# The United States Air Force In Korea 1950-1953

by

ROBERT F. FUTRELL

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# *Foreword*

The year 1950 marks the fiftieth anniversary of the outbreak of the Korean War. In order to commemorate the events and their impact, the Air Force History and Museums Program proudly reprints Robert Frank Futrell's authoritative work, *The United States Air Force in Korea, 1950-1953*. In spite of the limitations imposed by the political aspects of the war, as it fit into its Cold War niche, the Air Force provided the men, the means, and the effectively powerful dimension of air power.

The newly-independent Air Force found itself sorely tested for this conflict without precedent, a war of limited aims, and like the rest of the armed services, was not prepared for the conflict. Yet, with almost no warning, the Air Force effectively injected itself into the war in its first week, providing transportation, evacuation, intelligence, but most importantly the means to delay the rapid advance of the North Korean forces. Its unparalleled ability to deliver crushing bombloads on target, time after time, allowed allied forces the time to construct a defensive perimeter, and to prepare for a counter-attack.

For three years, American air power contributed overwhelming force to the war effort, by controlling airspace over the battlefield with an overwhelmingly effective air superiority force, by providing effective close air support to ground force operations, and by providing transportation for critical war materiel.

Futrell describes all these operations with a clarity and a balance that have since become a model for official military history. Even better, he has analyzed the operations, interpreting their significance to the course of the conflict and their importance in the application of air power in modern warfare.

Richard P. Hallion
Air Force Historian

## *The Author*

Robert Frank Futrell was a senior historian at the Albert F. Simpson Historical Research Center. He holds bachelor of arts and master of arts degrees from the University of Mississippi and a PhD from Vanderbilt University (1950). During World War II he served as historical officer of the AAF Tactical Center, Orlando, Florida, and assistant historical officer of Headquarters Far East Air Forces in the Philippines. After World War II, Dr. Futrell joined the new Army Air Forces/ United States Air Force Historical Office, which was moved from Washington, D.C. to the Air University, Maxwell AFB, Alabama, in 1949. At the Air University he was professor of military history and became emeritus professor at his retirement from the U.S. Civil Service in 1974. He also retired as a lieutenant colonel from the Air Force Reserve. He is a co-author of *The Army Air Forces in World War II* and the author of many air history books and articles including *Ideas, Concepts, Doctrine: A History of Basic Thinking in the United States Air Force, 1907-1964*. He is currently on an assignment in the Air University Research Institute preparing an extension of *Ideas, Concepts, Doctrine* from 1964 to the near present.

# *Preface*

"It is important," stated Brig. Gen. Laurence S. Kuter, Deputy Chief of Air Staff, Army Air Forces, on 19 July 1942, "that our history be recorded while it is hot and that personnel be selected and an agency set up for a clear historian's job without axe to grind or defense to prepare."[1] Since its inception, the historical program of the Army Air Forces and of the United States Air Force has ever reflected the spirit of General Kuter's charge in its research and publications. For its part, the United States Air Force has loyally supported the independent findings of the USAF Historical Division. This volume on Korea was approved by the United States Air Force without a suggestion for changing so much as a single word.

Utilizing the fullest availability of sources in research for this volume on the USAF in Korea, the author has sought to record the story of the air war as it was—or as it appeared to informed participants—without yielding very often to speculations of what might have been if different decisions had been made or the facts had somehow been changed. Air Force failings have been stressed fully as much as accomplishments, for failures (and the reasons for them) must be evaluated if the Air Force is to progress. In this record of Air Force experience in Korea there was much that was heroic and there were other events that were unpleasant, but a military historian must freely record the mistakes and controversies if a reader or a student of military history is to understand the full meanings of military accomplishments and failures.

In preparing this history, the author has necessarily included a great amount of material which likely will be of limited interest to a general reader but which may be significant to the military planner and student. There was good reason for this, for at the end of the Korean war General O. P. Weyland's official report noted that: "An astounding facet of the Korean war was the number of old lessons that had to be relearned....It appears that these lessons either were forgotten or were never documented—or if documented, were never disseminated."[2] A major purpose of this volume is to "document" and "disseminate" the lessons learned by Air Force men in the peculiar circumstances of the limited war in Korea.

Although this history is primarily the institutional story of the United States Air Force and more particularly of the Far East Air Forces in Korea, it also represents an account of the employment of United Nations Command airpower in Korea. Because of its predominant strength, the Far East Air Forces was the main component of United Nations Command airpower, but U.S. Marine and Navy airmen, as well as airmen from other participating United Nations countries, made substantial contributions to the air victory in Korea. The activities of the Marine, Navy, and other United Nations air units are sketched in order to present the composite effect of United Nations airpower, but the operations of these forces are not discussed in as great detail as are those of the Far East Air Forces. Since the first two years of the Korean war were fought in accordance with a surface strategy, much attention has necessarily been given to the activities of the United Nations ground forces. The reader who desires to be fully informed

[1]Routing and Record Sheet, Brig. Gen. L. S. Kuter, Dep. CofAS, AAF to Director of Organizational Planning AAF, 19 July 1942.

[2]FEAF Report on the Korean War, 26 March 1954, I, 130.

concerning the war in Korea ought not to be satisfied merely to read this history; he must also study the Army, Navy, and Marine service histories of the Korean war.

From the viewpoint of an airpower historian, the history of air operations in Korea naturally groups itself into the operations which gained and maintained friendly control of the air, those which reduced Communist war capabilities, those which destroyed the force in being and the mobility of the Red armies, and those which supported friendly ground troops in battle. All of these air actions happened simultaneously, but each was designed to produce a different effect upon the enemy. Not until late in the Korean war, however, did the United Nations Command accept an air strategy, and most of this history therefore seeks to follow the historical course of events and chronologically to relate air operations to the surface strategy which prevailed. Although this history is mainly one of institutions at war, the author has recognized that all institutions are made by the men who compose them. The history, therefore, freely records personal exploits, many in the early days of the Korean war when brave men fought with what they had and fewer in the latter years of the hostilities when the air forces were employed as massed striking forces which inevitably subordinated personality to the accomplishment of the air mission.

A degree of calculated risk is involved in the preparation of any history of recent events, and this history—written at Maxwell Air Force Base, Alabama, in the months between March 1957 and November 1958—is no exception. The passing of time and the completion of definitive Army and Navy service histories of the Korean war will undoubtedly provide additional historical perspective which was not available to the author of this USAF history. The exigencies of the Cold War have also denied much desirable information about the enemy's plans and operations, but one may doubt that the Communists will ever provide any accurate and unbiased narrative of their campaigns in Korea. The development of nuclear missiles and the technological developments in an age of aerospace may well cause modifications of some of the lessons of Korea; and yet in an international nuclear missile stalemate the only type of hostilities to be encountered might well be those of a limited scope to which the Korean experience might be particularly applicable. This history's purpose, however, is to record the story of airpower in Korea—not to predict its role in future national emergencies.

For their assistance in the preparation of this narrative of USAF experience in Korea, the author must acknowledge gratitude to many persons. So much of their labor is represented in this volume that it is appropriate to thank the wartime personnel of the various historical offices of the Far East Air Forces. At FEAF, under the successive direction of Majors Charles T. A. Paul and Wayne E. Scrivener and of Chief Historians Ward D. Smith (for a short time) and Oliver L. Hobson, the following persons were variously or continuously assigned to historical duty: MSgt. Dunlap Castle, Dr. Lula M. Garrett, MSgt. R. L. Hitchcock, Mr. James T. Kenney, Mrs. Marjorie Matthews, Miss Mabel Mangum, SSgt. J. L. Rhoades, MSgt. S. R. Spencer, TSgt. W. J. Wallrich, and TSgt. G. J. Weber. Under the field conditions in Korea, historical personnel of the Fifth Air Force changed rapidly. The Fifth Air Force's historical officers of the war period included Lt. John J. Costello, Lt. Ellery E. Swank, Maj. Boardman C. Reed, Maj. Edward R. Kandell, Lt. H. L. Addelson, Maj. Edgar A. Holt, and Lt. Clyde

R. Littlefield, while SSgt. J. D. Brandt, TSgt. R. C. Eiland, Mr. Harvey L. Horwich, Mr. Arthur C. O'Neil, Mr. Ernest M. Maygarden, Mr. Jacob Van Staaveren, and MSgt. John F. Whalen were at times assigned in historical functions. An apparently incomplete list of the historical personnel of the FEAF Bomber Command (Provisional) includes Col. Philip H. Best, Mr. G. F. Blewett, and MSgt. James B. Valla. Historical officers of the FEAF Combat Cargo Command (Provisional) and the 315th Air Division (Combat Cargo) were Col. Charles J. Long III, Maj. Edward M. Rosentreter, Capt. Kenneth E. Grine, Maj. James L. Greene, Maj. Robert L. Lovelace, Capt. Zenobia Skipworth, and Maj. Andrew Di Antonio, while Lewis W. Bealer, William D. Cox, Florence S. Richards, Dorothy J. Vestecka, and Patricia A. Visscher contributed to the histories. The task of preparing the span of histories of the Far East Air Materiel Command and the Far East Air Logistics Force fell to Theodore A. Faulkner, Lawrence F. Kenney, Stuart P. Griffin, Mrs. Barbara A. Shoup, Lt. Francis J. Ash, Miss Eva Mahony, Lt. Howard A. Smith, Jr., A2C J. R. Reznichek, and Maj. Joel E. Cocks. On Okinawa, Captains R. G. Bergman and H. E. Fansler, Lt. Roy L. Goodale, Mr. Wayne G. Peterson, Mrs. Alice Harvey, MSgt. James D. Kinder, and SSgt. Carl C. Combs prepared the wartime histories of the Twentieth Air Force. Impressive though it is, this list of wartime historical personnel leaves nameless the many wing, group, squadron, and unit historians who wrote the histories of their organizations, often as an additional duty. Without the historical data prepared by these nameless historians no USAF history of Korean operations could have been written.

The preparation of a history of the USAF in Korea was conceived in 1950 by Col. Wilfred J. Paul, Director of the Research Studies Institute, and the project was supported by the successive directors of the institute: Brig. Gen. Clinton W. Davies, Col. Curtis D. Sluman, Col. Garth C. Cobb, and Brig. Gen. William J. Clinch. Dr. Albert F. Simpson, the USAF Historian, gave assistance to the author at every step, and Mr. Joseph W. Angell, Jr., Assistant Chief of the USAF Historical Division ensured that the field historical program provided requisite data for the history. In the autumn of 1950 Messrs. P. Alan Bliss and Thomas J. Mayock of the USAF Directorate of Intelligence assisted the initial research effort by assiduous note-taking in headquarters files in Washington. In Tokyo, in 1950, Dr. Gordon W. Prange, then the Far East Command Historian, provided information to the author. More recently, Professor James A. Field, Jr., of Swarthmore College, who is writing the Navy's history of the Korean war, suggested valuable source material for research, and Mr. Wilbur W. Hoare, Jr., Historian of the Joint Chiefs of Staff, ensured that top-level policy information was made available. The maps (which were originally used in classified USAF historical studies) were drawn by Mr. Z. F. Shelton. Under the supervision of Mr. Jack Turner, Mrs. Lucy Meek of the Graphics Branch, Air University Library, prepared the special map of Korea's transportation routes. Within the USAF Historical Division, Miss Sara E. Venable, Mrs. Sally M. Watkins, Mrs. Margie McCardel, and Mrs. Dorothy Turner shared the laborious task of typing the manuscript. Maj. James F. Sunderman, Chief of the USAF Book Program, Secretary of Air Force Information Office, richly deserves the utmost appreciation for shepherding the manuscript through many reviewing channels and for arranging publication of the original edition.

The author gratefully acknowledges the assistance of Mr. Lawrence J. Paszek, Senior Editor, Office of Air Force History, Mary F. Loughlin, and Vanessa D. Allen, editors in the same office, for their concepts in laying out and designing the revised edition, selecting the photography, and guiding the volume through various stages of publication. Further appreciation is extended to Mr. Bruce Plumb, Typography and Design Division of the U.S. Government Printing Office, for his role in the layout and design of this work.

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Many persons have contributed information toward the writing of this history, and it has been officially reviewed by the Department of State, the Department of Defense, the Joint Chiefs of Staff, the United States Air Force, and the USAF Tactical Air Command. The author nevertheless assumes the responsibility for such errors of fact or interpretation as may remain in the volume. Like other USAF historical studies, this history is subject to revision, and additional information or suggestions for correction will be welcomed.

Air University

ROBERT FRANK FUTRELL

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# Historical Advisory Committee

(As of December 31, 1982)

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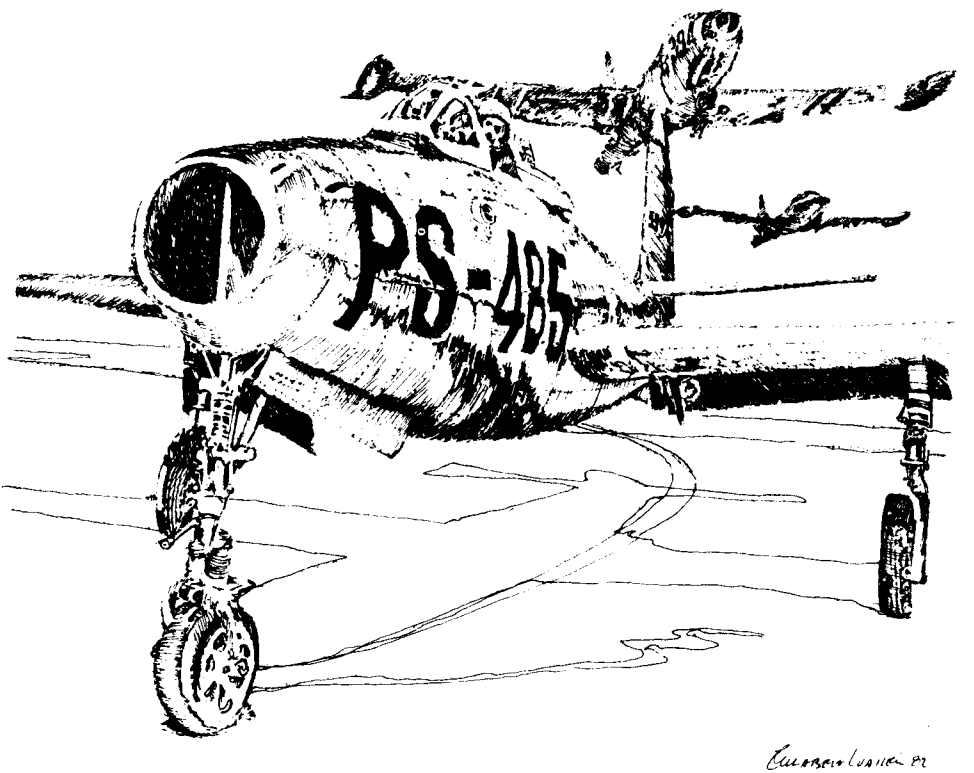
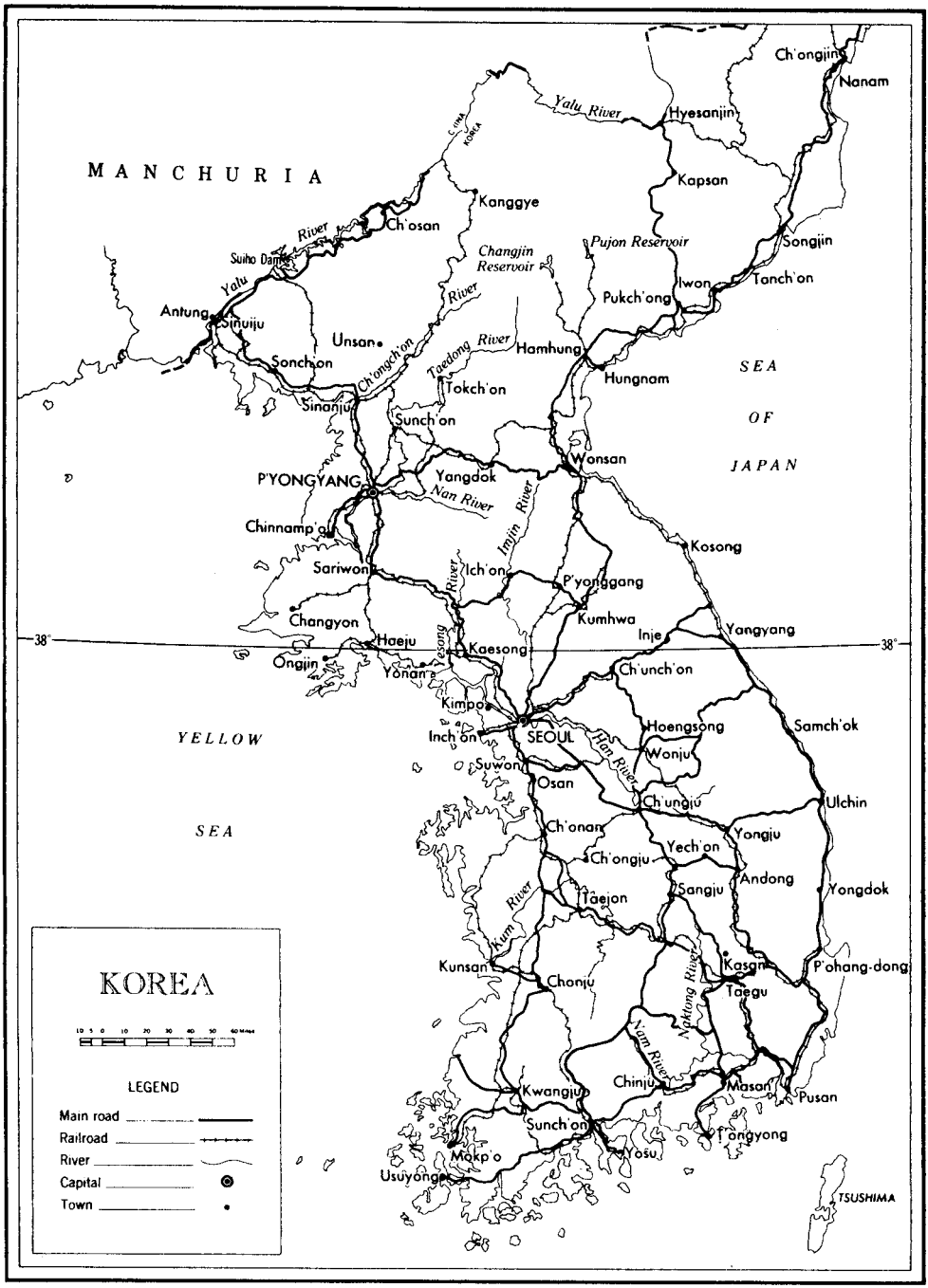
# The United States Air Force In Korea 1950-1953






ARMY MAP SERVICE CORPS OF ENGINEERS

# 1. *The First Six Days of Communist Aggression*

## *1. They Called It "FEAF"*

To the officers and airmen of the United States who served it, the Far East Air Forces was in June 1950 a distinguished and venerable command. True, the Far East Air Forces, or "FEAF" as it was always called (the initials pronounced as a word which rhymed with "leaf"), was only six years old, but in these few years the achievement of the command had become a legend in the new United States Air Force, where tradition was short and measured in service against the nation's enemies rather than in the passing of uneventful calendar years.

The gold-and-blue shoulder patch worn by the men of FEAF revealed a brief history of the command. At the center of a diamond of blue were the typical Air Force wings and star, but above the Air Force star was the Philippine Sun and below it were the five stars of the Southern Cross, as familiar a constellation to the people "down under" as the North Star is to those of the Northern Hemisphere. The Southern Cross denoted FEAF's birthplace. Needing a theater air headquarters to control American air forces in the Southwest Pacific Area theater of military operations, General George C. Kenney had activated the Far East Air Forces at Brisbane, Australia, on 15 June 1944. The Philippine Sun portrayed the past and predicted the future. In 1941 an old Far East Air Force had been driven from the Philippines by Japanese invaders, and the new Far East Air Forces meant to avenge this national humiliation.

The prophecy of the FEAF insignia had been fulfilled. As American air, ground, and naval power relentlessly drove the Japanese back whence they had come, FEAF's command post moved always closer toward its objective: first to the Netherlands New Guinea and the village of Hollandia, then to the rain and mud of Tacloban town on Leyte Island in the central Philippines, then to the war-torn old American post at Fort McKinley near Manila on Luzon, the principal island of the Philippine archipelago. Had the Japanese not surrendered when they did, FEAF headquarters would have moved northward to Okinawa, where it would have directed air operations in an American invasion of the Japanese home islands. But the Japanese had suffered enough and surrendered, and FEAF moved its command post in September 1945 to Tokyo. Here in the heart of the Japanese capital, at the Meiji building, an eight-story "skyscraper" which overlooked the heavily forested grounds of Emperor Hirohito's palace, FEAF directed the air phase of the Allied occupation of Japan.*

The passing of time had brought changes in FEAF's mission—that statement of assigned duties which governs the allocations of forces, the tables of equipment, the training of personnel, and, in essence, the very life of a military command. As long as

*During the months of United States military readjustment following Japan's defeat, the Far East Air Forces for a time had a new name and expanded duties. On 6 December 1945 FEAF was redesignated as the Pacific Air Command United States Army (PACUSA) and commanded all Army Air Forces organizations in the Pacific. With the circumscription of the Far East Command's area of authority, however, PACUSA was redesignated as the Far East Air Forces on 1 January 1947.

the Japanese had fought, FEAF had been recognized as the major air element of General of the Army Douglas MacArthur's Southwest Pacific Area Theater, and it had been expected, in mutually-supporting coequality with Army and Navy forces, to wage an aggressive war against Japan. In June 1950 General MacArthur was still the American theater commander in the Far East, but his command was now designated the U.S. Far East Command (FEC). The primary mission of the Far East Command was the defense of its area of operations, a geographical region including Japan, the Ryukyus, the Marianas, and American bases in the Philippines. As the United States Air Force (USAF) component of the Far East Command, FEAF's primary and only principal mission was to maintain an active air defense of the FEC theater of operations. Among its subordinate missions, FEAF was charged to maintain "an appropriate mobile air striking force" and to "provide air support of operations as arranged with appropriate Army and Navy commanders." The duties of FEAF as the FEC theater air force were thus explicitly stated by General MacArthur as Commander-in-Chief, Far East (CINCFE). General MacArthur's mission was derived from the wishes of the President of the United States, as translated into formal directives by the U.S. Joint Chiefs of Staff (JCS).[1]

The years after World War II had also brought changes in FEAF's commanders. General Kenney remained in the Far East until December 1945, at which time Lt. Gen. Ennis C. Whitehead, who had long commanded the Fifth Air Force, assumed the duties as commanding general of FEAF. General Whitehead, a bluff and combat-canny officer, had managed the postwar strength reductions of air units in the Far East in such a manner that, although the air garrisons got smaller, the air forces in the Far East never lost their combat potential. In April 1949 Lt. Gen. George E. Stratemeyer relieved General Whitehead, and he still guided air affairs in the Far East in June 1950. General Stratemeyer had served in Asia for nearly three years during World War II. Between July 1943 and July 1945 he had been commanding general, Army Air Forces India-Burma Theater. General Stratemeyer had then taken command of the Army Air Forces in China and had retained that post until February 1946. One journalist said that genial General "Strat" had something of the air of a jolly college professor,[2] but such a description slighted the capabilities of this veteran air commander who never refused a reasonable request but never sacrificed Air Force principles to accommodate anyone.

The defensive mission of the Far East Command, General MacArthur had informed General Stratemeyer when the latter reported for duty, was of primary importance.[3] The deployment of FEAF's subordinate air forces reflected these defensive considerations.

Largest of the FEAF subordinate commands was the Fifth Air Force. Activated in Brisbane on 3 September 1942, this fighting command had driven back northward until, at the collapse of Japan, it had established its headquarters in the city of Nagoya. In October 1948 Maj. Gen. Earle E. Partridge had taken command of the Fifth Air Force. Tall and thin with a shock of gray hair, General "Pat" Partridge had seen his World War II combat in North Africa and Great Britain, where he had been chief of staff of the XII Bomber

Command and commander of the 3d Air Division of the Eighth Air Force. Fifth Air Force tactical units were deployed in defense of the Japanese home islands. At Itazuke Air Base on Kyushu, southernmost of the main Japanese islands, was the 8th Fighter-Bomber Wing, augmented by the 68th Fighter All-Weather Squadron. The 8th Group was equipped with F-80C jet interceptors; the 68th Squadron flew F-82 all-weather fighters. Misawa Air Base, on the northeastern shore of the main Japanese island of Honshu, defended the northern frontiers of Japan. Here was based the 49th Fighter-Bomber Wing, whose tactical group flew F-80C Shooting Star fighters. The center of gravity of the Fifth Air Force lay in the Kanto Plains of Honshu, around Tokyo. Yokota Air Base served the 35th Fighter-Interceptor Wing, the 339th Fighter All-Weather Squadron, and the 8th Tactical Reconnaissance Squadron (Photo Jet). The aircraft complement at Yokota included F-80C's, F-82 all-weather fighters, and RF-80A photo reconnaissance planes. At Johnson Air Base was the 3d Bombardment Wing (Light), with a reduced strength of two tactical squadrons, which flew conventional B-26 light bombers. At Tachikawa Air Base was located the 374th Troop Carrier Wing, with two squadrons of C-54 transport aircraft. For the performance of its defensive mission, the Fifth Air Force was provided with several aircraft control and warning groups, whose personnel manned the large fixed-radar and aircraft-control facilities which were deployed throughout Japan.[4]

Southward from Japan and down off the coast of Asia on the island of Okinawa the Twentieth Air Force, Maj. Gen. A. C. Kincaid commanding, made its headquarters at Kadena Air Base.

Gen. Douglas MacArthur

General Kincaid had already served his tour of duty and was slated for rotation. On 31 July 1950 he would be relieved by Maj. Gen. Ralph F. Stearley. The Twentieth Air Force, which once had controlled the world-wide operations of all B-29 Superfortress bombers, was responsible for the air defense of Okinawa and the Marianas. Situated at Naha Air Base on Okinawa was the 51st Fighter-Interceptor Wing, augmented by the 4th Fighter All-Weather Squadron. The 51st Group was assigned F-80C interceptors; the 4th Squadron, like the other fighter all-weather squadrons, possessed twin-Mustang F-82 aircraft. Attached to duty with the Twentieth, with station at Kadena, was the 31st Photo Reconnaissance Squadron, Very Long Range. This squadron belonged to the U.S. Strategic Air Command and possessed RB-29 photo planes. Stationed at Andersen Air Base, on Guam in the Marianas, was the 19th Bombardment Wing. The squadrons of the 19th Group flew conventional B-29 Superfortresses, aircraft which had once been designed "very heavy" but which were now considered to be "medium" bombers.[5]

Defending and commanding American installations in the Philippine Islands was the Thirteenth Air Force—an unsuperstitious air command which had been activated in the South Pacific at 1300 hours, 13 January 1943. This air force had moved up the island chain with FEAF during World War II, but following the defeat of Japan it had remained in the Philippines. Commander of the Thirteenth Air Force was Maj. Gen. Howard M. Turner, whose headquarters and principal operating site was at Clark Air Base, in central Luzon. At Clark were based the 18th Fighter-Bomber Wing with F-80C's, the attached 21st Troop Carrier Squadron with C-54's, and the provisional 6204th Photo Mapping Flight, with a few RB-17 aircraft.[6]

The fourth major command of the Far East Air Forces was the Far East Air Materiel Command (FEAMCom), which, as its name implied, furnished logistical support for all USAF units in the Far East. Brig. Gen. John P. Doyle commanded FEAMCom, and his command post and principal installation was twenty miles west of downtown Tokyo, at the sprawling factories and airfield where the Tachikawa Aircraft Company had once built Oscar fighters, but which was now the Tachikawa Air Depot.[7]

A few other attached air units rounded out FEAF's organizational structure. Flights of the 2d and 3d Air Rescue Squadrons, attached for duty from the USAF Air Rescue Service, were located at the various bases where they could best perform their emergency search and rescue services with SB-29 and SB-17 aircraft. The 512th and 514th Weather Reconnaissance Squadrons of the 2143d Air Weather Wing flew synoptic weather reconnaissance missions from Yokota and Andersen.[8] The British Commonwealth air component in Japan was the Royal Australian Air Force (RAAF) No. 77 Squadron, which flew F-51 Mustangs and occupied Iwakuni Air Base, at the Southwestern end of Honshu. This squadron was available to General MacArthur as Supreme Commander Allied Powers, and it maintained liaison with FEAF, but it was neither attached nor assigned to the American air command.[9]

Where FEAF had its stations, watchful radars never ceased to sweep the skies, air-defense control centers were always open, and alert crews stood by, day and night, to scramble combat-ready F-80 and F-82 interceptors. Since 1949, when Russia had

detonated its first atomic burst, everyone in FEAF had realized that the Cold War might, at any moment, break into the flames of World War III. Such a new world holocaust would begin with air attacks against Far East air bases, launched from Communist airfields in Asia. Everyone was tautly ready. No one forgot that for the United States World War II had begun at Hickam Field with an air attack early on a Sunday morning. But, despite a high degree of vigilance, peacetime schedules prevailed, and, except for alert personnel, a Sunday in occupied Japan was not a normal day of duty.

## *2. The North Koreans Strike*

As the Sunday which was 25 June 1950 began there was little to mark it different from any other first day of the week. Over most of Japan the weather was fine, except that it was becoming hot and there were scattered showers. The summer monsoon was beginning. Weather predictions called for continued good weather on Monday and most of Tuesday, but thereafter a southwardly drifting polar front promised to bring low clouds and rain down through nearby Korea and across the narrow sea to Japan. The weather prediction did not seem particularly important to the duty officers in the Meiji building as they managed the routine of the morning at FEAF headquarters. Business was generally quiet in Tokyo. General Stratemeyer was not in Japan. After conferences in Washington, on the morning of 25 June he was somewhere in flight between San Francisco and Hawaii. Before returning to Tokyo, he meant to pay a command visit to the Twentieth Air Force on Okinawa. With Stratemeyer absent, General Partridge was acting commander of FEAF. He had been spending a part of his time in Tokyo, but on the morning of 25 June he was with his family in Nagoya.[10]

Over across the Sea of Japan on the peninsula of Korea the Communist North Korean People's Army had also been watching the weather. The North Korean high command probably lacked meteorological capabilities, but it had the advantage of experiencing southwardly flowing weather before it drifted across the Bamboo Curtain. Taking advantage of the cover of bad weather, the Red Koreans had drawn up their army along the 38th parallel, and at 0400 hours 25 June 1950 they launched a sudden and all-out attack against the Republic of Korea. When the North Koreans struck, said General MacArthur, they "struck like a cobra."[11]

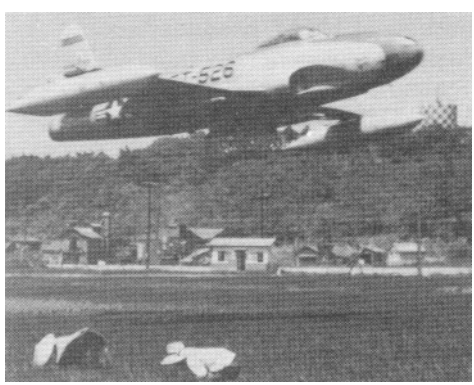
Long fearful of aggression from the north, the Republic of Korea had built field fortifications along the 38th parallel, but the lightly armed South Korean soldiers proved no match for the Communists. By 0600 hours columns of North Korean infantry, spearheaded by Soviet-built T-34 tanks, drove through the ROK lines toward Kaesong in the west and Chunchon in central Korea. On the east coast, south of Kangnung, a motley but effective collection of small boats and junks set Red troops ashore. To U.S. Korean Military Advisory Group (KMAG) field advisers serving with the ROK forces,

the Communist assault looked real enough from its outset, but many times before this Red Korean raiding parties had crossed the border. Accustomed to such Communist terror tactics, American observers hesitated to report all-out aggression until they were sure of their facts. By 0900 hours, however, the South Korean town of Kaesong had fallen, and this victory, coupled with the landings south of Kangnung, made it starkly evident that this was no mere raid. The Reds were bent upon an armed subjugation of the Republic of Korea.[12]

First report of the North Korean aggression reached the Meiji building at 0945 hours. From Seoul Chief Warrant Officer Donald Nichols, commander of District 8, Office of Special Investigation (OSI), telephoned the news to the FEAF operations duty officer.[13] Although the report was promptly flashed to all FEAF units, General Partridge was not in his quarters in Nagoya and did not get the news from Korea until 1130 hours. General Partridge at once acknowledged the gravity of the situation, but he knew that the Far East Command had only one minor mission concerning Korea. At the outbreak of a war or general domestic disorder, and then only at the request of the American ambassador, the Far East Command was required to provide for the safety of American nationals in Korea.[14]

For the accomplishment of the air-evacuation mission General MacArthur had charged FEAF to furnish such air-transport aircraft as might be needed to move Americans out of Korea. He had also charged FEAF to be ready to attack hostile ground and surface targets in support of the evacuation, but not before he issued specific instructions so to do. The Fifth Air Force had issued its operation plan on 1 March 1950. Since Itazuke Air Base was closest to Korea, General Partridge had designated the commander of the 8th Fighter-Bomber Wing as air-task force commander. Assisted by other combat wings as needful, the 8th Wing commander was directed to provide fighter cover for air and water evacuations, and he was given operational control over the transport planes which the 374th Troop Carrier Wing would send to him from Tachikawa. Other wing commanders had stipulated duties: the 3d Bombardment Wing, for example, was to stage six B-26's to Ashiya Air Base (near Itazuke) where they would fly reconnaissance and cover missions over the water areas off Korea.[15]

Shortly after 1130 hours General Partridge ordered all Fifth Air Force wing commanders to complete the deployments required to implement the air evacuation plan, but he cautioned all of them that flights to Korea would await further orders.[16] During the afternoon and early evening of 25 June Col. John M. ("Jack") Price, commander of the 8th Wing, marshaled his own F-80 and F-82 fighters, 10 B-26's, 12 C-54's, and 3 C-47's. By a fortunate



An F-80 Shooting Star over a Japanese rice field.

circumstance, the 8th Bombardment Squadron (Light) had come to Ashiya for a FEAF air-defense readiness test on 24 June, and its B-26's were in place when the alert sounded. At 2100 hours Colonel Price telephoned Fifth Air Force operations that he was prepared to execute the evacuation operations plan beginning at 0330 hours on 26 June, a time which would permit the first C-54 to arrive at Seoul's Kimpo Airfield before dawn.[17] That same evening General Partridge, who had elected to remain at Nagoya while his air force implemented the evacuation plan, held a conference of his key staff members. All of them agreed that the Fifth Air Force was ready for such instructions as it might receive. The talk then drifted around to American policy toward Korea, what it was likely to be. One staff officer suggested that the United States might abandon South Korea to the Reds. General Partridge disagreed completely. Such a line of action, he said, was "unthinkable." He believed that new policies on Korea would be forthcoming from Washington.[18]

At the same time as the Fifth Air Force was readying its air evacuation task force events were marching in Korea. At the American embassy in Seoul Ambassador John J. Muccio learned of the invasion at 0930 hours. At once he went to KMAG headquarters, where he learned that a full-scale Communist attack seemed to be in progress.[19] At about this time, however, the ROK defenses appeared to begin to hold, and during the remainder of the day Communist gains were limited to a tank thrust down to Uijongbu and to three more landings on the east coast of Korea. Just before noon, however, weather began to clear over Seoul, and the North Korean Air Force entered combat. At 1315 hours two dirty silver-colored Yak fighters buzzed Seoul and Kimpo airfields and winged off northward without attacking. But at 1700 hours the Yaks returned. Two of them strafed Kimpo, hitting the control tower, a gasoline dump, and an American Military Air Transport Service (MATS) C-54 which was grounded with a damaged wing. Four other Yaks strafed the Seoul Airfield and damaged seven out of ten trainer airplanes which the ROK Air Force had there. At approximately 1900 hours six other North Korean fighters again strafed Kimpo. This time they completely destroyed the hapless MATS transport.[20]

An F-51 Mustang plows through water to take off position.

During the afternoon of 25 June ROK President Syngman Rhee's importunate telephone calls kept Ambassador Muccio occupied. President Rhee believed that the ROK ground troops would offer effective opposition, but he was greatly worried about the Reds' superiority in tanks and aircraft. Unable to contact General MacArthur, Rhee telephoned an urgent plea to Muccio. Give us ten F-51 aircraft, with bombs and "bazookas" (rockets), he begged. Deliver them before dawn on 26 June to Korean

pilots who will be waiting at Taegu. Unless these planes are received, Rhee warned, it will be very difficult to meet the northern attack. Rhee also asked for heavier artillery which could disable or destroy Communist tanks, specifically 75-mm. antitank guns, 105-mm. howitzers, and 155-mm. howitzers.[21] Ambassador Muccio relayed these requests to Tokyo and reported to the U.S. Secretary of State that Rhee was most concerned about his lack of air capabilities. "As Department doubtless aware," Muccio cabled, "Rhee and other Korean officials will look to United States for air assistance above all else. Future course of hostilities may depend largely on whether United States will or will not give adequate air assistance."[22]

Through the evening of 25 June the Korean situation did not appear to be critical enough to warrant the evacuation of American nationals.[23] A few minutes before midnight, however, Ambassador Muccio informed MacArthur that he had decided to evacuate dependent women and children from the vicinity of Seoul and Inchon. He felt compelled to do this because of the Red tank concentration at Uijongbu, actually only 17 miles north of Seoul. Several merchant freighters were in the harbor at Inchon, and Muccio proposed to load as many as needed with evacuees and get them started for Fukuoka port in Japan, beginning as early as possible on the morning of 26 June.[24] At 0045 hours on 26 June Brig. Gen. Jarred V. Crabb, the FEAF Director of Operations, awakened General Partridge with a telephone call: General MacArthur had ordered FEAF to provide fighter cover while the freighters loaded and withdrew from Inchon. The fighters were to remain offshore at all times, but they were to shoot in defense of the freighters.[25]

General Partridge instructed the 8th Fighter-Bomber Wing to furnish the freighters with combat air patrols. Within a few minutes, however, Fifth Air Force operations let General Crabb know that Colonel Price anticipated difficulties. This patrol work was a job for long-range conventional aircraft, not for the speedy but fuel-hungry jets. Colonel Price's 68th Fighter All-Weather Squadron had twelve operational F-82's, but he needed more aircraft than this. The Fifth Air Force first asked if it would not be possible to use the RAAF No. 77 Squadron's Mustangs, but General Crabb replied that the British had not yet taken a stand in the Korean war. The Fifth Air Force therefore ordered the 339th Fighter All-Weather Squadron to move its combat-ready F-82's from Yokota to Itazuke. This was still not enough of the long-range fighters, and General Crabb ordered the Twentieth Air Force to send eight of the 4th Squadron's planes up to Itazuke from Okinawa. To clear his ramps to receive these additional fighters, Colonel Price moved the contingent of C-54's from Itazuke to nearby Ashiya.[26]

Early on the morning of 26 June General Partridge flew from Nagoya to Tokyo's Haneda Airfield. At FEAF headquarters he held a staff conference, where the principal matter of discussion was the evacuation operation. Throughout the morning intelligence reports were optimistic. KMAG reported "increased steadiness" on the part of ROK troops opposing the tank column north of Seoul, that Chunchon had been retaken, and that the invaders on the east coast had been contained. These reports were so favorable that FEAF released the C-54 transports at Ashiya to return to normal duties.[27]

The optimistic expectation that the ROK Army, if given adequate logistical

support, could hold still prevailed in midafternoon, when General Partridge went to the Dai Ichi building to attend a teleconference between the Joint Chiefs and General MacArthur's staff. In these discussions the JCS approved all of MacArthur's recommendations. He was authorized to send a GHQ survey party, headed by Brig. Gen. John H. Church, to Seoul to determine the amounts and types of equipment needed by the ROK forces. He was authorized to ship arms and equipment to Korea and to protect the shipments. He was instructed to use armed force if such were necessary to insure the safety of the Americans being evacuated from Seoul. The JCS also informed MacArthur that the U.S. Seventh Fleet, which had one large aircraft carrier (the *Valley Forge*), was proceeding from Philippine waters to Sasebo, where it would come under the operational control of Vice-Adm. C. Turner Joy, commander Naval Forces Far East (NavFE). At the end of this teleconference the Joint Chiefs asked if MacArthur required further instructions. He replied that he did not.[28]

Evacuation operations got under way in Seoul early on the morning of 26 June, and, to the dismay of the F-82 pilots, who orbited in relays above Inchon harbor, lasted all day. In a change of plans the F-82's were allowed to come inland to cover truck convoys moving from Seoul to the Army Support Command compound near Inchon, but for the most part the flights of four F-82's remained over Inchon harbor. The air-patrol duty was without incident until 1333 hours, when a radial-engine Communist fighter came out of the clouds and bounced two F-82's. The American pilots were uncertain as to whether they should return fire. The evacuation vessel was in no danger. Instead of joining the attack, the F-82 pilots took evasive action, and the Communist plane did not prolong the attack.[29] Missionaries and friendly foreign nationals swelled the ranks of the evacuees, and at a final head count 682 persons required transportation. With some crowding, all of these people were loaded aboard the Norwegian merchant ship *Reinholte* (which had just unloaded a cargo of fertilizer), and at 1630 hours the vessel at last weighed anchor.[30] After nightfall two F-82's continued to escort the vessel as it got under way and proceeded toward Japan. Early on the morning of 27 June the *Reinholte* finally met escorting destroyers. At this time the Fifth Air Force got permission to cover the convoy with B-26 aircraft during the remainder of its voyage to Fukuoka port.[31]

Ambassador Muccio had planned to continue to evacuate superfluous personnel from Seoul in a second and possibly a third merchant vessel, but he would not have enough time. With the coming of darkness on 26 June ROK morale began to crack. Shortly after 2200 hours President Rhee summoned Muccio to a conference and there told him that the North Korean tanks approaching Seoul could not be stopped. Accordingly, Rhee was going to move his government to Taejon, either during the night or the first thing the next morning. At midnight Col. W. H. S. Wright, chief of KMAG, reported that the enemy would be in Seoul within a day. Both Muccio and Wright asked for emergency air evacuation, and General MacArthur ordered FEAF to provide it, beginning at dawn on 27 June.[32] Foreseeing that the transport operations would require active fighter support, General Partridge dispatched a fignting order to the Fifth Air Force. "No interference with your mission," stated General Partridge, "will be tolerated."[33]

American civilians leave the USS *Reinholt* at Japan.
(right) First evacuees arrive at a Fifth Air Force base. 27 June 1950.

Arriving at Itazuke a few hours before dawn on 27 June, the air evacuation order caused Colonel Price some concern. The F-82 planes and pilots were fatigued: one all-weather pilot had flown fifteen hours out of the preceding thirty-eight. The C-54 transport contingent had been released and had scattered to routine duties. In short order, however, Colonel Price got two C-54's from the 374th Wing and eleven C-47's from the FEAF base flight and from FEAMCom. Designing to provide an umbrella over the transports, Colonel Price directed his F-80 jet fighters (which had their most economical fuel consumption at high altitudes) to fly high cover over Seoul. The F-82 pilots were instructed to orbit at lower levels. To be safely certain that Colonel Price had enough fighters, Fifth Air Force operations flashed the word to the 9th Fighter-Bomber Squadron (49th Wing) to move from its maneuver station at Komaki Air Base to Itazuke on the morning of 27 June.[34]

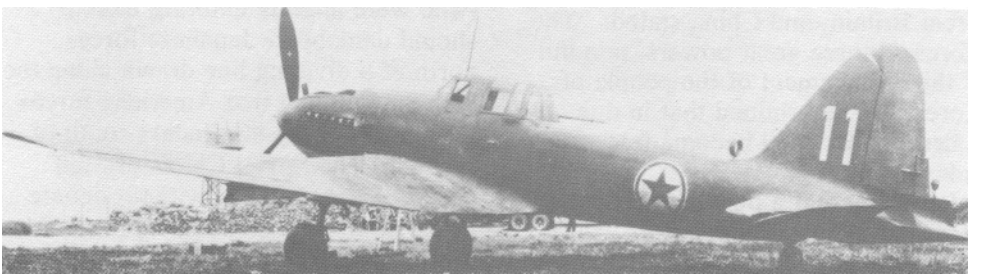
At the appointed time the 8th Fighter-Bomber Wing was ready to execute the air evacuation order. Before dawn the first transports left Itazuke with F-82 route escort, and at first light orbiting F-80's established themselves along the Han River, south of Seoul. Thereafter, during the day, Colonel Price improvised to meet constantly changing requirements. General MacArthur's staff first assured FEAF that only 375 persons required transportation, nearly all from Kimpo. But both the American Embassy and KMAG decided to release all nonessential people, and, to expedite the airlift, they divided the evacuees between Kimpo and the small airfield at Suwon, about 20 miles south of Seoul. During the morning the United Nations Commission on Korea decided to evacuate to Japan, further swelling the number of persons awaiting air transportation at Kimpo. Communications between Itazuke and the Korean airfields proved unreliable, and before the day was over each aircrew arriving at Itazuke reported the number of persons still requiring transportation, and the 8th Wing dispatched planes to get them. So much confusion jangled the nerves of the evacuees (none of them were ever quite sure that a departing aircraft might not be the last), but all who waited were picked up before dusk. When the air evacuation operation officially ended shortly before midnight on 27 June, a total of 748 persons had been flown to safety in Japan. By 29 June all superfluous persons were out of Korea. At this time a total of 851 individuals had been flown out of the war zone, a figure comparing favorably with the 905 who had been removed from Korea by water transportation.[35]

Not a single refugee was injured during the mass air exodus from Korea. This record of safety was attributable in no small part to the impenetrable fighter cover which the 8th Wing kept aloft over Kimpo and Suwon while the vulnerable transports landed and loaded passengers. Throughout 27 June the North Korean Air Force amply demonstrated that it wanted to destroy the helpless transports. At about noon five Yak fighters swept over Seoul at 10,000 feet, headed for Kimpo. Waiting for the Reds were five F-82 fighters of the 68th and 339th squadrons, and in a few minutes Lt. William G. Hudson, Maj. James W. Little, and Lt. Charles B. Moran each destroyed one of the enemy planes. The other Communist pilots fled. Each of the American pilots was, in various quarters, credited with the first aerial victory of the Korean war. In 1953, however, the Fifth Air Force reviewed conflicting testimony

and officially stated that Lieutenant Hudson, 68th Fighter All-Weather Squadron, had destroyed the first Communist aircraft in Korea.[36]

Early on the afternoon of 27 June Communist airmen made a second attempt to attack the American transports at Kimpo. This time the North Koreans sent out eight IL-10 fighters. These improved versions of the dread Stormovik plane of World War II proved a feeble match for the four F-80C jet fighters which the 35th Fighter-Bomber Squadron had posted on air alert over Seoul. Very quickly, with a minimum of maneuver, the 35th Squadron pilots blasted down four of the Red planes, and the other Red pilots turned tail and ran. In this air battle Capt. Raymond E. Schillereff and Lt. Robert H. Dewald scored single victories and Lt. Robert E. Wayne shot down two enemy planes. These were the first aerial victories for a USAF jet fighter. They clearly demonstrated that even these oldest jets were superior to one of the best conventional aircraft of World War II. When the Red pilots who survived this air battle got back to their home airfield—most probably Heijo airfield at Pyongyang—they evidently passed the word that the Fifth Air Force was shooting to kill. No more aggressor plans appeared in the Seoul area on 27 June.[37]

During the first two days of the Korean hostilities the United States obviously hoped that the Republic of Korea would be able to win its own battle without armed assistance from the outside. Just before dawn on 27 June Ambassador Muccio had to inform the ROK prime minister, who begged for American air support, that FEAF planes were not allowed to attack the Communist guns and tanks which were decimating ROK defenses.[38] Even without air support, the ROK Army made a valiant and supreme effort at first light on 27 June. The ROK 2d and 7th Divisions, plus elements of the 5th Division, launched an attack toward Uijongbu. Within an hour or so this last supreme effort was shattered, and the broken remnants of the three divisions streamed back toward the Han River. The city of Seoul could now be taken when the Reds wanted it, and the demoralized ROK chief of staff told all who would listen that the loss of the capital city meant the collapse of South Korea. In an early afternoon teleconference with the Joint Chiefs of Staff, General MacArthur warned that ROK army units were no longer able to resist the determined Communist offensive. "Our estimate," he stated, "is that a complete collapse is imminent."[39] It was starkly apparent that the Republic of Korea could not survive without active American military assistance.




Russian IL-10

## *3. Korea Was an International Problem*

As far back as history recorded the Korean peninsula, which thrusts down like an arm from the continent of Asia, had always been a pawn in the game of international rivalries played by its more powerful neighbors. In modern times Korea had been a nominally subject state to the Chinese Empire, but Japan's victory in the Sino-Japanese War had ended this traditional relationship in 1895. After a short period of sovereignty, which was much complicated by Russo-Japanese rivalries, Korea came increasingly under the influence of Japan, so much so that in 1910 she lost her independence in a formal Japanese annexation. Despite some qualms of international morality over the ruthless Japanese subjugation of a proud and independent people, the legality of Japan's tenure in Korea went unquestioned by any foreign nation.

Only after December 1941, when Japan's plans for a new order in Asia caused her to attack the United States, did American statesmen remember that Korea was numbered among the first victims of Japanese aggression. The first real commitment concerning Korea was made at the Cairo Conference. Here, in an official communiqué of 1 December 1943 the United States, Great Britain, and China stated: "The aforesaid three great powers, mindful of the enslavement of the people of Korea, are determined that in due course Korea shall become free and independent."[40]

Believing that a military occupation of Korea by any single power would have serious political repercussions, U.S. State Department planners urged that an international administration representing the United States, Great Britain, China, and the Soviet Union could best prepare the long-subjugated Koreans for independent statehood.[41] At Yalta, in February 1945, President Franklin D. Roosevelt suggested to Generalissimo J. V. Stalin that Korea should be prepared for independence by an international trusteeship, including a representative from Russia.[42] Stalin appeared receptive, but no formal agreement was made at this time. On 28 May 1945, however, Stalin formally agreed to the proposal in a conversation with Mr. Harry Hopkins in Moscow. At the Potsdam Conference the Allies reaffirmed their adherence to the Cairo declaration and on 8 August 1945, when she declared war on the Japanese, the Soviet Union announced her adherence to the Potsdam declaration.[43]

The U.S. State Department had hoped to avoid the partitioning of Korea into zones of military occupation. But because of a sooner than anticipated capitulation of Japan, some emergency partition had to be devised on very short notice in order to accept the surrender of Japanese troops in Korea. The U.S. Joint Chiefs of Staff therefore proposed that the Russians (who were already entering Korea) should demobilize Japanese forces north of a dividing line drawn along the 38th parallel and that American forces would accept the surrenders south of this line. The Soviet Chiefs of Staff accepted the proposal without debate or bargaining.[44] Although the United States regarded the 38th parallel dividing line as a temporary and undesirable expedient, which severed

Korea's political and economic unity, the Russians appeared to be quite content that Korea should be partitioned. Early in December 1945 the commander of American occupation forces in Korea reported that the Russians were building field fortifications on their side of the parallel.[45] Later in December, at Moscow, a meeting of foreign ministers provided for the establishment of a Joint American-Soviet Commission, representing the two military commands in Korea, whose primary duty would be to assist the formation of a provisional Korean government. This joint commission functioned fruitlessly. It was never able to find acceptable solutions to the Korean problem.[46]

At last, in September 1947, the United States asked the United Nations to take up the problem of Korean unification. This world organization's General Assembly—over strong Soviet opposition—decided that a national government for Korea should be established through nationwide elections, supervised by a United Nations Temporary Commission on Korea. The government so formed would constitute its own national security forces, take over the functions of government exercised by the occupation forces, and arrange with the occupying powers for the prompt withdrawal of their troops. The Soviet Union maintained that the General Assembly's action was "illegal," and the North Korean Communists refused to allow the United Nations commission to supervise free elections in the area which they controlled. Nevertheless, the commission held elections south of the 38th parallel, which, when conducted on 10 May 1948, formed the Republic of Korea, headed by an American-educated Korean patriot—Syngman Rhee. In 1948, and again in 1949, the United Nations General Assembly declared the ROK government to be the only freely elected and lawful government in Korea. The General Assembly also established a United Nations Commission on Korea, which it charged to facilitate the peaceful unification of all Korea.[47]

The Soviet Union not only refused to participate in the United Nations actions in Korea, but she also moved toward the establishment of a rival "autonomous" government in Korea. The Communist regime at Pyongyang announced and held elections on 25 August 1948 for a "Supreme People's Assembly," which supposedly represented the people of both North and South Korea. This government of the so-called "People's Democratic Republic of Korea" was headed by Kim Il Sung, a Russian-trained Communist who had assumed the name of a legendary Korean guerrilla leader. On 20 September 1948 the Soviet foreign ministry announced that all Russian occupation troops would be withdrawn from Korea by 1 January 1949. It invited the United States to withdraw its forces from South Korea.[48]

The Soviet proposal that all foreign troops should be withdrawn from Korea was quite welcome to American military planners. For more than a year they had wanted to evacuate the American occupation forces, but they had known that this was impossible as long as Russian troops remained in Korea. On 25 September 1947 the Joint Chiefs had informed President Truman: "From the standpoint of military security, the United States has little strategic interest in maintaining the present troops and bases in Korea." If hostilities broke out, the American forces in Korea would be a "military liability." American military manpower, moreover, was severely strained, and

the Joint Chiefs, who viewed Cold War requirements from a global viewpoint, considered that the 45,000 men of the U.S. Army Forces in Korea could "well be used elsewhere."[49]

The United States government thus desired to reduce its military commitment in Korea, and yet it had no wish to abandon the Republic of Korea. A joint governmental policy coordinating committee therefore submitted a planning paper projecting American policy toward Korea. This paper went through the National Security Council to President Harry S. Truman, who, on 8 April 1948, approved it for action. The United States would undertake to train and equip a South Korean armed force which would provide security "against any but an overt act of aggression by North Korean or other forces." The United States would afford economic assistance to South Korea: a diplomatic mission would use its influence to persuade the new government in South Korea to follow policies which would contribute to its own stability. The United States would not, however, become so irrevocably involved in Korea that any action by any faction there could be considered to be a *casus belli* for the United States. Finally, the United States would encourage continued United Nations interest in the Korean problem and would continue to cooperate with the United Nations in seeking a solution to the Korean situation.[50]

Official American policy undertook to build in the Republic of Korea an indigenous security force large enough to maintain internal order and public safety but not so large as to strain the country's economy or so powerful as to provide a means for aggression against North Korea. Calculated on these terms, the United States undertook to support the training and equipment of a

President Truman and Secretary of the Air Force Symington, 1949.

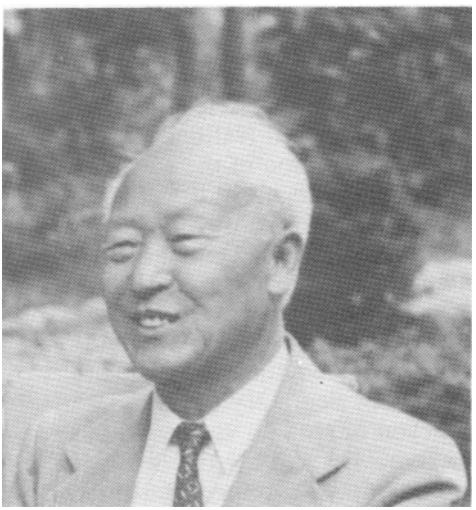
ROK military force comprising an army of 65,000 men, a coast guard of 4,000 men, and a police force of 35,000 men. Since it was a security force, the ROK Army was equipped with hand weapons, heavy machine guns, and 81-mm. mortars. It was not provided with tanks or artillery.[51]

This modest military force was not nearly so large as the ROK government thought to be necessary. In Washington Korean Ambassador Chough Pyung Ok pressed for a standing army of 100,000 men, a militia of 50,000, an air force of 3,000 men (with 75 fighters, 12 bombers, 30 training and reconnaissance planes, and 5 cargo aircraft), a navy of 10,000 men (with two cruisers), and a police force of 50,000 men. And in some measure the ROK did slightly increase the size of its army by reductions in its police force: by June 1950

the ROK had eight divisions (82,000 men) and an 18,000-man police force. But Mr. Kenneth C. Royall, U.S. Secretary of Army, and Lt. Gen. Albert C. Wedemeyer, the Army's chief planner, visiting Korea in February 1949, explained to President Rhee that Korea should not burden its economy with excessive armed forces but should, instead, concentrate on economic stability.[52]

President Rhee continued to insist that the Republic of Korea needed an air force to balance its military strength. At Rhee's request Maj. Gen. Claire L. Chennault (USAF Retired) drew up a plan for a 99-plane air force, including an air striking force of 25 F-51's. When General MacArthur's opinion of the Chennault plan was sought, he replied that such a force was not essential to the maintenance of internal order in Korea, would increase the possibility of war between North and South Korea, and would lend credence to Communist charges that the United States was fostering an armaments race in Korea.[53] United States policy did allow the ROK to possess air liaison aircraft and detachments, and, using this wedge, the ROK authorities activated a separate air force on 10 October 1949. At this time they assured the United States that the seeming expansion meant no more than the establishment of air representation at the ROK joint chiefs of staff level.[54] In April 1950 the ROK Air Force mustered 187 officers and 1,672 enlisted men, and 39 of its 57 pilots were counted as trained. The ROKAF's 16 planes (8 L-4's, 5 L-5's, and 3 T-6's) were located at Kimpo and Seoul airfields, and it had detachments at Suwon, Taegu, Kwang-ju, Kunsan, and Cheju-do.[55]

As the ROK military forces attained strength and effectiveness, the United States reduced its occupation forces in Korea. At last, on 29 June 1949, the last American military units departed Korea, and at midnight on 30 June 1949 General MacArthur inactivated the command which had been called U.S. Army Forces in Korea.[56] Only a small U.S. Korean Military Advisory Group remained in Korea. It numbered about 500 persons, and, since it was responsible to the State Department, its work was immediately supervised by the American ambassador in Seoul. Effective with the inactivation of USAFIK, the U.S. Far East Command no longer had any responsibility for the defense of the free Republic of Korea.[57]



ROK President Syngman Rhee

The withdrawal of American troops from Korea did not change the objectives of the United States government toward Korea. This government continued to stand for a unified, free, and democratic Korea. These, however, were political objectives, to be obtained through peaceful measures. No statesman had ever suggested that the United States should go to war to

unify Korea. In 1947 the United Nations had also accepted the objective that all Korea ought to be united under a free and popularly elected government. The United Nations had sponsored the creation of the Republic of Korea and recognized it as the only lawful government in Korea.

But what did the United States intend to do if the Republic of Korea was attacked by an external aggressor? In a speech before the National Press Club in Washington on 12 January 1950, U.S. Secretary of State Dean Acheson offered an answer to this question. He said the the defensive perimeter of the United States ran from the Aleutians to Japan, then to the Ryukyus, and then to the Philippines. The United States military forces held defensive positions along this line, and this perimeter of defense would be unilaterally defended by the United States. Should an attack occur in some other area in the Pacific, Acheson stated that initial reliance for resistance to such an attack would be expected from the people subjected to the attack and "then upon the commitments of the entire civilized world under the Charter of the United Nations which so far has not proved a weak reed to lean on by any people who are determined to protect their independence against outside aggression."[58] Secretary Acheson's speech was criticized by those who said that it informed the Communists that the United States did not intend to defend Korea or Formosa. In the soft-spoken language of diplomacy, however, Acheson had actually stated that the United States would unilaterally defend areas which were strategically important to it and would participate with the United Nations to check aggression against other free peoples in the Pacific.[59]

Soviet policy toward Korea in the years between 1945 and 1950 can only be surmised from Communist actions in Korea. In 1945 and 1946 the Russians may have intended to honor their commitments. At any rate, shortly after their occupation began, Soviet forces looted many of North Korea's industries. Such capital goods as an entire aviation depot at Wonsan and part of the electrical generating equipment at the mammoth Sui-ho hydroelectric plant on the Yalu River were expropriated.[60] Soon, however, the Russians must have realized that they had fallen heir to a major industrial region built by the Japanese, and before long this industrial potential was incorporated into a growing Communist economic complex in the Far East. Electric power, tungsten, high-grade steel, and other economic goods flowed from North Korea into Communist China and the USSR to repay these powers for services and military supplies furnished to the "People's Democratic Republic of Korea."

At the beginning of their occupation the Russians transplanted to Korea political cadres of Communist indoctrinated Korean *émigrés,* who had been nurtured on Soviet soil during the years of Japanese occupation.[61] A North Korean army began to form around the core of two battle-hardened divisions made up of Korean exiles and refugees who had served in Soviet forces, some of them at Stalingrad. Later on, when the Chinese Communists triumphed in China, they, too, sent to Korea battle-wise cadres and entire units of the "Korean Volunteer Army," which had seen field service against the Chinese Nationalists. In 1949 and 1950 the Chinese Communist forces passed to Korean control three complete divisions of Koreans who had either volunteered for service with the Communists or had been conscripted in

Manchuria. On 25 June 1950 the North Korean People's Army (NKPA) totaled about 100,000 troops and was composed of eight infantry divisions, three border constabulary brigades, and an armored brigade.[62] The NKPA infantry divisions and the armored brigade were freely provided with the Soviet military equipment which they required for a "blitz" assault. In the spring of 1951 Andrei Y. Vyshinsky would frankly admit to the United Nations that Russia had "sold" this offensive military equipment to the NKPA.[63]

The North Korean Air Force (NKAF) was formed under Russian tutelage and was equipped with Soviet-built aircraft. With headquarters at Pyongyang, the NKAF comprised an air division, which was subdivided into a fighter regiment, a ground-attack regiment, and a training regiment. On the day the war began the North Koreans apparently possessed 62 IL-10 aircraft, 70 Yak-3 and Yak-7B fighters, 22 Yak-16 transports (similar to a USAF C-45), and 8 PO-2 trainer aircraft. Most of the 132 combat planes were based at the two airfields near Pyongyang and at the airfield at Yonpo, on the eastern coast of Korea below Hungnam. The North Koreans also made some use of the airfield at Wonsan, and they were building advanced strips near the 38th parallel at Sinmak, Pyonggang, Kumchon, and Kansong. On 26 June a detachment of ten Yak-7B's and two IL-10's moved from Pyongyang to Sinmak.[64] The Ilyushin and Yakovlev aircraft were obsolete in a jet air age, but they were good conventional aircraft. Many of the North Korean pilots were young volunteers with limited flying experience, but they were cocky, aggressive, and eager to fight. The NKAF was "young" and incompletely trained, but it was clearly an offensive force. On the eve of hostilities FEAF stated that the North Korean Air Force had the capability to destroy the meager ROKAF and then materially to assist the North Korean ground troops as they moved into South Korea.[65]

Despite the secrecy that surrounded Communist activities, the Korean Military Advisory Group received some hints that Chinese-trained units had been joining the North Korean army. On 25 May 1950 KMAG knew that the North Koreans had six regular divisions located between the 38th and 39th parallels, and it suspected that seven other divisions were being formed from constabulary and recruits near the Manchurian border, an area from which little intelligence information could be obtained.[66] By the spring of 1950 the North Korean army was reaching a strength which would permit it to attack, but its aggressive intentions could only be conjectured. On 8 December 1949 KMAG reported that no immediate invasion seemed imminent, but that, following the completion of the Chinese Communist campaigns in China, additional troops would be channeled into North Korea, increasing the threat to South Korea. On 10 March KMAG relayed a report that the North Koreans would invade sometime in June 1950.[67] In May 1950 Ambassador Muccio predicted that the ROK would be increasingly threatened by the transfer of men released from the successful Chinese Communist campaigns.[68]

Military intelligence agencies in the Far East correctly assessed the build-up of North Korean forces, but they were unable to agree as to the likelihood of a Korean war. In April 1950 Far East Command intelligence believed "that there will be no civil war in Korea this spring or summer....The most probable course of North Korean

action is the continuation of its efforts to overthrow the South Korean government by the creation of chaotic conditions in the republic through guerrilla activities and psychological warfare."[69] On 1 June 1950 FEAF intelligence recognized that the North Koreans had enough military power to undertake a war against the Republic of Korea at any time it selected. "South Korea," predicted FEAF, "will fall before a North Korean invasion, which will be initiated whenever Soviet strategy so dictates."[70]

### *4. Decisions at Washington and Lake Success*

Early on the evening of Saturday, 24 June 1950,* press news flashes first informed Washington that the Communists had broken the peace in Korea. At 2126 hours the State Department received the first official word from Seoul. A telegram from Ambassador Muccio stated that the North Koreans had apparently launched an all-out attack against the Republic of Korea. The State Department promptly relayed this information to the Defense Department, to President Harry S. Truman at Independence, Missouri, and to United Nations Secretary General Trygve Lie at his residence in Forest Hills, Long Island.[71]

The report from Korea sounded like a major violation of the United Nations charter's ban on military aggression to Secretary General Trygve Lie, and he informed the State Department that he was prepared to bring the Security Council together to consider the matter. Before making a formal recommendation to the Security Council, however, Lie preferred to obtain a report from the United Nations Commission on Korea. The next morning, 25 June, Lie received a dispatch from Dr. Liu Yu-wan, chairman of UNCOK, which confirmed the aggression and suggested that it be brought before the Security Council. That afternoon at Lake Success the Security Council adopted a draft resolution submitted by the United States. The vote was 9 to 0, with Russia absent and Yugoslavia abstaining. This resolution noted "with grave concern the armed attack upon the Republic of Korea by forces from North Korea" and determined that this action constituted a breach of the peace. It called for the "immediate cessation of hostilities" and directed the authorities of North Korea "to withdraw forthwith their armed forces to the 38th parallel." It requested "all Members to render every assistance to the United Nations in the execution of this resolution and to refrain from giving assistance to the North Korean authorities."[72]

In Washington the State and Defense Departments thought that the United Nations' resolution of 25 June met the needs of the immediate situation. On the preceding night Secretary Dean Acheson had told President Truman that he was not immediately needed in Washington, but at midday on 25 June he was less certain. As Truman was

*There is a time difference of fourteen hours between Korea and Washington. For example, 0400 hours, Sunday, in Korea is the same time as 1400 hours, Saturday, in Washington. The times and dates used are those of the place where the events described occurred.

On alert at a base in Japan.

sitting down to a Sunday dinner in Independence, Acheson reached him on the telephone. The Security Council, Acheson said, would probably vote the cease-fire resolution, but the North Koreans were likely to ignore it. Some decision was needed at once as to the degree of aid or encouragement which the United States would be willing to extend to Korea. Truman decided to return to Washington at once, and he asked Acheson to schedule a dinner-time conference at Blair House.[73]

At 1915 hours that night the President landed at Washington and drove directly to his temporary residence at Blair House. Here were assembled the key officers of the Departments of State and Defense, including the Joint Chiefs of Staff: General Omar Bradley (chairman), General J. Lawton Collins (Army), Admiral Forrest P. Sherman (Navy), and General Hoyt S. Vandenberg (Air Force). Most of the talk over the dinner table reflected a hope that the South Koreans could hold with the help of American arms and equipment which General MacArthur was sending them. The main theme of conversation, however, was that the Communists appeared to be repeating patterns of aggression similar to those acts which had set off World War II.

After dinner President Truman opened the conference with the statement that he did not wish to make decisions that night, except such as were immediately necessary. Secretary Acheson then presented three recommendations which had been prepared by the State and Defense Departments: that MacArthur would send arms and ammunition to Korea, that MacArthur would furnish ships and planes to assist and protect the evacuation of American dependents from Korea, and that the U.S. Seventh Fleet would be ordered northward from the Philippines to report to MacArthur. Truman asked for comments, and the discussion worked around to what the United States might have to do to save South Korea. Vandenberg and Sherman thought that air and naval aid might be enough. Collins stated that if the ROK Army was really broken, American ground forces would be needed. At the end of the meeting President Truman directed that orders be issued implementing the three recommendations made by the State and Defense Departments.[74] Shortly after the Sunday night meeting broke up the Pentagon put these orders on the teletype to General MacArthur. As has been seen, they were received in Tokyo during the midafternoon of Monday, 26 June, Far East time.

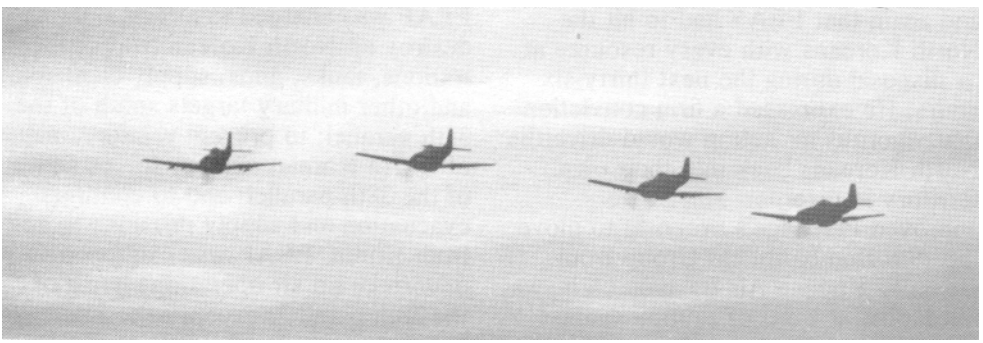
In Washington and Lake Success, on 26 June, the news received from Korea was distressing. Far from obeying the Security Council's cease-fire order, the North Koreans continued their attack and openly called upon the government of the Republic of Korea to surrender. At 1929 hours Secretary Acheson telephoned President Truman and told him that reports from Korea were so bad that another conference was advisable. Truman instructed Acheson to summon the same group that had conferred the night before to another Blair House meeting at 2100 hours.

When the second Blair House conference assembled, General Bradley stated that General MacArthur's dispatches made it apparent that the ROK forces could not hold Seoul and were, in fact, in danger of complete collapse. As senior cabinet officer, Secretary Acheson spoke first. He said that the Security Council would meet again on the next afternoon, Tuesday, and at this time the United States would press for the adoption of a resolution recommending assistance to the South Koreans. But there was not

time to wait for the additional resolution. Acheson therefore recommended that the U.S. Navy and Air Force be ordered to provide the fullest possible cover and support to South Korean forces south of the 38th parallel. He repeated a suggestion that he had made the night before: that the U.S. Seventh Fleet be ordered to prevent any attack against Formosa, and that the Chinese Nationalists "be called upon" to cease any military action against the Chinese mainland. Acheson also recommended increased American military aid to the Philippines and Indo-China. No one objected to these recommendations. President Truman approved them, and at 2140 hours the second Blair House conference broke up.[75]

Before midnight the Joint Chiefs had MacArthur and his staff assembled for a teleconference. The Joint Chiefs of Staff now stated that all restrictions preventing FEAF from supporting and assisting in the defense of ROK territory were lifted for operations below the 38th parallel. Similarly, they continued, Navy forces might be used without restriction against aggressor forces in coastal waters and sea approaches to the Republic of Korea, south of the 38th parallel. The purpose of the change in orders, stated the Joint Chiefs, was to clear North Korean forces from the Republic of Korea.[76]

Because of delays at Lake Success President Truman had ordered American forces into action several hours before the Security Council adopted a resolution specifically recommending that member states furnish assistance to the Republic of Korea. Secretary General Trygve Lie nevertheless considered Truman's order to be "fully within the spirit of the Council's resolution of June 25." "I, for one," said Lie, "welcomed the United States' initiative." At Lake Success it was clear that seven votes—the required majority—favored armed assistance to the Republic of Korea, but the Security Council had been holding up a vote until the delegates from India and Egypt could obtain instructions from their home governments. Finally, in the evening hours of 27 June, the Security Council waited no longer, but adopted by a vote of seven in favor and one (Yugoslavia) opposed a resolution which recommended that "the Members of the United Nations furnish such assistance to the Republic of Korea as may be necessary to repel armed attack and restore international peace and security in the area."[77] Once again the Soviet delegate, who could have vetoed the resolution, did not attend the meeting of the Security Council.



Mustangs headed for an early dawn mission.

*5. Battle for the Han River Line*

Such was the difference in time between Washington and Tokyo that it was midafternoon on 27 June when General MacArthur received the instructions directing him to use air and naval forces in support of the South Koreans. That morning General Stratemeyer had reached Haneda Airfield at 1120 hours, and he had immediately reassumed command of the Far East Air Forces. However, General Partridge, who would serve as acting vice-commander of FEAF for several days, attended the teleconference with the Joint Chiefs at the Dai Ichi building that afternoon. As Partridge saw it, the United States at this time "directed a major reversal of policy."

As soon as the teletypewriters which had delivered the new instructions from Washington went silent, General MacArthur turned to Partridge with a volley of oral orders. Success in Korea, said MacArthur, depended largely upon measures which would restore the spirits of the army and people. He wanted Partridge to get the Air Force into action immediately. Far-reaching results could be achieved if the air effort could be made effective that night and next day. He stressed again and again that FEAF had to hit the North Koreans with every resource at its disposal during the next thirty-six hours. He expressed a firm conviction that vigorous air action would drive the North Koreans back into their own territory in disorder. MacArthur approved Partridge's proposal to move the 19th Bombardment Group from Guam to Kadena Air Base on Okinawa, but he had a word of caution against other unit movements. He warned that FEAF must continue to defend Japan against such actions as the Russians might possibly undertake. When he was finally done with Partridge, General MacArthur had other decisions. As CINCFE, he would assume operational control over the Korean Military Advisory Group. General Church's survey party would become a command group and would serve as the Advanced Echelon, General Headquarters, Far East Command. To General Partridge, General MacArthur appeared "almost jubilant" as the conference ended.[78]

Operations staffs at every level in the Far East Command now hurriedly prepared and published orders. Up until this time the Far East Command had had no combat mission toward Korea, and, consequently, it had no contingent plan for such operations. General MacArthur formally assumed operational control of all American military activities in Korea, such control to be exercised through Brig. Gen. John H. Church, who was designated as chief, GHQ Advance Command and Liaison Group in Korea (GHQ ADCOM).[79] At 1800 hours General MacArthur published his operations instruction detailing the new mission relative to Korea and Formosa. FEAF was charged to attack and destroy all North Korean troop concentrations, tanks, guns, supply elements, and other military targets south of the 38th parallel; to prevent reinforcement of North Korean military forces south of the 38th parallel; and to continue evacuation and supply missions to and from Korea. FEAF was cautioned to undertake no air operations north of the 38th parallel, except in self-defense. In another paragraph of these same instructions the Naval Forces Far East

F-80's move toward Communist frontline positions.

(NavFE) was charged to attack and destroy all enemy vessels found in Korean coastal waters south of the 38th parallel; to destroy North Korean invasion forces along the coasts of South Korea; and to isolate Formosa from the Chinese mainland. In yet another paragraph the Eighth Army was directed to support FEAF and NavFE and to provide logistical support to the Republic of Korea.[80]

At the Meiji building FEAF operations officers had not waited for the formal CINCFE operations orders but had been implementing General MacArthur's verbal orders. To the Fifth Air Force went instructions to dispatch visual and photo reconnaissance sorties to Korea. Another urgent message directed the Fifth Air Force to make B-26 attacks against the enemy all night long on 27/28 June.[81] Next came a schedule of missions for 28 June. The Twentieth Air Force was ordered to move all combat-ready B-29's from Guam to Kadena and to dispatch them against such targets of opportunity as assemblies of tanks, artillery, and military columns.[82] The Fifth Air Force was directed to make extreme efforts with two squadrons of B-26's, four squadrons of F-80's, and two squadrons of F-82's. Targets were to be tanks, artillery and military columns, supply dumps, ground transport, bridges, and moving traffic in the area between the 38th parallel and the front lines.[83]

During the evening of 27 June General MacArthur laid another operational task upon FEAF. NavFE and the Eighth Army had been preparing to dispatch two vessels to Korea with ammunition, but these waterborne lifts would not get there soon enough. Accordingly, FEAF would airlift 150 tons of ammunition from Tachikawa to Suwon on 28 June and 200 tons per day thereafter until about 1 July, when

The Han River bridge near Seoul.

water transport would begin to take effect. This airlift was primarily utilitarian, but the CINCFE staff also reasoned that air shipments of ammunition would demonstrate the immediacy of American aid to Korea. The Eighth Army would provide the ammunition and operate the port of aerial embarkation at Tachikawa. Receiving this mission, the Fifth Air Force made the commander of the 374th Troop Carrier Wing responsible for all airlift to Korea, and he was authorized to arrange for fighter cover from the 8th Fighter-Bomber Wing.[84]

Before nightfall on 27 June the Fifth Air Force made the deployments required for the next day's missions. Four RF-80's of the 8th Tactical Reconnaissance Squadron (Photo Jet) moved down from Yokota to Itazuke. The flight echelon of the 3d Bombardment Group and the 13th Bomb Squadron moved from Johnson to join the 8th Squadron at Ashiya.[85] Because of circumstances which it could not control, however, the Fifth Air Force's execution of light bomber strikes against Korea on the night of 27/28 June was somewhat disappointing. For one thing, six of the 8th Squadron's ten B-26's were flying continuous cover for the refugee ship *Reinholte*, which was still plodding along toward Fukuoka. The other B-26's were sent out from Ashiya shortly before dark, with instructions to find and attack a Communist tank column reported to be somewhere north of Seoul. Weather and darkness forced these planes to return to base without engaging the enemy.[86] As daylight faded, low clouds began to close in the airfield at Ashiya, and the next B-26 mission could not depart until 2032 hours. One of these five planes aborted for mechanical

causes, but the other four went on to Korea, only to find the battle area blanketed by clouds.[87]

The bad weather was beyond human control, but the lack of results was extremely annoying to Maj. Gen. Edward M. Almond, who, as MacArthur's chief of staff, was impressed with the need for air action. During the night Almond telephoned General Partridge and several times, repeated that in order to save the South Koreans, FEAF would have to display visible supporting actions. Almond stated that he "wanted bombs put on the ground in the narrow corridor between the 38th parallel and Seoul, employing any means and without any accuracy." General Partridge called Brig. Gen. Edward J. Timberlake, deputy commander of the Fifth Air Force, and General Kincaid and spurred them "on to a full-out effort."[88]

On the morning of 28 June the southward drifting polar weather front stood over the airfields on Kyushu, but the Fifth Air Force had to fly, weather or no weather. Into the murky dawn from Itazuke Lt. Bryce Poe II took off alone in his RF-80A to reconnoiter and photograph the vanguard of the NKPA. Terminal weather at Itazuke was the "foulest imaginable," but Poe found target weather in Korea to be clearing, and he accomplished a successful mission—the first reconnaissance sortie of the Korean war and the first USAF combat jet reconnaissance sortie of all time.[89] The tactical weather report that Poe brought back was encouraging. If pilots could get airborne and then, at the completion of their missions, get back down through the low-lying clouds for safe landings, they could fly strikes to Korea.

Off from Ashiya at 0730 hours, a 3d Bombardment Group strike force of 12 B-26's bombed the busy railway yards up near the 38th parallel at Munsan, and then the light bomber crews swept southward at low level over the railway and nearby highway, strafing and rocketing targets of opportunity. This tree-top high attack was costly to the Reds, but hostile ground fire riddled many of the B-26's. One lost an engine and set down at Suwon; a second limped back to Ashiya where it had to be junked; a third crew lost sight of the weather-shrouded runway at Ashiya and crashed, killing everyone aboard. Later in the day the 3d Group sent out another mission of 12 B-26's. Three of these planes aborted from mechanical causes, but the others attacked road and rail traffic north of Seoul.[90]

The B-26 light bombers had enough fuel to let them take chances, but prevailing 200-foot ceilings and limited visibilities at Itazuke made F-80 operations risky. It was 310 miles from Itazuke to the Han River, a distance that stretched the range of the jet interceptors. All of them would return to base with little fuel. If they could not find enough visibility to allow them to land without delay, the pilots would have to bail out and save themselves. The risk was great, but in the middle of the morning and again in the middle of the afternoon Colonel Price dispatched six flights of F-80's, each of four planes. North of Seoul the Shooting Star pilots found the hunting good. Road nets were crammed with North Korean tanks, trucks, troops, and artillery, and the F-80 pilots left fires visible for 50 miles.[91] In all, the F-82 squadrons flew 11 sorties to Korea during the day. Most of these planes flew top cover for the transports which were landing at Suwon. One 68th Squadron fighter developed mechanical trouble and had to land at Suwon.[92]

In the latter part of the afternoon four B-29's of the 19th Bombardment

Group arrived over Korea. As they were briefed to do, two of these Superfortresses flew up the parallel road and rail lines between Seoul and Kapyong and the other two covered similar arteries between Seoul and Uijongbu. Each bomber crew toggled out bombs against anything that looked to be worth a bomb.[93] It was a strange employment for the strategic bombers, but General MacArthur had called for a maximum show of force.

The American embassy in Korea liked the strikes which FEAF flew on 28 June, but, for the following day, it suggested that FEAF center its attacks in the vicinity of Seoul. Even if there were no worthwhile objectives, the embassy believed that constant visual display of American airpower was "fundamental" if ROK troops on the south banks of the Han were to hold their ground.[94] But while FEAF was flying "morale" attacks, the North Korean Air Force was having a field day. At about 1330 hours on 28 June four Yaks strafed Suwon Airfield, disabling the F-82 and B-26 which had been forced to land there. At about 1830 hours six other Yaks, working in pairs, appeared over Suwon. They jumped a 6th Troop Carrier Squadron C-54 in the landing pattern and sieved the transport before its pilot could hit the deck and head back to Ashiya for an emergency landing. These same Yaks caught a 22d Troop Carrier Squadron C-54 on the ground and destroyed it.[95] From Taejon Ambassador Muccio warned General Stratemeyer not to land any more transports at Suwon unless fighter cover was overhead.[96]

So far the Far East Command had no definite plan of action for its operations in Korea, but Brig. Gen. John H. Church's ADCOM group was beginning to function. After dark, on 27 June, the ADCOM group landed at Suwon and proceeded into the town of Suwon to establish its command post in a school building, which already sheltered the headquarters of the ROK Army. First reports from the Korean commander were not good. He had lost about 40 percent of his troops, the major portion of his automatic weapons, and most of his few artillery pieces. Although the ROK commander did not know exactly where his units were, the ADCOM group posted a situation map indicating where the ROK troops were believed to be.[97]

The fate of South Korea looked gloomy, but General Church saw some ray of hope. He thought that the South Korean troops were as good as the North Koreans, the major difference being that the latter had the initiative. If the ROK's could be made to hold anywhere, it would be behind the shelter of the broad and swiftly flowing Han River. This line would have to be held. General Church therefore announced his intention to keep ADCOM at Suwon. This location was convenient to the Han battle line and was also the last remaining airfield in central Korea. On the negative side, Suwon had no communications with the outside world. To make telephone calls to Tokyo, General Church had to drive about 17 miles south of Suwon to a telephone relay station. Although he used this line, it was not secure against possible wire taps.[98] Sometime on 28 June ADCOM secured a high-frequency radio which had belonged to KMAG, only to find that the assistance group had destroyed its codes. The only cryptographic device immediately at hand was Mr. Muccio's State Department code, and messages so encoded would have to go all the way to Washington for decoding and retransmission to Tokyo.[99]

A young USAF officer, Lt. Col. John McGinn, was one of the most active members of the ADCOM group. Early on the morning of 28 June, when transport aircraft began to land at Suwon, Colonel McGinn went to the airfield, rounded up some trucks and Korean laborers, and began to organize the Suwon airhead. During the morning General Timberlake sent from Ashiya a battery of quadruple-mounted .50-caliber machine guns, served by a detachment of men from the 507th Antiaircraft Artillery Battalion, and a tactical air-control party, with two very high-frequency radio jeeps. The VHF radios did not have enough range to reach back to Japan, but McGinn put one of them to work controlling air traffic and used the other to communicate targets to fighters which circled above Suwon. To get these targets, McGinn drove the six miles separating the airfield from the command post, studied the Korean situation map in General Church's office, and selected likely looking objectives several miles out in front of known ROK positions. Recognizing the security violation involved, McGinn broadcasted several of the targets in the clear to fighters overhead. He also wrote target descriptions (he had no American maps) and gave them to transport pilots to carry back to Itazuke. Late in the afternoon Warrant Officer Donald Nichols appeared at Suwon with several recommended air targets. At Ambassador Muccio's request, Nichols was now maintaining personal liaison with the ROK chiefs of staff. His air targets included the Seoul main railway station, the former American motor pool in Seoul where 30 Communist tanks were reported to be parked, and an enemy propaganda radio transmitter in Seoul. Nichols had already annotated the locations of these targets on Korean maps, and McGinn sent them back to Itazuke by a departing transport.[100]

At about 0300 hours on 29 June General Church awakened Colonel McGinn with a request that he arrange a B-29 strike against the Han River bridges at Seoul and Communist troops massing on the north bank of the river, if possible before dawn. The retreating ROK's had blown the highway bridge but they had left one railway bridge intact. McGinn explained that it would be impossible to divert any B-29's on such short notice and with such inadequate communications, but he nevertheless used the State Department code and radioed a request to CINCFE.[101] At approximately the same hour the Superfortresses were taking off from their base at Kadena, under instructions to destroy the buildings and facilities at Kimpo Airfield and the main railway station in Seoul. Had anyone in Tokyo known of General Church's request, the B-29's might have used their demolition bombs against the Han bridges (although the diversion of a medium bomber strike, once briefed and en route to a target, is seldom productive of good results), but McGinn's message did not reach FEAF until 1255 hours on 29 June.[102] At 0800 hours that morning nine 19th Group B-29's had walked their 500-pound bombs across Kimpo. The bombing, done from altitudes as low as 3,000 feet, was excellent. Two Yaks and an unidentified fighter contested the attack, but B-29 gunners shot down one of the Yaks and sent the unidentified plane away trailing smoke. While the larger formation was attacking Kimpo two other B-29's bombed the main railway station at Seoul. According to a Central Intelligence Agency report, this attack killed or wounded a large number of North Korean troops.[103]

In his air-intent statement for 29 June General Stratemeyer had announced that the B-26 light bombers would give close support to the ROK ground troops. As soon as the Han bridge requirement was made known, the Fifth Air Force accordingly sent the light bombers against the objective. These planes tore up the flooring which the Reds were laying on the center bridge of the three parallel Han railway bridges. During the day the Fifth Air Force was able to fly 22 other sorties in direct support of ROK ground troops. Once again Colonel McGinn handled this direct support with finesse. As he had asked, the 8th Wing sent Lieutenant Moran to Suwon early in the morning. Moran landed his F-82, and he and his radar operator went with McGinn to General Church's office where they sketched an overlay of the ADCOM situation map. Moran took the overlay back to Itazuke, where, during the remainder of the day, it served to indicate the locations of friendly and hostile ground troops. Since other aircraft were occupied, the F-82 fighters gave most of the close support that was flown. For the first time in Korea the 68th Squadron attacked with napalm, using jettisonable fuel tanks as fire bombs against hostile ground positions.[104]

In deference to the Communist air threat, the 8th Fighter-Bomber Wing

Sgt. Glenn Roush and Capt. Gail Farnham, Tactical Air Control Party, transmit information to fighters overhead.

used its F-80 fighters in a novel employment. Fully loaded with .50-caliber ammunition (but carrying no external bombs or rockets), the F-80's flew to the Han and established patrol orbits at 10,000 feet. They remained on these stations for fifteen to twenty minutes, and if enemy aircraft appeared they engaged them. If not, the F-80's swooped over Seoul and made one or two passes against hostile road traffic before returning to Itazuke. During the day Red pilots made (or attempted to make) six strafing and bombing attacks against Suwon Airfield, one of which was mounted by six Yaks. Most of these attacks were thwarted by the jet fighter patrols, and during the morning Lieutenants William T. Norris and Roy W. Marsh shot down an LA-7 and an IL-10, each pilot scoring one victory. But at another hour no friendly fighters were overhead, and a Communist bombing strike hit and completely destroyed a C-54 transport.[105]

As an experienced air commander General Stratemeyer knew quite well that the first task of tactical airpower is to destroy the enemy air force and attain friendly air superiority, but his orders had not permitted him to deal effectively with the North Korean Air Force. Now the enemy air threat was getting out of hand, and on the afternoon of 29 June General MacArthur wanted to fly to Suwon to get a first-hand view of the ground fighting. Recognizing the risk involved, the 8th Fighter-Bomber Wing scheduled a heavy screen of F-80's for the *Bataan* (MacArthur's C-54) and pressed into escorting service a flight of F-51 Mustangs which it was preparing to turn over to ROK pilots. It was well that the Mustangs had come, for while MacArthur was in conference at the Suwon schoolhouse four Yaks approached undetected through scattered clouds and attempted to attack Suwon Airfield. All the conferees went outside to watch the air fight. The Yaks appeared slightly more maneuverable, but the Mustangs were faster. As a result, Lt. Orrin R. Fox (80th Squadron) scored two kills and Richard J. Burns (35th Squadron) and Harry T. Sandlin (80th Squadron) each shot down a Yak.[106]

General MacArthur was forcibly impressed with the importance of establishing a general air superiority in Korea. "North Korea air, operating from nearby bases," he subsequently informed the Joint Chiefs, "has been savage in its attacks in the Suwon area."[107] General Stratemeyer, who was a member of the MacArthur party,

An Army paratrooper coordinates a field problem after being dropped by FEAF Combat Cargo planes in Korea.

added another cogent argument: constant aerial cover was exhausting air effort which might otherwise have served combat purposes. Stratemeyer also pointed out that in order to get control of the air he would have to be cleared to attack Communist airfields in North Korea. Deeming the emergency grave enough to justify his action, MacArthur verbally authorized Stratemeyer to commence air attacks against enemy airfields north of the 38th parallel.[108]

Almost as soon as American planes were permitted to enter North Korea, the 8th Tactical Reconnaissance Squadron began to fly photo cover of all known North Korean airfields.[109] But in the late afternoon of 29 June these hostile airfields were not adequately targeted. Notwithstanding the lack of target information and of needed bombing tables, the 3d Bombardment Group at 1615 hours sent 18 B-26's to attack the enemy's main military airfield at Pyongyang. Arriving unannounced just before dusk, the light bombers placed their fragmentation bombs along the hangar line, ramps, and revetment areas. Only one Yak-3 opposed the attack, and it was shot down by S/Sgt. Nyle S. Mickley, a gunner aboard one of the light bombers. Bombing results were described as excellent, and the 3d Group estimated that the raid destroyed 25 enemy aircraft on the ground.[110] To its other laurels the 3d Bombardment Group added the distinction of being the first air unit to attack into North Korean territory.

Back in Tokyo during the early evening of 29 June FEAF operations officers were planning and ordering the next day's air missions. In recognition of the gravity of the ground situation, Fifth Air Force aircraft would continue to provide local air superiority and support for the ROK ground troops. In recognition of the enemy air threat, the Twentieth Air Force was directed to send its B-29's against hostile aircraft at Wonsan Airfield.[111] In the early morning hours of 30 June these operations orders had to be changed. Shortly after midnight General Church established secure communications into Tokyo, and he was insistent that the B-29's ought to attack the Han bridges and the enemy troops massing on the north bank of that river. The question now was whether or not, and how soon, the 19th Bombardment Group could change its force preparations from those made to attack the airfield at Wonsan to those required to hit troops and bridges at Seoul. The air echelon of the 19th Group had just completed a 1,200-mile change of station, and it had been able to bring to Kadena only a few maintenance and service personnel.[112] The B-29's were already loaded with 260-pound fragmentation bombs; to unload and reload the bombers with other ordnance would take a miminum of six hours.[113] The frags would be useless against bridges, but they would serve antipersonnel purposes. FEAF therefore directed the Twentieth Air Force to scratch the Wonsan strike and to attack troop concentrations and landing craft along the north bank of the Han River east and west of Seoul.[114]

As a result of the change in operations orders, nearly all of FEAF's air effort on 30 June was again employed against targets of opportunity north of the Han River. At intervals during the morning 15 B-29's strewed frag bombs on enemy troops along the river. The results of these attacks remained "unknown" to FEAF, but one of General Church's officers told him that the strikes "were too distant from the river to be effective."[115] The 3d Bom-

bardment Group sent 18 B-26 sorties to strafe, bomb, and rocket enemy traffic and troops in and around Seoul. One flight from the 13th Squadron, checking the status of the Seoul railway bridges early in the morning, discovered North Korean tanks, trucks, and other vehicles jammed up bumper to bumper, waiting to cross the center rail bridge. These vehicles could not go forward because the Reds had not finished the wooden decking and they were parked too close together to escape rearward. The B-26 flight swept in, wing to wing, using all of their offensive weapons in one murderous pass. All of the crews agreed that this strike must have hurt the Reds badly.[116]

The Shooting Star jet fighters from Itazuke continued to exploit the combined air-patrol and ground-attack tactics which they had devised and used the day before. Few enemy aircraft made an appearance, but Lt. Charles A. Wurster and Lt. John B. Thomas of the 36th Squadron bounced two Yak-9's and each destroyed one of the hostile planes. The strafing passes, flown by the F-80's after they completed their air patrols, usually accounted for several trucks or similar moving targets, and the speedy jets got in and away before the enemy hardly knew it. One unlucky pilot, however, flew through an electrical power line which left him just enough wing to get back to Suwon and bail out.[117] From his station at Suwon Airfield Colonel McGinn continued to manage air strikes in support of the South Koreans. Early in the morning a courier aircraft brought him gridded maps of Korea which had been printed in response to a request he had made two days earlier. The crews leaving Itazuke and Ashiya also carried these maps, and when McGinn had a supporting target he could call it out in grid coordinates. The maps were small scale, making it difficult to pinpoint the target, but the grid procedure was better than passing targets over the radio in the clear. Working as he was, almost single-handed, Colonel McGinn could not provide many close-support targets. During the day only 25 such sorties were flown in support of the ROK's.[118] Perceiving that McGinn needed assistance, FEAF directed the Fifth Air Force to establish in Korea, probably at Suwon, a tactical air-direction center, which could control tactical air operations in the forward areas.[119]

But time was rapidly running out for the Americans at Suwon. Late on the afternoon of 30 June ADCOM received reports that the South Korean defenses along the Han River were crumbling. The Reds had not been able to cross the Han bridges, but they had ferried tanks and troops across the river southeast of Seoul.[120] A little after 1700 hours Colonel McGinn was summoned to the schoolhouse headquarters in Suwon. General Church was not present (he was at the relay station making a telephone call to Tokyo), but his second-in-command informed all present that ADCOM would have to evacuate. All cryptographic material was destroyed, and everyone moved out to Suwon Airfield, where they were joined at approximately 2140 hours by General Church and Mr. Muccio. General Church was at first reluctant to leave Suwon, but after a discussion he directed that ADCOM would proceed southward by vehicle to Taejon, and there establish a new command post. Colonel McGinn then drove out onto the Suwon strip in one of the air-control jeeps and warned away two C-47's which were trying to land. He knew that he should burn the damaged aircraft parked alongside the strip, but

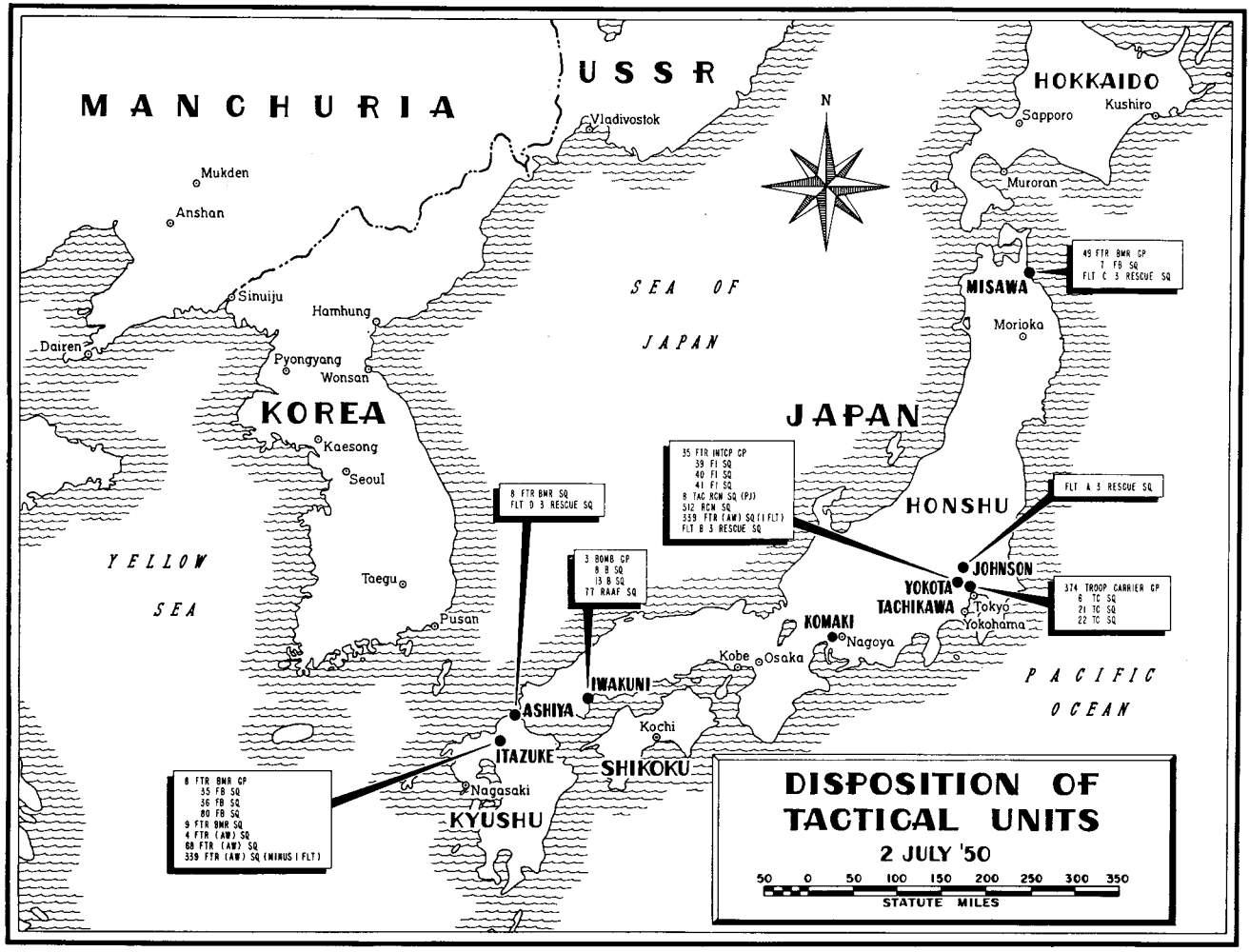
by this time a large number of Koreans had gathered at the airfield's gate. In the dark, no one knew whether they were friendly or hostile. Either way, McGinn reasoned, the Koreans would likely resist if he tried to burn the damaged airplanes. If they were ROK's, they would assume that he was an enemy agent; if they were Reds, they would shoot to try to save the planes for capture. McGinn therefore left the damaged planes as they were and formed up as a part of the ADCOM convoy.

As the American vehicles ran through Suwon's gate they met a desultory fire from among the crowd of Koreans, but no one was hurt. The antiaircraft artillery team served as rear guard for the column as it drove uneventfully southward through the rain to Taejon. Here all personnel assembled in KMAG's dependent housing area, dried their clothing, and made a head count. All Air Force people were present except one sergeant, and he hitch-hiked in the next day with the explanation that he had been asleep in a building at the airstrip and had waked the next morning to find everyone gone.[121] During the darkness, when the evacuation from Suwon was taking place, it had seemed that North Koreans were all around, but actually the enemy did not get to the airfield in any strength until 2 July. In this interim period the OSI agent, Donald Nichols, went back to Suwon with a party of Koreans and destroyed the damaged planes left there.[122]

### *6. New Decisions from Washington*

In Washington, on Thursday, 29 June, top government and military officials were gravely concerned about Korea. Diplomatic soundings indicated that the Kremlin would not openly intervene in the Korean fighting, but the news from Korea was progressively worse. At 0700 hours, Washington time, a teleconference with Tokyo brought the Pentagon up to date on the latest estimates. The ROK Army had sustained up to 50 percent casualties. Whether it could hold the Han line was problematical. If this natural defense line was broken, the next defenses would form east and west across Korea, roughly along the 36th parallel, slightly north of the city of Taegu. In such event the port and airfield at the coastal city of Pusan would be the main supply base, and FEAF would expect to use the Pusan Airfield as its main base and the strip at Taegu as an alternate airfield.[123] New American decisions were necessary, and at about noon Secretary of Defense Louis Johnson requested President Truman to schedule another top-level meeting concerning Korea.

The National Security Council, plus most of the other officials who had attended the Blair House conferences, assembled at 1700 hours, 29 June, in the White House. Here Secretary Johnson presented a proposed directive designed to broaden and supplement General MacArthur's instructions. He explained that FEAF and NavFE were hampered by the restriction which confined their attacks to South Korea.


MANCHURIA
U S S R
HOKKAIDO
Vladivostok
Sapporo
Kushiro
Muroran
Mukden
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SEA OF JAPAN
49 FTR BMR GP
7 FB SQ
FLT C 3 RESCUE SQ
MISAWA
Morioka
Sinuiju
Hamhung
Dairen
Pyongyang
Wonsan
KOREA
JAPAN
Kaesong
Seoul
35 FTR INTCP GP
39 FI SQ
40 FI SQ
41 FI SQ
8 TAC RCN SQ (PJ)
512 RCN SQ
339 FTR (AW) SQ (1 FLT)
FLT B 3 RESCUE SQ
8 FTR BMR SQ
FLT D 3 RESCUE SQ
HONSHU
FLT A 3 RESCUE SQ
YELLOW SEA
3 BOMB GP
8 B SQ
13 B SQ
77 RAAF SQ
Taegu
JOHNSON
YOKOTA
TACHIKAWA
Tokyo
Yokohama
374 TROOP CARRIER GP
6 TC SQ
21 TC SQ
22 TC SQ
Pusan
KOMAKI
Nagoya
Kobe
Osaka
IWAKUNI
PACIFIC OCEAN
ASHIYA
Kochi
ITAZUKE
SHIKOKU
Nagasaki
KYUSHU
8 FTR BMR GP
35 FB SQ
36 FB SQ
80 FB SQ
9 FTR BMR SQ
4 FTR (AW) SQ
68 FTR (AW) SQ
339 FTR (AW) SQ (MINUS 1 FLT)
DISPOSITION OF TACTICAL UNITS
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STATUTE MILES

His directive accordingly authorized MacArthur to extend air operations into North Korea against airfields, tank farms, troop columns, and such other military targets as were essential to the purpose of clearing South Korea of hostile forces and preventing unnecessary friendly casualties. Air operations, however, were to stay well clear of the borders of Manchuria and Siberia. Johnson then explained that it was necessary for the United States to secure a firm foothold in Korea, both to assist the Republic and, if worse came to worse, to insure the evacuation of all American nationals. Therefore, his directive permitted MacArthur to send to Korea such Army combat and service troops as were required to insure the retention of the ports and airfields at Pusan and Chinhae. The decision to send American troops to the port areas of southern Korea did not authorize their use in active ground combat. President Truman stated flatly that he would want to consider carefully with his top advisors before authorizing the introduction of American combat troops into the battle area. President Truman approved the directive, subject only to the rewording of a last item which told MacArthur what to do in the event of overt Russian intervention.[124]

The additional orders from the Joint Chiefs of Staff reached Tokyo after daylight on 30 June, and FEAF viewed them as a step in the right direction. North of the 38th parallel the enemy had accumulated supplies, assembled troop units, and launched his invasion forces without any opposition. For three days these hostile concentrations had been wide open to air attack, but FEAF had not been authorized to punish the enemy in his own territory. Had the air offensive against targets in North Korea been permitted earlier, FEAF believed that a relatively small effort "could have affected profoundly the Communists' ability to proceed with the war, and may well have induced their leaders to reassess the whole business as a rotten enterprise."[125] On 30 June General MacArthur authorized Stratemeyer to extend his air operations into North Korea "against air bases, depots, tank farms, troop columns, and other purely military targets such as key bridges and highway or railway critical points." MacArthur enjoined Stratemeyer to exercise especial care to insure that air operations were kept "well clear of the frontiers of Manchuria and the Soviet Union."[126]

The new directive from Washington broadened the horizons of air operations, but it did not give General MacArthur the authority to employ American Army troops in ground combat, an authority which he now desired. While at Suwon on the afternoon of 29 June General MacArthur had driven up the Seoul road to inspect ROK defenses along the Han. Before leaving Suwon he had told the ADCOM staff that he wanted the South Koreans to hold on at the Han until he could get some American ground troops into the area.[127] Upon returning to Tokyo MacArthur had written a long message reporting his findings to the Joint Chiefs. The South Korean army, he said, was down to not more than 25,000 effective soldiers. It was in confusion, had not seriously fought, and lacked leadership. A lightly armed force in the beginning, the ROK Army had made no plans for defense in depth and had lost many of its supplies and heavier equipment during its retreat. Now, at best, the South Koreans could only hope to fight behind natural barriers and to retard the North Korean advance. Whether they could hold the

Han River line was "highly problematical."

After this report of his observations General MacArthur made his recommendations. His only assurance of holding the Han line, and of later regaining lost ground, lay in the introduction of American ground combat forces into the Korean battle area. If authorized to do so, MacArthur intended immediately to move an American regimental combat team to reinforce the vital Suwon-Seoul area. He would then provide for a possible build-up of two divisions from troops in Japan for an early counteroffensive. "Unless provision is made for full utilization of the Army-Navy-Air team in this shattered area," said MacArthur, "our mission will at best be needlessly costly in life, money, and prestige. At worst, it might even be doomed to failure."[128]

The message bearing General MacArthur's estimates and recommendations was apparently written prior to his receipt of the new directive from the Joint Chiefs. At any rate, MacArthur's message reached the Pentagon at approximately 0300 hours, 30 June, Washington time. General Collins at once undertook to establish a teleconference with the Far East, and not many minutes elapsed before the consultation was in progress. General Collins explained that MacArthur's recommendations would require Mr. Truman's approval, and he added that the President would want to consider them carefully. Would not the new JCS directive serve MacArthur's purposes? MacArthur replied that the new directive did not give him sufficient latitude for effective ground operations. Already the Reds were breaking across the Han east of Seoul, and they were repairing the Seoul bridges as fast as FEAF's air opposition would permit. Perhaps it was already too late to save the Suwon airhead. "Time is of the essence," said MacArthur, "and a clear-cut decision without delay is imperative." At this juncture General Collins stepped outside the telecon room and telephoned the problem to Army Secretary Frank Pace. Secretary Pace telephoned President Truman. When MacArthur's urgent message was repeated to him, Truman immediately authorized MacArthur to move one regimental combat team to the combat area. Within a few hours he promised to give a decision on the additional build-up to two divisions in Korea. Back in the Pentagon, the teleconference was still in progress, and before it ended General MacArthur received authority to dispatch the regimental combat team to Korea.[129]

In the Far East General MacArthur lost no time directing the Eighth Army to begin to move Maj. Gen. William F. Dean's 24th Infantry Division from Kyushu to Pusan by air and water. He ordered FEAF to prepare to airlift the headquarters and two rifle companies of the 24th Division into either Suwon or Pusan.[130] Back in Washington, at 0930 hours on 30 June, the Secretaries of the Army, Navy, and Air Force and the Chiefs of Staff met President Truman in his White House office. After a thirty-minute discussion, President Truman approved two orders. The first authorized General MacArthur to employ in Korea such Army forces as he had available, subject only to the requirements for the safety of Japan. The other, suggested by Admiral Sherman, established a naval blockade of North Korea.[131] President Truman thus authorized what MacArthur had requested: "full utilization of the Army-Navy-Air team." The United States was going to war in defense of the Republic of Korea.

Gen. Douglas MacArthur discusses Inchon landings with aides.

# 2. *Plans and Preparations*

## *1. The United Nations Command Takes Shape*

The United Nations' decision to resist aggression in Korea with armed force posed new and complex problems to a world organization which lacked any staff capable of directing military operations and possessed no international police force. Looking toward an answer to both of these deficiencies on 3 July 1950, Secretary General Trygve Lie circulated a draft resolution which he hoped the Security Council might be willing to adopt. This resolution requested the United States to assume the responsibility for directing such armed forces as United Nations member states might furnish in response to the resolution of 27 June. It also proposed to establish a "Committee on Coordination of Assistance for Korea." Lie urged that this committee was necessary both to stimulate and coordinate offers of assistance and to provide some measure of supervision for the United Nations military security action in Korea. Lie suggested that the members of the committee would represent the nations who furnished troops to fight in Korea. Delegates of Britain, France, and Norway liked the idea of the supervisory committee, but Lie recorded that the United States "promptly turned thumbs down."[1]

While Lie was circulating his draft resolution, the American Departments of State and Defense were jointly preparing another draft resolution, which accepted the essence of Lie's proposal less the provision for the committee on coordination. The American resolution was adopted by the Security Council on 7 July. It established a unified command under the President of the United States; designated the United States as the executive agent for matters dealing with the Korean conflict; and requested the President to appoint a commander for the United Nations forces.[2] On 8 July President Truman named General MacArthur "as commander of military forces assisting the Republic of Korea which are placed under the unified command of the United States by members of the United Nations."[3] Several days later, in deference to world-wide political reasons, Washington advised MacArthur that, whenever practicable, he should identify himself as "Commander in Chief of United Nations Forces." On 24 July General MacArthur formally established the United Nations Command (UNC) and assumed the duties of Commander-in-Chief, United Nations Command (CINCUNC).[4]

Establishment of the United Nations Command gave recognition to the fact that nations other than the United States were fighting to repel aggression in Korea. As a working organization, however, the United Nations Command lacked significance. General MacArthur merely assumed another title, becoming CINCUNC as well as CINCFE, and General Headquarters, Far East Command, was additionally designated General Headquarters, United Nations Command, the whole establishment being neatly abbreviated as GHQ UNC/FEC. The CINCUNC did not report directly to the United Nations but to the President of the United States, through the U.S. Joint Chiefs of Staff. MacArthur's instructions were issued by the Joint Chiefs, in coordination with the Department of State and

subject to the approval of the President.* United Nations troops or other military units were attached for operational control to appropriate United States military organizations in Korea. These arrangements were reasonable when viewed against the fact that the United States furnished a preponderant share of the military effort, but they had their drawbacks. Many members of the United Nations, observing that Washington was directing the military operations, were content to allow the United States to carry the burden of providing the forces needed by the United Nations cause.[5]

Before the Korean war was many months old the United States began to know some of the many problems inherent in its role as the executive agent of the United Nations. During the first several months of hostilities the only official guidance given by the United Nations to operations in Korea was the Security Council resolution of 27 June, which recommended that member nations "furnish such assistance to the Republic of Korea as may be necessary to repel the invasion and restore international peace and security within the area." Whether this resolution authorized United Nations forces to enter and liberate North Korea was uncertain. On 30 June 1950 the U.S. Department of State, noting that United Nations political and military objectives were distinct and separate, advised General MacArthur to make it clear that American military effort in Korea was intended solely to restore the ROK to its territorial status as of 25 June 1950.[6] Again on 14 July, after press reports had quoted Syngman Rhee as voicing a firm determination that ROK troops would not stop at the 38th parallel when they returned northward, the State Department warned Ambassador Muccio that "all statements on this delicate question should be avoided."[7] During the summer of 1950 this indecision as to the military objective made little matter to the ground strategy, for friendly ground troops were retreating southward. But the indecision greatly complicated the task of air planners, who desired to balance the destruction of hostile industrial targets against some foreknowledge as to whether such plants would be rebuilt during a friendly occupation of North Korea.[8]

As the United Nations' executive agent, the United States bore the responsibility for providing CINCUNC with the policy statements that he required to conduct military operations in Korea. But the United States government was not free to devise the military policies which would be followed in Korea. Such policies had to be acceptable to the other United Nations' members who actively supported the cause. From the beginning of the Korean hostilities, the United States and the other members of the United Nations who extended support to the Republic of Korea held to the basic policy that the local Korean war

*Although they normally issued the directives to the Commander of the United Nations Command/Far East Command, the Joint Chiefs of Staff did not necessarily originate the directives, nor did the directives necessarily represent the attitudes or actions of the Joint Chiefs. (Memo for Chief Air University Historical Liaison Office from Mr. Wilbur W. Hoare, Jr., historian, the Joint Chiefs of Staff, subj: Comments on Manuscript: "The United States Air Force in Korea," 17 Nov. 1959.) The National Security Council had been legally established in 1947 to serve as an advisory body to the President for the integration of domestic, foreign, and military policies relating to the national security of the United States. Through the medium of the National Security Council and of intimate State-Defense consultations, the departments of State and Defense developed progressively closer cooperation and coordination as the Korean war continued. (See William R. Kintner, Joseph I. Coffey, and Raymond J. Albright, *Forging a New Sword, A Study of the Department of Defense* (New York: Harper & Brothers, 1958), pp. 24-93.)

must not be allowed to spread beyond the confines of Korea. "The whole effort of our policy is to prevent [general] war and not have it occur," stated Secretary Acheson. "Our allies," he added, "believe this just as much as we believe it, and their immediate danger is much greater than ours because if general war broke out they would be in a most exposed and dangerous position."[9] "Our view," wrote Great Britain's Prime Minister Clement R. Attlee, "had always been that the Far Eastern war should be confined to Korea and that it would be a great mistake to have large forces committed to a major campaign in Asia."[10]

The policy of limiting hostilities to Korea was productive of many politico-military restrictions upon military operations within Korea, restrictions which Secretary of Defense George C. Marshall said were the result of "an intermingling...of political necessities along with military directions." Secretary Marshall explained that these restrictions were necessary not only for the security of the United States but "to avoid a break with our allies and a complete confusion in our relations to the United Nations."[11] Most of these restrictions dealt with the employment of UNC airpower. At the National Security Council meeting on 29 June Secretary Acheson was willing that American air operations should extend into North Korea but he requested that precautions be taken to ensure that air operations did not go beyond the boundaries of Korea. Thus on 30 June General MacArthur enjoined Stratemeyer to take "special care...to insure that your operations in Northern Korea stay well clear of the frontiers of Manchuria and the Soviet Union."[12] After a State-Defense conference in Washington, Secretary of Air Force Thomas K. Finletter, on 2 July, directed USAF "to stress the importance of briefing all our air crews so that there is no chance of attacking targets beyond the North Korea area."[13] The sanctity of the borders of Manchuria and Siberia was thus established at the outset of Korean hostilities, and the rule would never be relaxed. In fact, after a few inadvertent violations of the borders by wandering airmen, the restrictions would be significantly tightened in the autumn of 1950.

Another category of politico-military restrictions had its origin in an unstated but very real policy which sought to maintain "humanitarian" standards in the United Nations' war effort. In 1949, during the course of a congressional investigation of the United States national defense program, certain critics of airpower had made a case for the moral wrong of massed air bombardment. "War itself is immoral," General Omar Bradley, chairman of the Joint Chiefs of Staff, had declared in rebuttal. But he had pledged that "we Americans will seek to achieve maximum effectiveness against the enemy's armed forces, with a minimum harm to the nonparticipating civilian populace."[14] On 29 June 1950, when the National Security Council discussed air operations in North Korea, President Truman stated that he wanted to be sure that the bombardment of North Korea was "not indiscriminate."[15] As a result of the President's concern, the directive which General Stratemeyer received on 30 June specified that FEAF would attack "purely military targets" in North Korea.[16] These humanitarian ideals were reinforced by criticisms which sporadically appeared in the world's press. In August 1950 an Indian newspaper recalled that during World War II "Americans and other western people showed special solici-

tude toward the European enemy, but adopted different codes of conduct in Japan and elsewhere in the East, culminating in the choice of Japanese towns as targets for the first atom bombs." Secretary Acheson officially invited General MacArthur's attention to this statement.[17] To the end of the Korean war FEAF would be bound by a rule which was finally stated in this language: "Every effort will be made to attack military targets only, and to avoid needless civilian casualties."[18]

Many of the politico-military restrictions which stemmed from United Nations' humanitarian motives were not precisely defined but were usually manifest by some higher authority's disapproval of suggested operations. Early in August 1950 FEAF planners calculated that the B-29's could most efficiently destroy North Korean industrial targets with incendiary bombs. Use of incendiaries, coupled with radar aiming, would permit day or night attacks in any weather, and the destruction of urban areas adjoining industrial plants would erode the morale of the North Korean people and undermine their obedience to the Communist government.[19] Washington, however, desired no unnecessary civilian casualties which might come from fire attacks and was unwilling to sanction an "indiscriminate" use of incendiaries.[20] At the end of September 1950, when the war was going badly for the Communists, General Stratemeyer proposed that FEAF should send a massive force of 100 B-29's to clean out military targets in Pyongyang. General MacArthur saw no reason why such a massed attack could not be undertaken against military objectives, but the Joint Chiefs had a different view. "Because of the serious political implications involved," they informed MacArthur, "it is desired that you advise the Joint Chiefs of Staff, for clearance with higher authority, of any plans you may have before you order or authorize such an attack or attacks of a similar nature."[21] As a matter of policy, the Joint Chiefs of Staff would generally disapprove massed air attacks, even against military targets, if such attacks could be possibly interpreted to be against the civilian population of North Korea.

As the war went on and military situations changed in Korea, United Nations' military objectives and policies would require modification to meet unforeseen circumstances. Yet, in the absence of any United Nations mechanism capable of giving continuing guidance to the war effort in Korea, these objectives and policies would be difficult to change. In June 1950 the United Nations Security Council had been able to act swiftly because the Russian delegate was boycotting its meetings, but in August 1950 the Russian representative resumed his seat and thereafter prevented the council from taking cognizance of Korean problems. Such additional objectives as the United Nations was to provide would have to be given by its General Assembly, and then only after lengthy discussion and debate.

Since the policies and politico-military restrictions which governed military operations in Korea represented a consensus of the nations who contributed to the United Nations Command, any change or modification of these ground rules had to be negotiated through none-too-swift diplomatic channels. Not only were the policies and restrictions difficult to change, but the existence of unwritten policies lent an air of uncertainty to planning at every command level. A vague understanding that certain targets were "sensitive" and that certain tactics

possessed "far-reaching political implications" compelled the CINCUNC to seek decisions from Washington authorities, who not infrequently had to coordinate their opinions with Downing Street, the Quai d'Orsay, and other friendly foreign offices before returning an answer. In a thermonuclear age, when immediate decisions are imperative for survival, this was a slow and hazardous way to manage a war.

Cpl. Duane S. Holdren, Fifth Air Force, 452d Bomb Wing, wipes a few specks of dust from the camera "eye" of a B-26 Invader.

## *2. Armed-Force Relationships in the Far East*

Before the Korean hostilities were concluded they would provide a combat test for the principles of armed-force unification which the United States had adopted after World War II. The National Security Act of 1947 had provided for the unification of the armed services of the United States in a departmental agency originally called the National Military Establishment and after 1949 the Department of Defense. Under the Department of Defense were three independent military departments and armed services: Army, Navy, and Air Forces. Policy guidance papers had foreseen that combat forces of each of these armed services would normally be found in geographical theaters of operations, and each service had been assigned roles and functions which its forces would perform. A theater commander was expected to stand separately from his own service and to provide the command authority over the theater ground, sea, and air forces, which would cooperatively employ their capabilities to attain the theater mission.

Looking toward the accomplishment of armed-force unification, the Joint Chiefs of Staff had dispatched on 14 December 1946 a directive to all theater commanders which required these unified commanders to establish a "joint staff with appropriate members from the various components of the services...in key positions of responsibility."[22] Such a joint staff would provide the theater commander with the specialized knowledge and advice which he needed in order to employ his ground, naval, and air forces in a common war against an enemy.

Nearly three years elapsed before General MacArthur took cognizance of this directive, and then, on 20 August 1949, he established a Joint Strategic Plans and Operations Group (JSPOG) under the Assistant Chief of Staff for Operations (G-3) of GHQ Far East Command and charged it "to assist and advise the Commander-in-Chief, Far East, on matters pertaining to his exercise of unified command over Army, Navy, and Air Force forces, allocated to the Far East Command."[23] The JSPOG comprised three Army, three Navy, and two Air Force officers, and it was frequently cited as evidence that GHQ was a joint staff. But it was apparent both from the statement of its functions and from the small number of its assigned personnel that the JSPOG could not serve in lieu of a joint staff contemplated by the JCS.[24] By this same type of logic the Assistant Chief of Staff for Intelligence (G-2) of GHQ Far East Command reorganized his section on a "joint basis" in January 1948 by assigning to it "one suitably qualified Air and Naval Intelligence officer...to act as the Air and Naval representatives and experts, for the various publications of Theater Intelligence."[25] At the highest headquarters level, unification had never reached the Far East; yet in 1949 General MacArthur had assured General J. Lawton Collins that unification was "working well" in his theater and that he stood "squarely behind" the Department of Defense's efforts to carry out the unification act.[26]

In June 1950 the composition and functioning of General Headquarters, Far East Command clearly demonstrated an absence of any vestige of unification principles. In theory, the major commands of the Far East

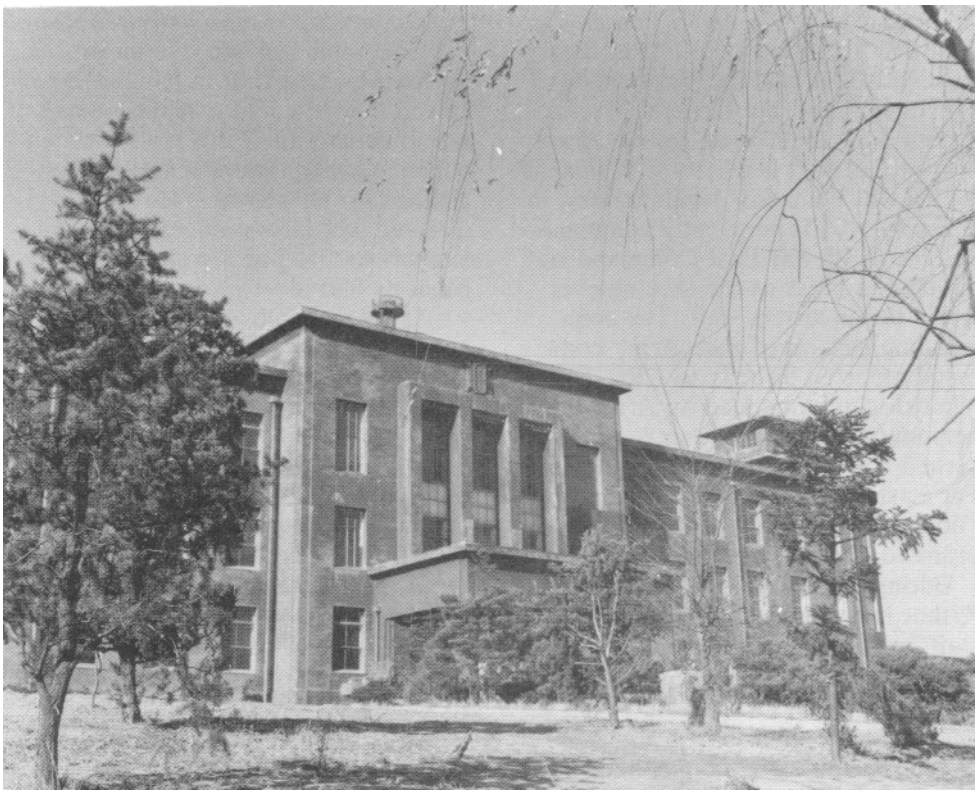
Command were the Army Forces Far East (AFFE), the Naval Forces Far East (NavFE), and the Far East Air Forces (FEAF), but General MacArthur had never organized an Army Forces Far East headquarters. Instead, AFFE was a shadow headquarters, in which CINCFE personally commanded and the GHQ Far East Command staff doubled in brass as the theater-level Army headquarters staff. The commanding general of each Army command reported directly to CINCFE. Almost wholly manned by Army personnel and predominantly concerned with Army business, the GHQ Far East Command was quite naturally "dominated by Army thinking and prone to honor Army concepts."[27]

During World War II General MacArthur had never employed a joint staff, but, observing that he had "found that it takes an aviator to run aviators," he had left the details of air matters to the control of his air commander.[28] As theater commander, MacArthur had assigned FEAF tasks to perform, but the FEAF commander had determined how these tasks would be executed. Much of this same philosophy of control was obtained between FEAF and its subordinate air forces. General Stratemeyer assigned to his subordinate air commanders tasks or duties and the necessary wherewithal to execute them, but he did not normally tell these air commanders how they were to execute their missions. In short, FEAF controlled and supervised; the subordinate air forces operated and executed their missions.

At the outset of hostilities in Korea, however, many of MacArthur's staff subordinates manifested an inclination to direct air operations from the theater staff level. In fact, many of the men on the GHQ staff wanted to run the Korean war from Tokyo. As soon as radio communications were established, Lt. Col. John McGinn, the air officer on the ADCOM staff in Korea, received "definite and explicit orders" not to contact the Fifth Air Force advance headquarters at Itazuke to arrange for air support. He was directed to address requests for air support to GHQ in Tokyo, and the requests had to be passed through FEAF to the Fifth Air Force advanced headquarters at Itazuke. "This was a shameful way to operate," said General Timberlake, "because it normally took us about four hours to get the messages." Effective on 4 July, General MacArthur established a new ground command, U.S. Army Forces in Korea (USAFIK) under Maj. Gen. William F. Dean, and General Dean was instructed to communicate directly with the commanders of FEAF and NavFE (with information copies to CINCFE) to secure the air and naval support which he required. General Dean sent several requests for air support directly to FEAF in Tokyo, but this arrangement was too roundabout to permit adequate and timely air support.[29]

General Stratemeyer recognized that Korea would have fallen to the onrushing Communists if air units had not laid on all-out attacks against the forward prongs of the North Korean ground penetrations, but he also knew that any continued employment of air resources in always "urgent" operations would be extremely wasteful in a war of any duration. Accordingly, during the first week of July General Stratemeyer began to organize his theater air forces and assign them missions after the patterns which World War II had proved would make the best use of air capabilities.

From the first days of the war the Fifth Air Force had been supporting friendly ground forces in Korea, but as



Headquarters, Fifth Air Force, Pyongyang.

American ground troops went into action there General Stratemeyer sought to formalize the relationship. On 27 June the Fifth Air Force had established an advance echelon at Itazuke, and on 7 July General Stratemeyer relieved General Partridge from duty as acting—Vice Commander of FEAF and sent him down to Itazuke to resume active command of the Fifth Air Force. That same day Stratemeyer secured a new order from CINCFE which directed USAFIK to call directly upon Fifth Air Force advance headquarters for supporting air strikes.[30] General Stratemeyer visualized that the Fifth Air Force would continue to be responsible for its former duties in Japan. In Korea it would perform tactical air-force missions: it would maintain air superiority, isolate the battlefield, and provide close support for USAFIK and ROK troops.[31]

Acting on his own initiative, General Hoyt S. Vandenberg, the USAF Chief of Staff, had secured approval on 3 July to move two medium bombardment groups—the 22d and 92d—from the Strategic Air Command's Fifteenth Air Force to temporary duty with FEAF. This diversion was a considerable cost to the SAC's strategic capabilities, but General Vandenberg sent the groups out primarily because of "the vital necessity of destruction of North Korean objectives north of the 38th

parallel." "While I do not presume to discuss specific targets," he informed General Stratemeyer, "it is axiomatic that tactical operations on the battlefield cannot be fully effective unless there is a simultaneous interdiction and destruction of sources behind the battlefield."[32] A new command was needed to control the strategic bombers, and General Stratemeyer, on 8 July 1950, organized the Far East Air Forces Bomber Command (Provisional), with headquarters at Yokota Air Base. This command would exercise operational control over the SAC medium bomber groups and 31st Strategic Reconnaissance Squadron and FEAF's own 19th Bombardment Group. To serve as the strategic bomber commander, General Vandenberg dispatched on indefinite temporary duty Maj. Gen. Emmett ("Rosie") O'Donnell, Jr. An experienced bomber officer, General O'Donnell had commanded a squadron of the 19th Bombardment Group in the Philippines in the early days of World War II. In the last years of this war O'Donnell had commanded the strategic air attacks of the Marianas-based 73d Bombardment Wing. Since 1948 he had commanded SAC's Fifteenth Air Force.[33] According to General Stratemeyer's concept, the FEAF Bomber Command would normally operate in the area from the Han River northward. Its main duties would be to interdict the enemy's lines of communications from the Han to the Manchurian border and to destroy such North Korean industrial facilities as contributed combat support to the enemy forces.[34]

By 8 July General Stratemeyer had effected the command organization which would best employ theater air capabilities. The time had arrived when the control of air operations could be placed in the field and divorced from FEAF and GHQ. Tactical air-support operations in Korea simply could not be managed from Tokyo. But General MacArthur's headquarters staff gave General Stratemeyer little sympathy and far too little understanding. On the night of 9 July MacArthur's chief of staff, Maj. Gen. E. M. Almond, called Brig. Gen. Jarred V. Crabb, the FEAF director of operations, on the telephone. So far, said Almond, all of FEAF's efforts against enemy armor and mechanized elements had been ineffective. The Communist threat to General Dean's 24th Division was critical. Almond stated bluntly that General MacArthur wanted FEAF to direct all of its combat capabilities continuously and to the exclusion of other targets at the hostile columns and armor threatening the 24th Division. As General Stratemeyer expressed it, Almond gave Crabb quite a bit of "static."[35]

Completely loyal to his commander in chief, General Stratemeyer immediately committed the whole of FEAF's combat capability to the support of General Dean's forces. To General Partridge went the message: "You must consider your mission primarily direct support of ground troops."[36] And although he privately doubted the wisdom of the action, Stratemeyer made an eleventh-hour change in the 19th Bombardment Group's assigned targets. The medium bombers had been ordered to attack bridge structures; now they were directed to hit enemy convoys, tanks, and troop concentrations reported to be somewhere in the vicinity of Chonan and Pyongtaek.

The close support rendered by the 19th Group's medium bombers on 10 July proved to be more hindersome than helpful. General Partridge telephoned that the ten B-29's sent to attack mechanized targets of opportunity had been unable to contact his

front-line tactical air-support parties. Partridge euphemistically said that the B-29's bombing results were "unknown." He did know, however, that the B-29's had taken targets which he had meant to assign to his own B-26's, which were best qualified for low-level operations against enemy vehicles, tanks, and troop columns. Consequently, the B-26's had been sent to attack bridges, which could have best been destroyed by the medium bombers. On 11 July eight B-29's made contact with the Fifth Air Force's tactical air-control center and got good results against targets in the towns of Wonju, Chinchon, and Pyongtaek. General Partridge nevertheless reported that he had more fighter-bombers than he had targets. He suggested that the medium bombers ought to be released from close support so that they could begin to attack targets deeper within enemy territory.[37]

"Unless you direct otherwise," General Stratemeyer told General MacArthur on 10 July, "I will operate every combat airplane in the Far East Air Forces in support of ground troops against those targets in battlefield support as suggested by the Fifth Air Force Advanced Headquarters in conjunction with General Dean's Headquarters." But General Stratemeyer was gravely troubled on three counts. MacArthur's staff was telling FEAF how to conduct its air operations, and the way these staffmen wanted air operations conducted was quite inefficient. Tactical air operations could not be managed from Tokyo: battlefield air support was a matter which concerned General Partridge and General Dean. And Stratemeyer resented implications that FEAF had not been doing a good job in Korea. On the morning of 10 July Stratemeyer wrote a memorandum which he personally carried to General MacArthur. In his memorandum and in his discussion Stratemeyer reminded MacArthur of the great confidence which he had placed upon Generals Kenney and Whitehead. He, Stratemeyer, hoped to merit a similar degree of confidence. "Your directions to me," Stratemeyer told MacArthur, "will be conducted in the most efficient manner that we can plan, and I am sure that it is not your intention to tell me how to do the job." General MacArthur replied that he had the same confidence in Stratemeyer that he had had in Generals Kenney and Whitehead. He was personally enthusiastic about FEAF's accomplishments in Korea. MacArthur also emphasized that Stratemeyer was to run his "show" as he saw fit, regardless of instructions from GHQ staff members.[38]

After receiving this show of confidence from the commander in chief, General Stratemeyer signed and dispatched formal mission letters to the FEAF Bomber Command and Fifth Air Force. On 11 July he directed Bomber Command to handle deep interdiction and strategic targets; on 12 July he made the Fifth Air Force responsible for tactical air operations in Korea.[39] By 14 July, however, the ground situation in Korea was again reported to be "critical." Against almost impossible odds General Dean's ground troops were battling to hold the key communications center of Taejon. General MacArthur said that the extraordinary situation demanded exceptional measures, and Stratemeyer ordered the Fifth Air Force and Bomber Command to apply their main effort in the battle area "until the threat to our front-line troops is eliminated."[40]

During the first two weeks of July General Stratemeyer had been seeking solutions to another theater air-force

problem: the coordination of land-based and carrier-based air operations over Korea. On the several occasions during World War II when he had "borrowed" fast carrier task forces from the Pacific Fleet, General MacArthur had employed these carrier task forces against targets lying beyond the range of FEAF's land-based bombers. Such geographical coordination had worked fairly well in the vast reaches of the Southwest Pacific, but under such arrangements the massed power of land-based and carrier-based aviation could not simultaneously be brought to bear on significant targets.[41] Moreover, Korea was too small to permit geographical coordination. On 2 July, preparatory to Task Force 77's first air strikes to be made on the following day, Vice Adm. C. Turner Joy, Commander NavFE, requested and received "exclusive use" of a large airspace area of northwestern Korea, encompassing Pyongyang. Subsequently, at 2235 hours on 3 July, GHQ FEC informed FEAF that this same target area would again be allocated to Task Force 77 on the following day.[42] Having had no advance indication that the carrier air strikes would continue for an additional day, FEAF operations had scheduled a medium bomber strike against Pyongyang's airfields for 4 July. As a result, the scheduled B-29 strike for 4 July had to be canceled, and, since it was too late to devise a new mission, the Superfortresses were grounded that day. The Navy air operations presented another complication: Task Force 77 preserved radio silence while at sea,* and for several days General Stratemeyer was unable to get any knowledge of the results of the carrier air strikes against Pyongyang.[43]

Without some form of centralized control the mass of Air Force and Navy airpower could not be effectively employed in the attack, and if Air Force and Navy air commanders were to choose their targets independently, flying over Korea could become hazardous. Learning that Marine aircraft were also scheduled to come to the Far East, General Stratemeyer requested on 8 July that he be assigned operational control over all naval land-based and carrier-based aviation, when operating from Japan or over Korea, except those units used for the naval tasks of aerial mining or antisubmarine warfare. If he was to insure that carrier air operations were to be coordinated with the operations of the Fifth Air Force and Bomber Command, Stratemeyer had to be able to direct carrier aircraft operations "including the targets to be hit and the area in which they must operate."[44]

When this memorandum was reported to be unacceptable to the Naval Forces Far East, General Stratemeyer drafted an amplification of his ideas on 10 July. He explained that he had no desire to control Navy planes when they engaged in authorized Navy air

*The inability of Navy forces in the Far East to communicate freely and fully with Army and Air Force commands would long continue to be a major interservice problem. In large measure the difficulty was attributable to the fact that the Navy had a different communications philosophy. Naval forces afloat were traditionally closely-knit organizations which generally operated in accordance with prebriefed orders. Because of their physical characteristics, moreover, naval vessels had only a limited amount of space which could be given to communications equipment. Because of requirements and capabilities, the Navy made its electronics messages as brief as possible. On the other hand, the Army and Air Force used more elaborate communications systems designed to handle a large volume of traffic and habitually passed what the Navy called "correspondence" by electronic means. As a result of the difference in philosophy and capability, Navy forces off Korea were unable to receive or dispatch the many long, encrypted messages required by the local combat situation. (CINC U.S. Pacific Fleet, Interim Evaluation Rpt. No. 1, Korean War, 25 June to 15 Nov. 1950, Vol. XIII, pp. R56 and R57.)

tasks. He stated that he would not attempt to control or to direct the movements of Navy carriers. Once a carrier force entered the area of operations its assigned missions would not be altered without the concurrence of Admiral Joy. Stratemeyer further stipulated that he construed operational control to mean nothing more than "the authority to designate the type of mission, such as air defense, close support of ground forces, etc., and to specify the operational details such as targets, times over targets, degree of effort, etc., within the capabilities of the forces involved." In conclusion, Stratemeyer pointed out that a "sizable potential" of air forces was at MacArthur's disposition, but he voiced the fear that, without proper coordination, the full effect of the air striking power would be dissipated. Uncontrolled air operations over Korea, moreover, would endanger the safety of the various participating air units.[45]

Navy headquarters in Tokyo apparently did not like this second memorandum any better than it had liked the first proposal, and, seeking a workable solution, General Stratemeyer and Admiral Joy, with a few of their subordinates, met on 11 July in General Almond's office at the Dai Ichi building. Here Admiral Joy and his staff contended that the phrase "operational control" was so broad a definition that the Navy could not accept it. To the Navy, "operational control" meant that its forces might be assigned to FEAF on a continuous basis, and this might be detrimental to the Seventh Fleet's mission in the Formosa area. Someone finally suggested that FEAF could be vested with a more intermittent authority called "coordination control." This term was acceptable to Admiral Joy, and General Stratemeyer, on the spur of the moment, thought that it would meet his requirements.[46] Following this agreement, the Joint Strategic Plans and Operations Group drafted a directive which issued without further coordination over General Almond's signature on 15 July. "When both Navy Forces, Far East, and Far East Air Forces are assigned missions in Korea," read this directive, "coordination control, a Commander in Chief, Far East, prerogative, is delegated to Commanding General, Far East Air Forces."[47] Hardly was this directive issued than Air Force officers discovered that the magic formula of "coordination control" had no officially assigned meaning. It meant one thing to FEAF and quite another thing to NavFE, and, although asked to give some clarification, CINCFE never saw fit to explain just what "coordination control" did mean. Time itself would give some meaning to the newly coined phrase, but until it did so there would be differences of opinion, misunderstandings of channels of communications, and disagreements over the wordings of important operations orders.

Other language in the 15 July directive indicated that its promulgators actually had not attached any great significance to the "coordination control" authority which was granted to General Stratemeyer. Another paragraph of the directive provided that "Basic selection and priority of target areas will be accomplished by the General Headquarters target analysis group with all services participating." On 14 July General Almond established the GHQ Target Group as a part-time duty for its members, who were: a senior officer from the G-2 section, serving as chairman; an Air Force member and a Navy member from the Joint Strategic Plans and Operations Group, appointed by the chief of that

agency; and a member of the G-3 operations group, appointed by the G-3. These four officers, supported at their request by NavFE and FEAF consultants, were charged to: advise on the employment of Navy and Air Force offensive airpower in conformity with the day-to-day situation; recommend air targets or target areas; recommend measures to insure coordinated use of available airpower; and maintain a continuing analysis of target systems and priorities assigned. The Assistant Chief of Staff, G-3, FEC was charged to implement the target group's recommendations with CINCFE orders.[48]

Since its charter of authority was quite broad, the GHQ Target Group attempted more exactly to define its responsibilities at its initial meeting on 16 July. General Crabb attended this meeting and was alarmed by what he heard. One concept was that the target group had authority to select targets from the front lines deep into enemy territory. Crabb stated bluntly that FEAF could not accept such an idea as this. He reminded the group that Lt. Gen. Walton H. Walker had established Headquarters, Eighth U.S. Army in Korea (EUSAK) at Taegu on 13 July and that General Partridge was in the process of moving Advance Headquarters, Fifth Air Force from Itazuke to Taegu. Crabb asserted positively that tactical air targets should be selected at the tactical air force-field army level in Taegu.[49]

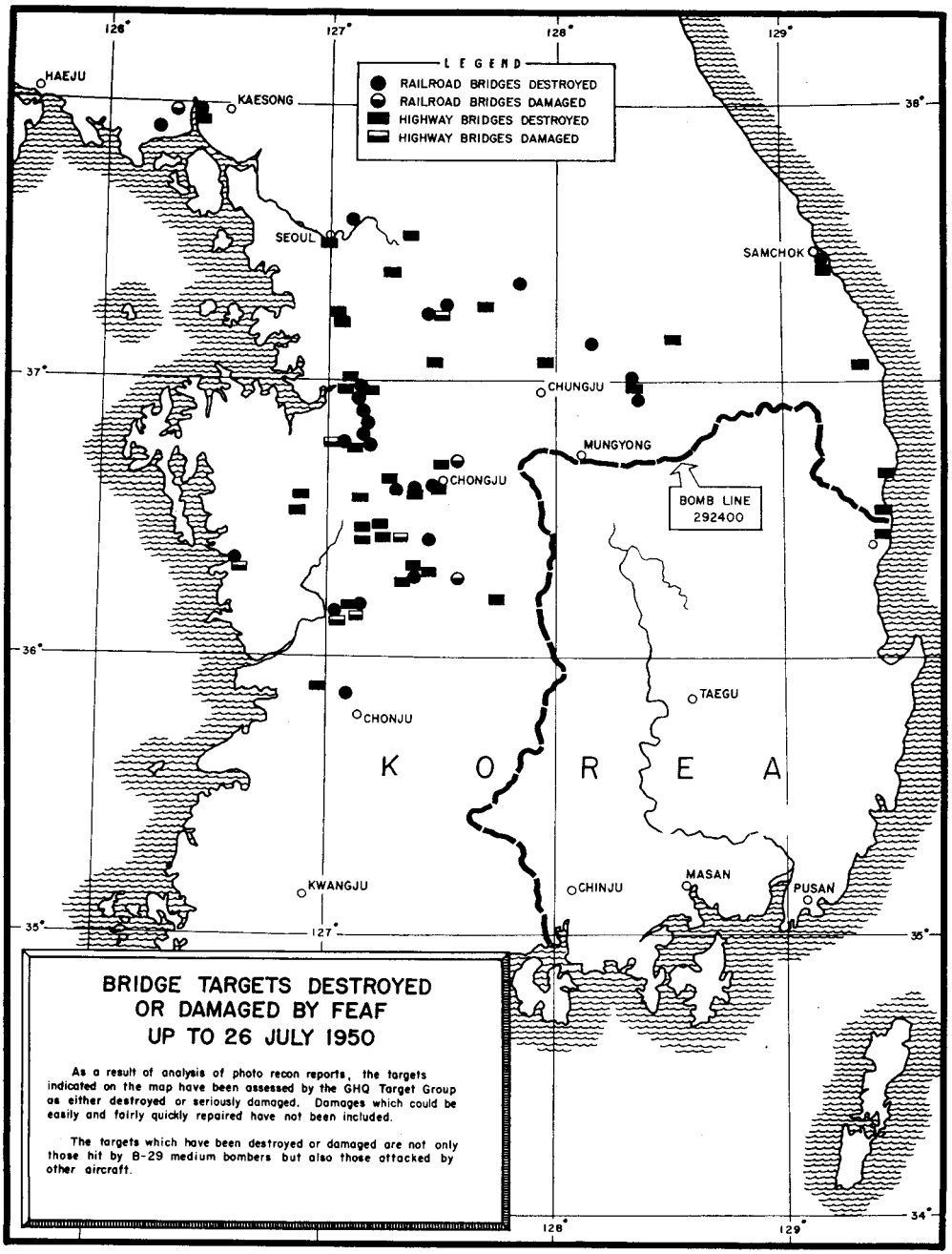
The trend of events in Tokyo also disturbed General Stratemeyer, so much so that on 17 July he prepared a letter defining the air-support procedures which would be employed in Korea. General Walker would make his requests for support directly to General Partridge, who would honor these requirements within the capabilities of his aircraft. General Partridge would forward such requests as were in excess of his capabilities to Stratemeyer, who would direct General O'Donnell to accomplish them. Specific details as to target identification, time of attack, and control procedures would be arranged directly between General Partridge and General O'Donnell.[50] The next day Stratemeyer called on General MacArthur to discuss the recommended procedures. MacArthur agreed in principle with Stratemeyer's letter, but he pointed out that there was one gap in it—GHQ had been "sidetracked."[51] MacArthur then called Almond into his office and told him how he wanted Stratemeyer's letter to be endorsed. This endorsement, written that same day, approved the proposed methods for accomplishing the Eighth Army's close support. Furthermore, EUSAK's requirements for general air support (strikes against rear-area targets beyond the range of friendly artillery) were to be processed in the same manner as close support. These decisions, however, did not prevent the issuance of CINCFE directives to Stratemeyer for the employment of medium bombers in attacks against general air-support targets or strategic targets. Such directives would be based upon recommendations submitted by the GHQ Target Group. Until otherwise directed, Stratemeyer was instructed to continue to employ the majority of the medium bomber effort in the area between the bombline and the 38th parallel, the purpose being to isolate the battlefield.[52]

The GHQ Target Group retained its authority to designate medium-bomber targets and to establish target areas and priorities of these areas for air attack.[53] On 19 July the GHQ Target Group recommended its first list of 22 B-29 targets, nearly all of which were rail or

road bridges around the periphery of the battle area.[54] Almost immediately FEAF target experts noted that the GHQ Target Group was not conversant with problems of target selection. The first batch of targets, for example, required FEAF to destroy railway bridges at Yongwol and Machari, but there was no railway through these towns. Subsequent target lists prepared by the GHQ Target Group were no more accurate. Out of a total of 220 targets designated by this group, some 20 percent of the objectives did not exist. Later investigation showed what had happened. A principal source of error was the group's use of an obsolete map of Korea, which included railway lines that had been projected but never built. In another case the target group was guilty of faulty map reading, for it designated a river "bridge" which was marked as a ford on the map consulted. Correct maps, based on aerial photography, were available to the target group in the G-2 Section. Many of the bridges which the target group designated for air attack were later seen to have spanned small streams where a destroyed structure could be easily by-passed, even in a normally rainy Korean summer. A USAF evaluation board later commented: "The GHQ Target Group was unfamiliar with the time-honored Intelligence principle of confirming reported information by checking several sources.[55]

Despite the concentration of all of FEAF's air capabilities in the front-line areas, General Dean's forces were unable to hold the key city of Taejon, which fell to the Red Koreans on 20 July. On this same day Maj. Gen. Otto P. Weyland arrived in Tokyo to assume the duties of FEAF vice-commander for operations. During World War II General Weyland had commanded the XIX Tactical Air Command which, in cooperation with the U.S. Third Army, had set new standards for joint-service teamwork. His experience in tactical air warfare permitted him to make a penetrating diagnosis of FEAF's troubles. Basic to all of FEAF's problems was the fact that GHQ was "essentially an Army staff." Lacking joint representation of air, naval, and ground officers, the GHQ staff was unable to accomplish the most efficient and timely employment of airpower in Korea.[56] The GHQ Target Group did not have sufficient experience or stature to perform the important duties which had been assigned to it. To give him the advice he needed, General MacArthur required a "senior target committee" which would be composed of officers of wide military experience. Weyland was also critical of the GHQ-ordered interdiction efforts, which were seeking to disrupt enemy communications immediately behind the battleline. This, he said, "was like trying to dam a stream at the bottom of a waterfall."[57]

Recognizing the wisdom of Weyland's diagnosis, General Stratemeyer on 21 July sent a memorandum to General MacArthur which strongly recommended the establishment of a GHQ target selection committee, to be comprised of such senior officers as Maj. Gen. Doyle O. Hickey, Deputy Chief of Staff of FEC, Maj. Gen. C. A. Willoughby, Assistant Chief of Staff for Intelligence of FEC, General Weyland, and a NavFE representative to be designated by Admiral Joy. This target selection committee, said Stratemeyer, should make all target recommendations to CINCFE, but the GHQ Target Group and the FEAF Target Section would do the groundwork for the "senior" target committee.[58] At a conference with Stratemeyer on 22 July General MacArthur approved the


126°
127°
128°
129°
LEGEND
RAILROAD BRIDGES DESTROYED
RAILROAD BRIDGES DAMAGED
HIGHWAY BRIDGES DESTROYED
HIGHWAY BRIDGES DAMAGED
HAEJU
KAESONG
38°
SEOUL
SAMCHOK
37°
CHUNGJU
MUNGYONG
CHONGJU
BOMB LINE
292400
36°
TAEGU
CHONJU
K O R E A
KWANGJU
CHINJU
MASAN
PUSAN
35°
127°
128°
129°
34°
BRIDGE TARGETS DESTROYED
OR DAMAGED BY FEAF
UP TO 26 JULY 1950
As a result of analysis of photo recon reports, the targets indicated on the map have been assessed by the GHQ Target Group as either destroyed or seriously damaged. Damages which could be easily and fairly quickly repaired have not been included.
The targets which have been destroyed or damaged are not only those hit by B-29 medium bombers but also those attacked by other aircraft.

creation of a FEC Target Selection Committee, and he further agreed that the first duty of the new committee would be to devise a sound interdiction program which would sever the flow of reinforcements and supplies to the Communist forces in South Korea. Generals Hickey, Willoughby, and Weyland were named members of the committee, and Admiral Joy was asked to designate a Navy member.[59] Admiral Joy, however, did not care to name a member to the committee. He explained that the Seventh Fleet would perform "hit-and-run" general and close air-support strikes in Korea under FEAF's coordination control, but the Seventh Fleet's primary mission was to defend Formosa. Any decision to commit the Seventh Fleet's air-striking power to Korea was a matter which had to be carefully considered in the light of hostile threats to Formosa, and Admiral Joy thought that General MacArthur should make these decisions personally.[60]

Preparatory to the first meeting of the FEC Target Selection Committee General Weyland made a careful analysis of currently ordered interdiction operations. His study of the CINCFE targets designated by the GHQ Target Group revealed several deficiencies: all were too close to the battle zone, they were too numerous to be attacked by available B-29's, and many of the objectives were so "obscure" that they could not be identified by bombardiers, even under good visual conditions. Weyland noted that FEAF had skilled target officers, and he suggested that FEAF be heavily relied upon for target recommendations. He sent a memorandum setting out these findings to the FEC G-3.[61]

On 24 July, when the members of the FEC Target Selection Committee met in General Almond's office for instructions, Weyland found that his memorandum had stirred up a tempest. General Almond stated that General MacArthur had not approved an interdiction program, that the B-29's had to be used in the immediate battle area, that the Air Force had caused trouble and was uncooperative, and, finally, he asked whether or not General Weyland understood his directives. Here, as Weyland noted in his daily journal, "the discussion became quite warm." Without recalling more of what was said, it is sufficient to record that General Weyland emphasized that the FEC Target Selection Committee had been established to work out the best employment of airpower on a mutually acceptable basis, a mission which would be impossible if all decisions were to be dictated to it from above. General Almond thereupon agreed that the target committee should study the interdiction matter and come up with recommendations.[62]

That evening the FEC Target Selection Committee met at the Dai Ichi building and worked far into the night. At first Generals Hickey and Willoughby argued that all B-29's were needed in the battle area, where three American divisions were opposing nine North Korean divisions in a bitterly fought ground battle. Weyland agreed that the ground situation was critical, but he urged that it had been critical since the beginning of the hostilities. The "critical" situation was becoming the normal situation. The target committee, Weyland said, had to establish a comprehensive interdiction program which would reach into the Reds' rear areas and ensure that their nine divisions did not become twelve or fifteen divisions. Weyland pointed out that neither General Walker nor General Partridge had asked for Superfortress support. He thought that

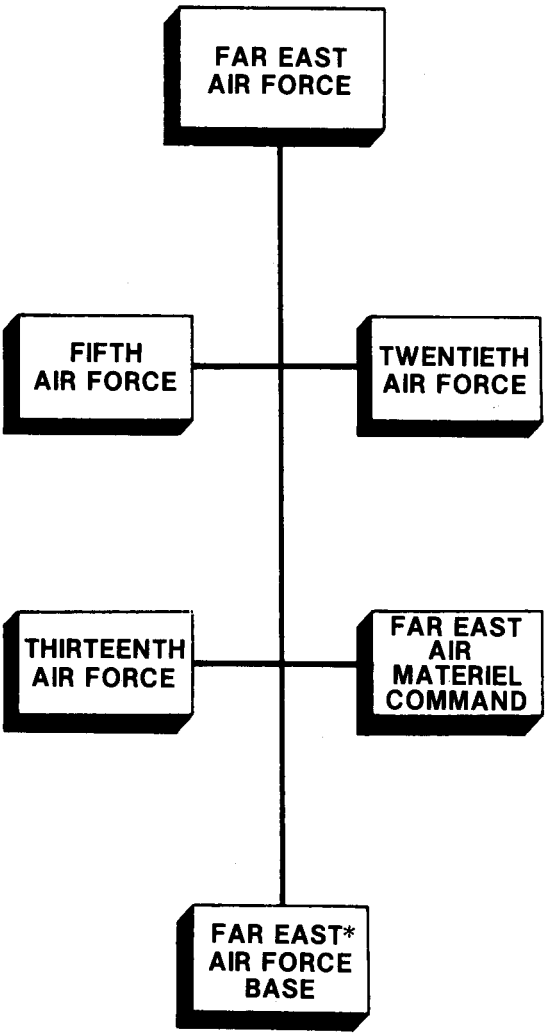
the field commanders in Korea ought to be allowed to run their own show. General Hickey yielded to these arguments and suggested that two B-29 groups be put on interdiction and that the third remain temporarily on close support. General Willoughby then suggested that the B-29 interdiction program be centered north of the 38th parallel. All agreed to these recommendations, and the meeting broke up harmoniously.[63] On 26 July General MacArthur approved the committee's recommendations and issued them as a directive.[64]

The establishment and acceptance of the FEC Target Selection Committee marked the beginnings of workable relationships for the control of theater air forces in the Far East. Since the committee did not attain a joint stature—equally representative of GHQ, FEAF, and NavFE—it was actually not long lived, but during the six weeks that it operated other improvised mechanisms began to control CINCFE's air forces. An almost immediate result of the creation of the FEC Target Selection Committee was the demise of the GHQ Target Group. Although General Stratemeyer had thought that the GHQ Target Group would continue to prepare and recommend air targets to the FEC Target Selection Committee, this agency had so little capability for target research that it went out of business shortly after 2 August. The bulk of air-target identification and development reverted to FEAF's Target Committee, which was composed of members of the Operations and Intelligence deputates of the headquarters staff. Ultimately expanded to include representatives of the Fifth Air Force and FEAF Bomber Command (and accordingly redesignated), the FEAF Formal Target Committee became in fact the basic theater agency for target selection. This committee selected major targets for attack and laid out air campaigns against target systems in accordance with basic programs approved by CINCFE and Commander, FEAF.[65]

Belatedly, at the end of July, improvised procedures brought some order to the fantastically confused command situation in the Far East, but these extempore arrangements never achieved the full fruits of unification. Certainly, at the outset of the Korean war, the defective theater command system prevented the fullest employment of airpower, delayed the beginning of a comprehensive air-interdiction program for more than a month, and, as will be seen, caused confusion and loss of effectiveness at the very time that every single aircraft sortie was vital to the survival of the Eighth Army in Korea. Had he possessed a joint headquarters staff, General MacArthur might never have encountered these mischievous problems. To General Weyland, writing on 10 October 1950, one conclusion was inescapable: "Whenever combinations of Air Force, Army, and Navy are in a joint command, it is essential that the Commander-in-Chief have a joint staff with proportionate representation of the services involved."[66]

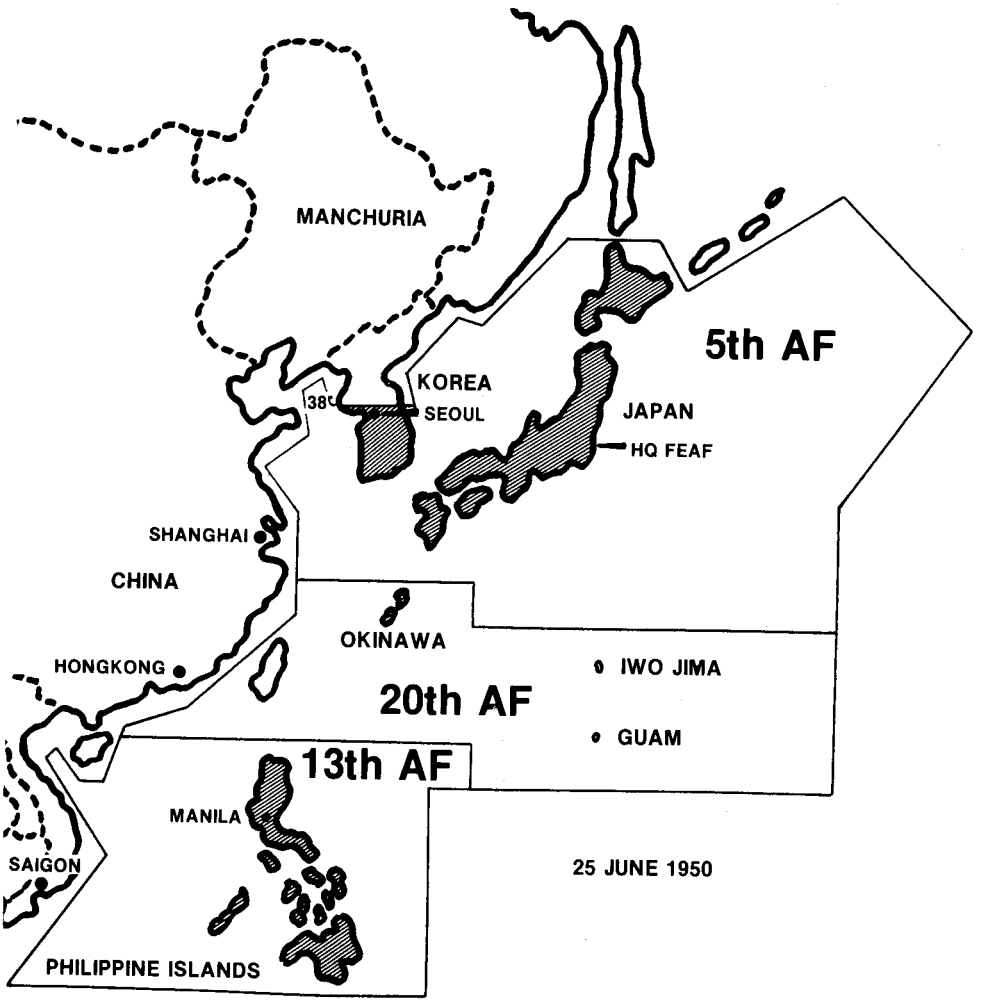
# FEAF ORGANIZATION

**25 JUNE 1950**




*Administrative support for FEAF HQ

# AREAS OF RESPONSIBILITY



### *3. General Stratemeyer Takes a Final Inventory*

Not all of General Stratemeyer's problems were command problems, for during July 1950 FEAF faced difficulties in adapting its defensive capabilities to tactical air war requirements in Korea. "The troop basis which FEAF had at the start of the Korean war," said General Stratemeyer, "was totally inadequate for anything other than a limited air defense of Japan, Okinawa, and the Philippine Islands."[67]

Altogether, on 25 June 1950, General Stratemeyer controlled 30 USAF squadrons, or the equivalent of nine of USAF's total of 48 combat wings. This was the largest aggregation of USAF units outside the continental limits of the United States, but budgetary limitations, taken in context with the Far East Command's defensive mission, had caused significant reductions in FEAF strength. Earlier in fiscal year 1950, FEAF had lost a squadron of light bombers and the 314th and 315th Air Divisions, the latter being small headquarters organizations which had provided an intermediate control of the air-defense effort in Japan. At this time General MacArthur had protested that the Air Force units assigned to the Far East were so inadequate in number as to reduce his capabilities to defend the command area beyond the point of a calculated risk—almost, indeed, to the point of a "gambler's risk."[68]

All but a few of the squadrons which FEAF owned or controlled were organized in basic Air Force wings. According to concept, a combat wing was a nearly self-sufficient entity in which one wing commander directed the combat effort, supporting elements, base services, and medical services necessary for the performance of his mission. The resultant combat wing was a large and complex organization, but, in theory, it possessed mobility. Tables of organization and equipment contained provisions whereby supporting personnel and equipment might be detached to accompany and support a separate combat squadron. When a whole wing was transferred, the combat-wing plan visualized that a temporary station or airbase group would be organized to replace it at the old installation. Because of the pressure for personnel savings arising from pre-1950 economy programs, however, most of FEAF's combat wings had been compelled to assume an area-command status that was inconsistent with their combat mobility. Following the inactivation of the two air division headquarters in Japan, the air-defense functions previously exercised by these units had been subdivided into three parts and delegated to the 49th Fighter-Bomber Wing (Northern Air Defense Area), the 35th Fighter-Interceptor Wing (Central Air Defense Area), and the 8th Fighter-Bomber Wing (Southern Air Defense Area). The 19th Bombardment Wing had become responsible for managing all USAF activities in the Marianas.[69]

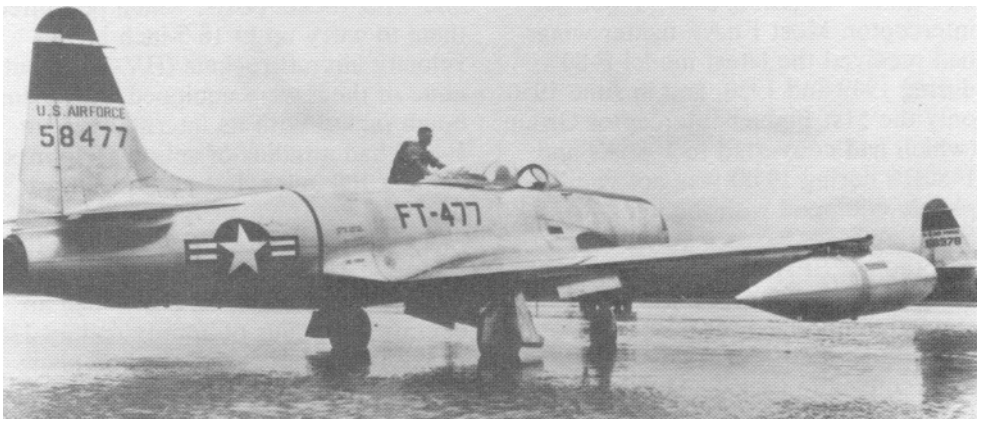
The types and numbers of aircraft which FEAF possessed clearly indicated its defensive mission. On 31 May 1950 FEAF possessed a grand total of 1,172 aircraft of all descriptions, including some in storage and a few in salvage. Less than half of this total, or 553 aircraft, were possessed in operational units: 365 F-80's, 32 F-82's, 26 B-26's, 22 B-29's, 25 RF-80's, 6 RB-29's, 24 WB-29's, 26 C-54's, 23 SB-17's, and 4 SB-29's.[70] FEAF's most numerous operational aircraft was the

Lockheed "Shooting Star" F-80C jet interceptor. Most FEAF fighter wings had received the latest model F-80's during 1949 and 1950, and in June 1950 only the 51st Fighter-Interceptor Group (which had converted to F-80A's and F-80B's during 1948) was not completely equipped with the latest model Shooting Stars.[71]

Although FEAF's jet fighter wings were up to the 90 percent of equipment strength authorized for peacetime operations, their recent conversion from conventional F-51 Mustangs to F-80C jets had brought a number of problems, of which a few serious ones remained to be solved. The employment of jet fighters in Japan complicated a virtually static air-base situation, for these aircraft required longer and stronger runways than did conventional aircraft. Since it seemed not improbable that FEAF's tenure of Japanese bases would not outlast the American occupation of Japan, the USAF had not been eager to expend its scarce funds for air installations which would have to be abandoned.[72] General MacArthur had ruled that no resources from the Japanese economy would be used for military construction unless it was essential for occupation purposes, and, reasoning that jet aircraft were not actually required for occupation duties, he had disapproved FEAF's request that Japanese funds be used to build jet-fighter facilities in Japan.[73] In July 1950 only four Japanese airfields had the 7,000-foot runways which met the operational requirements of combat-loaded jet fighters.[74]

The Shooting Star fighters were new in the Far East, but they were the oldest of USAF operational jets. They had been designed as counterair interceptors. As interceptors, their primary weapons were six .50-caliber machine guns. FEAF's F-80's also had mid-wing rocket posts, which permitted them to carry up to 16 5-inch high velocity aircraft rockets (HVAR's), but none of them were equipped with pylon bomb racks. With its internal fuel, an F-80C had a radius of action of approximately 100 miles, but each plane was provided with two 165-gallon external fuel tanks which it carried on wing-tip shackles. Loaded with rockets and two 165-gallon tip tanks, an F-80C had an operational radius of approximately 225 miles. Instead of fuel tanks, the plane could carry two 1,000-pound bombs on its shackles, but its operational radius in this configuration was the 100 miles possible with internal fuel. All of these ranges were not only quite short, but they also assumed that the F-80 jet would, for the most part, fly at the high altitudes (above 15,000 feet) where it attained its most favorable rate of fuel consumption. Any length of time spent at low altitudes, either en route to a target or seeking an objective for attack, rapidly exhausted an F-80's fuel and decreased its radius of flight.[75]

USAF planners were completely aware of the operational limitations of the F-80 aircraft, but these planes were designed as short-range interceptors and were not meant to be used for ground attack. Specifically adapted for air-ground operations was the Republic F-84E "Thunderjet." FEAF had been scheduled to get some of these more modern F-84's beginning in 1949, but because of the inadequate Japanese airfields General Stratemeyer had been compelled to ask, instead, for nothing "hotter" than F-80C's.[76] But General Partridge had not been content to let the matter rest, for he maintained that he had to get the longest range aerodynamically possible from his F-80's. He had therefore assigned the problem to the 49th Fighter-Bomber Wing, and at Misawa Lieutenants Edward R.




An F-80 pilot prepares to take off in ankle deep water covering the landing strip.

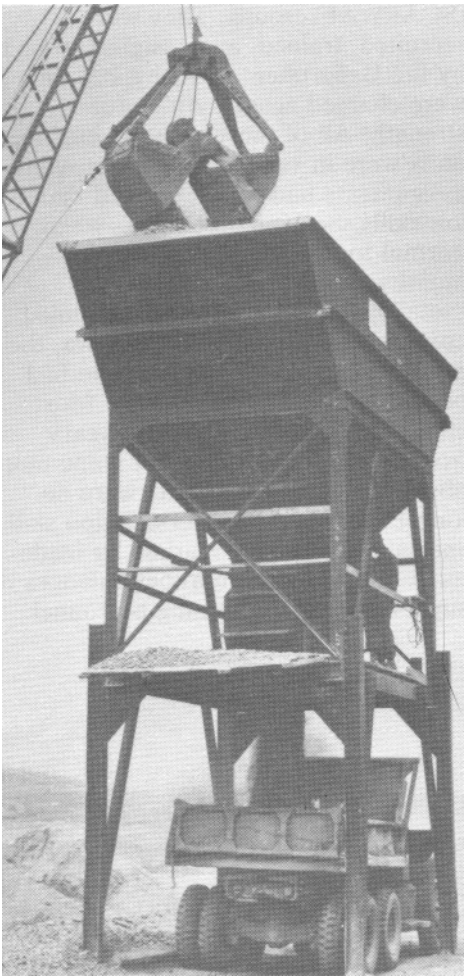
Johnston and Robert Eckman had devised an improvisation. Two center sections of a Fletcher tank could be inserted in the middle of the standard Lockheed tank, thus making a modified tank which could hold 265 gallons of fuel. These big "Misawa" tanks provided enough fuel for an extra hour of flight and increased the radius of action of an F-80C to approximately 350 miles, depending on the type of combat mission flown.[77] The USAF Air Materiel Command was unwilling to approve the installation, since the 265-gallon tanks stressed the wing tips and shackles, but early in June 1950 FEAF had established a project to manufacture one pair of the long-range tanks for every F-80 aircraft in the Far East Command.[78]

In the several years prior to 1950 USAF budgetary ceilings had severely pared flight training in FEAF. Cross-country trips in Japan had been curtailed, and most navigational flights were accomplished between two well-known bases, where pilots could make full use of radio aids and ranges. The 49th Fighter-Bomber Group later reported that two hours' dead-reckoning practice each month would have qualified its pilots for the hazardous flying conditions they encountered over Korea.[79] Rocket training of FEAF fighter pilots was severely limited by a USAF policy which prohibited the depletion of HVAR reserves. Some practice was possible with subcaliber aircraft rockets, but pilots, once in combat, found the trajectory of the HVAR to be entirely different from that of the practice projectile. Since few FEAF pilots had ever fired a 5-inch HVAR, they would have to get their rocketry training in the heat of combat.[80]

Since its primary mission was air defense, FEAF's unit tactical training had been principally concerned with interception exercises and counterair missions. While the Fifth Air Force had met all Eighth Army requests for joint air-ground training in full, such joint maneuvers had been neither realistic nor extensive.[81] As of 26 June 1950 the Eighth Army was just completing battalion-level training. To expedite the mutual phases of this training, the Eighth Army and Fifth Air Force had exchanged liaison officers, and 16 out of 25 battalion tests conducted between March and May had included close-

support demonstrations under the direction of tactical air-control parties provided by the 620th Aircraft Control and Warning Squadron. The provisional air-control parties had obtained some beneficial experience, but for the most part these battalion demonstrations were "canned" problems, conducted over well-known ranges and lacking realism to the airmen who flew them. In many instances the lack of adequate bombing and gunnery ranges convenient to Army posts in populous Japan forced the aircrews to simulate their supporting strikes.[82] Recognizing the limited value of battalion-level training, General Partridge worked earnestly to secure closer joint operations with the Eighth Army. Following the failure of communications in a joint theater-command post exercise early in April 1950, Partridge specifically recommended that a joint operations center be established, with regularly assigned Army, Navy, and Air Force representatives. Unfortunately, this proposal was not approved by the Far East Command.[83]

The air units in FEAF lacked much that they needed for peak effectiveness, but all of them were able to operate on the day that the war began. Such was not true of the engineer aviation units assigned to FEAF, and this construction capability was a significant weakness to offensive planning. Assigned to FEAF were two engineer aviation group headquarters and service companies, five engineer aviation battalions, and one engineer aviation maintenance company. Headquarters and Service Company, 930th Engineer Aviation Group, was assigned to the Fifth Air Force. With station at Nagoya, this group directed construction done by civilian contractors in Japan. Assigned to the Twentieth Air Force was the Headquarters and Service Company,



This truck is being loaded with a mixed crushed rock compound used in runway construction.

931st Engineer Aviation Group, the 802d, 808th, 811th, 822d, and 839th Engineer Aviation Battalions, and the 919th Engineer Aviation Maintenance Company. All of these units except the 811th Battalion (which was stationed on Guam) were engaged in construction work on Okinawa.[84] All aviation engineer troops were "Special Category Army Personnel with Air Force"

(SCARWAF) troops. They were recruited, trained, and assigned to units by the Department of Army, but they were charged against Air Force strength. All of these aviation engineer units were in sad shape. Theater-work assignments had not developed battalion skills. Serving on Guam—where a normal tour of duty was twelve months—the 811th Battalion was "totally untrained." In the scheduled construction projects on Okinawa, the prime duty of the 822d Battalion had been to operate a rock quarry. Most engineer equipment was war-weary from World War II, and, for some more obsolete items, spare parts were no longer stocked. Engineer aviation skill specialties had been marked by inadequate training and improper balances of supervisory and operating personnel. Rapid rotation cycles had alternately filled the battalions to excess, causing serious administrative troubles, or depleted the units so much that work projects had to be curtailed. As of 30 June 1950 aviation engineer personnel was on the ebb flow of the "boom or bust" cycle. With a total war-strength authority for 4,315 persons, FEAF engineer organizations possessed only 2,322 officers and men. Viewed in the light of their tables of organization and equipment, engineer aviation battalions possessed imposing capabilities to build the facilities which Air Force units required, but commanders of the engineer battalions in the Far East estimated their combat effectiveness to be not more than 10 to 25 percent of that expected from equivalent units during World War II.[85]

### *4. Air Planners Examine Korea's Geography and Climate*

High on the list of factors to be considered in any estimate of a combat situation is an analysis of the area of military operations. Human and natural geography dictate the manner in which ground forces will fight their battles. Weather and climate are determinants of air operations. Although the Air Force had taken strides toward all-weather capabilities, target and terminal weather would continue to be a major-operation consideration in Korea. As early as 27 June FEAF air planners were predicting that the Korean peninsula was going to be an inhospitable site for any sort of armed conflict.[86]

The peninsula of Korea thrusts down toward Japan, like an arm joined to the shoulder of Asia. It is bounded on the north by the winding Yalu and Tumen rivers which separate it from Manchuria and Siberia, on the east by the Sea of Japan, on the south by the Korea Strait, and on the west by the Yellow Sea and Korea Bay. In shape, Korea resembles Florida, and its area (85,000 square miles) approximates that of the state of Minnesota. Korea's greatest length is about 575 miles. It is narrowest at a line projecting eastward from the city of Sinanju: at this "neck of Korea" the peninsula is about 95 miles wide. South of Seoul the average width of the peninsula is about 150 miles. On the surface of the globe Korea is at the

center of a triangle formed by China, Russia, and Japan. The capital city of Seoul, which is approximately midway along the peninsula, lies 240 miles from the tip of China's Shantung peninsula, 340 miles from the Japanese island of Kyushu, 730 miles from Tokyo, and 800 miles from Okinawa.[87]

One of the first things that airmen observed was that Korea was a land of mountains and gorges, deep ravines and narrow valleys, mud flats, marshes, and rice paddies. In the north jagged mountain peaks reach 9,000-foot elevations. A wall of mountains—the North and South Taebank ranges—rises abruptly from the east coast and reaches crests of 5,000 to 6,000 feet at an average distance of ten miles inland. Spurs from these mountains radiate to the west and southwest and cover nearly all of Korea. River systems are patterned by the mountainous terrain. Streams of any size flow west or southwest from the western slopes of the main east-coast ranges. From north to south these major rivers are: the Yalu, which separates Korea from Manchuria; the Chongchon, which debounches into the Korea Bay near Sinanju; the Han, on which Seoul is located; the Kum, north of Taejon; and the wandering Naktong, which flows west and south around the town of Taegu and then east to empty into the Korea Strait near Pusan. From the air the gray-green ridges and valleys of Korea are so little distinguished from each other as to make target identification extremely difficult.

The topography of Korea, its age-old ties with China, and the Japanese occupation, all gave precedence to the development of Korea's west coast communications lines. The few good highways follow the axis Pusan-Taegu-Seoul-Kaesong-Pyongyang-Sinuiju. Aside from corridor routes from Seoul and Pyongyang to the Wonsan-Hungnam area on the eastern coast, Korea's lateral communications are, for the most part, little better than mountain trails. The backbone of Korea's overland transportation system was its railroads—some 3,500 miles of standard-gauge lines which had been built by the Japanese. A main rail line originates at Pusan and runs northward through Taegu, Taejon, Seoul, and Pyongyang to cross the Yalu at Sinuiju. Lateral spurs leave this main line at Chonan and Taejon for the southwest coast and then circle back eastward along the south coast at Pusan. Two other rail lines run diagonally across Korea from Seoul and Pyongyang to Wonsan and Hungnam. On the eastern coast a rail line from the Vladivostok area in Siberia crosses the Tumen River and follows the narrow coastal flats to a point southwest of Samchok, where it terminates. The railways were well constructed. Their substructures were heavily ballasted and most bridges were of modern construction. Both railways and roads followed the courses of rivers and valleys: the road commonly topped the ridges, but the railroads tunneled through them. These tunnels promised refuge to trains and vehicles, and the surrounding hills and mountains would provide excellent platforms for gun and warning positions. Any cross-country movement would be difficult because of the prevailing rice culture, especially on the western slopes, where paddies lay next to the communications routes and were terraced as high as 5,000 feet up the mountains.

Neither North nor South Korea had many good seaports. Pusan, at the southeast tip of the peninsula, is the best port in the country. The west coast has extensive mud flats and extremely high tides. Inchon, the port for Seoul,

Ground Control Approach Units like this one track aircraft and assist pilots making instrument landings in bad weather.

has a 27-foot tide, and its basic capacity depended upon a tidal basin which could serve only small vessels. Secondary west-coast ports—Kunsan, Yosu, Mokpo, and Chinnampo—had been developed primarily to serve fishing and agricultural interests. The ports at Wonsan and Hungnam, on the northeastern coast, held significance for supporting military operations in the hinterland of these two cities.

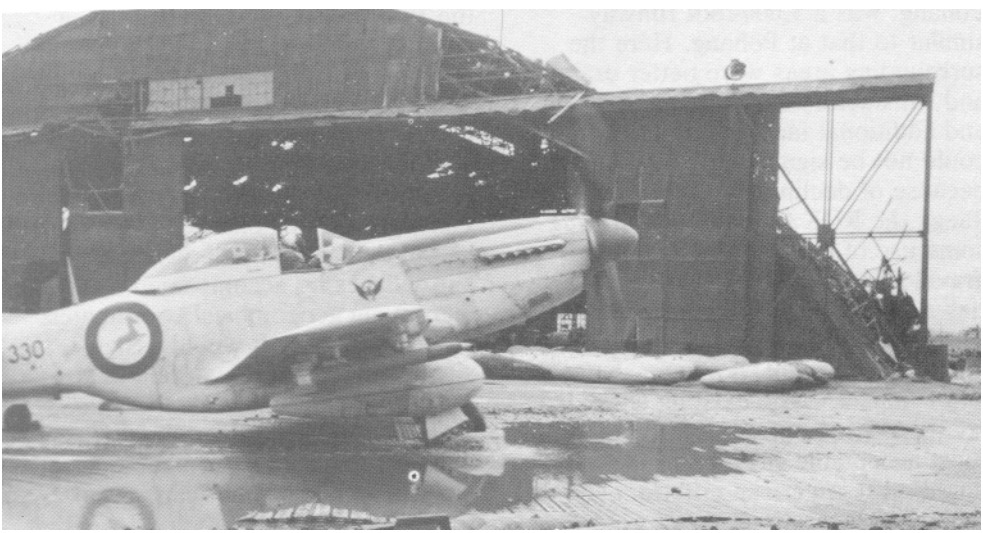
In South Korea the Japanese had built more than ten military airfields, but the South Koreans, having only a token air force, had kept few of these fields in use. Kimpo and Suwon were the only airfields suited for high-performance aircraft. Kimpo had been improved during the American occupation and was the most modern airfield in Korea. Suwon had a 4,900-foot concrete runway and adjacent air facilities. The next best airfield in South Korea was at Pusan: this airfield's runway was 4,930 feet long, but it was built of a concrete wash on four inches of rubble. On the eastern coast of Korea, near the fishing village of Pohang, was a 5,000-foot runway similar to that at Pohang. Here the surrounding areas were better drained, and satisfactory for building taxiways and additional facilities, but the strip could not be significantly lengthened because of declines at each end. At Taegu the ROKAF had been making some use of a 3,800-foot clay-and-gravel runway and a few other facilities. In addition to these airfields there were short sod strips at Sachon, Taejon, Pyongtaek, Kwangju, Kunsan, and Chinhae.[88] The existing airfields in southern Korea generally occupied the most acceptable sites, but none of them could meet American criteria, even for limited air operations.

Existing maps and charts which revealed the topographic features and human improvements of Korea were more accurate than those which are available for many parts of the world. Most Korean maps were based upon the Japanese Imperial Land Survey, which had established an abnormally dense geodetic control upon the peninsula. Aerial maps and charts for South Korea were based upon aerial-mapping photography and were for the most part accurate. North of the 38th parallel, however, little aerial mapping had been possible before June 1950, with the result that the ground maps and aeronautical charts covering North Korea were often inaccurate. Site errors of up to 500 feet were common, errors of up to 1,000 feet were not uncommon, and one instance was found where a map feature was one-half mile off from its actual geodetic location.[89] Serious enough to pose a problem from the first days of operations was a confusing similarity in Korean place names. Pyongyang, for example, was the capital of North Korea; Pyonggang was the site of an advanced enemy airfield just north of the 38th parallel; Pyongyong was a town of no especial importance on the railway north of Pusan. Alternate place names appeared on different maps. The airfield on the southeastern coast of Korea was variously called Geijitsu Bay, Yongil-wan, Pohang-dong, Pohang-wan, or Pohang. FEAF soon had to demand that all names of towns and villages be accompanied by identifying geographical coordinates, and early in July it would assign a "K-site" number to each airfield in Korea for purposes of exact identification.[90]

While the importance of weather to military operations had been theoretically reduced as American armed forces had increased their all-weather potentials, climatology and weather remained major factors in planning air

operations over Korea. Lying in the same latitudes as the eastern seaboard of the United States between upper New York and North Carolina, Korea has a climate that is generally hot and humid in the summer and cold and fairly dry in the winter. Summer is the season of heavy rains. In July most of the country receives from eight to ten inches of rain, and the southern highlands sometimes get more than sixteen inches. Summer cloud cover is generally heavy, and fogs and haze further reduce visibility, particularly in the forenoons. Winter temperatures in Korea are more extreme than those of the eastern seaboard of the United States. They range below zero degrees almost every night in the northern interior and between thirty and forty-five degrees during the day in southern coastal areas. There are strong upper winds at this season, but the predominantly dry air of the winter makes it the most favorable period for air operations.[91]

The prevailing flow of weather over Korea is from the northwest, a factor which would complicate any forecasting of weather with the degree of accuracy which is needed by aerial operations. During the Korean hostilities Russian weather stations would continue to broadcast international meteorological observations, and from these periodic radio broadcasts FEAF weathermen could mark weather trends as they originated in central Siberia. The Chinese Communists, however, provided no weather data, and, as a result, weather fronts could not be mapped during the several days when they moved across North China and Manchuria. Even under the best of conditions, forecasting weather for mountainous Korea, which is surrounded by several thousand square miles of warm ocean currents, would have been a difficult problem. From the beginning of the war FEAF planners recognized that weather predictions for the battle area would not be completely accurate.[92]



An F-51 of the South African Air Force taxis out for a mission despite the weather.

### *5. Balancing FEAF Requirements Against USAF Capabilities*

At the end of June 1950, as FEAF shifted its existing units from a defensive to an offensive deployment, General Stratemeyer's purpose was to bring as much of his force to bear against the North Korean aggressors as was consistent with the requirement that he continue to maintain the air defenses of the Far East Command. General Stratemeyer and his staff sought the answers to three thorny questions: What air defenses would FEAF continue to maintain? Where would the air striking force be based? The third question would need answering both in Tokyo and Washington: What kind of striking force could the USAF support in the Far East without jeopardizing its world-wide commitments?

"The Far East Air Forces in Japan," Stratemeyer told General Vandenberg on 29 June, "are operating on instructions which require that we continue to be prepared to insure the air defense of the Japanese home islands against hostile air attack."[93] The headquarters of the three fighter wings in Japan were so inextricably a part of the air-defense structure that they would have to remain where they were, but some part of their tactical units could be released for the Korean war. Assuming that Soviet Russia would not openly intervene in Korea, General Stratemeyer's operational planners told him that the air-defense forces at Misawa, Johnson, and Itazuke could be reduced to minimums of one F-80 squadron, plus a flight of F-82 fighters.[94] General Stratemeyer was apprehensive about denuding the defenses of the Kanto Plains of central Japan, where so many vital American installations were concentrated, but he approved this allocation of defensive units, with the proviso that another squadron of F-80's and more F-82's would be returned to Johnson Air Base as soon as possible.[95] Looking farther afield in the first days of the war, General Partridge recommended that the fighter wings on Okinawa and the Philippines should be deployed to Japan. At such an early date GHQ would permit the movement of only one fighter squadron, this from the 18th Fighter-Bomber Wing in the Philippines.[96] On 13 July General Stratemeyer obtained permission to move the 18th Group and another one of its squadrons to Japan.[97]

Having ascertained the minimum air-defense forces which would remain in place, FEAF operational planners sought airfields suited to the deployment of the air striking force. Whatever glimmer of hope there was that jet fighters could be based in Korea was extinguished as heavily loaded transport planes tore up the lightly surfaced runway at Pusan. Now it was clear that all of the jets would have to be based on Kyushu, at Itazuke, and Ashiya. The 49th Fighter-Bomber Group (less its 7th Squadron) moved from Misawa to join the 8th Fighter-Bomber Wing at Itazuke. But before the 35th Fighter-Interceptor Group could go to Ashiya some disposition had to be made of the 3d Bombardment Group's B-26's which were already there. FEAF planners cast covetous glances at Iwakuni Air Base, but Great Britain had not yet announced whether Commonwealth forces would support South Korea. In Washington on 29 June, however, the Australian ambassador made the RAAF No. 77 Squadron (with 26 Mustangs) available to FEAF, and thus cleared the way for the desired deployment of the

3d Bombardment Group to Iwakuni.[98] The 35th Fighter-Interceptor Group (less its 41st Squadron, which went to Johnson for air defense) moved from Yokota to Ashiya without delay. The all-weather fighter squadrons were shifted according to plan. The 339th Squadron moved from Yokota to Misawa and Johnson, the 68th Squadron remained at Itazuke, and on 8 July the pilots of the 4th Squadron returned to Naha Air Base on Okinawa.[99]

The officers who were planning FEAF's war deployment meant to use every F-80C jet fighter which could be spared from defensive purposes, but they also recognized that the Fifth Air Force would need to employ every conventional F-51 Mustang it could secure. Everyone seemed to like the way the jet fighters were performing, but the planners recognized that the Mustangs had a longer range and could operate from shorter and rougher airfields. General MacArthur had given ten Mustangs to the Republic of Korea, and a detachment of the 36th Fighter-Bomber Squadron was training ROK pilots at Itazuke. Thirty more Mustangs were being withdrawn from theater storage and prepared for combat, and the FEAF planners recommended that these Mustangs be used to equip a provisional fighter squadron, which could operate from Iwakuni until such time as accommodations were prepared in Korea.[100] General Stratemeyer approved this plan. On 3 July he directed the Thirteenth Air Force to form such a squadron from the most apt personnel of the 18th Group and to send the squadron—which would be called "Dallas"—to Johnson Air Base for equipment with Mustangs.[101]

Having made the plans to employ the forces he had available, General Stratemeyer sent his first requirements to USAF on 30 June. One message

Korean mechanics work on the engine of an ROK F-51.

asked for enough personnel in specified categories to bring all assigned units up to war strength (one and one-half times peace strength).[102] A second message requested 164 F-80's, 21 F-82's, 22 B-26's, 23 B-29's, 21 C-54's, 64 F-51's, and 15 C-47's. Most of these planes were needed to round out squadrons to their war strength and provide a 10 percent reserve for combat attrition. The C-47's would haul cargo into smaller Korean airfields. Added to those FEAF already had, the Mustangs would be used to equip a provisional Mustang group. General Stratemeyer explained that both F-51's and F-82's were exceptionally well suited for the long-range, low-level missions required in Korea.[103] On 1 July General Stratemeyer dispatched another requirements message to Washington. This time he asked for air units, some for service in Korea and some for air defense. Wanted were: one medium bombard-

ment wing, two Mustang wings, two F-82 all-weather squadrons, one troop carrier wing, three F-80C squadrons to augment the Japan-based fighter wings, a B-26 wing, two B-26 squadrons to fill out the 3d Bombardment Wing, an RF-51 reconnaissance squadron, an RB-26 night photographic squadron, and a tactical air-control squadron.[104] In a separate message to the Joint Chiefs of Staff General MacArthur endorsed Stratemeyer's requirements messages and urged that they receive immediate action.[105]

Back in Washington the USAF Chief of Staff, General Hoyt S. Vandenberg, had the utmost sympathy for Stratemeyer's requirements. Better than any other man, Vandenberg knew the needs of a tactical air war, for in World War II he had commanded the Ninth Air Force in Europe. Vandenberg's oral instructions left no doubt that he wanted FEAF to be given the strongest possible support. "We want," he said, "to...insure the position of the USAF in this job that is being done over there, be sure that it is being done with the very best equipment in the shortest time. When the request comes in, that request must be fully met."[106] Unfortunately, however, the USAF in 1950 was what General Vandenberg would later describe as "a shoestring Air Force."[107] The semi-annual report of the Secretary of Air Force, published in April 1950, spoke of the "completion of the downward readjustment to 48 groups." Personnel slashes in late 1949 and early 1950 brought Air Force strength down to 411,277 officers and men on 30 June 1950—less than 18 percent of the peak wartime strength of 2,411,294 officers and men.[108] In July 1950 the USAF had a total inventory of less than 2,500 jet aircraft of all types.[109]

With a few important exceptions, USAF would have to support the initial year of Korean hostilities from stored stocks of equipment left over from World War II. On 3 July General Vandenberg secured approval from the Joint Chiefs of Staff to move the 22d and 92d Bombardment Groups (Medium) from the United States to the Far East. This more than met FEAF's request for an additional B-29 group. But other divergencies between FEAF's requirements and USAF's capabilities were so wide that General Vandenberg dispatched a team of officers, headed by Lt. Gen. K. B. Wolfe, USAF's Deputy Chief of Staff for Materiel, to the Far East. The Wolfe party reached Tokyo late on the evening of 4 July and began work the next day. One of the duties of the Operations representative on the team, Maj. Gen. Frank F. Everest, was to explain why FEAF could not get the F-80C jet fighters it had requested. Most of these F-80C's just did not exist. Some 325 F-80A's and F-80B's could be modernized, but only slowly—at a rate of 27 a month. General Everest also explained why USAF could not supply any more F-82 all-weather fighters. USAF possessed only 168 of these planes, most of them already assigned to units in Alaska and the Pacific Northwest. Moreover, if the Fifth Air Force continued to use the F-82's that it had in combat over Korea, USAF would not be able to provide supply support for these planes for more than sixty days. Having dealt with its limitations, General Everest next discussed USAF's capabilities. It had "a considerable backlog" of F-51 Mustangs—764 assigned to Air National Guard units and 794 in storage. At that moment 145 F-51's were being recalled from the Air National Guard, and these planes, with accompanying pilots and mechanics, would be shipped aboard the aircraft carrier *Boxer* as

soon as that vessel could be readied for the voyage.[110]

After visiting several Fifth Air Force bases the Wolfe party returned to Tokyo for a final meeting with the FEAF staff on 7 July. At this conference FEAF agreed to convert six of its F-80 squadrons to F-51 aircraft, and it also promised to withdraw the F-82 all-weather fighters from combat. FEAF recognized that it would not get the F-51, F-82, and F-80 units it had requested. Everyone agreed that the two Strategic Air Command groups more than met the B-29 requirements. Back in the United States more B-29's would be processed out of storage, but for the time being the 19th Group would remain under strength. Enough RF-80's would be provided to keep the 8th Tactical Reconnaissance Squadron at war strength, and FEAF therefore withdrew its request for an RF-51 squadron. Detailed discussions of air-transport requirements led to a mutually agreeable solution whereby FEAF would re-form the 374th Troop Carrier Group with two squadrons of C-54 aircraft and one squadron of C-47 planes. If Army airborne units were sent to the Far East, FEAF would be further augmented with temporary-duty troop carrier units from the United States.

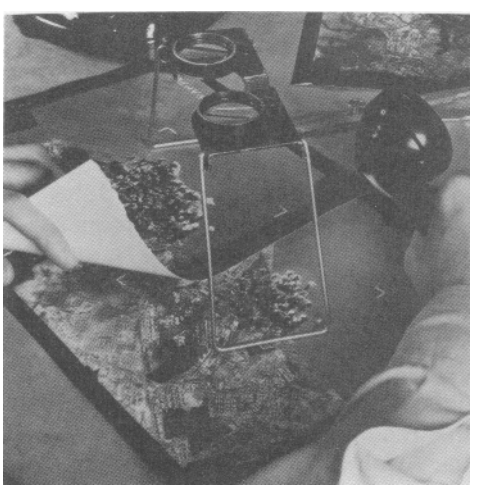
The Tokyo conferees agreed that FEAF had a legitimate need for an additional light bombardment wing plus two light bombardment squadrons, but this requirement could not be satisfied from active resources. Such units would have to be called into active service from the Air Reserve. The request for a tactical air-control squadron would be difficult to meet. The USAF had only one tactical control group (the 502d) at Pope Air Force Base, North Carolina. FEAF initially agreed that the Fifth Air Force would satisfy its needs with a provisional air-control squadron which it was organizing from its own resources.[111] Although the USAF party was able to enlighten FEAF officers as to the thinking in Washington, it was actually able to give the FEAF staff little exact guidance concerning the air units which it might expect to receive as reinforcements.

Throughout the month of July the Joint Chiefs of Staff reviewed service plans for the movement of units to the Far East. Not a week of fighting had passed before General MacArthur was sending in requests for additional troops which would, at the proper moment, make an amphibious landing behind the North Korean army. Among the troops he wanted was the Army's 187th Airborne Regimental Combat Team, and, in order to mount an airborne operation, FEAF would require additional troop-carrier effort. With JCS approval, USAF alerted the 314th Troop Carrier Group for a stint of temporary duty in the Far East.

Photo interpreters check the thousands of reconnaissance contact prints taken by an RB-29 only twelve hours earlier.

General MacArthur requested a Marine division and a Marine air wing. Not all of these Marines could be had at once, but the Navy undertook to dispatch a 1st Provisional Marine Brigade to the Far East. This brigade would be accompanied by elements of the 1st Marine Air Wing.[112] At its meeting on 7 July the Joint Chiefs approved USAF's projected deployment of air units. The 162d Tactical Reconnaissance Squadron, Night Photo, and the 1st Shoran Beacon Unit were put on orders to move from Langley Air Force Base, Virginia. Committed for eventual movement to FEAF were the 437th Troop Carrier Wing and the 452d Bombardment Wing (Light). Both of these wings were Air Force Reserve organizations which would be recalled to active duty and given sixty-day refresher training before they would be ready for the trip overseas.[113]

As the war developed in Korea FEAF found need for several other organizations. To handle the Fifth Air Force's expanding photographic reconnaissance capability, FEAF requested a reconnaissance technical squadron, and on 19 July USAF issued orders for the 363d Reconnaissance Technical Squadron to proceed from Langley Air Force Base to Itazuke.[114] By 18 July General Partridge saw that the Fifth Air Force could not perform its mission in Korea if it depended upon improvised communications and control facilities. He requested USAF to send to the theater the 502d Tactical Control Group, the 2d Radio Relay Squadron, the 934th Signal Battalion, Separate, and three electronics bombing director detachments of the 3903d Radar Bomb Scoring Squadron. USAF approved this request on 28 July.[115] The last FEAF-augmentation project of the period originated not in the theater but in Washington, where the Joint Chiefs were disturbed over the fact that the three B-29 groups already in the theater had been allowed too little time for strategic bombing deep in North Korea. On 29 July the Joint Chiefs proposed to send two additional B-29 groups for 30-day temporary duty in the Far East, provided they would be used for strategic bombing. That same day the Strategic Air Command alerted the Fifteenth Air Force's 98th Bombardment Group (M) and the Second Air Force's 307th Bombardment Group (M). General MacArthur found the proposal "highly desirable," and on 1 August the two medium bomber groups got their movement orders.[116]



Preliminary Bomb Damage Assessments are phoned in from these still-wet "quickies."

During July and August the USAF drew upon its regular and reservist manpower resources to meet FEAF's requirements for Air Force personnel. By 1 September 1950 FEAF had an authorized strength of 46,233 officers and men and possessed 45,991 assigned. This was a substantial increase in personnel strength from the strength of 39,975 authorized and 33,625 as-

signed total personnel which FEAF had possessed on 30 June.[117] Much of this increased strength was in the new tactical units which reinforced FEAF, but FEAF also received combat crew personnel to bring its tactical units up to wartime strength and augmentation authorizations which permitted it to increase the manning of its headquarters staffs and to activate a number of table-of-distribution air-base organizations. Recognizing Stratemeyer's need for the best knowledge of the Air Force, General Vandenberg offered many of his most experienced officers for service in the Far East.

But in spite of persevering efforts to do so, USAF was not able on short notice to supply all of the specialized categories of Air Force personnel which were requested. Navigators and bombardiers remained in such short supply in the 3d Bombardment Group that these officers in July flew three times as many missions as other rated personnel. Not until September would the group receive a full complement of reservist bombardiers and navigators, men who would need refresher training. Most of FEAF's units continued to be alarmingly short of specialists in aircraft accessories, ordnance, and communications.[118] Some of these personnel shortages were attributable to the fact that the USAF, in the years between wars, had lost many of its trained technicians to the lure of the higher wages paid by private industry. Other deficiencies were attributable to faults in personnel planning. A serious shortage in the category of intelligence specialists known as photographic interpreters posed a problem which USAF would not be able to solve for more than a year. Most USAF photo interpreters had left the service at the end of World War II, and, because the jobs lacked rank, few regular officers had selected the field as a military career. No reservist photographic interpretation unit had been created to provide a reservoir of trained Air Reserve officers for a war emergency.[119] Each of these personnel deficiencies in some measure reduced FEAF's effectiveness or added to the cost of its operations.

Critical from the beginning of the Korean war, the status of SCARWAF engineer aviation troops admitted of no ready solution. On 5 July General Stratemeyer "earnestly solicited" General Vandenberg's personal assistance to get the FEAF aviation engineer units up to authorized strength with proper personnel specialties. On 14 July, when General Vandenberg was in Tokyo, General Stratemeyer explained the full import of the aviation-engineer problem to him: "If we had aviation-engineer units even at nearly full strength with proper specification serial numbers," Stratemeyer said, "the operations from Korea would have been initiated from Taegu and Pusan last Friday [7 July]."[120] In Washington USAF authorities begged the Department of Army for assistance. In immediate actions, FEAF was authorized to retain any SCARWAF people who were slated to rotate to the United States, and some 870 specialists began to move by air to Japan on 14 July.[121] On 26 July, however, FEAF requested 1,237 engineer replacements, a number which would bring its units up to strength and provide a surplus of men who could relieve misfits and deserving individuals who were ready for rotation. USAF was unable to comply with this request, stating in justification that the Army could not bring FEAF's aviation-engineer units up to war strength without depleting its cadre sources which it needed to activate new units.[122] General Stratemeyer

nevertheless insisted that his engineers required full strength as an absolute minimum and recommended that airmen with requisite qualifications be dispatched if SCARWAF troops could not be made available. Indeed, General Stratemeyer suggested that aviation-engineer units and all responsibilities pertaining to them should be transferred to the Air Force.[123] Finally, on 12 September 1950, FEAF was permitted to reorganize its aviation-engineer units in accordance with new, increased-strength tables of organization and equipment,[124] but the deficiencies of SCARWAF engineer aviation troops would remain a vexing problem throughout most of the Korean war.

### *6. Trans-Pacific Movements Test Air Force Mobility*

Asked his formula for winning battles, Confederate General Nathan B. Forrest replied: "Get there first with the most men." Recognizing that this axiom of the American Civil War was a vital truth in an era of global nuclear war, the United States Air Force had made determined efforts to instill the need for mobility into all of its tactical units. The story of the trans-Pacific movement of the organizations which were ordered to FEAF's support now provided examples of air mobility at its best and at its worst.

On 13 July 1950, nine days after receiving word 8,000 miles away in the United States that the medium bombers were to move to the Far East, General O'Donnell sent the 22d and 92d Bombardment Groups on a combat mission to Wonsan, an achievement which demonstrated the mobility and striking power of the Strategic Air Command. To General Vandenberg this accomplishment indicated a "high degree of esprit, mobility, and technical competence."[125] Profiting from mistakes made in this initial deployment, the 98th and 307th Bombardment Groups got to combat even faster. The 98th flew its first combat mission from Yokota Air Base on 7 August, five days after it had departed the United States, and the 307th launched its first combat strike from Kadena Air Base on 8 August, exactly one week after its planes had left its home base in Florida.[126]

The swiftness of the medium bomber deployment to combat was possible only because of well-established Strategic Air Command mobility plans which had been designed for just such an emergency. In conjunction with the execution of its primary mission, the Strategic Air Command held the responsibility of maintaining air force units in readiness "for employment against objectives of air attack in any location on the globe." All units assigned to the Strategic Air Command were required to be "highly mobile organizations, capable of being dispatched without delay, to distant bases." Command letters, directives, and manuals gave, in complete detail, the various requirements for executing the mobility plan. Emphasis had been placed upon the equipment of all units for thirty days' operations with a minimum amount of support from operating bases. Flyaway kits contained spare parts and served as a kind

of airborne base supply. Bomb-bay bins carried other essential supplies. Each wing commander maintained a reserve of spare engines, engine quick-change packups, and power packups. The wing mobility plans and preparations had been tested in overseas movements. The 22d and 92d Groups had been in the Far East and the United Kingdom; the 98th Group had been in the Far East, the United Kingdom, and at Goose Bay; and the 307th Group had served temporary duty in the United Kingdom and Germany.[127]

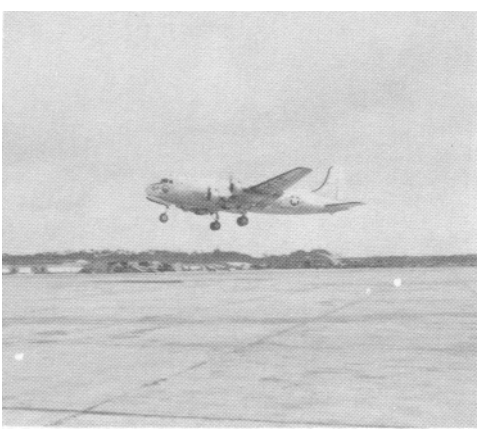
The warning alert, followed by appropriate operations orders, went out to the 22d and 92d Groups on or soon after 1 July. Officers and airmen who had been planning Fourth of July holidays found themselves packing crates, loading cargo planes, or standing in line before the boarding ramps of planes bound for the Far East. After hurried hours of packing and preparation, the deployment airlift got under way. The two groups scheduled flights of ten B-29's each day, departing their home bases on 5 through 7 July. The 22d left March Air Force Base, California, stopped off at Hickam for a rest period, then flew on to Kadena, with stops at Kwajalein and Guam. The 92d Group took off from Spokane Air Force Base, Washington, and followed a similar flight plan, with a final destination of Yokota Air Base. The 98th and 307th Groups were equally well prepared for short-notice departures. The 98th departed Spokane Air Force Base for Yokota between 2 and 4 August, and the 307th left MacDill Air Force Base, Florida, between 1 and 3 August, headed for Kadena.[128]

In the years of reduced military budgets prior to 1950, the USAF Tactical Air Command had become an operational headquarters under the USAF Continental Air Command in December 1948. Even though it realized that tactical air units required global mobility, the Continental Air Command had had no funds to stand the costs of such a program. Alerted at Langley Air Force Base, Virginia, on 5 July, the 162d Tactical Reconnaissance Squadron (Night Photography) was hurriedly filled to near peacetime strength (a part of the fillers were jet mechanics with little experience on the squadron's conventional RB-26's). Its ground echelon, traveling by water, reached Itazuke on 19 August. Meanwhile, the aircrews had moved to Ogden, Utah, for depot installation of a new-type flash cartridge illumination system on their RB-26's. Then the flash equipment was pronounced too heavy for the old B-26's on the long, overwater flight to Japan, and it was removed to be crated for air shipment. But someone diverted the flash equipment to water shipment, so that it was not until 26 August, fifty-three days after the alert at Langley, that the 162d Squadron was finally ready and equipped for its first mission over Korea. Traveling with the air echelon of the 162d Squadron, the 1st Sharon Beacon Unit arrived at Johnson Air Base on 9 August. Conveyed by air and water, the 363d Reconnaissance Technical Squadron assembled both of its echelons at Itazuke Air Base on 18 August.[129] Considering their lack of mobility training and the mistakes that had been made, these Tactical Air Command units reached Japan in an acceptable length of time.

But the laborious transfer of the 502d Tactical Control Group, the 934th Signal Battalion, Separate, and the 2d Radio Relay Squadron from the United States to Korea proved to be a study in frozen motion. These three "mobile" communications units were burdened with large and fragile electronics

equipment. Even after they were stripped of many of their vehicles, their unit property filled the better part of two Liberty ships. Their organizational structure was such that they could only move and function as complete units. These factors, plus a certain amount of confusion in the preparation of their movement orders, delayed the arrival of the three badly needed units in Korea by more than eight weeks. Requested by FEAF on 18 July, the three communications and control units did not reach Pusan until 24 September. Even then they had to repair their damaged equipment and were unable to begin to perform their assigned duties until 10 October.[130] Looking back at this unfortunate experience, it was apparent that these communications and control units should have been organized as cellular structures, which would have allowed parts of the units to move and function pending the arrival of later echelons. And the electronics equipment required in the tactical-control system should have been air transportable.

When the two wings were designated for mobilization and assignment to FEAF in July, no one expected that the 437th Troop Carrier and 452d Bombardment Wings would soon see service in Korea. But the mobilization and preparation of the two wings for overseas service went rapidly. Both were better-than-average reserve wings. The 452d, for example, had been the first air-reserve wing to attain its full authorized reserve strength. Both of the wings were recalled to active duty on 10 August 1950. The 437th entered active service at O'Hare Airport, Chicago, Illinois, and promptly moved to Shaw Air Force Base, South Carolina, where it trained with the C-46 aircraft which it would operate overseas. The 452d Wing was mobilized at Long Beach Airport, California, and at once began intensive B-26 training at nearby George Air Force Base. On 15 October the 452d Wing began its movement to Itazuke Air Base, and at this time one of its four tactical squadrons—the 731st Bombardment Squadron (Light-Night Attack)—was detached and ordered to join the 3d Bombardment Group at Iwakuni Air Base. On 27 October 1950 the 452d Wing sent its initial combat mission to Korea, exactly seventy-seven days after the wing was recalled to active duty. By 15 November the water-borne echelon of the 452d Wing arrived at Itazuke, bringing the wing up to full strength at its overseas base. The first aircraft of the 437th Wing flew the Pacific and reached Brady Air Base, Kyushu, at sundown on 8 November. Less than thirty-six hours later three 437th Wing C-46's flew a combat cargo mission to Korea. Water echelons of the 437th Wing disembarked in Japan on 8 November and established themselves next day at Brady.[131] The two air-reserve wings had gotten to the Far East too late to fight the North Koreans but they would make their presence known to the Chinese Communists.



C-54 transport aircraft.

(left to right) Lt. Gen. George E. Stratemeyer, Maj. Gen. Earle E. Partridge, and Gen. Hoyt S. Vandenberg.

# 3. *Drawing the Battleline in Korea*

## *1. Beginnings of a Tactical Air Force*

While General Partridge was in Tokyo, Brig. Gen. E. J. Timberlake was in command of the Fifth Air Force. On the night of 30 June General Timberlake was at Fifth Air Force headquarters in Nagoya, and at 2300 hours FEAF Operations summoned him to the telephone to pose a startling question. How soon could he get his troop-carrier people ready to lift General Dean's 24th Infantry Division from Kyushu to Korea? "This was the first indication I had as Commanding General of the Fifth Air Force," said Timberlake, "that the 24th Division was going to move to Korea." During the past several days all Fifth Air Force troop-carrier planes had been hauling ammunition and supplies to Korea. Most of them were already loaded for the next day's missions. But during the night the 374th Wing unloaded its aircraft, and at dawn on 1 July a fleet of C-46's, C-47's, and C-54's was standing by for the troop lift at Itazuke.[1]

Plans for moving the 24th Division to Korea were worked out at Itazuke between General Dean and representatives of the 374th Troop Carrier Wing. As a matter of priority, General Dean wanted the 24th Division headquarters and two battalions of infantry troops lifted to Korea by air. The remainder of the division could proceed by water transport from Fukuoka to Pusan. Using C-54's, each of which would carry 50 soldiers, the representatives of the 374th Wing thought that the task could be accomplished in three days without much difficulty. But the planners did not reckon with foul flying weather and the sorry condition of the runway at Pusan. On the morning of 1 July a cloud ceiling hung only a little above the rice paddies which surrounded the Pusan landing strip, and the first C-54 could not leave southern Japan for that destination until 1536 hours in the afternoon. After six loads of infantry troops were landed, the weather at Pusan closed in again and a few planes had to return to Japan without accomplishing their mission. A full-scale C-54 airlift into Pusan began on the morning of 2 July, but the lightly surfaced concrete runway rapidly deteriorated under the pounding of the heavily loaded transports. "It was a horrible field anyway—the damned thing was practically under water," said General Timberlake, who flew to Pusan at noon on 2 July to inspect the airlift. Since the runway obviously would not stand up under the loading of the heavy transports, General Timberlake in midafternoon of 2 July closed the field to C-54's and ordered the 374th Wing to resume operations with lighter C-46's and C-47's. Using these lighter planes, the 374th Wing completed its troop-lift mission a little before dusk on 4 July.[2] Already, a battalion combat team of the 21st Infantry which had been airlanded at Pusan in the first serials of the airlift was racing northward by rail and truck to make its first contact with the enemy near the village of Osan on 5 July.[3]

General Timberlake was puzzled by the lack of Army and Air Force planning manifest in the sudden movement of American troops to Korea, but he correctly surmised that the Fifth Air Force would be required to provide support for the American ground troops. In Tokyo General

Partridge also assumed that the Fifth Air Force would have to serve the role of a tactical air force in Korea. As late as April 1950, during the FEC command post exercise, Generals Partridge and Timberlake had carefully reviewed Field Manual 31-35, *Air-Ground Operations,* the joint doctrinal publication which represented the best of learning regarding the cooperation of air and ground forces in the land campaigns of World War II. They were thus well versed in the philosophy of the employment of tactical air power and of the organization required for the cooperative operations of a tactical air force and a field army in a theater of war. Somewhat later, after touring Korea as a representative of the U.S. Army Field Forces, Brig. Gen. Gerald J. Higgins, Director of the Army's Air Support Center, would think it "highly significant that the Commanding General, Fifth Air Force, was apparently the first individual in the theater to recognize, and take steps to implement, the necessity of coordination of the efforts of the air and ground troops."[4]

The intimate degree of air and ground cooperation which had spelled victory in World War II had been born of teamwork between air and ground commanders—Coningham and Alexander in North Africa, Quesada and Hodges in France, and Weyland and Patton in Germany—who lived together in adjacent headquarters and employed their forces in a common war against the Nazi enemy. On 27 June General Timberlake had already established an advanced echelon of Fifth Air Force headquarters at Itazuke, and on 2 July the Fifth Air Force's director of operations and his staff went down to this airfield in southern Japan, completing the manning of the advanced echelon.[5] From Tokyo General Partridge sent word that he wanted the advanced echelon of Fifth Air Force headquarters to move to Pusan and become operational not later than 8 July,[6] but these orders proved premature. At Pusan Airfield, on 2 July, General Timberlake found nothing useful to a headquarters installation. Moreover, Timberlake talked to General Dean, who said that he was not yet sure where he would locate the ground command post.[7] When General Dean established USAFIK headquarters at Taejon on 4 July, General Partridge instructed Timberlake to move his advanced headquarters to Taejon as soon as communications were available there.[8] Because of a shortage of communications equipment, however, the advanced echelon of Fifth Air Force headquarters would remain, for the time being, in southern Japan.

In order to integrate the effort of air and ground forces, each operating under its own command, official doctrine recognized the requirement for a joint agency which served to exchange battle information, to provide the Army commander with a facility at which he might present his requirements for air support, and to provide the Air Force commander with an agency for timely planning and control of the supporting air effort. This agency was called a "Joint Operations Center." The physical make-up of the center included an Air Force combat operations section and an Army air-ground operations section. Designed to operate in close association with the Joint Operations Center (JOC) was an Air Force activity designated as the Tactical Air Control Center (TACC). Primarily a communications organization, the TACC was the focal point for aircraft control and warning activities of the tactical air force.

Although he could not yet move the

advanced echelon of Fifth Air Force headquarters to Korea, General Partridge was anxious to open a Joint Operations Center at Taejon.[9] At Itazuke, on 3 July, General Timberlake accordingly organized a combat operations section, drawing officers from the advanced echelon and airmen from the 8th Communications Squadron, in all, 10 officers and 35 airmen. Lt. Col. John R. Murphy was named officer-in-charge of the operations section, and he moved his personnel and equipment to Taejon on 5 and 6 July, and set up for business at the 24th Division's headquarters in an office adjoining the division G-3. Later on FEAF would say that the JOC opened at Taejon on 5 July,[10] but since the Army did not man its side of the establishment, Colonel Murphy's section was something less than a joint operations center. Lacking Army representatives, Air Force intelligence officers in Colonel Murphy's party scouted around the Army headquarters building and picked up such targets as seemed profitable for air attack. The state of the war was so confused that the 24th Division's operations officer was frequently unable to post an accurate location of friendly troops. "At Taejon," said Lt. Col. John McGinn, who was now working with Colonel Murphy's section, "we would get a target, and then pretty soon the Army liaison pilots would come in and say that our troops were in that area and it wouldn't be advisable to go there for a target."[11] Even when Colonel Murphy's section obtained worthwhile targets, communicating them back to the advanced echelon of the Fifth Air Force in Itazuke proved to be a difficult to impossible matter. The section had a very high-frequency radio for air-control work and a land-line telephone and teletype to Itazuke, but the wire circuit back to Japan was said to have been out of order approximately 75 percent of the time. Understanding this lack of communications, General Timberlake scheduled F-80 flights from Itazuke and Ashiya at twenty-minute intervals during the daylight hours, and these flights checked in over Taejon with Colonel Murphy's "Angelo" control station. When "Angelo" had supporting targets, it gave them to the pilots; when "Angelo" had no targets, the fighter pilots proceeded up the roads between Osan and Seoul and looked for targets of opportunity.[12]

According to the existing doctrine on air-ground operations, the tactical air force furnished tactical air-control parties (TACP's) to serve as the most forward element of the tactical control system and to control supporting aircraft strikes from forward observation posts. Each TACP was composed of an experienced pilot officer, who served as forward air controller, and the airmen needed to operate and maintain the party's vehicular-mounted communications equipment. On 28 June, while ADCOM was still at Suwon, General Timberlake had sent two tactical air-control parties there, hoping that they might be useful for controlling air strikes in support of ROK troops. These two parties–headed by Lieutenants Oliver Duerksen and Frank Chermak–retreated back to Taejon with ADCOM, and they were ready to go into the field when the first elements of General Dean's division reached that place. Both parties were from Detachment I, 620th Aircraft Control and Warning Squadron, and Colonel Murphy brought the other four control parties of this detachment with him from Itazuke. Since Detachment I had been formed for the purpose of cooperative training with Eighth Army troops, the control parties had had

some maneuver experience in directing close-support strikes. Each of the parties was equipped with an AN/ARC-I radio jeep and another jeep which served as a personnel carrier. All this equipment was old. Most of it had been in use or in storage in the theater since World War II.[13]

As the forward elements of the 24th Division advanced northward from Taejon to engage the enemy, Lieutenants Chermak and Duerksen joined the advanced command posts on 3 and 4 July. Here they immediately began to run into trouble. "The weather was . . . murky, ceiling was on the ground," recalled Duerksen. Chermak's radio broke down, and he had to go back to Taejon for another jeep. On 8 July, when working with the 21st Infantry Regiment at the little town of Chonui, the weather cleared up enough so that Duerksen finally got a chance to control his first flight of F-80's onto a target. Now the radio jeep revealed another vulnerability. The control jeep had no remoting equipment, which would allow the forward air controller to leave the vehicle in a sheltered spot and advance on foot to a position from which he could see the target. As Duerksen said, "Any time that we would be able to get the jeep in a position where we were able to control, we would be exposed ourselves, and the Communists would start laying artillery in on us."[14]

Within a few days attrition began to take a toll of the men and equipment of Detachment 1. The AN/ACR-1 was at once heavy and fragile, and it was quickly jolted out of operation by normal travel over the rough roads. Because of a lack of replacement parts and test equipment, only three radio-control jeeps were operational on 11 July. On this day Lt. Arnold Rivedal—a young officer who was described as "very willing and eager...a very fine example"—was hit by a burst of hostile fire while reconnoitering along the front lines. His radio operator and mechanic survived and evaded capture, but Lieutenant Rivedal was lost in action, with his radio jeep.[15] Later that day, while moving north from a regimental command post at Chochiwon toward the front lines, Lt. Philip J. Pugliese and his party were cut off by a North Korean road block. They destroyed their equipment and dispersed to walk out, but two of the airmen—S/Sgt. Bird Hensley and Pfc. Edward R. Logston—never returned to friendly territory.[16]

As the first week of American air-ground operations ended, certain facts were becoming evident. The rough roads of Korea were quickly battering the old AN/ARC-1 jeeps out of commission. The unarmored jeeps, moreover, could not be exposed to enemy fire, and thus the TACP's could seldom get far enough forward for maximum effectiveness. Under normal circumstances, Army units were supposed to request air-support missions against specific targets through the air-ground operations section of the JOC. But the 24th Division was retreating, and, more often than not, its battalions were unable to identify points of enemy strength on their front lines. American ground troops badly needed close support, yet the jet fighters, limited to a short time at lower altitudes over the front lines, had to have an immediate target for air attack in order to give effective ground support.

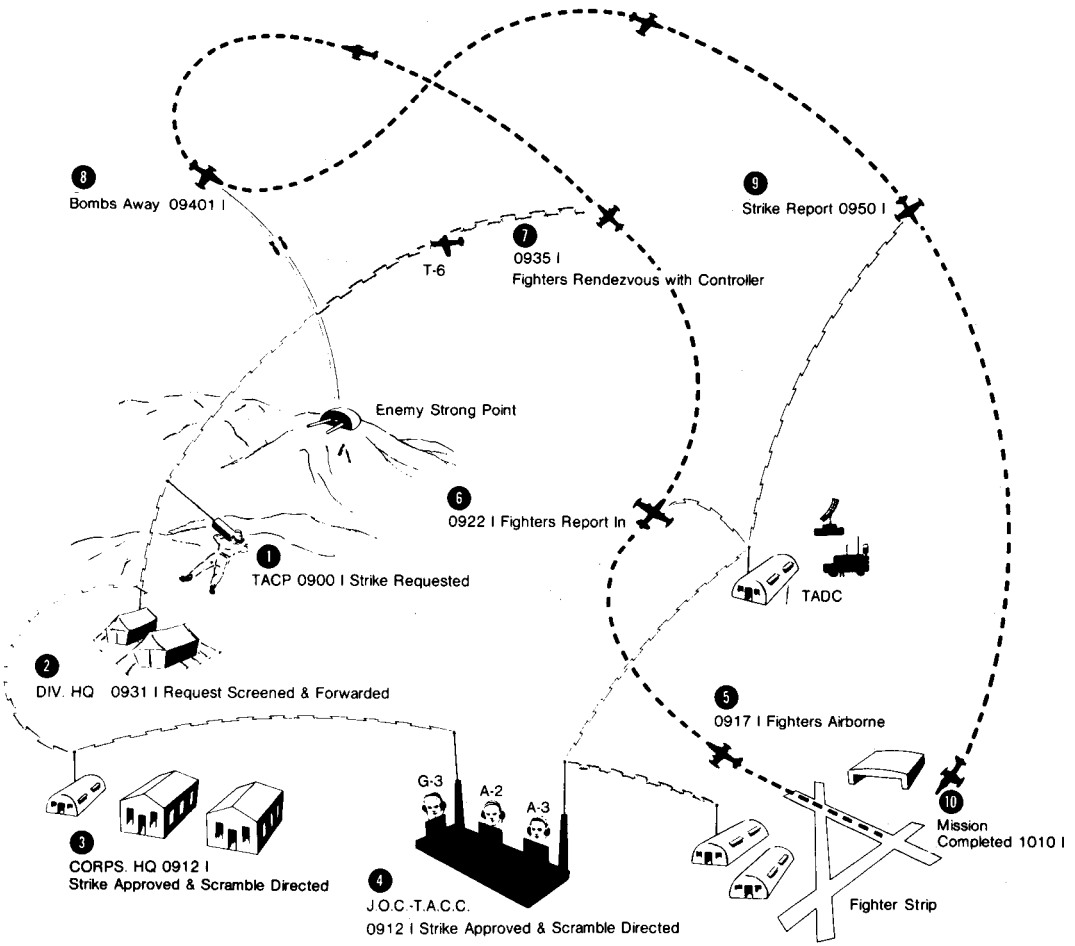
Who first thought of the solution to all of these problems—the employment of airborne tactical air coordinators—was not recorded, but the use of airborne controllers was not new in the Air Force. In mountainous Italy, during World War II, "Horsefly" liaison pilots had led fighter-bombers to obscure

Even the hard-climbing jeep needs an occasional assist over the rough Korean terrain.

close-support targets. Shortly after he reached Taejon Colonel Murphy apparently asked the Fifth Air Force to provide an operations officer and five pilots who could fly reconnaissance and control missions for his section. On 9 July Lts. James A. Bryant and Frank G. Mitchell brought to Taejon two L-5G liaison planes, modified with four-channel very high-frequency radios. Bryant and Mitchell were unable to get their radio equipment to work in the field, but they borrowed rides in two 24th Division L-17's during their first day in Taejon. Although Bryant was bounced by two Yaks over the road between Ichon and Umsong, the two airborne controllers—calling themselves "Angelo Fox" and "Angelo George"—each hailed down and managed about ten flights of F-80's during the day. There was some confusion, for the fighter pilots had not been briefed to expect airborne control, but the results of the missions brought Colonel Murphy's comment that it was "the best day in Fifth Air Force history."[17]

Some continued efforts were made to use liaison planes, but on 10 July Lt. Harold E. Morris brought a T-6 trainer aircraft to Taejon, and in flights during the day he demonstrated that this plane was best able to perform airborne control. One thought at this time was that the T-6 was fast enough to survive enemy air attacks whereas liaison aircraft did not have enough speed to evade the enemy. North Korean Yaks had shot down several liaison-type

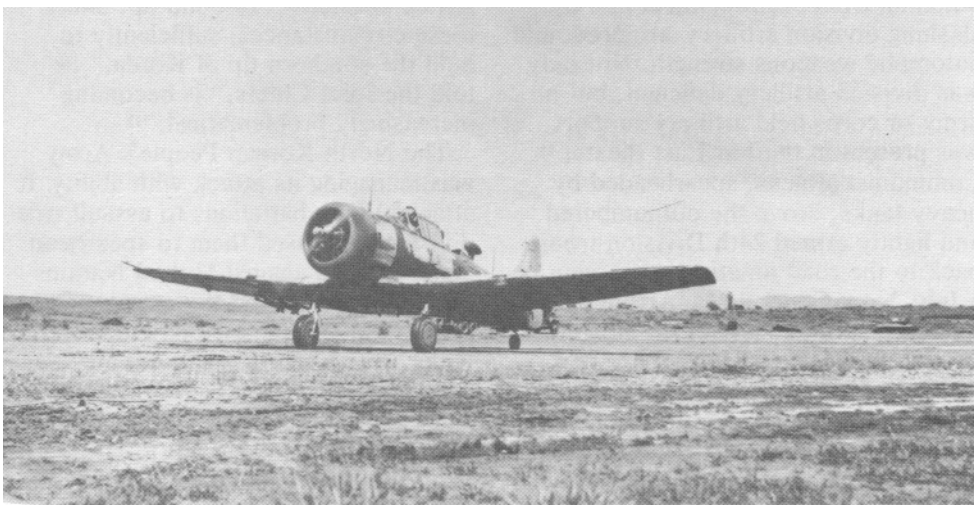
# CLOSE AIR SUPPORT STRIKE




A close support strike is carried out within 40 minutes. The mission begins at TACP and ends when the aircraft return to home base.

aircraft in the early stages of the war. Maj. Merrill H. Carlton, who arrived in Taejon on 11 July to undertake direction of the airborne control detachment, appealed strongly for more of the unarmed but speedy T-6's, each to be equipped with eight-channel AN/ARC-3 radio sets. During their first few days of operations the airborne controllers demonstrated their value. Given premission briefings by Colonel Murphy's combat operations section in Taejon City, the airborne controllers reconnoitered the front lines, located worthwhile targets, and "talked" fighter-bomber pilots to successful attacks against the enemy objectives. "There was no definite system," said one of the early airborne controllers, "the only thing we had was an aeronautical chart and a radio. . . . We went into the back of the enemy lines and reconnoitered the roads. . . . We saw some tanks, got on each radio channel until we got fighters in the Chochiwon area, and any fighter who heard us would give us a call and we would give them the target."

Immediately after concluding their missions, the airborne controllers went into Taejon City and were interrogated by the combat operations section. The information which they furnished permitted the combat operations officers to keep their situation maps up to date with current locations of friendly and hostile troops. Enemy pressure against Taejon forced Major Carlton to move the airborne control function back to Taegu Airfield on the morning of 13 July. Here he received additional T-6 aircraft and pilots, and, although the organizational status of the airborne controllers remained anomalous, they soon gained a popular name. In a Fifth Air Force fragmentary operations order issued on 15 July the airborne controllers were given radio call signs as "Mosquito Able," "Mosquito Baker," and "Mosquito How." The call sign was catching and appropriate, and thereafter the unit was commonly called the "Mosquito" squadron and the airborne controllers and their planes were called "Mosquitoes."[18]



T-6 Mosquito

## *2. Airpower Blunts the North Korean Attack*

When he requested authority to send American ground troops to Korea, General MacArthur had expressed a hope that American intervention would rally the South Koreans for a stand along the Han River, but the North Korean People's Army had begun to break across this barrier before the first elements of the 24th Infantry Division reached Korea. Although this American division was committed to action in fragments, General MacArthur's headquarters announced on 4 July that the U.S. Army Forces in Korea were making "tentative plans for an advance directly north from Pyongtaek to secure Suwon as the first objective and continue north on Seoul."[19] But the 24th Division proved no match for the North Koreans. Like other Eighth Army divisions, the 24th Division was at reduced strength. Because of appropriations limitations, all Eighth Army divisions had been restricted to 12,000 men, a ceiling which the Eighth Army had met by deleting one infantry battalion from each regiment and by slashing division artillery, armored, and automatic weapons strength. Not only was division artillery deficient, but no army or corps field artillery support was present in the Far East theater.[20] Communist attacks, spearheaded by heavy tanks, drove the outnumbered and lightly armed 24th Division troops back to the road junction at Chonan on 6 July. Now General MacArthur began to take a serious view of the hostilities. "Apparently," he said, "we are confronted with an aggressive and well-trained professional army equipped with tanks and perhaps other ground materiel quite equal and in some categories superior to that available here."[21]

Facing relentless enemy pressure, which combined frontal attacks with flanking movements, 24th Division forces were compelled to evacuate Chonan on 8 July. The situation was getting desperate. "The enemy threat to the 24th Division," stated MacArthur, "is critical and extremely dangerous. To date our efforts against enemy armor and mechanized elements have been ineffective."[22] "We are endeavoring by all means now available here to build up the force necessary to hold the enemy." MacArthur informed the Joint Chiefs, "but to date our efforts against his armor and mechanized forces have been ineffective." MacArthur explained that enemy armored equipment was "of the best," and the enemy infantry was "first-class quality." American troops were fighting "with valor against overwhelming odds of more than ten to one." MacArthur's one hope was to reinforce the 24th Division with additional American soldiers, but he feared that this might not be possible. "To build up, under these circumstances, sufficiently to hold the southern tip of Korea," he told the Joint Chiefs, "is becoming increasingly problematical."[23]

The North Korean People's Army was managing its attack with ability. It attached tank battalions to assault rifle divisions and used them to spearhead major attacks against United Nations forces, which lacked the armored power and ground weapons to stop the tanks. The North Korean infantry showed a keen appreciation for terrain and guerrilla tactics. Employing their superior numbers, the North Koreans fixed and then outflanked each position that the 24th Division sought to establish. Other enemy soldiers, disguised as

civilian refugees, often compelling women and children to accompany them, infiltered the United Nations lines. Once at the rear of United Nations positions, the Korean Reds threw up roadblocks and cut communications to the forward units.[24]

But the combat preparations of the North Koreans demonstrated one major weakness. The North Korean army was not prepared to withstand hostile air attack. For the successful accomplishment of blitz tactics, the North Koreans required unimpeded lines of communications. By destroying bridges the Far East Air Forces could delay the movements of the enemy's armor. Early air attacks against the bridge complex across the Han River at Seoul, compounded by a 19th Bombardment Group B-29 strike upon these bridges on 1 July, had already delayed the Communist drive into South Korea.[25] Perceiving the enemy's weakness, General Stratemeyer enjoined that the B-29 crews would bomb individually and continue to drop single bombs until their assigned bridge targets were destroyed. Stratemeyer directed the Fifth Air Force to destroy key bridges south of the Han River.[26]

The North Korean People's Army was vulnerable to air attack on another account. The North Korean ground troops had evidently not been trained to meet the hazards of opposing air strikes. "In the early part of the combat," said Col. Stanton T. Smith, commander of the 49th Fighter-Bomber Group, "the enemy troops were not too well indoctrinated in what airpower could do. Either that or they had a lot of guts, because we would time and time again find convoys of trucks that were bumper to bumper against a bridge that had been knocked out, and we'd go in to strafe them, and every man in the truck would stand up where he was and start firing his rifle at us. I don't think that I would have done that with the power that we were putting on them."[27]

Early in July, while the pattern of the Communist blitz attack was taking shape, Fifth Air Force operations officers employed the B-26's, F-82's, and F-80's in low-level strikes against the North Koreans. At first the 3d Bombardment Group's light bombers were very effective. Operating from Iwakuni, the B-26's carried adequate fuel to permit them to reconnoiter the enemy's lines of communications and select targets for their guns, bombs, and rockets. Since most of its airraft were "hard-nose" or "gun-nose" B-26B models—with up to 14 forward-firing machine guns—the 3d Bombardment Group was well fitted for low-level attacks.[28] The all-weather F-82's also possessed the range which gave them staying power both to escort medium bombers into North Korea and to search out targets at night along the Han River.[29] Operating from Ashiya and Itazuke under the immediate direction of the 8th Fighter-Bomber Wing, the F-80C jet fighters of the 8th, 35th, and 49th Fighter-Bomber Groups dispatched flights at periodic intervals between dawn and dusk. These flights were briefed to seek special targets from Army liaison aircraft or Air Force controllers in the forward areas, but if they received no supporting directions they reconnoitered the enemy's lines of communications and sought targets of opportunity.[30]

Flushed with success, eager to finish the war in a hurry, and lacking understanding of the power of the air opposition, the North Korean forces were out on the roads and were wide open to assault from the air. On 6 July six 3d Group B-26's located and then bombed, rocketed, and strafed a

Communist tank and vehicle concentration north of Pyongtaek. Later three other B-26's returned to the enemy concentration. In the low-level attacks hostile ground fire shot down one light bomber crew, but the assault left six to ten tanks burning, destroyed a number of trucks and horse-drawn vehicles, and knocked out a defending machine-gun position.[31] Almost every aircraft sortie destroyed some enemy target. In the three days, 7 through 9 July, Fifth Air Force crews claimed 197 trucks and 44 tanks destroyed on the roads between Pyongtaek and Seoul.[32]

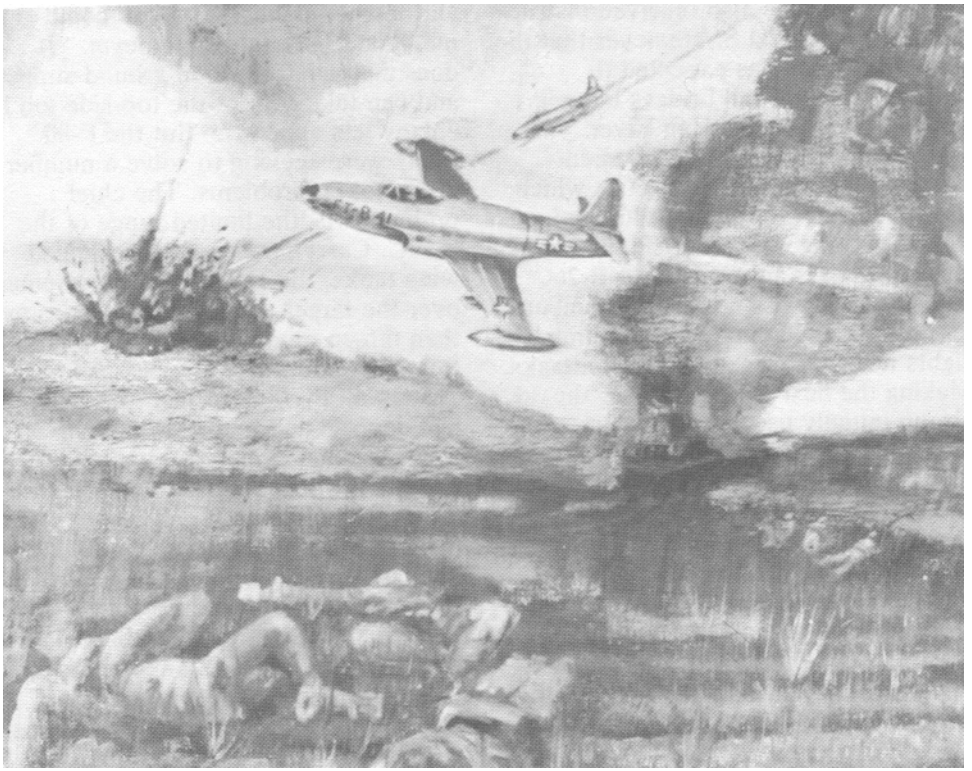
But the Fifth Air Force was unable to obtain the intelligence information from Korea which it needed to insure the most complete success of its operations. Because of the fluid ground situation in Korea, the Army, on 1 July, had drawn its official bombline along the south bank of the Han River. North of this line aircrews were permitted to attack targets without restriction, but south of the bombline they had positively to identify targets as hostile before attacking them. How Fifth Air Force pilots were expected to identify ROK troops was somewhat indefinite. General Partridge submitted the question to General MacArthur's staff and received the reply that the ROK troops would mark themselves with white panels and carry South Korean flags, but that the North Koreans would probably do the same.[33] In view of the confusion, some mishaps were almost inevitable. Such a mishap occurred on 3 July, when five RAAF No. 77 Squadron Mustangs in their second day of combat erroneously attacked ROK troops between Osan and Suwon. What had happened was that Fifth Air Force advance headquarters had received a report of a Communist convoy headed southward, but the message had passed through Tokyo and had not reached the operating level for some several hours after it was filed. Noting this delay, Fifth Air Force operations officers estimated where the North Korean convoy would probably be found at the hour of the Mustang attack. Unfortunately, ROK troops were holding the positions where it was thought that the North Koreans would be.[34] Soon after this episode, and effective for the first time on 7 July, General MacArthur instructed USAFIK to establish a realistic bombline and to report changes in this line at periodic intervals during each day.[35] General MacArthur also instructed General Dean to see that the ROK troops painted white stars on the tops and sides of their vehicles, the same markings that served to identify American groundmen.[36]

Although the aircrews of the Fifth Air Force were delaying and disrupting the North Korean blitz, each of the tactical air units was operating under technical disadvantages. But the quality of air leadership was high, and the tactical air units had begun to meet and overcome many of their technical problems. Some problems, however, could not be immediately solved. Since the Twin-Mustang F-82's represented FEAF's counterair interception capability in periods of darkness and bad weather, these scarce planes soon had to be withdrawn from the rigors of combat in Korea. The light bombers were highly effective in low-level operations, but the B-26 crews were finding it difficult to maneuver at low altitudes in the small valleys of Korea. More serious was the fact that hostile small-arms fire was wreaking substantial losses and damages upon the low-flying conventional bombers. By 7 July it was evident that the light bombers had to operate at medium altitudes if they were to survive. At this juncture

General Partridge also received instructions from General Stratemeyer that the Fifth Air Force was expected to destroy road and rail bridges in enemy territory south of the Han River. This was work for the 3d Bombardment Group, but to devise the tactics which the light bomber crews would employ to attack bridges was not simple. The group had only seven or eight B-26C aircraft, the "glass-nose" or "bombardier-nose" plane which carried bombsights needed for medium-level attacks. Making the best of what it had, the 3d Group initially used its few B-26C's to lead flights of B-26B's in medium-level attacks against bridges, road junctions, and railway targets. Quite shortly the B-26B crews came up with an innovation which permitted them to make their own attacks from medium levels: in a combination of glide and dive bombing, the pilot of a "hard-nose" light bomber, without the aid of specialized sights, aligned his plane with the target, compensated for drift, dived at the objective with sufficient angle to allow his bombs to penetrate before they exploded, compensated for rate error, and then released his bomb load. This novel employment got good results in terms of bomb hits. Once they completed their medium-level bombing attacks, the light bombers went down "on the deck" for reconnaissance sweeps against such targets of opportunity as they might meet while heading back to Iwakuni.[37]

Flying planes which were not yet converted to fighter-bomber tasks from faraway airfields in southern Japan, the Shooting Star pilots were performing admirably. By 15 July the F-80's had flown 70 percent of all combat sorties over Korea and had accounted for 85 percent of the enemy's losses to air attack. "I wouldn't trade the F-80 for all the F-47's and F-51's you could get me," said General Stratemeyer. "It does a wonderful job in ground support and can take care of the top-side job if enemy jets appear."[38] But the F-80 pilots were seeking to solve a number of operating problems. The chief problem was the limited range of the F-80C. Carrying standard Lockheed wing tanks, the F-80's could not remain over the target area in Korea for more than fifteen minutes. The 49th Fighter-Bomber Group used the 265-gallon "Misawa" tip tanks which the group had devised and got up to forty-five minutes' time over targets along the Korean battleline, but during the first few weeks of combat only about one flight out of four could be continually equipped with the big tanks. Denied the staying time they required effectively to attack Communist targets, those pilots who carried the small tanks reported: "We felt like Joe Louis in the ring, blindfolded." They were flying combat sorties, had the firepower, could manage to navigate into the target area under the most adverse weather conditions, and yet could not stay long enough there to manage a solid combat punch. In short, the F-80's were based 150 miles too far distant from their targets.[39]

Anxious to make their maximum contributions in Korea, some of the jet pilots stretched their luck and used up their reserve supplies of fuel. On 7 July two pilots of the 35th Fighter-Bomber Squadron made dead-stick landings at Ashiya, while a third pilot of the same squadron ran out of fuel and bailed out north of the airfield. Two factors worked together to alleviate the range problem confronting the F-80's. "Mosquito" tactical air-control operations greatly assisted the F-80 pilots, for the airborne controllers located enemy targets and had them pinpointed for



Air Attack by F-80's (Art by Arthur W. Rodriguez. *Courtesy Air Force Art Collection)*

attack when the faster-flying F-80's arrived at the scene. Most of the F-80 squadrons soon secured "Misawa" tanks which FEAMCom fabricated in a priority effort. Pilots of the 8th and 35th Groups were reported as "considerably worried" about the overstress these tanks placed on their wing tips, but the 9th Squadron of the 49th Group, after about 150 sorties with the big tanks, reported that they "aren't quite so aerobatic" but that "the general attitude of the entire squadron toward the F-80 is one of confidence and pride."[40]

Another problem which the jet pilots met during July had to do with the selection of weapons, for as yet the jet interceptors had no wing racks that could carry bombs. The Shooting Star plane soon showed that it knew no superior as a strafer. Lack of propeller torque facilitiated aiming, six .50-caliber nose guns blasted out a lethal concentration of fire, and jet airspeeds allowed pilots to be upon the enemy before they had time to scatter and take cover. But the only weapon which the F-80's could carry which could stand a chance of destroying a Soviet-built tank was the 5-inch high-velocity aircraft rocket (HVAR). Having had little peacetime practice with the HVAR, American pilots had to learn to use this weapon in combat. Early in the campaign ineffective rocket attacks

against enemy tanks caused unfortunate publicity. Such failures, however, were attributable to low clouds over Korea—often the base of the cloud layer was no more than 1,000 feet high—which forced pilots to attack enemy objectives from exceedingly flat angles of approach. When rockets were launched from a flat angle, aiming was often inaccurate, the projectile tended to ricochet off an armored object such as a tank, and the debris thrown up by the rocket's blast often damaged the low-flying plane. Soon, however, Shooting Star pilots learned how best to use the HVAR. They found it best to approach a tank from a four o'clock position and to fire from a 30-degree angle from a range of about 1,500 feet. A single 5-inch HVAR would normally disable a tank when it hit the rear of the tank's treads, but most pilots got the best results when they fired a salvo or ripple of all four of their rockets.[41]

At the same time as the men of the Shooting Star squadrons were exploring the tactical capabilities of their jet fighters, Generals Partridge and Timberlake recognized that they needed to operate as many conventional F-51 Mustangs from Korean bases as could be supported over there. The only airfield that could be used without extensive rehabilitation was five miles northeast of the city of Taegu. Early in July Taegu Airfield had little to offer: a sod-and-gravel runway which was full of pot holes, two concrete buildings, and a wooden mess hall which the Japanese had built. As it alone was ready for immediate occupancy, Taegu Airfield (or "K-2," as it was soon designated) became the destination of the "Bout-One" project, the composite unit of American and South Korean airmen which the 8th Fighter-Bomber Wing had organized on 27 June. General Partridge had feared that the Korean pilots might not be able to fly the ten Mustangs which he provided, and he had gotten permission to assign nine USAF instructor pilots to the project. Under the leadership of Maj. Dean E. Hess, the Korean and American personnel of "Bout-One" moved to Taegu on the evening of 30 June and there reported to the local KMAG headquarters. During the first few days American pilots flew with the Korean pilots on missions, and then Major Hess began to allow the Koreans to fly combat missions alone. This, however, did not work out. Some of the Koreans had flown with the Japanese in World War II, but none of them had been in a fighter plane for five years. The heavy F-51's were too tricky for the inexperienced Koreans and following the death of the ROK troop commander on a combat sortie, American pilots began to fly all of the combat missions.[42]

The Mustangs which "Bout-One" brought to Korea had been towing targets for several years in Japan and were in sad mechanical condition. "Had not the pressure been on at that time," said Major Hess, "we would probably have declared the 51's non-combat operational." The control system for the detachment was "a little haphazard." At first Major Hess received requests for missions from the local KMAG. When the 24th Division started to operate, communications were established with General Dean's command post. And on several occasions Lt. Gen. Walton H. Walker, who was setting up his Eighth Army headquarters in Taegu City, came directly to the airfield to request air strikes. Most requests for missions were completely informal. "I recall on one occasion," said Hess, "individuals came out from KMAG in the middle of the night, about three o'clock in the morning, and they requested an air

strike verbally just by sticking their heads in the tent and requesting an air strike over a city at a certain time and then they disappeared in the night." Major Hess gave "greater preference" to strikes requested for the 24th Division, for the heaviest enemy pressure was being encountered in this sector. But "Bout-One" did not neglect the central and eastern fronts, where smaller enemy forces were advancing against ROK ground defenses. Sometimes the Mustang pilots would drop their bombs on hostile targets on the Hamchang front and then climb over the mountains to strafe targets of opportunity on the east coast. Extremely heavy demands were made upon the Mustangs, and "Bout-One" was able to cause much damage to enemy vehicles and troop movements. Located near the front, the detachment could get its planes immediately into action when the Army reported targets. It could also operate its Mustangs for two to three hours over the enemy's lines, searching out targets when none were reported by the Army.[43]

During the first week in July FEAF air units had been "fighting fire" in Korea—meeting situations as they arose and doing their best while they were working out the operational techniques which would make an optimum use of their capabilities. In this same time command arrangements had been shaping up, both in Japan and in Korea. And so, on the night of 9 July, when the reports that the 24th Division had been driven out of Chonan caused General MacArthur to question whether he would be able to hold South Korea, FEAF was prepared to face the challenge. On this night General MacArthur sent peremptory orders to FEAF: "It is desired," he stated, "that all FEAF combat capabilities be directed continuously, and to the exclusion of other targets, at the hostile columns and armor threatening the 24th Division."[44] General MacArthur's operations officer added the caution that the Communist threat actually existed from coast to coast and was not exclusively confined to the thrust against the 24th Division.[45] Impressed with the gravity of the situation, General Stratemeyer flashed positive instructions to General Partridge. "You must," he said, "consider your mission primarily direct support of ground troops."[46] Solely in view of the ground emergency, for he well understood that such was not a proper use for strategic bombers, General Stratemeyer also issued orders that the 19th Bombardment Group would support the battleline on 10 July.[47]

If the Communists had vigorously prosecuted their attack following their capture of Chonan on 8 July, they might well have destroyed the 24th Division, leaving the route to Taejon, Taegu, and Pusan bare of defenders.[48] But the North Korean divisions showed signs that they were feeling the effect of the damages wrought upon them by American air attack. Men of the NKPA 3d Division, who were captured by General Dean's troops, said that a lack of food and sleep and attacks by American aircraft had materially lowered the combat effectiveness of this crack division, which had been spearheading the attack. After taking Chonan, the Communists were compelled to pause and build up their strength.[49]

As the Communists regrouped, General Partridge employed the full strength of the Fifth Air Force in support of the 24th Division. In the tactical emergency, he manned ten Mustangs, which had been withdrawn from storage in Japan, and sent them into combat. The pilots took the

Mustangs off from Itazuke early on the morning of 10 July, flew initial combat strikes, and then landed at Taegu and replenished for several more missions during the day. Airlifted fuel and armament from Ashiya supported the forward area operation.[50] The F-80 pilots were active during the day, and in the late afternoon hours a Shooting Star flight slipped in under the clouds at Pyongtaek to discover a large convoy of tanks and vehicles lined up north of a bombed-out bridge. All available B-26's, F-82's, and F-80's rushed to the scene, and the combined attack destroyed 117 trucks, 38 tanks, 7 half-tracks, and a large number of enemy soldiers. "This attack," commented the Fifth Air Force director of combat operations, "was considered by many to have been one of the decisive air-ground battles of the entire conflict."[51] At intervals during the day, ten B-29's sought to attack targets of opportunity such as tanks, trucks, and troops on the roads between Chonan and Suwon. Each of the Superfortress crews made from three to ten bomb drops. Their results were reported as "excellent" against clearly defined targets such as bridges and towns, but the medium-bomber crews made no claims for destruction against targets of opportunity, except for a direct hit on a 20-car freight train.[52]

Assisted by the 280 combat air strikes flown on 10 July, the troops of the 24th Division established positions at Kongju and Chochiwon. Anchoring their defenses along the Kum River line, the 24th Division's forces hoped to defend the key city of Taejon.[53] Again, on 11 July, General Partridge continued to give all-out air support to the 24th Division, and for a second day ten B-29's reported to the tactical air-control center at Taejon for supporting mission assignments. Colonel Murphy now sent the medium bombers against targets located in the towns of Wonju, Chinchon, and Pyongtaek. Hostile concentrations were reported in each of these towns, and the targets were far enough removed from the battleline so that the B-29's would not complicate the tactical air effort. At the close of the day on 11 July General Partridge expressed a belief that the 24th Division had weathered its crisis. Reporting that he had more fighter-bomber and fighter-strafer capability than profitable targets, General Partridge suggested that the medium bombers could help most if they would attack bridges farther to the north which were serving the Communists.[54] On 12 July the 19th Bombardment Group was sent to attack bridges and communications targets 30 to 50 miles behind the enemy's lines, and on 13 July the newly arrived 22d and 92d Bombardment Groups dispatched a radar-directed attack against the marshaling yards and oil refinery at Wonsan. This mission marked the entry of the two new groups into combat, and it was the first combat mission flown by the FEAF Bomber Command.[55]

Although the staunch resistance of the 24th Division and the fury of the Fifth Air Force air attack temporarily stalled the enemy's thrust down the Seoul-Taejon axis, other Communist columns were on the march. Through the central mountains of Korea a parallel column had been advancing by way of Wonju and Chungju toward Hamchang. Another enemy force was moving down the eastern coastal routes toward Pohang.[56] On 10 July General MacArthur informed General Dean that he was concerned by the continued evidence of enemy movements in columns southward from the line Ansong-Chechon through central Korea. Pending the arrival of American

Gun crew firing 155-mm howitzer at North Koreans, 10 July 1950 *(Courtesy U.S. Army).*

ground reinforcements in the area, MacArthur suggested that General Dean would do well to ask the Fifth Air Force to neutralize these columns.[57] Three days later General MacArthur judged that the concentration of hostile troops in central Korea posed a "critical situation." Accordingly, he asked General Stratemeyer to concentrate a maximum medium- and light-bomber effort against rail and road junctions, bridges, passes, and other targets in the general area bounded by the towns of Umsong, Changhowon, Chechon, and Changhoe-Ri.[58] On 13 July—the same day MacArthur was concerned with the central front—Communist troops on the Taejon front again surged into action and compelled the 24th Division to withdraw to defensive positions south of the Kum River.[59] In order to meet this coast-to-coast attack, General Stratemeyer announced that all elements of his air command would put their primary effort on the main battleline "until the threat to our front-line troops is eliminated."[60]

On the evening of 13 July Maj. Gen. Laurence C. Craigie, acting vice-commander of FEAF, brought the news of the Korean ground emergency to General O'Donnell at Bomber Command headquarters. Here a plan was hurriedly worked out to the effect that ten B-29's of the 92d Bombardment Group would attack targets along the battleline as directed by Fifth Air Force controllers. Next morning the Superfortress crews took off from Yokota at nine-minute intervals. Eight of the aircraft successfully contacted "Angelo" control at Taejon and obtained specific targets in the vicinity of Chongju, which they bombed with "fair to good results." On 15 July the 92d Group continued the ground-support effort, but, since the controllers at

American soldiers of the 8th Cavalry Regiment, 1st Cavalry Division, prepare an 81-mm mortar along the Naktong River front.

Taejon had been unable to handle the medium bombers when they arrived so close together, the group allowed thirty minutes between planes. Because a few Communist aircraft were reported to be at Kimpo, three of the Superfortress crews were sent to attack this airfield. The other eight crews checked in with the control station at Taejon and were sent to attack targets of opportunity around Chongju. These attacking aircraft hit a rail tunnel entrance, destroyed two railway bridges, and bombed the marshaling yard at Wonju.[61]

Acting in compliance with General MacArthur's order for 16 July, General O'Donnell dispatched 47 B-29's of the 19th and 22d Groups against the Seoul railway marshaling yards and 8 B-29's of the 92d Group against tactical targets. At Seoul the bomber crews destroyed rolling stock, cut the main rail lines, and set afire the large repair and assembly shops. The aircraft of the 92d Group attacked targets reported to them by "Angelo." A part of them were sent to the western end of the battleline, where they bombed a concentration of troops and six tanks at a road junction near Kongju and a marshaling yard and oil dump at Chochiwon. On the central front, however, three of the bomber crews mistook their location and bombed the town of Andong, killing 22 friendly civilians.[62] Six B-29's of the 92d Group reported to "Angelo" on 17 July, and these crews destroyed two bridges and bombed the railway marshaling yards at Chechon, Ansong, and Wonju.[63]

The employment of B-29 strategic bombers in visual attacks against ground support targets of opportunity was a novel and wasteful usage of airpower. Bombing from 10,000 feet,

with no target information other than the oral directions provided by "Angelo" and such other data as they could glean from aerial maps while in flight, the B-29 crews had very little expectations for successful attacks against poorly distinguished targets. In several discussions with General Stratemeyer and with General Vandenberg, who was in the theater for a firsthand view of the conflict, General MacArthur stated that he knew that the B-29's were improperly used but he argued that the ground emergency justified emergency procedures. On 18 July, however, General Stratemeyer emphatically protested the continued employment of the B-29's in wasteful "emergency" operations. "You cannot operate B-29's like you operate a tactical air force," he told General MacArthur. "B-29 operations must be carefully planned in advance and well thought out."[64]

General MacArthur orally agreed that some better employment must be found for the medium bombers, and before the end of the day of 18 July he sent Stratemeyer written orders to employ most of the medium-bomber effort in the area between the bombline and the 38th parallel, the purpose being to isolate the battlefield.[65] Next day a CINCFE directive ordered Stratemeyer to center sustained medium-bomber effort against critical communications facilities and troop concentrations to be found between the bombline and a general line drawn between the towns of Taen and Samchok, this zone being about 60 miles deep behind the front lines. A list of 19 bridges and road junctions, selected for attack by the GHQ Target Group, accompanied this directive.[66] As has been seen,* many of these bridge targets listed for attack by the GHQ Target Group were taken from erroneous maps and did not exist, but General Stratemeyer forwarded the GHQ target directives to General O'Donnell for attack. Medium-bomber crews still were unable to obtain the targeting photographs which they required for most effective operations, but their bombing attacks on such specific targets as road junctions and bridges were quite effective. Most of the bridges were small structures, and the medium-bomber crews, flying alone or in pairs, proceeded to the target area, sized up the objective, and quite frequently severed a bridge with a part of a bombload. By 24 July General Stratemeyer figured that the bombers had destroyed 58 bridges and had damaged 31 others during the period in which MacArthur had held the medium bombers to close and general support of ground troops.[67]

When the 24th Division was driven from Chonan on 8 July Generals Partridge and Timberlake redoubled their efforts to base Mustang fighters in Korea. "One F-51 adequately supported and fought from Taegu Airfield," stated General Timberlake, "is equivalent to four F-80's based on Kyushu."[68] This statement was not caused by dissatisfaction with the F-80's, but it represented an appreciation of the fact that the Mustangs, for example, could carry napalm, the jellied gasoline incendiary which was equally versatile against troops or tanks.[69] On 8 July General Timberlake named Taegu as the destination of the "Dallas" squadron, which the Thirteenth Air Force was forming from a nucleus provided by the 12th Fighter-Bomber Squadron. Preparatory to the arrival of "Dallas," the Fifth Air

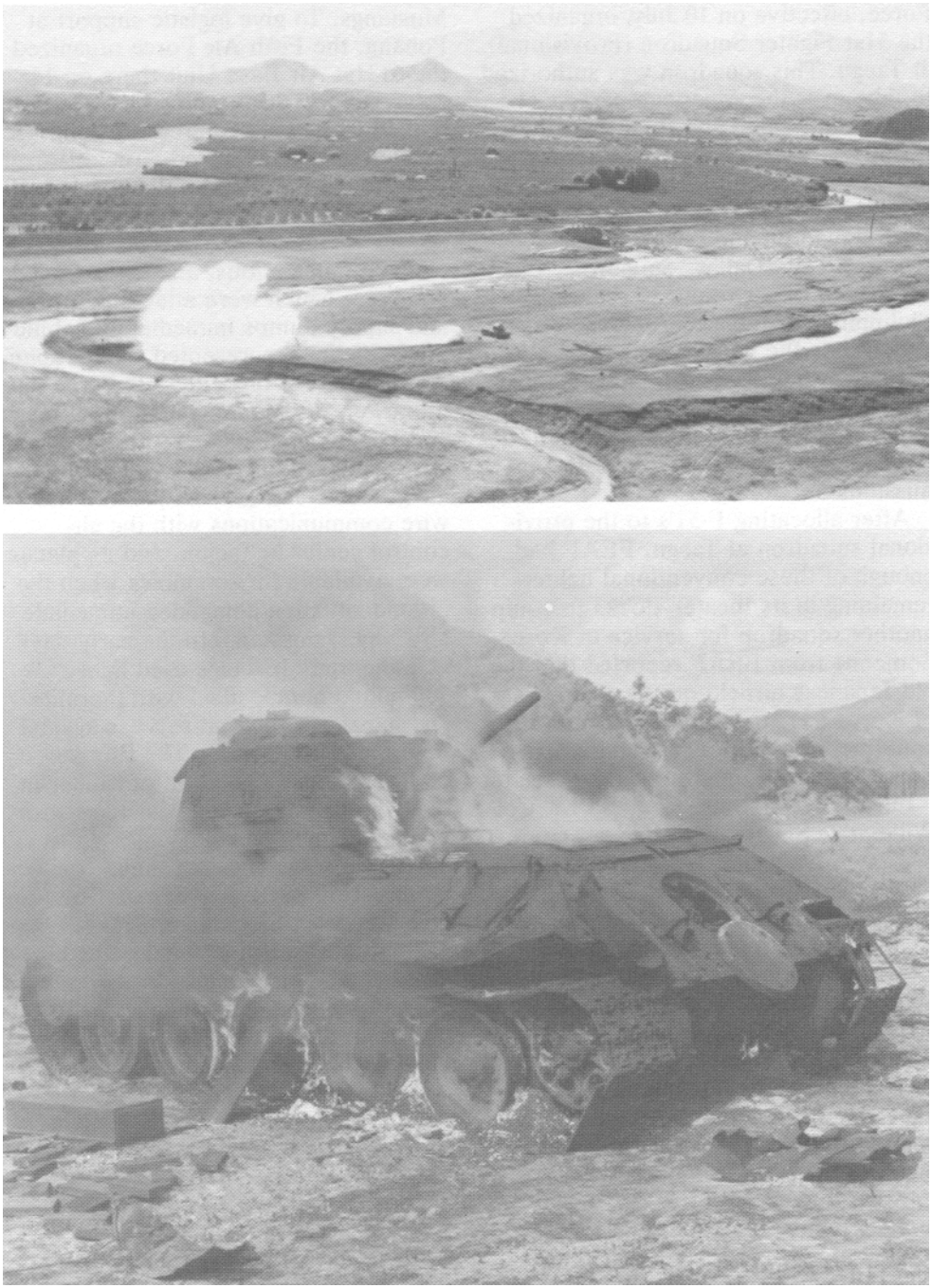
*See Chapter 2, p. 52.

Force, effective on 10 July, organized the 51st Fighter Squadron (Provisional) at Taegu. This squadron was authorized to take over the American personnel from "Bout-One" and the "Dallas" people. To provide logistical support for the provisional fighter squadron, the Fifth Air Force organized the 6002d Air Base Squadron and dispatched it to Korea.[70] The "Dallas" squadron proceeded by air transport from the Philippines to Johnson Air Base on 10 July. While the pilots hurriedly checked out in Mustangs, the ground echelon drew supplies and other equipment. After ferrying their planes to Taegu, the "Dallas" pilots flew their first combat missions on 15 July.[71]

After allocating F-51's to the provisional squadron at Taegu, FEAF had enough of these conventional fighters remaining in its theater stocks to equip another squadron for service in Korea. Someone from FEAF reported that the old Japanese airfield on the east coast of Korea near the town of Pohang could be repaired for Mustang operations, and after a flight over the area on 7 July General Timberlake and Lt. Col. William S. Shoemaker, the staff engineer at Advanced Headquarters, made the decision to develop Pohang Airfield (K-3). Already Company A of the 802d Engineer Aviation Battalion had loaded aboard an LST at Naha Harbor, Okinawa, and on the night of 10 July it arrived in Yongil Bay, off Pohang Airfield. Unloading its equipment across the beaches, Company A began work on 12 July, its immediate task being to put a 500-foot pierced steel plank (PSP) extension on the existing runway, to construct a taxiway, and to build 27 hardstands for Mustangs.[72] At Ashiya on 10 July the 40th Fighter-Interceptor Squadron of the 35th Group was informed that it would be the first Fifth Air Force squadron to convert to Mustangs. To give logistic support at Pohang, the Fifth Air Force organized the 6131st Air Base Unit there on 14 July, and on 16 July the 40th Squadron moved its newly acquired Mustang fighters to this advanced airfield.[73]

Although the F-80 jet fighters, which were flying almost 200 sorties each day against the enemy's front-line troops and communications, and the B-26 light bombers, which were attacking bridges and supply dumps immediately behind the battleline, represented the predominant portion of the Fifth Air Force's firepower, the Mustangs based at Taegu and Pohang displayed great utility during the critical days of mid-July. At Taegu the 51st Fighter Squadron had wire communications with the air-control center in Taejon, and its planes were available for scrambles when the ground situation demanded immediate air-support missions. In the early days at Taegu the Mustangs used light-case 500-pound bombs filled with thermite and napalm with great success against both tanks and troops. The Russian-built tanks had a good bit of rubber in their treads and even a near miss with flaming napalm would usually ignite and destroy the armored tank. The fire bombs were peculiarly demoralizing to North Korean foot soldiers. "The enemy didn't seem to mind being blown up or shot," said Major Hess. "However, as soon as we would start dropping thermite or napalm in their vicinity they would immediately scatter and break any forward movement.[74]

At Pohang the 40th Fighter-Interceptor Squadron was so bereft of communications as to be virtually out of contact with the rest of the world, but it began a "more or less personal battle" with a force of 1,500 North Korean regulars and guerrillas, which, opposed by a single South Korean regiment, was advancing down the



(top) The destructive path of a napalm bomb spreading toward a tank: (bottom) the same fighting machine as the scene clears.

coastal routes from Yonghae, bent on capturing Pohang. Averaging better than 34 sorties with 20 F-51's each day that weather permitted (and for a week sorties were flown in less than 150-foot ceilings), the 40th Squadron wrought heavy damages upon its east-coast enemy. North Korean prisoners taken by the ROK regiment reported that air attack had knocked out nearly all of their transportation. They said that the North Korean commander had informed his superiors that he would be unable to accomplish his mission unless he received more troops.[75]

The United Nations air attack and ground defense had delayed the Communist drive along the Chonan-Taejon axis, but the three divisions of North Koreans which opposed the surviving troops of the 24th Division were too strong to be stopped. The Reds launched probing attacks up and down the Kum River line, and successfully forded this barrier at Samgyo-ri and Kongju. Now, the North Koreans could again outflank the 24th Division and seize the key city of Taejon, but at this moment, when every day counted toward the success of the United Nations cause, air attack forced the Communists to change their tactics. Enemy forces were reluctant to move or fight by day, tanks and trucks used back roads and trails when they had to make daylight marches, forward-area supply dumps were dispersed, and all troops exercised vigorous camouflage discipline. Such tactics reduced the enemy's vulnerability to air attack, but they also slowed the rate of his ground advance.[76] Fifth Air Force pilots, using steeper angle-rocket attacks and napalm, were decimating the enemy's tanks, and as the 24th Division battled in Taejon the ground troops also obtained weapons which could deal effectively with the Red armored threat. On 12 July four Military Air Transport Service planes arrived in Japan from the United States carrying the Army's king-size bazooka, the new 3.5-inch rocket launchers and shaped charges which could knock out a North Korean tank. These rocket launchers were flown to Taejon without delay, and 24th Division troops found them highly effective, close-range antitank weapons.[77] For eight critical days its thinning ranks waged the unequal fight to retain Taejon, but the 24th Division had neither weapons enough nor troops enough to hold back the Communists. At last, at midnight on 20 July, the 24th Division was compelled to abandon the city. Among the men lost in the last day's battle was the division commander, General Dean, who remained in Taejon when the enemy tanks broke through and was captured by the North Koreans.[78]

The loss of Taejon was a bitter blow to the United Nations' cause in Korea, but the North Koreans had been forced to slow the tempo of their ground attack. In this delaying battle airpower had been a pillar of American strength. "Without question the Air Force definitely blunted the initial North Korean thrust to the southward," stated General Dean shortly before his capture. "Without this continuing air effort it is doubtful if the courageous combat soldiers, spread thinly along the line, could have withstood the onslaught of the vastly numerically superior enemy."[79] In evaluating the effect of the medium-bomber attacks against enemy transportation targets in the battle zone, the chairman of the GHQ Target Group stated that "It is very evident from a study of the...road and rail lines that the operations of the enemy have been seriously impeded by the bombing operations."[80] Two weeks

earlier General MacArthur had thought it "highly problematical" that American troops could hold the southern tip of Korea, but he had gained the time he needed to send other American reinforcements into Korea. Now he could say of the enemy, "He has had his great chance but failed to exploit it."[81] Keenly appreciative of the role that airpower had played against the North Korean blitz, General MacArthur asked Stratemeyer to pass a commendation to his airmen. "The contribution of the Far East Air Forces in the Korean conflict has been magnificent," stated MacArthur. "They have performed their mission beyond all expectations."[82]

### *3. American Airmen Establish Air Superiority*

During the same three weeks of July in which airpower blunted the North Korean ground blitz, American airmen of the Air Force and Navy won a significant victory over the small but aggressive North Korean Air Force. As they made preparations to launch their attack against their southern neighbor, North Korean war-planners must have assumed that the United Nations would not intervene in Korea. In such a circumstance the North Korean air arm could be expected to attain air superiority over the Republic of Korea. One North Korean pilot, shot down over Anyang on 29 June, confirmed this estimate of Communist war-plan assumptions. "Soviet advisors have ordered us to bomb South Korea," said this North Korean pilot, "because they know for sure the South Koreans have very few planes and only small ones."[83]

According to American intelligence estimates, the North Korean Air Force possessed at the beginning of hostilities some 132 combat aircraft and a total strength of about 2,000 men. It was a new air force—many of the combat aircraft had been received as late as the spring of 1950—and it was short of trained pilots. The North Korean airman shot down in South Korea on 29 June told his interrogators that the NKAF had only 80 pilots, two of whom were good and 40 were counted to be of fair proficiency.[84] Taking into consideration the reported scarcity of North Korean pilots and the vigor with which the NKAF was employed in the opening days of the hostilities, FEAF intelligence thought it "highly possible" that Soviet instructor pilots participated in the initial phase of the war in Korea.[85]

Recognizing the threat posed to the defense of South Korea by the North Korean Air Force, General Stratemeyer gave air superiority operations as high a priority as was possible in view of the desperate ground situation in Korea. At dusk on 29 June the 3d Bombardment Group had sent 18 B-26 light bombers against Heijo Airfield at Pyongyang and had claimed the destruction of 25 enemy aircraft on the ground and one Yak fighter in the air. Acting on a report that a concentration of 65 aircraft was based at Yonpo Airfield, southwest of Hungnam on the east coast of Korea, FEAF sent ten B-29's of the 19th Group there on 2 July. When these medium-bomber crews reached Yonpo, however, they sighted only 16 planes on the ground, none of

which were apparently destroyed by the frag bombs which the B-29's dropped.[86] Launching its first strikes of the Korean war, Task Force 77 attacked the airfields at Pyongyang and Onjong-ni on 3 and 4 July. The carrier pilots shot two Yaks out of the air and damaged ten other planes on the ground in the two-day assault.[87]

Undoubtedly hurt by the American air attacks and possibly studying the air situation in the light of American intervention, the Communists sent few aircraft into South Korea during the first week of July. And when they did renew their air offensive, the Communists employed guileful tactics which tacitly indicated that they recognized that the United Nations possessed air superiority. Four Yak-9's, which strafed Osan on 6 July and knocked out a telephone repeater station, bore South Korean markings.[88] During the second week of July the Reds had evidently diagnosed the situation well enough to devise a course of action which allowed them some advantages. Having restored the runways at Kimpo, the North Koreans based some seven camouflaged and dispersed Yaks at this airfield, thus obtaining an ability to stage short-range sneak attacks against United Nations ground troops.[89] Red air actions also indicated that they had discovered the length of time that the Fifth Air Force's jets were able to remain in the battle area before exhausting their fuel.[90] Timing their attack to coincide with a moment at which no Fifth Air Force planes were in the vicinity, four North Korean Yaks bombed and strafed the U.S. 19th Regiment at Chongju on 10 July.[91] Next day, in the same area, three Yaks surprised a flight of F-80's while the latter pilots were strafing ground targets. The jet pilots successfully evaded, but they were low on fuel and could not counterattack. On 12 July Communist pilots were extremely active. Enemy fighters shot down a single 19th Group B-29 which was attacking targets in the vicinity of Seoul. In midafternoon two Yaks jumped a flight of F-80's while the latter were strafing in the frontlines near Chochiwon. Once again the jet pilots evaded and escaped damage but they were unable to pursue their attackers. Later in the afternoon two other Yaks shot down an L-4 liaison plane.[92] On 15 July two Yaks attacked a formation of four B-26's while the bombers were attacking a target. One of the B-26's was damaged so badly that its crew had to make an emergency landing at Taejon.[93]

Bothered by the "reappearance" of the North Korean Air Force, General MacArthur gave Stratemeyer oral instructions to devote a part of his air effort to counterair purposes. Since MacArthur was particularly concerned about the seven camouflaged Yaks reported to be at Kimpo, General Partridge sent strafers there which destroyed two or three of these widely dispersed planes on 15 July. That same day General O'Donnell diverted three B-29's and used them to crater the runways at Kimpo.[94] In two strikes against Pyongyang airfields on 18 July pilots from the aircraft carriers of Task Force 77 destroyed 14 more enemy aircraft and damaged the 13 other planes which were dispersed and camouflaged in the vicinity of these fields. Moving their attention to east-coast airfields on 19 July, the carrier pilots strafed and destroyed 15 enemy planes at Yonpo and three others at a dispersal airfield near Sondok.[95]

On 19 July Fifth Air Force pilots also hit hard at North Korea's elusive air strength. Photographic reconnaissance had discovered a small grass strip

Lt. David O. Stegal, wounded while on a combat mission, is helped out of a B-26 by Lt. Henry Van Depol, base surgeon, and Lt. Charles M. Coin, 20 July 1950.

immediately north of the 38th parallel near Pyonggang, and some 25 planes were camouflaged under tree branches along the west edge of this field. The enemy was obviously not expecting an air attack when seven F-80's of the 8th Fighter-Bomber Group, led by Lt. Col. William T. Samways, the group's commander, dropped in at low level over Pyonggang during the midafternoon of 19 July. Making pass after pass over the airfield, the F-80 pilots destroyed 14 enemy fighters and one twin-engine bomber on the ground. The jet pilots also strafed seven other planes, but because they did not burn, these planes could be counted only as "damaged."[96] Wishing to clean up the task which had been so well begun by Task Force 77, General Stratemeyer diverted 14 B-29's from ground support on 20 July and sent them to crater the runways and dispersal areas at Pyongyang's Heijo Airfield and at Onjong-ni Airfield.[97]

Alerted to the tactics of the North Korean fighter pilots, who seemed to be timing their attacks along the frontlines to catch American jets when they were low on fuel, Fifth Air Force forward air controllers and fighter pilots began to work together to break up the Communist scheme of operations. Along the battleline jet pilots of the 8th Group shot down one Yak on 17 July, three on 19 July, and two more on 20 July. Excellent coordination by air-ground radio control was said to have been largely responsible for these successful interceptions. "We were attacking enemy targets when we were called by the ground controller and informed of the Yaks," explained one F-80 pilot on 19 July, "and that controller took us right to them although we were low on ammunition and just about ready to go back to our home base."[98] Superfortress gunners also revealed their proficiency. In the Seoul area on 20 July alert turret gunners of the 19th Group drove off two Communist fighters before they could do more than slightly damage one of the bombers.[99] In a regrettable incident on 28 July Superfortress turretmen again demonstrated their prowess, this time against a friendly plane. The 22d Group target on this day was the Seoul marshaling yard, and, since enemy fighters had frequently intercepted the bombers in this area, Colonel James V. Edmundson, the group commander, had instructed his gunners to fire at any unidentified fighter within range which pointed its nose at one of the bombers. When four strange planes suddenly broke out of rain clouds and headed toward the tail of a 22d Group B-29, first the tail gunner and then the central fire-control gunner blazed away at them. One of the fighters was hit and its pilot parachuted from it. All members of the bomber crew who saw the unidentified plane identified it as a Yak, but unfortunately it was a British Seafire from H.M.S. *Triumph*.[100]

With a few unimportant exceptions the North Koreans were able to make no further offensive use of their remaining aircraft after 20 July, and the United Nations possessed a virtual air supremacy over all of Korea. The Communists, however, were not inactive in the air through their own choice. Intelligence officers at FEAF estimated on 22 July that the North Koreans still possessed 65 of their original aircraft, of which perhaps 30 might be in operational condition.[101] The Reds gave every indication that they hoped to use their remaining planes and such additional aircraft as they might be able to secure from the Soviet and Chinese supporters. Early in August, for example, the Korean Reds repaired the runways and built

protective revetments at Kimpo and Suwon. Probably they hoped to use these forward airfields for staging attacks against United Nations' ground troops, but FEAF airmen were too alert to permit this. On 4 August B-29 crews attacking the Seoul marshaling yard observed enemy fighters taking off from Kimpo. Next day Fifth Air Force fighter pilots strafed and bombed the airfield, reporting nine enemy aircraft destroyed and an equal number probably destroyed.[102] Other Fifth Air Force Mustangs went to Pyongyang on 6 August, where they destroyed nine combat aircraft on the ground. Four North Korean planes were claimed as damaged at Pyongyang and three more were hit but not claimed as destroyed in a follow-up strafing attack flown against Kimpo Airfield.[103]

When FEAF intelligence officers recapitulated North Korean aircraft losses on 10 August, they credited American air attack with the destruction of 110 enemy planes and figured that the North Koreans must still possess 35 of their original air order of battle aircraft. Photo reconnaissance of North Korean fields actually showed more aircraft than this, but the Communists were known to be employing dummy planes, to be propping up previously destroyed planes, and to be moving their few remaining aircraft from field to field.[104] Under these circumstances photo interpreters could not exactly determine how many operational aircraft the North Koreans possessed, and FEAF credited the North Korean Air Force with a capability for making sneak attacks against United Nations forces. Such a capability, however, was slight. On 15 August an LA-5 attacked a 307th Bombardment Group B-29 but was easily driven off by two bursts from the tail gunner. On 23 August two Yak fighters attacked and damaged a British destroyer off the west coast of Korea.[105]

Already, on 20 August, General Stratemeyer had warned General Partridge that he must devote enough attention to the enemy's airfields to prevent him from making "any sacrificial strike" against United Nations forces.[106] General MacArthur, who saw the attack upon the British destroyer as an evidence of an increased enemy air potential, instructed General Stratemeyer to provide for frequent inspection and attack against known or suspected enemy air facilities. "The use by the enemy of these or other airfields south of 39 degrees north," said MacArthur, "must be refused from this date forward."[107] Since full and regular coverage of the enemy's airfields by his reconnaissance crews revealed very few planes and almost no activity, General Partridge saw little need to do more than to continue frequent interval surveillance of Communist fields in North Korea.[108] During August the reconnaissance crews periodically reported small numbers of enemy planes which seemed serviceable, and Fifth Air Force fighter pilots went where they were located and knocked them out. At the end of August FEAF estimated that the North Korean Air Force could not possess more than 18 planes. By a most generous reckoning the North Korean Air Force could be expected to launch no more than 16 sorties in any one day.[109]

"As it happened," stated General Stratemeyer in retrospect, "the air battle was short and sweet. Air supremacy over Korea was quickly established." By 20 July the first task of tactical air employment in Korea—establishment of air superiority—had been accomplished without difficulty and without any great commitment of

United Nations' air effort. Yet the very ease with which friendly air superiority had been gained was the first of many unrealities of the Korean war, unrealities which must be kept constantly in view in any attempt to evaluate the Korean experience. "I need not dwell on the fact," said General Stratemeyer, "that had the enemy possessed a modern air force the whole picture in Korea—from the viewpoint of land, sea, and air forces—would have been vastly different."[110] Under the circumstance of a friendly air superiority, which was virtually an air supremacy, General O'Donnell was able to notify the Fifth Air Force early in August that his strategic bombers would not require fighter escort for their missions into North Korea.[111] Without fear of enemy air attack, Navy aircraft carriers—even the small escort carriers—would be able to stand close off the shores of Korea and launch their air attacks. Outnumbered Eighth Army ground troops were completely free to move and maneuver by day, while an extraordinarily large close air-support effort kept the enemy pinned down and forced the Communists to move and attack only at night. Lacking the challenge of a first-rate opposing air force, the United Nations air forces would for some time be able to employ successfully their obsolete propeller-driven aircraft in Korea. In any war with a major air power, the aerial supremacy so readily attained in Korea would probably be dearly purchased in terms of pilots, planes, and air effort.

### *4. Partridge and Walker Join Forces in Korea*

On 6 July Lt. Gen. Walton H. Walker, commander of the U.S. Eighth Army, announced that he had been designated to command all ground forces in Korea and that he intended to take Eighth Army headquarters to Korea.[112] General Partridge knew that air-ground doctrine required him to locate his tactical air-force headquarters in the immediate vicinity of the field army headquarters, but for several days the Fifth Air Force did not know where General Walker meant to establish his command post. More or less accidentally, General Timberlake happened to meet General Walker at Itazuke Air Base, when the latter was passing through on his way to Korea. In conversation, General Timberlake remarked that the Fifth Air Force was going to have to move its combat operations section from Taejon back to Taegu, but that he was not sure that this was the right place to locate it. "Of course it's the right place," said Walker. "That's where the Eighth Army headquarters is going to be."[113]

At Taegu City, on 13 July, General Walker assumed command of all American ground forces in Korea, designating his headquarters as the Eighth U.S. Army in Korea, with a short title of "EUSAK." General Walker's headquarters absorbed the Army personnel of USAFIK, ADCOM, and KMAG, all of which were discontinued.[114] During the week which followed the establishment of the Army headquarters in Taegu additional American ground troops reached

Korea. The 25th Infantry Division crossed from Japan and went to Hamchang, where it was in a position to block Communist attacks against Taegu from the north. The 1st Cavalry Division landed across the beaches at Pohang and rushed to relieve the battered 24th Division at Yongdong, northwest of Taegu.[115]

As soon as he learned where General Walker's headquarters were to be located, General Partridge "went all out" to establish his own command post in Taegu.[116] Because he remained responsible for the air defense of Japan and for the logistical support of Air Force units in Japan, General Partridge had no choice but to divide his headquarters into two echelons. On 14 July he activated Headquarters and Headquarters Squadron, Fifth Air Force (Advance) at Itazuke. At this time Headquarters and Headquarters Squadron, Fifth Air Force (Rear), continued to function at the old station in Nagoya.[117] In an official delineation of mission responsibilities, the Taegu headquarters was charged with the direction of the tactical air war in Korea. The Nagoya headquarters, soon to be commanded by Brig. Gen. Delmar T. Spivey, who assumed the duty as a Fifth Air Force vice-commander on 10 August, supervised the air defense of Japan and attended to air logistical and administrative matters in Japan.[118] As soon as housing and communications were provided in the missionary school compound which would shelter it in Taegu City, Fifth Air Force (Advance) began to move to the forward location, and at 0001 hours on 24 July Headquarters and Headquarters Squadron, Fifth Air Force (Advance), became operational in Taegu City.[119] In a subsequently issued redesignation which was made retroactive on 24 July, General Stratemeyer established the Fifth Air Force in Korea, and recognized it as a major command of the Far East Air Forces.[120]

Several Fifth Air Force staff offices had begun to function in Taegu well before 24 July. Sometime after 12 July, when he realized that Taejon would be lost, Lt. Col. John R. Murphy began to move the heavier equipment and a part of the personnel of the Air Force combat operations section back to Taegu. When he established EUSAK in Taegu, General Walker named officers to serve as G-2 and G-3 Air representatives in an air-ground operations section of a joint operations center, and thus, effective on 14 July, the Fifth Air Force-Eighth Army joint operations center began to function.[121] Using a radio jeep as "Angelo" control, Colonel Murphy and a few other officers continued to operate at Taejon until the evening of 19 July, when the remaining personnel were finally compelled to evacuate to Taegu. On the morning of 20 July control of tactical support aircraft was assumed at Taegu, and the radio control station was now designated with the call sign of "Mellow."[122]

Thus far in the war Colonel Murphy's control function had possessed only the most rudimentary communications facilities. Back in the United States the USAF had alerted the 502d Tactical Control Group for movement to Korea, but the war would not wait the many weeks that would be required to get this regular group into action. In an effort to make a provisional organization serve control and warning needs in Korea, General Partridge on 14 July organized the 6132d Tactical Air Control Group (Provisional), under the command of Colonel Joseph D. Lee. Drawing personnel and equipment from the air-defense establishment in Japan, Colonel Lee formed the provisional control

Lt. Gen. Earle E. Partridge (left)
Lt. Gen. Walton H. Walker (right)
Lt. Gen. George E. Stratemeyer (bottom)

group at Itazuke and immediately began to move to Taegu. On 23 July the 6132d Group established a Tactical Air Control Center (TACC) adjacent to the JOC, and at this time took over the operation of control station "Mellow." Inasmuch as no radar equipment was deployed in Korea for control and warning purposes during the time that it functioned, the principal duty of the provisional TACC was to supply the tactical air-direction radio communications required by the combat operations section of the JOC.[123]

When it arrived in Taegu, the 6132d Tactical Air Control Group also absorbed the tactical air-control parties in Korea and assumed the responsibility for providing such additional parties as were required by the Eighth Army's expanding troop list. During the European campaigns of World War II the Army Air Forces had allocated air-support parties only to corps and divisions, except in the case of armored divisions, which were given an air-support party for each independently operating combat command, organizations which were comparable in size to regiments.[124] Existing air-ground doctrine specified no set number or allocation of tactical air-control parties and stated that their operations with a division, regiment, or battalion would be dependent upon the need for close air support on a particular front. From the beginning in Korea, however, General Partridge allocated one TACP to each United States infantry regiment and higher unit headquarters engaged in active combat operations and to each ROK division and corps. As quickly as the Far East Air Materiel Command could fabricate them, the 6132d Group obtained additional AN/ARC-1 radio-control jeeps, and the group also provided the radio operators and mechanics requisite to each tactical air-control party. Some forward air controllers were apparently obtained from the United States, but most of these officers came from the Fifth Air Force's tactical groups, which were required to provide combat pilots for three weeks' temporary duty as forward air controllers.[125]

From the first day they flew over Korea the "Mosquito" airborne controllers proved their worth, but the airborne control function continued in an anomalous organizational status during July. The commander of the 6132d Group did not think that the airborne controllers had a place in his provisional tactical control group. After three weeks of unofficial operations, the "Mosquito" unit was organized effective on 1 August as the 6147th Tactical Control Squadron (Airborne). Under the command of Maj. Merrill H. Carlton, the 6147th Squadron was assigned directly to the Fifth Air Force in Korea, with station at Taegu Airfield. During the latter part of July the Eighth Army began to attach officers and noncoms to the "Mosquito" squadron as observers. Riding in the back of the T-6's, these Army observers contributed a ground soldier's viewpoint to the aerial control function.[126] The primary duty of the 6147th Squadron was to control air strikes against enemy targets, but the T-6 Mosquitoes continued to serve as the "eyes of the JOC." From the outset of their operations the Mosquitoes remained on station over the battle area for nearly three hours at a time, and in the course of their patrols they messaged current observations to the TACC over their very high-frequency communications. When the areas that the Mosquitoes reconnoitered were so far distant from Taegu as to prevent direct line-of-sight VHF communications, the 6147th Squadron kept aloft a plane called

"Mosquito Mellow," which stood orbit at some intermediate point and relayed the messages of the airborne controllers into the TACC.[127]

Although he was short of officers, General Partridge placed "considerable stress" upon the attachment of experienced Air Force officers to liaison duty with units of the Eighth Army and Task Force 77.[128] From the first air liaison officers (ALO's) were attached to each American division and to each ROK corps. Later on, when the Eighth Army organized corps headquarters, ALO's were also attached to these corps. According to doctrine, these officers were the personal representatives of the Air Force commander and were charged to advise the ground-unit commander on air matters, such as the suitability of targets for attack by tactical aviation. In theory, the ALO's were not a part of the tactical control system, but in Korea, where every man's services had to count to the utmost, the ALO's soon began to supervise the efforts of the tactical air-control parties which were attached to the ground units under the command where they were stationed.[129]

During July the Fifth Air Force staffed its side of the JOC, put together the other elements of the tactical control system, and improvised "Mosquito" control procedures. Unfortunately, however, the Eighth Army was long unable to provide the personnel and communications required by its air-ground operations system. The Eighth Army was slow to staff the air-ground operations section of the JOC with requisite personnel. In mid-August, for example, this section still lacked nine G-3 Air duty officers, six G-2 Air duty officers, and enough clerks to process the work of the section.[130] "The air people were willing to furnish more and more people for the JOC, since they were quite interested in it," said the G-2 Air officer of the JOC, "however, it was a hard job to sell the Army people with the idea that the JOC was going to function—be an organization which would help them."[131] The Army was also committed to establish G-2 Air and G-3 Air sections at division and corps headquarters, but many of these sections were handled as a part-time duty and not until the spring of 1951 would the Eighth Army issue formal directives establishing these duties as a full-time occupation and assigning sufficient personnel to them to permit twenty-four-hour operations.[132]

Even more serious was the Eighth Army's inability to provide the special communications required by the air-ground operations system. In the official delineation of service responsibilities for air-ground operations the Army was obliged to establish three communications nets: a tactical air request net with stations at divisions, corps, and the JOC; a ground liaison officer net between Army liaison officers at fighter-bomber airfields and the JOC; and an information net which connected G-2 Air officers at corps headquarters with the JOC. Of these networks the tactical air request net was the most vital, for over it, in orderly fashion, were supposed to flow the requests for support air strikes from needing battalions to the JOC. The approved procedure for handling requests for immediate air-support missions was as follows: a battalion commander up front prepared a request for an immediate close-support strike and dispatched it over organic communications through regimental headquarters to the G-3 Air officer at division. This officer received all battalion requests, assigned them priorities, and, after conferring with the ALO and the artillery coordinator, sent the requests

over the tactical air request net to the JOC. The G-3 Air officer at corps headquarters monitored immediate strike requests as they passed over the tactical air-request net; if he approved, he remained silent, but if he thought that artillery could handle the request, he arranged that support and disapproved the air strike. But the Eighth Army, in the summer of 1950, was unable to establish such a communications net which would permit an orderly passing and evaluation of immediate air-support requests. "The Army had no equipment available," explained the G-3 Air officer at the JOC. "We had no strike-request nets. Everything was in the United States."[133]

Lacking the properly constituted tactical air-request net, Eighth Army battalion commanders at first attempted to forward requests for supporting strikes over organic communications lines. This, however, did not work too well, for the Eighth Army's land lines were generally "busy" with administrative traffic, if, indeed, they were operating at all.[134] Regimental commanders soon learned that the TACP's could pass a mission request to the Mosquito which hovered over their division and that the Mosquito could relay the request to the TACC with a minimum of delay. This soon became the accepted communications route whereby air-support requests passed from front-line Army units to the JOC.[135]

This communicating arrangement was effective, but it produced undesirable complications and novel developments in the tactical control system. It strained the Air Force's already overburdened tactical air-direction net. Air requests, moreover, went directly from regiment to the JOC without review by higher echelons. Because they depended upon a TACP for communications, ground commanders came to believe that they could not obtain air support unless they had a TACP. Regimental commanders began to insist that these parties remain in the immediate vicinity of their command posts. This was not an entirely disadvantageous position for the TACP, for in the area was normally located the regimental artillery-fire direction post, and the forward air controller and the artillery liaison officer were prepared jointly to advise the regimental commander on the support that could be given to him. But the regimental command post was normally some distance from the front lines, and the TACP was unable visually to control an air strike from such a rearward location. Sometimes the TACP left the regimental command post and went forward to a battalion to direct a close support strike, but more often the TACP described the target to a Mosquito controller, who then received the fighters and directed their attack.[136]

At first in Korea the Mosquito controllers were assigned a geographical section of hostile territory in which to reconnoiter and report enemy targets, but ground commanders soon began to take a proprietary interest in the Mosquito control system and were reluctant to let the airborne controllers out of sight. The notion that a given Mosquito "belonged" to a division became emphatic after 12 August, when, as a means for facilitating identification, the Mosquitoes assumed radio-call signs to coincide with division-call signs. Thus the Mosquito which operated in the area of the 1st Cavalry Division called itself "Mosquito Wildwest." "The airborne controller," noted Major Carlton in mid-August, "has been restricted to limited areas over the front

lines....Less thought is being given to the enemy's build-up fifteen to thirty miles behind his lines." Under these circumstances the Mosquito controllers also met situations in which rights of jurisdiction came into play. "A short distance north of Waegwan," reported Major Carlton, "an enemy tank sat exactly on the dividing line between two divisions. When fighters arrived and reported to the Mosquito, the Mosquito aircraft requested authority to strike the tank, giving its location. The ground controller came back, negative, the tank is in another division's territory." Although the position of the tank was passed on to the neighboring Mosquito controller, the net result of the jurisdictional problem was that the Communist tank got away without air attack. As soon as it could obtain the necessary aircraft and controllers, the Fifth Air Force began to assign additional Mosquitoes to the task of locating targets in the enemy's build-up area behind his front lines. The Mosquito controllers working in the enemy's rear areas reported targets through the Mosquito relay aircraft directly to the JOC and controlled such armed reconnaissance aircraft as the JOC dispatched to them.[137]

In an effort to clear Army air-request traffic from his tactical air-direction net, General Partridge sent detachments of men with SCR-399 radios to the ALO at each division headquarters, and, in effect, attempted to operate the tactical air-request net which the Eighth Army was unable to provide.[138] Now, however, the forward ground commanders found it difficult to pass immediate air-support mission requests over the division's organic communications, and they continued to dispatch requests directly to the JOC over the tactical air-direction net.[139]

Even though he lacked the technicians and equipment of a regularly constituted tactical control group, General Partridge had improvised a control system which served its temporary purpose. He had also attempted to provide facilities which the Eighth Army—pending the arrival of the 20th Signal Company, Air-Ground liaison from the United States—was unable to establish. On 13 August General Stratemeyer outlined the actions which had been taken in Korea and asked General MacArthur to notice that the Eighth Army had not yet established the air-ground operations system contemplated in joint doctrine. General MacArthur's headquarters replied that the Eighth Army was aware of its deficiency and would attempt to remedy it as soon as it obtained the necessary personnel and equipment. Meanwhile, GHQ expressed satisfaction with the improvised control system. "It is fully appreciated that essential elements of the air-ground system were not available in the Far East Command at the outbreak of the Korean emergency and that substitutes and field expedients were necessary. That such a highly successful and workable system has been developed in a relatively short period of time speaks well of the resourcefulness and ability of the commanders concerned."[140]

Early in July General Partridge had planned to use aviation engineers and civilian contractors to lengthen and improve a total of six of the old airfields which the Japanese had built in southern Korea. Such a number of fields would allow him to move all of his tactical air groups to Korea, where they would be proximate to the battle zone.[141] But as July progressed General Partridge's air-facilities planning went completely awry. Prospective airfield sites at Pyongtaek, Taejon, and Kunsan

were lost to the North Koreans. Both General Stratemeyer and General Partridge had expressed the expectation that the airfield at Pusan (K-1) could soon be prepared to support a tactical air group, but an on-the-spot survey made by General Timberlake and Lt. Col. William S. Shoemaker, the staff engineer of Advance Headquarters, revealed that Pusan could not be immediately improved. Colonel Shoemaker accordingly established a detachment which would keep Pusan's airstrip sufficiently patched to permit light transport and emergency landings, and General Timberlake had diverted Company A of the 802d Engineer Battalion to undertake an improvement project at Pohang Airfield (K-3), on the southeast coast of Korea.[142]

The second airfield in Korea selected for development was the ROKAF facility at Taegu (K-2). FEAF decided to move the 822d Engineer Aviation Battalion from Okinawa and concentrate it at Taegu. With the 822d, although not attached to it, would travel the contact platoon of the 919th Engineer Aviation Maintenance Company. On 5 July the battalion commander and his operations officer flew to Tokyo, where they were oriented as to the prospective duty in Korea. These officers explained that half of their personnel were scheduled to return to the United States immediately, either because of the completion of their overseas tours or for discharge from the Army. Acquainted with the emergency, the Department of Army issued orders to prevent such an exodus, but these orders left the 822d with a serious morale problem. By noon on 13 July the 822d loaded the majority of its personnel aboard a Baltic Coastal steamship, and the last of three smaller vessels which carried equipment sailed from Okinawa on 22 July. On 16 July the first company of the 822d unloaded at Pusan, and on 30 July the last of the battalion moved northward by train from the South Korean port. At Taegu the 822d commander had received instructions to repair the existing sod-and-gravel runway so that it could handle "moderate traffic for a minimum time," this without halting air operations. After these repairs were made the battalion was to construct a 5,000-foot pierced steel plank (PSP) runway alongside the existing strip.[143]

When construction work began at Taegu on 18 July, dust and the psychological effect of aircraft landing and taking off from the adjacent lane were the 822d Battalion's earliest problems. For a week work went on from dawn to dusk, and then round-the-clock shifts were instituted. Near the west end of the old runway area the battalion encountered "Air Force blue" clay—the soft silt which makes up Korean rice paddies. This soil would not sustain the weight of truck traffic, let alone a heavy plane. Accordingly, the battalion had to excavate the soggy clay to a depth of five to ten feet and refill the pit with crushed stone. Augmented by about 500 Korean laborers, who laid PSP fairly well after three or four days' training, the battalion completed 4,300 feet of the new runway—called Strip "A"—on 7 August. At this time Strip "A" was opened to air traffic, and the battalion began to renovate and lengthen the old sod-and-gravel strip, which was now designated Strip "B." As was the case with their comrades who were engaged in the same type of project over at Pohang, the engineers at Taegu were so pressed for time that they were able to give very little attention to sound engineering procedures.[144]

As the airfield development program

Welding torches were used to repair pierced steel planking.

slowly unfolded, it became evident to General Partridge that the only airplanes which he could base in Korea during the immediate future would be Mustang fighters. Existing theater stocks of F-51's had provided minimum equipment for the 51st Squadron at Taegu and the 40th Squadron at Pohang, but the movement of other tactical organizations to Korea would have to await the arrival of additional Mustangs from the United States. Securing the planes from Air National Guard units, USAF moved 145 F-51's to Alameda, California, where they were cocooned for an ocean voyage and loaded on the deck of the aircraft carrier *Boxer*. After a record eight-day Pacific crossing, the fast carrier reached Tokyo on 23 July.[145] In Japan everything was in readiness to receive the Mustangs. The Far East Air Materiel Command assembled them at Kisarazu and flew them to Tachikawa to make them combat ready, a task which was completed for all planes in thirteen days. The 3d Bombardment Wing operated an F-51 replacement training unit at Johnson Air Base, which transitioned pilots to the conventional planes as fast as the aircraft were delivered from the modification lines at Tachikawa.[146]

Newly checked-out pilots flew enough of the first of the newly-arrived Mustangs to Korea on 30 July to bring each of the two squadrons operating there up to an authorized strength of 25 planes.[147] Second priority for the disposition of the Mustangs went to the 18th Fighter-Bomber Group and its 67th Squadron, both of which had arrived from the Philippines and were standing by at Johnson when the first F-51's were delivered there. On 30 July the 18th Group moved down to Ashiya, and on 3 August the group headquarters proceeded on to Taegu. Next day

the 51st Fighter Squadron (Provisional) was returned to its old designation as the 12th Fighter-Bomber Squadron. The commander of the 18th Group had intended to move the 67th Squadron to Taegu without delay, but when he reached the forward airfield he found that its facilities could not yet serve a second squadron. The 67th Squadron accordingly had to remain at Ashiya.[148] When its 40th Squadron had converted to F-51's and had gone to Pohang on 16 July, the 35th Fighter-Interceptor Group and its 39th Squadron had remained at Ashiya, where they continued to fly F-80's. On 7 August the 39th Squadron received its allocation of Mustangs, and, accompanied by group headquarters, this squadron moved to Pohang Airfield on the next day. Concurrently with the arrival of the fighter groups at Taegu and Pohang, General Partridge redesignated and expanded the provisional support units at these fields into the 6002d and 6131st Fighter Wings, Single Engine.[149]

Last of the Fifth Air Force units to convert to Mustangs was the 8th Fighter-Bomber Group, which had sent its F-80's into combat over Korea on the first day the United States participated in the hostilities. There was no airfield which could serve the group in Korea, but in order to clear Itazuke for other units which were arriving from the United States the 8th Group, together with its 35th and 36th Squadrons, was slated to convert to Mustangs and to move to an old Japanese naval airfield at Tsuiki, or "Sun Valley." This old airfield, on Kyushu and not far from Itazuke, had not been used for anything other than infrequent maneuvers since 1945, but on 10 August the 8th Group moved its ground echelons over there. At Itazuke, on the morning of 11 August, pilots of the 35th and 36th Squadrons bade their "beloved" F-80's good-by, climbed into Mustangs for a mission to Korea, and returned to land at Tsuiki. This was something new in USAF experience: movement to a new airfield and conversion to a different-type aircraft at the same time, without the loss of any time from combat operations.[150]

On 11 August the Fifth Air Force thus completed a scheduled conversion of six of its fighter squadrons to conventional F-51 Mustang aircraft. Viewed in terms of tactical capabilities, the conversion held some benefit to the Fifth Air Force. The Mustang had range enough to go anywhere in Korea, and it could be based on crude airstrips in the combat zone. In token of the Mustangs' endurance and ordnance-carrying abilities, General Partridge ordered that they would be used primarily to provide close support for ground troops. The F-80's of the 49th Fighter-Bomber Group and of the 80th Fighter-Bomber Squadron (8th Group), units which continued to fly from Itazuke, would be employed primarily in interdictory sweeps of hostile lines of communication leading into the battle area.[151] Many of the pilots who were forced to give up modern jet fighters apparently could not agree that the change was beneficial. Pilots of the 8th Group were told that the F-51 was a better ground-support fighter than the F-80, but the group's historian recorded that "this idea was not shared by the pilots who have been flying F-80's." "A lot of pilots," said this historian, "had seen vivid demonstrations of why the F-51 was not a ground-support fighter in the last war and weren't exactly intrigued by the thought of playing guinea pig to prove the same thing over again."[152]

# 4. *In Defense of the Pusan Perimeter*

## *1. General MacArthur Matures a Strategy*

On the dismal afternoon of 29 June, as he stood on a hill overlooking the Han River and watched the backwash of defeated ROK soldiers streaming southward, General MacArthur is said to have recognized the strategy which would be followed if South Korea was to be saved from Red conquest. The onrushing North Korean army had to be halted. Then other friendly forces would land from the sea behind the North Korean lines. The North Korean army would be caught between the hammer of an attack from the south and the anvil of the amphibious beachhead. It would be rolled up and destroyed. One of General MacArthur's staff officers so recorded the thoughts which passed through the august theater commander's mind.[1]

In the war against Japan General MacArthur had proved himself a master at amphibious strategy, and it is not likely that he saw an amphibious solution to the strategic problem in Korea at the very beginning of these hostilities. If it had not been apparent earlier, however, General MacArthur fully understood by 7 July that the North Koreans possessed an "aggressive and well-trained professional army." In order to "halt" and "hurl back" this Communist army, MacArthur then informed the Joint Chiefs that he would require not less than four to four and one-half full-strength infantry divisions, an airborne regimental combat team, and an armored group, together with artillery and service elements. Once the North Korean enemy was "fixed," MacArthur explained that he intended "to exploit our air and sea control and by amphibious maneuver strike behind his mass of ground forces."[2]

Three weeks later, on 23 July, General MacArthur was confident that the Eighth Army would not be driven into the sea, and he was able to present his ultimate strategy to the Joint Chiefs in greater detail. Sometime in the middle of September—the exact date to depend upon the enemy's actions during August and the arrival of additional forces from the United States—the United Nations Command would make a two-division corps landing in the rear of the Communist lines. Acting in conjunction with an Eighth Army attack from the south, the amphibious corps would envelop and destroy Communist forces in South Korea. General MacArthur was completely convinced that the amphibious envelopment was the right strategy. An early and strong effort behind the enemy's front, he said, would "sever his main lines of communications and enable us to deliver a decisive and crushing blow." The only alternative to amphibious encirclement was a "frontal attack which can only result in a protracted and entensive campaign to slowly drive the enemy north of the 38th parallel."[3]

## *2. Coordinating the Air-Ground Battle*

Although General MacArthur expressed confidence that the Eighth Army would be able to hold a beachhead in southern Korea, General Walker's forces were less optimistic, and with good reason. Even before Taejon fell on 20 July the Communists had turned the Eighth Army's left flank. Unopposed except for a few ROK policemen, two Red divisions raced southward, reaching Chonju and Iri on 20 July, Kwangju on 23 July, and the major southwestern port city of Mokpo on 24 July. This assault established the Reds in position for a turning thrust eastward against the unguarded coastal cities of Chinju, Masan, and Pusan. To meet the hostile thrust against Chinju, General Walker sent remnants of the 24th Division southward, but there was little good reason to hope that these combat-fatigued troops could withstand the enemy's assault.[4]

As the Eighth Army sought to establish positions at which it could form a perimeter and defend Pusan, it needed every assistance which the full strength of United Nations' airpower could give to it. Unfortunately, however, during the crucial days in which every air sortie was of vital importance, General Partridge began to know the defects of the "coordination control" arrangement which had been handed down from Tokyo for the control of air operations over Korea.* On 18 July General MacArthur had agreed that the Fifth Air Force would be responsible for supporting the Eighth Army. That same day General Stratemeyer had issued a directive defining the procedure through which the Eighth Army would secure the close support that it needed. "All requests for close support of ground troops in Korea," stated Stratemeyer's directive, "will be made by Commanding General Eighth Army direct to Commanding General Fifth Air Force."[5] This order was clear as to the procedures which the Eighth Army would follow in obtaining close support from the Fifth Air Force or from the FEAF Bomber Command, but it failed to establish any channel whereby the Eighth Army might obtain close support from the carrier-based planes of Task Force 77. Viewed after the event, General Stratemeyer's failure to specify procedures whereby the Eighth Army could get support from naval aircraft seems a glaring oversight, but it is only fair to observe that no one in Tokyo had discussed the proposition that carrier pilots might support ground troops in Korea.

On 23 July General Partridge was establishing the Advance Headquarters of the Fifth Air Force in Taegu, but the Joint Operations Center was in full operation, and the Air Force combat-operations section was working closely with Eighth Army representatives to meet General Walker's requirements for support. On this day, however, some member of General Walker's staff was so concerned by the enemy's end-around advance in southwestern Korea that he flashed a message directly to General MacArthur requesting that he order Task Force 77 to support the Eighth Army. On that day and continuing on 24 July the carrier task force

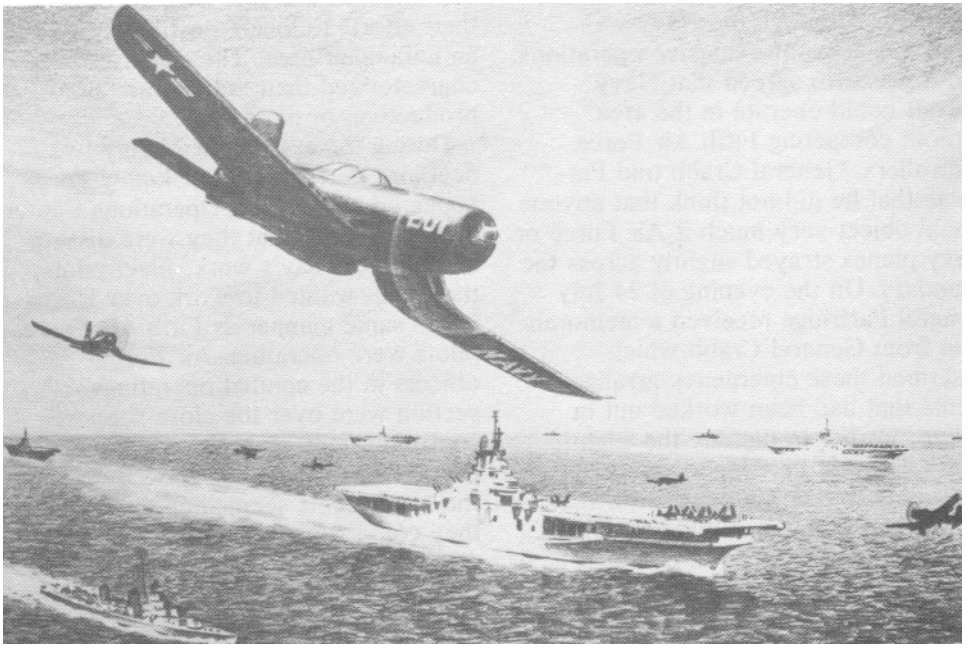
*See Chapter 2, pp. 49-50.

was resupplying at sea, but Vice-Admiral C. Turner Joy, commander of NavFE, was receptive to the idea that naval air could be employed in close support of ground troops, if the emergency were great enough.[6]

Concerned about the Eighth Army's left flank and assuming that Partridge was "pretty much all out" with the forces he had available, General Stratemeyer was also in favor of the naval close support proposal. General MacArthur understood that the strikes could not be controlled from the ground, but he was willing to accept the calculated risk that the emergency naval strikes might hurt some friendly people. He accordingly issued instructions that Task Force 77, beginning on 25 July, would seek out and attack military targets in southwestern Korea within an area bounded by the towns of Kunsan, Chonju, Namwon, and Kwangju. Although the Navy was given this area for exclusive operations, and it was also agreed that Navy aircraft could operate in the area without contacting Fifth Air Force controllers, General Crabb told Partridge that he did not think that anyone would object very much if Air Force or Navy planes strayed slightly across the boundary. On the evening of 24 July General Partridge received a memorandum from General Crabb which described these emergency arrangements that had been worked out in Tokyo. Earlier in the day the Eighth Army had told Partridge that the Navy was going to operate over southwestern Korea on 25 and 26 July, so Crabb's memorandum was "not a complete surprise."[7]

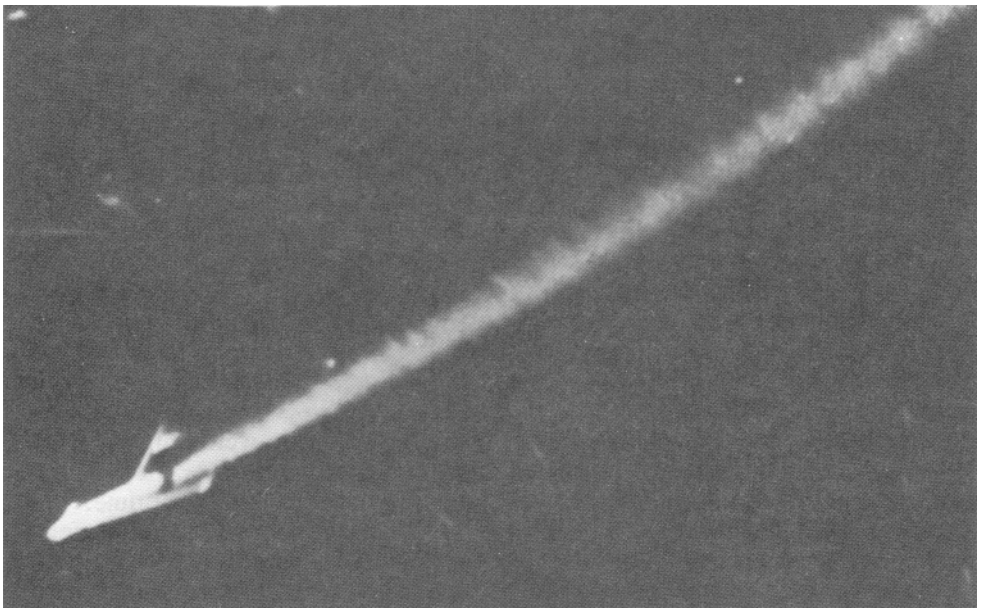
General Stratemeyer and his staff had assumed that General Partridge must know all about the need for naval close support, and they had arranged the matter without consulting responsible air authorities in Korea. But General Partridge had known very little about this need for naval support. General Walker, moreover, told Partridge that he had not requested the additional air support. Walker thought that it must have been arranged by GHQ on its own initiative. As they were scheduled to do, Navy pilots sought targets in southwestern Korea on 25 July, but at the close of the day's flying neither the men of Task Force 77 nor General Partridge was satisfied with what had been accomplished. General Partridge welcomed the help of any available air unit, but he felt strongly that air effort in support of the Eighth Army ought to be managed from Korea. Since the carrier task force had not established any communications with the JOC, nor provided liaison with that responsible body, its carrier pilots had met little success in their efforts to locate hostile targets in an unfamiliar area. These carrier pilots characterized their activity as "non-productive, or nearly so."[8]

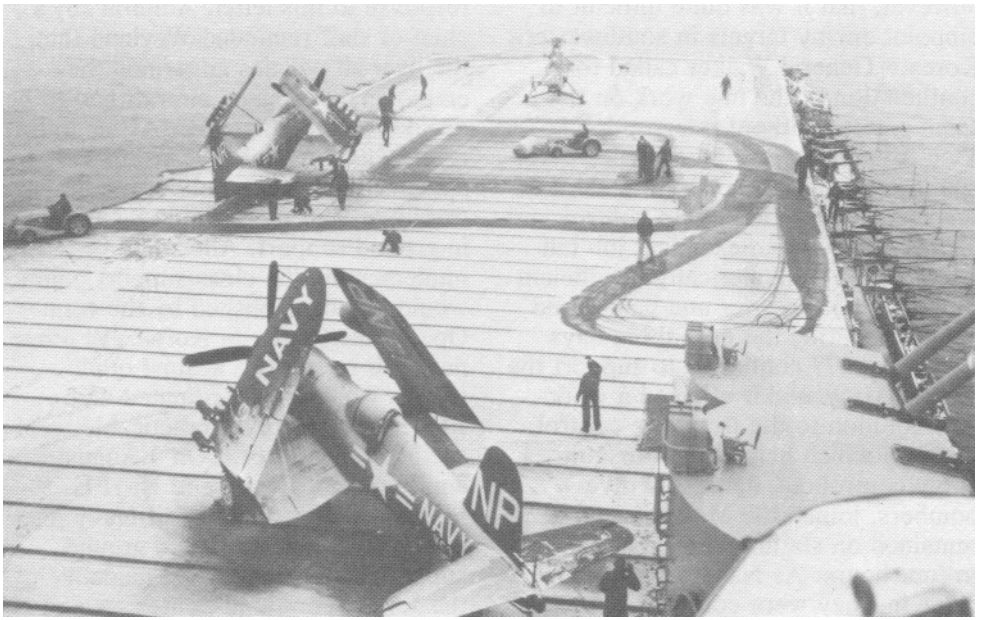
During the evening of 25 July two fleet air officers from the *Valley Forge* appeared at the Joint Operations Center and announced that they were dissatisfied with the day's work. Fleet pilots, they said, wanted to work over Korea in the same manner as Fifth Air Force pilots were operating. Air Force officers in the combat operations section went over the close-support control system, gave the naval officers pertinent call signs and procedures, and the Navy pilots seemed confident that they could support the entire Eighth Army battleline under the control of the JOC. Before leaving Taegu the Navy officers arranged that the fleet would fly four support missions on 26 July, each with from 12 to 16 aircraft. On the morning of 26 July Partridge got the answer to another mystery, for



(top, left to right) VAdm. Arthur D. Struble, USN, VAdm. C. Turner Joy, USN. and Secretary of the Navy Francis P. Matthews discuss the Korean crisis *(Courtesy U.S. Navy).*

(bottom) Planes in landing pattern over Task Force 77 (Herbert C. Hahn, *Courtesy U.S. Navy).*






(top) A Soviet-built fighter shot down by a Navy fighter *(Courtesy U.S. Navy)*.

(bottom) Snow-covered deck of the USS *Valley Forge* during operations in Korean waters. The planes on deck include an F4U Corsair (foreground) and an AD Skyraider; in the background is an HO3S helicopter.

General Walker told him that he had learned that someone in his staff had requested the additional naval air support. Walker acknowledged that this was not a correct procedure, and he promised that all requests made by the Eighth Army for naval air support in the future would be submitted through the Fifth Air Force.[9]

On the basis of the informal understandings undertaken at Taegu the night before, Navy and USAF pilots worked together in support of the Eighth Army on 26 July. Some 60 carrier-based sorties, flown in four launchings, reported to the Joint Operations Center and were sent to front-line Mosquitoes, who controlled their attacks. Everyone seemed satisfied, or nearly so. General Partridge signaled that he was glad to have the Navy planes. He noted, however, that it was quite difficult to pinpoint enemy targets in southwestern Korea.[10] General Walker called for a continuation of the fine work on the same pattern without interruption.[11] Vice-Admiral Arthur D. Struble, commander of the Seventh Fleet, reported that the Mosquito control planes had done an excellent job but appeared to be numerically insufficient to handle both carrier and land-based planes.[12] During the next three days Task Force 77 continued to support the Eighth Army, and it effected a workable solution to the front-line control problem which helped the Mosquitoes. Navy controllers, flying AD dive-bombers, joined the Mosquitoes and remained on station with them for three to four hours. As Navy attack planes came in, they were controlled by either the Air Force or the Navy controller, whichever was available and not already working other aircraft. At the conclusion of their strikes the Navy pilots checked out with "Mellow" control and made an oral report of their mission accomplishments. At the end of this stint of close support duty, when the task force had to withdraw for replenishment, the Navy operations officer told the Joint Operations Center that the way naval pilots had been used was very satisfactory and effective, although some days Navy pilots had been short of targets.[13]

Seeking to secure more naval close-support strikes and to get a formal statement of policy, General Weyland informed Admiral Joy on 2 August that the naval air operations in support of the Eighth Army were "highly successful and contributed very materially to the joint effort at a critical time." Weyland recommended that carrier aircraft should continue to support the ground forces, under coordination at the fleet-air force level in Korea.[14] In response to this letter, Admiral Joy's chief of staff reminded Weyland that the over-all policies governing the employment of naval aircraft had to be decided at the NavFE-FEAF operating level, with General MacArthur's approval. One such policy was that maximum air effort should be expended in ground support. Allocation of targets implementing the close-support policy would be accomplished by the Joint Operations Center in Korea. All other naval air operations against other targets would be coordinated with FEAF, and wherever practicable with the Fifth Air Force.[15] On 3 August a conference of FEAF and NavFE representatives agreed that Navy pilots would give first priority to ground support under the tactical guidance of the Joint Operations Center, second priority to interdiction strikes south of the 38th parallel in coordination with the Fifth Air Force, and third priority to interdiction strikes north of the 38th parallel in coordination with the FEAF Bomber Command.[16] Early in August it

seemed that adequate arrangements had been made whereby FEAF and NavFE planes would work in harmony in Korea.

Recognizing that effective air-ground operations against the Communist enemy depended upon the establishment of mutual trust between the tactical air force and the field army, General Partridge made conscientious efforts to cultivate close relations with the Eighth Army. Partridge and his key staff members attended the morning staff meetings which General Walker held at eight o'clock. At these morning conferences Walker explained what his forces were expected to do during the day, and Partridge issued such additional orders for immediate air missions as were necessary to support the ground actions. General Partridge invited Walker and his key officers to attend the Fifth Air Force planning session which met each evening at six o'clock. At this meeting Partridge customarily ordered the air missions which would be written up on operations orders for execution the following day. While the Joint Operations Center continued to handle immediate changes in the allocation of airpower, the headquarters relationships insured that airpower operated as a unified force where it was most needed by the ground troops. Thus on 30 July General Walker asked Partridge to concentrate all available air strikes in the Chinju area. Next day Walker recommended that first priority for air strikes be given to the Kochang sector of the central front.[17]

While the groundwork for air-ground cooperation against the common enemy was being laid at Taegu, General Timberlake could not help noticing that the Eighth Army staff "didn't exactly go along with the idea that we were on a parity with them and we were their opposite numbers." From the start of the Korean operations the Eighth Army had made plans without coordinating them with the Fifth Air Force, with the result that the Air Force had been caught off balance by unexpected ground actions. Early in August another of these unexpected actions placed the Fifth Air Force in a hazardous situation. Almost as an afterthought on 3 August, following the morning staff conference, General Walker took Partridge and Timberlake into his war room and told them that the Eighth Army was going to have to pull back without delay on the west to the line of the Naktong River. Apparently the Eighth Army staff had discussed this course of action for several days without giving any inkling of it to the Fifth Air Force—despite the fact that the ground withdrawal would jeopardize the security of the Mustang squadrons which Partridge had been pressing forward to the airfields at Taegu and Pohang.[18]

Although Partridge was confident that General Walker would stabilize his lines at the Naktong and successfully defend Taegu City and its airfield, the enemy was going to be too close to Taegu for comfort. On 4 August General Partridge accordingly suspended all plans for moving additional air units to Taegu and began to backpedal those that were already there to safer locations in Japan. This order caught the ground echelon of the 8th Fighter-Bomber Group on its way to Korea; it had to turn around and go back to Tsuiki. On 6 August the 18th Fighter-Bomber Group moved back to Ashiya, and on 8 August the 6002d Fighter Wing also departed for Ashiya, after first having organized the 6149th Air Base Unit which would remain behind to service Mustangs as they staged through Taegu on combat

missions. The aviation engineers ceased all construction work and evacuated their heavy equipment to Pusan.[19] General Partridge also felt compelled to evacuate all the heavy gear and all persons who could be spared from the Advance Headquarters. General Walker announced that he intended to take his own headquarters back to Ulsan, if the situation deteriorated too much. But Partridge did not have enough communications equipment to plan to go to this midway position, and he elected to move his own rear echelon directly to Pusan. Starting on 4 August, the main bodies of Advance Headquarters and the 6132d Tactical Air Control Group went southward to establish an alternate command post and control facilities in Pusan. General Partridge and a skeleton staff remained with the Joint Operations Center in Taegu.[20]

General Partridge and Timberlake recognized that Walker was burdened with a grave responsibility for conducting ground operations under the most adverse circumstances. They were also aware that circumstances beyond Walker's control had often prevented better coordination. Nevertheless, Partridge felt that the time had come to discuss the matter of closer cooperation with Walker. On 4 August he accordingly wrote Walker a letter and took it to him for discussion. In this letter Partridge recalled numerous evidences of a lack of cooperation between the air and ground-planning functions. He proposed that the Eighth Army and Fifth Air Force had to keep each other better informed of future plans. In line with this thought, General Partridge gave Walker a brief but firm appraisal of the value of the airfield at Taegu to air-ground operations. If Taegu was lost, Pohang Airfield was bound to fall into the enemy's hands, and then the Fifth Air Force would have no airfields in Korea other than the unsatisfactory field at Pusan. "In a tight situation in which airpower may tip the scales in our favor," Partridge cautioned, "the continued utilization of Korean airfields by our fighters is a major factor. If, by chance, the line of action adopted achieves marked success in the southwest at the expense of Taegu, the net result might prove disastrous."[21] General Walker evidently discussed this letter of remonstrance with the Eighth Army staff, for after 4 August the Eighth Army would keep the Fifth Air Force conversant with all ground-force plans.[22]

Early in August, when Fifth Air Force Mustang squadrons were retreating to Japan, elements of the 1st Marine Air Wing became combat ready in the Far East. Beginning of 22 July, the 1st Marine Air Wing's advanced echelon—actually Marine Aircraft Group 33, led by Brig. Gen. Thomas J. Cushman—established a base of operations at Itami. The doctrine and organization for air support practiced by the Marine Corps were designed to support an amphibious mission. Since Marine infantry troops were put ashore by small amphibious craft and could not expect much support in the way of organic artillery, Marine aviation was expected to make up deficiencies of organic artillery. Each Marine infantry division could normally expect the support of a Marine air wing, the latter being a small tactical air force with its own ground-control intercept and tactical air-control squadrons, as well as combat aviation. Since the Marines utilized air support as a substitute for artillery, air observers accompanied each infantry battalion. To insure an air strike within five to ten minutes against enemy targets in close proximity to the front lines, the Marine air units kept

aircraft orbiting on station over the ground Marines.[23]

According to the organization of the Marine Corps, the 1st Marine Air Wing was the air component of the 1st Marine Division, and, by the same arrangement, Marine Aircraft Group 33 was an integral part of the 1st Provisional Marine Brigade. In Korea, however, the Marine infantry units would for the most part fight in the Eighth Army's battleline, with the result that the Marine air units had to be subjected to some form of coordination control from the Fifth Air Force. "At such time as the Marine Wing may be committed to shore-based operations in Korea," stated General Stratemeyer on 22 July, "it will operate under the control of the Commanding General, Fifth Air Force, except as may be directed for special operations."[24] One of the Marine squadrons—VMF (N)-513—was a night-fighter unit, equipped with F4U-5N all-weather Corsairs. This squadron joined the 8th Fighter-Bomber Wing at Itazuke Air Base and began to fly night-intruder attacks under the coordination control of the Fifth Air Force. The Fifth Air Force assigned missions to this Marine squadron in its daily operations orders, and at the conclusion of their missions the Marine pilots were interrogated and their mission reports were forwarded to Fifth Air Force.[25] Marine Aircraft Group's two day-fighter Corsair squadrons—VMF-214 and VMF-323—were committed to the support of the 1st Marine Brigade, and early in August these two squadrons took station aboard the baby flattop carriers *Sicily* and *Bandoeng Strait*. These two escort carriers comprised Task Element 96.23, which located itself just off the southern shore of Korea. When the 1st Provisional Marine Brigade went into action, VMF-214 and VMF-323 followed the organic Marine air-control system and gave the Marine infantrymen some 45 close-support sorties each day. While supporting the Marine brigade, the Marine airmen did not report to the Joint Operations Center, but at General Partridge's request the 1st Marine Air Wing sent a liaison officer to join the Air Force combat-operations section. During those intervals in which the Marine brigade was not in action, Marine Aircraft Group furnished its Corsair capabilities to the Joint Operations Center for the support of the entire Eighth Army battleline. In these periods the Marine liaison officer at the Joint Operations Center sent reporting schedules to the escort carriers. According to these schedules, Marine pilots checked in with "Mellow" control, received targets and front-line controller designations, and upon the completion of their missions they checked out with "Mellow" and returned to their baby carriers.[26]

During the fortnight at the beginning of August as his forces withdrew to the Naktong line and began to make counterattacks against the Communists, General Walker enjoyed the support of Air Force, Navy, and Marine aircraft. The heaviest ground fighting occurred at the southwestern end of the front, east of the city of Chinju, where Task Force Kean counterattacked the North Korean 6th Division. Named for the commanding general of the 25th Infantry Division, Task Force Kean comprised the 35th Regiment of the 25th Division, the 5th Regimental Combat Team, and the 1st Provisional Marine Brigade. It was the initial blooding for the 1st Marine Brigade and the 5th RCT, these two units having just arrived in Korea from the United States and from Hawaii. With strong air support making up for deficiencies

in artillery, Task Force Kean jumped off on 7 August, and by 11 August it captured strategic high ground east of Chinju. This courageous counterattack for the moment safeguarded the western approaches to Pusan.[27] On 10 August General Walker acknowledged his appreciation for the close support that the Fifth Air Force was giving his troops. "The Fifth Air Force," said Walker, "has given all-out support of our efforts, and all of our troops...are high in their regard for the close-support sorties, which have averaged 175 sorties a day in the past ten days. They have destroyed enemy tanks that have penetrated our lines. They not only attack targets given them by the ground commanders but prevent any enemy movement during daylight hours. Their effort has been of tremendous value to our forces and has saved many, many lives of our infantry troops."[28]

Having completed its replenishment, Task Force 77 returned to the support of the Eighth Army early in August, but almost at once its pilots found fault with the tactical air-control system. Some part of this dissatisfaction was understandable. Another fast carrier—the *Philippine Sea*—had joined the task force on 31 July, doubling its force of strike aircraft. The Navy maintained that these two fast carriers had to operate together for mutual protection, and both of them customarily launched their strike aircraft by the deckload. The Navy pilots complained that they had to stack up awaiting contact with "Mellow" control station, which they said frequently had no targets for them once they did contact it. The carrier airmen also reported that the Mosquito air controllers they contacted along the front lines almost always had more aircraft on hand than they could successfully place on targets. Since a permanent naval liaison officer—Lieutenant Commander James A. Murch—had joined the combat operations section early in August, the Fifth Air Force could understand the Navy's problem. Recognizing that the large flights of Navy planes tended to swamp its control system, the Fifth Air Force attempted to hold its planes on the ground during those intervals at which the aircraft carriers were launching their strikes. The trouble with this, however, was the lack of direct communications between the Joint Operations Center and Task Force 77, which did not permit the control agency to know when naval planes were going to report to "Mellow" control.[29]

In a conversation with General Stratemeyer on 6 August Admiral Joy reported the difficulties his pilots were meeting over Korea and questioned whether naval aircraft ought to continue to try to support the ground forces. General Stratemeyer assured Admiral Joy that no more naval planes would be used for ground support than could be profitably employed and controlled. He explained that Fifth Air Force pilots were often unable to secure close-support targets but that in such event these pilots were briefed to attack an interdiction target. In order that Navy pilots might use the same procedure, General Stratemeyer reminded Joy that he had already provided NavFE with a list of more than 100 tactical interdiction targets lying between the bombline and Seoul.[30] But the Navy did not find this employment profitable, and, after a particularly vexatious day on 9 August, when many flights of carrier planes were unable to contact either "Mellow" or the Mosquitoes, Admiral Struble messaged Admiral Joy that the maximum effort of the fleet was not being used in South Korea.[31] Acting

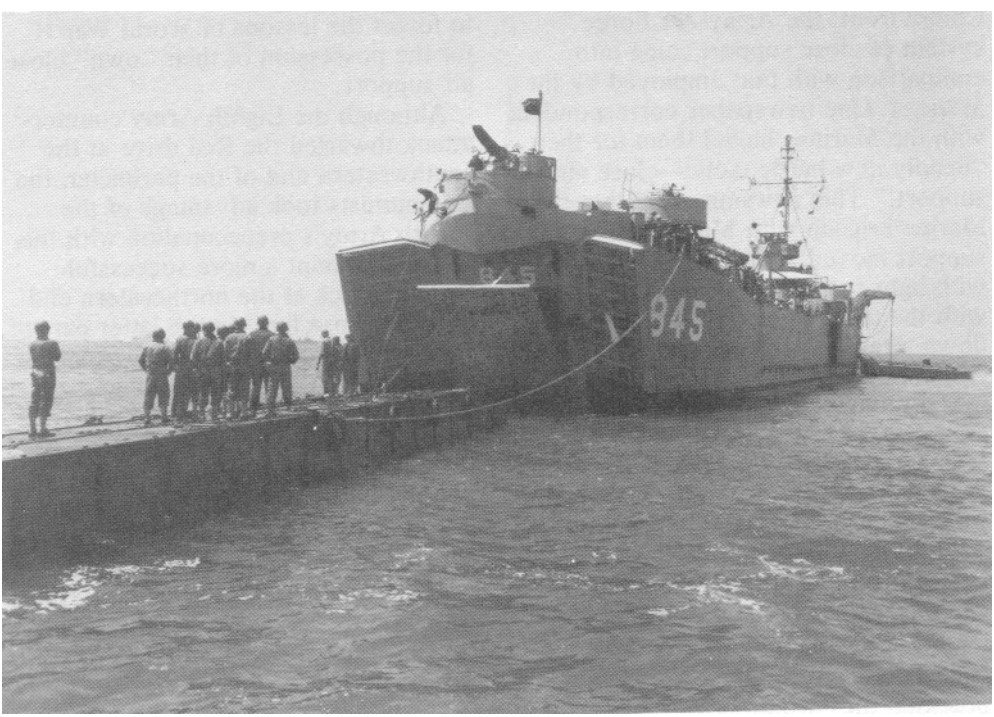
without coordination with FEAF, NavFE secured permission from the GHQ staff to transfer its operations into North Korea, where naval pilots soon found "a multiplicity of extremely lucrative and profitable targets well suited to carrier-aircraft strikes."[32] This action seemed contrary to the agreement between NavFE and FEAF undertaken on 3 August, but the Seventh Fleet held that the record of this conference did not constitute a formal agreement.[33] The somewhat embarrassed Navy liaison officer at the Joint Operations Center explained that the Seventh Fleet did not understand that the letter issued after the 3 August conference was an order. "It was just a mutual agreement," he said, "there wasn't any order out to that effect from GHQ or higher headquarters."[34]

As Air Force and Marine pilots supported Task Force Kean on the Chinju front, the Army-Air Force system of close support came into comparison with that employed by the Marines. One newspaper correspondent with the Marines hailed them for their "deadly new battle tactic—close air support." This newsman said that the Marine brigade with Marine close support moved 27 miles in four days with light casualties, while Army units with the usual air coverage bogged down after suffering heavy casualties.[35] Although these facts were untrue, there was no doubt that the Marine fliers, operating from escort carriers close to their target areas, offered excellent close support to the Marine brigade. But their advocates failed to appreciate the unusual circumstances which at this juncture exaggerated the positive advantages of the Marine system and minimized its disadvantages. Had the Communists possessed an air-attack potential they would have prevented the baby flattops from standing close inshore in Korean waters. Hostile fighter opposition would also have played havoc with the conventional Corsairs, in which Marine pilots orbited for long periods of time over the battle area before they were called down for support strikes. World War II had shown the gross waste of committing specific air units to the support of specific ground units, in this case a single brigade. "You hear and read much about the type of support furnished by the Marine air units," observed General Walker. "It's good, it's excellent, and I would like to have that kind of air support available, too—but if the people who advocate that would sit down and figure out the cost of supplying air units for close-support only, in that ratio to an army of the size we should have, they would be astounded."[36] A surprising number of Army officers, however, seemed willing to forget the lessons of World War II for the possession of their "own" close air support.

Although the Eighth Army counterattack thwarted the Red drive at the southwestern end of the perimeter, the Communists took advantage of the Eighth Army's preoccupation with this sector to mount a more successful limited attack at the northeastern end of the defense line. In the latter part of July Col. Robert W. Witty, commander of 6131st Fighter Wing at Pohang Airfield, had been warning that his installation and forces were endangered by North Korean troops who were filtering through the mountains between the ROK 3d and Capital Divisions.[37] Although the commanders in Taegu were supposed to be "keeping close watch on the situation," neither the Fifth Air Force nor the Eighth Army was as well versed as to what was happening on the east coast as was Colonel Witty. Early in August ele-

ments of the North Korean 12th Division worked through the mountains, struck the coastal route south of ROK defenses at Yongdok, and headed southward for Pohang. An American infantry-tank task force went to meet the North Koreans, but it was too little and too late and was soon scattered by enemy fire.[38]

For several days at Pohang Airfield Air Force ground crews serviced Mustangs by day and defended the strip against infiltrating guerrillas at night, but by 8 August it seemed doubtful that Pohang Airfield could long remain in friendly possession. Aviation engineers accordingly evacuated their heavy equipment and remained to help with the ground fight. On 12 August North Korean troops entered the port of Pohang, and next day the 35th Fighter-Interceptor Group had no choice but to evacuate the embattled airfield and return to Tsuiki Airfield in Japan. Elements of the 6131st Fighter Wing departed by LST on 15 August and subsequently joined the 35th Group at Tsuiki. The evacuation was well managed. "No equipment was left behind," observed one fighter squadron, adding that "this was due partly to the fact that we did not have much equipment anyhow."[39] A few days after the Air Force men abandoned Pohang Airfield, the American task force rallied the ROK troops in the area and drove the Reds out of the port of Pohang. But Air Force units would not be able to return to Pohang while fighting raged on the Pusan perimeter, for the east coast area was too guerrilla ridden to accommodate combat air units.[40]




An LST during landing operations.

### *3. Comprehensive Interdiction Gets Results*

"I would say that in a long-term war," stated General Weyland, "tactical airpower will contribute more to the success of the ground forces and to the over-all mission of a theater commander through a well-planned interdiction campaign than by any other mission short of the attainment of air supremacy."[41] As a generic term used by the Air Force, "interdiction" means any air action which prevents, or delays, or destroys enemy movements of men and supplies to the zone of a ground battle. In order to achieve desired results, any air-interdiction campaign must be well planned as to its objectives and persistently sustained in its execution. Such operations always achieve their maximum success when the enemy is closely engaged by friendly ground troops and forced to use up his supplies in active ground combat at the same time as air attacks in his rear deny him needed resupply and replacements of combat casualties.

"Had our available tactical airpower and medium bombardment effort been initially placed upon a well-planned interdiction program," said General Weyland, "I believe the over-all mission would have been advanced appreciably."[42] Sporadic air-interdiction efforts during July had undoubtedly delayed the Communists, but during the time in which FEAF aircraft were required to center their attacks in the immediate battle area Communist logisticians had benefited from virtually unimpeded movement north of Seoul. Visual air-reconnaissance reports disclosed heavy southbound rail traffic on the east-coast transportation routes. From Chongjin southward to Hungnam all marshaling yards and rail sidings were loaded with rolling stock. Air reconnaissance also revealed that the Reds had repaired the rail routes between Sinuiju and Seoul and between Seoul and Wonsan. Reconnaissance photography taken on 22 July at Seoul revealed that the Reds had floored half of the double-track west railway bridge across the Han and were using it to serve both vehicular and rail traffic. The Reds had also thrown a pontoon bridge across the Han, immediately downstream from the old highway bridge. The Reds used this pontoon bridge only at night; during daylight hours it was broken up and concealed somewhere along the Han's banks. The North Koreans appeared to be trucking most of their supplies southward from Seoul, but there were reports that they were running one train a night between Seoul and Chonui. All of these activities indicated that the North Korean army possessed a highly competent modern staff organization which was directing its logistical resources toward carefully planned objectives. While FEAF had been supporting the Eighth Army, Red logisticians had established a capability "to move supplies and personnel over comparatively long distances by rail to within a very short distance of the front lines."[43]

Using the telling argument that the Eighth Army would continue to find itself in a "critical" situation so long as the North Koreans continued to enjoy virtually uninterrupted routes back to their sources of supplies, General Weyland on the evening of 24 July persuaded the other members of the FEC Target Selection Committee to recommend that two B-29 groups should be freed from ground-support tasks and used to effect a steady and continuous interdiction program

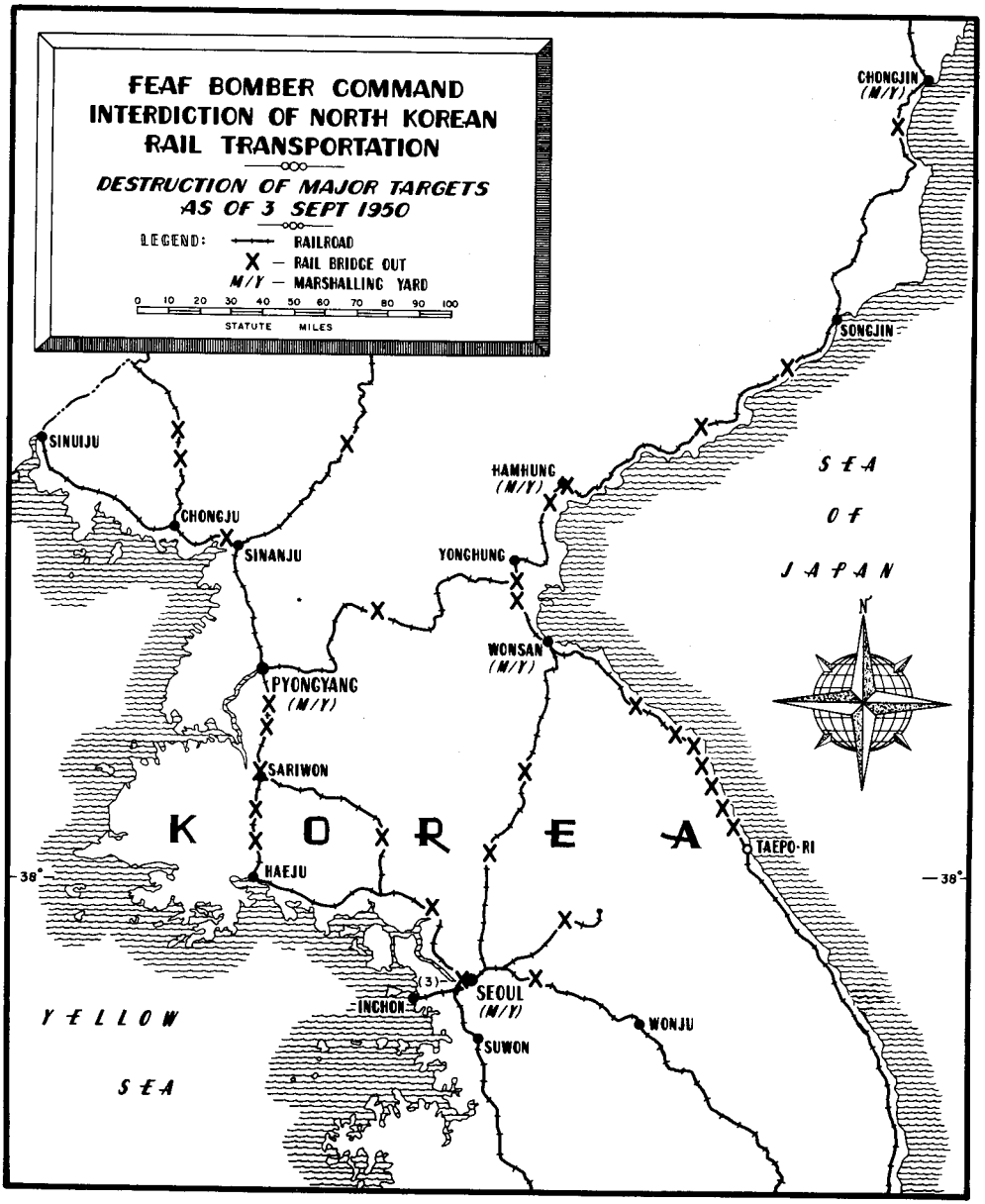
centered north of the 38th parallel.* On 26 July General MacArthur approved the recommendation and ordered that two medium-bomber groups would be used to destroy key communications centers, rail and highway bridges, and supply depots north of a line connecting the towns of Suwon and Kangnung.[44] Since General Weyland had gotten agreement that FEAF target experts would select medium-bomber interdiction targets, the FEAF Target Committee promptly examined the concept for an air campaign designed to disrupt the enemy's use of North Korean communications. Establishment of primary cut points at Pyongyang, Hamhung, Wonsan, and Seoul would prevent rail movements through North Korea to the battle front. For complete rail interdiction, however, additional rail cuts would be required on all main rail lines. Further committee study showed that the North Korean highway system followed the same general terrain pattern as the railways. Thus the destruction of key road bridges between the principal transportation centers—Seoul, Pyongyang, and Hamhung—would hinder Communist motor transport in North Korea.[45]

Given this concept for the interdiction of Communist transportation northward of Seoul, the FEAF deputies for intelligence and operations worked closely to nominate specific interdiction targets. Intelligence established that the target did in fact exist and that its destruction would hamper enemy movement. Operations then established that the target fell logically into some phase of the interdiction program and that its destruction, together with the destruction of related targets, would materially increase the enemy's difficulties in moving supplies and equipment through the interdiction zone.[46] Such procedures were thorough and comprehensive, but they did not delay the medium-bomber strategic interdiction campaign. On 28 July—the date that MacArthur specified that the medium bombers would first be available for interdiction—FEAF issued an initial list of strategic interdiction targets. After more study this initial list was expanded on 2 August, when Bomber Command was provided with a list of 44 rail and highway bridge targets, further designated as primary, secondary, and tertiary in importance. All but 13 of these targets lay north of the 38th parallel, and General Stratemeyer made Bomber Command specifically responsible for coordinating the strategic interdiction effort in North Korea.[47]

Having made Bomber Command responsible for the interdiction campaign in North Korea and for the destruction of 13 other major transportation targets south of the 38th parallel, General Stratemeyer on 3 August ordered the Fifth Air Force to destroy and maintain the destruction of key transportation facilities in the zone between the 37th and 38th parallels. In general terms, he charged the Fifth Air Force to interdict all lines of enemy transportation across this belt. At Seoul General Partridge and General O'Donnell were to coordinate their operations. The B-29's would destroy the marshaling yards and the west railway bridge, while tactical aircraft would knock out the pontoon bridge.[48]

At the same time that he was dividing responsibility for interdiction in Korea between the FEAF Bomber Command and the Fifth Air Force, General Stratemeyer was anxious to share the task with the Navy. On 2 August he asked Admiral Struble to

*See Chapter 2, pp. 54-55.


FEAF BOMBER COMMAND
INTERDICTION OF NORTH KOREAN
RAIL TRANSPORTATION
DESTRUCTION OF MAJOR TARGETS
AS OF 3 SEPT 1950
LEGEND:
RAILROAD
X — RAIL BRIDGE OUT
M/Y — MARSHALLING YARD
0 10 20 30 40 50 60 70 80 90 100
STATUTE MILES
CHONGJIN (M/Y)
SONGJIN
SINUIJU
HAMHUNG (M/Y)
SEA OF JAPAN
CHONGJU
SINANJU
YONGHUNG
WONSAN (M/Y)
PYONGYANG (M/Y)
SARIWON
K O R E A
TAEPO-RI
38°
HAEJU
38°
(3)
INCHON
SEOUL (M/Y)
WONJU
SUWON
YELLOW SEA

destroy the entire bridge complex at Seoul. "We have been unable to do this so far," he said, "so now let us give the Navy a crack at it."[49] At the meeting of NavFE and FEAF officers on 3 August, held to discuss coordination of air operations in Korea, the Navy representatives readily agreed to take on interdiction strikes, when they were not supporting friendly ground troops. They agreed to coordinate such strikes south of the 38th parallel with the Fifth Air Force. They further agreed that when the fleet desired to attack interdiction targets in North Korea it would so inform FEAF, which would check with Bomber Command and either approve the objectives for attack or designate alternate targets in the same general area. These agreements posed a new requirement to FEAF target planners. FEAF operations officers had initially indicated that they did not intend to designate any specific interdiction targets to General Partridge other than the pontoon bridge at Seoul. At the conference with the Navy, however, FEAF representatives said that they were willing to provide the Fifth Air Force and the Navy with selected interdiction targets lying south of the 38th parallel. One record of the conference was to the effect that the FEAF deputy for intelligence would provide "as much target data as possible relating to these targets."[50] Later on this same day—3 August—FEAF sent the Fifth Air Force a "recommended partial list of targets" lying between the 37th and 38th parallels. This same list of hastily selected interdiction objectives was provided to the Seventh Fleet.[51]

Up until this time in the Korean hostilities the ground officers who dominated General MacArthur's staff had been lukewarm toward air interdiction, but on the evening of 3 August General Stratemeyer unexpectedly obtained General MacArthur's unequivocal support for a comprehensive interdiction campaign. Hurriedly summoned to a conference at the Dai Ichi building, Generals Stratemeyer and Weyland found Generals MacArthur, Almond, and Wright eager to discuss air interdiction, for these officers were alarmed by a message received from General Walker reporting that three trains had been sighted moving toward Seoul and that several enemy convoys were en route south of that city headed toward the battleline. General MacArthur emphatically stated that he wanted "a line cut across Korea, north of Seoul, to stop all communications moving south." To speed the accomplishment of this project, General MacArthur authorized Stratemeyer to use all three of the medium-bomber groups for interdiction. General Stratemeyer was frankly jubilant, for the theater commander had at last extended his support to a project designed to strike the North Koreans where they were most vulnerable.[52]

The comprehensive interdiction plan which FEAF instituted on 2 August was well conceived and calculated to employ strategic bombers, tactical aircraft, and naval planes in coordinated attacks against the enemy's transportation system. But the plan had one major weakness which caused the Navy to become reluctant to continue with the program. The FEAF list of strategic interdiction objectives was completely valid, but the FEAF list of tactical interdiction objectives provided to the Fifth Air Force and the Seventh Fleet proved to be quite faulty, as might have been expected considering the fact that it was evidently drawn up on short notice without much study. Early in August carrier pilots sent to attack the tactical interdiction objec-

tives returned with reports that many of the bridges on the FEAF target list "were nothing but little cow-trail bridges, foot bridges, which we only wasted time and effort on."[53] Air Force officers in the Joint Operations Center agreed that the Navy pilots had a legitimate complaint. The Navy fliers, said an Air Force intelligence officer, "would go out to the highway bridge and they could easily see tracks in the river bed where enemy troops and equipment had forded the usually shallow streams, or on many occasions the dry river bed itself." "We in the Joint Operations Center," he added, "couldn't see the necessity for bombing these bridges, however, the requirement was set up by FEAF and not by Fifth Air Force."[54]

In view of Task Force 77's dissatisfaction with both close-support and tactical interdiction targets, Admiral Joy on 12 August sought and secured permission from GHQ to move the carriers up Korea's west coast and attack interdiction targets in North Korea.[55] General Stratemeyer accepted the proposition that the Navy carriers would operate north of the 38th parallel, but he requested that the fleet pilots would assist the medium bombers to destroy bridges on the strategic interdiction plan.[56] But the carrier airmen—probably because of their experience with FEAF's tactical interdiction targets in South Korea—did not want to accept targets from FEAF's strategic interdiction plan. On 24 August a Fifth Air Force staff officer—Col. T. C. Rogers—visited the *Philippine Sea,* where fleet air officers informed him that they felt qualified to select their own interdiction targets and preferred not to accept such targets from either FEAF or the Fifth Air Force.[57]

Fortunately for the success of Interdiction Campaign No. 1, which FEAF officially initiated on 2 August, the B-29 crews of the FEAF Bomber Command soon demonstrated that they alone could adequately handle the systematic destruction of North Korea's transportation routes. Because of MacArthur's particular interest in the rolling stock and supplies which had accumulated in Seoul's marshaling yards, General O'Donnell sent the 19th Group there on 4 August and followed up this smashing attack with another mission flown by the 22d and 92d Groups on the next day. After these two missions Bomber Command reported that Seoul's transportation facilities would be "inoperative for a considerable period of time."[58] On 7 August the 22d and 92d Groups, joined by planes of the 98th Group which had left the United States five days earlier, plastered the marshaling yards and adjacent arsenal at Pyongyang. Aircraft of the newly arriving 307th Group hit Pyongyang's yards on 8 August, and a major effort flown by the 22d, 92d, and 98th Groups struck the oil refinery and marshaling yards at Wonsan on 10 August.[59]

These strikes cleaned up the fat accumulations of supplies at North Korea's main transportation centers, and Bomber Command promptly turned to the work of knocking out the key bridges named for destruction. Effective on 12 August, the normal daily effort of three B-29 groups was directed at bridges. Such a scale of effort continued until 20 August, when General Weyland got approval from the FEC Target Selection Committee to employ the normal daily effort of only two groups against the remaining targets on the strategic interdiction list. By this time bridge targets were getting scarce. When assigned bridges were obscured by cloud cover, the medium-

bomber crews attacked North Korean marshaling yards as secondary targets. During August such secondary target attacks destroyed rolling stock and supplies in the yards at Chongung-ni, Chinnampo, Kilchu, Kowon, Oro-ri, Seishin (Chongjin), Sigjin-ni, Sinanju, and Sariwon.[60]

The bridge targets assigned to the FEAF Bomber Command were not easy to destroy, for the Japanese builders had spanned Korea's major rivers with sturdy steel-and-concrete structures. But with a little practice the sharpshooting medium-bomber crews became exceptionally proficient "bridge busters." Since the bomber crews had little to fear from enemy fighters or hostile flak, bridge destruction was mainly a bombing problem. The most successful bombing tactic and the one generally used was a bomber stream of individual aircraft which approached the bridge at an altitude of about 10,000 feet from an angle of 40 degrees. Each plane released a string of four bombs on a run. Bomber Command computed that 13.3 runs were required to destroy an average bridge, this number including multiple runs against a target by the same aircraft. In its bridge attacks Bomber Command generally employed 500-pound general-purpose bombs, admittedly not always the best ordnance, but the crews usually had to do their own loading and the command wanted to stand prepared for last-minute changes in missions. Larger tonnages of these bombs could also be racked up in the B-29's than could heavier types of bombs. Dropped with minimum intervalometer settings, the 500-pounders were quite satisfactory against flat concrete spans, but 1,000-pound or larger bombs were required for many steel bridges. At the end of August General O'Donnell wired General Stratemeyer that his medium-bomber crews were running out of assigned bridge targets. And on 4 September, when the final results of Interdiction Campaign No. 1 were calculated, General O'Donnell could report that his groups had destroyed all but seven of the 44 bridges which Stratemeyer had listed for destruction on 2 August. These seven bridges were so badly damaged as to be impassable to Communist traffic.[61]

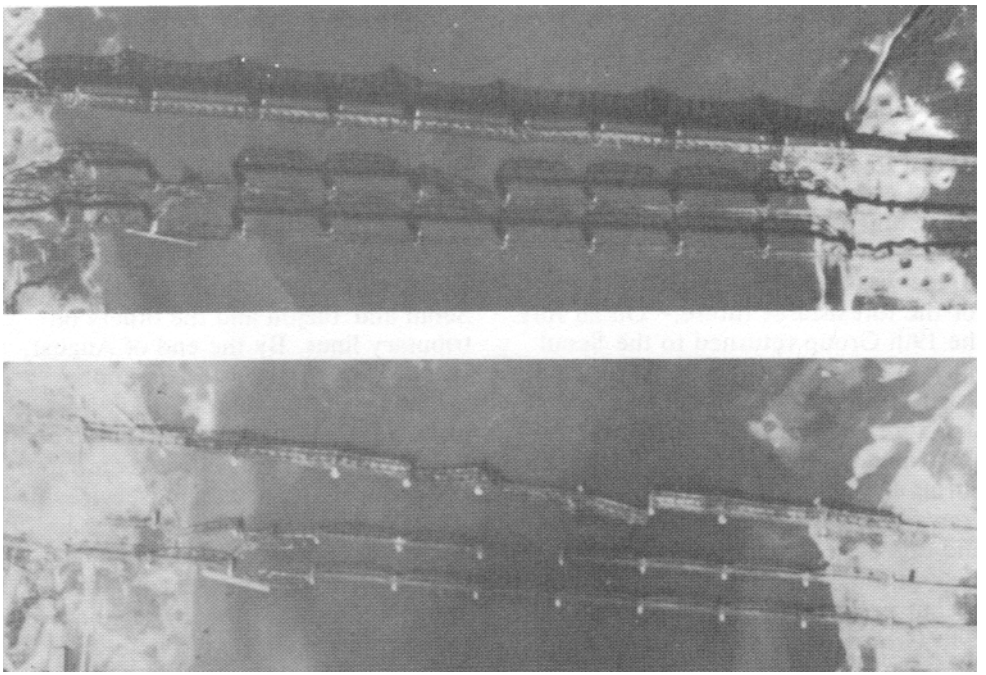
Of all the bridge targets assigned to the FEAF Bomber Command, none was so perverse as the steel cantilever west railway bridge at Seoul, called by air crews the "elastic bridge" because of its stubborn refusal to fall. Only the 19th Group possessed bomb racks fitting 2,000-pound bombs, and it accordingly drew the task of destroying this rail bridge. Day after day, for nearly four weeks, the 19th Group hammered the bridge with 1,000-pound, 2,000-pound, and 4,000-pound general-purpose bombs. Blueprints were obtained from the Japanese who had built the bridge, fuze settings were varied to obtain damage to the superstructure as well as the abutments, but, despite numerous hits which forced the Communists to keep the decking under constant repair, the steel spans of the bridge still stood. So important was the destruction of the bridge that General MacArthur offered to commend the air unit that dropped it, and General Stratemeyer privately promised a case of Scotch whiskey to the crew who would take it down.[62]

Shortly after the noon hour on 19 August nine B-29's of the 19th Bombardment trailed in over Seoul to place 54 tons of 1,000-pound bombs on the west railway bridge. The bomber crews reported numerous hits, so many, in fact, that they thought they could surely finish off the weakened bridge on the following day.[63] Navy pilots of

Task Force 77 had already made two attacks against the railway bridge, and at midafternoon on 19 August the *Philippine Sea* and *Valley Forge* launched 37 Corsairs and Skyraiders against this target. These dive bombers scored eight hits, after which one of their number flew the length of the span at low level and reported that the bridge was still standing but unusable for the foreseeable future.[64] On 20 July the 19th Group returned to the Seoul railway bridge, but the crews found that two spans of the weakened structure were in the water. These spans had evidently collapsed sometime during the night. The medium-bomber crews bombed the bridge as directed, and this attack chopped down a third span of the structure.[65] General MacArthur presented a trophy to both the 19th Group and to Navy Air Group 11 for their participation in the destruction of the west railway bridge at Seoul, and General Stratemeyer provided a case of Scotch for each group.[66]

As its task under the comprehensive interdiction program announced by FEAF on 2 August, the Fifth Air Force was expected to curtail enemy movement south of the 38th parallel, and for the most part south of Seoul. In view of the relatively short distance between Seoul and the battlelines, the Fifth Air Force's interdiction task was somewhat more complex than that of the FEAF Bomber Command. Taking into consideration the fact that the Eighth Army appeared to be stabilizing its defensive positions, General Partridge sought to commit approximately one-third of his aircraft capability to interdiction operations.[67] This, however, was a flexible allocation of air effort, for the Eighth Army's requirements for close support would continue to get first-priority claims on Fifth Air Force resources.

Wherever possible the Fifth Air Force attempted to key its interdiction operations to the destruction of major road and rail bridges on the transportation routes leading to the battle area. Light bombers and fighter-bombers continued to hammer the railways south of Seoul, and during August these planes established and maintained 47 rail cuts—nine on the line between Seoul and Taejon and the others on tributary lines. By the end of August, counting work that had been done earlier by the medium bombers and by naval aircraft, the Fifth Air Force could report that 140 bridges between Seoul and the front lines were unserviceable and that 93 highway bridges, generally around the perimeter, had been destroyed.[68] In view of General Stratemeyer's interest in the target, the 3d Bombardment Group did its utmost to destroy the pontoon bridge at Seoul. Since the pontoons were concealed during the day, only night-flying B-26's could attack this objective. Supposing that the pontoons might be flammable, General Weyland suggested that Partridge employ napalm against them. But when this was attempted, the pontoons did not burn. Photo interpreters then revealed that the bridge was composed of sectional steel ramp extensions, or pontoon causeways, which appeared to be of the type used by the United States Navy.[69] In the early morning hours of 30 August an experimental B-29 flare mission illuminated the Seoul bridge area, while eight B-26's bored in to attack the pontoon bridge—only to find that the bridge was not in place.[70] When the Fifth Air Force was unable to get results, General Stratemeyer directed Bomber Command to lay and renew strings of delayed-action bombs set to explode at night along the path of the pontoon bridge. This tactic doubtless harassed



(top) The "elastic bridge" on 12 August 1950; (bottom) the same bridge severed in three places eight days later.

the Communists, but it did not prevent movement across the Han.[71]

Aerial destruction of rail and road bridges south of Seoul hampered Communist efforts to resupply their losses of heavy equipment, such as tanks and artillery. But the destruction of bridges represented only partial interdiction. Not too many major terrain obstacles were to be found south of Seoul, and many smaller streams could be forded by vehicles or human bearers. If the stream crossing was very important, the Communists displayed a tenacious ability to keep it bridged. The Red Koreans shored up demolished bridges with sandbags and timbers, and at other crossings they aped Russian techniques and built "underwater bridges," or timber and sandbag causeways laid across the bottom of a stream to improve traction. Since these causeways were under the water, they were practically impossible to locate or to destroy from the air.[72] To the amazement of some Fifth Air Force officers, the North Koreans proved willing to shuttle trains back and forth over very short distances of open track. They offloaded rail cars at destroyed bridges or rail-track cuts, portered the supplies across the breach, and reloaded them on another train. Locomotives and cars hid by day in the numerous tunnels and operated only at night. In such fashion the Reds continued to move supplies by rail between Seoul and Chonui.[73]

Cognizant that the Communists continued to use their transportation routes in spite of the destruction of bridges, General Partridge emphasized

Reconnaissance photos prove the "elastic bridge" is sunk, 29 August 1950.

armed reconnaissance sweeps. In July fighter pilots had undertaken these road sweeps when they were unable to secure close-support targets, but beginning in August Fifth Air Force operations and intelligence officers laid on a systematic coverage of road routes leading southward to the battle area. The G-2 and G-3 of Eighth Army frequently recommended areas where current intelligence indicated interdiction sweeps would be profitable.[74] Although General Partridge announced an intention to use his Mustangs for close support and his Shooting Star jet fighters for road sweeps,[75] both types of aircraft would share the task. The F-80 jets, however, proved to be the best aircraft for armed reconnaissance ventures. They were less vulnerable to hostile small-arms and automatic-weapons fire, and their speed allowed them to approach and attack enemy concentrations, often before they could disperse or send up defensive fire. After his capture Senior Colonel Lee Hak Ku, chief of staff of the NKPA 13th Division, said that the Air Force "should use more jets, that not only did they come in quickly and destroy the target with a great element of surprise, but also that the soldiers feared them because of the great speed and the way the aircraft appeared before the sound of its flight reached them to make them aware of its presence." Colonel Lee reported that the more ignorant North Korean soldiers soon began to personalize the F-80C with "a certain mystery and thus primitive fear."[76]

The Communists customarily moved

at night and dispersed and camouflaged their troops and equipment by day, but on numerous occasions early in August the Reds were unable to get completely under cover. When they located these partly concealed enemy targets, Fifth Air Force fighter pilots prosecuted vigorous attacks, for they were mindful that their ground comrades were facing overwhelming odds. Thus on 5 August Maj. Louis J. Sebille, commander of the 67th Fighter-Bomber Squadron (18th Group), led a flight of Mustangs against enemy artillery and troops hidden along the banks of a river near Hamchang. In the initial bombing attack, Major Sebille was unable to release one of his two 500-pounders, but he circled the target and returned with the other Mustangs for a strafing attack. On this pass the Mustangs drew ground fire, and Major Sebille's plane was hit. Disregarding advice to head south to safety at Taegu, Major Sebille again turned into the target and fired his six .50-caliber machine guns at point-blank range. Somewhere on this pass—which he made on his own volition—Major Sebille must have sustained additional damage, for he flew right into the enemy concentration and there met death. For this act of selfless devotion to duty against enemy forces threatening the security of friendly ground troops, Maj. Louis J. Sebille was posthumously awarded the Congressional Medal of Honor.[77]

As August progressed, Fifth Air Force armed reconnaissance pilots found very little hostile trafffc moving during daylight, but tightened procedures for reporting such enemy sightings as were made permitted some effective attacks. Medium-bomber crews or reconnaissance pilots who sighted enemy movements initiated voice calls on their radios and reported the targets to the first armed reconnaissance flight that answered.[78] Such a procedure worked well east of Pyongyang on 25 August. Here a fighter flight which was returning from an airfield attack noticed a train about to take shelter in a tunnel. One of the fighters still had a napalm bomb left in his racks and used it to block the entrance to the tunnel. The fighter flight hurriedly summoned armed reconnaissance planes which destroyed the double-header locomotive, 12 tank cars, and 13 boxcars of the train.[79] On another occasion, probably early in September, a flight of Fifth Air Force fighters did far more damage to the Red war effort than it must have imagined. A few miles north of Andong fighters evidently dropped a tank of napalm on a truck seen entering a tunnel and then placed another tank of the incendiary mixture at the other end of the tunnel. This flight probably reported one truck destroyed, but a ground reconnaissance party, happening on the scene somewhat later, discovered that the tunnel was crammed with burned North Korean equipment. The reconnaissance party "conservatively estimated" that ten 76-mm. field guns, eight 120-mm. mortars, five trucks, and four jeeps—the table of equipment of a North Korean artillery battalion and heavy mortar company—had been destroyed. Judging by the odor, the party supposed that a number of enemy soldiers had also perished in the napalm-filled tunnel.[80]

Fifth Air Force armed reconnaissance attacks not only destroyed Communist troops and equipment while they were en route to the battleground, but they also forced the enemy to move his supplies only at night over damaged roads. But so long as the Reds moved at all neither General Stratemeyer nor General Partridge would be satisfied. Weather reconnaissance pilots over

Korea at night told of lighted enemy truck convoys moving southward to the front lines. To combat this enemy traffic, General Partridge needed a night-intruder unit, but the Air Force possessed no such organization. During World War II the 47th Bombardment Group (Light) had flown night-intruder missions in Italy's Po River Valley, and after the war the 47th had returned to the United States to experiment and determine optimum night-intruder tactics. In 1948, however, the 47th Group had traded its B-26's for B-45 jet bombers and was no longer concerned with night attacks.[81] Since the USAF possessed no night-intruder organization, the Fifth Air Force would have to devise its own means of combating Communist night travel.

During July the Fifth Air Force used one flight of the 68th Fighter All-Weather Squadron's F-82's (three aircraft) for offensive night operations over Korea, but General Partridge did not think that these planes had much value except against known and fixed targets, such as airfields and towns. Early in August, when Marine Squadron VMF(N)-513 began to operate from Itazuke, the all-weather Corsairs provided eight to ten sorties per night. More effort was needed. The F-80 pilots tried their hand at night interdiction, but they found it all but impossible to strafe enemy road traffic, which could not be easily identified at jet speeds, even on moonlit nights. Mustang pilots attempted night-harassing missions with "almost nil" results: the Mustang pilots located targets easily enough but their rocket and machine-gun fire blinded them.[82] Late in July a few 3d Bombardment Group crews who had been assigned to the 47th Group began to fly night-intruder sorties. The 3d Group B-26's were quite different from the planes they had flown in the 47th Group, for they had no radar altimeters, short-range navigation radar (shoran), or AN/APQ-13 blind-bombing radar, but in their initial employment over Korea the 3d Group crews met apparent success. They could sight the lights of a Red convoy and even though the hostile vehicles almost always blacked out before the B-26's could make a pass the light-bomber crews felt that they could remember the convoy's position well enough to get in one good strafing pass.[83]

Disturbed by reports that night movements were allowing supplies to reach the Communists, General Stratemeyer directed Partridge on 8 August to step up night-attack sorties to 50 each night, using any of his airplanes which could operate in the dark.[84] General Partridge was not willing to reduce day operations so sharply in order to get more night sorties, but he nevertheless directed the 3d Group to place half its effort on night operations. The 8th and 13th Squadrons accordingly alternated in the night-intruder role, one squadron flying night missions one week and day missions the following week. By using the light-bomber squadrons in addition to the all-weather squadrons the Fifth Air Force managed to fly an average of 35 night-intruder sorties each night during August.[85] Each intruder organization dispatched its crews singly at periodic intervals during the night to reconnoiter prebriefed transportation routes—the assigned mission being to harass enemy convoys and force them to move without their lights, thus increasing the enemy's problem of resupplying his combat forces.

As August wore on 3d Group night intruders, who had begun to supplement their strafing attacks with 160-pound fragmentation bombs, reported

that they were sighting fewer and fewer lighted convoys. Communist night convoys were now creeping and not speeding to the front lines.[86] Other evidence indicated that the North Koreans, already hypersensitive to daytime air attack, had an unreasonable fear of the night intruders. While he was being carried northward by his Communist captors, General Dean reported that his guards dismounted from their truck and took cover each time they heard an airplane, no matter how black the night.[87] On occasions, moreover, the night intruders struck telling blows against the enemy. Two F-82 crews of the 68th Squadron, reconnoitering marshaling yards north of Seoul on the night of 30 August, located and knocked out three locomotives, plus a number of railway cars. General Partridge commended the squadron for skillful, aggressive, and determined action.[88] Because their all-weather Corsairs were short-ranged, the Marine pilots of VMF(N)-513 operated almost entirely over hostile lines of communication immediately behind the Naktong perimeter. The bigger part of this squadron's missions sought enemy supply movements, but the Corsair pilots also helped the ground troops by strafing or bombing night-firing Red artillery.[89]

Although the improvised night-intruder effort slowed the flow of Communist logistical support, it was manifestly unable to interdict Communist night movements with the same degree of certainty with which daytime fighter-bombers interdicted hostile day movements. "Since the start of operations in Korea," observed General Vandenberg, "the problem of night attack on moving targets has obviously been one of our greatest weaknesses."[90] On 6 September Vandenberg accordingly suggested that General Stratemeyer convert the 3d Group completely to night attack. As soon as it reached the theater, the 452d Bombardment Wing could make up for the lost daytime effort. The 731st Squadron (Light-Night Attack) of this air-reserve wing was especially trained for low-level night operations, and General Vandenberg proposed that this squadron should be assigned to the under-strength 3d Group.[91] Needless to say, General Stratemeyer was completely agreeable to this proposal, for he believed that one of his main requirements was "equipment and tactics to seek out, see, and attack hostile ground equipment at night."[92]

North Korean ferry boat on the Han River hauling a partially camouflaged truck.

*4. All-Out Close Air Support for the Eighth Army*

American ground forces have seldom faced a graver challenge than did the Eighth Army in August and early September 1950. Benefiting from the respite accorded them in July, when American airpower was principally committed to front-line attacks, the North Koreans had augmented the size of their army and had brought newly organized divisions into South Korea. Around two sides of the box-shaped perimeter which the Eighth Army defended the North Koreans were employing an estimated 150,000 troops, organized into 13 rifle divisions, a tank brigade, a mechanized division, and a tank division.[93] To oppose this enemy force, the Eighth Army possessed four American divisions, a Marine brigade, and five ROK divisions. Nearly all of the Eighth Army's strength had to be spread along the perimeter defenses, and each unit was required to defend fantastic frontages. South Korean division fronts were 12 to 20 miles long, and the American divisions held even greater frontages.[94] To the rear of the thinly held front lines General Walker had practically no reserves. "Sometimes," said Walker, "I had only a company in reserve—and you know that is an absurd situation for an American army. But that's the way it was."[95] Late in August General Walker could expect to receive the U.S. 2d Infantry Division, which would permit the casualty-ridden 24th Division to get a short rest before it had to be rushed back into the line. Early in September the 27th British Commonwealth Brigade would arrive from Hong Kong.[96]

Although the challenge of the enemy's superior numbers was grave, the Eighth Army had some important advantages. Because of loss and damage inflicted by Fifth Air Force air strikes, the North Korean armored forces were in shambles. During the perimeter fighting the Communists would be forced to deploy their tanks in small groups, which posed no serious threat to the United Nations' defenses.[97] Because of American airpower the North Koreans could move and fight only at night. Airpower kept the North Korean divisions pinned down where they were around the perimeter, and the Reds would not be able to mass their imposing strength for what might have been a decisive attack. Fighting under conditions of friendly air superiority, with nothing to fear from enemy air attack, the Eighth Army could move its units over interior lines of communication without delay required to effect cover and concealment. No American army, moreover, had ever received so much close support as that FEAF supplied to the Eighth Army: during August FEAF airmen flew 7,397 close-support sorties for an average of 238 close-support sorties each day.[98] Not only was this air support generously given, but the flexibility of the Fifth Air Force permitted General Partridge to employ his airpower when and where it was most needed. When the enemy achieved penetrations against which little or no ground strength could immediately be brought to bear, General Walker requested Partridge to concentrate air attack against the penetrating force, to weaken its thrust until ground reserves of units from less active sectors could be concentrated at the crucial point. "This teamwork between Walker and Partridge," said General Stratemeyer, "was a classic example of the flexibility of airpower

when centrally controlled and allocated in accordance with the needs of the ground situation."[99]

With the situation on the Chinju front approaching a stalemate, the North Korean high command evidently decided to make its next major assault against the bend in the United Nations' line in front of Taegu which was defended by the U.S. 1st Cavalry and the ROK 1st Divisions. On 10 August Eighth Army intelligence expressed apprehension about a build-up in front of these two divisions. The enemy's activity seemed to be centering in the vicinity of the town of Waegwan, where the main highway and railroad crossed the Naktong. In this vicinity the Reds built underwater bridges, established small bridgeheads, and sought to bring tanks into action. Everyone at Taegu watched this area closely as the Reds brought three divisions to probe the Naktong defenses and held two more divisions echeloned in depth to exploit any weakness. General Partridge kept the enemy's bridgeheads under constant air attack. Night-flying B-26's attacked enemy troops attempting to bring heavy equipment across the river. On 15 August, the date predicted for the all-out enemy assault, Fifth Air Force fighter-bombers congregated in support of the 1st Cavalry Division. Shortly after dawn rocket-firing fighters knocked out two tanks spearheading a Communist probing attack near Waegwan, and later in the day strafers killed an estimated 300 enemy troops in this same area. Fifteen miles north of Taegu other fighter-bombers assisted the 1st ROK Division to break up a tank-led attack. Under close control, the fighter-bombers repeatedly attacked enemy tanks which got inside ROK defenses. At the close of the day on 15 August General Partridge radioed Stratemeyer that the expected enemy offensive had failed to develop.[100]

Although General Partridge was concerned about the possibility of an enemy assault on the Waegwan front, he made no request for additional support—either from the Navy or from the FEAF Bomber Command.[101] Prompted by reports received from Korea, however, General MacArthur viewed the enemy build-up against Taegu with the greatest alarm. On 13 August MacArthur called Stratemeyer to his office, discussed the significance of the reported enemy concentrations, and stated that he desired that the entire B-29 force be used to "carpet bomb" certain areas in which operations reports indicated the presence of large enemy troop concentrations.[102] On the afternoon of 13 August EUSAK informed the Fifth Air Force that MacArthur had made the entire B-29 effort available for ground support on 15 August.[103]

In a conference at the Meiji building on 14 August FEAF officers discussed the proposed "carpet-bombing" mission. General O'Donnell was not at all adverse to the planned employment, provided someone could assure him that it would accomplish positive results. If a significant number of Communist troops were concentrated in a bridgehead, said O'Donnell, "We would like to take a crack at them, declare a dividend." With his available force, General O'Donnell figured that he could saturate a three-square-mile area with 500-pound bombs. Fragmentation bombs would be better for the purpose, but the B-29's were already loaded with general-purpose bombs and could not be reloaded on such short notice. General O'Donnell specified requirements for the mission: sufficient ceiling for visual bombing, an avenue of attack parallel to the front lines, a

clearly defined bombline like the Naktong River, and definite intelligence that two or more enemy divisions were in the three-square-mile objective area preparing to attack. Some of the officers at the conference wondered why the medium bombers were expected to provide ground support when the aircraft carriers were not supporting the Eighth Army, but no one opposed the B-29 operation under conditions such as those outlined by General O'Donnell.[104]

Cloud cover along the Naktong was too heavy to permit the medium-bomber operation on 15 August, but it was rescheduled for the next day. To General O'Donnell's dismay the target area which the Eighth Army designated for attack was a strip of terrain 3½ miles wide and 7½ miles long running along the Naktong northwest of Waegwan. In this area some 40,000 Communist troops were said to be preparing for an assault against the 1st Cavalry Division. For the operation General O'Donnell had available two full medium-bomber groups and two squadrons each from the other three medium-bomber groups. With these 12 squadrons he realized that he would be unable to "saturate" the 27 square miles of the target area, but he thought that the ground situation merited an all-out attack if for nothing more than its psychological effect. Bomber Command operations officers therefore divided the area into 12 equal squares and assigned each squadron an aiming point in the center of one of them. All crews were cautioned that they must place all of their bombs west of the river and that they must take especial care not to bomb any of the American troops who would be watching from the east bank of the Naktong.[105]

The weather was fine on the morning of 16 August, and at a few minutes before noon the first squadron of the FEAF Bomber Command Superfortresses was over the Waegwan area. Within thirty minutes 98 B-29's had bombed their assigned aiming points. From altitudes ranging between 5,000 and 10,000 feet the Superfortress crews released 3,084 x 500-pound and 150 x 1,000-pound general-purpose bombs. It was the biggest employment of air-power in direct support of ground forces since the Normandy invasion. The bombs dropped had a blast effect equivalent to that of 30,000 rounds of heavy artillery.[106]

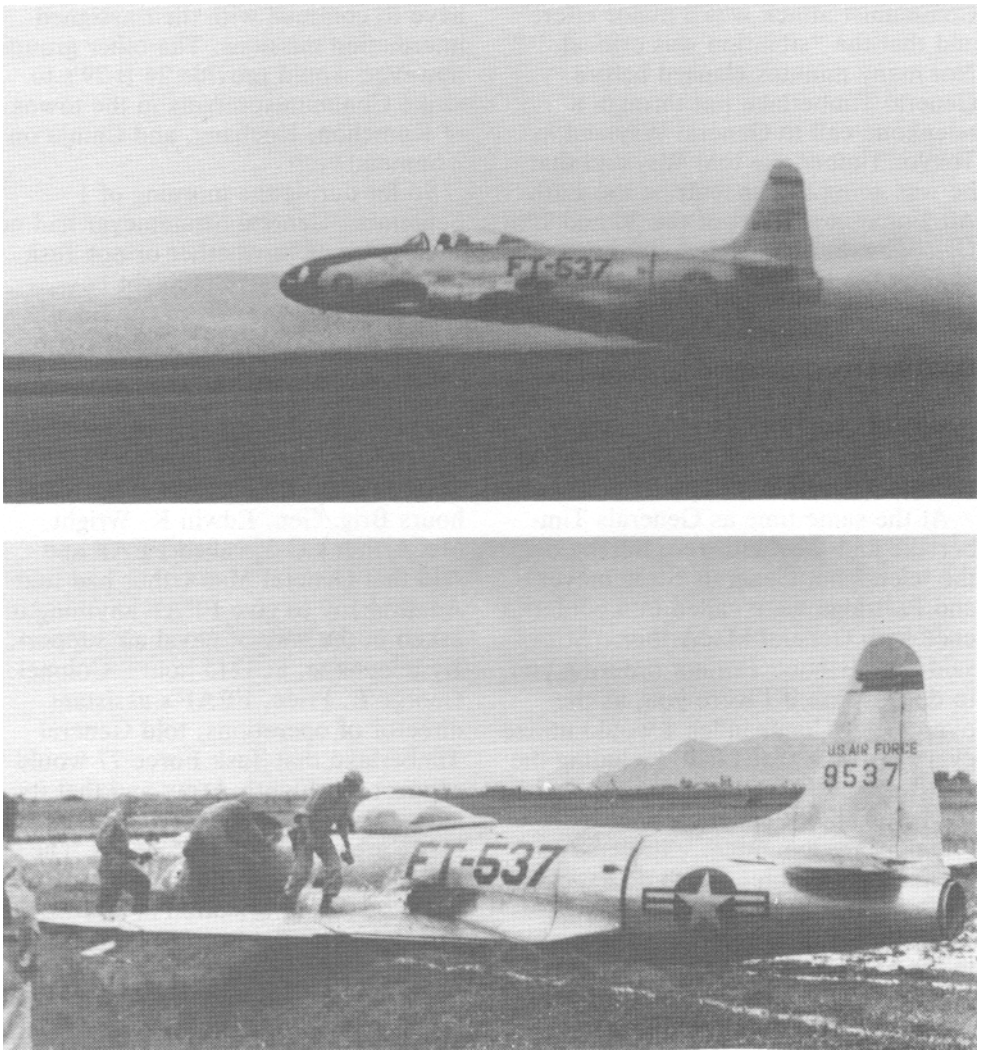
Even before the smoke and dust cleared away along the Naktong General Stratemeyer and his subordinates were seeking to discover the results of the mammoth air attack. Most crews could report nothing more than that they had dropped their bombs as directed. Post-strike reconnaissance photographs showed only that the bombing patterns had been generally excellent, although there were a few bombs short and a few over the target area. Since Eighth Army troops made no immediate effort to send patrols into the area, no one ever knew just what the medium bombers had accomplished. General O'Donnell personally reconnoitered the area for two and one-half hours and reported no evidence of enemy activity—no troops, no vehicles, no armor, no flak. He recommended that no more such missions should be flown unless against concentrated targets where the ground situation was extremely critical.[107] General Partridge commented that ground commanders had been given an object lesson concerning the inflexibility of medium-bomber support.[108] General Walker, who had seen the medium bombers in action for the first time, stated that the strike had helped the morale of his troops and had the opposite psycholog-

ical effect upon the enemy.[109] In his final report on the Waegwan carpet-bombing episode General Stratemeyer recommended that future area bombing by medium bombers should be undertaken only under two conditions: as a desperation measure against identified and definite concentrations of hostile troops who were preparing to assault friendly forces, or against a limited area through which friendly troops would effect a penetration into enemy territory.[110] General Stratemeyer personally reported these findings to General MacArthur and further pointed out that Fifth Air Force fighter-bombers or Navy dive-bombers could provide the Eighth Army with its most effective air support. In summary, General Stratemeyer recommended that the medium bombers be allowed to resume and continue their interdiction and destruction operations in North Korea and that Task Force 77 should be brought back to South Korea to support the Eighth Army.[111]

Eighth Army intelligence had assumed that the main Red attack against Taegu would be made from the direction of Waegwan. Instead, the Reds launched their attack from the direction of Kunwi. This drive, which came down from the north against Taegu, penetrated the ROK 1st and 6th Divisions on 18 August. As the fighting raged only 12 miles north of Taegu, General Partridge evacuated everyone he could spare. The Joint Operations Center moved southward to Pusan on 20 August.[112] General Walker stated that the Communist attack along the Kunwi-Taegu axis represented the main threat to United Nations forces, and General Partridge gave almost everything he had to the support of the ground troops north of Taegu. Mustang fighters from southern Japan made strikes, landed at Taegu for refueling and rearming, and then took off again against enemy targets so close that the men at the airstrip could watch the fighters launch their bombs. Benefiting from the strong air support, the ROK troops held the line, and General Walker gained the time he needed to bring the 27th Regiment of the 25th Division northward from the Chinju front to reinforce the ROK divisions. This stalwart defense and swift countermeasures saved Taegu from almost certain capture on 19 August, and within two days the United Nations forces had driven the enemy back and had re-established their defense line on favorable high ground southeast of Hajang.[113]

Although the Communists remained active everywhere along the perimeter they made no more major attacks during August. The pattern was one of Communist attack and United Nations counterattack. As the friendly ground troops counterattacked into terrain held by the enemy they began to get their first appreciation for the value of close air support. On 26 August, for example, the 27th ROK Regiment pushed the enemy back near Kigye and found 600 enemy soldiers who had been killed by air strikes.[114] In this same area northwest of Pohang on 30 August a flight of Mustangs bombed and rocketed hostile troops, after which the ROK's moved in and counted the bodies of 700 enemy soldiers. These were among the first ground verifications of enemy casualties resulting from close-support air operations.[115] While the front lines were relatively quiet, the Fifth Air Force emphasized interdiction sweeps for several days after 24 August. For the first time in the Korean hostilities the Fifth Air Force flew more interdiction sorties than close-support missions.[116]

By the end of August the North




(top) Damaged F-80 makes a forced belly landing in a rice paddy; (bottom) the same airplane after the pilot walked away unhurt.

Korean People's Army was in desperate straits. The Reds had to win, and win quickly, or lose everything. The Red commanders evidently decided to make supreme, all-out, human-wave attacks. Shortly before midnight on 31 August, on the southwestern end of the Pusan perimeter, the Communists unleashed elements of five divisions against the U.S. 25th and 2d Divisions. On the morning of 1 September General Partridge was in Tokyo to discuss the forthcoming amphibious operation at Inchon, and General Timberlake was the acting commander of the Fifth Air Force. At the Eighth Army's morning conference General Walker told Timberlake that the

Communist attack was a major effort and that the "situation was critical."[117] Not many minutes elapsed before General Timberlake put through a telephone call to General Weyland in Tokyo. Timberlake told Weyland that he was going to concentrate the Fifth Air Force in support of the 2d and 25th Divisions, but he needed authority to employ the F-80 squadrons which were reserved in Japan for air defense. General Timberlake reminded Weyland that the escort carriers *Sicily* and *Bandoeng Strait* had returned to Japan to prepare for the Inchon operation, and he asked that the small carriers be returned to action in Korea.[118]

At the same time as Generals Timberlake and Weyland were talking over the telephone, Generals Stratemeyer and Partridge were called into conference with General MacArthur. "Strat," said MacArthur, "I'm not ordering you to do this, but if I were you, as the over-all Air Commander, I would utilize every airplane that I had, including the B-29's, to assist Walker in dealing with the latest all-out effort the North Koreans are mounting." Stratemeyer replied that he intended to do exactly as General MacArthur suggested. Immediately after returning to his office in the Meiji building General Stratemeyer called Weyland and Partridge into conference and got in touch with General O'Donnell. Already FEAF operations officers had made arrangements for the Marine air squadrons. The *Sicily* was in port with its aircraft aboard and was not available, but the *Bandoeng Strait's* Corsairs were ashore at Itami, and they would be able to fly to Ashiya, fuel and arm there, and begin sorties over Korea on the morning of 2 September. From General O'Donnell Stratemeyer learned that two B-29 groups were already loaded with 1,000-pound bombs and would have to continue with their assigned interdiction missions. The other groups, however, would provide 24 B-29's to strike Communist targets in the towns of Kumchon, Kochang, and Chinju on 2 September.[119]

So far during the morning of 1 September General Stratemeyer had no knowledge as to whether or not Task Force 77's fast carriers might be ordered to the support of the Eighth Army. At 0845 hours the Joint Operations Center had asked Task Force 77 for support, but the fast carriers were far away in the northeastern Yellow Sea en route to make interdiction strikes north of Seoul. At about 1130 hours Brig. Gen. Edwin K. Wright, MacArthur's G-3, called FEAF and said that General MacArthur had told Admiral Joy to give FEAF anything it asked in the way of naval air support. By telephone, at 1215 hours, Colonel George E. Price, FEAF's assistant director of operations, told General Timberlake that Task Force 77 would support the Eighth Army and that its aircraft would begin to arrive over the battle area at about 1425 hours. The Joint Operations Center had already received this information in a message dispatched by the fast-carrier task group at 1133 hours. General Timberlake wanted the fast-carrier assistance, but he could not but note that the Joint Operations Center would have only a few hours in which to get ready for the arrival of the carrier planes.[120]

"It is believed," General Timberlake reported at the close of the day on 1 September, "that General Walker's request of this morning has been fulfilled." Along the 40 miles of front held by the 2d and 25th Divisions Fifth Air Force fighter-bombers had provided 167 close-support sorties during the day.[121] The 25th Division, fighting on the front south of the Nam River where

there were few natural defense lines, received 108 of the Fifth Air Force's close-support sorties and used them to withstand a heavy enemy assault. At a press conference on 2 September Maj. Gen. William B. Kean, the 25th's commander, was outspoken in praise of the Fifth Air Force. "The close air support strikes rendered by the Fifth Air Force," Kean told newsmen, "again saved this Division, as they have many times before." General Kean cited one instance in which a company was surrounded on a hill. Mustangs came in to blaze a circle of fire upon the enemy troops, knocking out enough of them to lighten the pressure. Since the company was running short of ammunition it called for airdropped resupply, which was promptly delivered by a 21st Troop Carrier Squadron transport. The company held its position. "I am not just talking," General Kean said, "I have made this a matter of official record."[122] A large share of the credit for this outstanding employment of tactical airpower was undoubtedly attributable to the fact that General Kean always took a personal interest in air support. In the September fighting, for example, General Kean had his division TACP up close to the front where the forward air controller could locate, pinpoint, and report enemy targets to the Mosquito controllers.[123] At the Joint Operations Center, moreover, General Kean was known for making no request for air support that was not strictly legitimate. "When the Air Force received a request from the 25th Division," said an officer of the Joint Operations Center, "they pulled a string and gave them everything they could."[124]

During the morning and early afternoon of 1 September the Joint Operations Center sent 59 Fifth Air Force fighter-bomber sorties to the support of the 2d Division, which was fighting to hold its positions behind the bend of the Naktong. When Task Force 77's fliers began to report in, the Joint Operations Center sent the Navy pilots to support the 2d Division. Although Task Force 77 launched 85 sorties during the afternoon, the Navy support did not work out very well for several reasons. Having reversed course, the Navy carriers launched maximum striking forces while they were still some 250 miles from the target area. All flights were supposed to report to "Mellow" control and obtain target designations and directions. But when the swarms of Navy planes, already short on fuel from their 250-mile trip, began to report to "Mellow," the result was fairly obvious: communications channels were overloaded and could not handle all of the Navy's flights within the time permitted by their reduced fuel loads. Some of the Navy planes could not wait and had to jettison their bombs and return to their carriers without making a contribution to the battle.[125]

The Communists continued their offensive on 2 September, exerting pressure all around the defensive perimeter. On the southwestern front the 25th Division withstood the enemy and launched strong counterattacks which drove the Reds back beyond their original positions. The 2d Division, however, continued to find itself in trouble, for the enemy had forced across the Naktong and was seeking to capture the town of Yongsan. Weather in Korea was generally poor, particularly in the battle areas, but the Fifth Air Force, making good use of squadrons released from air defense in Japan and the Marine air squadron, flew a total of 201 close-support sorties.[126] The 307th Bombardment Group sent 25

B-29's to blanket Communist supplies in the towns of Kumchon, Kochang, and Chinju with 863 x 500-pound bombs.[127] On the previous evening Task Force 77 had sent a representative to the Joint Operations Center to plan missions and arrange flight schedules. The Navy also agreed to furnish airborne controllers to work with the Mosquitoes in front of the 2d Division, this being the area in which it was agreed that carrier planes would provide close support. In view of this agreement, General Partridge was willing to waive his requirement that Navy planes would report to "Mellow" before making close-support strikes. These coordinated operations went very well, and during the day pilots from Task Force 77 flew 127 close-support sorties. On this day the 2d and 25th Divisions continued to secure the bulk of available close-support effort. Together, Navy and Air Force planes provided the two divisions nearly 300 close-support sorties.[128]

Clearing weather over Korea permitted FEAF pilots to throw what could be both literally and figuratively described as a "Sunday punch" at the North Koreans on 3 September.[129] Fifth Air Force planes flew 249 close-support and 89 interdiction sorties, while 35 B-29's bombed enemy troop and equipment concentrations in nine towns lying close behind the battleline.[130] During the morning a large share of the Fifth Air Force's fighter bombers supported the 2d Division and the 1st Provisional Marine Brigade, the latter unit having been returned to the battleline in an effort to stay the enemy's drive toward Yongsan. During the day, however, the Reds unleashed new attacks along the northern rim of the perimeter southeast of Hajang and centered about the town of Kigye, a few miles inland from Pohang, These attacks indicated that the Reds were now launching a new offensive against Taegu's rail and highway communications to Pusan, and the Joint Operations Center had no choice but to send the Fifth Air Force's fighter-bombers against the new threat.[131]

General Partridge had already asked Task Force 77 to continue to fly close support on 3 September, but he had been informed that the carriers had to refuel and could not operate that day. The Eighth Army, however, dispatched an urgent message to Tokyo, and, as a result, Task Force 77 broke off refueling and sent 28 sorties to support the ground troops at Yongsan. These Navy planes went directly to the Yongsan area and contacted air controllers there. Neither FEAF, the Fifth Air Force, nor the Joint Operations Center knew of the missions prior to the receipt of a routine message reporting the results of Navy operations. These would be the last close-support strikes the Navy could provide for some time, for Task Force 77 would operate against communications targets in northwestern Korea on 4 and 5 September and then retire to Sasebo to outfit for the amphibious operation coming up at Inchon. General Partridge nevertheless called General Stratemeyer's attention to the latest breach of cooperation. "It is mandatory," he informed General Stratemeyer, "that Task Force 77 either supply proposed schedule of operations to Joint Operations Center in advance or require all flights to establish contact with Mellow control for assignment to specific forward controllers."[132] Seeking a long-delayed solution to this recurring problem, General Stratemeyer took the matter to General MacArthur and obtained his approval to a directive which instructed the Eighth Army to request all its air support—including

that from Task Force 77—from the Fifth Air Force. Such requests for naval air support would be sent from the Fifth Air Force to FEAF, which, after coordinating with NavFE, would submit them for General MacArthur's approval or disapproval.[133]

On the western front the Communists had crossed the Naktong at many places and had driven a salient into the Eighth Army's defenses at Yongsan. Marine F4U's and Fifth Air Force fighter-bombers defied bad weather to fly 43 close-support sorties in the 2d Division sector on 4 September and claimed the destruction of 11 North Korean tanks, which were spearheading the Yongsan attack.[134] This attack accordingly began to falter, and the same rain storms that impeded air operations turned the Naktong into a torrent which crippled enemy efforts to transport additional troops to the east bank.[135] On the next day the 2d Division had the battle so well in hand that General Walker was able to relieve the 1st Marine Brigade and permit it to prepare for the impending amphibious operation.[136]

Although thwarted on the southwestern front, the North Korean People's Army intensified its offensive against the northern flank of the Eighth Army perimeter. Attacking from Waegwan and from Hajang, two North Korean divisions forced the 1st Cavalry and 1st ROK Divisions backward to within seven miles of Taegu. On the Kigye front two other North Korean divisions drove ROK troops backward almost to the towns of Yongchon and Kyongju. On the east coast a resurgent North Korean division again captured the port of Pohang. As Walker and Partridge viewed the enemy situation on 4 September, the main threat to Taegu was the hostile thrust toward Kyongju and Yongchon, which promised to sever the lateral rail and highway communications supporting the northern flank of the perimeter. General Walker issued orders that all but a skeleton staff of Eighth Army headquarters would evacuate to Pusan. Already the Fifth Air Force had reduced its personnel at Taegu, and, other than a minimum headquarters staff, the only air units remaining at Taegu Airfield were the 6149th Air Base Unit and the 6147th Tactical Control Squadron. On 6 September Col. Aaron Tyer, commander of the 6149th and of Taegu Airfield, ordered the 6147th Squadron to begin to move its Mosquitoes to Pusan Airfield. Unless the Eighth Army could assemble forces in sufficient strength to hold the line between Taegu and Pohang, General Partridge said that he thought that Taegu would have to be evacuated.[137]

At this critical juncture General Partridge once again exploited airpower's flexibility and ability to concentrate where it was most needed. Once again General Partridge used the Fifth Air Force to blunt the enemy's attack and to give General Walker time to bring up such reinforcements as he had. Beginning on 4 September, the ROK divisions to the east of Taegu received the lion's share of Fifth Air Force capabilities: 160 sorties on 4 September, 51 sorties on 5 September (when weather seriously hampered flying), 183 sorties on 6 September.[138] Heartened by the air support, the ROK divisions rallied and counterattacked, while the U.S. 24th Division raced northward from its rest camps to secure Kyongju and Yongchon. Having secured these communications routes this combat-wise American division joined with the ROK's in a flanking attack which promised to cut off and destroy the North Korean troops who had

penetrated into the Eighth Army lines.[139]

Fighting in the meanwhile on a diminishing arc around the city of Taegu, the U.S. 1st Cavalry and the ROK 1st Divisions enjoyed a second priority for air support. The number of close-support missions sent to this area was not large, but the missions were carefully controlled to do the most good. Fifth Air Force fighters and B-26's had some share in thwarting the Red advances at the ruined city of Waegwan and at the "Walled City" of Tabudong, eight miles north of Taegu.[140] On 7 September the British 27th Infantry Brigade took over responsibility for a sector of the front lines immediately to the south of the 1st Cavalry, permitting the Americans to shorten their front and augment the defense of Taegu.[141]

The Eighth Army had been forced to give some ground, but the North Korean People's Army was nearing exhaustion. Taking advantage of good weather on 11 September, FEAF planes turned in their peak sortie record so far in the war—683 sorties flown against the enemy. For its part in the record accomplishment the Fifth Air Force offered 307 sorties in support of ground troops and 130 interdiction sorties against retreating enemy forces.[142] Having failed to make good with their all-or-nothing offensive, the Reds were peculiarly vulnerable to air-ground counterattacks. Maj. Gen. Lawrence B. Keiser, commander of the 2d Division, credited air-ground action on 11 September with a confirmed destruction of 1,500 hostile soldiers and their equipment.[143] It was evident that the North Koreans had sustained these last offensives only through sheer desperation. Attacks against the 2d Division in the Yongsan area on 9 September, for example, were in five waves. The first three waves were armed, and the last two were sent into the battlefield unarmed, with instructions to secure their weapons from the dead and dying there.[144]

The momentum of the Communist attacks was spent by 12 September, and the enemy was falling back in the face of counterattacking Eighth Army forces. General Walker could now state that the worst was over. The Eighth Army had maintained its defense of the Pusan perimeter. Looking backward at the successful accomplishment of the Eighth Army's magnificent defensive effort, General Walker had nothing but praise for the air support which the Fifth Air Force had provided to the Eighth Army. "I am willing to state," said Walker, "that no commander ever had better air support than has been furnished the Eighth Army by the Fifth Air Force. General Partridge and I have worked very closely together since the start of this campaign. We have kept our headquarters together, and no request for air support that could possibly be furnished has ever been refused. I will gladly lay my cards right on the table and state that if it had not been for the air support that we received from the Fifth Air Force we would not have been able to stay in Korea."[145]

# 5. *Victory in the South*

## *1. Planning the Inchon Invasion*

Although General MacArthur had long visualized an amphibious invasion at the rear of the North Korean forces, the United Nations invasion at Inchon was to be hurriedly planned and hastily executed. Given enough amphibious vessels to land troops behind the enemy lines, everyone in authority seemed willing to agree that the counterinvasion was a correct strategy, but no one but General MacArthur saw much hope for a landing at Inchon, the port and harbor serving the city of Seoul. In fact, Inchon was as inhospitable an invasion point as anyone could imagine. Because of the fantastic rise and fall of tides at this Yellow Sea port, naval amphibious vessels would be able to beach only on a few hours of certain days—on 15 September, 11 October, or 3 November.[1]

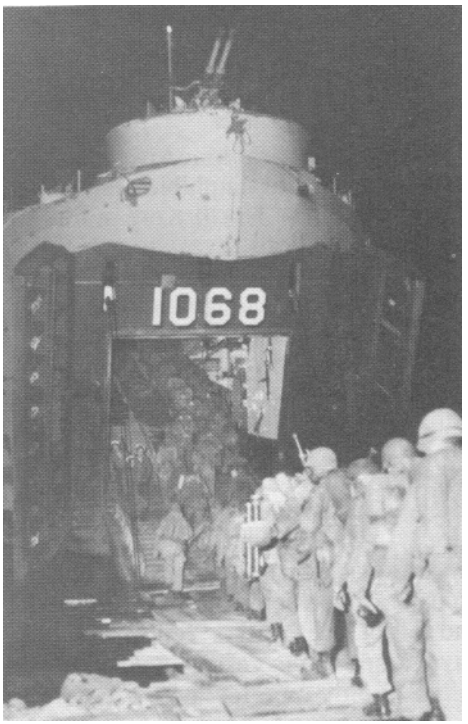
During the first months of the Korean war the actual site of a counterlanding had stood in second importance to the more pressing matter of getting troops to make the invasion. Early in July the Joint Chiefs of Staff promised MacArthur the 1st Marine Division and the 1st Marine Air Wing. Advance elements of Marines—the 1st Provisional Marine Brigade and Marine Aircraft Group 33—had come to Japan to prepare for an amphibious operation but they had of necessity been committed to combat in South Korea. The main strength of the Marine division and wing could not reach Japan before early September. For the counterinvasion of the magnitude visualized by MacArthur, an additional Army division and an airborne regimental combat team would be required. The Joint Chiefs accordingly dispatched the U.S. 2d Infantry Division and alerted the 187th Airborne Regimental Combat Team for overseas service. When the 2d Division reached the Far East, however, it had to be thrown into the Eighth Army battleline. The Joint Chiefs started the U.S. 3d Infantry Division moving to the Far East, but this reduced-strength division was going to arrive too late to meet a 15 September invasion date at Inchon.[2]

The Joint Chiefs had been shuttling troops to General MacArthur, but they confessed to be "somewhat in the dark" as to his exact plans.[3] To get a firsthand view of the situation, Gen. J. Lawton Collins, Adm. Forrest P. Sherman, and Lt. Gen. Idwal H. Edwards—representing Army, Navy, and Air Force—flew to Tokyo. And in General MacArthur's office, late on the afternoon of 23 August, the die was cast in favor of invasion at Inchon on the next feasible tidal date—15 September 1950. At this conference only MacArthur was confident and assured. "The best I can say," stated Rear-Admiral James H. Doyle, the Navy's amphibious expert, "is that Inchon is not impossible." General Collins and Admiral Sherman frankly favored a landing at Kunsan, which would outflank the Reds in southwestern Korea. But General MacArthur eloquently overwhelmed all objections. Nearly all of the North Korean strength was concentrated around the Eighth Army's defensive perimeter. The Communists were ripe for an attack which would seize the Inchon-Seoul area and throttle their fighting strength in southern Korea.[4]

The Joint Chiefs were not so swayed

by MacArthur's forceful arguments as to accept completely the wisdom of the Inchon gamble, but General MacArthur's staff nevertheless proceeded on the basis that a final decision had been reached on 23 August. Staff planners buckled down to the job, and on 30 August United Nations Command Operations Order No. 1 outlined the general concept of the Inchon invasion.[5] On D-day the U.S. X Corps, commanded by Maj. Gen. Edward M. Almond, MacArthur's chief of staff, would seize and secure Inchon. Following the initial assault, the X Corps would take Kimpo Airfield and Seoul. The forces of the X Corps would be the 1st Marine Division and the U.S. 7th Infantry Division, an under-strength occupation division in Japan, which would be filled up with South Korean recruits. The Naval Forces Far East would transport the landing forces, seize the beachhead in the Inchon area, and, when Almond assumed command ashore, establish a naval support force for air, naval gunfire, and initial logistical support of the land troops. In coordination with the X Corps landing, the Eighth Army would begin to drive northward along the Taegu-Taejon-Suwon axis on D plus 1. The Far East Air Forces would provide general air support as directed, isolate the objective area, and furnish air-ground support to the Eighth Army. If General MacArthur so ordered, FEAF would transport, cover, and drop the 187th Airborne RCT, and, in any event, it would provide cargo air support, initially at Kimpo Airfield and later at Suwon.

During the summer of 1950 General MacArthur's intelligence officers had not been blind to the "sinister connotations" of a growing Chinese Communist order of battle in Manchuria, and the Inchon planners recognized that




U.S. Army paratroopers of the 187th Regimental Combat Team.

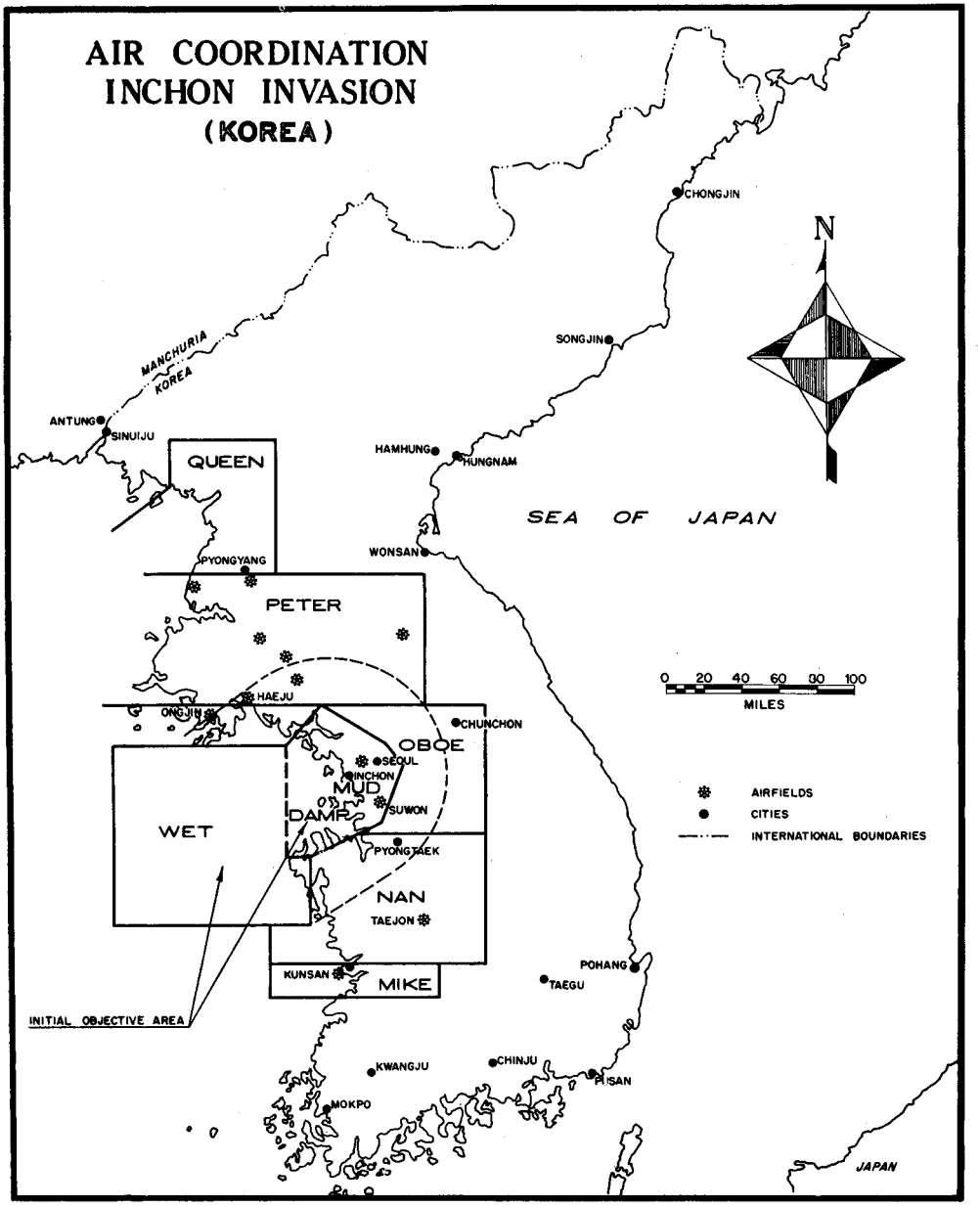
Chinese Communist entry into action at the time of the invasion at Inchon might be fatal to the United Nations Command.[6] General MacArthur, however, was willing to gamble that the Inchon operation would surprise both the North Koreans and the Chinese Communists. In fact, General MacArthur was so confident of his diagnosis of the enemy situation that he was willing to divide the command of the United Nations ground and air forces in Korea. General Almond would not be subordinate to General Walker, but both ground commanders would be independently responsible to General MacArthur.

If the Chinese Communists did intervene in Korea, General Stratemeyer knew their first move would be

to employ their air forces. As Stratemeyer viewed the course of events, he saw some danger of Communist air intervention. In two separate instances, on 22 and 24 August, Chinese antiaircraft gunners fired bursts of flak across the Yalu at RB-29's reconnoitering the border.[7] In Korea, moreover, the Communists were repairing airfields and building revetments on a priority schedule. Many air-intelligence reports emphasized that the Chinese Communists were transferring aircraft to Manchuria, particularly to the two airfields at Antong. On 28 August the Peking foreign office officially protested that American planes had violated Manchurian territory five times.* General Stratemeyer warned that the Chinese protest note could well be the final indication that the Chinese Communists intended to carry out their announced determination to aid the North Korean invaders. Stratemeyer notified Generals Partridge and O'Donnell that he considered Chinese air and ground assistance to the hard-pressed North Koreans to be "a distinct possibility."[8]

Fully convinced of the danger of Communist air intervention, cognizant that some one United Nations air commander had to have the over-all responsibility for meeting an enemy air attack, and no longer certain whether the principle of "coordination control" still applied in Korea, General Stratemeyer displayed a copy of the CINCFE air-coordination policy agreement at a joint planning conference held on 30 August and suggested its continuance. Both Admiral Joy and Admiral Struble gave verbal assent to the proposal. The conference then turned to its major business, which was to secure a coordination of air operations in support of the Inchon invasion. It was agreed that Navy aircraft, beginning on D minus 3, would sweep all enemy airfields within 150 miles of Inchon, once in the morning and once in the afternoon. Everyone agreed, however, that the Fifth Air Force would be free to make coordinated attacks against these same airfields. As long as naval support units were present, Navy aircraft would provide air support for the landing forces. When the X Corps got ashore, it would be supported according to Marine procedures by the 1st Marine Air Wing, which would establish a part of its squadrons at Kimpo Airfield. The Navy agreed to establish approach corridors for troop carrier aircraft to and from Kimpo in accordance with Air Force desires. To prevent undue congestion at the Kimpo airhead, the size of the Marine establishment there would be determined by NavFE and FEAF. In order that

*General Stratemeyer had issued positive orders cautioning against any violation of the Manchurian or Siberian borders on 3 July and again on 14 August 1950. Some errors nevertheless occurred, though not so many as the Communists alleged. Two American Mustang pilots apparently strayed across the border and strafed a Red Chinese airstrip near Antung on 27 August. On the night of 22 September a B-29 crew of the 98th Group made a navigational error and bombed Antung's marshaling yard. Now General Stratemeyer ordered Generals Partridge and O'Donnell thoroughly to brief all crews to stay away from the Manchurian border. But the worst border violation was yet to come. Flying in search of targets in northeastern Korea in marginal weather on 8 October, two young F-80 pilots of the 49th Group (whose zeal surpassed their navigational prowess) happened upon and repeatedly strafed a Russian airfield north of the Siberian border. Acting on orders from above, General Partridge relieved the commander of the 49th Group but brought him to Seoul as director of combat operations of the Fifth Air Force. A court-martial subsequently refused to convict the two young lieutenants. The men of the 49th Group thought that these actions were somewhat severe, but they wondered what must have been the punishment of the Russian air commander who allowed his airfield to be strafed without mustering any opposition. (Msgs. AX-0167B-CG, CG FEAF to CG FAFIK and CG FEAF BomCom, 2 Sept. 1950, A-1473B-CG, CG FEAF to CofS USAF, 25 Sept. 1950, and AX-1530B-CG, CG FEAF to CG FAFIK and CG FEAF BomCom, 26 Sept. 1950; Dept. of Defense, OPI News Digest Service, 4 Oct. 1950; Hist. 49th Ftr.-Bmr. Gp., Oct. 1950; interview with Colonel B. I. Mayo by author, 27 Aug. 1956.)


AIR COORDINATION
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AIRFIELDS
CITIES
INTERNATIONAL BOUNDARIES
KUNSAN
MIKE
POHANG
TAEGU
INITIAL OBJECTIVE AREA
KWANGJU
CHINJU
PUSAN
MOKPO
JAPAN

emergency requests for mutual assistance might be flashed without delay, the Navy agreed to establish positive and solid communications between the Fifth Air Force Joint Operations Center and the Navy Combat Information Center.[9]

Further discussions elaborated these basic agreements on 31 August, when General Crabb met with General Cushman, the deputy commander of the 1st Marine Air Wing who was assigned to X Corps as tactical air commander. General Cushman stated that no Air Force tactical planes would need to operate in the amphibious objective area from D-day onward. As soon as the aviation engineers prepared an operating surface, Marine Aircraft Group 33 would go ashore from its escort carriers and base at Kimpo. FEAF would provide the aviation engineers to rehabilitate Kimpo and would maintain an airhead at this airfield. As soon as appropriate, the Fifth Air Force would move a combat group into the objective area. Between D minus 10 and D minus 3, a major B-29 bombing effort was planned against all marshaling yards on the main rail line leading into Seoul from the north. This effort, plus FEAF's current interdiction operations, should be sufficient to isolate the Seoul-Inchon area. The X Corps did not accept another FEAF plan which called for the B-29's to knock out all bridges in a 25-mile-wide belt outside the amphibious objective area.[10]

In view of the haze of discussion in which many of these decisions were undertaken, some misunderstandings would not have been remarkable. The United Nations Command operations plan air annex, which was issued on 2 September, however, deviated significantly from the basic air-coordination agreement of 8 July 1950* and the specific decisions made on 30 August. On 4 September General Stratemeyer wrote General MacArthur a letter requesting clarification of the air annex.[11] When several days passed without any official reply, General Weyland at last protested that FEAF could issue no final operations order until it could receive a clarification of the air annex. Finally, on 10 September, an undated indorsement reached FEAF which stated that none of Stratemeyer's objections were vital to the Inchon operation, that all commanders had approved the air annex prior to its publication, and that, in any event, it was too late to amend plans which were already in execution.[12]

At noon on 10 September, before the GHQ indorsement reached FEAF, General Stratemeyer presented his objections to the air annex to General MacArthur in person. Stratemeyer pointed out that NavFE could quite properly control air operations within the amphibious objective area, but he strongly asserted that some one air commander had to have the single responsibility for the over-all air campaign in Korea. General MacArthur acknowledged that the responsibility for the air campaign belonged to General Stratemeyer. The air annex specifically assigned NavFE the task of neutralizing all enemy airfields within 150 miles of Inchon, beginning on 2 September. Since Task Force 77 was going to be in port at Sasebo during most of this time, Stratemeyer pointed out that NavFE could not accomplish

*The CINCFE "coordination control" directive was actually issued on 15 July 1950 as an answer to General Stratemeyer's letter of 8 July 1950, but it was generally referred to as the "8 July" directive. See Chapter 2, pp. 49–50.

this mission. Moreover, FEAF was responsible for maintaining friendly air superiority over Korea, and its participation in the airfield attacks would seem to be a foregone conclusion. MacArthur agreed. NavFE was unilaterally authorized to designate the routes troop carrier aircraft would follow into and out of the amphibious objective area. Stratemeyer pointed out that Navy commanders were not familiar with the characteristics of USAF planes and urged that such routes had to be worked out by mutual understanding. MacArthur gave his nod of agreement. General Stratemeyer also stated that land-based Navy and Marine air units, when no longer performing naval missions, should return to his coordination control. "Why, of course, Strat," MacArthur replied, "there is no other way to do it." After returning to his own headquarters, General Stratemeyer told his staff that he meant to abide by the policy directive of 8 July. "I want the necessary action taken as soon as the current situation is over," he ordered, "to assure that subsequent directives clearly establish the coordination of air efforts of FEAF and NavFE in accordance with the policies agreed to and stated in the 8 July letter."[13]

During the days in which General Stratemeyer was seeking to establish some unity of air action over Korea, FEAF had also been delegating mission responsibilities to its subordinate commands. The Fifth Air Force was charged to maintain air superiority in Korea, to interdict the battle areas and provide close air support to EUSAK, to accept, where possible, emergency requests for air support from the X Corps tactical air commander. It was to rehabilitate Kimpo and Suwon airfields and to be prepared to move tactical air groups to those airfields. It was to be prepared to establish its advance headquarters in the Kimpo-Seoul area.[14]

When he was called to Tokyo and briefed on the forthcoming operations. General Partridge took a studied look at his available forces which seemed to him to be "meager at best." Navy and Marine aircraft were going to be employed in the operation at Inchon, at the same time as the Fifth Air Force would be called upon to intensify its counter-air alert and provide all-out support for the Eighth Army. Looking about FEAF, Partridge noted that he was fighting a war with eight fighter squadrons while six other fighter squadrons were deployed for the air defense of Japan and five other fighter squadrons defended Okinawa and the Philippines. After this examination of the problem, Partridge recommended that the Fifth Air Force be released from its commitment to provide day-fighter squadrons for the defense of Itazuke and Misawa, that the entire 51st Fighter-Interceptor Wing should be released from the defense of Okinawa and sent to Korea or Kyushu, and that the remaining units of the 18th Fighter-Bomber Wing should be sent to join the 18th Group in Korea. General Partridge pointed out that the F-82 all-weather squadrons and the F-80 squadron at Johnson could continue to provide a shell of defense. If the need arose, all fighter squadrons could be redistributed throughout Japan and Okinawa within a few hours.[15]

At the start of the Korean war General Partridge had made these same proposals, only to have them turned down by General MacArthur's staff, but now his bid for more fighters gained better acceptance. Because of the Eighth Army's emergency requirements for air support on 1 September, General Weyland released Japan air-defense squadrons for service against Korean targets. The 80th Fighter-

Bomber Squadron (8th Group) at Itazuke was immediately available for tactical air operations. On 4 September the 9th Fighter-Bomber Squadron* left Misawa and rejoined its parent 49th Group at Itazuke. Elements of the Johnson-based 41st Fighter-Interceptor Squadron (35th Group) moved to Misawa to provide skeleton air defenses.[16] General Stearley, commander of the Twentieth Air Force, proved quite willing to send Partridge all but one F-80 squadron of the 51st Fighter-Interceptor Wing, but this movement had to await the transfer of the 49th Fighter-Bomber Group from Itazuke to a base in Korea. On 22 September, however, pilots of the 16th and 25th Squadrons flew from Naha Air Base to Itazuke and began operations over Korea the same day, some within two hours after landing in Japan. By 25 September the water-borne echelon reached Japan, and the 51st Fighter-Interceptor Wing was in place at Itazuke.[17]

As its contribution to the Inchon operation, General Stratemeyer directed the FEAF Bomber Command to emphasize interdiction operations designed to isolate the amphibious objective area, to continue to attack strategic targets in North Korea, and to conduct special missions including tactical air support, photo and visual reconnaissance, and the distribution of psychological warfare leaflets.[18] Late in August, when General O'Donnell had informed FEAF that his B-29 groups lacked enough outstanding bridge targets "to go around," the FEAF deputies of operations and intelligence had begun to plan FEAF Interdiction Campaign No. 2. On 2 September FEAF furnished a list of 56 rail and road bridges to the FEAF Bomber Command for destruction.[19] The new interdiction plan represented some careful thought. The interdiction planners recognized that the destruction of bridges would not decisively influence the military situation at the front lines in a short time, for a North Korean division had proved able to continue to fight with only 50 tons of resupply each day. But in the event of a Chinese or Russian intervention the new interdiction program was calculated to hinder the movement of troops to the front, to disrupt their resupply, and to place limits on the numbers of Chinese or Russian troops who could be employed at the front lines.[20] The Inchon planners agreed that Interdiction Campaign No. 2 would meet most of their special requirements, but they requested that a major B-29 effort would be flown against the marshaling yards on the main rail lines leading into Seoul from the north between D minus 10 and D minus 3.[21]

Bomber Command would support the Inchon invasion by continuing its industrial and interdiction attacks, but General MacArthur's planners calculated that the Eighth Army would need the support of all five B-29 groups during its breakout from the Pusan perimeter. General Stratemeyer was willing to make the commitment for "carpet bombing," provided Bomber Command got five days' advance notice of army requirements in order that it might perform maintenance, load the correct types of bombs, and preplan its missions.[22] Assembling in General Crabb's office on 8 September, representatives of the Eighth Army, Bomber

*The 9th Squadron had seen service over Korea in the first days of hostilities, but on 14 August it had traded duties and stations with the 49th Group's 7th Squadron, a transfer designed to give the squadron some rest at Misawa after strenuous operations.

Command, and Fifth Air Force discussed the support that the medium bombers would be able to provide the ground forces. The Eighth Army representative explained that the main D plus 1 assault would be made with massed divisions along the Taegu-Kumchon-Taejon axis, while other divisions struck out on all fronts to hold North Korean forces in place. Army artillery would cover 5,000 yards ahead of the front lines, but the Eighth Army wanted a carpet-bombing barrage ahead of the artillery zone and timed to coincide with the jump-off at Waegwan.[23] Much of the discussion at this meeting was academic because the Eighth Army had not decided the exact areas it wanted the medium bombers to attack, but the FEAF Bomber Command sent a liaison officer to the Fifth Air Force to handle detailed planning for medium-bomber support. As a planning objective, FEAF made three B-29 groups available to EUSAK on D plus 1 and 40 to 50 B-29's each day thereafter through D plus 10.[24]

Mindful of its impending commitments for mounting an airborne operation and for providing additional air transport between Japan and Korea, FEAF had been making preparations for an expanded air-transport establishment during August. As FEAF planners attacked the problem of the airborne operation some complications were imminent since both the paratroopers and the troop-carrier units were in the United States. The 187th Airborne Regimental Combat Team was being organized at Camp Campbell, Kentucky, and the 314th Troop Carrier Group was at Sewart Air Force Base, Tennessee. USAF signaled that the 314th Group would be available to FEAF any time after 15 August with 64 Flying Boxcar C-119's, a number of the new-type transports sufficient to lift 2,700 paratroopers.[25] Soon, however, the Department of Army notified USAF that the 187th would require simultaneous airlift for 3,500 paratroopers and their heavy equipment. Such a task as this posed a requirement for 140 C-119's, or their equivalents. USAF agreed to augment the strength of the 314th Group to 96 aircraft, but it stated that FEAF would have to meet the remainder of the requirement.[26] Early in July the Fifth Air Force had converted the 21st Troop Carrier Squadron (374th Group) to C-47's and these planes could be used by paratroopers. To get the remainder of the needed airlift, the Fifth Air Force drew key personnel from the 374th Wing, pilots from desk jobs, and C-46 aircraft from all over the theater, and organized at Tachikawa on 26 August the 47th and 48th Troop Carrier Squadrons (Provisional).[27] From Tokyo General Weyland reported that the 187th Regiment's liaison officers were "most unhappy over plans to use C-46 aircraft and . . . do not want to use C-47 aircraft,"[28] but it was soon apparent that the 187th would not reach the Far East before 21 September. Informed that the 187th would arrive too late for Inchon, General MacArthur announced he would go ahead with the amphibious invasion anyway, but he asked that the airborne regiment would proceed to the theater as soon as possible and be prepared for either an airlanding or a paratroop assault in Korea.[29]

Reasoning that the Korean airborne assault would be a short-time, one-shot affair, the Fifth Air Force on 22 August organized the 1st Troop Carrier Task Force (Provisional), with headquarters at Ashiya.[30] This organization was to become effective on 26 August, but before this the role to be played by transport aviation took on new impor-

Cargo aircraft like the C-124 Globemaster (rear) and the C-46 Commando airlifted tons of war supplies.

tance. General MacArthur, for example, warned FEAF that the forces in Korea would require 700 to 1,000 tons of airlifted cargo each day for an indefinite period of time.[31] Moreover, General Vandenberg cabled Stratemeyer that the air-transport effort ought to be commanded by the "best man possible." The man whom Vandenberg had in mind for the job was Major General William H. Tunner, who had commanded the India-China "Hump" operations and the Berlin airlift.[32] General Tunner, who was currently the deputy commander of the Military Air Transport Service, happened to be in Tokyo inspecting that service's Pacific airlift when his services were offered to General Stratemeyer. In a conference at FEAF operations General Tunner made arrangements to receive the 314th Group. At first General Tunner said that he wanted only 64 of the Flying Boxcars, but he wanted double crews and additional maintenance men to enable each C-119 to fly 200 hours a month. This, however, was not possible, for parts and engine shortages would not permit the C-119's to achieve a utilization rate higher than 100 hours a month. General Tunner therefore requested that the first 64 C-119's arrive in Japan by 10 September and that the additional 32 C-119's would arrive as soon as they could be fitted with self-sealing fuel tanks but not later than 21 September.[33]

After making these arrangements, General Tunner returned to Washington to gather a small staff for his new headquarters. Back in Tokyo on 3 September, Tunner immediately began to organize a centralized establishment to handle theater air-transport tasks. Up until this time air-transport and troop-carrier functions had always been considered to be separate, but General Tunner saw no reason why a single air-transport command, with one fleet of versatile aircraft, could not successfully accomplish both air-transport and air-assault missions. He accordingly organized the FEAF Combat Cargo Command (Provisional) on 10 September 1950 as a major operational command directly responsible to General Stratemeyer. The Combat Cargo Command assumed operational control

over the 1st Troop Carrier Group (Provisional), the 314th Troop Carrier Group, and the 374th Troop Carrier Wing.[34]

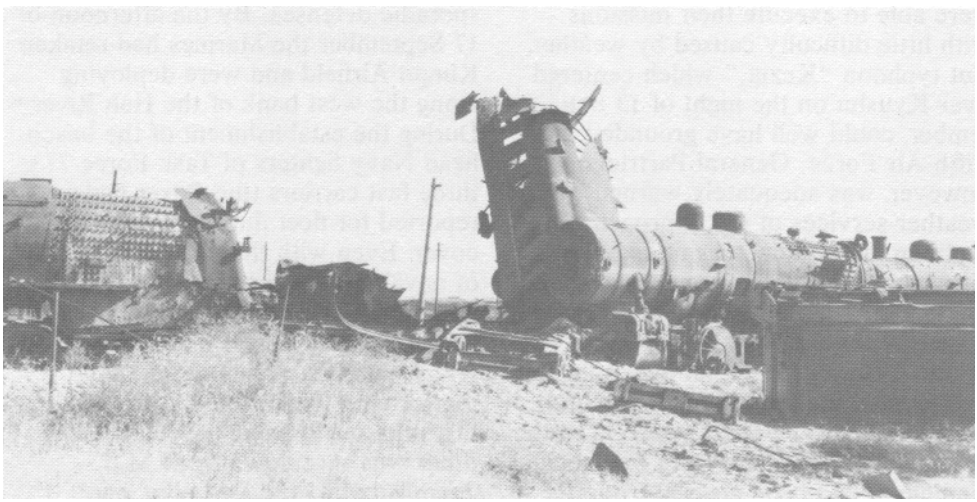
As the FEAF Combat Cargo Command commenced business its main objective was to set up firm controls for the entire Korean airlift operation and to weld the newly arriving and newly organized transport units into a tight organization which would perform all theater air-transport tasks. General Tunner recognized that the airlift should be employed in behalf of the theater objective rather than of any specific component force. Up until this time GHQ, the Eighth Army, and FEAF had been channeling their requirements for air transportation to the FEAF transport operations officer, who relayed them by telephone or teletype to the Fifth Air Force's troop-carrier division, which allocated the tonnage capability of the 374th Wing between the ground and air forces on an arbitrary 70 and 30 percent basis.[35] This arrangement was not particularly responsive to the needs of the several services for air transport. At General Tunner's suggestion, the Far East Command Air Priority Board, which represented Army, Navy, and Air Force, took the responsibility for handling the allocation of Combat Cargo Command's capabilities. Each week Cargo Command furnished the FEC Air Priority Board a statement of its airlift capability figured in tons. After deliberating the tactical situation, the FEC Air Priority Board, acting for General MacArthur, allocated airlift tonnages to the using services. Located at Combat Cargo Command headquarters in Ashiya were liaison officers of the two principal airlift users, the Eighth Army and FEAF, who comprised the Joint Airlift Control (JALCO). These officers received specific requests for air transportation from their services and decided what was to be moved and in what priority, keeping their consolidated requirements within the tonnages specified for their service. Since the Naval Forces Far East continued to operate their own fleet airlift, they did not require large amounts of airlift from the Combat Cargo Command. What requests the Navy made for air transport were handled by the Eighth Army liaison officer in the JALCO.[36]

Under the arrangements which General Tunner sponsored, the FEAF Combat Cargo Command did not have the responsibility for allocating its capabilities. But General Tunner nevertheless demanded that the Cargo Command should most efficiently utilize its airlift capabilities. General Tunner accordingly established Berlin airlift operating methods and procedures. From Ashiya Combat Cargo Command's Transport Movement Control Center (TMC) scheduled all flights, issued all flight orders to wings or groups, recorded departures and landings, and diverted or canceled flights by radio if necessary.[37] At the same time as these controlling principles were being instituted to handle regular airlift, the FEAF Combat Cargo Command made preparations to launch the 187th Airborne RCT in the event of a tactical emergency in Korea. General Tunner's solution to the problem of aircraft was to plan the drop in one day with 87 C-119's and 40 C-47's, or else to take two days and use all C-119's. The 187th Airborne accepted the former alternative on 13 September, and two days later the FEAF Combat Cargo Command had an operations plan ready, just in case the airdrop was ordered.[38]

## 2. *The X Corps Goes Ashore*

As the scheduled date for the Inchon operation approached, the Far East Air Forces responded to the challenge. In the several weeks in late August and early September FEAF photographic reconnaissance units flew aerial photographic cover of the Inchon-Seoul area, and photo interpreters studied the photographs to note signs of enemy activity. A few days before the landing, however, FEAF discovered that the Navy sorely needed to know the exact high- and low-tide heights of the sea walls which would have to be scaled at Inchon. Four precisely timed photo missions were assigned to the 8th Tactical Reconnaissance Squadron and within two days the needed photography was delivered to the Navy. These oblique photographs, taken by low-flying RF-80 photojet pilots, not only provided the basic information that the Navy wanted to know but they proved to be just what the Navy needed to orient its landing crews. In less than a day 2,100 prints of the oblique photos were delivered to the naval task force at Kobe.[39]

The FEAF Bomber Command began to hammer the enemy's rail lines north of Seoul on 9 September. The plan of action outlined for the accomplishment of the special rail-interdiction operation was novel: each day one medium-bomber group conducted a maximum-effort strike against marshaling yards while two other groups, each with eight planes, made multiple cuts on rail lines in thinly populated areas where repairs would be difficult. These latter formations of B-29's struck tracks, trestles, bridges, and tunnels in the triangular area from Seoul to Wonsan to Pyongyang and back to Seoul. Exclusive of numerous hits on bridges and tunnels, the B-29's effected 46 rail-line cuts by 13 September. In a crescendo of effort on 13 September four groups with 60



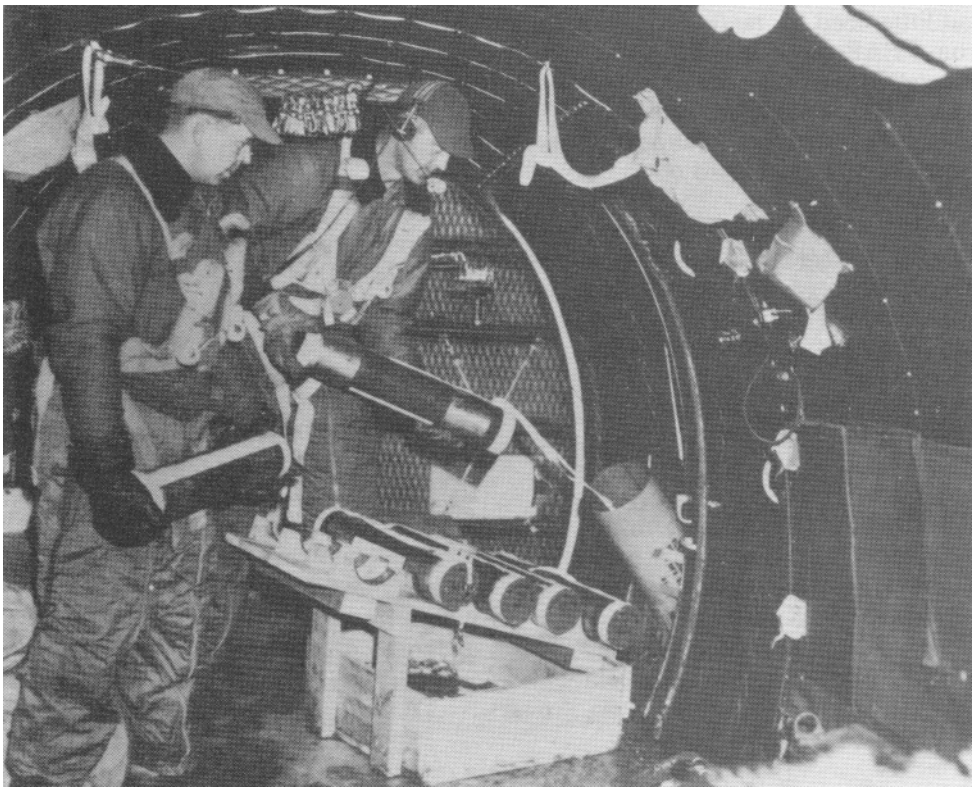
Aftermath of a B-29 attack on the Northwest Pyongyang marshalling yard and repair center.

B-29's attacked marshaling yards and rail tracks on all rail lines southward from Anju and Hungnam.[40]

As soon as General Stratemeyer had secured authority from General MacArthur to do so, the Fifth Air Force moved promptly to sweep the Communist airfields which might endanger the Inchon beachhead. Armed fighters reconnoitered a long list of Red airfields in Korea and attacked such targets as they could discover. At Sinmak Airfield on 11 September a fighter patrol destroyed a Yak and another unidentified plane. The next day a fighter formation surprised Communist ground crews camouflaging four Yaks at Pyongyang, destroyed three of the Red aircraft, and damaged the fourth.[41] These were slim results, but every hostile plane destroyed meant less trouble at Inchon. Mindful both of the B-29 interdiction work and of the fighter sweeps, Admiral Joy complimented FEAF for its "exceptionally fine performance."[42]

Flying from bases in central Japan and on Okinawa, the Superfortresses were able to execute their missions with little difficulty caused by weather. But typhoon "Kezia," which centered over Kyushu on the night of 13 September, could well have grounded the Fifth Air Force. General Partridge, however, was adequately warned by weather services of the approach of the typhoon, and he once again exploited airpower's flexibility. Engineer aviation units in Korea had gone back to Pusan, where, about nine miles east of the city on the shore of the Japan Sea, someone had located the remains of an abandoned Japanese airstrip. As soon as the storage dumps of the Pusan Logistical Command had been cleared from the site, the aviation engineers had repaired the old drainage system and laid a pierced-steel plank surfacing on the old airfield.[43] Although Pusan East Airfield (K-9) was not yet counted to be operational, the 18th Fighter-Bomber Group went to this location on 7 September. From this forward airfield the 18th Group's Mustangs "were able to give close support in the foulest weather."[44] In preparation for the arrival of "Kezia," the 8th Fighter-Bomber Group took its Mustangs to Taegu Airfield and operated there on 12 through 14 September.[45]

While FEAF was preparing its duties outside the amphibious objective area, Joint Task Force Seven was bearing toward Inchon. Two days of preliminary napalm attacks flown by Marine pilots added to destroyer bombardment and neutralized Red Korean defense positions on the island of Wolmi-do, the terrain feature which dominated Inchon harbor. Assault elements of the X Corps went ashore as scheduled on 15 September with little difficulty. The Communist garrison troops in the Inchon area were weak and, surprised as they were, could not recover quickly enough to organize anything other than sporadic defenses. By the afternoon of 17 September the Marines had retaken Kimpo Airfield and were deploying along the west bank of the Han River.[46] During the establishment of the beachhead Navy fighters of Task Force 77's three fast carriers (the *Boxer* had reported for fleet duty) provided air cover. Even with this formidable array of naval aircraft present, two Yaks sneaked in at daybreak on 17 September to attack the heavy cruiser *Rochester*. After both planes scored near misses with light bombs, one Communist pilot made good his escape. The other was shot down by H.M.S. *Jamaica* while the Red pilot was strafing the British cruiser.[47] Alarmed by this sneak attack, Admiral Joy warned his forces that the enemy might



Crewmen rig parachute flares aboard a C-47. These transports work in close coordination with B-26s during night intruder sorties.

have up to 180 fighter planes available for attacks at an early date, and General Stratemeyer enjoined his subordinates to take every means to guard against surprise air assaults.[48]

When the elements of the X Corps began combat ashore the 1st Marine Air Wing implemented its close-support procedures. Each of the nine battalions of the 1st Marine Division had an accompanying forward air controller, and the Fifth Air Force had provided the 7th Infantry Division with the same number of tactical air-control parties. These Marine and Air Force ground controllers possessed direct communications to a tactical air-direction center, located near the X Corps command post.[49] The Marine infantrymen captured Kimpo without causing it too much damage, and General Cushman made immediate arrangements to bring the tactical squadrons of Marine Air Group 12 from their staging base at Itami. Accordingly, the headquarters, Marine Aircraft Group 33, left the escort carriers off Inchon and proceeded to Kimpo, where, on 19 and 20 September, it received VMF(N)-542, VMF-212, and VMF-312. In a change of command, Marine Aircraft Group 12 took authority over the Corsair squadrons based aboard the escort carriers and the night-fighter squadron at Itazuke.[50] Since the X Corps controlled its own tactical air support, it

had little need for tactical air assistance from FEAF, but General Almond did request flare missions over Seoul all night on 25 September to enable Marine night fighters to attack enemy troops fleeing northward out of the city.[51]

Although the X Corps did not require FEAF's tactical air support within the amphibious objective area, it found great need for the air-transported supplies and reinforcements which were laid down by the FEAF Combat Cargo Command. Unloading water-borne cargo at Inchon was even more difficult than had been forecast, and General Tunner's air transports were called upon for herculean efforts. At 1426 hours on 19 September Major Albert W. Brownfield landed the first C-54 transport at Kimpo, and during the afternoon eight other C-54's and 23 C-119's set down at the airfield with supplies for the ground troops, night-lighting equipment, and 280 men of the 1st Combat Support Unit (Provisional). The combat support unit, commanded by Lt. Col. George E. ("Smokey") Stover, was another of General Tunner's innovations. It comprised air-force cargo handling teams which would speed the unloading of cargo aircraft and allow the planes to turn around in the shortest possible time.[52] On 20 September the FEAF Combat Cargo Command began an around-the-clock airlift into Kimpo which immediately bettered the planning figure of 226 tons delivered each day. On their return trips the C-54's provided aeromedical evacuation of casualties which transported sick and wounded men from the beachhead to hospitals in Japan. A good proportion of the inbound airlift was aviation gasoline

Belted ammunition used by the .50-caliber machineguns of the F-80.

and aircraft munitions for Marine Aircraft Group 33 which was unable to get supplies from Inchon. As the X Corps ground divisions moved farther from the port, they, too, suffered for want of supplies. On 21 September nine C-119's made emergency drops of ammunition and rations directly to front-line troops, and eight C-54's landed 65 tons of ammunition and C-rations at the newly captured Suwon Airfield on 24 September.[53] In response to General Almond's request that the 187th Airborne Regiment be airlanded at Kimpo at the earliest possible date in order that it might guard the corps' northern flank, the Combat Cargo Command landed a battalion of paratroopers at Kimpo on 25 September and completed the task on 27 September.[54] "The airlift provided by the Cargo Command for the Marines at Kimpo has been the subject of much praise from those who know," radioed Admiral Joy. "The success of our arms was aided greatly by the tremendous amounts of freight and combat-replacement personnel airlifted during the most critical period of operations," stated General Almond.[55]

### *3. Air Support for the Eighth Army*

A few minutes after dawn on 16 September an armada of 82 B-29's swept in over the coast of southern Korea heading for Waegwan, where they were scheduled to blast a hole in the Communist defenses which would allow Eighth Army troops to break out from the Pusan beachhead. But the air commander, who reconnoitered the target area, found Waegwan completely covered with low-lying clouds. Since only visual bombing could be permitted in such close proximity to friendly troops, the bomber commander had no choice but to send the B-29 crews to attack secondary targets in Pyongyang and Wonsan.[56] During the rest of the day low rain clouds in the aftermath of typhoon "Kezia" continued to hang over Korea. In the morning F-80 jets and F-51 Mustangs let down through holes in the clouds to attack enemy positions from Pohang to Masan, but shortly after midafternoon weather worsened and forced nearly all air units to cease operating.[57] Under these circumstances the 1st Cavalry and 24th Infantry Divisions, which were now organized together with the British 27th Brigade and the ROK 1st Division into the U.S. I Corps, never got their ground attack going.[58]

Overcast skies and heavy rain showers again hampered air operations over southern Korea on 17 September, but the weather began to improve in the afternoon. Except for leaflet missions, Bomber Command was standing down from operations, awaiting such targets as the Eighth Army wished the B-29's to attack. During this day, however, the Eighth Army had no targets for the Superforts.[59] For the second day in a row Fifth Air Force crews, ably guided by Mosquito controllers, broke through the clouds and managed some effective attacks. Fighter-bombers dumped scores of tanks of napalm on the "Walled City" of Tabu-dong, where enemy troops

were holding up the attack of the 1st Cavalry Division. Large groups of enemy troops were bombed and strafed in the vicinity of Pohang. Most outstanding results were attained on the front of the U.S. 2d Division, which was driving out toward the Naktong to destroy and contain enemy forces. As Red soldiers in this sector attempted to retreat, Fifth Air Force fighter-bombers defied the adverse weather to blast them with 260 x 110-gallon tanks of napalm. General Partridge received reports that the massive napalm assault killed at least 1,200 Red soldiers while they were attempting to retreat across the Naktong.[60]

In planning the Eighth Army breakout, General Walker had counted heavily upon exploiting the shock effect of airpower. But he had been ordered to begin his attack on 16 September, a date which was arbitrarily dictated by tidal conditions at Inchon and had no relationship to the unfavorable flying weather forecast for South Korea. Enemy resistance in front of the U.S. I Corps was stubborn, but meteorological forecasts called for clearing weather beginning on 18 September. At 1800 hours on the afternoon of 17 September the Eighth Army accordingly signaled that it was ready to use the Superforts. Specifically, it wanted two groups of the huge bombers to saturate two targets, each 500 x 5,000 yards in dimensions lying on either side of the strip of terrain where the old road and rail bridges crossed the Naktong at Waegwan. Bomber Command did not have much time to plan and order the mission, but at first light on 18 September 42 B-29's of the 92d and 98th Bombardment Groups divided their 1,600 x 500-pound bombs between the two army support bombing areas. Despite the hurry with which the mission was planned and carried out, the Eighth Army G-3 Air officer later described the carpet-bombing attacks as highly satisfactory, with timing and accuracy excellent. Major General Hobart Gay, commander of the 1st Cavalry Division, called the B-29 strikes "beautiful."[61]

As the weather cleared over Korea, the Fifth Air Force stepped up the tempo of its air attack. On 18 September Fifth Air Force pilots flew 286 close-support sorties, and on 19 September they provided 361 close-support sorties.[62] Under the force of strong ground pressure and withering air attack, the stubborn Communist defenses began to crumble. To the 1st Cavalry Division, attacking along the Tabu-dong road toward Sangju, Mustangs provided napalm and strafing attacks against entrenched enemy positions within 50 yards of friendly front-line elements. After these strikes the company commanders of the lead cavalry battalion sent an official letter of appreciation expressing their gratitude for the "superb" close support, which, they said, enabled the 1st Cavalry to break through the crust of Communist resistance on the afternoon of 19 September.[63] On this same day troops of the 24th Division forged across the Naktong four miles south of Waegwan and headed for Kumchon. As this attack progressed, it flushed from cover a group of some 1,500 Red soldiers. The bewildered Reds became confused under the aerial attack and milled around in the open, where they fell prey to division artillery, F-80 jet fighters, and B-26 light bombers.[64]

"From now on," said General Gay on 20 September, "it's a tank battle."[65] The I Corps had managed to break through the shell of Communist resistance and now armored forces would knife into the enemy's territory. Looking forward to the day when the Eighth

Sgt. Donald R. Chamness, radio operator, talks to his bombardier as demolition bombs are dropped from this B-29.

Army would attack, General Partridge had laid the groundwork whereby the exploitation forces would receive strong air support. In August Mosquito controllers had begun to carry SCR-300 "walkie-talkie" radios in their cockpits which allowed them to talk directly with tank columns and forward ground patrols.[66] As the ground columns forged ahead, Mosquitoes hovered above them and covered the front and flanks of the columns. This column cover proved valuable on 21 September when the Mosquitoes noted a scratch force of 30 Red tanks moving up to attack the advancing 24th Division. Mustang fighters and Shooting Star jets responded to the call for air support, and a joint air-ground attack knocked out 14 of the enemy tanks and put to flight the remainder of the enemy armored force. On 22 September the 24th Division's regiments were battling in column up the rail line toward Kumchon, a tactic which was possible only with continuous aerial support. Again on this day the Reds attempted to employ what remained of their tanks, but once again aerial spearheads engaged and routed the Red armored crews.[67]

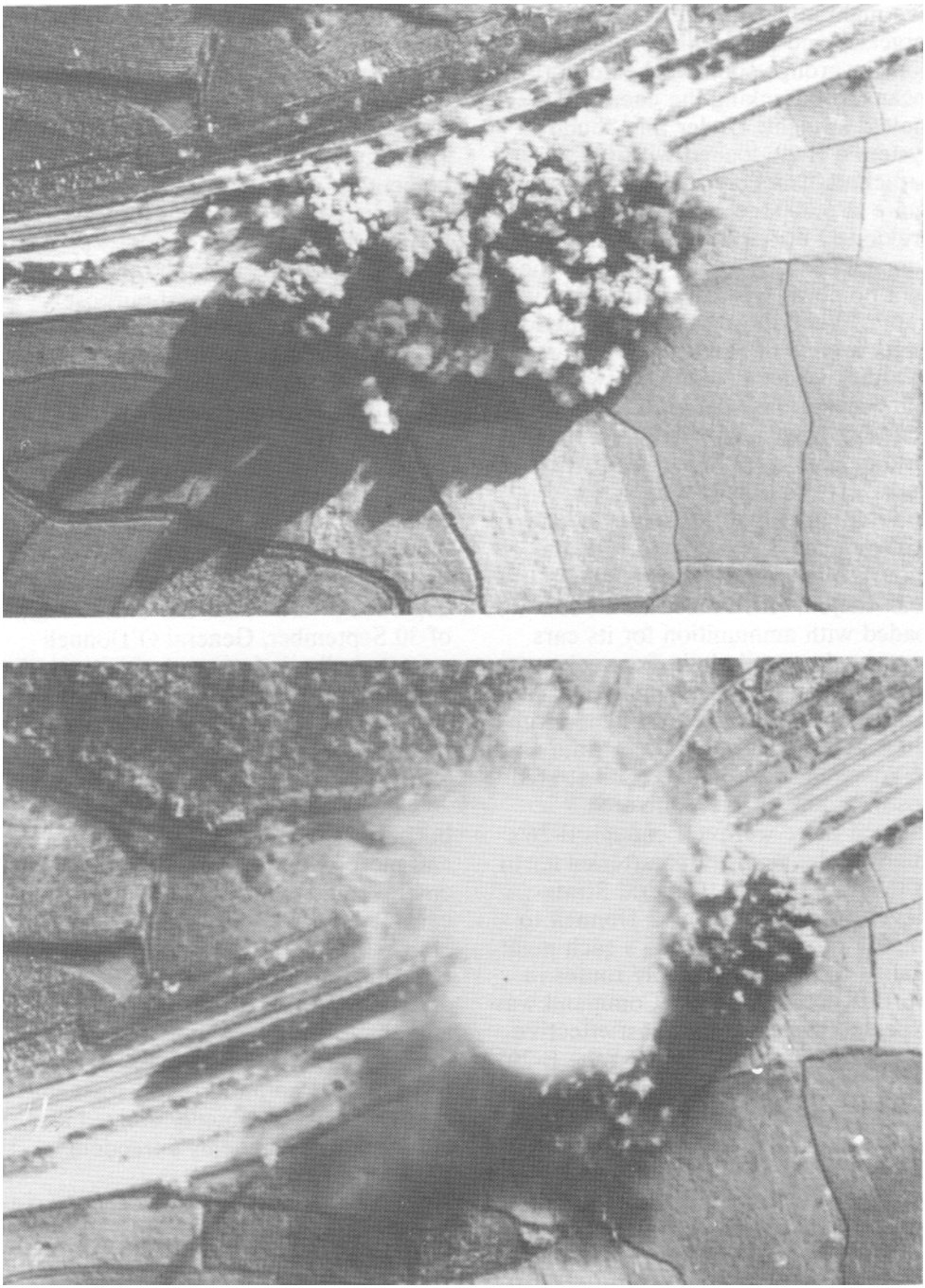
On the northern and western fronts the North Korean divisions virtually collapsed on 22 September. The 1st Cavalry Division drove forward rapidly on the Tabu-dong-Sangju axis and then followed secondary roads in a rapid drive to Chongju. As the Red resistance crumbled, the ROK I and II Corps drove forward with strong air support. On 22 September Fifth Air Force fighters killed 160 Communist soldiers in front of the 1st Cavalry and 625 enemy troops in the ROK sectors.[68] Forced to leave their cover by the Eighth Army counterattack, Communist soldiers were everywhere retreating and proved an easy mark for the ever-present fighters. For the first time since the early days of the conflict Communist troops and equipment were out on the roads, without camouflage or concealment, in daylight hours. Many of the badly bewildered Red soldiers acknowledged that they had enough of the war and surrendered. The Fifth Air Force, for example, reported what was probably the first instance of an Air Force pilot capturing enemy ground troops. A Mosquito pilot, Lt. George W. Nelson, spotting about 200 enemy troops northeast of Kunsan, swooped low and dropped a hurriedly scribbled note signed "MacArthur," ordering them to lay down their arms and move to a nearby hill. After they complied, Nelson found United Nations patrols in the vicinity and directed them to round up the prisoners.[69] Other enemy soldiers of stauncher mettle attempted to escape northward. Pilots returned with tales of North Korean soldiers dragging fieldpieces down the roads by hand, refusing to disperse even when they were strafed. As of 23 September Fifth Air Force fighter pilots estimated that they had killed 6,500 enemy soldiers, and 1,400 more fell before the fighters' guns, bombs, and rockets on the following day.[70]

As the Eighth Army broke out of the Pusan perimeter, FEAF's medium and light bombers continued their interdiction attacks but with a new slant on the mission. Previously these attacks sought to prevent resupply and reinforcement of the Communist armies in the field. Now the interdiction attacks sought both to hamper the enemy's movement toward Seoul and to prevent his escape from the noose which was being drawn in southern Korea. On 11 September General Stratemeyer had directed the Fifth Air Force and Bomber Command to conduct further joint experimental missions in coopera-

tive night attacks against moving targets,[71] and the medium- and light-bomber groups soon worked out a means for attacking the enemy as he moved at night. Under this "buddy" system a B-29, loaded with 100 M-26 parachute flares (paraflares) set to ignite at 6,000 feet, orbited above a previously arranged point over a communications artery on which the light bombers wished to attack moving traffic. When the B-29 crew lighted the target area with flares, the low-flying B-26 attacked the Communists with bombs and machine guns. The "buddy" system showed good results on the night of 22 September, when a Superfortress hung a long series of brilliant flares over the highway and railway from Suwon south to Kumchon. Low-flying B-26's bombed a train near Taejon which must have been loaded with ammunition for its cars continued to explode in firecracker fashion for nearly thirty minutes. The same team of medium and light bombers heavily damaged another train east of Yongdong and bombed and strafed hostile troops in the same area.[72]

Since there were not enough B-26's to cover the main traffic arteries north of the 38th parallel, General Stratemeyer ordered General O'Donnell to employ three to four B-29's each night against the enemy's supply routes in North Korea.[73] Bomber Command was expected to devise the most effective tactics for this work. At first the B-29's dropped delayed-action fuzed bombs along the roads at twilight with the expectation that the bombs would explode and harass enemy road movements after dark. Since it was next to impossible to evaluate the success or failure of this effort, Bomber Command soon rejected this tactic. Next each B-29 crew sent to reconnoiter the roads of North Korea attempted to carry a mixed load of flares and bombs, the idea being that the crew would locate, illuminate, and attack its own targets. But the Superfort crews found it hard to launch their flares and then make an 180-degree turn in time to bomb their objectives—the huge B-29's were just not maneuverable enough for this tactic. Quite soon pairs of B-29's—one loaded with flares and the other with parafrags or small general-purpose bombs—teamed up to attack hostile moving targets at night. This method of attack was none too satisfactory, since bombardiers in the trailing planes found it hard to synchronize their bombsights in the short time a target was illuminated. Moreover, the American M-26 paraflares were old and unreliable. The flare crews encountered up to 65 percent duds and when one of them exploded in the bomb bay on the night of 30 September, General O'Donnell canceled all missions with this type of flare. Fortunately, an air shipment of British 1950 flares had arrived in the theater from the United Kingdom, which would permit the B-29's and B-26's to continue their buddy attacks, but, lacking enough of these heavier and more reliable flares for use in both employments, General O'Donnell canceled the B-29 reconnaissance attacks in North Korea. At this time O'Donnell observed that the B-29 armed reconnaissance attacks amounted to nothing more than a harassment. While these attacks probably did no more than harass the enemy, they undoubtedly created fear and checked the enemy's freedom to move at night.[74]

Not all of the B-29's flew at night, for the FEAF Bomber Command was pledged to whatever direct support it could give to the Eighth Army. General Walker first asked that the B-29's bomb towns in advance of the ground



(top) A single B-29 dropping a stick of 500-pound bombs on a moving ammunition train between Sinanju and Pyongyang, 20 September 1950; (bottom) the resultant explosion of the ammo-laden car.

troops—Yechon, Hamchang, Andong, and Tanyang—on 23 and 24 September, but General Stratemeyer raised the objection that indiscriminate attacks against South Korean towns were unlikely to be politically desirable or to accomplish any favorable military results. Instead, he scheduled 12 B-29's for continuous surveillance over the main roads leading from the battlefield toward Seoul on 24 September. These planes—four of which remained on station throughout the daylight hours—bombed targets of opportunity to support the Eighth Army and to cut off retreating enemy units.[75] In the ten days following the landing at Inchon, 13 other B-29's bombarded the defeated North Koreans with psychological warfare leaflets inviting them to surrender. To operations officers at FEAF this diversion of Superfort effort seemed excessive, but FEAF intelligence rated the leaflet missions as "highly profitable." Near Seoul on 27 September, for example, 104 Red Koreans surrendered in a group to the X Corps and each man carried one of the "safe-conduct passes" dropped by the Superforts.[76]

Before the onslaught of the United Nations air and ground attack, the North Korean People's Army rapidly broke into fragments. By 25 September fighter pilots were returning to their bases with ordnance still in their shackles and guns unfired. The situation on the ground was so fluid that the fighter pilots found it hard definitely to identify targets as hostile, and they wanted to make no mistaken attacks on friendly troops.[77] At noon on 23 September four Mustangs had by mistake strafed and napalmed the Argyll Highlanders of the British 27th Brigade, and General Stratemeyer had emphatically renewed his orders that all pilots would positively establish that the targets they attacked were hostile.[78] Undoubtedly these restrictions on air attack allowed some Reds to escape to North Korea, but organized Communist resistance in South Korea was nearing an end. Following a street-by-street fight, the U.S. X Corps captured the ruined ROK capital city of Seoul on 26 September. Late that same night a fast-racing 1st Cavalry Division battalion linked up with elements of the 7th Infantry Division near Osan, the same village at which American troops had first met the North Koreans in combat.[79]

Victory in South Korea came quickly once the North Korean People's Army, already reduced to a dearth of logistics by aerial blockade, was outmaneuvered on the ground. On 29 September General MacArthur and President Rhee flew to Seoul for a victory parade which marked the Republic of Korea government's return to its capital city. South of the United Nations lines remnants of six Red divisions continued to resist the U.S. IX Corps, a new organization comprising the U.S. 2d and 25th Infantry Divisions and attached units which had become operational for the mopping-up campaign on 23 September.[80] Although some bypassed North Koreans continued to fight, General MacArthur informed the United Nations that "the backbone of the North Korean Army has been broken."[81]

The defeat of the Red Korean armed force entailed an immediate modification of air objectives. In view of the favorable progress of United Nations forces, the Joint Chiefs of Staff on 27 September canceled all strategic air attacks against North Korean objectives. The destruction of such targets of relatively long-term military significance was no longer considered necessary. Henceforward all air opera-

tions were to be directed against objectives which had an immediate bearing upon the tactical situation in Korea.[82] Seeking to preserve what remained of the South Korean communications network, General MacArthur on 1 October prohibited the destruction of railway facilities south of the 38th parallel unless they were known to be actively used in support of the North Koreans. Any such necessary interdiction attack, however, was to be accomplished by bombing the roadbeds.[83] Looking even further ahead, on 4 October FEAF prohibited attacks against enemy airfields south of the 40th parallel unless such attacks were necessary to destroy hostile aircraft.[84]

### *4. Post-Mortem on the North Korean People's Army*

"Events of the past two weeks have been decisive," General MacArthur informed the United Nations on 30 September. "The seizure of the heart of the enemy's distributing system in the Seoul area," he said, "has completely dislocated his logistical supply to his forces in South Korea and has quickly resulted in their disintegration."[85] In the first flush of the military victory many commentators attributed the defeat of the North Korean army to the surface maneuver which placed the U.S. X Corps at the rear of Communist forces in Korea, but within a few weeks the United Nations Command reached sounder conclusions regarding the causes of the defeat of the North Korean People's Army.

What had happened to the numerically superior and combat-capable North Korean People's Army, which had been so invincible on the field of battle in July and August? How had this powerful battle force been defeated? In the final analysis it is always the enemy who is best able to judge the effectiveness of the various elements of military strength which contributed to his defeat, and such was the case in South Korea. In November 1950, when many of the North Koreans captured south of the 38th parallel had been questioned, the FEC G-2 Translator and Interpreter Service issued a research report based upon some 2,000 prisoner-of-war interrogation reports, translated enemy documents, and other related sources.[86]

The Far East Command analysis revealed that the relentless and intensive air effort directed by United Nations tactical aircraft against the numerically superior North Korean ground forces undoubtedly played the decisive role in preventing the invader from overrunning the Republic of Korea. Furthermore, continued effective support by the tactical air arm during and after the period when United Nations forces wrested the initiative from the enemy contributed immeasurably to the rapid progress which characterized the drive to the 38th parallel. Since the enemy seldom differentiated the type, service, or nationality of United Nations aircraft, the report had to be taken as an analysis of the effect of the total United Nations air effort rather than that of any particular service. The analysis,

however, revealed the following points of interest and significance:

Because of the absence of effective counterair opposition, United Nations aircraft flying in support of friendly ground troops were able to operate at optimum efficiency, a predominant factor in accounting for the overwhelming impact of the United Nations air effort.

Unremitting daylight attacks on enemy ground targets and troop concentrations acted as a disorganizing and disruptive factor in North Korean tactics. As a rule, rather than an exception, North Korean combat units were compelled to attack under cover of darkness.

Of the complex of elements contributing to the lowering of morale in North Korean army units, the strafing and rocketing by United Nations tactical aircraft were the most potent. Eighteen percent of all references made by North Korean prisoners of war relative to factors resulting in low morale specified air action as being the most detrimental. Furthermore, at least 35 percent of the remaining causes for low morale could be attributed indirectly to casualties and damages wrought by United Nations aircraft.

The percentage of North Korean personnel casualties resulting from tactical air action approximated that caused by artillery fire. Equipment losses sustained from air action, however, were noticeably greater than those produced by ground weapons.

Continuous strafing and bombing of supply routes, installations, and transport media resulted in marked attrition in the supplies available to North Korean front-line units. By early September critical shortages began to impose serious limitations on North Korean tactical operations.

Almost from the start of the war in Korea United Nations airpower had affected the tactical employment of the North Korean army. Although the North Korean government had anticipated that the United States would provide logistical support and military advisors to the ROK Armed Forces, it was apparent from the lack of antiaircraft preparations and the absence of a strong air force that North Korean military planners had discounted the possibility of direct military action by the United States in defense of the Republic of Korea. Prisoners of war attested that scant attention had been given in training cycles to the indoctrination of ground-combat troops in measures of protection from tactical aircraft and in the employment of small arms against low-flying hostile planes. As a result, North Korean tactical units in the field were faced with the task of implementing positive countermeasures to provide adequate security for personnel and equipment. By reason of a stubborn adherence to stereotyped tactical concepts in training and combat, however, North Korean military leaders experienced considerable difficulty in formulating sound measures to compensate for the disruptive effect of absolute United Nations air superiority. In fact, prisoner-of-war interrogation reports reflected that this lack of tactical adaptability forced North Korean combat units in several instances to delay or even abandon their primary missions. Illustrative to this point was a statement by a platoon leader of the NKPA 5th Division to the effect that the plans of his division to take Pohang Airfield were all doomed to abortive failure because of the intensity of air attacks and naval gunfire.

The continuous presence of United Nations aircraft during daylight hours and the aerial destruction of the

North Korean prisoners of war interned in South Korea.

already-limited and overtaxed communications system often forced North Korean infantry units to proceed to their objectives without armored support and deprived them of the supporting fire of their artillery. The combination of unserviceable roads and a high rate of attrition in motorized transport also contributed to the depreciation of the North Korean replacement system. Personnel destined for decimated front-line units either failed to arrive or were delayed so that at times North Korean commanders were obliged to use conservative tactics in situations where all-out efforts were needed. Another and perhaps even more serious limiting factor was imposed on North Korean tactics by the rapid deterioration of the supply system. Recurring and increasingly serious shortages of all classes of supply necessitated strictest rationing and the adoption of stringent conservation measures in all sectors of secondary effort and deprived the North Korean army of much of its mobility. In attempting to protect and conserve their supporting weapons, which were almost irreplaceable when once destroyed, North Korean commanders often leaned toward conservative tactics.

But the most far-reaching influence of United Nations aircraft on North Korean tactics was the fact that it forced the North Koreans to conduct combat operations under the difficult conditions imposed by darkness. An example of numerous reports that referred to the necessity for night operations was an order issued by the operations section of one enemy division on 4 September: "Our experience in night combat up to now shows that we can operate only four to five hours in the dark, since we start night attacks between 2300 and 2400 hours. Therefore, if the battle continues after the break of dawn, we are likely to suffer losses. From now on use daylight hours for full combat preparations and commence the attack soon after sunset. Concentrate your battle actions mostly at night and thereby capture enemy base positions. From midnight on engage the enemy in close combat by approaching to within 100 to 150 meters of him. Then, even with the break of dawn, the enemy planes will not be able to distinguish friend from foe, which will enable you to prevent great losses."

The impact of tactical bombing and strafing was further manifest in captured North Korean field orders which directed combat troops to concentrate upon the extensive use of camouflage and the digging of emplacements that afforded protection against air attack. Increased emphasis was also given to the utilization of such ground weapons as were adaptable to antiaircraft purposes for fire against United Nations aircraft. The great importance attached to antiaircraft defense and an indication of the fearful effect of United Nations airpower was a field order from the commander of the 25th Rifle Regiment which directed the crossing of the Naktong River: "Antiaircraft defense will be provided by the regimental antiaircraft unit supplemented by one heavy machine-gun section from each battalion. When enemy planes appear, 50 percent of the infantry weapons will be diverted for antiaircraft defense." The fact that during a river crossing against deliberately constructed defenses the regimental commander felt justified in diverting half of his infantry weapons to antiaircraft defense throws into sharp relief the conclusion, hinted at by many other interrogation reports, that United Nations tactical aircraft were able to

EFFECTIVENESS OF WEAPONS (%)

| *Agent* | *Number of Reports* | *Percent of Effectiveness* |
|---|---|---|
| Artillery | 39 | 43 |
| Aircraft | 24 | 27 |
| Small arms | 13 | 14 |
| Other agents | 14 | 16 |
| Total | 90 | 100 |

inflict especially heavy losses on enemy equipment and personnel during river crossings and that bridgeheads, until well established and dug in, were highly vulnerable to air attack. Instance after instance reflected that United Nations airpower was able to isolate enemy bridgeheads across the Naktong River from their sources of supply and replacement and that the enemy managed to reinforce these bridgeheads only at a forbidding cost in lives and materiel.

Interspersed throughout prisoner-of-war interrogation reports were examples of the complete disorganization and rout of various North Korean combat units as the result of United Nations air action. The table above presents a comparison in percentages of the effectiveness of various weapons in breaking up and dispersing enemy attacks or troop concentrations. This table, compiled from information contained in 90 pertinent prisoner-of-war interrogation reports, represented reported instances of disorganization of enemy attacks or concentrations within artillery range. This table revealed that artillery, within its effective range, was the primary agent of disruption. This conclusion, however, had to be qualified in context with the fact that the North Koreans confined themselves for the greatest part to night operations.

Of the complex of elements contributing to the lowering of morale in the North Korean People's Army units, the strafing, rocketing, and bombing of United Nations aircraft were the most potent. At first, while reaping the fruits of victory, the North Koreans enjoyed a high morale index, but as United Nations ground and air arms dealt increasingly heavy casualties and equipment losses the North Korean army suffered a sharp decline in its esprit de corps. North Korean propaganda of a quick-and-easy sweep of a peaceful republic had less promise of realization. A medical officer observed that "the morale of the troops, during the first month of the war, was extremely high. The second month of fighting showed a noticeable decline in morale due to the intensity of enemy aerial activity and superior fire power." After the latter part of August this medical officer believed that the men were driven forward only by the fear of being shot by their own officers. Interrogation reports indicated that enemy troops were aware of the causes of insufficient food and inadequate supplies. They were also aware that the blows dealt to their supply system by United Nations airpower threatened the outcome of the conflict. Gradually came the knowledge that the long-promised North Korean Air Force was not going to materialize and that the antiaircraft weapons available in North Korean divisions (primarily heavy antiaircraft machine guns) were mere toys when pitted against modern aircraft.

DEMORALIZATION OF NORTH KOREAN TROOPS (%)

| *Reason for Low Morale* | *Answers* | *Percentage* |
|---|---|---|
| Shortage of food | 176 | 21.4 |
| Tactical aircraft | 148 | 17.9 |
| Lack of training | 93 | 11.3 |
| Lack of arms and equipment | 81 | 9.8 |
| Insufficient rest | 68 | 8.2 |
| Forced induction | 52 | 6.3 |
| Casualties | 51 | 6.2 |
| No cause for fighting | 40 | 4.9 |
| Artillery | 39 | 4.7 |
| Desertion | 28 | 3.3 |
| Harsh treatment by officers | 13 | 1.6 |
| Lack of replacements | 12 | 1.5 |
| Inadequate clothing | 10 | 1.2 |
| All other causes | 14 | 1.7 |
| Total | 825 | 100.0 |

A survey of 825 prisoner-of-war interrogation reports containing specific references to morale revealed that tactical airpower contributed materially to the demoralization of North Korean military personnel (See table above). In this survey of references to morale in prisoner-of-war reports the effect produced by tactical airpower was ranked second only to a discontent over the insufficiency of food. If, however, it was realized that the supply shortages were in effect an indirect manifestation of the destructive effect of tactical airpower it was apparent that at least 50 percent of the causes for low morale cited could be attributed directly or indirectly to United Nations air action. The report, in fact, indicated that the psychoneurosis engendered by United Nations air attack may actually have outweighed the actual physical destruction done by airpower.

Although airpower contributed to the United Nations victory by forcing the enemy to use unfavorable tactics and by lowering the morale of the enemy soldier, its greatest contribution was the interdiction of hostile supplies. Only by applying the strictest measures of conservation and salvage and by moving supplies in accordance with set priorities (which gave precedence to ammunition and fuel at the expense of all else) was the North Korean Army able to keep its divisions in the field and to sustain its offensive against the Naktong perimeter. Although other agents—such as the natural limits of Korea's roads and rail lines, the activities of inshore naval patrols which broke up water-borne supply, and the natural deterioration of hostile motorized equipment—made contributions of varying proportions, the United Nations air forces figured as the largest single factor in the wrecking of the enemy's system of supply.

Even in an undamaged state Korea's roads and railroads would have been overtaxed by the military traffic needed to supply an army in the field. Subjected as it was to repeated and widespread damage and destruction, the Korean transportation network acted as a very definite limiting and delaying factor on the movement of Communist supplies. Enemy prisoners indicated that in their travels from Seoul to the front they noticed few

undamaged bridges and roads. Most bridges were either impassable or showed signs of recent destruction. In general, however, the disruption of the already-strained transportation network served to slow down the movement of supplies to an appreciable degree, but it never caused an abrupt halt. Lines of communication were kept open by ingenious repairs, and rarely, if ever, did the destruction of a road or rail line occasion more than one or two days' delay in the delivery of supplies. Yet the continuous delays caused by successive obstacles and detours and by the limited capacity of temporary bridges and rail lines constituted a very real brake on the enemy's logistical support of front-line units.

Interrogation reports indicated that United Nations airpower accounted for more than 80 percent of the total of approximately 800 trucks reported to have been destroyed en route to the front. The shortage of transport equipment grew so acute that the enemy found it necessary to allocate the few available replacement vehicles at the highest command level, in accordance with the most urgent operational requirements. Closely linked with the great damage inflicted on North Korean motorized equipment was the high casualty rate of truck drivers. Those who survived aerial attacks reportedly took the first opportunity to desert. To consequent drain on trained drivers was so high that the North Korean Army utilized American prisoners of war under armed guard to drive its supply vehicles. The enemy also resorted more and more to the use of animal-drawn transportation and impressed battalions of ROK civilians as human supply trains. Although reliance on these devices enabled the enemy to maintain his offensive, shortages were felt everywhere, and his operational flexibility was sharply limited by the wholesale destruction of transport vehicles that kept supplies from reaching forward supply dumps.

The effectiveness of the United Nations tactical air effort in disrupting the enemy's supply system was best reflected in the progressively deteriorating status of North Korean supplies. By the middle of August North Korean combat units began to encounter serious shortages of supplies. Those units deployed at the southern extremity of the overextended supply lines were the first to feel the pinch. By 26 August all units had been ordered to conserve ammunition in order to permit the level of reserve stores to be compatible with continued offensive operations. In this same period combat units began to experience severe shortages in petroleum products, small arms, and of items of heavier equipment such as self-propelled guns and tanks. Prisoners of war estimated that more than half of the total supply tonnage destined for the front was destroyed en route, but not all of the shortages could be credited to tactical aircraft. The petroleum shortage, for

Wonsan Oil Refinery after FEAF bombing raid

COMPARISON OF WEAPONS ON ENEMY SYSTEMS (%)

| | *Destruction by Aircraft* | | *Destruction by Ground Arm* | |
|---|---|---|---|---|
| | *Number* | *Percentage* | *Number* | *Percentage* |
| Personnel | 49,527 | 47 | 56,270 | 53 |
| Equipment: | | | | |
| Tanks | 452 | 75 | 143 | 25 |
| Trucks | 637 | 81 | 146 | 19 |
| Artillery pieces | 301 | 72 | 112 | 28 |

example, was primarily the result of the bombing of the large petroleum refinery at Wonsan. In view of the available evidence, however, it seemed apparent that the annihilation of the enemy's means of transportation did more to impair logistical support than did the disruption of his lines of communication.

Under the vulnerable conditions imposed by a lack of aerial cover and of training in antiaircraft measures, the North Korean Army found its personnel and combat equipment exposed to the fullest shock effect of United Nations airpower. Illustrative of the high quality of United Nations air operations are comments by prisoners of war, such as the one describing an air attack on 5 August: "En route from Kwangnung area the 8th Division was attacked many times by aircraft and lost ten 76mm. field guns, three 122mm. howitzers, 20 tanks, and 50 trucks loaded with ammunition and equipment." Another typical account was furnished by a captured member of the 105th Tank Division: "At a point two or three kilometers from Hamchang the unit sustained an air attack in which it lost six tanks, four trucks, and 150 men. Four planes participated in the attack." A prisoner from the 16th Tank Brigade reported that less than half of his unit's tanks got into combat. These comments were substantiated by a detailed analysis of the number of tanks, trucks, artillery pieces, and enemy soldiers reported by prisoners of war to have been destroyed.

The above tables indicate very clearly the immense superiority of unopposed airpower over other weapons in dealing the North Korean enemy a decisive, crippling blow, in disrupting his system of supplies, and in disorganizing his troops in their assembly areas and during the attack. The effect of tactical airpower on the course of the battle in South Korea had been absolute, direct, and often decisive.

The testimony of North Korean prisoners of war, as reported and evaluated by the Far East Command Translator and Interpreter Service, revealed that North Korean offensive power, so invincible at the start of the Korean operations, had been decimated by United Nations air and ground action well prior to the invasion at Inchon. Cut off from his sources of supplies, his equipment being destroyed and his personnel slaughtered by air and ground action on the battlefield, the North Korean aggressor had been sustaining his offensives around the Pusan perimeter only by sheer desperation. Such North Korean power as remained was an encrustation around the Eighth Army's lines. Viewed in the light of prisoner-of-war reports, it was evident that the North Korean People's Army was defeated by relentless air-ground action in South Korea—not by the opportune amphibious invasion at Inchon.

## *5. The Fifth Air Force Moves to South Korea*

Late in August General Timberlake announced plans to move the Fifth Air Force's tactical groups to Korea "as soon as they can be assured they are safe there and have operating facilities ready for them."[87] After 15 September South Korea was soon safe enough for the Fifth Air Force's tactical air units, but getting operating facilities ready for them was a more difficult matter.

Before it could base its fighter-bomber groups in Korea the Fifth Air Force had to prepare a minimum of six airfields, a construction objective of magnitude which was further complicated by Korea's geography, which yielded few adequate airfield sites, and FEAF's grave deficiency in aviation engineer capabilities. In view of the unfavorable terrain features of Korea, the Fifth Air Force had little choice but to attempt a rehabilitation of old Japanese-built airfields. These old airfields occupied the best available sites, but even these "best" sites were characterized by high water tables, hazardous obstructions in the clear zones, and limited areas for runway extensions or parking aprons. These old airfields, moreover, had been built to accommodate lighter aircraft and neither their subsurface stabilization nor their asphalt or concrete surfacings were strong enough for modern USAF planes.[88]

More serious than the natural disadvantages of Korea for building airfields was the shortage of aviation engineer constructional skills and capabilities throughout the Far East. To handle Korean construction, FEAF established the I Construction Command (Provisional) on 11 July, and General Partridge named his director of installations as its commander. But the I Construction Command was able to obtain no officers to serve on its staff, and, as a result of this lack of staff supervision, airfield sites were selected after very sketchy ground reconnaissance, without soil tests, drainage checks, or exploration of the surrounding area for available constructional materials. Even in view of the fact that there was really little choice in airfield sites and constructional deadlines were quite short, Lt. Col. William S. Shoemaker, staff engineer at Advance Headquarters, Fifth Air Force, said that some prior ground reconnaissance by an engineer staff officer would have been possible and would have been of great advantage. As it was, the engineer aviation work unit was frequently first to get on the ground at the work site, and it usually found itself there with indefinite verbal orders and no established channels for securing supplies and constructional materials.[89] Looking back at the experience, the Fifth Air Force director of installations commented that "Too little engineering and too many 'eyeball' principles were used."[90]

As the Eighth Army pushed northward, ending the threat of the North Korean People's Army, the Fifth Air Force returned to those stations from which it had retreated in August. Traveling by motor convoy and aircraft, Headquarters, Fifth Air Force in Korea, returned to Taegu City between 23 and 25 September, the former being listed as the official movement date.[91] The 6149th Tactical Support Wing regathered the men and equipment which it had dispersed to Pusan and Itazuke and began to operate Taegu Airfield.[92] On 17 September the 822d Engineer Aviation Battalion retraced its

way from Pusan and resumed work at Taegu Airfield, where it renovated and surfaced strip "B" with pierced-steel plank to a length of 5,700 feet.[93] Alerted at Itazuke for movement to Taegu, the 49th Fighter-Bomber Group sent its 7th Squadron to Taegu on 28 September. Group personnel and the 8th Fighter-Bomber Squadron arrived on 29 September, and the 9th Squadron joined on 30 September. For the first time a jet fighter group was based under field conditions at a Korean airdrome.[94] Taegu Airfield was also designated as the station for the 543d Tactical Support Group, a new provisional unit which had been organized on 26 September to serve as the parent of the 8th Tactical Reconnaissance Squadron (Photo Jet), the 162d Tactical Reconnaissance Squadron (Night Photo), and the 363d Reconnaissance Technical Squadron. Under the schedule of movement the 8th Squadron arrived at Taegu on the morning of 2 October, the 162d Squadron reached Taegu on 8 October, and the 363d Squadron began to open its laboratories at the Kyung Buk Middle School, eight miles from the airfield, on 4 October.[95] Like the 49th Fighter-Bomber Group, the 543d Tactical Support Group was

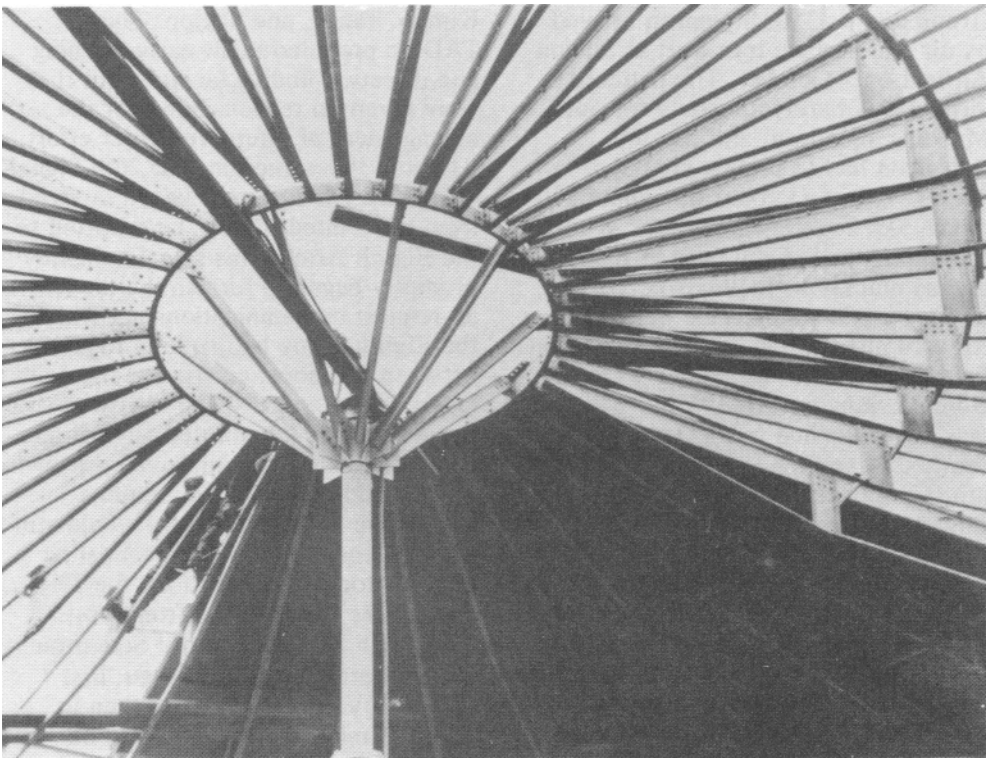
Army soldiers manning antiaircraft gun emplacement near Taegu.

attached to the 6149th Tactical Support Wing.

During the fighting in South Korea Pohang Airfield had never been captured by the North Koreans, but it had been in a sort of no-man's land for several weeks. For this reason Company A, 802d Engineer Aviation Battalion, feared that it would have to restore most of the improvements which it had made at the east-coast airfield earlier in August. After arriving by LST on 27 September, however, Company A found Pohang Airfield relatively undamaged. Only the north taxiway required renovation, and the aviation engineers promptly commenced this and other necessary work at the airfield.[96] Following the movement of the 6150th Tactical Support Wing, advance elements of the 35th Fighter-Interceptor Group left Tsuiki for Pohang on 3 October, and within four days the group, with its 39th and 40th Squadrons, settled in the same habitat it had left in August. The group's historian reported that "conditions at the old airbase were much the same as they were . . . in July and August 1950. When the wind blew, it was just as dusty, and when it rained, the mud was just as sticky." On 12 October the RAAF No. 77 Squadron joined the 35th Group at Pohang, fleshing out the base complement to three squadrons of F-51 Mustangs.[97]

The establishment of air units at Taegu and Pohang, plus the earlier-than-Inchon movement of the 6002d Tactical Support Wing and the 18th Fighter-Bomber Group to Pusan East Airfield, represented the maximum air garrison which General Partridge could deploy to Korea until such time as the U.S. X Corps was willing to allow Fifth Air Force units to base in the Seoul-Suwon area. On 26 September FEAF accordingly asked authority to move the 6131st Tactical Support Wing and the 8th Fighter-Bomber Group from Tsuiki to Suwon Airfield. To prevent confusion, FEAF urged that the 6131st Wing would remain under General Partridge's control, but, as the Eighth Army situation permitted, the Fifth Air Force would make the 8th Group available day by day to the control of the X Corps tactical air command. The X Corps had no objection to the movement, but it asked for assurance that the movement would in no way reduce its cargo air support. The X Corps also insisted that the fighter group would have to come under the operational control of the X Corps tactical air command as soon as it reached Suwon. Since these conditions were not acceptable to the Fifth Air Force, movement of the 6131st Wing had to await the disestablishment of the Inchon amphibious objective area.[98] On 29 September General Stratemeyer accordingly invited General MacArthur's attention to the fact that the Inchon operation had "progressed well beyond an amphibious phase." To support contemplated Eighth Army operations, the Fifth Air Force would be compelled to base fighter-bomber groups at Kimpo and Suwon airfields without further delay.[99] General MacArthur did not comply with Stratemeyer's request until 4 October, but at this time he passed operational control over all land-based aircraft in Korea to General Stratemeyer, as commander FEAF.[100]

While the Inchon-Seoul area still remained under the authority of the X Corps, the Fifth Air Force had been making efforts to rehabilitate Kimpo and Suwon airfields. Arriving from Guam on 25 September, the 811th Engineer Aviation Battalion first tackled the reconstruction of Kimpo, where a 6,000-foot asphalt runway



Members of the 811th Engineer Aviation Battalion lay the cover sections of a petroleum storage tank at a Korean base.

promised to be the best flight surface in Korea. The 811th Engineers arrived at the port of Inchon short many items of heavy construction equipment which could not be found in the theater. At the moment the shortages were not too important, for the 811th encountered great difficulty getting what equipment it had unloaded at the crowded harbor of Inchon. The battalion's first assignment at Kimpo was to fill a large bomb crater on the main runway and to cover it with pierced-steel plank, an expedient which permitted use of the runway but gave trouble. Marine carrier-type aircraft, for example, frequently came in for landings with their arresting gear down. "Naturally," wrote the battalion's historian, "when the hook caught the pierced-steel plank either the plank was ripped and torn or the plane came to an abrupt stop." On 1 October Company A of the 811th Battalion went to Suwon to try to restore this war-torn airfield. The runway here was cratered with bomb holes and American tanks had lacerated all flight surfaces. Doing the best it could, Company A patched the runway and laid down a pierced-steel plank taxiway along its length.[101]

As soon as the command situation was cleared up, the Fifth Air Force rushed tactical air units to Kimpo and Suwon. The 6131st Tactical Support Wing loaded aboard ships at Moji for the forty-eight-hour trip to Inchon on 6 October, and the 8th Fighter-Bomber

Group and its 35th Squadron arrived by air and surface transport at Suwon Airfield on 7 October. The battered airfield was barely adequate for one Mustang squadron, and the 36th Squadron had to remain behind at Tsuiki.[102] On 6 October the commander of the 51st Fighter-Interceptor Wing took command of the base at Kimpo, and as quickly as facilities permitted he moved his subordinate units to the forward airfield. On 25 October the last fighter squadron—the 80th Fighter-Bomber Squadron (8th Wing) which was now attached to the 51st Wing—reached Kimpo.[103] For three weeks the 8th Group attempted to operate at Suwon, where half of the concrete runway could not be used, but at last, on 30 October, the 8th Group got permission to move to Kimpo, where it was joined by the 36th Squadron from Tsuiki.[104]

In a movement which coincided with that of the main Eighth Army command post, Headquarters, Fifth Air Force in Korea, closed at Taegu at midnight on 13 October and simultaneously reopened in Seoul City. The Joint Operations Center made these same changes of station.[105] As General Partridge's headquarters was moving northward, the long-awaited 502d Tactical Control Group was finally ready to operate. On 7 October the provisional 6132d Tactical Air Control Group was accordingly disbanded and most of its personnel was used to form the 6132d Aircraft Control and Warning Squadron of the 502d Group, which had reported to the theater with only two of the normal aircraft-control and warning squadrons. One squadron of the 502d Tactical Control Group now manned the tactical air-control center at Seoul, and the three aircraft-control and warning squadrons opened tactical air-direction centers (TADC's) at Kimpo, Taegu, and Taejon. These TADC's provided radar early-warning and direction-finding facilities but they were given no responsibility for the management of offensive fighter effort. At about this same time the 20th Signal Company, Air-Ground Liaison, arrived from the United States and reported to the Eighth Army. This signal company promptly began to furnish the tactical air-request communications net which the Eighth Army had so long required between divisions, corps, and the Joint Operations Center.[106] The arrival of these regularly constituted tactical air-control units greatly improved the air-ground and tactical air operations systems in Korea, but there would still be work for the Mosquito tactical air coordinators. In order to get the T-6 controllers closer to the frontlines, the 6147th Tactical Control Squadron moved northward from Taegu, first to Kimpo on 5 October and then to Seoul Municipal Airfield (K-16) on 18 October.[107]

The deployment of the Fifth Air Force's combat strength to Korea coincided with similar movements of Eighth Army and X Corps units and the means of transportation in the Far East were severely strained. Air transport carried most Air Force personnel and lighter equipment to the new stations, but heavier equipment required hard-to-obtain surface transportation. At Inchon tidal conditions made unloading particularly slow, since ships had to wait to get into the harbor basin. The X Corps, moreover, was granted an overriding priority to stage its forces out of Inchon for a landing at the North Korean east-coast port of Wonsan. Two transports and a victory ship carrying cargo for the 6131st Wing arrived at Inchon on 10 October; the transports began unloading on 23 October, and the unloading of the

victory ship was not begun until early November.[108] Part of the 8th Group's equipment lay buried in the hold of a cargo vessel off Inchon during October and was finally unloaded only after the ship moved back to Pusan, whence the equipment was hauled back overland by rail and truck.[109] Symptomatic of the effect of this delay upon air operations was the 6131st Wing's estimate that its operations were no more than 35 percent effective during the period it waited for heavy equipment.[110] As a result of experiences such as these, FEAF came to know another defect in the organization of the Far East theater. All available air transport had been properly placed under the control of the theater command and airlift was allocated by the theater commander. Surface transportation within Japan and Korea, however, was controlled by the Japan Logistical Command, the Eighth Army, and the X Corps. In order to obtain surface transportation, the Fifth Air Force had to negotiate with these parallel commands which had units of their own to move. General Tunner identified this problem and called for the establishment of an over-all theater transport coordinating agency which would allocate all transportation on land, sea, and air for the most efficient use of all available methods of supply and transport,[111] but this reform would never be undertaken in the Far East during the Korean war.

Problems common to all of the Korean airfields included difficult living conditions and a large amount of physical labor required in keeping operational, but the most serious common problem was the lack of equipment for handling bulk fuel. At Suwon aircraft had to be fueled by hand from 55-gallon drums trucked in from Inchon, a slow procedure which was further complicated when other flights landed at the base for staging. Most of the 60,000 gallons of jet fuel which the 51st Group used each day had to be trucked to Kimpo. A limited amount of fuel was delivered by tank car to a railhead about seven miles from the base and some refueling units were loaded directly from the tank cars. At Taegu the same problem hampered the 49th Fighter-Bomber Group, which was additionally penalized by a shortage of refueling units. Use of drum fuel brought about contaminated supplies which forced squadrons to pull and inspect low-pressure fuel filters on their aircraft very often. Some of the contamination appeared to originate with units which mixed napalm in fuel drums without marking the drums for special cleaning prior to refilling with aviation fuel.[112]

Lack of reliable communications with the Joint Operations Center was another common problem of the tactical wings as they set up in Korea. At Pusan the 6002d Tactical Support Wing had a direct telephone and teletype to the Joint Operations Center at Taegu, but when the Joint Operations Center moved northward to Seoul, the lengthened lines required relay stations which brought increased maintenance difficulties.[113] During November communications between the 6149th Wing at Taegu and the Joint Operations Center were said to have been inoperative 20 percent of the time.[114] Even at Kimpo the 51st Wing had difficulty in transferring intelligence to the Joint Operations Center in Seoul, and resultant delays of flash intelligence permitted numerous tactical targets to escape follow-up attacks. A direct teletype to the Joint Operations Center would have alleviated this disadvantage, but equipment could not be obtained.[115]

Most of these common problems had

been foreseen and would be corrected in time. The greatest imponderable to the Fifth Air Force, however, was how the Shooting Star jets were going to stand up under rugged field conditions. Operating its F-80C's from the rough facilities at Taegu, the 49th Group gained experience indicative of what a jet outfit could expect to encounter under the most extreme conditions. Laid over recently recovered rice paddies, the 5,700-foot pierced-steel plank runway soon developed subsurface defects which could not be completely repaired. Irregularities and jagged edges in the steel plank caused such frequent tire failures that main gear tires had to be changed after seven or eight landings. With increased proficiency 7th Squadron pilots averaged 22 landings per main tire, but one "hot" touchdown would ruin a new set of tires.[116] The short length of the strip caused some concern, but pilots were soon checked out in water-alcohol injection procedures which gave them an additional surge of power, decreasing the takeoff roll by 500 feet and increasing rates of climb and acceleration. Without water-alcohol injection the jets probably could not have operated from Taegu.[117]

Taxiing jets stirred up billowing clouds of dust, and, although maintenance units improved the dust problem by towing the jets to starting positions at the end of the runway, air-filter changes were frequently necessary. Parking space was at a premium and fighters had to be spotted at extemporized locations, an expedient which favored accidents. On 10 October, for example, an RB-26 blew a tire on landing and plowed into four F-80's parked along the edge of the runway.[118] Despite hazardous operating conditions, shortages of spare parts, and severe problems of maintenance, the 49th Group maintained an aircraft in-commission rate of 82.55 percent during October. "The F-80 is bearing up well under the strain of operating under minimum operational and maintenance facilities," the 7th Squadron reported; "from every standpoint it is doubtful whether any other jet aircraft could do the job."[119]

Although the movement of the tactical air wings to Korea necessitated hard work, Fifth Air Force pilots were elated because of reduced flight time and no more over-water flights. Living conditions at Pohang were primitive, reported the 40th Squadron, but the stay at Tsuiki had conditioned personnel to all forms of hardship. After Tsuiki, Pohang was not so bad. Within a few weeks living conditions improved at most Korean bases. During the latter part of October personnel of the 49th Group moved from tents to Korean-built barracks, a welcome change with the arrival of cold weather. On 1 September the Fifth Air Force announced that a person with six weeks in Korea would be entitled to three days of temporary duty in Japan at a station of his choice. "This little project has much to do with the high morale maintained in the squadron," wrote the 8th Squadron's historical officer. There was some discontent that FEAF had not announced any definite number of missions prerequisite to rotation, but in October most personnel were glad to have made the move to Korea, where, with the effective strength of the Fifth Air Force brought to bear, it did not appear that the war would be continued very long.[120]

# 6. *The Strategic Bombing Campaign*

## *1. North Korea's Industrial Target System*

"While I do not presume to discuss specific targets," General Vandenberg informed General Stratemeyer on 3 July, "it is axiomatic that tactical operations on the battlefield cannot be fully effective unless there is a simultaneous interdiction and destruction of sources behind the battlefield." A year later General Vandenberg offered these same thoughts to congressional investigators. "The proper way to use airpower," he said, "is initially to stop the flow of supplies and ammunition, guns, equipment of all types, at its source."[1] But in early July 1950 it was already evident that the North Korean People's Army was drawing a major proportion of its logistical support from Communist production centers beyond the borders of Korea, sources which were off limits to American strategic bombers.

Although USAF commanders recognized that strategic air attacks aimed at the enemy's military, industrial, political, and economic system could not be decisive in Korea, they also knew that North Korea's industries had made very important contributions to Japan's war effort in the world-wide struggle which had concluded in 1945. American intelligence in 1950 could not say whether North Korea's industrial potential had the same capability to support the Red Korean war effort as it had offered to the Japanese. Whether the industries had fallen into disuse, had been dismantled by the materiel-hungry Russians, or were operating at reduced capacity would have to be determined by aerial reconnaissance.[2] Any industries in North Korea operating directly or indirectly in support of the Red regime's war effort, however, had to be destroyed at the earliest possible moment. Under no circumstances could the Red Koreans be allowed the luxury of an uninterrupted industrial system in support of their military forces in the field.

As soon as the 22d and 92d Bombardment Groups were ordered to the Far East, the Directorate of Intelligence of the Strategic Air Command instituted a "crash" project looking toward the recommendation of strategic targets and target systems in North Korea. This Strategic Air Command intelligence research soon showed North Korea to have five major industrial centers: Wonsan, Pyongyang, Hungnam (Konan), Chongjin (Seishin), and Rashin (Najin). With the exception of Pyongyang, all of these industrial centers were on the northeastern coast of Korea. Wonsan was a major seaport and railway center and the site of petroleum refining in Korea. The Chosen Oil Refinery on the south edge of Wonsan's harbor was the largest Korean oil refinery and one of the largest in Asia. Five miles northwest of the city the Rising Sun Petroleum Company had a large petroleum tank farm. Wonsan's port and dock area could accommodate ocean-going vessels; its railroad yards were one of the three most important rail hubs in Korea; and its locomotive shops were the second largest rail-repair and manufacturing establishment in Korea. Pyongyang, the capital of the North Korean regime, was also the army arsenal center of Korea. Second in size in Asia to the Mukden arsenal in Manchuria, Pyongyang's armaments

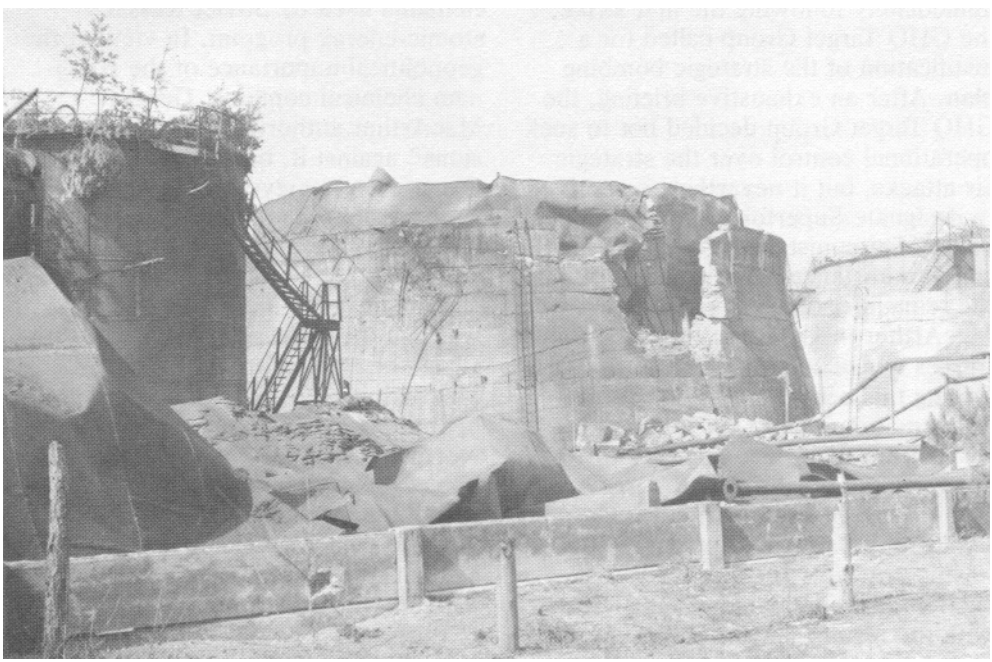
plants produced rifles, automatic weapons, ammunition, artillery shells, grenades, bombs and mines, and military vehicles. Pyongyang had large freight yards and a major railway shop which manufactured and repaired rolling stock. The old Showa Aircraft Factory and the air section of the arsenal were believed to be the center of North Korea's aircraft maintenance and supply. On the northeastern coast of Korea the Hungnam (Konan) area constituted the most extensive basic-chemical and light-metals production complex in the Far East. In the environs of Hungnam were located the Chosen Nitrogen Fertilizer Company, the Chosen Nitrogen Explosives Factory, and the Bogun (Motomiya) Chemical Plant. In the mountainous northeastern section of Korea the port city of Chongjin (Seishin) possessed two major harbors, important railway yards and workshops, the Japan Iron Works, and the Mitsubishi Iron Company. Far to the northeast and only sixty miles from Vladivostok was the important port and naval base of Rashin (Najin), whose naval oil-storage facilities and railway yards were of significance both to the North Koreans and the Russians.

In addition to the major industrial complexes at Wonsan, Pyongyang, Hungnam, Chongjin and Rashin, North Korea held a few other more scattered strategic objectives. On Korea's west coast, at the mouth of the Taedong River, Chinnampo harbor had anchorage for ships of any draft. In the city were the Chosen Riken Metals Plant, producing aluminum and magnesium, and the Japan Mining Company Smelter, producer of copper and low-grade zinc. The Kyomipo Steel Plant, ten miles east of Chinnampo on the Taedong River, produced pig iron and steel. On the east coast at Songjin other metals plants produced high-grade steels. In order to supply energy to the chemical and light-metals industries, the Japanese had built in North Korea one of the world's principal hydroelectric complexes. On the shallow western slopes of the spinal mountains of the eastern coast the Japanese had built storage dams; they had tunneled through the drainage divide and dropped stored water down the precipitous eastern mountain slopes through penstocks to a series of generating plants. There were five of these eastern power systems: Fusen, Choshin, Kyosen, Funei, and Kongo-san. At Sui-ho, on the Yalu River about 30 miles northeast of Antung, the Japanese had developed the world's fourth largest hydroelectric power project. Unlike the east-coast facilities, Sui-ho had an impounding dam with adjacent powerhouses, and it exploited a large volume of water rather than head for its hydraulic pressure. Ever since May 1948, when the Red Koreans had cut off power transmissions south of the 38th parallel, North Korea had possessed a surplus of electrical power for export to the Communist nations of the Far East. Nearly half of Sui-ho's output of 300,000 kilowatts powered Chinese Communist factories in Manchuria.[3]

As soon as intelligence officers established the magnitude of North Korea's industrial development, the Strategic Air Command gave thought to target priorities and force requirements. Under normal circumstances, strategic target priorities are calculated in terms of the immediacy of the effect of their destruction on an enemy's ability to wage war: thus direct war-supporting industries would be in first priority, end-product or general industries in second priority, and basic-processes industries in third priority. Because of

the relative smallness of the five main areas of industrial concentration in North Korea, however, the Strategic Air Command's director of intelligence recommended attacks by area rather than by target systems. Since all priority targets were close together, a minimum number of raids would eliminate all targets within areas more quickly than would scattered attacks against targets in a given target system. Computation of force requirements involved such matters as weather forecasts, the bombing techniques to be used, and the type of munitions to be employed. The Strategic Air Command recognized that most North Korean target areas could be most efficiently destroyed with a predominant employment of incendiary bombs. Using less accurate radar aiming, the medium-bomber crews could direct incendiary bombs against area targets by day or night, regardless of target weather. Fire-bomb raids would not only destroy the major industrial targets but would eliminate many subsidiary factories near the major plants. But the Strategic Air Command had some doubt as to whether fire raids would be acceptable in Korea, and it accordingly devised twin plans: one involving the employment of incendiaries against the target areas, the other foreseeing the employment of demolition bombs in precision attacks against the industrial plants.[4]

After the plan was completed by the Strategic Air Command, it was presented to Major General Emmett O'Donnell, who carried it to Japan and submitted it for General Stratemeyer's approval. As a veteran of the strategic air war against Japan, General O'Donnell personally endorsed the



The Bumpyo Oil Storage Area at Wonsan after a FEAF bombing raid, 18 October 1950.

concept of area attacks with incendiary munitions. "It was my intention and hope ...," said O'Donnell, "that we would be able to get out there and to cash in on our psychological advantage in having gotten into the theater and into the war so fast by putting a very severe blow on the North Koreans, with an advance warning, perhaps, telling them that they had gone too far in what we all recognized as being an act of aggression . . . and [then] go to work burning five major cities in North Korea to the ground, and to destroy completely every one of about 18 major strategic targets."[5]

Heralding its arrival in the Far East, the FEAF Bomber Command dispatched the 22d and 92d Bombardment Groups in a strategic strike against the marshaling yards of Wonsan on 13 July. General O'Donnell immediately laid plans for a second mission against the railway yards in Pyongyang, but, immediately following the first strike, the GHQ Target Group called for a justification of the strategic bombing plan. After an exhaustive briefing, the GHQ Target Group decided not to seek operational control over the strategic air attacks, but it nevertheless resolved to designate Superfortress targets under "special circumstances."[6] Such "special circumstances" prevailed during the remainder of July, for General MacArthur insisted that the Superfortresses would support the Eighth Army. During this period the FEAF Target Section attempted to lay foundations for a strategic air campaign. Prior to the Korean war, the FEAF Target Section had been preparing standard USAF target dossiers for potentially hostile targets in the Far East. The section, however, had neglected Korea, with the result that this peninsula was not covered by target dossiers on 25 June. The old target-folder system of World War II vintage covered 159 targets in South Korea and 53 in North Korea and provided immediate operational intelligence for air strikes. As a result of hurried effort, the FEAF Target Section completed dossiers for most North Korean targets by 25 July.[7]

Back in Washington during July the Joint Chiefs of Staff became increasingly impatient with the delayed strategic bombing attack. So long as the North Koreans drew support from virtually bomb-free industries in North Korea, United Nations forces would find it difficult to defeat them on the battlefields of South Korea. More mature study, moreover, demonstrated that North Korean industry was contributing significant strength to Russia in the cold war. At some plant in the chemical complex at Hungnam the North Koreans were reportedly processing monazite, a primary source of thorium and other radioactive elements used by Soviet Russia's atomic-energy program. In view of the geopolitical importance of the Hungnam chemical combine, General MacArthur authorized "special missions" against it, but he cautioned General Stratemeyer not to lessen the support which the Superfortresses were giving to the ground troops in South Korea.[8]

Thinking both in terms of the cold war and the hot war in Korea, the Joint Chiefs of Staff informed General MacArthur on 31 July that mass air operations against industrial targets in North Korea were "highly desirable." To get the air campaign under way without more delay, the Joint Chiefs directed General Vandenberg to make available to MacArthur two more medium-bomber groups for a period of thirty days. Although they said that they did not intend to preclude MacArthur from employing the extra

medium-bombers on other overriding missions, the Joint Chiefs desired the B-29's to destroy the two munitions plants and railway yards and shops at Pyongyang, the three chemical plants at Hungnam (Konan), the oil refinery and railway yards and shops at Wonsan, and the naval oil-storage tank farm at Rashin (Najin).[9] On 15 August the Joint Chiefs designated additional strategic targets: the railway yards and shops and the harbor facilities at Chongjin (Seishin); the railway yards, the "Tong Iron Foundry," and the "Sam Yong Industrial Factory" at Chinnampo; the railway yards and shops and the docks and storage areas at Songjin; the railway yards at Hamhung; and the railway yards at Haeju.[10]

General MacArthur readily accepted the two additional medium-bomber groups, and General Weyland, on 2 August, secured a meeting of the FEC Target Selection Committee to discuss the implementation of a strategic air campaign. The committee of high-ranking officers was briefed on the FEAF plan for strategic air attacks against the five main industrial areas of North Korea, a plan which was little changed from that which General O'Donnell had brought from the Strategic Air Command. Based upon purely military considerations, FEAF urged that incendiary attacks would be most economical, efficient, and expeditious. Given visual bombing weather, two medium-bomber groups could destroy the five industrial areas in thirty days, but weather forecasts indicated that the North Korean industrial areas would probably be cloud covered during half the days of August. For this reason General Weyland argued that three medium-bomber groups should be committed to the strategic air campaign, but, in the end, he had to give way to the counter-arguments of the Army representatives on the committee, who insisted that two groups were enough for the strategic air attacks and that the other three groups should continue interdiction attacks.[11] At the Target Selection Committee meeting General Weyland pointed out that someone would have to decide whether or not the B-29's could use incendiary munitions, and within a few days FEAF got the answer to this question—in the negative. Washington was very hesitant about any air action which might be exploited by Communist propaganda and desired no unnecessary civilian casualties which might result from fire raids. General Stratemeyer consequently directed General O'Donnell not to employ incendiaries without specific approval.[12] A little later the Joint Chiefs of Staff forwarded further instructions that Bomber Command must drop warning leaflets notifying civilians to leave the industrial areas before the factories were attacked.[13]

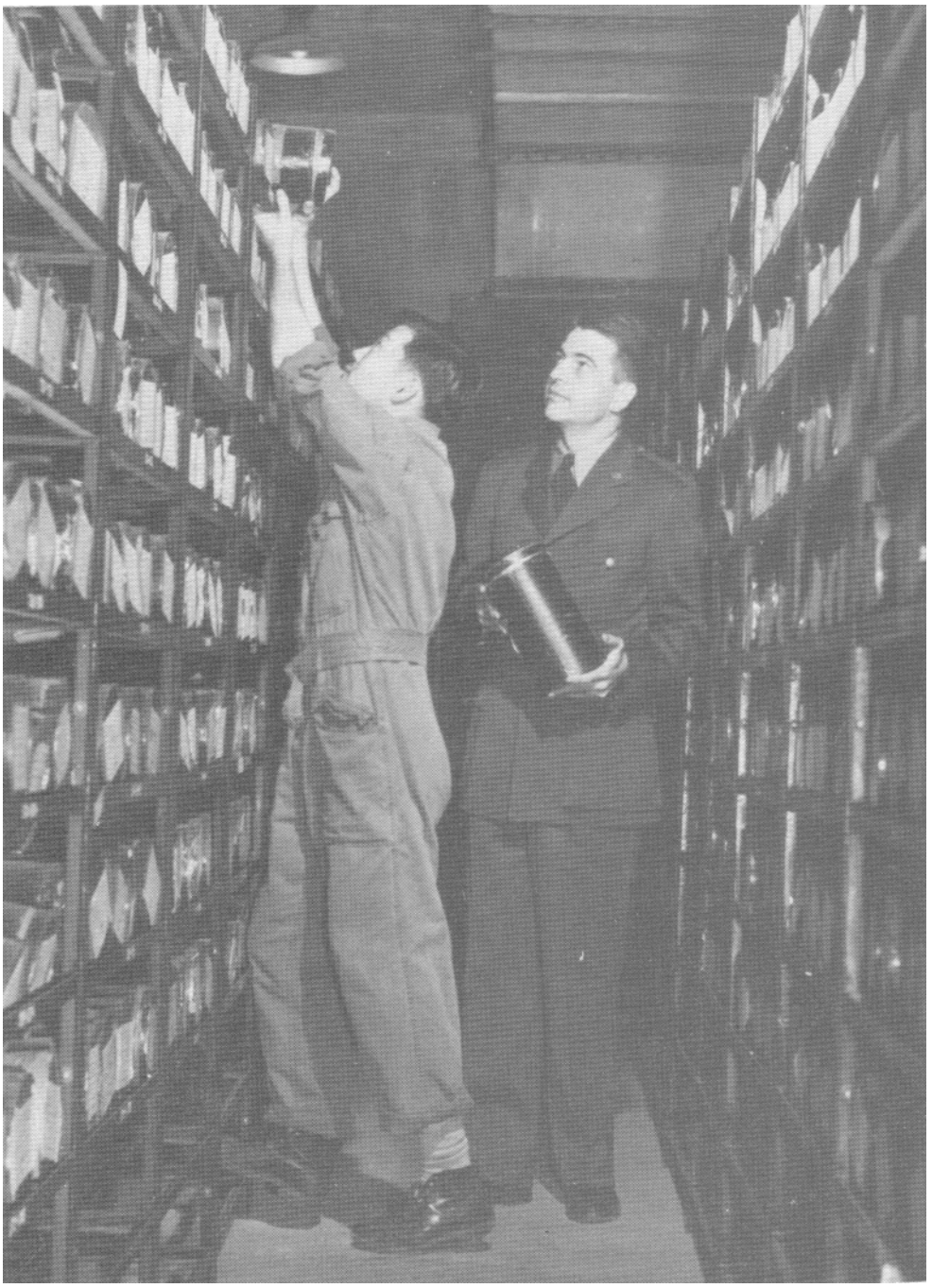
When the 98th and 307th Groups arrived in the theater, General Stratemeyer on 8 August ordered O'Donnell to put the strategic offensive into effect, using the maximum effort of two B-29 groups against industrial targets every third day.[14] This allocation of effort continued in force until 20 August, when General Weyland, arguing the fact that several of the newly designated Joint Chiefs of Staff strategic objectives were actually interdiction targets, persuaded the FEC Target Selection Committee to commit three medium-bomber groups to strategic bombing.[15] On the basis of this decision, General Stratemeyer directed General O'Donnell to employ the maximum effort of three groups against strategic targets, with two days' stand-down between strikes.[16]

## *2. Hungnam Strikes Establish Operational Precedents*

Based upon the special information from Washington regarding the peculiar importance of the target, General Stratemeyer, on 21 July, instructed the FEAF Bomber Command to prepare plans for strikes against the Communist chemical combine at Hungnam, a mission which the command would be expected to accomplish with a total strength of two groups and with high-explosive bombs.[17] The FEAF Bomber Command had already made one large-scale attack against the marshaling yards at Wonsan, but the Hungnam attacks were to be bigger—both in the number of planes required to do the task and in the size and importance of the target.

At first General Stratemeyer specified that the Chosen Nitrogen Fertilizer Company, the Chosen Nitrogen Explosives Company, and the Bogun (Motomiya) Chemical Plant were to be attacked under visual conditions, each in two-group strength in three days as rapidly hand-running as possible in order to prevent the enemy from devising any protection for the plants. These conditions, however, were incompatible, especially the requirement for visual bombing. During the summer monsoon in Korea Bomber Command was seldom able to obtain a weather forecast which would hold good three days in advance. If the targets were to be attacked in a short period of time, Bomber Command would have to target them for either radar or visual attack. Moreover, as Bomber Command operations officers examined the FEAF target dossiers for the Hungnam targets they soon determined that the lithographed target illustration sheets included in the dossiers "had almost no value to FEAF Bomber Command crews." Operations officers were supposed to plot aiming points on these target illustration sheets and aircrews were expected to use them for familiarization, but the original photography was lacking in uniformity, the reproduction was poor, and the lithographs displayed little appreciation for the problems of target identification from the higher altitudes at which medium bombers would attack. Fortunately, the Bomber Command intelligence officer had picked up a set of superseded target-illustration folders from storage on Guam, and these old folders contained annotated photographs of North Korean targets. Bomber Command used these photographs and other similar ones obtained by the 31st Strategic Reconnaissance Squadron for planning and briefing its strategic missions. Arrangements were also made whereby the 31st Squadron would perform radar-scope photography and the 548th Reconnaissance Technical Squadron would screen and catalogue the radar target materials.[18]

As a first step in planning the Hungnam missions, FEAF Bomber Command operations officers determined that all three of the plants were so situated that land and water contrasts on the radar scopes would make them good radar targets. In this respect the Chosen Nitrogen Explosives Factory was the best radar target of the three plants. If at all possible the operations planners wanted the bomber crews to employ the more accurate visual bombing, but the planners knew that they had to count on the eventuality of radar attacks, for heavy cloud cover was usual along Korea's eastern coasts. The 19th Group had no AN/



All FEAF reconnaissance photography eventually arrives here at the 548th Reconnaissance Technical Squadron for storage in the Photo Intelligence Section.

APQ-13 bombing radar; therefore, the missions would have to be flown by the 22d and 92d Groups. The operations planners finally specified three methods of attack for as many different sets of target conditions: squadrons in trail, bombing visually on squadron leaders; squadrons in trail, bombing by radar on squadron leaders; or a bomber stream of individual aircraft, bombing individually by radar. An airborne commander, who would reconnoiter the target area prior to the arrival of the bomber formations, would make the final decision as to the method of attack to be employed.[19]

As a result of the careful planning and the superior skills of the Bomber Command crews, mission "Nannie Able" against the Chosen Nitrogen Explosives Factory went off smoothly on the morning of 30 July. Within four minutes, beginning at 0954 hours, 47 B-29's were over the Hungnam factory in squadron "vic" or "V" formations. Cloud cover underneath the bombers forced the lead squadrons to bomb by APQ-13 radar, but the large fires set in the center of the factory burned some of the clouds away and the trailing squadrons got some visual assistance for their radar bombing. All bombs fell into the target area, completely destroying 30 percent of the factory and heavily damaging 40 percent of it. The radar bombing was "superior" and attested the value of intensive radar-training programs of the Strategic Air Command.[20]

Operational planning for "Nannie Baker"—the attack made against the Chosen Nitrogen Fertilizer Factory on 1 August—was identical to that employed on the first strike against the Hungnam complex. On this strike, however, the squadrons of the 22d and 92d Groups found weather clear enough so that they could use their Norden bombsights, and, except for the last squadron (which was unable to see the target through the billowing clouds of smoke and bombed by radar), all bombing was visual. The 46 B-29's which attacked the fertilizer factory walked their 500-pound bombs across their aiming points and set off explosions large enough to rock the aircraft at 16,000 feet.[21] Again on 3 August the 22d and 92d Groups sent 39 aircraft on mission "Nannie Charlie" against the Bogun Chemical Plant. All squadrons bombed through the clouds from base altitudes of 16,000 feet. Bombing results were good to excellent, but the two overworked groups had not had enough aircraft on the mission to cover all aiming points.[22] After this third attack against the Hungnam chemical complex in five days General Stratemeyer announced that the biggest explosives and chemical center in Asia could "no longer be considered a major factor in the Korean war."[23]

### *3. Sustained Strategic Bombing Operations*

The operational precedents of the Hungnam strategic strikes became a part of routine operational planning as the FEAF Bomber Command began its sustained strategic attacks with an all-out mission against Wonsan's railway shops and oil refinery on 10 August. While the prohibition on incendiaries

necessitated additional sorties, General O'Donnell privately hoped to improve on the seven missions per B-29 per month which MacArthur had said would satisfy him. With 80 assigned B-29's on 26 July, O'Donnell had already informed FEAF that he meant to drop more than 5,500 tons of bombs a month, thus bettering the peak record of B-29 employment from the Marianas in World War II when the planes were new, maintenance simpler, and replacement crews plentiful.[24] As good as the commanding general's promise, Bomber Command's B-29's averaged 8.9 sorties per month between 13 July and 31 October. During the period Bomber Command dropped 30,136 tons of bombs.[25]

Good target research and analysis insured that Bomber Command's ordnance was not wasted. When the headquarters of Bomber Command were established, everyone had thought that the FEAF Target Section would provide most information needed by the bomber crews, and the Bomber Command intelligence function had comprised a section under the operations division with two officers. As a result of additional targeting duties thrust upon Bomber Command, General O'Donnell established intelligence as a separate division, coequal with operations and materiel, and by 10 August the intelligence division reached a strength of seven officers and eleven airmen. Working in close coordination with the 31st Strategic Reconnaissance Squadron and the 548th Reconnaissance Technical Squadron, the Bomber Command intelligence division accumulated the minimum target materials needed by B-29 crews. In the course of 46 strategic target attacks, only one group failed to receive adequate photography and radar-scope target materials. In this instance the courier to Okinawa was delayed, but the group concerned found visual conditions and bombed its target with excellent results.[26]

"We are in no position to select or wait for favorable weather," General O'Donnell announced at the beginning of the strategic bombing campaign.[27] In each of the strategic missions Bomber Command therefore dispatched an airborne commander in a weather aircraft ahead of the striking force. This senior officer had authority to direct the method of attack, to decide whether the target could be bombed by radar, or to direct the mission to an alternate target. All formation-bombing attacks were planned along the best axis for a radar bombing run, and squadron formations usually dropped on the lead bombardier, whether the bombing was visual or by radar. When clouds at bombing altitudes prevented formation attacks, the airborne commander could call for a "Hometown" attack in which a bomber stream of individual aircraft crossed the target at one-minute intervals, bombing individually by radar. The "Hometown" procedure sacrificed the close bombing pattern desirable against industrial targets, but it permitted Bomber Command to surmount the worst of bombing weather.[28]

The arrival of the 98th and 307th Groups gave Bomber Command the strength it needed for tactical and strategic bombing, but the two groups based at Yokota and the three groups flying from Kadena seriously overcrowded the airspace surrounding both of these airfields. Stringent traffic control and ground-controlled approach (GCA) techniques were mandatory. During August the Kadena GCA provided 553 radar-controlled landings, and the emphasis on the radar-approach training brought control

personnel up from a "relatively weak and inefficient" status to an "efficient and effective status."[29] Flight control at Yokota was additionally hazarded by the congested air traffic always found over the Tokyo area, and low summer cloud ceilings over central Japan necessitated heavy reliance on GCA control. The skill of the GCA controllers paid off handsomely on 29 August when 24 B-29's were landed safely at Yokota under a 300-foot ceiling after a nine-hour mission to Chongjin.[30] Congestion at the medium-bomber airfields also affected the conduct of strategic bombing missions. On these large-scale efforts the groups were staggered in the times that they were to arrive over the targets in order to get the greatest practicable intervals between the times that they returned to the same base. Squadrons were often scheduled over targets at five- to ten-minute intervals. Such tactics did not bring a maximum concentration of aircraft on the target in the shortest period of time, but the weak enemy defenses allowed Bomber Command to escape damage. Had the North Koreans possessed adequate antiaircraft artillery, or active fighter aircraft, Bomber Command's leisurely flights over targets, together with the patterned medium-bomber routes to and from Korea, would have been extremely hazardous.[31]

As the medium bombers accomplished their strategic air attacks, some uncertainties as to targeting and the vagaries of the weather presented the only obstacles to a successful accomplishment of their mission. Intelligence officers at FEAF were never able to identify the Chinnampo "Tong Iron Foundry" or the Chinnampo "Sam Yong Industrial Factory," either from detailed city plans or aerial photography, but the medium-bombers destroyed the Japan Mining and Smelter and the Chosen Riken Metals Company which were in the vicinity of the never-located Joint Chiefs of Staff targets.[32] In the end, weather prevented the bombers from destroying the naval oil-storage areas at Rashin (Najin). Although the Joint Chiefs had listed this target, the American State Department had been dubious about the wisdom of hitting an objective in a city only 17 miles from the Siberian border. Fearing that errant bomber crews might violate Russian territory, USAF cautioned FEAF that attacks against Rashin were to be made only under visual bombing conditions and after positive target identification. Someone at FEAF, however, neglected to pass this order on to General O'Donnell, and on 12 August Bomber Command bombed Rashin by radar. On this day B-29 bomb patterns were strangely off in azimuth, and the center of the bomb pattern fell into the unoccupied countryside near the port city, doing no damage to the target and little damage to the city. No violation of the Soviet border was alleged, but USAF strongly reminded General Stratemeyer that Rashin attacks were to be visual bombing efforts. On 22 August 64 B-29's retraced their way to Rashin, but bad weather forced the bombers to attack secondary targets at Chongjin (Seishin). At this juncture the State Department strongly objected to the continuance of Rashin as an air target, and on 1 September the Joint Chiefs put the city off limits for air attacks.[33] The Joint Chiefs of Staff apparently reasoned that Rashin was an important center of Communist supplies but that the movement of these supplies could be effectively interdicted somewhere along the long coastal route leading southward from the border city. Later on, during the course of congressional

hearings on affairs in the Far East, General MacArthur's supporters would cite the Rashin experience as "a flagrant example of political interference in military decisions."[34]

"Practically all of the major military industrial targets strategically important to the enemy forces and to their war potential have now been neutralized," General Stratemeyer stated on 15 September.[35] Even earlier than this FEAF target planners had been perplexed by the growing shortage of strategic targets in North Korea and the indecision as to whether United Nations forces were going to occupy North Korea. On 23 August FEAF intelligence had asked USAF to give some guidance on this subject. If North Korea was to be occupied, FEAF wanted to neutralize the industrial targets; if North Korea would not be occupied, FEAF wanted to destroy its industrial potential, particularly the hydroelectric power complex which was sending energy into Manchuria and Siberia. Having secured no guidance from Washington, FEAF intelligence on 21 September strongly recommended that the North Korean hydroelectric generating facilities should be attacked.[36] On the basis of this recommendation, General Weyland directed that the hydroelectric complex be made available to the FEAF Bomber Command. At a staff briefing at GHQ on 26 September, however, Maj. Gen. Doyle O. Hickey, acting chief of staff of the

(left to right) Maj. Gen. Doyle O. Hickey, Gen. Douglas MacArthur, Maj. Gen. Leven C. Allen, Maj. Gen. Earle E. Partridge, and Col. A. W. Tyer, commander of the 49th Fighter Bomber Wing.

Gen. Hoyt S. Vandenberg (left) confers with Lt. Gen. George E. Stratemeyer in a staff car enroute to Tokyo.

United Nations Command, ventured the opinion that United Nations troops would occupy North Korea and therefore questioned whether the hydroelectric plants should be attacked. After the briefing was over, General Hickey took the matter to General MacArthur, who told him that FEAF should attack the hydroelectric complex as planned.[37] Even as the policy regarding air attacks against North Korean hydroelectric plants was under discussion in Tokyo, eight B-29's of the 92d Bombardment Group were attacking the Fusen Hydroelectric Plant inland from Hungnam. In a leisurely demonstration of precision demolition, these B-29's went to the Fusen plant in pairs, and chopped out its transformer yards and penstocks with 1,000-pound bombs.[38]

This attack against the Fusen hydroelectric generating plant on 26 September marked the end of the strategic bombing campaign against North Korea. Back in Washington the United States government had decided to authorize General MacArthur to cross the 38th parallel.[39] On 26 September the Joint Chiefs of Staff accordingly informed General MacArthur that air attacks against targets of relatively long-term military significance in North Korea were no longer necessary. Henceforward, the Joint Chiefs directed, United Nations air forces would be employed only against objectives which had a bearing on the tactical situation in North Korea.[40]

*4. Evaluation of the Strategic Air Campaign*

"The FEAF Bomber Command, new as it is in the annals of the United States Air Force," General Stratemeyer wrote General O'Donnell, "has made history for which you and every member of your command can be justly proud."[41] In a little more than a month the FEAF Bomber Command had neutralized all but one strategic bombing objective contributing support to the North Korean People's Army. The sole target which was not effectively attacked—the naval oil-storage tanks at Rashin—had been proscribed for air attack because of political considerations. Had the FEAF Bomber Command been permitted to make radar-directed attacks against Rashin, General O'Donnell was certain that the B-29's could successfully have destroyed the strategic target there, without compromise to the Russian border.[42] Damage assessment reports revealed that the B-29's had achieved marked success against the strategic targets. Although only 2.5 per cent of the B-29 effort had been employed in strategic attacks, the medium bombers had effected an average of 55 percent destruction on the industrial targets of the strategic bombing list. General O'Donnell attributed the successful accomplishment of the mission to the high degree of professional competence of the Strategic Air Command's medium-bomber crews, but the groups recognized that they had, in some part, benefited from the exceptional combat conditions in Korea. "Our bombing should have been good," said Colonel James V. Edmundson, commander of the 22d Group. "We didn't have any opposition and the bombardiers had all the time in the world to make their bomb runs."[43]

Because the North Korean People's Army drew most of its logistical support from sources beyond Korea's borders, the strategic bombing campaign lacked decisiveness in terms of the ground fighting in South Korea,[44] but on-the-ground surveys of the strategic bombing effort revealed that the medium bombers had made an appreciable contribution to the United Nations victory south of the 38th parallel. Communist prisoners of war attributed the shortage of petroleum, oil, and lubricants in the North Korean army to the bombing of the large petroleum refinery at Wonsan.[45] North Korean civilians who had worked in Pyongyang's arsenals told a bombing-evaluation team that these munitions factories had been reopened in January 1950 with all-out production goals. When they were blasted by the B-29's, the Pyongyang arsenals were employing more than 40,000 persons in the manufacture of small arms, munitions, and field guns.[46] A significant part of the North Korean industrial complex had been furnishing goods to Communist China and Russia. At Songjin a shipping clerk who had retained his records showed investigators that the steel refinery had sent more than a thousand tons of tungsten and larger quantities of high-grade steel to China and Russia during 1949. After February 1950 Russia had been getting most of the refinery's metals production.[47] A North Korean employee told bombing evaluators that the Pyongyang railway shops had been capable of reconditioning 16 locomotives at a time and that 1,600 workers had been employed there. Three key employees of the Wonsan locomotive works testified that the B-29's had rendered more than

Bomb damage to city of Wonsan, 14 October 1950.

1,850 workmen idle when they destroyed the expansive railway shops in the east-coast city. Normally, the Wonsan shops could repair 30 locomotives and a greater number of rail cars.[48]

The FEAF Bomber Command strategic air attacks destroyed none but legitimate military targets in North Korea, and the bombing was so accurate as to do little damage to civilian installations near the industrial plants. Although the industrial area of Pyongyang was almost completely gutted by bombs, the remainder of the city showed "almost no evidence of battle damages."[49] Even radar missions were outstandingly accurate: one radar-directed strike knocked out the Chosen nitrogen explosives factory but did practically no damage outside the factory area.[50] Warning leaflets dropped prior to the industrial attacks gave civilian workers ample warning that the bombers were coming. Three railway mechanics at Wonsan told investigators that American planes showered the railway shops with warning leaflets three days prior to the bombing attack. Communist soldiers warned the rail workers not to pick up the leaflets, but a few workers read them and passed the word of the impending air attack.[51]

Despite efforts of the FEAF Bomber Command to make the bombing raids as humane as possible, Communist propaganda exploited the attacks to the utmost. The Russian representative in the United Nations Security Council charged that the United States was conducting barbarous and indiscriminate bombing attacks against peaceful towns and civilians. Although the Communist propaganda was untrue, the falsehoods gained some acceptance throughout the world. On 19 August the London *News Chronicle* speculated that the B-29's might be doing more damage to the democratic cause than to the Communists.[52] An American news analyst pointed out that Asians, long accustomed to manual labor, regarded factories as facilities which lightened their toil, and felt a sense of personal loss when the North Korean industries were destroyed.[53] India's press assumed an alarming racist note. As has been seen, the usually friendly *India News Chronicle* recalled that during World War II "Americans and other western people showed special solicitude toward the European enemy, but adopted different codes of conduct in Japan and elsewhere in the East, culminating in the choice of Japanese towns as targets for the first atom bombs."[54] World press comments such as these made it evident that the United Nations Command would have to fight the Reds with ideas as well as bombs.

# 7. *On to the Yalu*

## *1. "A Feeling of Elation and of High and Successful Purpose"*

"There was at this fateful hour," wrote United Nations Secretary General Trygve Lie of events in early October 1950, "a feeling of elation and of high and successful purpose which the United Nations experienced only rarely." For several months fearful diplomats who sympathized with the United Nations cause had asked each other: "Can we hold the Korean bridgehead?" Now, following the overwhelming victory of United Nations arms against the aggressor in South Korea, the point of debate had become: "Should the United Nations forces pursue the aggressor into North Korea?"[1]

Unknown to American journalists and to many of the lower ranked military men in the Far East, who deplored the "indecision" as to whether United Nations forces would cross the 38th parallel, the United States had already decided that General MacArthur's troops possessed an authority to enter North Korea. The Security Council's resolution of 27 June 1950, which empowered the United Nations commander to repel the North Korean invasion and to restore international peace and security in the area, was broad enough to encompass military operations against remnants of the Communist regime in North Korea. "We regarded that there was no, you might say, legal prohibition against passing the 38th parallel," stated Secretary of Defense George C. Marshall.[2] Before the landing at Inchon the U.S. National Security Council had recommended that action, or lack of it, on the part of Soviet Russia or Communist China would determine the future course of military operations in Korea. If the Russians or Chinese gave no indication of intervening, the Security Council recommended that General MacArthur would extend his operations into North Korea. But in the event of Communist intervention, no ground operations should be conducted north of the 38th parallel. With President Truman's approval, the Joint Chiefs of Staff prepared a directive based upon the Security Council paper, and this directive went to General MacArthur on 15 September—the day of the landing at Inchon. When the Communist hierarchy made no efforts to prevent the defeat of the North Korean People's Army, the Joint Chiefs of Staff sent new instructions to General MacArthur on 27 September. This order told MacArthur that his military objective was "the destruction of the North Korean Armed Forces." It authorized him to conduct military operations in North Korea, provided there was no threat or actual intervention of Russian or Chinese forces. Under no circumstances would United Nations forces cross the Manchurian or Siberian borders, and, as a matter of policy, no non-Korean ground forces would be used in the provinces adjacent to the Manchurian or Siberian border.[3]

Within the United Nations Secretary General Trygve Lie sponsored a solution for the Korean problem which was somewhat different from that favored by the United States. On 30 September Lie and his advisers prepared and circulated a draft working paper which suggested that the General Assembly would demand that the

North Korean government agree to a withdrawal of its forces, a cease-fire, a demilitarization, and a free election to unite Korea. If the North Korean regime accepted these conditions, it would continue as a *de facto* government until the United Nations elections, which would be held within a year. If the Red Koreans refused, the General Assembly would recommend military operations north of the 38th parallel.[4] Already, on 28 September, the Joint Chiefs had directed MacArthur to offer surrender terms to the Korean Reds, and at noon on 1 October Radio Seoul and Radio Tokyo began to broadcast a demand that North Korean forces lay down their arms and cease hostilities.[5] But the North Korean government did not respond to this cease-fire call, and, in fact, its propaganda broadcasts stressed the claim that the Red retreat was temporary and "strategic." The strident assertion that Communist troops would strike again left the United Nations General Assembly no alternative but to accept a military advance north of the 38th parallel. On 7 October the General Assembly accordingly approved the American-sponsored resolution which recommended that "all necessary steps be taken to ensure conditions of stability throughout Korea."[6]

The success or failure of the newly stated mission of United Nations forces would depend upon the warlike intentions of the Chinese Communists and Russians. All summer long both the United States Central Intelligence Agency and the Far East Command intelligence officers had been posting the movements of Chinese troops into Manchuria. "That the enemy was shifting his forces northward," stated MacArthur, "I know thoroughly."[7] According to the best American intelligence estimate, the Chinese Communists had about 116,000 regular troops in Manchuria on 8 July, 217,000 on 8 August, 246,000 on 30 August, and, by 21 September, transfers from southern and central China had augmented the Manchurian garrisons to an estimated 450,000 men. Many of these troops belonged to Communist General Lin Piao's Fourth Field Army, which was normally stationed in Manchuria, but which had been transferred south to participate in operations against Hainan and Formosa, and, following the postponement of this aggression, might merely be returning to its home stations.[8] On 5 October General MacArthur's intelligence reported 18 Chinese divisions along the Yalu, while a total of 38 divisions was said to be in Manchuria.[9] At this time Washington warned MacArthur that "the potential exists for Chinese Communist forces to openly intervene in the Korean war if United Nations forces cross the 38th parallel."[10]

American intelligence knew that the Chinese Communists were able to intervene in Korea, but determining whether or not they meant to do so was a more complex matter. Up until 26 September intelligence estimates rated Communist intervention in Korea as improbable, barring a Soviet decision to precipitate general war. Toward the end of September, however, India's diplomatic representatives in Peking began to report that Chinese officials were threatening intervention if United Nations forces crossed the 38th parallel. On 3 October Chou En-lai, the Chinese Communist foreign minister, informed the Indian ambassador to Peking that China would send troops to the Korean frontier to defend North Korea if United States or United Nations forces crossed the 38th parallel. Chou En-lai said, however, that this action would not be taken if only South

Korean troops crossed the parallel.[11] Similar reports came in from Moscow and Stockholm, but evaluation of Chou's cryptic statement was difficult. At the moment the resolution recommending all appropriate steps to insure stability throughout Korea was pending in the General Assembly, and to President Truman "it appeared quite likely that Chou En-lai's 'message' was a bold attempt to blackmail the United Nations by threats of intervention in Korea."[12] On 10 October, after the General Assembly had passed the resolution, however, Chou En-lai stated that the Chinese people "would not stand supinely by while their neighbor was being invaded."[13] Since Chinese Communist interference in Korea was at least possible, President Truman approved an amplifying directive which the Joint Chiefs dispatched to General MacArthur on 9 October. "Hereafter in the event of the open or covert employment anywhere in Korea of major Chinese Communist units, without prior announcement," the Joint Chiefs stated, "you should continue the action as long as, in your judgment, action by forces now under your control offers a reasonable chance of success. In any case you will obtain authorization from Washington prior to taking any military action against objectives in Chinese territory."[14]

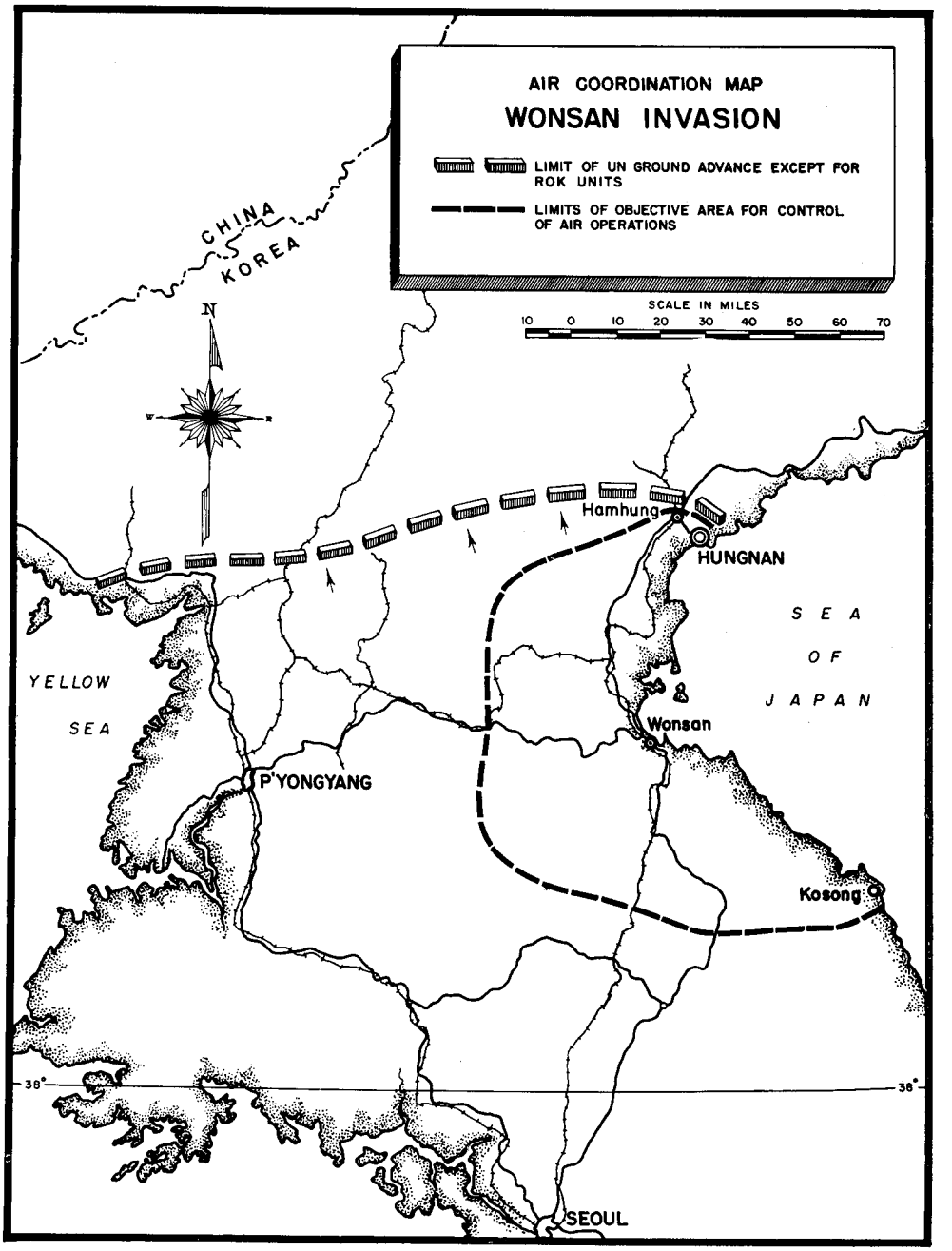
In Washington a general view prevailed that Chinese Communist intervention in Korea was a "possibility" but "not...a probability."[15] General MacArthur apparently held this same view, and at Wake Island on 15 October he explained to President Truman that he did not anticipate great difficulty in ending military operations in Korea, perhaps as early as Thanksgiving Day. "In North Korea, unfortunately," said MacArthur, "they [the Red Koreans] are pursuing a forlorn hope. They have about 100,000 men who were trained as replacements. They are poorly trained, led, and equipped, but they are obstinate and it goes against my grain to have to destroy them." President Truman asked a blunt question: "What are the chances for Chinese or Soviet interference?" "Very little," replied MacArthur. "Had they interfered in the first or second months it would have been decisive. We are no longer fearful of their intervention. We no longer stand hat in hand. The Chinese have 300,000 men in Manchuria. Of these probably not more than 100,000 to 125,000 are distributed along the Yalu River. Only 50,000 to 60,000 could be gotten across the Yalu River. They have no air force. Now that we have bases for our Air Force in Korea, if the Chinese tried to get down to Pyongyang there would be the greatest slaughter."[16] General MacArthur's remark that the Chinese Communists had "no air force" was at variance with FEAF estimates that the Chinese possessed at least 300 combat aircraft. Citing repeated reports of enemy aircraft sightings, including reports of jet aircraft, General Stratemeyer had cautioned General Partridge on 1 October that "Maintenance of absolute air superiority continues to be the highest priority mission for Fifth Air Force area."[17]

The United Nations Command operations plan issued on 2 October reflected more consideration for terrain and transportation than for enemy opposition in North Korea. MacArthur's planned maneuver was what Maj. Gen. Charles A. Willoughby, the theater intelligence chief and an author on military movement, described as "the classical one made famous by Von Moltke: action by separated forces off the enemy's axis of movement."[18] Under General Walker

the Eighth Army was to attack northward overland along the Kaesong-Sariwon axis to secure Pyongyang, where it would effect a juncture with the X Corps, establish a defensive line across the Korean peninsula at Chongju-Kunmori-Yongwon-Hamhung-Hungnam, and destroy encircled North Korean forces. The U.S. X Corps, commanded by General Almond, was to load aboard ship at Inchon and Pusan and make another amphibious assault at Wonsan, the port city on Korea's east coast. Once ashore, the X Corps would attack westward to join the Eighth Army. At Wonsan D-day was set for 20 October, but the Eighth Army would not await the landing for its push northward. Pending additional orders, no United Nations forces, other than those of the Republic of Korea, were to advance north of the defensive line between Chongju and Hungnam.[19]

Several of MacArthur's subordinate commanders viewed this strategy with some concern. "We objected to Wonsan as being unnecessary," explained Rear Adm. Arleigh A. Burke, chief of staff of the Naval Forces Far East, as reported by Navy historian Capt. Walter Karig. "It took a lot of troops out of action for a long time when the enemy was already on the run. We felt the same objective could be achieved by marching the X Corps up a road leading from Seoul to Wonsan." Air Force officers objected to the congestion of the limited port facilities at Inchon and made an issue of the fact that the combat capability of both the Eighth Army and Fifth Air Force was being jeopardized by the outloading of the X Corps through this restricted harbor before essential supplies had been brought ashore. At least one Army general—Maj. Gen. David G. Barr, commander of the X Corps' 7th Infantry Division—wanted to move overland from Seoul to Wonsan. But General Almond argued that "Going overland is simply out of the question. Half of our heavy equipment...would be left in ditches by the side of the road."[20] Despite the possibility of Chinese Communist intervention, General MacArthur chose to divide the command of the ground forces in Korea. General Almond would be independent of General Walker. There were those who would report General Walker's discontent with the arrangement and who would say that there was inadequate liaison between the Eighth Army and X Corps.[21] General MacArthur, however, would testify that there was "complete coordination under my own immediate command."[22]

During the execution of the amphibious operation at Inchon, United Nations air capabilities had been compartmented: the Far East Air Forces had supported the Eighth Army and the X Corps had possessed the 1st Marine Air Wing as an integral supporting air arm. General MacArthur apparently looked with favor upon such a division of air capabilities in context with the ground mission; he reported, in fact, that the two ground forces in Korea were "completely self-sustaining."[23] The United Nations operation order for the Wonsan landing established the same arrangement for the command of airpower as had been employed at Inchon. Beginning on D minus 5 day and continuing until the amphibious phase of the operation was terminated, Admiral Joy would possess "coordination control" authority over air operations within a 50-mile circle around Wonsan. Task Force 77's fast carriers would provide air support and air defense for the initial phase of the Wonsan landing, but Maj. Gen. Field Harris was designated X Corps tactical air commander and his 1st Marine Air


AIR COORDINATION MAP
WONSAN INVASION
LIMIT OF UN GROUND ADVANCE EXCEPT FOR ROK UNITS
LIMITS OF OBJECTIVE AREA FOR CONTROL OF AIR OPERATIONS
SCALE IN MILES
10 0 10 20 30 40 50 60 70
CHINA
KOREA
N
Hamhung
HUNGNAN
SEA OF JAPAN
YELLOW SEA
Wonsan
P'YONGYANG
Kosong
38°
38°
SEOUL

Wing would provide close support to the X Corps, at first from escort carriers and then from Wonsan airfield. Except for air-transport and courier missions, FEAF planes would not enter the amphibious objective area unless on the request of the X Corps tactical air commander. As its part of the advance into North Korea, FEAF would continue its current missions, support the advance of the Eighth Army, and support the landing and subsequent operations of the X Corps as directed. It would prepare to transport and drop the 187th Airborne Regimental Combat Team where and when it might be needed.[24] At a conference concerning the preparation of an air annex to the Wonsan operations order, which he attended with Generals Hickey and Wright on 2 October, General Weyland secured agreement that General Stratemeyer would regain "coordination control" over all air operations over Korea at the disestablishment of the Wonsan amphibious objective area. Weyland also argued that Stratemeyer must possess coordination control over all air operations outside the amphibious objective area during the Wonsan landing, but General Hickey indicated that General MacArthur wanted to exercise this authority himself.[25] Informed of these developments, General Stratemeyer conferred at length with MacArthur during the afternoon of 2 October. In the course of these discussions General MacArthur went on the record with a statement that he was 100 percent in favor of having General Stratemeyer as the controlling head of all air operations, but he observed that the defense forces were just not organized that way. Nevertheless, General MacArthur agreed that General Stratemeyer would be responsible for coordinating all air operations over Korea outside the Wonsan objective area. General MacArthur also gave Stratemeyer the impression that the Wonsan amphibious area would be disestablished fairly soon after the landings at that place.[26] Although airpower would be divided during the amphibious landing, General Stratemeyer had at least secured some semblance of unity of air action over Korea.

Maj. Gen. Edward M. Almond, 26 Nov. 1950.

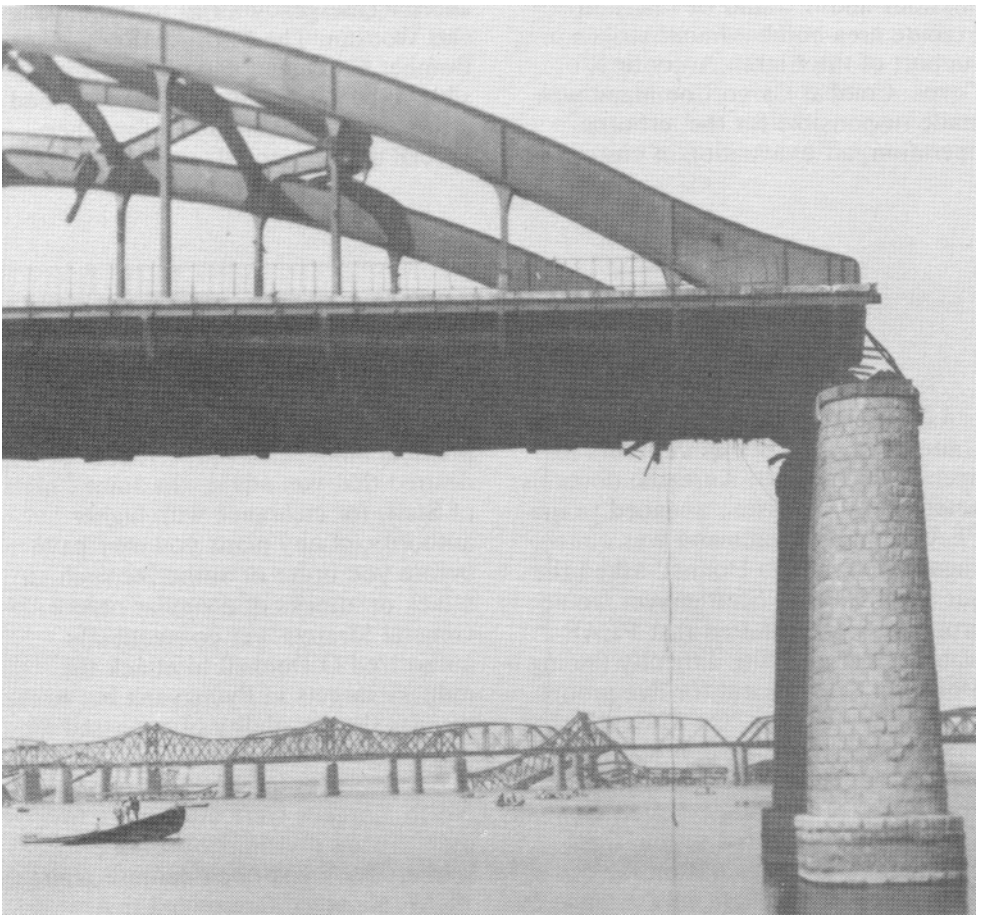
Following the temporary settlement of air-command relationships at the theater level, General Stratemeyer suballocated FEAF's mission to Generals Partridge, O'Donnell, and Tunner. The Fifth Air Force was to provide maximum air support for the Eighth Army, maintain air superiority in Korea (except in the Wonsan objective area), develop Wonsan airfield for transports and fighters, be prepared to take over coordination control at Wonsan, and to rehabilitate the airfields at Pyongyang. Bomber Command was to continue its current

missions and it would be ready to execute area-bombardment strikes in support of the Eighth Army or X Corps. Combat Cargo Command was made responsible for the airborne operation, air evacuation of casualties, and for emergency airlift to Pyongyang and Wonsan. The Fifth Air Force and Bomber Command were jointly responsible for photography, interdiction, and armed reconnaissance and for other special air missions.[27]

## *2. General O'Donnell Runs Out of Targets*

As General O'Donnell examined the United Nations Command orders for operations in North Korea he doubtless noted that the mission assigned to the FEAF Bomber Command was quite vague. And, had O'Donnell asked the question, General Stratemeyer would probably have admitted that FEAF planners were having difficulty finding a profitable employment for five groups of medium bombers. On 27 September, when MacArthur was first definitely authorized to conduct military operations north of the 38th parallel, General Stratemeyer suggested to him that FEAF could perhaps hasten the collapse of North Korean resistance by dispatching the full strength of Bomber Command against Pyongyang. The medium bombers would attack nothing but legitimate military targets and they would use nothing but demolition bombs, but Stratemeyer thought that 100 B-29's massed against the Red capital city might be impressive to the defunct North Korean government. General MacArthur saw no reason to refer the matter to the Joint Chiefs, as Stratemeyer suggested he might want to do, but he asked Stratemeyer to hold up the attack until he had offered surrender terms to the Reds. Somehow the Joint Chiefs learned of the impending mission and signaled MacArthur, on 30 September: "Because of the serious political implications involved, it is desired that you advise the Joint Chiefs of Staff, for clearance with higher authority, of any plans you may have before you order or authorize such an attack or attacks of a similar nature."[28] General Stratemeyer consequently authorized O'Donnell to attack the military targets in Pyongyang but to dismiss the possibility of a massed air attack against the Red capital.[29]

According to intelligence reports, the North Koreans were attempting to mobilize six divisions of trainee soldiers for a last-ditch defense, and FEAF planners determined that medium-bomber attacks against the enemy's replacement training centers would possess tactical utility. Most of these centers were identified in prisoner-of-war interrogation reports. On 20 September the B-29's destroyed three separate barracks areas comprising the "North Korean Military Academy" at Pyongyang. On 23 September the Superfortresses knocked out 90 percent of the buildings at a troop training center in Hamhung. On 2 October the B-29's destroyed 75 percent of the training station at Nanam. And on 12 October ten B-29's bombed a training center at Hungnam (Konan) with excellent results. These



Bridge-busting activities on the Han River.

attacks sought to inflict personnel casualties, to destroy facilities, and to weaken the morale of troops in training. At this juncture, when only half of the known training installations had been attacked, FEAF received a report that United Nations prisoners of war were being held at many of the North Korean training camps. To play it safe, FEAF operations directed that no further air attacks would be made against the training areas.[30]

Rapid advances of United Nations ground forces during October greatly complicated the FEAF Bomber Command's efforts against bridge targets in North Korea. On 6 October FEAF sent Bomber Command a list of 33 bridges, all north of Pyongyang and Wonsan and selected to isolate these two areas. ROK troops advanced so rapidly up the east coast, however, that FEAF had to delete ten of the bridge targets within the week.[31] In context with the Eighth Army's advance on the western front, medium bombers were forbidden to operate south of Sinanju after 18 October, and FEAF again revised its

list of bridges needing destruction.[32] Inasmuch as all FEAF aircraft were operating under stringent orders to "remain well clear" of the Manchurian and Siberian borders and were permitted to attack targets lying within 50 miles of the borders only on special order from FEAF and under visual flight conditions, air operations were being squeezed into a very restricted strip of terrain.[33]

Because of the lack of targets for medium bombers, General Weyland on 10 October instructed Bomber Command to reduce its sorties to 25 per day, a figure which would increase Bomber Command's aircraft serviceability in case it was needed for all-out ground support.[34] But the ground forces needed no medium-bomber support. Anticipating that the idle B-29 crews were going to lose interest in the war, General O'Donnell visited and talked to each of the squadrons in mid-October,[35] but most of the combat crews were frank to tell anyone who would listen that they thought that their job was done in Korea.[36] Finding nothing better to bomb, one 92d Group crew recorded that it chased an enemy soldier on a motorcycle down a road, dropping bombs until one hit the hapless fellow.[37] Since no employment became available, General Stratemeyer further reduced Bomber Command to 15 sorties a day on 22 October, and on this same day General MacArthur authorized Stratemeyer to release the 22d and 92d Bombardment Groups for return to the Zone of Interior. These two pioneer groups began to depart for the United States on 27 October.[38] On this day General Stratemeyer stood down the whole B-29 command: only three of the bridge targets assigned to Bomber Command for destruction were still usable and it had begun to look as if these bridges might be of more value to United Nations forces than to the defeated Reds.[39]

### *3. Air Umbrella for the Eighth Army*

On the defensive lines north of Seoul on 7 October the Eighth Army's I Corps relieved X Corps troops. Since the IX Corps was still eliminating pockets of enemy resistance in South Korea, General Walker had designated the I Corps as his assault force. Again, on 9 October, General MacArthur called upon the North Koreans to lay down their arms and cease hostilities,[40] and, without really waiting for an answer that would not be forthcoming, Eighth Army troops captured Kaesong and forged across the 38th parallel this same day. During the next several days North Korean remnants fought to hold the hills overlooking the roads northward from Kaesong, but the Eighth Army had a plethora of air support. On 12 October, for example, the Fifth Air Force gave the I Corps 81 close-support sorties, all that were needed to put 11 enemy fieldpieces out of action.[41] Although the North Koreans fought bitterly, the enemy's defenses had no depth, and by 15 October General Walker was able to launch tank and truck columns of the 1st Cavalry Division in a race to Pyongyang.[42]

As the main Eighth Army drive

rolled against Sariwon, airborne Mosquito controllers flew reconnaissance patrols from Haeju, east to Kaesong, back to Haeju, thence to Chaeryong and Sinwon-ni. These Mosquitoes guarded the Eighth Army's left flank, and when they located hostile targets they called in fighters to destroy them. On 17 October, between Sariwon and Miryok, for example, Mosquito "Hammer" spotted an enemy train pulled by three locomotives and loaded with troops. Four F-80's promptly smashed the train and dispersed the North Korean soldiers. That same day three other flights of fighters worked over another enemy troop concentration on the road north of Sinwon-ni.[43]

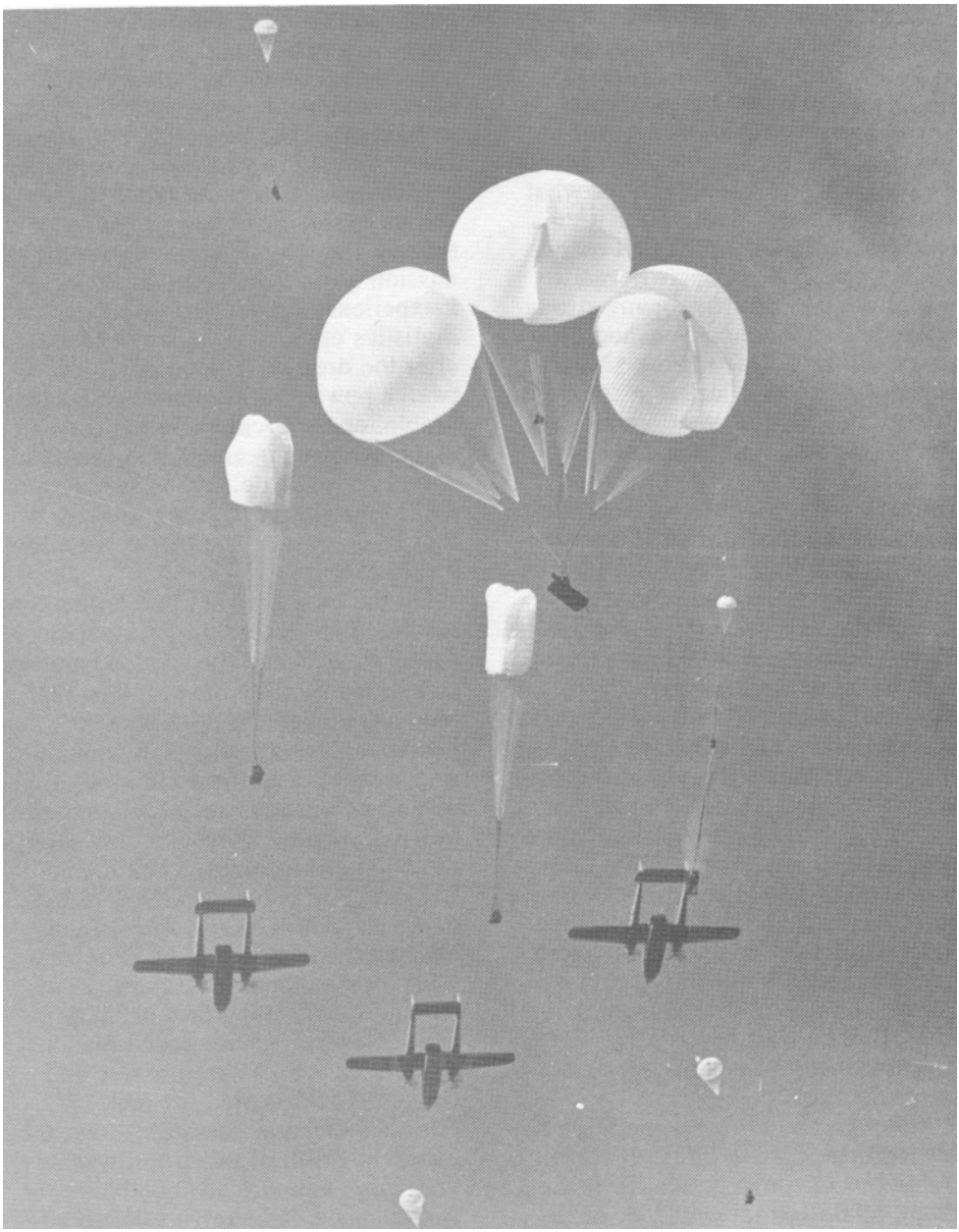
Driving northward at a rate of ten miles a day, more troubled by mountain roads than by enemy resistance, the 1st Cavalry Division met no more serious enemy opposition until it reached Hukkyori, a village about ten miles south of Pyongyang. In obedience to Premier Kim Il Sung's departing exhortation as he fled Pyongyang, the North Koreans had collected a scratch force of troops, supported by about 25 tanks, eight self-propelled guns, and several heavy mortars for a last stand in front of the North Korean capital. In an all-day fire fight eight fighter-bomber strikes and friendly tank and artillery fire destroyed the collection of Red weapons.[44] On 19 October the 1st Cavalry Division, reinforced by the Commonwealth 27th Brigade, entered the sprawling city of Pyongyang, which, except for a few snipers, was virtually undefended. "The breakthrough at Hukkyori and the subsequent capture of Pyongyang," wrote the 1st Cavalry's commander, "was made possible only by the magnificent close air support given by the Fifth Air Force."[45]

The taking of the city which up until a few days before had been the seat of the Red government was a signal victory, but General MacArthur wanted to trap as many Red officials and troops as possible. The 187th Airborne Regimental Combat Team was at Kimpo awaiting employment, and on 16 October General MacArthur issued orders for an airborne operation north of Pyongyang. The drop zones were to be near the towns of Sukchon and Sunchon, both about 30 miles from Pyongyang up the arms of the "V" formed by the main road and rail routes which converge at the capital city. Initially, 21 October was the date established for the airborne maneuver, but the Eighth Army sped ahead so rapidly that the paratroop employment was moved up to 20 October.[46] As far as Combat Cargo Command was concerned, Kimpo Airfield was not a good location for lifting the 187th; it was still a forward airstrip, which had to serve combat planes as well as troop carriers. But the command nevertheless airlifted about half of the 2348th Quartermaster Air Supply and Packaging Company from Ashiya to Kimpo to prepare for the assault. Two days before the drop date General Tunner canceled all transport commitments of the 314th Troop Carrier Group's C-119's and of the 21st Troop Carrier Squadron's C-47's in order that they could receive intensive maintenance. When Fifth Air Force planes moved from Kimpo to make room for the huge fleet of transports, the Combat Cargo air task force quickly flew in from Japan.[47] As its contribution to the operation, the Fifth Air Force scheduled softening-up attacks in the drop zones, fighter escort for the transports, and Mosquito-control procedures for handling close support, once the paratroopers were on the ground.[48]

Shortly after dawn aircrews and paratroopers stood by their designated aircraft at Kimpo, but the rain was falling in sheets and the operation would be delayed. Toward noon, however, the rain began to let up and the paratroopers got aboard for what would be a delayed afternoon jump. Shortly after noon Fifth Air Force fighters and light bombers began to search out and destroy enemy strong points in the Sukchon-Sunchon drop zones. Other Fifth Air Force Mustangs escorted the airlift fleet as it took off at Kimpo, flew tight formation out over the Yellow Sea, and then suddenly turned inland and headed for the dropping grounds. General Tunner flew alongside the formation and served as airborne commander, and from his personal plane General MacArthur viewed the airborne attack at close range. Promptly at 1400 hours the parachutes of the first wave of troopers blossomed out of the Flying Boxcars over Sukchon, and a few minutes later other paratroopers jumped at Sunchon. Within the hour 71 C-119's and 40 C-47's delivered 2,860 paratroopers and 301.2 tons of equipment to the drop zones. Many of the paratroopers landed on or near a high-tension power line which had not been spotted in aerial reconnaissance photographs, but jump casualties were light in comparison with other combat jumps: only one man was killed and only 36 troopers received injuries.[49]

Although the airborne operation had been executed under difficult staging conditions on short notice, Brig. Gen. Frank S. Bowen, commander of the 187th, stated that "there has not been any better combat jump." Bowen called the formation and timing "perfect," and he particularly commended the C-47 crews, men of the 21st Squadron augmented by crews and planes drawn from the Fifth Air Force's combat wings. Bowen did suggest that future formations for heavy-equipment drops should not be so tight since the huge 100-foot parachutes tended to steal air from smaller parachutes, causing the latter to stream. Aside from that, Bowen thought the only difficulties with the mission arose from faulty materiel or inexperience on the part of his packers. Statistics on equipment serviceability after the drop were good. Only two of twelve howitzers were not immediately usable: one was completely lost when its parachutes streamed, and the other, with a broken axle, was repaired on the field. Four out of 28 jeeps and two of four three-quarter ton trucks were lost in the drop.[50]

On the ground the airborne operation was equally successful. Preliminary fighter attacks and the sudden paradrop so startled North Korean troops that they abandoned strong defensive positions, leaving guns with ammunition alongside. In the preliminary assault and in subsequent air support flown during the afternoon under the direction of Mosquito "Nightmare," the Fifth Air Force employed 75 F-51's, 62 F-80's, and 5 B-26's. These pilots claimed the destruction of 53 vehicles, 5 fuel and ammunition dumps, 23 ox-carts, 4 tanks, and a field artillery gun.[51] General Tunner called the tactical air support "aggressive and completely adequate." "I feel," he informed General Partridge, "that the excellent result of the drop...was in very large measure attributable to the well-planned and superbly executed support your people gave us."[52] Meeting moderate opposition on the ground, the paratroop assault elements quickly secured the high ground overlooking both drop zones, and at 1000 hours on 21 October 40 C-119's



C-119 Flying Boxcars spill out their load of heavy equipment during maneuvers in Korea.

delivered 1,093 additional troopers and 106.8 tons of supplies. On the next two days the Flying Boxcars provided more resupply—184 tons dropped by 31 C-119 sorties.[53] Late on 20 October elements of the ROK 6th Division bypassed Pyongyang to link up with the paratroopers, and on 22 October troops of the 1st Cavalry Division broke through from Pyongyang. In three days of operations the 187th Airborne Regimental Combat Team engaged about 6,000 North Korean troops, killed an estimated 2,764 of them, and took some 3,000 prisoners. The paratroopers also captured large stores of winter clothing and ammunition in the towns of Sukchon and Sunchon. Through no fault of their own, the paratroopers were less successful on one other score, that of rescuing American prisoners who were being moved northward from Pyongyang. On 21 October a paratroop patrol located a prisoner-of-war train hidden in a tunnel near Myongucham, but the Korean guards had already murdered 75 of the Americans. Fifteen wounded men were saved, and next day these casualties were flown to Ashiya on Combat Cargo planes which were now landing at the newly captured Pyongyang airfields.[54]

### *4. The X Corps Struggles Ashore*

According to the concept of the operation outlined in General MacArthur's order of 2 October, the U.S. X Corps was supposed to make an amphibious landing at Wonsan and attack westward in time to help the Eighth Army capture Pyongyang. But this plan had not reckoned with the Eighth Army's speed of movement nor with the fact that the North Koreans had liberally salted Wonsan's harbor with hair-triggered contact mines. While 50,000 X Corps troops sat aboard Admiral Struble's 250-ship armada off Wonsan, the hard-driving ROK I Corps captured the port city on the east coast.

On 7 October, the day on which the Eighth Army relieved the X Corps at Seoul and the latter unit began to stage aboard ship for Wonsan, the ROK I Corps was only 10 miles south of Wonsan. Remaining elements of three North Korean divisions sought to check the progress of the ROK I Corps, but the South Korean columns received reconnaissance reports from Mosquito controllers, who paced the advancing ground troops and called in Fifth Air Force and Marine fighters to overcome enemy roadblocks. On 7 October, for example, Mosquito "Antidote" located hostile antitank positions forward of the ROK 3d Division, and, although unable to establish workable communications with the South Korean troops, he called in flights of F-51's and F-80's to blast out the gun emplacements. By 10 October ROK forces were battling through the streets of Wonsan, and that day Mosquito "Polygon" worked with the ROK Capital Divison, spotting hostile positions and directing Marine and Air Force pilots to them. In one attack a flight of Marine F4U's destroyed enemy positions on a ridge which were holding up the division's

advance. At the end of the day of 10 October, the ROK Capital Division secured Wonsan Airfield, and by the close of the week the ROK I Corps held positions 22 miles north and 12 miles west of Wonsan.[55]

Wonsan had fallen to ROK forces well before the D minus 5 date specified for the establishment of an amphibious objective area as provided in General MacArthur's operations order. But even before these orders had gone into effect, they were causing General Partridge some trouble. The X Corps, for example, wished to stage the 1st Marine Air Wing's control squadrons for amphibious movement beginning on 7 October, thus, as General Partridge saw it, immobilizing the Marine air group at Kimpo for some two weeks before Wonsan's invasion date. At this very time ROK forces were rapidly advancing up the east coast and needed all the air support they could obtain. In view of these circumstances, General Weyland persuaded Admiral Joy to leave the Marine airmen in operation at Kimpo until Wonsan Airfield was secured.[56] On 11 October General Partridge sent Colonel Joseph D. Lee, whom he designated to command the base, to look over the airfield at Wonsan, and Colonel Lee reported that the runways and facilities at this base were in good shape. Next day Combat Cargo Command flew 22 sorties with 131 tons of ROK supplies to Wonsan, and on 13 October the transports lifted Colonel Lee's 6151st Air Base Unit to Wonsan.[57] On this same day Generals Partridge and Harris got together at Taegu and worked out agreements relative to Wonsan. The Fifth Air Force would provide the Marines with base services, including weather and communications. Until the 1st Marine Air Wing based at Wonsan, the Fifth Air Force would support the ROK I Corps, but General Harris would begin to move his Marine air units to the east-coast base on 14 October and would assume the support of the ROK Corps as soon as he could.[58]

Someone in authority in Tokyo, however, evidently wanted to maintain the fiction that the X Corps would make an amphibious landing at Wonsan. Thus on 11 October General MacArthur's headquarters issued orders that: "Wonsan airfield will be utilized for land-based aircraft under control of Tactical Air Commander, effective on arrival elements of X Corps in the objective area."[59] Alarmed by the fact that command arrangements peculiar to an operation which would not take place were being perpetrated, General Weyland dispatched a memo to General Hickey on 12 October, asking whether the Wonsan operations order and the CINCFE coordination control directive would apply or whether two separate land-based air elements were going to operate in the constricted area of North Korea under separate command arrangements. Next day, in a conference with General Weyland, General Hickey explained that General MacArthur had decided to assign the ROK I Corps to General Almond and that he had apparently decided that a separate air command (the 1st Marine Air Wing) would support the X Corps. Weyland immediately remonstrated that such an order would be contrary to the official delineations of roles and missions for the United States Armed Forces, which charged USAF with the support of Army forces. Weyland suggested that the proper way to handle the air-command arrangement was to place the Marine Air Wing under General Partridge's coordination control, to make the Marine Air Wing primarily responsible for supporting the X Corps, to make Partridge responsible

for providing such additional support as the X Corps might require, and to maintain the fast carrier task force under FEAF's coordination control to be used in general support of ground operations in the same way as the FEAF Bomber Command was employed.[60]

Apparently General Weyland's cogent arguments won the day, for on 16 October General MacArthur provided the decision that FEAF would exercise coordination control over land-based Marine air units and over carrier-based aviation operating over Korea effective as soon as X Corps troops advanced beyond the Wonsan objective area.[61] General Stratemeyer promptly directed Partridge to prepare to assume coordination control over Marine air units at Wonsan, but he instructed Partridge to commit these units to the support of the X Corps. In case the X Corps required more support than the 1st Marine Air Wing could provide, General Partridge would use Fifth Air Force units to supply it.[62] On 21 October the ROK I Corps forged beyond the Wonsan objective area and the new coordination control arrangements took effect.[63]

"At long last," noted General Weyland, "it appears that principles advocated by FEAF from the very start of the Korean conflict have been recognized and put into effect."[64] General MacArthur had finally issued an unmistakable delineation of authority which recognized General Stratemeyer as "operational controller" of all land-based air operations in Korea and "coordination controller" of all carrier-based air operations over Korea. At first General Almond, who came ashore by helicopter on 20 October to assume command at Wonsan, stated that because of limited communications facilities the X Corps would direct the Marine Air Wing to furnish close-support missions, but General MacArthur promptly rejoined that Almond must coordinate all requests for close support with General Partridge.[65] These command arrangements centralized the control of air operations over Korea, but General Partridge's task was one which could have been embarrassing. Had air-support requirements emanated simultaneously from both the X Corps and the Eighth Army in excess of air capabilities, General Partridge would have been required to decide which would receive priority, a decision which more logically would have been the responsibility of a single Army commander in Korea.[66]

In good measure, moreover, the procedural relationships which the Fifth Air Force sought to establish for controlling the 1st Marine Air Wing were not completely realistic. General Partridge thought that the X Corps should establish G-2 and G-3 Air officers in the Joint Operations Center who would function in the same manner as did analogous Eighth Army officers. Except for liaison officers who sometimes visited Seoul, however, General Almond did not choose to be represented in the Joint Operations Center. The Fifth Air Force also required the X Corps to submit a daily list of air-support requests, and each day the Fifth Air Force issued operations orders directing the 1st Marine Air Wing to fulfill those requests. In view of the limited communications channels between Wonsan and Seoul, this was a burdensome procedure and represented an unrealistic compliance with accepted air-ground doctrine.[67]

General Partridge apparently did not recognize the awkwardness of these close-support procedures, probably because the 1st Marine Air Wing had ample strength to provide the X Corps

with all the support it required against scanty ground opposition. After waiting six days while naval minesweepers cleared a channel, the X Corps and the 1st Marine Division made an administrative landing at Wonsan on 26 October. Three days later, in a landing designed to lighten port requirements at Wonsan and to speed the occupation of eastern Korea, the U.S. 7th Division landed across the beaches at Iwon, about 90 nautical miles northeast of Wonsan. In the days that followed, the ROK I Corps followed coastal routes northward toward Chongjin; the 1st Marine Division marched toward Hamhung and the Choshin (Changjin) Reservoir; and the 7th Division pushed inland toward the Fusen (Pujon) Reservoir.[68]

### *5. A New Adversary: Chinese Communist "Volunteers"*

Basing his action on an estimate that Chinese Communist intervention was unlikely and upon the fact that the Eighth Army would capture Pyongyang without assistance from the U.S. X Corps, General MacArthur issued new operations orders on 17 October. The two principal ground forces would continue to operate separately in two zones which divided along the mountain peaks of central Korea. Within its area of western Korea the Eighth Army would advance and secure the general line between Sunchon and Pyongwon. The U.S. X Corps would attack northward in eastern Korea to a general line between Toksil-li and Songjin. The new restraining lines were approximately 40 miles from Korea's northern borders, and, except on MacArthur's direct orders, none but ROK troops would progress north of the lines.[69]

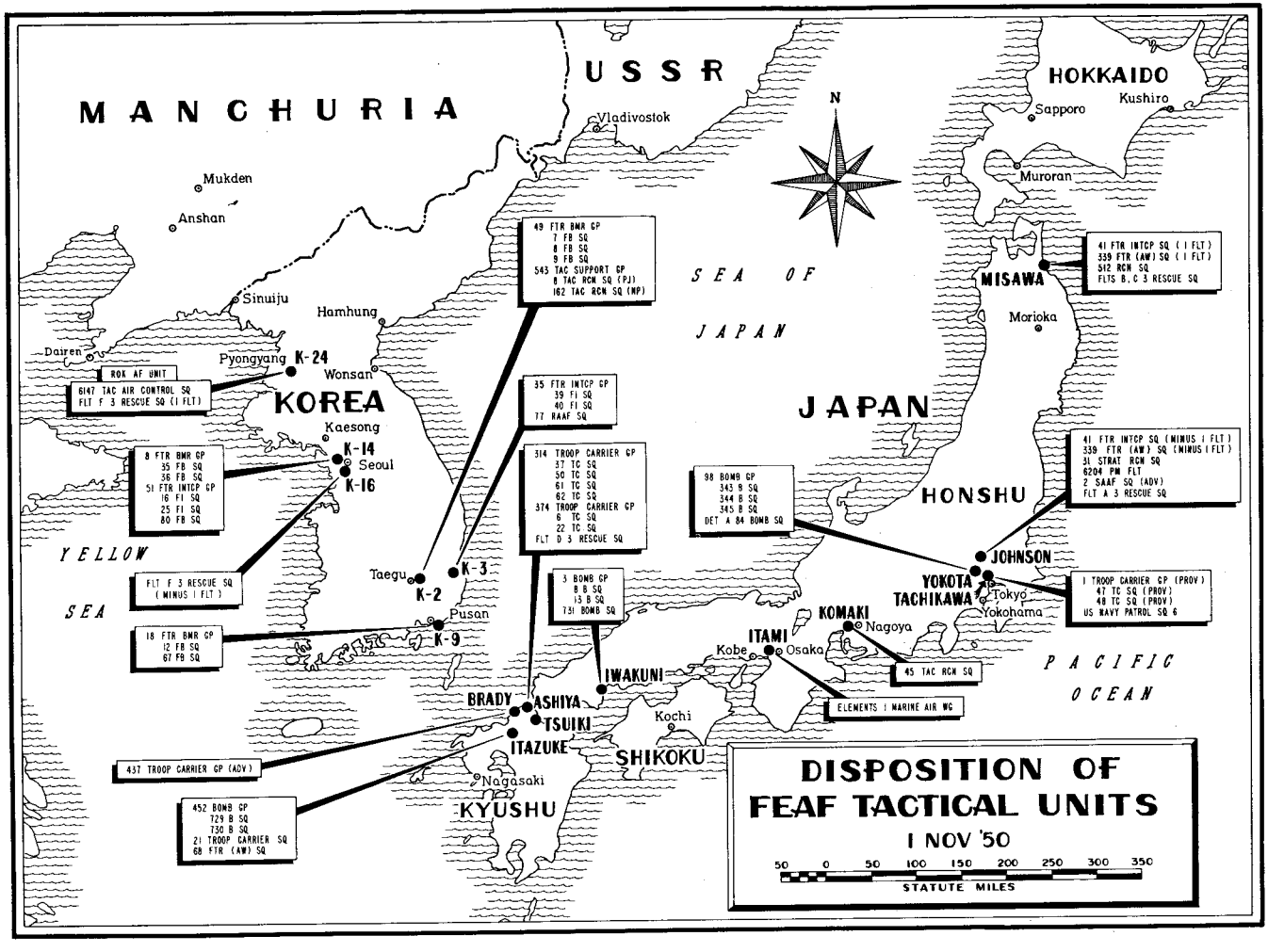
The new United Nations Command orders rendered obsolete General Stratemeyer's instructions which restricted air attacks against targets lying within 50 miles of Korea's borders. On 17 October General Stratemeyer therefore drew a "chop line" which connected the towns of Hwatan-dong, Kanggye, Oun-ni, Hapsu, Murung-dong, and Ka-tan, each of these towns being about 20 miles from the Korean border. Provided aircraft operated under visual flight rules and pilots positively identified their targets, General Partridge was authorized to schedule armed reconnaissance missions in the area between the 50-mile "VFR" line and the "chop line." Under emergency conditions and with a full report of each instance to FEAF, General Partridge was personally authorized to order visual attacks against targets north of the Hwatan-dong to Ka-tan "chop line."[70]

As soon as the Eighth Army captured and consolidated the area about Pyongyang, General MacArthur, on 24 October, again issued new operations instructions. These instructions abolished all restraining lines for the employment of American troops, restrictions which MacArthur explained had been "established initially in view of possible enemy capitulation." Both Walker and Almond were authorized to use any of their forces to secure all North Korea, but as soon as possible

any American troops along the border would be replaced with ROK troops. "All field commanders," MacArthur ordered, "are enjoined to drive forward with all speed and with the full utilization of all their forces."[71] Once again the Fifth Air Force needed new instructions, and General Stratemeyer gave them on 25 October: "Effective immediately," he stated, "close-support missions when under direct control of tactical air-control parties or airborne controllers, may go as close to the border as may be necessary for proper performance of mission." But Stratemeyer wanted no border violations and cautioned Partridge to choose none but "selected" pilots under "experienced leaders" for the close-support missions along the border.[72]

Although General Stratemeyer had issued orders which allowed Partridge to provide close support for the ground forces as they approached the northern borders of Korea, General Partridge was not finding much opportunity for the employment of the Fifth Air Force. The Eighth Army, in fact, frankly admitted that it was more interested in air transport than in air support. At first, because the port of Inchon was jammed with X Corps traffic, and then because the roads and railways north of Seoul were so badly damaged, the Eighth Army's drive to Pyongyang had been largely sustained by supplies airlifted directly from Japan. As Eighth Army troops advanced, the Combat Cargo Command laid down materiel as close as possible behind the groundmen. On 16 October Eighth Army soldiers captured the airstrip at Sinmak, little more than a meadow but about halfway to Pyongyang, and on the following day the Combat Cargo Command landed 235 tons of motor gasoline and rations there. On 20 October Pyongyang's airfields replaced Sinmak as the destination of Eighth Army supplies, but not before 625 tons had been laid down at Sinmak.[73] General Walker was highly complimentary concerning this combat support: "If it were not for airlift," he said, "the Eighth Army would be flat on its back and at a standstill, awaiting the opening of ports and rail facilities."[74]

Charged by the United Nations Command to drive forward with all speed, General Walker based his plans for operations north of Pyongyang "on a calculated logistical risk involving supply almost entirely by airlift."[75] Walker saw no other way to secure logistical support: the Reds had mined the muddy waters of the port of Chinnampo, through-highway traffic between Seoul and Pyongyang was "the exception rather than the rule," the railway line from Seoul to the south bank of the Taedong River at Pyongyang was not scheduled to be open before 10 November.[76] At a conference on 22 October Eighth Army staffmen brought their logistical problems to General Timberlake. The Eighth Army G-4 explained that to advance north of Pyongyang, the Eighth Army had to have a minimum of 1,000 tons of airlifted supplies each day—motor fuel, rations, and a limited quantity of ammunition. General Timberlake explained that the Fifth Air Force had been planning to move two Mustang wings to Pyongyang and that it would need 450 tons of airlifted supplies each day to support these wings. Since the Combat Cargo Command could lift only about 1,000 tons of supplies each day into northwestern Korea, it obviously could not meet both Army and Air Force requirements. The Eighth Army representatives insisted that the greatest obstacle facing them was not enemy opposition but want of supplies. Given the entire Combat Cargo Command


MANCHURIA
USSR
HOKKAIDO
Vladivostok
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Kushiro
Muroran
Mukden
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K-24
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Kaesong
K-14
Seoul
K-16
Taegu
K-3
K-2
Pusan
K-9
YELLOW SEA
SEA OF JAPAN
JAPAN
HONSHU
MISAWA
Morioka
JOHNSON
YOKOTA
TACHIKAWA
Tokyo
Yokohama
KOMAKI
Nagoya
ITAMI
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BRADY
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TSUIKI
ITAZUKE
Kochi
SHIKOKU
Nagasaki
KYUSHU
PACIFIC OCEAN
N
49 FTR BMR GP
7 FB SQ
8 FB SQ
9 FB SQ
543 TAC SUPPORT GP
8 TAC RCN SQ (PJ)
162 TAC RCN SQ (NP)
ROK AF UNIT
6147 TAC AIR CONTROL SQ
FLT F 3 RESCUE SQ (1 FLT)
8 FTR BMR GP
35 FB SQ
36 FB SQ
51 FTR INTCP GP
16 FI SQ
25 FI SQ
80 FB SQ
FLT F 3 RESCUE SQ
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18 FTR BMR GP
12 FB SQ
67 FB SQ
437 TROOP CARRIER GP (ADV)
452 BOMB GP
729 B SQ
730 B SQ
21 TROOP CARRIER SQ
68 FTR (AW) SQ
35 FTR INTCP GP
39 FI SQ
40 FI SQ
77 RAAF SQ
314 TROOP CARRIER GP
37 TC SQ
50 TC SQ
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345 B SQ
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339 FTR (AW) SQ (1 FLT)
512 RCN SQ
FLTS B, C 3 RESCUE SQ
41 FTR INTCP SQ (MINUS 1 FLT)
339 FTR (AW) SQ (MINUS 1 FLT)
31 STRAT RCN SQ
6204 PM FLT
2 SAAF SQ (ADV)
FLT A 3 RESCUE SQ
1 TROOP CARRIER GP (PROV)
47 TC SQ (PROV)
48 TC SQ (PROV)
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airlift, they believed that the Eighth Army could accomplish its ground tasks in a period of two weeks. On the basis of these estimates General Timberlake arrived at a bargain with the ground-force planners: provided General Walker would furnish enough port facilities at Inchon so that the 51st and 6131st Fighter Wings could get established at Kimpo and Suwon, the Fifth Air Force for a period of two weeks would reduce its airlift requirements to approximately 60 tons a day, an amount of supplies which would allow it to operate small base service units as several North Korean airfields and the Mosquito squadron and an air-rescue detachment at Pyongyang. Under such conditions General Timberlake emphasized that the Fifth Air Force's close-support capabilities would be limited to normal support from the two fighter groups at Suwon and Kimpo and limited support from other groups based farther to the rear. The conferees agreed that "this plan, although based on reduced air support, was the best possible solution to the present logistical problem and more nearly fitted Army requirements at this stage of the campaign."[77]

Both General Partridge and General Walker accepted the agreement substantially as it was made by their subordinates. Pursuant to the understanding, General Partridge was able to establish the 51st Fighter-Interceptor Wing at Kimpo. He also moved small base service units to Pyongyang (K-23), Pyongyang East (K-24), and Yonpo (K-27) airfields—the 6148th, 6146th, and 6151st Air Base Units, respectively. The 6147th Tactical Air Control Squadron and Detachment F, 3d Air Rescue Squadron, moved to Pyongyang East Airfield. By late October the FEAF Combat Cargo Command was delivering approximately 1,200 tons daily to Pyongyang. On two successive days—24 and 25 October—the Command broke its tonnage records by lifting 1,687 tons on the first day and 1,767 tons on the second. Almost 90 percent of this total tonnage was delivered to North Korea, the great bulk of it being rations and motor gasoline for the Eighth Army. In establishing these records, however, General Tunner's airlift command shuttled a good quantity of supplies to Kimpo Airfield, whence they were trans-shipped to Pyongyang. In short, Kimpo became an integral stop for a part of the airborne supplies proceeding from Ashiya to North Korean airfields.[78]

As United Nations ground forces moved forward to occupy all of North Korea, the Chinese Communists indicated that they intended to make some form of intervention in the battle zone. General Stratemeyer had predicted that Communist intervention in North Korea would first be manifest in the air, and he was right. At 0400 hours and again at 2110 hours on 14 October two hostile aircraft sneaked in at Kimpo Airfield and dropped several bombs.[79] The attacks did no damage, but four Mustangs, which were sent to search for the origin of the hostile air attacks at Sinuiju Airfield, drew heavy antiaircraft fire from across the Yalu on 15 October. The flak shot down one of the Mustangs. Having unlimbered their guns, the Chinese began to shoot at all planes that appeared along the Yalu, and, at the suggestion of Stratemeyer, General MacArthur strongly protested the "unwarranted attacks" to the United Nations.[80] Simultaneously with these hostile demonstrations came far graver reports of sightings of Communist aircraft. On 18 October an RB-29 crew of the 31st Strategic Reconnaissance Squadron looked across the Yalu and counted more than 75 fighters

MANCHURIA
CHINA
KOREA
YALU RIVER
MANPOJIN
KUUP-TONG
PYORHA-RI
CHINA
KOREA
NAMSAN-NI
BOMB LINE
24 OCT
HUICHON
X CORPS
Changjin Reservoir
24 NOV
CHONGJIN
BOMB LINE
HYESANJIN
HAMHUNG
BOUNDARY AS OF 24 NOV 1950
HUNGNAM
SEA OF JAPAN
SINANJU
K O R E A
EIGHTH ARMY
XXXX
WONSAN
PYONGYANG
Nan R.
SARIWON
SEOUL
INCHON
Han R.
UN ATTACK
TOWARD THE YALU
24 OCT-24 NOV 1950
LEGEND
HIGHWAYS
RAILROADS
0 10 20 30 40 50 60 70 80
STATUTE MILES

parked in neat rows at Antung Airfield. Early next morning the Communist planes were gone. General Stratemeyer thought that the Communists had displayed the planes to lend color and credence to their menacing statements.[81]

But the Communist airmen were not bluffing: they intended to intervene in the Korean fight. On the morning of 1 November, near Yangsi, about 15 miles south of Sinuiji, three Yak fighters bounced a Mosquito controller and a 730th Bombardment Squadron B-26, the latter aircraft belonging to the newly arriving 452d Wing. The B-26 crew shot down one of the Yaks, and two 18th Group Mustangs were hurriedly summoned to the scene to deal destruction to the other two Red aircraft.[82] At noon an FR-80 pilot flashed the word that 15 Yaks were parked in revetments on Sinuiju Airfield, and the Fifth Air Force sent three flights of F-80's to the scene. The Shooting Star pilots strafed the field, destroying one Yak and damaging six others, but the revetments opened toward the Yalu, and from across the river the F-80's drew Communist flak, which shot down one of the American jets. Later that afternoon a second F-80 strike returned to clean up the remainder of the enemy planes, but all of them that could be flown had departed.[83] The day, however, was not finished, for at 1345 hours the Communists revealed that they had something far more menacing than the old Yaks. At this time six swept-wing jet aircraft crossed the Yalu and opened fire on a Mosquito and a flight of Mustangs. The American pilots were lucky enough to evade and escape, and the Mosquito returned to Pyongyang to report a good look at one of the new jets. The plane was a Russian-built MIG-15.[84]

On the ground in the last week of October the Eighth Army had fanned out on a broad front in widely separated columns which were meant to pursue the North Koreans rather than to fight them. The American I Corps crossed the Chongchon River at Sinanju and pushed toward Sinuiju, and the ROK II Corps advanced northward on the right flank. One regiment of the ROK 6th Division reached the Yalu at Chosan on 26 October. As the Eighth Army columns advanced enemy resistance stiffened, and on 26 October an Army patrol captured a Chinese soldier. By the end of the month nine other Chinese prisoners had been captured, but these men were fighting with the North Koreans and presented "no concrete evidence of any outright commitment of Chinese Communist forces as such."[85] The going was getting rougher, and on the night of 28 October Communist ground troops launched strong counterattacks against the over-extended ROK II Corps. In the next several days the ROK II Corps collapsed and retreated into American positions. So far the U.S. I Corps had met no Chinese, but on the night of 2 November Chinese forces attacked and encircled elements of the 8th Cavalry Regiment near Unsan.[86]

Presented with increased Communist resistance which had collapsed his right flank and threatened to sever road communications to the advanced troops on the left flank, General Walker had to make some hurried decisions. One decided weakness was that the I Corps was operating on a logistical shoestring: it had only one day's firepower, a little more than a day's supply of gasoline, and three to four days' supplies of rations. On 3 November General Walker therefore ordered the Eighth Army to withdraw to the line of the Chongchon River where it would maintain a bridgehead until it could

regroup, accumulate additional supplies, and then renew the attack.[87] For the next three days the Communists attempted to pursue Eighth Army Forces, but Fifth Air Force crews helped relieve the pressure. In one notable air action on 4 November flights of B-26's kept a hostile troop concentration near Chongju under attack for more than thirty minutes and killed an estimated 500 enemy soldiers.[88] By 7 November Eighth Army troops were safely back at the Chongchon bridgehead, where they turned and countered Communist attacks with savage artillery barrages. In the face of this resistance the Communists broke off their attack.[89]

The Chinese Communists had definitely taken a hand in the Korean war, but the full extent of Chinese intervention puzzled the United Nations Command. General Stratemeyer doubted that the North Koreans had any pilots qualified to fly jet aircraft, but he had not yet determined whether his airmen faced a resurgent North Korean Air Force or a Communist "volunteer" air force.[90] Asked by the Joint Chiefs of Staff to submit an interim appreciation, General MacArthur said that he was unable to appraise the situation accurately on 4 November. MacArthur noted four possibilities: (1) that the Chinese Communist government intended to intervene with full military force at a time it deemed appropriate, (2) that it would give covert military assistance but conceal it for diplomatic reasons, (3) that it would permit and abet a flow of "volunteers" to aid the North Koreans, or (4) that the Chinese forces may have intervened in a mistaken belief that only Korean units would be sent to the Yalu, units which would have been weak opposition for the Chinese. The first contingency was a "possibility," but MacArthur thought that there were fundamental logical reasons against it and no evidence to justify it. The last three contingencies, or a combination of them, seemed more likely.[91] On 6 November, however, General MacArthur brought the hostile activities of the Chinese Communist forces, inside and outside of Korea, to the attention of the United Nations.[92]

## *6. Air Battle at the Yalu*

In the months prior to November 1950 the United Nations air forces had been fighting "under wraps." From the beginning of the hostilities United Nations airmen had been enjoined to "stay clear of Manchurian and Soviet boundaries." At the end of September the Joint Chiefs of Staff had warned against massed Superfortress attacks against the city of Pyongyang because of the "serious political implications involved." Again, in mid-October, General Stratemeyer had proposed to eliminate military targets in the gateway city of Sinuiju with all-out air attacks, and General MacArthur's headquarters had replied that the "general policy enunciated from Washington negates such an attack unless the military situation required it."[93] Early in November United Nations air commanders were of an

opinion that the military situation demanded strong air action. Stating that antiaircraft fire received from flak positions dispersed throughout the city of Sinuiju had killed one of his pilots, General Partridge requested clearance to burn the city. Acknowledging full awareness of the delicate international situation, General Partridge twice requested permission to authorize his fighter pilots to pursue aggressor Communist pilots back to their bases on Manchurian soil and to destroy them in the air or on the ground.[94]

Throughout the weekend of 3 November United Nations airmen in Tokyo worked to regear an air effort which had all but lapsed into desuetude in late October. Admiral Struble came to the Meiji building to report that his fast carriers laying-to at Sasebo were available to assist General Partridge. Next day Seventh Fleet representatives went to Seoul, where they agreed to establish radio communications and other liaison with the Joint Operations Center.[95] The crisis would demand the utmost of air transport: even though the aircraft of the 437th Troop Carrier Wing were then departing Travis Air Force Base in California, General Stratemeyer signaled USAF that he could not allow the 314th Troop Carrier Group's C-119's to depart the theater as scheduled on 11 November.[96] General Stratemeyer and his staff also made immediate operational decisions. To General Partridge went an authority permitting him to order carefully briefed daytime armed reconnaissance missions anywhere in Korea.[97] A staccato series of operations orders flashed to General O'Donnell: attack Kanggye on 4 November, Sakchu and Pukchin on 5 November, and Sinuiju on 7 November. Each of these Korean cities was a virtual arsenal and an important communications center. For this reason, and because of the reduced number of B-29's now in the Far East, General O'Donnell was authorized to use incendiary munitions. Taking care to avoid hospitals, General O'Donnell was expected to burn the cities to the ground.[98]

When General Stratemeyer went to the Dai Ichi building to explain the bombing program, General MacArthur not only lent his authority for the use of incendiaries but he outlined a far more severe program of air effort than General Stratemeyer had visualized. In an order dated 5 November General MacArthur directed two weeks of maximum air efforts. If necessary, combat crews were to be flown to exhaustion. Stratemeyer's airmen were to destroy "the Korean end" of all international bridges on the Manchurian border, an instruction which the FEAF commander took to mean the first over-water span out from the Korean shore. Then, beginning at the Manchurian border, progressing southward to the battleline, and excepting only Rashin, the Sui-ho dam, and other electric power plants, FEAF was "to destroy every means of communication and every installation, factory, city, and village." General MacArthur especially cautioned, however, that "there must be no violation of the border." "The border," he repeated, "cannot and must not be violated."[99] On the day MacArthur issued these drastic orders the FEAF Bomber Command flew its first purposeful incendiary attack. On 4 November 98th Group B-29's had found Kanggye covered with clouds and had dumped their incendiaries at Chongjin. On 5 November 21 B-29's of the 19th Group, diverted from attacks planned against Sakchu and Pukchin, had excellent bombing weather over Kanggye and used 170 tons of incendiaries to destroy 65 percent of the

town's built-up area. "Entire city of Kanggye was virtual arsenal and tremendously important communications center," Stratemeyer explained to General Vandenberg, "hence decision to employ incendiaries for first time in Korea."[100]

Back in Washington the Joint Chiefs of Staff received an information copy of MacArthur's order to FEAF with some amazement. In his order to FEAF General MacArthur displayed far more concern over Chinese intervention than he had previously expressed to the Joint Chiefs. As a consequence, on 6 November, the Joint Chiefs on direction from President Truman instructed the United Nations commander to postpone any bombing attacks against objectives within five miles of the Korean border. Washington feared that such attacks might involve Manchuria, and the government wished time to study the matter more fully.[101] But General MacArthur fired back in immediate answer: "Men and materiel in large force," he said, "are pouring across all bridges over the Yalu from Manchuria." The only way to stop such reinforcement was to destroy the international bridges and other installations supporting the enemy's advance.[102] Promptly upon receipt of this explanation the Joint Chiefs, later in the day on 6 November, reversed themselves and authorized MacArthur to use his air forces against the Yalu bridges on the Manchurian frontier. There must be no violation of Manchurian territory, and the clearance held good only for the Manchurian border. In areas adjacent to the Siberian border United Nations airmen continued to be forbidden to attack targets closer to the border than a line between Musan and Chongjin.[103] General Stratemeyer promptly authorized Partridge and O'Donnell to conduct air operations up to the Yalu River, but under no condition would aircrews drop bombs or attack targets on Manchurian territory.[104]

When he had studied the circumstances under which the medium bombers were expected to attack the Yalu bridges, General Stratemeyer is said to have shaken his head and to have advised MacArthur: "It cannot be done—Washington must have known, it cannot be done."[105] Doubtless Stratemeyer did recognize that to attack the bridges without violating Manchurian territory would be a difficult to impossible task, for Communist pilots, using their sanctuary airfield at Antung, had been playing a "cat-and-mouse game" with American airmen during the previous week. As American planes appeared at the Yalu, the Red airmen took off from Antung, climbed to superior altitudes on their side of the river, crossed the border at about 30,000 feet, dived down in firing passes against the Americans, and then scampered back to safety beyond the Yalu, where, if they desired, they renewed the attack cycle. Both MIG and Yak pilots tried these same tactics. The Yaks were too slow, and during the first week of November seven of them were shot down in air-to-air combat. But the slower American planes were virtually helpless against hit-and-run passes made by the flashy MIG-15's.[106] After a particularly grueling day on 7 November—a day on which MIG's intercepted Mustangs in five engagements south of the Yalu—General MacArthur asked the Joint Chiefs for instructions on the problem, which, he said, was causing a loss of morale and effectiveness to both air and ground troops.[107] At Washington the Joint Chiefs, the State Department, and the President found good military and civilian precedents whereby United

Nations pilots could be granted "hot-pursuit" authority or a right to pursue an aggressor aircraft for "two or three minutes" flying time north of the border. But the matter was fraught with international complications, and on 13 November the Secretary of State informed other friendly nations whose forces were fighting in Korea that the United States might permit its airmen to defend themselves in the airspace over the Yalu River. By 24 November two of the friendly nations had provided strongly negative reactions, and, following the collapse of the United Nations ground campaign in northern Korea, the Department of Defense dropped all consideration of hot pursuit.[108]

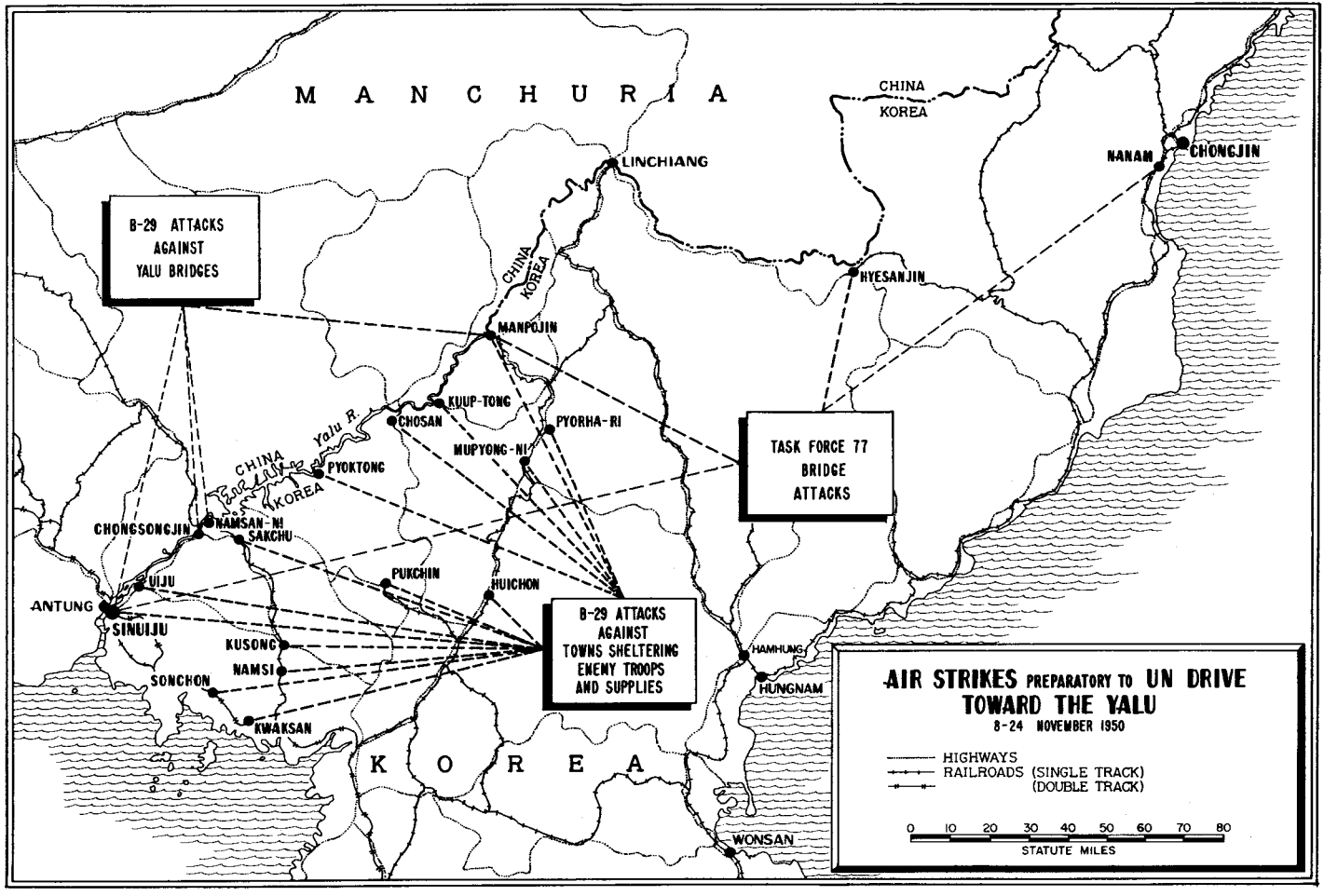
Although General Stratemeyer had scheduled the all-out strikes against Sinuiju before receiving General MacArthur's air-campaign directive, the city of Sinuiju was the foremost of the type of targets which General MacArthur wished FEAF to attack. It lay on the southern shore of the Yalu, directly across the river from the Manchurian city of Antung. Two three-quarter-mile-long bridges connected the two cities: one was a combination rail and highway bridge, the other was a double-track railway bridge. The city itself was the seat of Kim Il Sung's fugitive Korean government, and its warehouses and dwellings quite possibly sheltered Communist troops and supplies. Weather prevented the all-out attack planned for 7 November, but on the following day the Fifth Air Force and the FEAF Bomber Command executed maximum-strength strikes against Sinuiju. Before the B-29's arrived Fifth Air Force F-80 jets and F-51 fighters raked hostile antiaircraft artillery positions with machine guns, rockets, and napalm. As the fighter-bombers were suppressing flak, MIG-15's came up from Antung to engage top-cover flights which were flown by 51st Fighter-Interceptor Wing pilots. In history's first all-jet air battle the swept-wing MIG's proved clearly superior to the old F-80C's, but the MIG pilots showed their lack of combat experience. One of them foolishly attempted to dive away from Lt. Russell J. Brown, who put his heavier F-80 on the enemy's tail, held his machine-gun button down, and blasted the MIG pilot out of the air. Lieutenant Brown thus destroyed the first Communist jet aircraft to be shot down in Korea.[109] Shortly before noon 70 B-29's came over Sinuiju to drop 584.5 tons of 500-pound incendiary clusters. Under the cover of this assault nine other B-29's dropped 1,000-pound bombs upon the abutments and approaches of the two international bridges. As the mediums came over, Communist flak batteries from the Manchurian side of the river threw up a heavy volume of fire, but the bombers held altitudes above 18,000 feet and flew in squadrons in close trail, clearing the target in the shortest possible time. The MIG's did not appear, and the flak did no damage. Comparison of photographs taken before and after the holocaust revealed that the incendiary bombs burned out 60 percent of the two-square-mile built-up area of Sinuiju. But the spans of the international bridges were still standing: the 19th Group's B-29's had damaged the approaches to the bridges, but they had not closed the structures to Communist traffic.[110]

In an operations order issued on 6 November General Stratemeyer called upon FEAF Bomber Command to destroy six international bridges and ten cities. The most important bridges were the six in northwestern Korea: the two bridges at Sinuiju, a highway bridge at Chongsongjin, a railway

bridge at Namsan-ni, and a highway bridge and a railway bridge at Manpojin. Other international bridges, of lesser importance to the tactical situation, were the highway structures at Ongdmdong, Linchiang, Hyesanjin, Samanko, and Hoeryong.[111] Since his order gave the medium bombers more work than they could actually handle, General Stratemeyer asked Admiral Joy to employ naval aircraft against the bridges. When the Navy responded to the task with alacrity, Bomber Command was instructed to employ half of its sorties against bridges and the other half against the communications centers.[112]

In South Korea, bombing from medium altitudes with little or no enemy opposition, the airmen of Bomber Command and of Task Force 77 had developed great proficiency in destroying the usual-type bridge structures found in the area. The Yalu bridges, however, provided a more complex bombing problem. All of them were major structures, built by the Japanese to withstand great natural adversities. Antiaircraft fire and MIG interceptors hazarded bombing runs, and the orders which forbade violations to Manchurian airspace limited possible axes of attack. The railway bridge at Namsan-ni, for example, was so located in a bend of the river that neither the Superforts nor the Navy dive-bombers ever figured out a way to attack it without flying over Manchurian territory. The horizontal-bombing B-29's operated under severe disadvantages. To escape flak, they had to bomb from altitudes above 18,000 feet, and at such heights the B-29's were inherently unsuited for pinpoint work. To avoid border violations, the B-29's frequently had to bomb through cross winds, and high-level winds in excess of 120 knots were encountered.[113]

Following the failure of the Superfort attacks against the Sinuiju bridges on 8 November, Navy airmen from the *Valley Force, Philippine Sea,* and *Leyte* attacked the same targets in a three-day effort beginning on 9 November. The Sinuiju railway bridge proved as invulnerable to the naval dive-bombers as it had to the B-29 attack, but the Navy airmen dropped the highway bridge at Sinuiju and two lighter and less important bridges up the river at Hyesanjin.[114] As the carriers withdrew for replenishment, the 98th Group sent nine B-29's to walk 1,000-pound bombs across the Sinuiju bridges on 14 November. On the following day 21 B-29's of the 19th and 307th Groups teamed up against the bridges. After fighting off MIG fighters, which badly damaged two B-29's, the remainder of the Superfortress crews placed their bombs on the target but did little damage, probably because of the flak and a 95-mile-an-hour cross wind, neither of which made for good accuracy. At this juncture, General MacArthur agreed that Sinuiju was too strongly defended by fighters to permit Superfortress attacks, but he wished Bomber Command to continue the remainder of the bridge interdiction program as planned. During the next week heavy clouds hung over the Yalu, and the B-29's were unable to find the target visibility which they had to have to prevent possible border violations. On 24 November clearing weather returned all three B-29 groups to bridge assaults. Most of the attacks made in the next few days failed to accomplish their purpose, but on 25 November eight 19th Group B-29's dropped one span of the Manpojin railway bridge, and on 26 November eight 307th Group B-29's reported two spans of the Chongsongjin highway bridge destroyed.[115]


MANCHURIA
CHINA
KOREA
LINCHIANG
NANAM
CHONGJIN
HYESANJIN
MANPOJIN
B-29 ATTACKS AGAINST YALU BRIDGES
KUUP-TONG
CHOSAN
PYORHA-RI
MUPYONG-NI
Yalu R.
PYOKTONG
TASK FORCE 77 BRIDGE ATTACKS
CHONGSONGJIN
NAMSAN-NI
SAKCHU
PUKCHIN
HUICHON
UIJU
ANTUNG
SINUIJU
B-29 ATTACKS AGAINST TOWNS SHELTERING ENEMY TROOPS AND SUPPLIES
KUSONG
NAMSI
SONCHON
KWAKSAN
HAMHUNG
HUNGNAM
WONSAN
K O R E A
AIR STRIKES PREPARATORY TO UN DRIVE TOWARD THE YALU
8-24 NOVEMBER 1950
HIGHWAYS
RAILROADS (SINGLE TRACK)
(DOUBLE TRACK)
0 10 20 30 40 50 60 70 80
STATUTE MILES

The combined Navy and Air Force attacks had severed nearly half of Korea's international bridges and had damaged most of the other structures, but as November progressed it was increasingly evident that the returns were not commensurate with the effort being expended against these targets. Examination of aerial photographs taken while the bombing was in progress showed that the Chinese had thrown four new pontoon bridges across the Yalu at critical junctures in northwestern Korea. On 19 November, moreover, the Yalu was already frozen over between Sinuiju and Uiju and it was fast freezing across as far up as Manpojin. Japanese railway engineers told FEAF intelligence officers that the Yalu River ice could support great weights: on one occasion, they had laid railway track across the ice and had moved railway trains across it.[116] Because of the impossibility of attacking Namsan-ni and in deference to the build-up of hostile flak in defense of the Manpojin crossings, FEAF authorized Bomber Command on 21 November to knock out other bridges and communications lines south of the Yalu in a band of territory approximately 15 miles wide.[117]

While the Navy and Air Force attacks against the international bridges gave less than expected results, the Superfortresses were admirably suited for massed incendiary attacks against North Korean supply centers. After the attack on 8 November Bomber Command target planners scratched Sinuiju from the target list. In the next two weeks the medium bombers rained down incendiary bombs on the other nine cities named for destruction. In attacks against cities adjacent to the Yalu, the medium-bomber crews found hostile opposition sporadic but costly. The 307th Group lost a B-29 to MIG interceptors on 10 November, when their target was Uiju, a town a few miles up river from Sinuiju. Two days later, when the mediums were burning Manpojin, hostile flak from across the Yalu damaged a 98th Group B-29 so badly that it was forced to limp to an emergency landing in South Korea.[118] Except in the immediate vicinity of the Yalu, the medium bombers met no enemy opposition, but they nevertheless knew several serious operational problems. Proper target intelligence was lacking for a number of the cities, and icing conditions at the usual 8,000-foot cruising altitudes forced the B-29's up to the higher operating levels, causing engine failures and increasing gasoline consumption.[119] But the medium bombers did their work well, and as of 28 November they had effected heavy damages on the priority communications and supply centers: Manpojin—95 percent; Kanggye—75 percent; Hoeryong—90 percent; Namsi—90 percent; Chosan—85 percent; Sakchu—75 percent; Huichon—75 percent; Koindong—90 percent; Sinuiju—60 percent; and Uiju—20 percent.[120] Other smaller formations of B-29's attacked and destroyed such towns as Kwaksan and Kusong in northwestern Korea, Pyoktong and Kuup-tong on the Yalu in west-central Korea, and Mupyong-ni and Pyorha-ri in north-central Korea just below the 42d parallel. On 19 November 50 B-26's and the 3d and 452d Bombardment Groups flew from bases in southern Japan to drop incendiaries on enemy troop barracks at Masan in far northeastern Korea. This raid was the first massed light-bomber attack of the Korean war, and it successfully destroyed at least 75 percent of the barracks area.[121]

Although the medium bombers handled the destruction of the North

Navy crewmen check the braces of a napalm bomb on the flight deck of the USS *Philippine Sea* during the winter operations off North Korea *(Courtesy U.S. Navy).*

Korean communications and supply centers with relatively little difficulty, the effect of the destruction of these cities on the Communist cause was more difficult to assess. A number of Republic of Korea officials who were asked to comment on the matter viewed the destruction with a somewhat jaundiced eye. The North Koreans, they said, were no longer controlling the war, and other Communist nations welcomed destruction since it cost them nothing and gave them grist for their propaganda mills. Yet, in terms of the tactical situation, the destruction of the cities had utility. It deprived Communist troops of shelter, both for their personnel and for their supplies. Later on Chinese Communist troops would suffer many casualties, not from battle, but from the frigid winter weather.[122]

The all-out air campaign ordered by MacArthur against the Yalu bridges and other installations capable of supporting the enemy was as well executed as was possible under the circumstances, but it was largely designed to stop the movement of Chinese Communist troops into Korea. What was not known at the time was that the Chinese were already in Korea in great strength before the air campaign began. According to Chinese Communist records, captured much later, the Chinese had begun to slip troops across the Yalu as early as 14 October. By 26 October the 38th, 39th, 40th, and 42d Armies (Corps) of Communist General Lin Piao's Fourth Field Army had crossed the Yalu and were marching mostly at night toward positions in the mountains on the right flank of the American Eighth Army. Since the U.S. X Corps posed a threat to the Fourth Field Army, General Lin Piao detached the 42d Army to provide flank protection pending arrival of General Chen Yi's Third Field Army, with the 20th, 26th, and 27th Armies (Corps). Chinese Communist armies normally comprised headquarters troops and three divisions, each of 8,000 men. A full-strength Chinese "army" thus numbered approximately 30,000 men, and it was roughly comparable in size to an American "corps."[123]

Whether any amount of aerial reconnaissance could have penetrated the excellent camouflage discipline to locate Chinese troops in the heavily wooded mountainous terrain is problematical, but it is nonetheless true that neither air nor ground reconnaissance had fully measured the threat of Chinese Communist concentrations in north-central Korea.[124] From the beginning of Korean hostilities FEAF reconnaissance units had been operating under serious handicaps. In the years between 1946 and 1950 USAF "economy" programs had seriously curtailed the development of reconnaissance systems—aircraft, cameras, and skilled technicians. These reconnaissance systems had not kept pace with a jet air age.* Since July the 31st Strategic Reconnaissance Squadron (redesignated as the 91st Squadron on 16 November) had provided FEAF Bomber Command with target and bomb-damage assessment photography. But as the 31st Squadron sought to operate along the Yalu its obsolete RB-29's proved an easy mark for MIG interceptors. On 9 November two MIG's jumped a flak-damaged RB-29 over Sinuiju: in the aerial fight, Corporal Harry J. LaVene, the tail gunner, shot down one of the MIG's, but the

*See Chapter 17, pp. 545–556.

other hostile plane further crippled the RB-29, which limped home to Johnson Air Base, where a crash landing killed five crewmen. After this experience FEAF forbade the RB-29's to approach the Yalu, and the Fifth Air Force undertook to use its RF-80A photo planes to secure the needed reconnaissance in this area.[125]

The decision that it must cover strategic targets along the Yalu laid an additional burden upon the slight resources of the 543d Tactical Support Group, the provisional organization which controlled the 8th Tactical Reconnaissance Squadron, the 162d Tactical Reconnaissance Squadron (Night Photo), and the 363d Reconnaissance Technical Squadron. In an air-ground campaign involving an Army front, doctrine called for three day reconnaissance squadrons (one primarily photographic and two primarily visual), but other than an anachronistic use of Mosquito T-6 airborne control aircraft the Fifth Air Force still possessed no visual reconnaissance capability. The 8th Squadron, which flew RF-80A photo jets, had done an excellent job meeting demands made on it, but because of its limited ability both Army and Air Force intelligence staffs had been compelled drastically to screen their requests for photography. Most of the time, however, the 8th Squadron did not operate at its maximum capability, for neither the Fifth Air Force nor the Eighth Army had enough of the skilled photographic interpreters needed to examine and interpret such aerial photographs as were taken. In fact, because the Eighth Army had only a handful of photo technicians, the Fifth Air Force used its own scarce resources to provide the Army with quantity reproduction and interpretation of aerial photographs.[126]

Although FEAF's reconnaissance units possessed a limited potential, they might have done a better job if they had known what they were expected to discover. During the first three weeks of November the cameras of the reconnaissance units were closely focused upon the Yalu River crossings where air strikes were seeking to prevent the Chinese from entering Korea. The 8th Squadron did not entirely neglect the battle area, but its aircraft were so limited in number that they could infrequently reconnoiter any area other than that immediately adjacent to the main roads leading toward the Eighth Army and X Corps.[127] As far as possible the Communists avoided the main roads, but the road reconnaissance efforts not infrequently provided positive information of hostile activities. Thus on 7 November aerial reconnaissance reported many tracks in the snow which indicated heavy vehicular traffic south from Kanggye toward the Choshin (Changjin) reservoir area.[128] Earlier in November the 162d Reconnaissance Squadron (Night Photo) had been operating mostly by day and had been flying few sorties at night, but on 8 November reports that the enemy was moving under cover of darkness led the Fifth Air Force to require the squadron to fly eight sorties nightly over northwestern Korea. As a part of the increased night effort, the 162d Squadron sought to locate and illuminate targets for B-26 night intruders, but met little success. The severely restricted operating areas, extremely mountainous terrain, plus low-lying fog and haze at night, made both night photography and night attack extremely difficult.[129] Intelligence officers, moreover, did not view reports of an enemy build-up in the mountains south of Huichon with much concern. On 21 November FEAF finally directed the

Fifth Air Force to conduct close aerial reconnaissance of the area lying between the Eighth Army and X Corps,[130] but by this time the United Nations Command was already preparing its northward drive.

### *7. United Nations Attack and Communist Counterattack*

"While the North Korean forces with which we were initially engaged have been destroyed or rendered impotent for military action," General MacArthur announced to the United Nations on 6 November, "a new and fresh army faces us, backed up by a possibility of large alien reserves and adequate supplies within easy reach of the enemy but beyond the limits of our present sphere of military action."[131] The extent of Chinese Communist intervention was by no means clear, but the Chinese advertised the fact that they were in Korea as "individuals and volunteers," and the Joint Chiefs of Staff had empowered the United Nations commander to continue operations as long as he had a reasonable chance of success. General MacArthur and his field commanders had no thought but to continue the attack northward. General Walker spoke of a need for "a regrouping of forces, an active defense, a build-up of supplies pending resumption of offensive and advance to the border."[132] General Partridge told Stratemeyer that he meant to prepare for "conflict of indefinite duration." He announced that he intended to institute air patrols over Sinuiju, to open a tactical air-direction center at Anju, and move his Mustang wings to North Korean airfields.[133] General MacArthur agreed with these offensive plans. If the Chinese were not coming to Korea, he reasoned, a United Nations drive would finish the Korean war. If the Chinese were coming in, the United Nations troops would be in a far better position in the attack than if they waited assault along an immobile line of too thin defense.[134]

During the fortnight following 6 November United Nations forces battled not so much with the enemy as with such logistical problems as impassable roads, battle-damaged railways, and mined ports. In fact, General MacArthur informed the Joint Chiefs that the delay in the United Nations campaign was "due entirely to logistical difficulties."[135] Early in November it was starkly evident that an over-dependence on essentially scarce air transportation had put the United Nations forces in Korea in a difficult logistical position. Benefiting from the loan of the Fifth Air Force's share of the approximately 1,000 tons per day that the FEAF Combat Cargo Command could airlift into Pyongyang, the Eighth Army had pushed the U.S. I Corps ahead on a logistical shoestring. Now, because of increased enemy resistance, General Walker intended to bring forward the U.S. IX Corps, with the 2d and 25th Infantry Divisions. Such a force of four American and four ROK divisions would need 1,500 short tons of logistical support each day. Before launching an offensive, moreover, General Walker wanted to build up a five-day reserve of supplies in the forward area. Until enemy mines were cleared from the port of Chinnampo and rail traffic was opened into Pyongyang, General Walker wanted to retain

the 1,000 tons of supply capability represented by Combat Cargo Command's airlift.[136] General Partridge, however, planned to move the 6002d and 6131st Tactical Support Wings to Pyongyang's two airfields and the 6150th Tactical Support Wing to Yonpo Airfield, the latter being on the east coast near Hamhung. To support these Mustangs, Partridge had to recapture the Fifth Air Force's normal share of Combat Cargo Command's capability—about 450 tons per day.[137] Another complication involved the air-transport operations into North Korea: Kimpo Airfield was an important shuttling point for air freight en route between Ashiya and Pyongyang, and a free use of this airfield had enabled General Tunner to promise to deliver the 1,000 tons a day to North Korea. After 2 November resurgent enemy air opposition forced General Partridge to make heavy use of Kimpo, with the result that the airfield was so congested with tactical air operations as to interfere with the airlift. On 6 November General Tunner therefore suggested that Partridge ought to move one group of his fighters from Kimpo back to Suwon so that the transports could have freer use of Kimpo.[138]

Until this time air transportation had been so generously furnished in Korea that it had been taken for granted and used for many tasks which should have been performed by cheaper modes of transportation. Informed of the ramifications of the airlift problem by a telephone call from General Tunner on the morning of 7 November, General Stratemeyer announced some fundamental decisions that afternoon. In view of the sudden increase in hostile air opposition, Stratemeyer ruled that General Partridge must have first claim on all air facilities in Korea. Reasoning that Walker and Almond ought to be making more use of surface transportation, Stratemeyer directed Tunner to lend all possible assistance to the forward movement of Fifth Air Force units, movements which could not be accomplished without air transportation. General Stratemeyer also directed Tunner to look at the freight his planes were hauling and to determine that none but emergency requirements which could not be moved by other means of transport were airlifted.[139]

In Korea the airlift commander did not ordinarily concern himself with the nature of the cargo that his planes were required to haul, but, in view of the November emergency, General Tunner evaluated the urgency of the supplies being carried by air. While the X Corps had opened ports at Wonsan and Iwon, Tunner discovered that the Cargo Command was still hauling large quantities of motor gasoline and aviation fuel to the X Corps. The 1st Marine Air Wing would continue to require airlifted fuel, but on General Tunner's suggestion the X Corps agreed to cancel its requirement for the airlift of motor gasoline.[140]

So far as he was able, General Tunner also made efforts to increase the capabilities of Combat Cargo Command—a difficult task, for more transport aircraft operating into Korea's congested airfields did not mean more airlift capability. Less than thirty-six hours after its C-46's reached Brady Field, Kyushu, on 8 November the 437th Troop Carrier Wing began to shuttle cargo into Korea. But the 437th's airlift capability little more than compensated for the declining capabilities of the 314th Troop Carrier Group's C-119 fleet—aircraft which had been flown hard and for which supply support had always been short. For the long haul into North Korea General Tunner needed C-54 transports, but

rather than crowd Korean airfields with more planes, Tunner and Stratemeyer first requested USAF to provide added supplies and personnel to permit them to achieve a C-54 utilization rate of eight hours per day per plane.[141] In the latter part of November arrival of 22 additional aircrews and 279 maintenance technicians enabled the 374th Wing to increase its airlift capability by 33 percent without additional aircraft. But airlift requirements continued to pyramid, and on 21 November General Stratemeyer had to ask USAF for another squadron of C-54's. "We are not panicky," he explained, "but we are desperate, and we are utilizing every cargo aircraft we own."[142] At once USAF directed the 4th Squadron, 62d Troop Carrier Group, to move from McChord Air Force Base, Tacoma, Washington, to Tachikawa Air Base in Japan.[143]

Although General Tunner's actions increased the theater airlift capability late in November, Generals Walker and Partridge both continued to have legitimate requirements for mid-November's airlift capability into North Korea, a capability which remained fixed at approximately 1,000 tons a day. These requirements appeared irreconcilable, but Generals Walker and Partridge had learned to respect each other's needs, and they began personally to allocate the airlift each day, thus, for the time being, superseding the regular JALCO procedure.[144] Early in November the Eighth Army continued to take most of the available airlift, but the port of Chinnampo opened on 9 November and rail transportation into Pyongyang began at about this same time.[145] As these means of surface transportation became available, the Eighth Army reduced its requirements for air transportation, and the Fifth Air Force began to deploy the main bodies of its Mustang wings to North Korea. By air and by road the 606th Aircraft Control and Warning Squadron went to a site near Sinanju Airfield (K-29) and began operating its radars on 21 November. Between 10 and 19 November the 6150th Tactical Support Wing moved from Pohang to Yonpo Airfield (K-27). The tactical elements—the 35th Fighter-Interceptor Group and 77th RAAF Squadron—stayed at Pohang until the wing was in place, and then, between 17 and 19 November, the Mustang pilots took off from Pohang, flew tactical air strikes, and landed at Yonpo.[146] By 22 November the 6002d Tactical Support Wing, the 18th Fighter-Bomber Group and the newly arrived 2d South African Air Force (SAAF) Squadron were in place in Pyongyang East Airfield (K-24), but for several days before this the 18th Group's Mustangs had been staging through the field.[147] The main body of the 6131st Tactical Support Wing began to move to Pyongyang Airfield (K-23) on 25 November, the same day on which the 8th Fighter-Bomber Group completed movement of its two Mustang squadrons to the forward airfield.[148]

The three Communist airfields which the Mustang wings occupied showed signs that they had once been prosperous air facilities. Most still had barracks and hangars, but these buildings were badly battered by aerial bombardment and by Red demolition squads. Flight surfaces at each airfield were lightly constructed and had already suffered damages from heavy transport traffic. They presented some challenge, even to the hardy Mustangs. The surfaced strip at Yonpo was a little more than 3,000 feet in length, while the sod flying field at Pyongyang East was alternately dusty or muddy. Dust was the greatest hazard, for on one day

two Mustangs were lost in landing accidents caused by swirling dust clouds. Although living conditions were crude and operating conditions were worse, the Mustang squadrons benefited from their closeness to the battle area. Flying from Pusan, the 18th Group's crews had been hard pressed to reach the bombline, find targets, and then get back home after missions lasting up to five hours. From Pyongyang, missions were much shorter, targets more easily identified in the greater time allowed, and external fuel tanks (in short supply) were no longer needed. Such favorable operational factors more than offset the primitive operating facilities at the Communist airfields.[149]

While the Eighth Army gathered strength during mid-November, its combat forces probed and felt out the enemy's strength. Except on the right flank, where the ROK II Corps fought some sharp engagements around Tokchon, Eighth Army troops encountered less and less opposition. At this same time the U.S. X Corps moved more rapidly in northeastern Korea. On 11 November General Almond opened his command post in Hungnam, and shortly afterward the U.S. 3d Infantry Division landed at Wonsan to reinforce the corps. To relieve pressure on the Eighth Army's right and to explore enemy strength in central Korea, General Almond sent regiments of the 1st Marine and 7th Infantry Division through the mountain trails to the Choshin (Changjin) and Fusen (Pujon) reservoirs.* By 13 November the 7th Marines reached the south end of the Choshin Reservoir, gaining control of the extensive power installations which had been dismantled and dispersed nearly a month earlier. On this same day the 7th Infantry Division launched its 17th Infantry on a drive which would reach the Yalu at Hyesanjin on 20 November. Far away up the east coast routes the ROK Capital Divison prepared to assault the city of Nanam.[150]

"The situation here," reported an observer in Korea, who probably did not realize the full significance of his remark, "might well be compared to that of the Allied Powers in the Ardennes offensive during the winter of 1944–45, when overwhelming the enemy was only half of the battle."[151] Although guerrilla forays in the rear were occupying fully 30 percent of United Nations troop strength, the Eighth Army and X Corps were more troubled by near-zero temperatures and by ice-glazed roads than by enemy resistance. Weather also had an increasingly negative influence on air operations; low clouds and snow flurries further hampered identification of ground targets already obscured by prevailing morning fogs. On the Eighth Army front, however, the Fifth Air Force had few calls for air-support missions, and its armed reconnaissance flights could find few lucrative targets of opportunity. On the east coast the 1st Marine Air Wing found little to do in support of the X Corps.[152]

"The air attack of the last ten days has been largely successful in isolating the battle area from added reinforcement," General MacArthur informed the Joint Chiefs on 18 November. The Eighth Army was also building its

*The Japanese, who had built them, called these dams and reservoirs "Choshin" and "Fusen," but their correct Korean names were "Changjin" and "Pujon." Alternate spellings of the first name give the most trouble: Far East Command intelligence summaries and press releases of December 1950 used the name "Choshin," but maps in the intelligence summaries called it "Chosin." Still other reports referred to the "Chosen" dam and reservoir.

VAdm. C. Turner Joy, USN (left), is met at Wonsan by Maj. Gen. Field Harris, USMC.

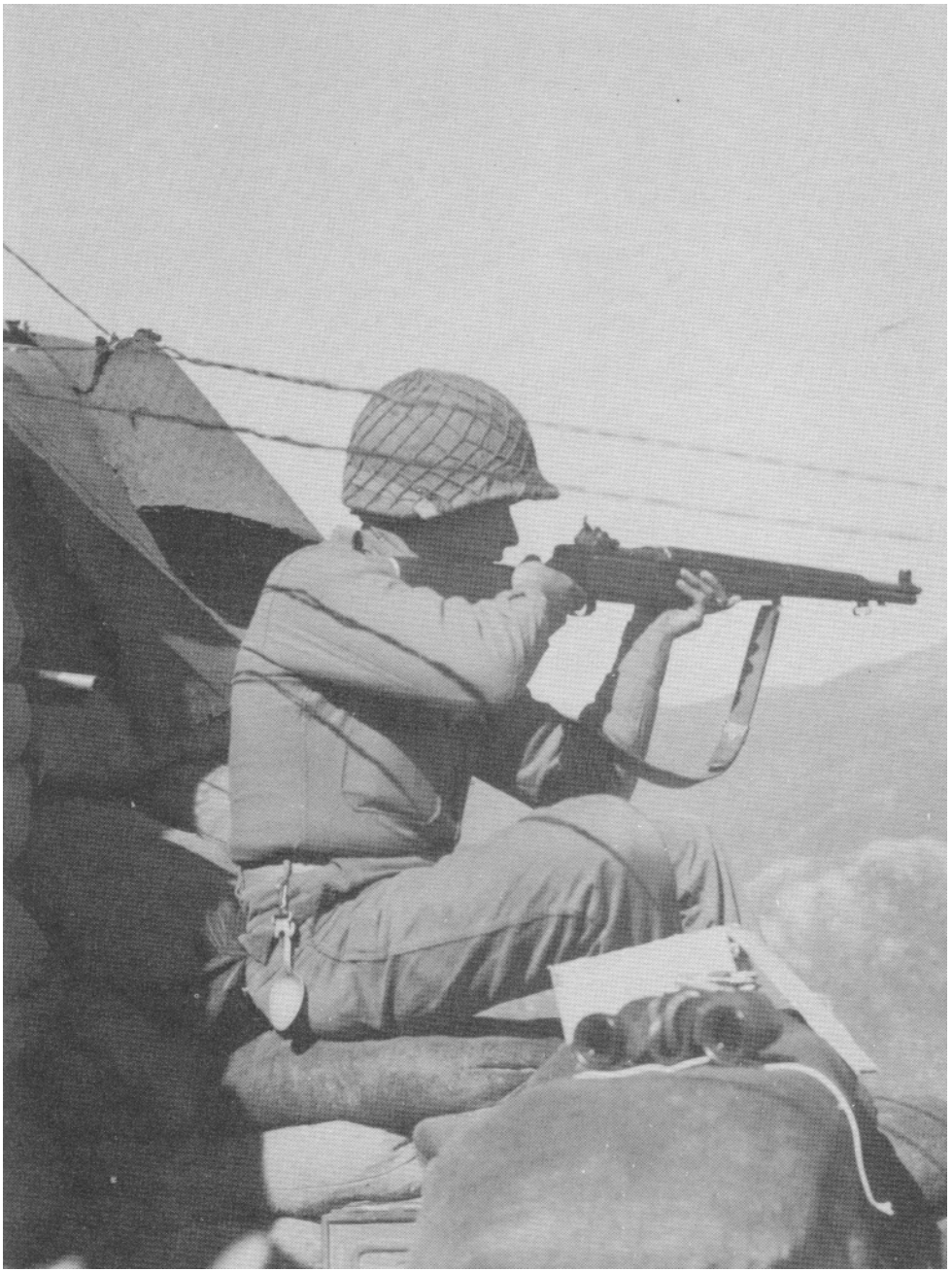
logistical stocks up to scarce but acceptable levels. In the light of these two factors, General MacArthur specified 24 November as the tentative date for the Eighth Army's main attack.[153] Given completion of his build-up by this date, General Walker would possess 136,000 combat soldiers against an estimated Communist force of 95,000 troops, 55,000 of whom were believed to be Chinese.[154] In support of this last offensive General Walker

asked FEAF to fly an all-out effort between 23 and 28 November and normal sustained effort thereafter.[155] Back in Washington the Joint Chiefs of Staff were still seeking to find a meaning for the Chinese intervention in Korea, and as the days passed they mentioned the possibility that the Chinese might be seeking to secure a "cordon sanitaire" to protect their Yalu River boundary and electric-power resources south of the river.[156] At the last hour, on 24 November, the Joint Chiefs queried MacArthur as to whether it might not be well, after advancing near the border, to stop short in terrain dominating the approaches to the valley of the Yalu. General MacArthur immediately replied that it would be utterly impossible to halt his forces south of the international border. If peace and unity in Korea were to be restored, it would be necessary to destroy all enemy forces within the country.[157]

The Eighth Army began its renewed offensive promptly according to schedule at 1000 hours on 24 November. For two days the American I and IX Corps advanced without encountering particularly heavy resistance, but the ROK II Corps, which formed the right wing of the Eighth Army, reported strong opposition and was generally held to no gains. On the two days the Fifth Air Force flew 345 close-support sorties and reported good results against enemy troops found in the open a few miles beyond the line of the Eighth Army advance. The drive was progressing favorably, but the Communists evidently meant to make a fight of it. General MacArthur therefore ordered the X Corps to attack northwestward toward Mupyong-ni, thus beginning an envelopment calculated to squeeze the Reds between the advancing elements of the two United Nations commands.[158]

But the United Nations campaign plan had not correctly reckoned with the caliber of the Chinese Communist opposition, nor with the intentions of the Chinese. The Chinese were not seeking to defend a buffer zone along the border; their purpose was to outflank, attack, and defeat the United Nations forces. On 26 November Communist General Lin Piao sprang the trap. His Fourth Field Army forces launched strong counterattacks against the U.S. I and IX Corps, while a main body of Chinese troops poured down the central mountain ranges to drive the ROK II Corps from its anchor position at Tokchon. On 27 November the ROK II Corps collapsed and the Communists continued southward, apparently meaning to turn the flank of the Eighth Army and then to wheel west to join guerrillas and sever the Army's communications. Next day General Chen-Yi's Third Field Army struck along both sides of the Choshin reservoir, cutting off the regiments of the 1st Marine and 7th Infantry Divisions which had been advancing toward Mupyong-ni.[159] Information obtained from Red prisoners left no doubt that the Chinese incursion was the result of a prepared plan of aggression. On 7 December the United Nations Commission for the Unification and Rehabilitation of Korea identified Red China as the aggressor: "On the basis of existing evidence," UNCURK reported, "the commission has come to the conclusion that Chinese forces in great strength are attacking the United Nations forces in North Korea and that these Chinese forces form part of the armed forces of the People's Republic of China."[160]

Planes from the USS *Leyte* bomb the Sinuiju bridges over the Yalu River, 22 November 1950.



A rifleman of the 14th Infantry Regiment.

# 8. *Two Months of Defeat and Retreat*

## *1. A Time for New Decisions*

"Enemy reactions developed in the course of our assault operations of the past four days," General MacArthur reported on 28 November, "disclose that a major segment of the Chinese continental armed forces...of an aggregate strength of over 200,000 men is now arrayed against the United Nations forces in Korea."[1] With the United Nations Command clearly confronting an overt Chinese Communist intervention, General MacArthur ordered the ground forces to change from the offensive to the defensive, an eventuality which had been foreseen in the original directives for the advance to the Yalu. Once again the Eighth Army began to fall back to a line south of the Chongchon River, while the X Corps sought to extricate its forward elements and to retreat toward Hamhung.[2] In order to oppose the Chinese Communists, General MacArthur's first thought was of ground reinforcements. At the start of the Korean war Chiang Kai-shek had offered 33,000 Chinese Nationalist troops for service in the battle zone. Then, General MacArthur had advised against any weakening of the defenses of Formosa, but on 29 November he asked for authority to negotiate for the Chinese Nationalist reinforcements.[3]

At first General Walker was reportedly not too happy about giving up ground his army had won in combat, but General MacArthur foresaw that the Eighth Army would have to withdraw toward Pyongyang and Seoul. On the east coast the U.S. X Corps would consolidate its strength around Hungnam and Wonsan, but General MacArthur wished to maintain General Almond's forces in those areas. From such positions on the eastern coast of Korea the X Corps could be supplied by sea and it would threaten the Communist line of attack through central Korea.[4] Secretly, on 28 November, Generals Walker and Almond flew back to Tokyo, where that night they joined Generals MacArthur and Stratemeyer, Admiral Joy, and other star-rank staff officers at a conference at MacArthur's residence in the American embassy. As one participant recollected, Generals Walker and Almond were more optimistic than had been expected. General Walker needed reinforcements but he believed that he could hold the Pyongyang area. General Almond, whose forces had not yet been subjected to full pressure of the enemy attack, was sanguine enough to feel that the 1st Marine Division could press through central Korea's mountains and strike the Reds in the rear.[5]

Back in Washington during November the Joint Chiefs of Staff had been fearful of the dispersion represented by the X Corps' detached position, and on 1 December they were unwilling to accept General MacArthur's strategy. They feared that the Reds would move large forces southward through the mountains in the gap between the two United Nations forces. They therefore urged MacArthur to extricate the X Corps from its exposed position and to bring it to join an Eighth Army battleline across the peninsula.[6] On 3 December, when he replied to the Joint Chiefs' message, General MacArthur noted that the X Corps was being withdrawn to a Hamhung perimeter as rapidly as possible. MacArthur said

that Walker no longer expected to hold Pyongyang, and under increasing pressure the Eighth Army would unquestionably be forced to withdraw to Seoul. Under such conditions General MacArthur could see no benefit from a union of the X Corps and the Eighth Army. At the narrowest, the Korean peninsula was 150 miles wide by road, which meant that the seven American divisions would be expected to defend 20-mile fronts against superior numbers of enemy troops. As MacArthur saw it, the United Nations Command was "facing the entire Chinese nation in an undeclared war." He called "for political decisions and strategic plans...adequate fully to meet the realities involved."[7] At the moment neither President Truman nor the Joint Chiefs of Staff had the new decisions that MacArthur needed. With the President's approval, the Joint Chiefs tersely informed the United Nations commander: "We consider that the preservation of your forces is now the primary consideration."[8]

If the evidence which presents itself is to be credited, General Walker had undergone a sudden change of opinion between 28 November, when he felt that the Eighth Army could hold Pyongyang, and 3 December, when he predicted that the Eighth Army would be forced to withdraw to the Seoul area. Aside from the hard ground fighting which was going on, General Walker was doubtless troubled by reported build-ups of Chinese strength in Korea. The main source of Eighth Army order-of-battle estimates of enemy strength was prisoner-of-war interrogations, and for some reason each Chinese prisoner willingly provided data regarding the location and identity of enemy units. According to these prisoner-of-war reports, Red Chinese troops in Korea in the first week of December numbered between 400,000 and 500,000 men. There was no way to verify these estimates, and the Eighth Army had no choice but to fall back as fast as possible to escape annihilation.[9] If the prisoners' reports were not correct, the Chinese had cleverly managed to gain time and space in which to build up their strength in Korea. The reports of preponderant Chinese strength in Korea were also accepted in Tokyo. During the middle of the first week of December General J. Lawton Collins, who flew to Tokyo on the President's order to get the latest facts, found General MacArthur gravely concerned by the superior numbers of Chinese troops facing his command. If the United Nations continued to fight a war limited in scope to Korea, MacArthur held little hope but that, sooner or later, his forces would be compelled to withdraw from the Korean peninsula. The best that he could expect was to fight a good delaying action.[10]

In messages to Washington and in conversations with General Collins, General MacArthur indicated that the United Nations Command ought to be permitted to bomb military targets in Manchuria. Later, during investigations in Washington, MacArthur was explicit as to what his intentions had been. He felt that he should have been permitted to bomb the concentrations of Chinese troops as they massed north of the Yalu. "If I had been permitted to bomb them before they crossed the Yalu, they never would have crossed," MacArthur said. Once the Chinese armies crossed the Yalu and entered combat in Korea, MacArthur would have bombed the enemy's Manchurian supply lines and the bases that contributed logistical support to the Red war effort in Korea.[11] At least one high-

ranking air officer held this same view. "I was all for the bombing of Manchuria," said General O'Donnell, "and I wanted very badly to do it as soon as we recognized the Chinese Communist forces...as bona-fide forces." General O'Donnell explained that the Chinese in November 1950 had very little good fighter cover and that their antiaircraft was not too formidable. "I think we could have gotten in and for very small cost in casualties we could have really hit them hard and perhaps even stopped them," General O'Donnell stated.[12]

Actually, General MacArthur regarded the bombing of Manchurian bases as only one phase of a broadened war effort against the Chinese Communist nation. At first, in early-December conversations with General Collins, and more fully in a long message to the Joint Chiefs on 30 December, General MacArthur indicated that the United Nations could recognize a state of war with Communist China and authorize the United Nations Command to blockade China's coasts, to destroy through naval gunfire and air bombardment China's industrial capacity to wage war, to secure reinforcements from the Nationalist garrison on Formosa, and to release existing restrictions upon the Formosan garrison so that it could undertake diversionary actions against vulnerable areas of the Chinese mainland. "I believe that by the foregoing measures," MacArthur stated, "we could severely cripple and largely neutralize China's capability to wage aggressive war and thus save Asia from the engulfment otherwise facing it."[13]

American authorities in Washington sympathized with MacArthur's position, but from the beginning of the Korean war the United States government was determined to work within the United Nations in halting aggression in Korea.[14] There was no doubt that the other nations whose forces fought alongside those of the United States opposed any extension of the Korean war. President Truman's remark of 30 November that the United States would take whatever steps necessary to meet the military situation in Korea, including the use of every weapon it possessed, caused profound repercussions in Europe and brought Great Britain's Prime Minister Clement R. Attlee to Washington on 4 December. At the conclusion of their talks President Truman stated "his hope that world conditions would never call for the use of the atomic bomb."[15] Inasmuch as the United States intended to pursue a course which would not rupture its relations with its friends in the United Nations—friends who opposed the extension of hostilities—the State Department opposed any bombing of Manchurian bases because, as Secretary Acheson expressed it, "to do so would, we believe, increase—and materially increase—the risk of general war in the Far East and general war throughout the world."[16]

Aside from these political reasons, American military leaders in Washington knew sound reasons why the United States could not, in the winter of 1950-51, undertake air operations against Manchuria or China. "It would be militarily foolhardy," stated a Joint Chiefs of Staff amendment on 3 January 1951 to a State Department circular intended for diplomatic dissemination, "to embark on a course that would require full-scale hostilities against great land armies controlled by the Peking regime, while the heart of aggressive Communist power remained untouched."[17] In the spring of 1951 General Vandenberg gave these same

thoughts to inquiring senators, but in more detail:

> Air power, and especially the application of strategic air power, should go to the heart of the industrial centers to become reasonably efficient. Now, the sources of the materiel that is coming to the Chinese Communists and the North Koreans is from Russia. Therefore, hitting across the Yalu, we could destroy or lay waste to all of Manchuria and the principal cities of China if we utilized the full power of the United States Air Force....In doing that, however, we are bound to get attrition. If we utilize less than the full power of the United States Air Force, in my opinion it might not and probably would not be conclusive.
>
> And even if we utilized it and laid waste to it there is a possibility that it would not be conclusive. But the effect on the United States Air Force, with our start from approximately 40 groups, would fix it so that, should we have to operate in any other area with full power of the United States Air Force, we would not be able to.
>
> The fact is that the United States is operating a shoestring air force in view of its global responsibilities....
>
> In my opinion, the United States Air Force is the single potential that has kept the balance of power in our favor. It is the one thing that has, up to date, kept the Russians from deciding to go to war....
>
> While we can lay the industrial potential of Russia today to waste, in my opinion, or we can lay the Manchurian countryside to waste, as well as the principal cities of China, we cannot do both, again because we have got a shoestring air force.

In short, General Vandenberg knew that the United States Air Force was powerful enough to devastate China and Manchuria, but in such a campaign it would inevitably suffer attrition, attrition which would leave the United States "naked for several years to come."[18]

During the cataclysmic month of December 1950 President Truman and his advisers were aware that any attempt to achieve the political objective of Korean unification solely by military means would be to incur an unacceptable risk of an Asiatic or general world war. Thinking so, the Joint Chiefs of Staff recommended that the most feasible solution to the military problem in Korea would be to secure a cease-fire agreement. Following this, the United Nations could proceed with the political, military, and economic stabilization of the Republic of Korea through political actions.[19] Early in December it seemed to some that the Chinese Communists might agree to a cease-fire, but Peking's special delegation which came to the United Nations Security Council soon revealed that the Reds wanted too high a price for such a cessation of hostilities. The chief Communist delegate brusquely insisted that his government had no interest in the Chinese "volunteer forces" fighting in Korea, and from Peking Chou En-lai insisted, as a basis for negotiating a peaceful settlement in Korea, that all foreign troops had to be withdrawn from the Korean peninsula, that American "aggressor forces" had to leave Formosa, and that representatives of the People's Republic of China had to be accorded a legitimate status in the United Nations.[20] At the United Nations a Soviet veto prevented action in the Security Council, but on 14 December the General Assembly adopted a resolution creating a Cease-Fire Committee and proposing that immediate steps be taken to end the

fighting in Korea and to settle existing issues there by peaceful means.[21] This resolution of 14 December separated the military and political objectives of the United Nations in reference to Korea. The political objective continued to be the unification of Korea under a freely representative government. The military objective was to secure a cease-fire agreement.

After the United Nations and United States had renewed their resolution to limit hostilities to Korea, President Truman had to give General MacArthur some word of instructions. MacArthur's messages indicated that he had little hope of defending Korea unless given reinforcements and authority to carry the war to the Chinese homeland. Fearing that Russia might strike Japan while that nation's defenses were down, the Joint Chiefs suggested that the United States might consider ways to withdraw from Korea. The State Department, however, was sensitive to world opinion, and it took the position that American forces should not leave Korea unless forced out. President Truman agreed that the United States could not voluntarily abandon Korea. Thus, with President Truman's approval, the Joint Chiefs informed MacArthur on 9 January that the United States would continue to limit hostilities to Korea but that MacArthur was expected to defend successive positions, inflicting as much damage on the enemy as possible, subject always to the safety of the forces under his command. If MacArthur should judge that evacuation was essential to avoid severe losses of men and materiel, then he was to withdraw to Japan.[22] This directive was seemingly clear enough to men in Washington, who knew the thinking behind it, but General MacArthur found it puzzling. Was he expected to maintain a military position in Korea indefinitely, for a limited time, or to minimize losses by withdrawing as soon as possible?[23] In response to MacArthur's request for clarification, President Truman personally addressed a frank statement of policy to him on 13 January. Truman explained that successful resistance in Korea would serve many important purposes. Only if continued resistance was no longer militarily possible was MacArthur to withdraw his forces, and, even then, he might, if he thought it practicable, continue to resist from islands off Korea's coasts. "In the worst case," said Truman, "it would be important that, if we must withdraw from Korea, it be clear to the world that that course is forced upon us by military necessity and that we shall not accept the result politically or militarily until the aggression has been rectified."[24]

## *2. Sabres to the Rescue*

As the Eighth Army and X Corps began to retreat before the Chinese Communist onslaught, General Stratemeyer announced that the Far East Air Forces would continue to maintain air superiority, to furnish close support to ground units, and to provide air-transport operations as required. It would seek to interdict North Korean lines of communication, to destroy

North Korean supply centers and transportation facilities, and to attack Communist ground forces and other military targets which had an immediate effect on the current tactical situation.[25] In broad outline, this was the same mission which FEAF had so well accomplished for the several months past, but now a new uncertainty nagged at the minds of many of the airmen in the Far East. Would the Far East Air Forces be able to maintain friendly air superiority over Korea? Without air superiority, the Far East Forces could perform its missions only with great difficulty, or perhaps not at all.

During the first months of the Korean war, after the North Korean Air Force was destroyed, United Nations airmen had possessed a virtually complete air superiority. In these months military pundits at every echelon had debated whether conventional aircraft, such as the Air Force Mustang and the Marine Corsair, might not be "better" aircraft than the Air Force F-80C jets. Already, serving as fighter-bombers, the Shooting Star jets had shown themselves to be better all-round planes than their conventional competitors.[26] And on the afternoon of 1 November the appearance of Soviet-built MIG-15 fighters offered the final answer to the problem, for the Soviet fighter's performance rendered obsolete every American plane in the Far East. The Russian fighter hopelessly outclassed the Mustang, whose pilots had no hope for survival when attacked by a MIG except to keep turning inside, to hit the deck, and to head for home as fast as possible. In level flight the MIG was fully 100 miles an hour faster than the F-80C and it could climb away from the old Shooting Star as if it were anchored in the sky.[27] At midafternoon on 18 November the Navy's new F9F Pantherjets first tangled with MIG's over Sinuiju. In this engagement the MIG's proved faster, could outclimb, outdive, and turn inside the Panthers, but in the second of two encounters one Pantherjet pilot got on top of a MIG and shot him down.[28]

The MIG-15 jet fighters, which flashed past startled Mustang pilots near the Yalu on 1 November, were not new to the world of aviation, but this was the first definite proof that a Chinese Communist Air Force was receiving these latest and "hottest" Soviet jet fighters. The plane itself, first seen by western observers over Moscow's Tushino Airdrome on Soviet Aviation Day in 1948, was believed to be a product of the design team of Artem Mikoyan and Michael I. Gurevich, whence came the American-given "MIG-15" designation. Probably, however, Mikoyan was solely responsible for engineering the jet fighter, which represented both borrowing and original design. The MIG's swept-back wings were products of design data captured from the Germans, and the original model MIG was powered by a Russian copy of the British Rolls-Royce Nene engine. Low wing loading and a 5,000-pound thrust engine resulted in a plane with spectacular maneuverability and a level speed of about 660 miles per hour. Probably in production as early as December 1947 the MIG's were reportedly pouring off Russian assembly lines at a rate of 200 per month by the end of 1950.[29]

The arrangements whereby Communist China was receiving Russian aircraft were not known in late 1950, but American intelligence later secured documents purporting to tell the story. As early as 14 February 1950 a Sino-Soviet aviation agreement had visualized the "reconstruction" of the Chinese Communist Air Force. Ac-

Soviet-built MIG-15

cording to this agreement, Russia apparently undertook to sell China 3,000 training and combat aircraft, to provide China with advisory and technical assistance, and to deliver as many as one-fourth of the promised firstline aircraft by December 1950. The Chinese Communist Air Force was to become "one integral part of the Russian air force."[30] According to FEAF estimates of the Chinese air order of battle, the Soviet Union made good its promised deliveries, for in December 1950 the Chinese were believed to possess 650 combat aircraft, including 250 conventional and jet fighters, 175 ground-attack planes, 150 conventional twin-engine bombers, and 75 transports. In addition to the Red Chinese planes, some 400 to 500 Soviet Air Force planes at bases around Dairen were readily available for use in Korea.[31] Reconnaissance photographs taken in late November showed that the Chinese Reds were developing Antung Airfield at a rapid pace: previously the field had two gravel runways but now the Reds had constructed a 6,000-foot concrete runway and a hard-surfaced perimeter taxiway. In early December early-warning radar in the Antung area began to track FEAF bombers at a range of nearly 150 miles.[32] With surprising rapidity, the Chinese were building air defenses which lapped down over northwestern Korea. The MIG-15 interceptor, an all-weather airfield at Antung, and a radar warning net added up to an operational capability that spelled trouble for the United Nations.[33]

Since the MIG fighters were superior in most aspects to American aircraft, it was providential that the Chinese Communist Air Force had some serious limitations, for an all-out Communist air attack added to the powerful ground assault might well have turned the

United Nations retreat into a virtual holocaust. As an air force, the Chinese Communist Air Force was very young, and its pilots were not yet skilled enough to use their aircraft to its greatest advantage. For the most part, the MIG pilots hugged the Yalu and preferred to make their attacks from high and to the rear of American planes. Seldom, if ever, did a MIG flight make more than two passes before streaking away to break off combat at the border. Most MIG pilots, moreover, were inept gunners: they consistently fired while beyond effective range, failed to take proper lead, and, on at least one occasion, a MIG pilot lost an almost certain kill when he ceased fire while in effective striking distance.[34]

While the Communists did not make a maximum employment of their jet fighters, the Chinese air garrison at Antung greatly hampered United Nations air attacks in the strip of terrain along the Yalu. The MIG's took a toll of the FEAF Bomber Command's B-29's and RB-29's. Such RF-80's as went to the border had to be escorted by F-80 fighters, which were not at all adequate to the task. In a "hairy" engagement on 4 December a flight of MIG's boxed in an RF-80 photo plane and its F-80 escort (one MIG prosecuted tail attacks while other MIG's flew wing positions 50 yards out). Although both planes were sieved by 23-millimeter cannon bursts, the American pilots escaped the trap and got home safely.[35] No longer could a fighter-bomber pilot assume that the sky above and behind him was clear of enemy aircraft. Armed reconnaissance flights had to provide themselves with top cover: a lower element searched for enemy traffic while the upper element watched for MIG's. All pilots had to conserve fuel and ammunition against the possibility of enemy attack.[36] Such conservative tactics prevented the Fifth Air Force from losing aircraft in air-to-air combat during November, but the defensive measures reduced combat effectiveness.

Despite a continuing measure of success in air-to-air combat, the Fifth Air Force did not go entirely unscathed from Communist air attack. A little before daybreak on 19 November a single-engine plane bombed Sunchon and at about the same time another conventional aircraft strafed and bombed Eighth Army emplacements along the Chongchon River.[37] At about 0300 hours on 28 November a Communist "light liaison" plane (probably one of the little PO-2 biplanes which the Reds would later employ as night hecklers) dropped a string of fragmentation bombs across the 8th Fighter Bomber Group's parking ramp at Pyongyang Airfield. The bombs killed an Air Force sergeant and damaged eleven Mustangs, three so badly that the group would have to destroy them when it evacuated southward.[38] Something more than luck may have been involved in this attack against Pyongyang Airfield, for the Office of Special Investigation detachment at that base subsequently learned that six supposed laborers working there had Chinese Communist papers and that one of the men was a captain in the Chinese Communist Forces.[39]

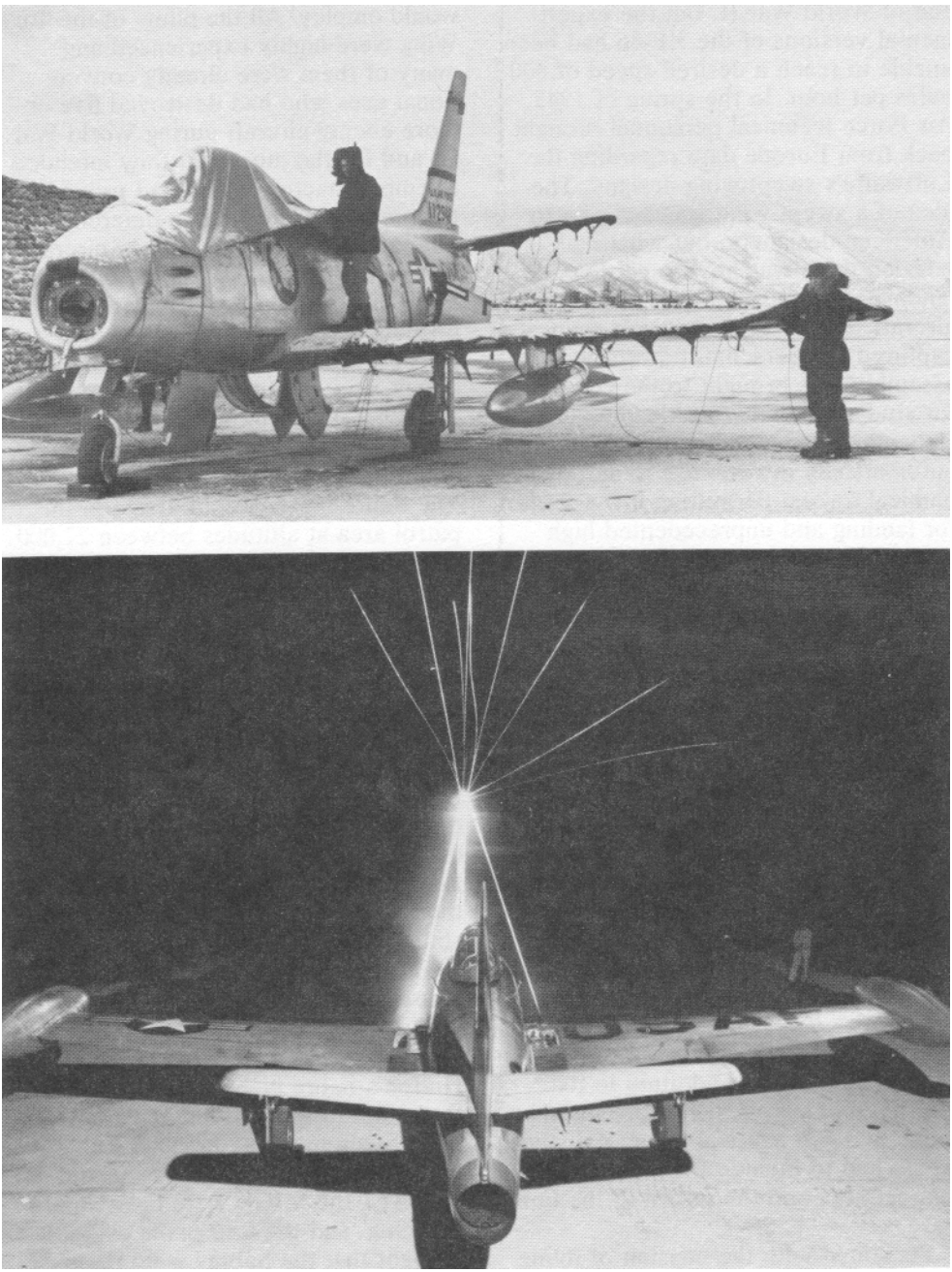
Through some good fortune the Chinese Communist Air Force made no determined bid to establish air superiority over northwestern Korea during the period in which the Fifth Air Force possessed no fighters which could battle on equal terms with the MIG's, and back in the United States the United States Air Force was bending every effort to get more modern jet fighters to Korea. On 8 November

Battle damage to the tail assembly of an F-80.

General Vandenberg offered to deploy an F-84E Thunderjet and an F-86A Sabre wing to Korea, provided General Partridge could prepare airfields for them in the combat area. Generals Partridge and Stratemeyer accepted the offer on the day it was made, and, still on 8 November, the USAF directed the 4th Fighter-Interceptor Wing and the 27th Fighter-Escort Wing to prepare for an immediate overseas movement.[40] These movement orders found the 4th Wing at New Castle County Airport, Wilmington, Delaware, where it was assigned to the Eastern Air Defense Force. Located at Bergstrom Air Force Base, near Austin, Texas, the 27th Wing was assigned to the Strategic Air Command. The aircraft of the two wings were flown to San Diego, California, where in the two weeks after 14 November they were deck loaded aboard aircraft carriers and a fast tanker. Advance personnel went to Japan by air, and the main contingents followed by rail and then by naval transport. Because of the urgency of the movement, the aircraft were loaded without really adequate waterproofing, and, as a result, most of the planes—especially those that were carried aboard the tanker—suffered substantial corrosion damages from salt spray during the trip across the Pacific. "Two or three days allowed in properly preparing the aircraft for shipment," wrote Colonel Ashley B. Packard, commander of the 27th Wing, "would probably have saved another week at this end."[41]

The deployment of two complete wings of new-model fighters to the Far East was accomplished in record time, but while they were on the water en route to Japan the war situation in Korea was worsening. General Partridge had planned to put combat echelons of the 4th Wing at Pyongyang Airfield and of the 27th Wing at Kimpo, but in early December, when the two wings assembled and were ready for service, such a deployment was no longer possible. Instead, the 27th Wing established a rear echelon at Itazuke and took its F-84 Thunderjets to Taegu Airfield, from which place the wing flew its first mission on 6 December. The crews of the 27th Wing were especially trained for long-range escort for medium bombers, but in view of the tactical situation they were immediately employed in an armed-reconnaissance and close-support mission.[42] The only Korean airfield which could possibly serve the 4th Wing was Kimpo, and because of the crowded conditions there only a part of the Sabre wing could go to Korea. Accordingly, Colonel George F. Smith, the wing commander, left a large rear echelon at Johnson Air Base, and took "Detachment A"—pilots and airmen from group headquarters and the three squadrons, but mostly from the 336th Fighter-Interceptor Squadron—to Korea. On 15 December the 4th Wing flew an orientation flight over North Korea which marked its entry into combat.[43] To the 4th Interceptor Wing General Partridge assigned a purely air-superiority mission: to fly combat air patrol over northwestern Korea and to meet, turn back, and, if possible, destroy MIG's.[44]

As they formed up on the runway at Kimpo and took off for combat at the Yalu on 17 December, the men who piloted the Sabres took confidence from the fact that they were flying the best fighter in the United Nations arsenal—the only plane on the friendly side of the Iron Curtain that could consistently slug it out with the MIG-15. The F-86A model Sabres which the 4th Wing took to Korea had been on the North American Aviation Company's drawing boards as a straight-wing fighter at the

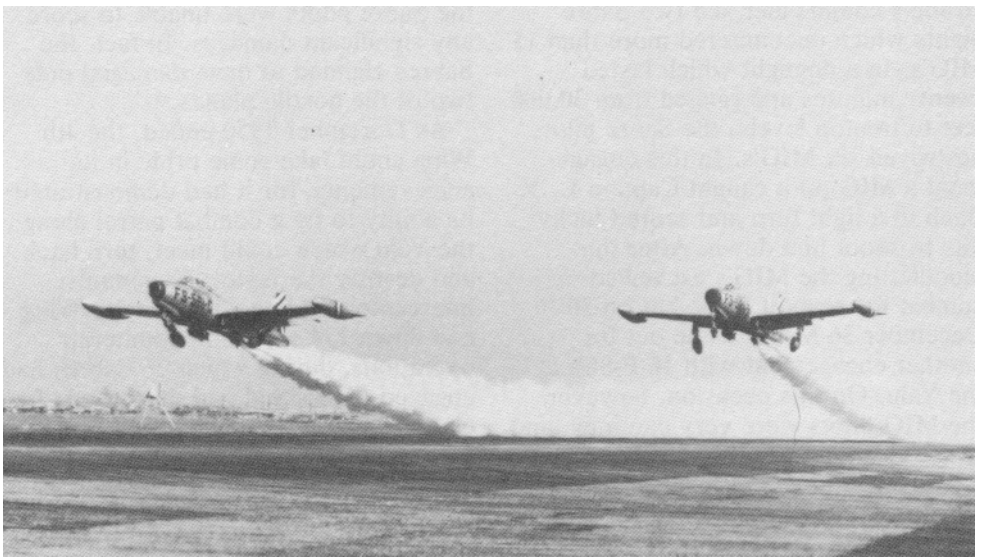


(top) Ground crew unwraps an F-86 Sabrejet for a combat mission.

(bottom) Maintenance men of the 49th Fighter Bomber Wing test the .50-caliber wing guns of an F-84.

end of World War II, but the experimental versions of the XF-86 had been unable to reach a desired speed of 600 miles per hour. In the spring of 1945 Air Force technical personnel brought back from Europe data regarding the Luftwaffe's swept-wing designs. The idea of a swept wing was not new to American designers, but what had puzzled them was how to get low landing speeds from a swept-wing aircraft. At North American's request a captured Messerschmitt swept-wing assembly was brought to the company for study. This wing had leading-edge slats which extended and retracted automatically in response to aerodynamical forces, permitting low speeds for landing and unprecedented high speeds for flight. North American added the fully-swept design version of the ME-262 wing to its F-86 Sabre, and the result was spectacular, even with the modest 5,200 pounds of thrust provided by the J-47-GE-13 jet engine.[45] At best, however, the Sabre was still not a mach-1 or a supersonic fighter, but its airframe was rugged enough to withstand transonic speeds on occasion. Other than the swept-wing design, the Sabre had few unconventional features. It carried six M-3 .50-caliber machine guns and a not too new K-18 gyroscopic computing gunsight with an electrical range-control system. One of the Sabre's chief limitations was its shortness of range. Carrying two 120-gallon wing tanks in addition to its internal fuel supply, the Sabre's combat range was 490 nautical miles, a distance which had to include the flight to the combat area and the return to the home base.[46]

Presented with the mission of flying combat air patrol along the Yalu from the air base at Kimpo, the men of the 4th Wing had given some serious thought as to the tactics which they would employ. All the pilots of the 4th Wing were highly experienced and many of them were already conventional aces who had destroyed five or more enemy aircraft during World War II, and for the most part they intended to employ tactics which had proved their worth in combat. In deference to time and space, flights of four aircraft would take off at five-minute intervals. Each flight would fly a "fingertip" formation which furnished the best possible defense against surprise attack, and on entering combat a flight could break down into elements of two, but in no case would an element leader and his wingman become separated. The Sabre flights would arrive in the patrol area at altitudes between 27,000 and 33,000 feet, just below the contrail level so that the Sabre pilots could locate hostile aircraft above them by their vapor trails. All these tactics were worth while and would be continued as standard practice, but in the first combat mission on 17 December the Sabre pilots made a mistake which might have cost them dearly had they opposed skilled adversaries. Since the distance of the round trip between Kimpo and the Yalu was 430 miles and the Sabres wanted to stay on patrol station as long as possible, they entered the area of combat at a leisurely, fuel-conserving speed of 0.62 mach. Thus, in the middle of the afternoon of 17 December, when Lt. Col. Bruce H. Hinton's Sabre flight sighted a battle formation of four MIG's, the F-86's were flying too slow to get their maximum effectiveness. Fortunately, however, the MIG's were below and climbing, and the Red pilots evidently thought that the Sabres were the old and slow F-80's, which had never given them any especial trouble. Gathering speed in their dive, the Sabre flight was on the startled MIG pilots before they



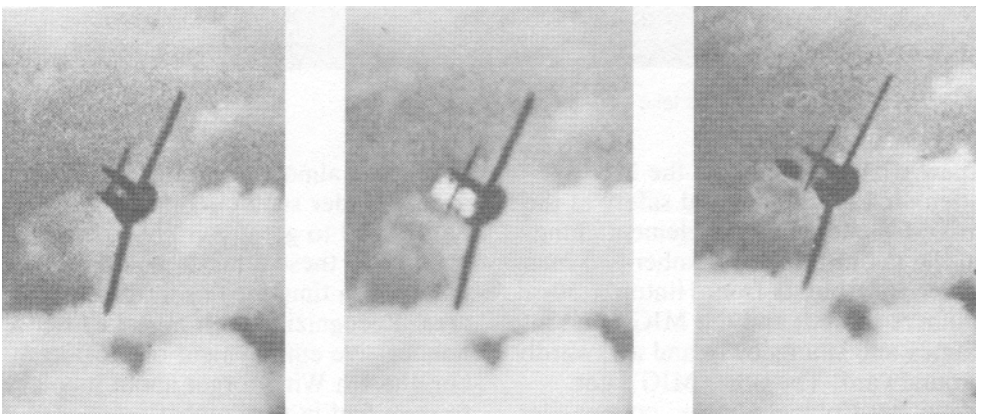
F-84's aided by JATO units take off carrying 500-pound bombs.

knew what hit them. As the MIG's attempted to dive toward safety at the Yalu, Colonel Hinton's element clung to the tail of the Red number-two man. Three long bursts from Hinton's .50-calibers scored, and the MIG burst into flames and spun slowly and awkwardly groundward. The other MIG's got away, but Colonel Hinton, commander of the 336th Squadron, had achieved the distinction as the first Sabre pilot to destroy a MIG-15 in air-to-air combat.[47]

During the next several days the Sabre flights continued to try to save fuel by cruising at slow air speeds until such time as they sighted hostile fighters. Although the MIG's came out to fight on several occasions, the Sabres scored no victories. The MIG pilots were learning that the Sabres were no ordinary adversaries: they now timed their attacks to catch the Sabres at the end of their periods of patrol, when the Sabres were short on fuel and could not stay to fight for any length of time. The MIG's also attacked from above and almost always at maximum speed. Under such circumstances the Sabres had to get up air speed before countering these attacks, and there was not enough time for this in the combat area. Recognizing their mistake after a nondecisive employment on 19 December, the 4th Wing forgot about its plans to save fuel in the combat area. Thereafter, when there was any danger of hostile air attack, the Sabre pilots entered the patrol area at air speeds of at least 0.85 mach, and preferably above 0.87 mach. The length of the patrol period was reduced to twenty minutes, which allowed the Sabres approximately ten minutes to stay and fight if the MIG's attacked while they were withdrawing. The strength of a Sabre patrol was standardized at 16 aircraft, or four flights of four aircraft which arrived at five-minute intervals at different altitudes. The soundness of the new high-speed cruising tactic was demonstrated on 22 December, when Lt. Col. John C. Meyer, the 4th

Group's commander, led two Sabre flights which encountered more than 15 MIG's. In a dogfight which lasted twenty minutes and ranged from 30,000 feet to treetop levels, the Sabre pilots destroyed six MIG's. In this engagement a MIG pilot caught Captain L. V. Bach in a tight turn and scored lucky hits to shoot him down. After this bloodletting the MIG's eschewed combat for several days, but on 30 December 36 MIG's came out for another engagement with 16 F-86's at the Yalu. On this occasion, however, the MIG pilots were very cautious, and the Sabre pilots were unable to score any significant damages. In fact, the Sabres claimed to have damaged only two of the hostile planes.[48]

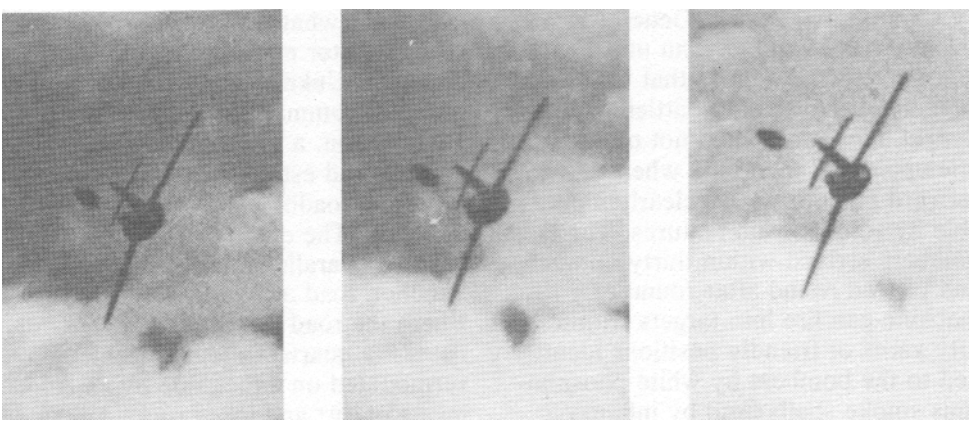
As December 1950 ended, the 4th Wing could take some pride in its achievements, for it had demonstrated its ability to fly a combat patrol along the Yalu which could meet, turn back, and destroy the fastest Communist interceptors. Altogether, the 4th Wing had flown 234 sorties in counterair operations, during which 76 Sabres had engaged MIG's and had destroyed eight, probably destroyed two, and



Ejection of MIG pilot.

damaged seven others of the enemy's jet interceptors. In the period the 4th Wing had found its optimum tactics, which would be employed with slight variation during the remainder of the Korean war. The "jet stream," whereby Sabre flights arrived in patrol areas at five-minute intervals, provided a minimum of four separate high-speed forces within easy supporting distance in time and space. The first Sabre flight to spot MIG's called out their location, altitude, and heading, and when a fight developed all Sabre flights converged to the point of contact. The optimum flight composition was the "fluid-four," four Sabres spaced generally in finger-tip formation. The two element leaders carried the firepower, while the wingmen covered the rear—a significant thrust along the Yalu where the enemy could almost always get the first "bounce." Maintenance of a high cruising speed not only allowed the Sabres to give an immediate counter-attack to a MIG's "bounce," but it often forced the enemy to fly a cutoff if he intended to attack. These tactics ably exploited the outstanding characteristics of the Sabres.[49]

After the first fortnight of combat, however, Colonel Meyer reported that his pilots unanimously agreed that they had never before fought under such difficult circumstances. Deriving advantage from their propinquity to their home base at Antung, the MIG pilots could select the time and position for their attacks. Nearly all combat occurred at near-supersonic speeds, and the combination of high speeds and of G-forces permitted next-to-no deflection shooting. The way to kill was to get on an enemy's tail and shoot up his tailpipe, but few pilots ever got more than a single such opportunity in an engagement. After their first few engagements with the MIG's. the 4th Wing pilots could make some tentative comparisons of the relative performance of the two swept-wing jets. In speed, the F-86A and the basic model MIG-15 were fairly evenly matched. At higher altitudes the MIG had better climb and zoom characteristics, but in level flights at lower altitudes the F-86 seemed to enjoy a slight advantage. Other flight characteristics of the Sabre appeared to be slightly better than those of the MIG, but not enough



better to make any appreciable difference. For air-to-air combat the armament of the F-86 was superior to the mixed-caliber, low-cyclic rate of fire armament (two 23-millimeter and one 37-millimeter forward-firing automatic weapons) carried by the MIG's. But the Sabre pilots were not entirely satisfied with their combat scores: they had let too many damaged MIG's get away. In order to take advantage of the short periods in which they could fire at a MIG, they wanted heavier-caliber, equally fast-firing guns to replace their .50-caliber weapons. The Mark-18 gunsight carried by the Sabres, moreover, was much too stiff and erratic for accurate deflection shooting in encounters at indicated air speeds of more than 500 knots. Perhaps a radar-ranging gunsight would allow the Sabre pilots to take advantage of their few opportunities to bring their guns to bear on the elusive MIG's.[50] Although the problems were many, the Sabres had nevertheless restored United Nations air superiority over northwestern Korea.

### *3. Aerial Support for the Ground Retreat*

As the Eighth Army broke away from combat north of the Chongchon River late in November, the Fifth Air Force sought to blunt the force of the Chinese attack and to clear out the roadblocks which hostile infiltrators put up behind friendly front-line positions. To the embattled ground troops the immediateness and finesse of the supporting fighters and light bombers often spelled the difference between destruction and survival. At 0130 hours on 28 November, for example, the 25th Infantry Division was so hard pressed by Chinese assault that General Kean asked for B-26 support, an unusual requirement since up to that time direct support of the friendly battleline during a night engagement had not often been attempted and then only when the forward positions were clearly identifiable by some terrain features. The light bombers arrived within thirty minutes and poured round after round of machine-gun fire into targets within fifty yards of friendly positions identified to the bombers by white phosphorous smoke shells fired by infantry mortars. "The surprise and extreme accuracy of the fire had a marked effect on the Chinese," read a ground narrative describing the episode, "for it came right at the crisis of the fight, when it seemed doubtful...that any part of the company could survive."[51]

Although it was far from niggardly in allocating air support to the other Eighth Army divisions, the Joint Operations Center gave priority to air-support requests received from the U.S. 2d Infantry Division, whose holding action was permitting other units to withdraw southward. In one day the 38th Regiment received 72 supporting air sorties. One of these support strikes sealed a mine shaft which sheltered enemy troops, and the 38th Regiment estimated that this strike probably killed 600 Chinese soldiers. Another air strike caught 50 Chinese soldiers crossing an open field and burned them to a crisp with napalm. But the most valiant air support for the 2d Division was yet to come. For nearly a week the division slowly withdrew toward Kunu-ri, stubbornly bearing the brunt of the Chinese offensive. By 2 December the division's rear guard was done, and it hurriedly loaded for what was supposed to be a speedy motor march southward to Sunchon. Unknown to General Keiser, who still commanded the veteran organization, a Chinese Communist division had established a massive five-mile-long roadblock on the road to Sunchon. The enemy's strongest positions paralleled the Kunu-ri to Sunchon road at its highest point, where the road ran through "The Pass"—a quarter-mile-long defile surmounted on either side by embankments of dirt and loose rock. As the 2d Division's motor columns got within the ambuscade they met a withering fire from many machine-gun emplacements. Under the circumstances, the motor columns had no choice but to try to run the gauntlet, and each man fought back according to his own fashion. For his own part, General Keiser sent off an urgent call to the Fifth Air Force for air support, which, as recorded by the division, "was given without stint until darkness closed on the scene." According to ground witnesses' reports, relays of fighter-bombers bored into "The Pass" so low that it seemed that some of them must certainly crash. Napalm spilled down

off the cliffs onto the road; rock fragments chipped off by .50-caliber bullets flew about everywhere; several friendly personnel sustained concussions from rocket blasts; but no friendly troops were known to have been killed by the air strikes. The air support was not only close, but it was effective. Ground observers said that the strikes knocked out many more enemy positions than did any defense mustered by the troop columns. General Keiser later expressed his highest praise for the effective air support and stated that his division might never have weathered the Chinese fire without the air support.[52]

After the evacuation of the 2d Division on 2 December, the Eighth Army was largely out of contact with the Chinese for several weeks. Initially, General Walker had hoped to hold defensive positions along the transpeninsula road crossing Korea between Pyongyang and Wonsan, but the Chinese armies were marching too fast for the Eighth Army to form its defenses. The city of Pyongyang was therefore abandoned on 5 December, and by mid-December the Eighth Army was massing in a group of positions extending from the Kumpo peninsula on the west to Choksong near the Imjin River north of Seoul, thence east across Korea to the Sea of Japan. Along this line General Walker meant to fight a delaying action in defense of Seoul, but his limited troop strength was too inadequate to permit him to hope to hold against a Chinese assault down through the mountains of central Korea.[53]

As the Eighth Army was completing its evacuation, the U.S. X Corps was beginning to feel the full force of enemy assault in eastern Korea. Recognizing that the overextended troop columns in the mountains of eastern Korea faced hazardous prospects for survival, General Partridge was determined to provide them all assistance that the air could give. On 1 December he ordered the 1st Marine Air Wing to assume direct responsibility for supporting the X Corps, without making any accounting for its actions to the Joint Operations Center. If the X Corps needed more support than the Marine airmen could provide, the Marine Air Wing was directed to refer these requests to the Fifth Air Force for performance.[54] Under one such circumstance General Partridge ordered the Yonpo-based 35th Fighter-Interceptor Group to aid X Corps on 28 November. Informed that bad weather on 1 December promised to keep Marine and Navy aircraft out of action, Partridge extended Fifth Air Force support to the ground troops in eastern Korea. Finally, following a personal visit to Hungnam on 3 December, General Partridge placed his entire light bomber capability at the disposition of X Corps. From Tokyo General Stratemeyer signaled that the entire medium-bomber force was available to support the X Corps in any manner it desired.[55]

Although the entire Far East Air Forces stood ready to support the ground troops in eastern Korea, the 1st Marine Air Wing and Task Force 77 actually provided more than enough close air support for the X Corps. In the several days following the initial Chinese assault most of the X Corps withdrew to Hungnam without serious incident. But a part of the corps remained in trouble. In the snow-covered mountains in the vicinity of the Choshin reservoir six divisions of the Chinese Communist Third Field Army had begun to cut off the escape routes behind the 1st Marine Division's 5th and 7th Regiments and behind elements of the 7th Infantry Division's 31st

These embattled marines dig at a command post in preparation for setting up communications.

Regiment. Short of supplies, battling in subzero temperatures, the besieged troops found air-supply support not less vital than the firepower of United Nations tactical aviation. Operating from Wonsan, a C-47 detachment of the 21st Troop Carrier Squadron had been dropping supplies to the advanced columns of the X Corps all during November,[56] and on 28 November this detachment flew overtime to drop ten tons of ammunition to the 5th and 7th Marines at Yudam-ni and 16 tons to the 31st Infantry at Sinhung-ni. By noon on 29 November, however, General Almond had placed requests for the delivery of more than 400 tons of air supply to the cut-off regiments, and the 21st Squadron's detachment could not handle so large an assignment. In fact, the FEAF Combat Cargo Command's whole airdrop system was geared to handle only 70 tons a day, the key to the matter being the capability of the Army to package and load airborne supplies. Back at Ashiya the 2348th Quartermaster Airborne Air Supply and Packaging Company augmented its strength with Japanese employees and began round-the-clock packaging of supplies, including rations, ammunition, petroleum products, clothing, and weapons. To Yonpo Airfield General Tunner sent a C-119 detachment and a detachment of Quartermaster supply packers, and on 4 December General Stratemeyer instructed Tunner to use all of his C-46's, C-47's, and C-119's in support of the X Corps.[57]

During the two days which the FEAF Combat Cargo Command required to gear its dropping capability up to 250 tons per day, the limited-scale drops were continued at Yudam-ni and Sinhung-ni. On 1 December, however, the airdrop machine was in full sway, and on that day, having accumulated sufficient airborne support to make the move, the Marine and Army units began to fight their way back to a concentration point at Hagaru-ri, an insignificant village in the valley just south of the Choshin reservoir. The Marine regiments and surviving members of the 31st Infantry reached Hagaru-ri on 3 December. Meanwhile, in an effort to open an escape route, the 1st Marine Regiment had moved out from Hungnam, but when this regiment reached the village of Koto-ri, seven miles down the valley from Hagaru-ri, the Chinese cut it off to its front and rear. Now, Cargo Command had to drop supplies at both Hagaru-ri and Koto-ri. Although airdrops were providing the bulk of the food, ammunition, and supplies which the encircled ground troops required, other light transports soon added to the airlift support. Within the defensive perimeter at Hagaru-ri the Marines smoothed the surface of the icy ground and prepared a rocky airstrip, barely wide enough to accommodate a C-47. On 7 December another such strip was hewn out at Koto-ri. By 10 December 240 sorties, most of them flown by the 21st Troop Carrier Squadron, brought into the crude airfields 273.9 tons of supplies, and, even more important, flew out 4,689 sick and wounded troops. Planes of the 1st Marine Air Wing shared 56 sorties of the total, while the C-47's of the Royal Hellenic Air Force detachment, new to the theater and attached to the 21st Squadron, flew 30 sorties carrying cargo but no evacuees. The 801st Medical Air Evacuation Squadron provided medical care for the evacuation cases. Although fraught with dangers of the rocky strips and harassed by hostile fire, these evacuation sorties not only saved the lives of men who would have died in the frigid weather but boosted the morale and

combat effectiveness of the 1st Marine Division.[58]

On the morning of 5 December General Tunner flew into Hagaru-ri with the proposition that the FEAF Combat Cargo Command would evacuate all the encircled Marines by air. Of course the offer applied only to people, for the cargo planes could not be expected to take out the equipment. Maj. Gen. Oliver P. Smith, commanding the 1st Marine Division, instead asked Tunner to continue the airdrops and even to fly in able-bodied Marine replacements. The 1st Marine Division, Smith said, intended to fight its way to safety.[59] Two days later the Marines were able to break out of Hagaru-ri and meet the 1st Regiment pushing from Koto-ri, but even with this concentration success was still not yet in sight, for about four miles south of Koto-ri the Chinese had blown out an apron bridge directly above the facing of a 1,500-foot-deep gorge. Unless this bridge could be replaced, the Marines would have to abandon their vehicles, tanks, and artillery, and make it out on foot. General Smith now made a rather remarkable request that eight spans of an M-2 treadway bridge, complete with plywood planking, should be dropped to his forces. Actually, four spans would do the job, but General Smith wanted some margin for error. When packaged, each of the bridge spans weighed an even two tons, and no one was quite sure whether such heavy, bulky objects could be dropped. The C-119 detachment at Yonpo made one unsuccessful test drop, employing six G-1 parachutes attached to the single span. No more time could be given to experiments, so the eight spans were each loaded into a C-119, and, instead of the smaller chutes, two huge G-5 parachutes were hitched to the ends of each span. On the morning of 7 December the C-119's took off from Yonpo and flew to Koto-ri, where they let down among the mountains to 800 feet and spilled the spans into an unmarked drop zone. One of the spans fell into an area held by the Chinese and another was damaged, but the other six spans were serviceable.[60]

Late on the afternoon of 8 December a 3d Infantry Division task force from Hungnam broke into Koto-ri, and with a little more airdropped supply for the road and thanks to the only airdropped bridge in history, the 1st Marine Division was soon out of trouble. After thirteen days of isolation the Marines and remnants of the 31st Infantry escaped the enemy, the Marines coming out as units with the bulk of their heavy equipment, despite the most adverse terrain, weather, and combat conditions. This they were able to do because of airdropped supply, the sole source of supplies for a unit exceeding division strength for a period of nearly two weeks. Altogether, 313 C-119's and 37 C-47's had dropped 1,580.3 tons of supplies and equipment.[61] The breakage rates of the supplies were high, a major contributing cause being the hardness of the frozen ground upon which they landed. As was inevitable, some pilots had missed the proper drop zones, and the Chinese got some part of the supplies dropped. But the Marines considered that the airdrops had been successful. "Without the extra ammunition," said General Smith, "many more of the friendly troops would have been killed." "There can be no doubt," he continued, "that the supplies received by this method proved to be the margin necessary to sustain adequately the operations of the division during this period."[62] For the part they played in the successful evacuation of the ground troops from the Choshin reservoir, the

314th Troop Carrier Group, the 21st Troop Carrier Squadron, and the 801st Medical Air Evacuation Squadron were simultaneously awarded Distinguished Unit Citations, the first such awards to Air Force units in the Korean war.[63]

When the Marines were back in the Hungnam-Hamhung perimeter on 11 December, General Almond got seriously down to the task of planning the wholesale evacuation of the X Corps. Even though water lift could evacuate the corps in ten days' time, there was no assurance that the Chinese would allow this much time before launching massive attacks. General Almond therefore desired to use air evacuation to the maximum. Yonpo Airfield was available for transport traffic, but, to be safe in case the Chinese broke through the perimeter, an emergency airstrip was graded on the beach at Hungnam.[64] The maximum-effort air evacuation from Yonpo began on 14 December and ended at 0900 hours on 17 December, when the X Corps could no longer secure the airfield against Chinese infiltrators. During these four days Combat Cargo Command plied a twenty-four-hour day operation, in which planes took off at five-minute intervals. Using nearly all its strength, the command flew 393 sorties from Yonpo, lifting 228 patients, 3,891 passengers, and 2,088.6 tons of cargo.[65] While it was efficiently managed, the transport operation was not without its hectic moments. Aircrews got very little rest in what was usually bad-weather flying. More often than not the crews had to assist with the loading of their planes in order to speed their turnarounds. Fatigue and tension developed into illnesses, requiring the ultimate hospitalization of a number of pilots of the 1st Troop Carrier Group (Provisional).[66] On the ground at Yonpo maintenance crews worked desperately on four C-119's which were grounded for mechanical difficulties, planes that would have to be destroyed if they were not prepared for flight before the field was closed. A broken elevator was replaced on the first of these planes; another was flown back to Ashiya even though its fuel pump was out of order; two entire engine assemblies were pulled from a plane at Ashiya and flown to Yonpo in time to save the third; and only the fourth C-119, which encountered a scavenger-pump failure at the last moment, had to be destroyed.[67] On 17 November the 314th Troop Carrier Group could report with an understandable degree of pride: "As the air evacuation ended, every request for airlift had been fulfilled."[68]

Outloaded at Hungnam, Songjin, and Wonsan, the bulk of the troops and equipment of the X Corps was evacuated by surface vessel. As the perimeter shrank, naval gunfire and carrier aircraft laid down a continuous barrage to hold the enemy at bay, while Fifth Air Force B-26's supported the defensive effort at night. Finally, at 1436 hours on 24 December, the evacuation was completed. Through control of the air and of the sea, the United Nations Command was able to withdraw its forces from their exposed beachhead in northeast Korea.[69] As the last ground units left Hungnam, the first of the X Corps troops were already moving toward reserve positions behind the Eighth Army's battleline. A number of ROK troops were landed at Samchok and Ulsan, whence they moved to take positions in the mountains of South Korea. The American divisions of the X Corps landed at Masan and Pusan and moved northward to take up blocking positions behind the Korean divisions at the center of the Eighth Army.[70]

### *4. Air Attack Lacerates the Advancing Chinese*

As soon as the Eighth Army and X Corps broke contact and retreated southward to form new defensive lines, the Far East Air Forces launched a determined air campaign designed to slow the forward progress of the Chinese Communist armies and to destroy their personnel, supplies, and equipment. For more than three weeks of December the United Nations air forces posed the only opposition to the enemy's forward progress, and in these weeks the Chinese met the full fury of an aroused air attack. The results scored by the air campaign were spectacular.

During the first week of December the Fifth Air Force did not neglect armed reconnaissance, for air strikes at the rear of the Chinese lightened the pressure on the Eighth Army. After the first several days of the month, however, the Eighth Army was out of trouble, and General Partridge was able to fill the air with armed reconnaissance and interdiction sorties. The full magnitude of the effort was indicated by the fact that FEAF aircraft flew 7,654 armed reconnaissance and interdiction sorties in December.[71] A few days after the Fifth Air Force launched intensive armed reconnaissance strikes General Weyland ordered the FEAF Bomber Command to devote its main efforts to the interdiction of enemy rail lines in North Korea. Effective on 15 December, FEAF formally instituted Interdiction Campaign No. 4, a well-conceived plan of operations which divided Korea north of the 37th parallel into eleven zones which followed the main transportation routes. The plan named for destruction 172 distinct targets—45 railway bridges, 12 highway bridges, 13 tunnels, 39 marshaling yards, and 63 supply centers—and FEAF promised to designate additional targets in accordance with the tactical situation. By mutual consent the Naval Forces Far East assumed responsibility for destroying targets in the three interdiction zones on the eastern coast of Korea—zones that ran north from Wonsan to the Siberian border.[72] Among its other purposes the interdiction plan was so conceived that if all rail bridges named were kept unserviceable the enemy would not be able to use any stretch of rail line longer than 30 miles in length.[73]

The Chinese military forces—which the Reds liked to call the "People's Liberation Army," but which Americans in Korea knew as the "Communist Chinese Forces"—were essentially an Asiatic guerrilla army whose peasant soldiers could make long daily marches on rations which were minuscule by western standards. In long years of fighting in China, the highly-disciplined coolie soldiers had grown used to marching and fighting at night and hiding by day. The Chinese logistical problem was essentially simple, especially during the initial hostilities in Korea. As he crossed the Yalu, the Chinese soldier was given a supply of ammunition and several days' supply of food—rice, millet, or soybeans—which he carried on his person. When they exhausted their food, the Chinese units were expected to forage from the countryside or capture food from the enemy. Many Chinese prisoners said that they liked to fight Americans because they could capture greater quantities of supplies from Americans. When a unit exhausted its ammunition, it was ordinarily replaced by another fresh unit, and the first unit

was pulled back to receive replacements and fresh bandoliers of ammunition. Inured to hardship, masters of stealth, highly disciplined, and frugal in their wants, the Chinese were difficult adversaries to the ground and air forces of the United Nations Command.[74]

Whatever they were, however, the Chinese were not supermen, and for more than two weeks at the beginning of December the Chinese forgot their guerrilla training and laid themselves wide open to air attack. According to General Peng Te-huai, commander of the Joint North Korean Army-Chinese Communist Forces in Korea, General Lin Piao's Fourth Field Army intended to come to grips with the Eighth Army north of the Chongchon River, if possible, but in all events north of the Taedong River, which flows past Pyongyang.[75] Failing to achieve victory north of the Chongchon, the Chinese threw their usual caution to the wind and marched as quickly as possible in pursuit of the Eighth Army. Such rapidity of pursuit was foreign to coolie troops, who were trained to exploit the stealthy approach, the surreptitious infiltration, and the ambush of enemy forces. As had been the case with the Red Koreans before them, moreover, the Chinese armies had never fought against an enemy who possessed a major air force, and, like the Red Koreans, the Chinese armies had to learn that they could not ignore the might of the Fifth Air Force.

Eager to score a victory which would end the Korean hostilities, the Chinese moved southward over main and secondary roads and very seldom used the mountain paths and trails which they had frequented in October and November.[76] Masses of Chinese jammed the roads in bold daylight movements. Even under air attack, the Chinese columns continued to march forward, apparently ignoring the casualties inflicted upon them by attacking planes. At night vehicle columns often refused to extinguish their lights, even when they were being strafed and bombed. Such stoic determination on the part of the enemy greatly disturbed American pilots, but Fifth Air Force fighter and light bomber missions nevertheless inflicted heavy casualties upon the Chinese.[77] When the Reds were crossing the Chongchon at Sinanju and Kunu-ri, 49th Group flight commanders returned from missions with claims of hundreds of troops destroyed.[78] Virtually every armed reconnaissance mission claimed the destruction of Chinese personnel and equipment, and it was obvious that the Far East Air Forces pilots were wreaking heavy casualties on the enemy. On the basis of accumulative combat claims, General Stratemeyer estimated that as of 16 December his airmen had killed or wounded 33,000 troops—the equivalent of four full-strength Chinese Communist divisions.[79]

After sustaining two weeks of aerial punishment the Chinese Communists began to realize that they could not afford to travel by day. An assistant platoon leader of the CCF 112th Division, for example, told interrogators that his division traveled by day until air attacks destroyed most of its trucks, after which the division moved solely by night.[80] By middle December, moreover, the Chinese must have recognized that they could not bring the Eighth Army to bay north of Pyongyang. Quite suddenly at this time, as if acting in accordance with orders from above, the Chinese armies returned to their accustomed practices of concealment and camouflage. Troops moved mostly at night, or, if absolutely necessary, by day, under rigid camou-

flage discipline. Each day at dawn the Chinese concealed their mobile equipment in ravines, under bridges, and in other carefully hidden positions along the main supply routes. Such targets were exceedingly difficult to locate and harder to destroy. Under such circumstances armed reconnaissance missions achieved slighter results, but they were still worth while. In the latter half of December FEAF crews estimated that they killed another 6,694 enemy troops, a slightly less number than the strength of another Chinese division.[81]

As the FEAF Bomber Command instituted Interdiction Campaign No. 4, the Superfortress crews soon perceived that the tasks required of them would not be so easy as similar undertakings had previously been. Because of the dangers from hostile fighters, the medium bombers which attacked targets in northwestern Korea were no longer able to make leisurely, single-bomber attacks against bridges. Instead, the bombers had to attack targets in enough strength to provide mutual support, or else they had to have fighter escort. Nor was the FEAF Bomber Command able solely to concern itself with the interdiction campaign. When tactical aircrews noted significant enemy troop concentrations, the Fifth Air Force requested diversion of medium bombers to such area targets. Thus the towns of Tokchon, Anju, and Pukchang-ni were bombed by B-29's on 4 December, and Sunchon, Songchon, and Sukchon were attacked on 5 December. On 10 December the B-29's postholed the two airfields at Pyongyang with high-explosive bombs, and four days later the 19th Group bombed Pyongyang's marshaling yards and nearby storage areas in order to destroy American equipment abandoned there. But the B-29's did not entirely neglect interdiction, for they made numerous attacks against marshaling yards and supply areas along North Korea's railroads. On 21 and 22 December Bomber Command employed its entire force in four-plane formation attacks against North Korean bridges.[82] On 23 December, however, General MacArthur asked that approximately two-thirds of the B-29 effort be normally expended against towns and villages suspected to be sheltering hostile troops. General Weyland promptly directed the change, with the result that only one-third of the FEAF Bomber Command's effort could be used for interdiction.[83] As the result of diversions of medium-bomber effort to other target systems, FEAF made little progress in implementing Interdiction Campaign No. 4 during December 1950.

During the weeks of December in which the United Nations ground forces were largely out of contact with the enemy, FEAF airmen were estimated to have killed or wounded enemy personnel equivalent in number to the aggregrate strength of five Chinese divisions. Evidence indicated that the Chinese Communist troops, who initially ignored air attack, had begun to respect airpower. On 28 December, for example, four 67th Fighter-Bomber Squadron Mustangs bombed and strafed enemy positions 80 yards beyond friendly lines near the Hwachon reservoir, and when the strike was over more than a hundred Chinese soldiers surrendered. These men explained that they had suffered enough from air attack.[84] Other air attacks, which destroyed potential or actual billeting areas, contributed indirectly to Chinese casualties sustained as a result of frigid weather. Apparently the Chinese feared air attacks against towns and villages and, as a result, suffered intensely from

Korean civilians board an LST during the Hungnam evacuation, 19 December 1950.

want of shelter. A Far East Command intelligence source reported that large bodies of enemy casualties moved northward during the last week of December. Fully half of these men had frozen hands and feet, and they seemed "to have been cut off from their command headquarters, and apparently had no regular supply lines, largely as the result of United Nations air action."[85]

### *5. The Fifth Air Force Reorganizes and Retreats*

Early in July 1950, when he wanted to take an Air Force headquarters and tactical air wings to Korea, General Partridge had been unable to cut himself free from continuing responsibilities in Japan. For want of an ability to do anything else, General Partridge had accordingly divided the Fifth Air Force's headquarters. Fifth Air Force in Korea managed the tactical air war, while Fifth Air Force (Rear) remained behind in the old buildings at Nagoya and took charge of Japan's air defense, airfield construction programs, and other kindred duties in Japan. When time came to move tactical air units to Korean airfields, General Partridge made another improvisation. The wing structures were so inextricably involved in the Japan air-defense organi-

zation that they could not be displaced for movement to Korea. Instead, General Partridge organized provisional tactical air-support wings to accompany and support the combat groups in Korea.

Neither of these administrative improvisations worked to complete satisfaction. Although his vice-commander at Nagoya helped him, General Partridge was nonetheless directly responsible for air activites in Japan. By November 1950, moreover, the commanders of 11 combat wings, a reconnaissance group, a tactical control group, and numerous smaller separate units reported directly to General Partridge. He also controlled the activities of 25 air bases. The divided headquarters structure worked after a fashion, but it was productive of no little confusion, poor administration, and loss of efficiency. The staff officers in Korea and at Nagoya were never quite sure what their counterparts might be doing at the other headquarters. Similarly, the provisional wings in Korea were fighting a war without any of the advantages of regular status, including such matters as authorizations for personnel and equipment and for promotions.[86]

Seeking to reduce General Partridge's excessively large span of control to more manageable proportions, General Stratemeyer, on 18 November, asked authority to organize an air-division headquarters at Nagoya, with the understanding that the air division would be a subordinate command to the Fifth Air Force. When approval from USAF arrived, General Partridge activated the 314th Air Division at Nagoya, effective 1 December 1950. Under the command of Brig. Gen. Delmar T. Spivey, the 314th Air Division assumed three principal duties: the air defense of Japan, logistical support as necessary for tactical air efforts in Korea and regularly for assigned or attached units in Japan, and the Japanese airfield construction programs.[87] Simultaneously, Headquarters and Headquarters Squadron, Fifth Air Force, was transferred without equipment or personnel to Seoul, where it absorbed the personnel and equipment of the discontinued Headquarters and Headquarters Squadron, Fifth Air Force in Korea.[88] Since the Fifth Air Force staff engineer officer would now be able to give his full attention to Korea, the I Construction Command (Provisional) was discontinued on 1 December.[89] To complete the reorganization, the Fifth Air Force ordered a series of paper transactions designed to give the supporting wings in Korea regular Air Force status. Effective on 1 December, the 18th Fighter-Bomber Wing replaced the 6002d Tactical Support Wing, the 8th Fighter-Bomber Wing replaced the 6131st Tactical Support Wing, the 49th Fighter-Bomber Wing replaced the 6149th Tactical Support Wing, the 35th Fighter-Interceptor Wing replaced the 6150th Tactical Support Wing, and the 3d Bombardment Wing (Light) replaced the 6133d Tactical Support Wing. New table-of-distribution air-base wings were organized to operate Itazuke, Johnson, Yokota, Misawa, and Clark Air Bases.[90]

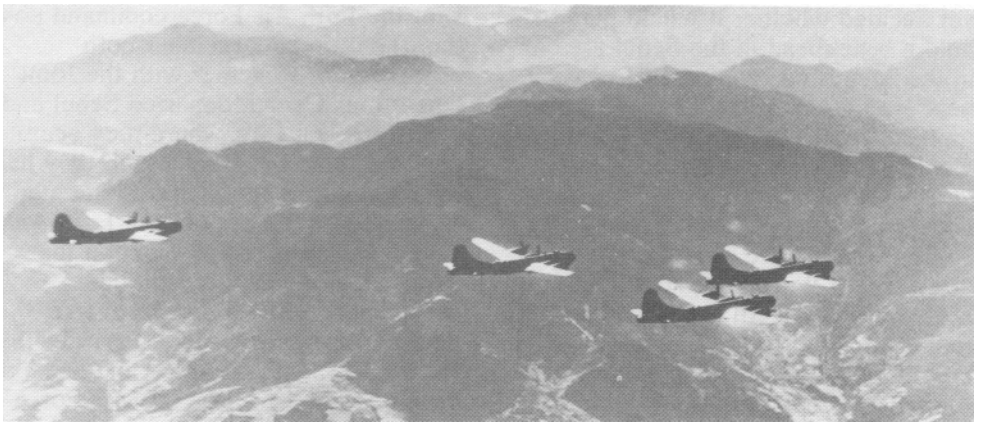
Actually, the Fifth Air Force reorganization was in the mill and would have taken place even if the Chinese Communists had not intervened in Korea, but, coming as it did on 1 December, it had the added salutary effect of serving notice to all concerned that the Korean war was no longer thought to be a temporary matter, to be met by improvised organization. While the wings and supporting squadrons assumed their new designations according to plan, the

reorganization, for the moment at least, received far less attention than did the Fifth Air Force's crash plans to redeploy its units to airfields beyond the reach of the advancing Chinese Communist Forces.

In the closing days of November the three Mustang wings and the aircraft control and warning squadron which the Fifth Air Force had so laboriously moved into North Korea earlier in the month stood in grave danger of being captured by the Chinese Communists. In the week that it had operated at a site near Sinanju Airfield, the 606th Aircraft Control Squadron had in a manner paid for itself, since the squadron's radars had not only provided early warning of Communist air activities but had positioned night-flying B-26's for the support of friendly ground troops during hours of darkness. Like other members of the 502d Tactical Control Group, the 606th Squadron had been deployed to Korea without organizational vehicles, and only after much scrounging and borrowing of vehicles the squadron had managed its move to Sinanju with great difficulty. Without advance notice, toward the middle of the afternoon of 29 November, the commander of the 606th Squadron received orders to evacuate southward within three hours. In view of the time permitted, the squadron commander knew no choice but to destroy his radars and camp equipment and to save his personnel. As Colonel Gilbert Meyers, Fifth Air Force deputy for operations, expressed it: "A million and a half dollars' worth of equipment...was lost for the lack of a few trucks."[91]

As the Chinese Communists poured down upon Pyongyang, the 8th and 18th Fighter-Bomber Wings and the 822d Engineer Aviation Battalion, which had come northward a few days before to work at Pyongyang's airfields, were to be permitted five days for their withdrawal. Utilizing air transport, the combat echelons of the 8th and 18th Wings managed hurried but orderly movements to Seoul Airfield and to Suwon Airfield in the four days following 30 November. The Mustangs, in fact, never missed a single day's operations.[92] Moving the heavier items of Air Force and engineer equipment on such short notice was a virtually impossible task. Some of this equipment was evacuated from Chinnampo aboard two LST's. Other equipment was loaded aboard trucks and sent southward by road, where a not-inconsiderable amount of it was lost on the way. From Pyongyang southward to Seoul the mountain roads were jammed by solid columns of Army and Air Force vehicles. If a vehicle stalled, it was pushed to the side of the road and set afire. "They just can't afford to hold up a whole column of vehicles that are solid, bumper to bumper, to save one piece," explained Colonel Meyers.[93] The 822d Engineer Aviation Battalion secured flatcars and got most of its equipment loaded, but before its trains could move the explosion of an ammunition car in Pyongyang's main rail yards abruptly terminated all further rail lift. Approximately 185 carloads of engineer equipment and supplies—some 75 percent of the battalion's property—had to be abandoned for destruction.[94] Although the evacuation from Pyongyang was costly to the Fifth Air Force in terms of supplies and equipment, nearly all of its personnel came out unscathed. "We had plenty of sweat and tears," reported the 822d Battalion's historian, "but no blood."[95]

Over on the eastern coast of Korea, in the X Corps area of operations, Air Force and Marine air units had ade-



Superforts on their way to attack the important supply and communications center of Anju, 4 December 1950.

quate time to evacuate and sustained few losses of any kind. On 3 November the 35th Fighter-Interceptor Wing received orders to move from Yonpo to Pusan East Airfield. As usual, the combat echelon of the wing moved by air, and within a few days the wing's Mustangs were reported to be operating from Pusan "as smoothly as ever." The bulk of the 35th Wing's troops and property was uneventfully transported southward aboard LST's.[96] The 6151st Air Base Unit, which provided services for 1st Marine Air Wing squadrons at Yonpo Airfield, evacuated the forward area on 17 December and went to Pohang Airfield (K-3), where most of the Marine air units were locating. Marine Air Squadron VMF-311, the first Marine jet squadron to fly in combat, flew interdiction missions from Yonpo for four days beginning on 10 December and then joined the 35th Fighter-Interceptor Wing at Pusan East Airfield. Here, the Marine F9F squadron drew logistical support from the 35th Wing but remained under the operational control of the 1st Marine Air Wing.[97] Most of the Marine Corsair squadrons shifted aboard escort carriers and continued to render close support to the X Corps. Later in the month a part of the Corsair squadrons went to Pohang Airfield and the remainder went back to Itami Air Base in Japan. To get the entire Marine Air Wing into operations, General Harris needed to use Pusan Airfield (K-1), but, as he explained to General Partridge, he had no construction troops or contracting authority and he estimated that it would take at least six months to obtain a Navy construction battalion from the United States. Although the Fifth Air Force could have well used its engineers elsewhere, General Partridge felt that he had a "moral obligation" to provide the Marines with air facilities, and, as a result, he sent the 811th and 822d Engineer Aviation Battalions to perform the necessary construction work at Pusan Airfield.[98]

At Seoul on 6 December, with General Timberlake presiding, a Fifth Air Force staff conference began to discuss future air-force deployments in Korea. The meeting arrived at no firm conclusions, for General Timberlake reported that the Eighth Army had not

yet decided whether it would plan to hold a beachhead in the Seoul area or in the Taegu-Pusan area. If the beachhead was going to be at Seoul, the air units at Taegu, Pohang, and Pusan would have to be evacuated. Conversely, if the Eighth Army held Taegu and Pusan, everything at Seoul and Kimpo would have to move elsewhere.[99] Within the next two days, however, the Eighth Army announced that it intended to hold Seoul as long as possible before retreating southward toward the lines of the old Pusan perimeter. With this information, the Fifth Air Force began to prepare for the loss of the airfields at Seoul, Kimpo, and Suwon. Already slated to convert to F-80C fighter-bombers, the 8th Wing gave its flyable Mustangs to the wings which could still use them, and on 10 December began to move from Seoul Airfield to Itazuke Air Base. Shortly afterward the 8th Wing was rejoined by its 80th Squadron (which had never given up its F-80's and had been attached to the 51st Wing), and before the end of December the 8th Wing was again operational with Shooting Star fighter-bombers.[100] Also on 10 December the 51st Fighter-Interceptor Wing began to organize a combat echelon similar to that of the 4th Fighter-Interceptor Wing which would remain behind at Kimpo. Having done this, the 51st Wing used air and water transportation to move its main strength back to Itazuke Air Base.[101] At mid-December the 18th Fighter-Bomber Wing, leaving a servicing detachment behind at Suwon to serve Mustangs staging forward, began a leisurely motor, rail, and air movement back to the southern coast of Korea, where it established itself at an old Japanese-built airfield at Chinhae (K-10).[102] As long as the Eighth Army headquarters remained in Seoul General Partridge kept the Fifth Air Force command post there, but on 20 December both organizations, together with the Joint Operations Center, departed Seoul and went to Taegu City, where they occupied the same buildings which they had tenanted during the previous summer.[103] By the end of December the Fifth Air Force was prepared to abandon the Seoul area on very short notice.

Except for the "airlift in reverse" made available to General Partridge by the FEAF Combat Cargo Command during December, the Fifth Air Force would doubtless have sustained grave losses of irreplaceable personnel and equipment. Despite the fact that the Command's C-46, C-47, and C-119 aircraft were heavily engaged in support of the X Corps on Korea's east coast during the month, General Tunner continued to give the Fifth Air Force 35 percent of his airlift capability. For the Fifth Air Force, Cargo Command lifted 5,069.3 tons of cargo in the first half of December and 2,885 tons of cargo in the latter half of the month. Since the C-54's filled most Fifth Air Force requests for transportation while other planes were busy in eastern Korea, the 374th Wing strained every sinew to perform the lift, especially until mid-December, when two squadrons of the 61st Troop Carrier Group arrived at Ashiya from the United States to join Combat Cargo Command.[104]

In the midst of the grim war for survival General Tunner was able to find some time for humanitarian purposes. During the autumn Fifth Air Force Chaplain (Col.) Wallace I. Wolverton and Chaplain (Lt. Col.) Russell L. Blaisdell had struggled to relieve the suffering of Korean children made homeless by the war. In Seoul Chaplain Blaisdell secured shelter for

Korean laborers load rations as U.N. troops prepare to evacuate Kimpo airfield.

many children in improvised orphanages, but fearing that the children would die when the Reds took the city, the orphanage directors took their wards to Inchon where they waited fruitlessly for a ship. Knowing of the plight of the children, Chaplain Blaisdell appealed for airlift. On 20 December General Tunner dispatched 12 61st Group C-54's to Kimpo, where, in a driving snowstorm, as many as 128 of the tiny children were loaded aboard some of the planes, and a total of 989 of the orphans was lifted to safety at Cheju-do Island, off Korea's southern coast. The incident in the airlift—called "Operation Christmas Kidlift" by those who participated—was a heart-warming episode in an otherwise cheerless month.[105]

Christmas on Cheju-do Island.

## 6. *Final Thoughts on Defending Korea*

"I must say, in all frankness," recollected Lt. Gen. Matthew B. Ridgway, who came to Korea from Washington on 26 December to replace General Walker, killed two days earlier in a vehicle accident, "that the spirit of the Eighth Army...gave me great concern." As he surveyed his ground troops, Ridgway noted "a definite air of nervousness, of gloomy foreboding, of uncertainty, a spirit of apprehension as to what the future held."[106] Before his untimely death General Walker had drawn up the Eighth Army's plans to accomplish the mission assigned by General MacArthur: to defend South Korea as long as possible, withdrawing in successive steps to escape destruction.[107] Originally, General Walker had drawn four defensive lines: "Able," north of Pyongyang; "Baker," along the Imjin River and 38th parallel; "Charlie," around Seoul in a crescent-shaped bridgehead and thence through Hongchon to the east coast; and "Dog," traversing Korea through Pyongtaek, Wonju, and Samchok.[108]

Early in December the Reds had breached the "Able" line before the Eighth Army could take positions on it, and at his death General Walker had been inspecting the emplacements his forces were establishing on the 135-mile-long "Baker" line. Above Seoul, south of the Imjin River, the American I Corps held the left sector of the battleline, while to the right the American IX Corps held the center of the Eighth Army's defenses. From there on through the mountains of central Korea were deployed the combat-depleted ROK II Corps, the new and untried ROK III Corps, and the battle-seasoned ROK I Corps. Altogether, United Nations ground forces in Korea numbered some 350,000 men, but the whole force was not immediately available for combat. On 26 December only three of seven American divisions were in the combat area. The 24th and 25th Infantry Divisions were north of Seoul, while the 1st Cavalry Division was in position to block at the rear of the two infantry divisions. Having suffered severely in the retreat from North Korea, the 2d Infantry Division was reorganizing and refitting. The American X Corps, which officially joined the Eighth Army on 26 December, was still out of combat. The 1st Marine Division had just closed at the port of Masan in southeastern Korea, and the 3d and 7th Infantry Divisions were moving south by sea to Pusan.[109]

Troop morale in the Fifth Air Force had sagged so appreciably at the time of the Chinese Communist attack that the Air Surgeon undertook to secure psychiatric assistance, which would enable him to identify and treat morale cases before they became acute.[110] But December's all-out air operations had kept most airmen so busy that they had little time to worry. Early in December, however, the Fifth Air Force saw so little cause for optimism that it began making plans for the evacuation of all its units from Korea. At this time all air garrisons in the Seoul-Kimpo-Suwon triangle were reduced to the minimum, and, acting on the estimate of Colonel Boyd Hubbard, the Air Intelligence Officer, that the Reds could reach Taegu within a week if they broke through at Seoul,[111] the Fifth Air Force made schedules to deploy its wings even from the southernmost Korean airfields. The Fifth Air Force headquarters planned to move from Taegu to Pusan (where interim facilities were

An H-5 helicopter of the 3d Air Rescue Squadron answers a call for aerial evacuation.

established for the Joint Operations Center) and thence to Itazuke Air Base in Japan. On 5 January General Partridge approved this general plan for redeploying the entire Fifth Air Force to Japan.[112]

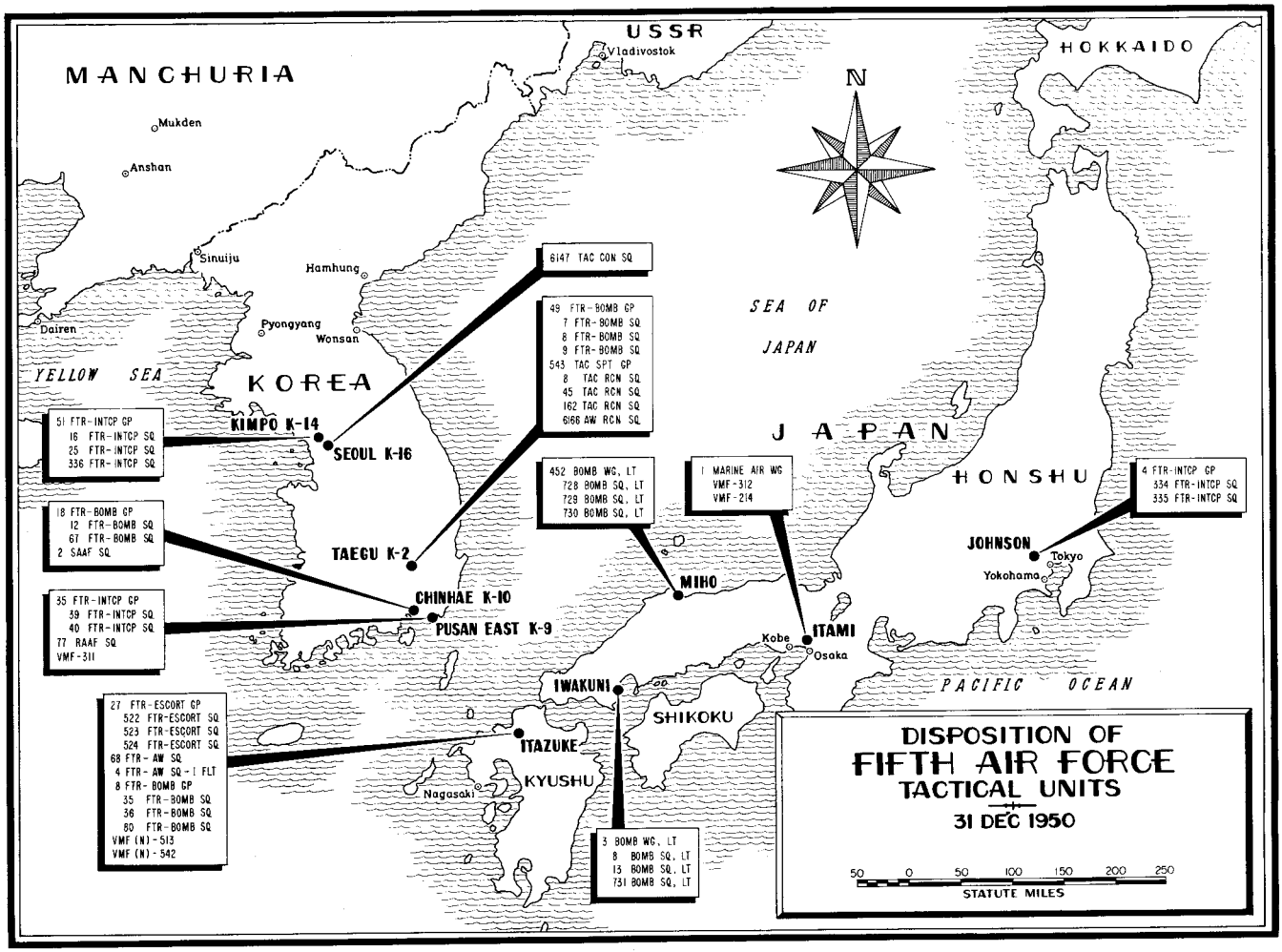
During December 1950, the United Nations commanders held little hope for a defeat of the Chinese Communists. No small cause for this defeatist attitude was the prevailing estimate that mammoth numbers of Red Chinese troops were in Korea. According to press reports, General MacArthur announced that more than a million Chinese Communists were in action against United Nations forces in Korea.[113] Moreover, after early December, when the Eighth Army broke contact and retreated southward, Far East Command intelligence officers were unable to plot the whereabouts of the Communist armies. As he arrived at his new command post, General Ridgway was shown a "big red goose egg" on the Eighth Army's situation map which represented all that was known about the size and location of the Red armies. At this same time Ridgway noticed that the Eighth Army had all but ceased sending out patrols to discover the location of enemy troops.[114] Over in Tokyo, on 20 December, General Stratemeyer had expressed concern that no one knew the exact location of the Chinese armies, and he personally ordered General Partridge to use his entire reconnaissance force "to find out where these Communists are." In ten days of unspared effort Fifth Air Force reconnaissance squadrons each day photographed the 40-mile-deep zone beyond the Eighth Army's lines. At Taegu photographic interpreters

examined the mountain-high stack of 27,643 photographs which the reconnaissance squadrons turned in, but the all-out reconnaissance effort achieved few results. Troops of the Fourth Field Army were masters of camouflage, and the Fifth Air Force's photo interpreters, who worked in solitary isolation at Taegu without any other intelligence sources which would give them an inkling of where to look for enemy activities,* were unable to establish the locations of the Chinese Communist armies.[115]

Toward the end of December Communist activities and increased Eighth Army patroling enabled Far East Command intelligence officers to get a fairly accurate estimate of Red strength and intentions. The Chinese Fourth Field Army, comprising the 38th, 39th, 40th, 42d, 50th, and 66th Armies (Corps), and numbering approximately 177,018 troops, opposed the Eighth Army. The Chinese, however, were not the sole adversary, for the North Korean army had been remarkably rejuvenated. The Red Koreans had assembled survivors from the battles in South Korea and recruits from training centers along the Yalu into understrength rifle divisions which would fight as corps. The North Korean I Corps, with about 14,139 men, lay at the extreme left of the Chinese Fourth Field Army, while the North Korean II and V Corps, with an aggregate strength of about 24,305 men, opposed ROK troops in central Korea.[116] Probing attacks launched by the North Korean II Corps on 27 December gave away the Communist ground battle plan. The North Koreans would aim a sharp thrust southwestward from central Korea designed to trap the Eighth Army in the Seoul area. With the Eighth Army so contained, the Chinese Fourth Field Army would launch a crushing attack toward Seoul.[117] This much of the order of battle and estimate of Communist intentions was realistic, but Far East Command intelligence nevertheless knew a great fear that the Communists would not depend upon the North Koreans for the flanking thrust but would bring the Chinese Third Field Army's 20th, 26th, and 27th Armies (Corps) southward from Hungnam. According to estimates, the Third Field Army numbered 101,561 men, and Far East Command intelligence computed that the bulk of the Hungnam forces could reach central Korean assembly areas by 3 January 1951.[118]

If Chinese Communist air capabilities were added to those of the Red ground forces, the United Nations Command appeared to have a very doubtful prospect for survival. With a minimum of 650 combat aircraft in China and Manchuria, and an additional 400 to 500 Russian planes around Dairen, FEAF could only conclude that "the enemy obviously possesses the capability to mount a major and sustained air effort at any time." If they threw their aircraft into battle, the Reds could divert a substantial proportion of the United Nations air effort away from direct support of ground action, hinder the airlift into Korea, strike United Nations naval vessels and installations both in Korea and in southern Japan,

*A USAF evaluation board, after examining the circumstances and procedures of the reconnaissance project, was not surprised that it failed. "Photographic interpreters," stated the board, "must be kept briefed up to the minute on the status of areas within which they work. They should be used to confirm, deny, or enlarge upon existing intelligence concerning those areas. They cannot be expected to furnish complete intelligence of any area if they are required to discover anew the information which has already been gathered from other sources." *See* Barcus Bd. Rpt., Vol. I, Bk. 2, p. 190.


USSR
Vladivostok
MANCHURIA
Mukden
Anshan
Sinuiju
Hamhung
Dairen
Pyongyang
Wonsan
YELLOW SEA
KOREA
SEA OF JAPAN
HOKKAIDO
JAPAN
HONSHU
N
6147 TAC CON SQ
49 FTR-BOMB GP
7 FTR-BOMB SQ
8 FTR-BOMB SQ
9 FTR-BOMB SQ
543 TAC SPT GP
8 TAC RCN SQ
45 TAC RCN SQ
162 TAC RCN SQ
6166 AW RCN SQ
51 FTR-INTCP GP
16 FTR-INTCP SQ
25 FTR-INTCP SQ
336 FTR-INTCP SQ
KIMPO K-14
SEOUL K-16
452 BOMB WG, LT
728 BOMB SQ, LT
729 BOMB SQ, LT
730 BOMB SQ, LT
1 MARINE AIR WG
VMF-312
VMF-214
4 FTR-INTCP GP
334 FTR-INTCP SQ
335 FTR-INTCP SQ
JOHNSON
Tokyo
Yokohama
18 FTR-BOMB GP
12 FTR-BOMB SQ
67 FTR-BOMB SQ
2 SAAF SQ
TAEGU K-2
MIHO
35 FTR-INTCP GP
39 FTR-INTCP SQ
40 FTR-INTCP SQ
77 RAAF SQ
VMF-311
CHINHAE K-10
PUSAN EAST K-9
ITAMI
Kobe
Osaka
PACIFIC OCEAN
IWAKUNI
SHIKOKU
ITAZUKE
KYUSHU
Nagasaki
27 FTR-ESCORT GP
522 FTR-ESCORT SQ
523 FTR-ESCORT SQ
524 FTR-ESCORT SQ
68 FTR-AW SQ
4 FTR-AW SQ-1 FLT
8 FTR-BOMB GP
35 FTR-BOMB SQ
36 FTR-BOMB SQ
80 FTR-BOMB SQ
VMF(N)-513
VMF(N)-542
3 BOMB WG, LT
8 BOMB SQ, LT
13 BOMB SQ, LT
731 BOMB SQ, LT
DISPOSITION OF
FIFTH AIR FORCE
TACTICAL UNITS
31 DEC 1950
50 0 50 100 150 200 250
STATUTE MILES

and provide some support for Red ground troops.[119] This threat of a general Communist air attack was very real. General Stratemeyer feared that air attacks against Okinawa might destroy the two Superfortress groups based there.[120] General Ridgway asked General MacArthur to consider that, during a possible evacuation from Korea, the port of Pusan would be so jammed with men and materiel as to present a particularly inviting target for a Soviet or Chinese atomic bomb.[121]

The prospects facing the United Nations Command were bleak, but General Stratemeyer and Admiral Joy nevertheless resolved that their airmen would acquit themselves to the utmost. At the Meiji building on 27 December Rear Adm. A. K. Morehouse and General Weyland, together with other staffmen, discussed measures needed to improve Air Force and Navy cooperation. Admiral Morehouse agreed to assign permanent naval air liaison officers to the Joint Operations Center in Korea. Next day Admiral Joy notified FEAF that the carrier airmen of Task Force 77 would undertake to support the eastern end of the battleline as a normal effort. In emergencies the carrier pilots could be counted upon to provide close support in the Seoul area. If naval pilots could not secure close-support targets from Air Force controllers, they would go forward of the battleline and make prebriefed armed reconnaissance missions.[122] Except for an all-out Superfortress attack against Pyongyang, which was requested by Generals Ridgway and Partridge, General Weyland visualized that the FEAF Bomber Command would devote one-fourth to one-third of its capabilities to attacks against railway targets and the remainder to strikes upon towns near the front lines which contained concentrations of hostile troops and supplies.[123] Under these arrangements the Fifth Air Force's mission of air superiority, interdiction, and close support was unchanged. In recognition of the gravity of the situation, however, General Partridge dispatched a command message to his wing commanders on 31 December, telling them that the effort they put forth in the next few days might well determine the success or failure of the United Nations' cause in Korea.[124]

## *7. Lessons from the Communist "Third-Phase" Offensive*

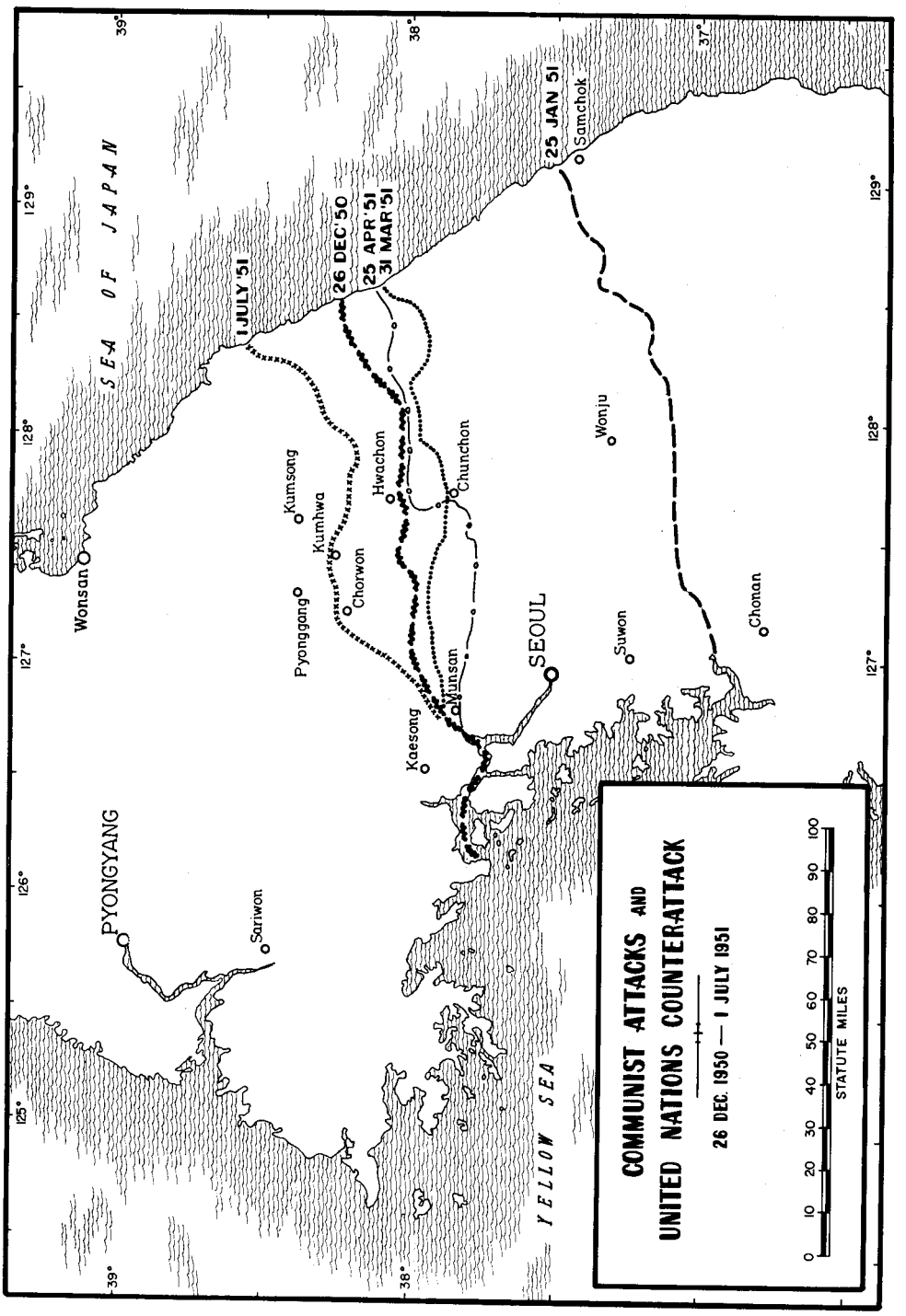
Up north of the 38th parallel, in the latter part of December, beetle-browed Communist General Lin Piao, commander of Red China's Fourth Field Army, doubtless surveyed the tactical situation and the combat potential of the forces he commanded. Unfortunately, Lin Piao never revealed his inmost thought to western reporters, but one would be safe to guess that the combat situation was not strictly to his liking. At an army conference in Manchuria in 1948 Lin Piao had asserted that the Chinese Communists had to forget guerrilla tactics and prepare to wage modern war. Yet in December 1950 the Communist armies were still essentially guerrilla forces of

peasant infantrymen. At best the Fourth Field Army was a polyglot organization. Many of its soldiers were "radishes"—former Nationalists who had switched to the Communist flag, men who were red outside but who might be white inside. The 50th Army was, in fact, the old Nationalist 60th Army and was still commanded by a general who had been highly praised by Americans in Burma.[125] According to an American officer who had known him in China, General Lin Piao had decided ideas as to how battles should be fought. Before giving battle Lin Piao liked to have "400 to 600 percent superiority." For a major campaign, he favored multiple short attacks along a front, to cut up the enemy. Such attacks prepared a hostile army for a final blow which should, in Lin Piao's estimation, travel in one giant wedge of main direction.[126]

General Lin Piao's style of battle had worked well in China, where Nationalist armies clung to cities, towns, and other fixed defenses and allowed themselves to be overwhelmed. But Korea was not China, and Lin Piao must have realized in December 1950 that he did not possess either the element of surprise or the overweening superiority of numbers which he needed for victory. Because of United Nations air-ground action and an additional toll of casualties caused by frigid weather, Third Field Army troops at Hamhung would require extensive reorganization and replenishment before they were again ready for battle. Moreover, according to prisoner-of-war testimony, General Lin Piao's own troops had suffered heavily from two months of aerial attack, and the Fourth Field Army's divisions had not received the replacements which they needed to make up for their losses.[127]

As Red China's foremost military tactician, General Lin Piao must have realized his limitations, but the situation was not entirely hopeless. General Liu Ya-lou, formerly Lin's chief of staff but now commander of the Chinese Communist Air Force, had promised to provide air support to the Fourth Field Army.[128] Fourth Field Army troops were short of supplies, but the Red commanders hoped to capture American supply dumps in the Seoul area. Although the Chinese Communist armies did not possess much mobility, the Eighth Army might be tempted to stand in place and fight for Seoul long enough to allow itself to be cut to pieces.[129] At any rate, Lin Piao committed his forces to a "Third-Phase" offensive. Over in central Korea, on 29 December, the North Korean II Corps commenced an envelopment along the Chunchon–Hongchon–Wonju axis on 29 December, and at the Imjin River, on the night of 31 December, the Fourth Field Army launched its troops into action. Following a night of incessant mortar fire, Chinese infantrymen poured southward in great strength against the Eighth Army at daybreak on 1 January 1951.[130]

On New Year's Eve, low-hanging clouds and snow showers along the front lines had hindered Fifth Air Force supporting strikes, and the Reds may well have hoped that this bad weather would continue to shroud their movements. If this were true, they had figured the weather wrong, for Monday, 1 January 1951, dawned crystal bright and bitter cold, heralding the first of five days of clear flying weather. For five consecutive record-breaking days the Fifth Air Force hurled its full fury against the mobs of Chinese troops found trekking southward toward Seoul along the highways from Kaesong and Yonchon. With all wings flying at or near their maximum effort, the Fifth

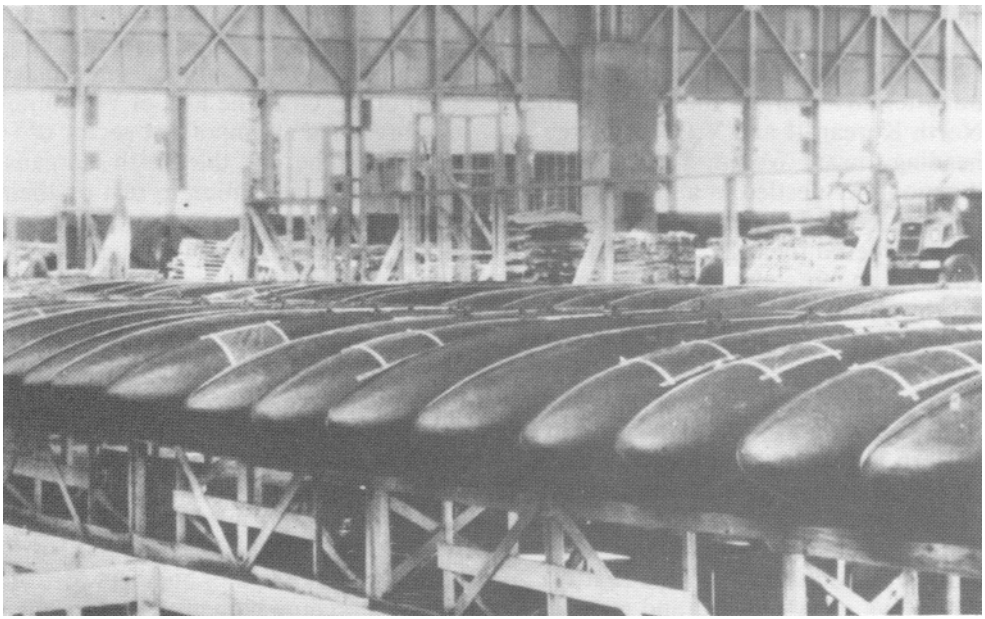

SEA OF JAPAN
YELLOW SEA
PYONGYANG
Sariwon
Wonsan
Pyonggang
Kumsong
Kumhwa
Chorwon
Hwachon
Chunchon
Kaesong
Munsan
SEOUL
Suwon
Wonju
Chonan
Samchok
1 JULY '51
26 DEC '50
25 APR '51
31 MAR '51
25 JAN 51
COMMUNIST ATTACKS AND
UNITED NATIONS COUNTERATTACK
26 DEC. 1950 — 1 JULY 1951
0 10 20 30 40 50 60 70 80 90 100
STATUTE MILES

Air Force scored with 564 sorties on 1 January, 531 on 2 January, 556 on 3 January, 498 on 4 January, and 447 on 5 January. On the first two days flights of fighter-bomber pilots reported to the Tactical Air Control Center at ten-minute intervals, and 60 percent of these missions successfully secured close-support targets. Thereafter the Eighth Army began to break contact and the majority of tactical air sorties flew armed-reconnaissance strikes north of the bombline. Virtually every fighter flight sighted and attacked aggregations of Chinese troops or buildings which sheltered them. By the close of the day on 5 January Fifth Air Force airmen estimated that they had killed nearly 8,000 Red soldiers and had destroyed or damaged some 6,400 enemy-occupied buildings. Each day the Eighth Army set the number of air-inflicted casualties at approximately double the figure claimed by the aircrews.[131]

In the initial stages of the Communist attack the FEAF Bomber Command found little opportunity to employ its planes along the front lines, but, instead, gave its maximum efforts to attacks against hostile supplies and personnel at Pyongyang. Sixty-three B-29's on 3 January and 60 B-29's on 5 January strewed incendiary bombs over the North Korean capital city. Snow-covered roofs checked the spread of the conflagration, and only 35 percent of the city's built-up area was destroyed, but the Red radio at Pyongyang bitterly reported that "the entire city burned like a furnace for two whole days."[132]

At the same time as the Fifth Air Force's fighter-bombers and the 452d Wing's light bombers lashed the Reds by day, the 3d Bombardment Wing—which liked to call itself "the other half of the Fifth Air Force"—stalked and attacked the enemy at night. Thus far in Korea the B-26 night-intruder crews had possessed no illuminants other than AN/M-26 paraflares, munitions from old stocks which, despite every conceivable corrective action, refused to work at least half of the time. At this juncture Colonel Reginald J. Clizbe, the 3d Wing's executive officer, came up with a new solution to the problem of night illumination. From the Navy Clizbe borrowed several Mark VIII flares, a type of pyrotechnic used by Navy flying-boat crews, who launched the lanyard-detonating flares through chutes in their planes. Following a successful test, Clizbe got permission to take a C-47 loaded with Mark VIII flares to Korea for combat tests on the night of 2 January. In five hours over the target area north of Seoul this "Lightning Bug" C-47 launched 129 Mark VIII flares, each of which detonated at about 5,500 feet and floated earthward, providing four to five minutes of near-daylight illumination. With such assistance the B-26 intruders were able to see virtually everything that was moving behind the enemy's lines, and they destroyed or damaged some 30 Red vehicles in the first night's work.[133] The flare illumination also proved beneficial to friendly ground troops. General Kean signaled that the flare missions were of "inestimable value" to the 25th Division. Prisoners captured by the division confessed that the flares (which were usually followed by air attacks) held their movements to about a fourth of a normal night's travel.[134] American soldiers, who soon observed that the Reds were reluctant to attack against illuminated front lines, affectionately called the C-47 used for the flare drops "The Old Lamplighter of the Korean Hills."[135]

Red China's Fourth Field Army was



Napalm tanks to be shipped to Korea from this factory in Japan.

suffering frightful losses from Fifth Air Force attacks and from Eighth Army ground fire, but it had enough strength to rout American ground forces defending Seoul. In coordination with ROK retirements in central Korea, the U.S. I and IX Corps first fell back to line "Charlie," the bridgehead defenses around Seoul. Almost at once the Reds began to cross the ice-covered Han River east and west of Seoul, and instead of inviting destruction General Ridgway ordered the Eighth Army southward to the "Dog" line. Starting on 3 January, when vehicle columns jammed the roads, the Eighth Army left the South Korean capital. On the day before the 4th Wing's Sabres flew from Kimpo back to Japan, where the wing reunited at Johnson Air Base. By noon on 4 January the 51st Wing's combat echelon loaded aboard transports and flew away to re-establish itself at Tsuiki Air Base on Kyushu. As the Air Force units departed, aviation engineers remained behind at Kimpo long enough to put the torch to remaining stocks of aviation gasoline, napalm, and to the airfield's buildings. Some miles southward Eighth Army troops maintained defense lines long enough to permit the removal of the great stocks of supplies stored at the Suwon airhead. On 5 January combat crews of the 18th Fighter-Bomber Wing took off for strikes from this advanced airfield, and at the conclusion of these missions they returned to the wing's main base at Chinhae. After this Suwon's buildings were burned. Having sheltered the Air Force retirement, the American I and IX Corps fell back to their prearranged defensive positions between Pyongtaek and Samchok.[136]

On the western front Chinese attacks tapered off to nothing as the U.S. I and IX Corps escaped from Seoul, but on the central front the ROK III Corps

and the U.S. X Corps, which assumed responsibility for the central sector on 2 January, found the North Koreans to be bitter adversaries. Inasmuch as the North Korean II and V Corps were heading toward Wonju, a key road-junction city nestled in a mountain basin of central Korea, General Almond ordered the U.S. 2d Infantry Division to cut short its rest and rush northward to defend this key link in the "Dog" line.[137] According to agreement, carrier airmen from the *Valley Forge, Philippine Sea,* and *Leyte* carried most of the air-support burden in central and eastern Korea, but the forces brought to defend Wonju soon had great need of assistance from the FEAF Combat Cargo Command. When Maj. Gen. Robert B. McClure reported that the 2d Division's snow-clogged and guerrilla-hazarded supply lines were virtually impassable, 21st Troop Carrier Squadron C-47's landed 115 tons of cargo at Wonju's icy airstrip and 314th Troop Carrier Group C-119's dropped 460 additional tons of supplies to the embattled ground troops. General McClure warmly commended both units for their assistance up to 6 January.[138]

On the afternoon of 6 January a storm front moving southward from Siberia began to work in favor of the Communists. Heavy snowstorms and low visibilities limited Fifth Air Force flying, and on the three days, 8 through 10 January, ice-covered flight decks forced Task Force 77 to cancel all flight operations.[139] Seizing the opportunity of a one-day break in the weather, Fifth Air Force Shooting Stars, Thunderjets, and Mustangs gave the X Corps 50 close-support sorties on 8 January, but the weather closed in again, and on 10 January most Fifth Air Force units were compelled to stand down completely from operations.[140] Several days before this the 2d Infantry Division had been no longer able to hold Wonju and had retreated to the hill line three miles south of the city. The loss of Wonju not only breached an important sector of the "Dog" line, but the North Koreans showed little inclination to rest on their laurels. Building up strength in the shelter afforded to them by the buildings of Wonju, they began to slip troops southward toward Chongju and Chechon. If they captured these cities they would sever the main lateral roads supplying ROK units on Korea's eastern coast.[141]

When the weather began to clear on 11 January, the Fifth Air Force and the FEAF Bomber Command came to the assistance of the X Corps. Flights of Fifth Air Force fighter-bombers attacked marching bodies of Red troops on the flanks of the 2d Division, while other armed reconnaissance flights hit enemy troops moving southward along the roads from Hongchon and Hoensong. At General Ridgway's request ten 98th Group B-29's flew a saturation strike against Wonju on 12 January. At this time the medium bombers made their first operational use of proximity-fuzed 500-pound general-purpose bombs, which burst in the air and showered thousands of steel fragments earthward. The medium-bomber crews, who had trouble identifying snow-covered Wonju, reported that their bombs blanketed the target area. Continued fighter-bomber support, plus a staunch ground defense against "Banzai-type" Communist attacks, soon took the power out of the Red assault. As yet the X Corps was not strong enough to recapture Wonju, but on 15 January it successfully established and defended a new sector defense line running between Wonchon and Yongwol.[142]

United Nations ground and air forces

in Korea depended heavily upon air supply during January 1951, for their surface supply lines were disrupted by weather and clogged by retreating troops. With the loss of the old airheads at Kimpo, Seoul, and Suwon, however, only Taegu and Pusan East airfields could accommodate heavier transports. Since Cargo Command's capability to lift supplies now exceeded the landing opportunities in Korea, General Tunner had to exercise ingenuity and take many chances of loss, the latter being acceptable in view of the dire combat situation. The old airfield at Taejon was able to support larger transports as long as the ground was frozen, but when a ground thaw caused a serious C-54 accident this field had to be closed to anything heavier than a C-46. First at Wonju and then at Chungju and Andong, X Corps troops scraped out or repaired old airstrips, and, balancing hazard against urgency, General Tunner plied C-46's and C-47's into these crude landing grounds. Using improvised and existing airfields, Cargo Command in the first twenty-four days of January lifted 5,041 tons of men and materiel for the Fifth Air Force and 7,445 tons for the Eighth Army. On their return trips from Korea the transports evacuated 10,489 combat casualties to rear-area hospitals. Even such amounts of airlanded supplies were not sufficient to meet the emergency, and by 24 January 406 C-119 sorties had dropped 2,007 tons of gasoline, rations, ammunition, and unit equipment, most of it to the troops of the X Corps.[143]

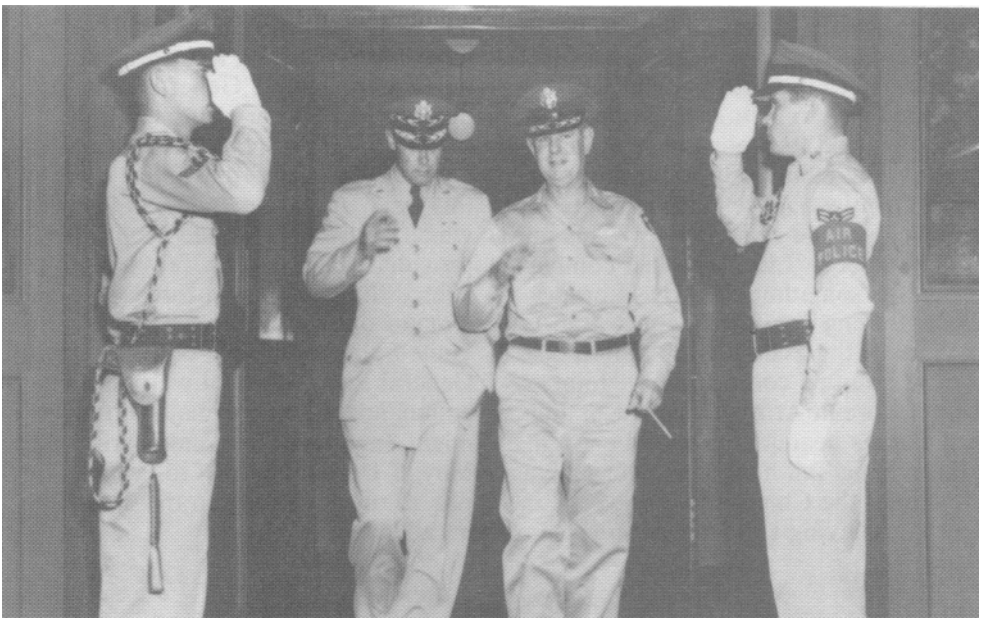
When the new year had dawned in Korea and Chinese ground troops had launched across the Imjin, FEAF had braced itself to resist a "major and sustained air effort" which its intelligence officers had predicted might come "at any time."[144] But to the surprise of everyone the Chinese air force not only made no effort to support the ground offensive but the MIG's actually stood down during the first week of January.[145] Evidently of stiffer mettle than the Red Chinese, a few North Korean airmen sought to assist their compatriots on the central front with small night attacks, flown in light airplanes, against ROK troops at Yongwol and Kyongpo.[146] On 10 January the Chinese Communist Air Force returned to action when 15 MIG's ventured to Sinanju to make a half-hearted attack against a lone-flying B-29. The MIG's departed quickly when the bomber crew opened fire. In the next several nights North Korean pilots heckled United Nations ground troops on nine occasions, again without inflicting much damage. Up near Pyongyang on 15 January a Yak fighter attacked a flight of 452d Wing B-26's. The Reds had clearly defaulted in the air, but even their small efforts were exploited by Communist propaganda. A Communist commentator on the Pyongyang radio saluted the activities of "Hero" Ong and "Hero" Kim—two Korean airmen who took their Yak fighters into the air each day "to chase American aircraft away from Pyongyang."[147]

The strident voice of Radio Peking told the world that the Communist New Year's offensive was "successfully concluded" on 14 January with the capture of Wonju.[148] Yet with each passing day it was more evident that the United Nations air and ground actions had exploded the myth of Chinese Communist invincibility. Preserving themselves through maneuver, United Nations air and ground forces had inflicted heavy casualties upon the Reds. Eighth Army headquarters estimated that the Communists lost 38,000 men during the first twenty-six

days of January. Of this total, FEAF airmen claimed to have inflicted 18,820 casualties, an estimate that jibed with prisoner-of-war estimates that air attacks had inflicted approximately half of the casualties sustained by their units.[149] Because of logistical shortcomings, compounded by air attacks upon their lines of supply, the Chinese Communists were unable to sustain an overwhelming force in combat or to follow up their initial victories. On 15 January, when no enemy troops appeared at the "Dog" line, General Ridgway sent a regimental combat team northward to feel out the enemy's strength. This task force "Wolfhound" probed to Osan before it exchanged shots with a fleeting detachment of hostile troops, and on the following day "Wolfhound" got almost to Suwon before it was finally halted by enemy emplacements. The tactical aircrewmen who supported "Wolfhound" returned from missions with strange reports: they claimed to have inflicted heavy casualties upon bodies of enemy troops moving northward out of Suwon.[150] Evidently the Reds had overreached their grasp and were withdrawing from extended positions to regroup, resupply, and rearm.[151]

Morale soared in the United Nations Command as its people began to realize that the best of the Chinese armies had been bled and beaten. Soldiers who had stood in mortal terror of Chinese "hordes" a month earlier now laughed about their earlier apprehensions. A widely circulated joke quoted an infantryman as saying "I was attacked by two hordes and killed both of them." In a variation, another soldier asked: "How many hordes to a platoon?"[152] In the course of a mid-January inspection trip to the Far East General Collins visited the Eighth Army's corps and divisions. General Vandenberg visited the airfields and before leaving Korea landed from a helicoptor near the front lines and joined a ground patrol for a firsthand view of the combat situation. Both officers informed Washington that the Eighth Army was in good shape.[153]

Although the Eighth Army had successfully retreated southward, General Ridgway did not wish to wait passively for the Communists to renew the battle at the "Dog" line. On 20 January he told his ground commanders that they must maintain pressure on the Reds. Taking and holding ground was not important, he said. The main objective was to destroy the Red armies. To this end Ridgway instructed his corps commanders to inflict maximum losses on the enemy consistent with the maintenance of the integrity of friendly units.[154] When air and ground reconnaissance reported that Chinese strength on the western front was mushy, Eighth Army planners outlined "Operation Thunderbolt," a limited objective attack to be mounted by the American I and IX Corps with the design of clearing the Reds out of the area south of the Han River. General Ridgway favored such offensive strategy, but he feared that the Reds might be leading his forces into a trap. To retreat and then to lie in wait and ambush pursuers was a known Red stratagem. To explore the possibilities of such a trap, Generals Ridgway and Partridge personally reconnoitered the enemy's front lines in a T-6 trainer plane for more than two hours on 24 January. Neither commander saw much trace of enemy activity on the snowy landscape, and Ridgway no longer feared that he might be risking the lives of American soldiers. At dawn on 25 January the American I and IX Corps launched task forces northward against the Reds.[155]



Gen. Vandenberg (left) and Gen. Stratemeyer leaving the Meiji building, FEAF headquarters in Japan.

Despite the propaganda line to the effect that the Communist offensive had achieved its objectives, General Lin Piao was enough of a realist to recognize that the Fourth Field Army's third-phase offensive had been a dismal failure. A series of intelligence reports of meetings and messages sent to and from Lin Piao's headquarters, which reached Tokyo from "fairly reliable sources," were so generally confirmed by subsequent events that they may be taken to be representative of the thoughts and actions of the Chinese general. Those who knew Lin Piao as an able soldier also knew him to be a conceited and bitter man, who was outspoken enough to voice his mind without fear of consequence. Now, Lin Piao was deeply rankled.[156] According to report, Lin Piao heatedly informed a visiting delegation that he wanted it "clearly understood that the failure of the Chinese offensive...was due to the failure of the Chinese Central Government to furnish air and tank support as promised."[157] In another report Lin Piao warned that the Chinese could not compete against United Nations forces "because of the air superiority against them."[158] A detailed study of the combat situation, made by a Special Aviation Inspection Group of the Chinese Communist General Staff, officially confirmed Lin Piao's diagnosis of the causes of the failure of the third-phase offensive. "If we had had a strong air support," this group reported, "we could have driven the enemy into the sea."[159]

With the failure of the New Year's offensive General Lin Piao had no choice but to fall back and engage United Nations forces in what the Reds described as "protracted defensive battles." At some date, either in late January or early February, General Lin

Piao ordered his commanders to begin withdrawals to strong defensive positions close to the 38th parallel. Here, screened by the 50th Army, which would expend its troops in rear guard actions, the main body of the Fourth Field Army would rest and prepare for renewed ground operations.[160] This may well have been Lin Piao's last combat order, for sometime in early February General Peng Teh-huai, deputy commander of the People's Liberation Army, assumed command of a Joint North Korean Army-Chinese Communist Forces headquarters, and early in March Peng Teh-huai took over active control of the Chinese "volunteers" in Korea, relieving Lin Piao, who was incapacitated either by wounds or by illness.[161] According to information received in Tokyo, General Peng Teh-huai on 16 February directed the Fourth Field Army to defend the 38th parallel at all costs until May 1951. At this time, given the "adequate support" which Soviet Russia had promised to provide, General Peng Teh-huai expected the Communist forces to launch a major offensive which would sweep United Nations troops out of Korea. General Peng Teh-huai warned his commanders that the major offensive might have to be launched earlier than May, if United Nations forces approached too closely to the 38th parallel.[162]

# 9. *Air Superiority—Key to Victory*

## *1. The Red Air Force Casts a Darkening Shadow*

"If we had had a strong air support," stated the Red Chinese Special Aviation Group, which came from Peking to assess the demerits of the Chinese Communist Air Force, "we could have driven the enemy into the sea and the protracted defensive battles raging from 25 January to 22 April...should have been avoided."[1] The Chinese recognized that they had failed on the ground in January 1951 because they had failed in the air, and a series of intelligence reports kept the United Nations Command aware that the Reds meant to profit from their mistake. Perhaps the most alarming of these intelligence reports concerned a growing Red air order of battle in China and Manchuria. Month after month China's air force grew from the 650 combat aircraft it had possessed in December 1950 to the 1,050 combat aircraft it would have on hand in June 1951. Each month Red China took delivery of more bat-wing MIG-15 fighters, so that she would possess 445 of these first-line aircraft by June 1951.[2]

Other intelligence information received in Tokyo let the United Nations Command know that the Chinese Communist Air Force was going to attempt to intervene in the Korean fighting. A Chinese staff officer captured in February, for example, told his interrogators that each regiment of the Fourth Field Army had sent staff officers to attend a special air-ground training conference in Mukden. Some of these officers were already returning to their commands and they were bringing panel kits with them so that they could identify their units to Red aircraft overhead.[3] Taken by itself, this report could mean that the Chinese were attempting to buck up the morale of their ground troops by leading them to expect air support, but in March FEAF received reliable information that two air regiments, equipped with Ilyushin IL-10 ground-attack planes, were training at an airfield near Kaiyuan in Manchuria.[4] Any number of other intelligence reports strengthened the conclusion that the Reds were building a powerful air force in Manchuria which they intended to employ against United Nations forces in Korea.

Both in Tokyo and in Washington Air Force leaders viewed the growing combat capabilities of the Communist air forces in Manchuria with a feeling approaching dismay. Because of the politico-military restrictions which limited combat to Korea, the Communists held the initiative: they could attack or refuse combat according to their own purpose. United Nations airmen could do no more than maintain an alert defensive posture and attempt to counter Communist air actions as they were manifest in the skies over North Korea. Early in 1951, however, the United States attached one significant qualification to the political rule which forbade United Nations airmen to violate the sanctity of Manchuria's borders. In view of the build-up of Communist air strength in Manchuria, the United States government accepted the Air Force position that, in case of massed Red air attacks against United Nations forces in Korea, American airmen would be authorized

to attack the airfields at which such attacks originated. The United States delegation at the United Nations quietly informed delegates from member nations whose troops were in Korea of this contemplated retaliation.[5]

## *2. General Liu Ya-lou's Air War Plan*

Up north of the Yalu at the numerous airfields available to him in Manchuria, principally the complex of fields clustering Mukden and the forward fighter base at Antung, General Liu Ya-lou, commander-in-chief of the Chinese Communist Air Force, was working hard to prepare his airmen for combat and to devise a plan which would support the Communist ground offensives scheduled for the spring of 1951. Late in this year FEAF would secure a copy of the report of the Special Aviation Group which summarized General Liu Ya-lou's planning, but even before this, FEAF intelligence officers had guessed what the plan was. Like any good military planner, Liu Ya-lou was forced to consider several factors bearing on the situation. First of all, Red China feared American air retaliation, and Peking was unwilling to allow General Liu to use Manchurian air bases for mounting attacks against United Nations personnel and installations in Korea. "The conservative policy adopted by China," fumed the Red Chinese aviation inspectors, "has apparently ensued from the high-handed policy of threats of the enemy." A second major factor bearing on Liu's problem was the fact that Soviet Russia had equipped the Chinese Communist Air Force more for defense than for offense. China's most numerous aircraft was the relatively short-ranged MIG-15, which the Chinese said could not attack tactical targets lying more than 100 miles distant from its home base. In view of its limited range, the Red Chinese Aviation Inspection Group concluded that the MIG-15 was "not suitable for use in Korea or Indo-China and of even less value against Taiwan."[6] Not noted in the aviation group's report but emphasized in intelligence information purporting to summarize conversations between General Liu and Chinese ground officers was the fact that Red China's pilots needed additional training in the newly arrived jet aircraft before they could hope to mount an offensive in Korea.[7]

Recognizing the limitations and capabilities of the Chinese Communist Air Force, General Liu Ya-lou drew up a forward-looking air war plan which outlined several phases for accomplishment prior to the initiation of an air offensive against the United Nations. Using bases at Antung and MIG fighters, the Reds intended to effect a zone of air superiority over northwestern Korea. During this phase the Reds would give their pilots badly needed combat training. Having established a working air superiority, the Communists meant to repair and to construct airfields in the defended area. They would also seek to build or repair many other "secret" airfields immediately north of the 38th parallel. As work progressed, the Reds would move in

automatic weapons and flak batteries to protect the new airfields. When the forward airfields were operational, the Chinese Communist Air Force would garrison them with MIG's and ground-attack planes and commence the full-scale air offensive against the United Nations. According to report, Red Chinese ground commanders—most notably General Lin Piao—criticized this air war plan as "too easy going," but General Liu Ya-lou possibly expected to be ready to commence offensive air strikes in coordination with the major Red ground offensive scheduled for May 1951.[8]

### *3. Two Months of Indecisive Air Combat*

Naturally enough, neither General Stratemeyer nor General Partridge could understand the full extent of the Chinese Communist air war plan in January 1951, but both officers knew the importance of air superiority and labored to meet each Red air threat as it was developing. After abstaining from combat early in January, the MIG forces bounced back more boldly later in the month. Now that the Sabres no longer came to the Yalu, but were out of combat back in Japan, the MIG's probably felt that they could try their wings with less danger of punishment. Whatever their reasoning, 12 MIG's "boxed" four F-80's south of Sinuiju on 21 January and shot down one of the slower American planes. Reaching farther southward than customary and revealing unusual aggressiveness, 16 other MIG's on this same day launched a surprise attack against two flights of F-84 Thunderjets which were dive-bombing a bridge across the Chongchon River. In the aerial fight which developed the MIG's destroyed one Thunderjet, but Lt. Col. William E. Bertram, commander of the 523d Squadron, sent a MIG flaming to the ground and thereby became the first Thunderjet pilot to down a MIG in Korea.[9]

On the ground in January the Reds began to repair the air facilities at Sinuiju and Pyongyang. In the Sinuiju area the Communists repaired Sinuiju, Sinuiju Northeast, and Uiju Airfields and built revetments designed to shelter aircraft against bombing attacks. In the Sinuiju area the Reds were protected by the MIG garrison at nearby Antung and by flak emplacements on both sides of the Yalu. Pyongyang was too far from Antung to be sheltered by the MIG umbrella, and, probably for this reason, the Reds steadily increased their antiaircraft artillery there to 53 heavy guns and 63 automatic weapons as they began to refill the bomb craters on the runways at Pyongyang Main Airfield.[10]

From the Fifth Air Force Command post in Taegu General Partridge viewed these Red air activities with a perplexity growing from a recognition of the fact that it would be difficult to counter them. Although a detachment of Sabres returned to Taegu on 14 January to test their potential for ground support, General Partridge had no airfield near enough to the Yalu to allow the Sabres to return to counterair work.[11] Once in December the Fifth Air Force had asked FEAF to send a Superfortress strike to Sinuiju Airfield, but FEAF

had ruled that such a strike was temporarily out of the question.[12] On 20 January General Partridge asked Brig. Gen. James E. Briggs, who had assumed Command of the FEAF Bomber Command on 10 January, when General O'Donnell had rotated to the United States, to make a B-29 attack against Pyongyang. General Briggs was willing to lay on the strike, provided the Fifth Air Force would send fighter-bombers to neutralize Pyongyang's flak batteries.[13] While the Pyongyang strike was being planned, Colonel Ashley B. Packard apparently came forward with the proposition that his 27th Fighter-Escort Wing would like to have a go at Sinuiju Airfield. The 27th Wing proposed to send out eight flights of Thunderjets, all loaded with maximum ammunition but no external ordnance. Two of the flights would go down and strafe Sinuiju Airfield, while the other six flights stayed overhead to fly top cover. The Fifth Air Force approved this mission for execution on 23 January, the same day as Bomber Command would be hitting Pyongyang.[14]

Early on the morning of 23 January 33 Thunderjets of the 27th Fighter-Escort Wing roared off the steel plank runway at Taegu and headed northward in combat formation. When they arrived over Sinuiju the F-84's evidently took the Reds by surprise, for the eight strafers made a pass across the airdrome before swirling clouds of dust across the Yalu signaled that the MIG's were taking off from Antung. As quickly as possible the strafer flights joined their top cover, and for the next thirty minutes the Thunderjets engaged 30 MIG's in a furious air battle. The MIG's showed definite speed and acceleration advantages, but the Thunderjets gained kills when they caught the Red planes in turns, something they were able to do at the less than 20,000-feet altitudes where the fight was waged. In a period of less than two minutes Lieutenant Jacob Kratt shot down two MIG's,* and before the fight was finished Captains Allen McGuire and William W. Slaughter each destroyed a MIG fighter. After all the Thunderjets returned safely to base the 27th Wing posted a claim for four MIG's destroyed, three probably destroyed, and four damaged. General Partridge warmly commended Colonel Packard for the Thunderjet victory, scored at extreme range over the enemy's finest jet fighters.[15] Later on the same morning, over Pyongyang, the other airfield attack was equally successful. The 49th Fighter-Bomber Wing sent 46 F-80's to suppress Pyongyang's flak with guns, bombs, and rockets, and when this work was done 21 B-29's of the 19th and 307th Bombardment Groups arrived from Okinawa to place 90 percent of their bombs squarely on Pyongyang Main Airfield. Despite the intensity of flak-suppression effort, the medium bombers drew a little fire from the ground, but none of the American planes were in any way damaged during the mission.[16]

After this high point of air action on 23 January, the margin of air superiority which FEAF could expect to exercise over northwestern Korea was

*On 26 January, near Pyongyang, Lieutenant Kratt shot down a single Yak fighter, which foolishly attacked his Thunderjet flight. The Yak pilot must have been either "Hero" Ong or "Hero" Kim, and FEAF monitors listened intently to see whether "Radio Pingpong" would announce that one of its "heroes" was missing. It did not. Lieutenant Kratt's activities gave Colonel Packard still another reason for a good chuckle. In gunnery training, back at Matagorda Island in the United States, Kratt had flown into a tow target, and Packard had spent several anxious moments convincing General LeMay that the young lieutenant should not be grounded. (FEAF Release No. 514, 27 Jan. 1951; Ltr.; Packard to Maj. Gen. S. E. Anderson, CG Eighth AF, 25 Jan. 1951.)

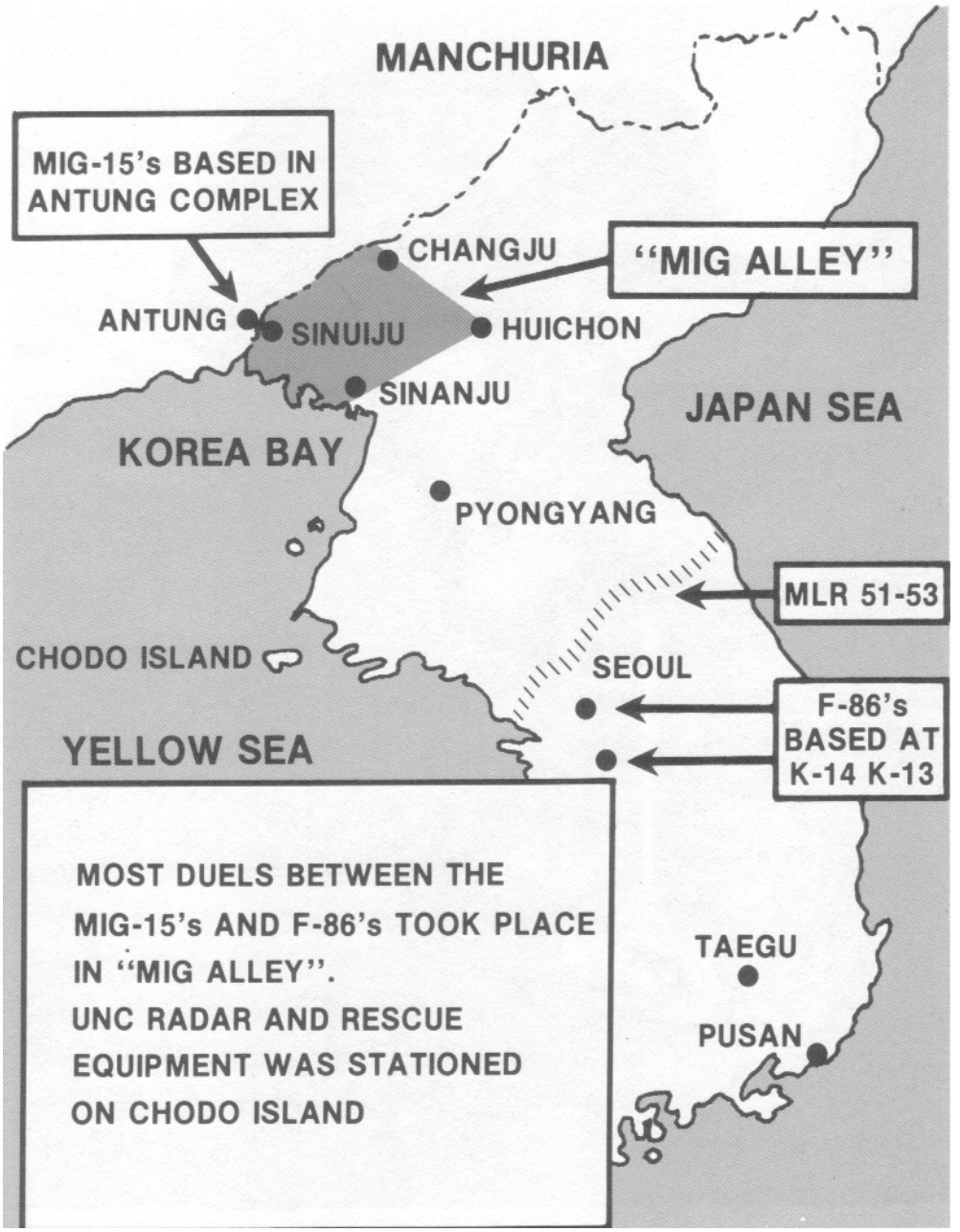
Wreckage of railroad yard at Pyongyang following attacks on the airfields and city.

steadily reduced. As yet no one could say whether the Eighth Army's ground offensive would succeed, and General Partridge wanted to get his jet air wings out of Korea. Accordingly, the Fifth Air Force's plan for redeployment to Japan continued in effect, and Colonel Aaron Tyer, commander of the 49th Wing, began to close down Taegu Airfield. On 26 January the 49th Wing withdrew to Tsuiki, leaving behind at Taegu a refueling and rearming detachment which would service F-80's staged through on combat missions. Before the month's end Colonel Packard withdrew all 27th Wing units from Taegu and concentrated the Thunderjets at Itazuke.[17] Following the deployment of the jets to southern Japan, the Fifth Air Force had to notify FEAF that it could not easily expect to provide escort to medium bombers in far northwestern Korea.[18]

The Fifth Air Force generally avoided air combat over northwestern Korea during February, and in the area between the Chongchon and Yalu Rivers Communist pilots reigned so nearly supreme that Fifth Air Force men called the area "MIG Alley," a name it would bear through the Korean war. Sometimes alone, and sometimes with F-80 escort, RF-80 photo planes continued to dash to the Yalu to secure pictures of Communist activity, but on at least four harrowing occasions in February MIG formations swarmed over the reconnaissance planes. Each time the intrepid reconnaissance pilots narrowly escaped destruction.[19] Cautious tactics coupled with the fact that only about a fourth of the MIG's sighted actually tried to attack prevented FEAF from losing planes in air combat during February,[20] but the only

An airport maintenance mechanic checks a landing strip light which enables planes to operate around-the-clock.

Crewmen boresight the wing gun of an F-84.


MANCHURIA
MIG-15's BASED IN ANTUNG COMPLEX
CHANGJU
"MIG ALLEY"
ANTUNG
SINUIJU
HUICHON
SINANJU
JAPAN SEA
KOREA BAY
PYONGYANG
MLR 51-53
CHODO ISLAND
SEOUL
F-86's BASED AT K-14 K-13
YELLOW SEA
MOST DUELS BETWEEN THE MIG-15's AND F-86's TOOK PLACE IN "MIG ALLEY".
UNC RADAR AND RESCUE EQUIPMENT WAS STATIONED ON CHODO ISLAND
TAEGU
PUSAN

combat victory of the month occurred on 5 February when Maj. Arnold Mullins, of the 67th Fighter-Bomber Squadron, pulled his Mustang up from a strafing pass near Pyongyang just in time to sight and shoot down a Yak fighter.[21] In the air the Reds did not make the most of their opportunities for aerial combat, but they were nonetheless busy with airfield rehabilitation. At Sinuiju, Sinanju, Sunan, Pyongyang, Yonpo, Wonsan, Ongjin, Anak, Sinmak, and Kangdong, the Reds were repairing the runways and builting protective revetments for aircraft.[22]

### *4. All-Out Air Battles in MIG Alley*

Considering the fact that United Nations aircraft were unable to battle over northwestern Korea on anything approaching equal terms in February, the Far East Air Forces had shown good discretion in avoiding the area called MIG Alley as much as possible. Such a policy, however, tacitly admitted that the Communists possessed air superiority in this key area. Important interdiction targets were not attacked, and the Communist air force was growing stronger. In order to renew the air battle over northwestern Korea, the Fifth Air Force had to return its jet fighters to Korea, preferably to the old bases at Suwon and Kimpo.

If the Communists had maintained stronger ground defenses in the country south of the Han River they might have kept the Fifth Air Force operating ineffectively at long range. Fortunately for the United Nations, however, the Eighth Army's limited offensive progressed rapidly from its beginning on 26 January. Suwon Airfield was recaptured in a few days, and on 30 January transports of the 61st Troop Carrier Group began to lay down supplies there. After overcoming stiffening enemy resistance, the U.S. I Corps recaptured the bomb-pocked runways at Kimpo on 10 February.[23] General Partridge lost no time informing his staff that he wanted Suwon, Kimpo, and Seoul Airfields put back into operation, one of them to serve the 4th Fighter-Interceptor Wing. Even as he gave these orders, however, General Partridge must have known that the Fifth Air Force's aviation engineer resources were so scant and the facilities so completely demolished that the airfields would not soon be serviceable for jet fighters.[24]

In the expectation that Suwon could be used as a staging base, Colonel John C. Meyer sent a refueling and rearming detachment there on 22 February and simultaneously brought the 4th Wing's 334th Fighter-Interceptor Squadron to Taegu.[25] On 26 February the Fifth Air Force informed FEAF that it was again prepared to escort B-29's into northwestern Korea, and FEAF directed Bomber Command to return to attacks on interdiction targets in northwestern Korea beginning on 1 March.[26] The decision to send the Superfortresses back into MIG Alley beginning on 1 March seemed lightly given in view of the increased Communist air activity in

Destroyed hangar and maintenance shop at Kimpo AB.

the area. It was defective on another count, for Suwon Airfield was too badly destroyed to permit its use as a Sabre staging base. Although the Sabres had begun to fly combat air patrols from Taegu on 22 February, they could not as yet reach any farther northward than Pyongyang.[27] A minor tragedy was in the making.

Anxious to get back into action against bridge targets in northwestern Korea, Brig. Gen. James E. Briggs scheduled Bomber Command's 98th Bombardment Group for attacks in MIG Alley on 1 March, and the Fifth Air Force undertook to escort the bombers with 22 F-80's. On the morning of 1 March the Shooting Star pilots reached the assigned rendezvous station on time, but the 18 B-29's from Japan ran into unexpected head winds and were so late making rendezvous that the jets soon had to break off their escort and return to base. As a result the Superfortresses had no escort, when, shortly after they dropped their bombs on the bridge target at Kogunyong (near Chongju), they were taken under attack by nine MIG interceptors. The bombers closed into a tight defensive formation and headed for home, but they were no match for the speedy jets. Although Superfortress gunners shot down one Red jet and damaged two others, the aggressive MIG pilots damaged ten of the B-29's, three so badly that their crews had to make emergency landings in South Korea.[28] As they watched the crippled B-29's stagger in to land at Taegu, Fifth

Korean women aid the U.S. Far East Air Forces in putting Kimpo AB into serviceable condition.

Air Force officers knew better than ever that they had to take stronger measures to restore air superiority over northwestern Korea.[29]

As of the first week of March Suwon Airfield was nothing more than a waterlogged, bomb-pitted, concrete runway in the middle of a sea of mud. For want of a taxiway the Sabres would have to taxi back along the runway while other planes were landing. The unobstructed flight surface was so narrow that the Sabres would have to land in trail, with consequent dangers from the turbulence of jet air wash. But the tactical situation demanded that the Sabres go forward to Suwon, and they did so. The 334th Squadron began to stage Yalu patrols through Suwon on 6 March, and four days later, following the completion of a modicum of parking space and a tent camp, the 334th Squadron moved to Suwon. At this time the 336th Squadron came from Japan to Taegu, and each day it staged Sabres up to Suwon to join the Yalu patrols.[30]

When the Sabres began to operate from Suwon, Colonel Meyer and Lt. Col. Glenn T. Eagleston, commander of the 334th Squadron, were permitted to devise their own tactics. Fifth Air Force fragmentary field orders simply charged the Sabres to fly combat air patrols over northwestern Korea at those hours of the day when other aircraft were attacking targets in MIG-hazarded areas. The Sabre screen was intended to turn back Communist aircraft, and it was not primarily

designed to destroy Red aircraft, though of course no one objected to the latter activity if opportunities presented themselves. As they had learned to do in December, the Sabre leaders dispatched flights of four Sabres at periodic intervals, and the flights took stations over various landmarks in MIG Alley. The lead flight generally went to Sinuiju to stir up the MIG's, and if swirling dust at Antung revealed MIG's taking off, the lead flight called out: "Dust on the runway at target area." Then the other Sabre flights closed in to join the fight. If a Sabre flight met more MIG's than it could handle, it called out "Hey Rube" and headed toward Sinanju, where all flights assembled to fight the MIG's. With some reduction of reserve fuel, the length of the Sabre patrol in MIG Alley was about the same twenty-five minutes that it had been when the Sabres were flying from Kimpo. The Sabre tactics varied some from day to day, but the 4th Wing continued to exploit high-speed cruising in the target area, the "jet-stream" patrols of flights staggered in time and space, and, at the moment, the "fluid-four" flight in fingertip formation.[31]

Although the swept-wing Sabres were again flying patrols along the Yalu, the 4th Wing was forced to enter combat on terms which generally favored the enemy. At a time when the 4th Wing was not operating at anything near maximum effectiveness, the Chinese had at least an air division with 75 MIG's based at Antung. The 4th Wing had only two squadrons in Korea, and, flying from separate airfields, the 334th and 336th Squadrons found it hard to unite their efforts over MIG Alley. On nearly every patrol, moreover, a few Sabre pilots were unable to jettison their wing tanks when combat was imminent, and such pilots and their element companions had to abort and return to base.[32] Under such circumstances the Sabre screen was by no means airtight. On the afternoon of 12 March, while Sabre pilots watched a formation of MIG's gyrate across the Yalu, 12 other MIG's bounced four 8th Group F-80's near Namsi. These Red pilots were mediocre fliers: each F-80 pilot claimed some hits, and in the air battle two MIG's collided and fell to earth.[33] On 17 March, near Sonchon, three MIG's again engaged an 8th Group flight in a battle which ranged in and out of the overcast and ended when a MIG and an F-80 collided head-on, destroying both aircraft.[34] So far in the month the MIG's were reluctant to do anything more than attempt fleeting passes on the Sabres, and while the F-86 pilots claimed some damages they had no kills. But the Sabre screen was improving. On 23 March, while 45 Sabres fought MIG's at the Yalu, 22 B-29's of the 19th and 307th Groups returned to MIG Alley to destroy the rail bridges at Kogunyong and Chongju. On this day the medium-bomber crews met no air opposition of any kind.[35]

Late in March the big air battles which would determine who owned the air over northwestern Korea were shaping up. Although attacks against these targets had been postponed while the Yalu River was frozen, the FEAF Bomber Command remained responsible for destroying the international bridges across the Yalu, and reconnaissance planes brought the news that the winter ice in the river was breaking up. The most important of these bridges crossed the Yalu at Sinuiju, in full view of the MIG force based at Antung. If the slow and vulnerable B-29's were to come through in the face of Communist counterair capabilities, they would require the strongest cover and escort

that the Fifth Air Force could provide. Accordingly, the Fifth Air Force directed the 4th Wing to provide high cover for the bombers and the 8th and 49th Wings to supply close escort in the target area. The first major strike of the spring series against the Yalu bridges took place on 30 March, and, all things considered, it came off very well. Bomber formations of the 19th, 98th, and 307th Groups—each with 12 B-29's—bombed the bridges at Chongsongjin, Manpojin, and Namsan-ni (Chongsu-ri). Eight flights of Sabres patrolled the Yalu and covered the three bomber formations but found little to do, for the MIG's did not come up to their patrol altitudes. In fact, only the 19th Group drew any seriously pressed MIG opposition, and its gunners claimed the destruction of two MIG's. In this flight one bomber sustained major damage and had to unload wounded crewmen at Itazuke. In their mission reports the medium-bomber crews mentioned "excellent fighter cover," but the F-80 pilots had little illusion about their usefulness for escort. At 25,000 feet MIG's were fully 100 miles per hour faster than the F-80's and were able to fly through the bomber formations before the old Shooting Stars could engage them.[36]

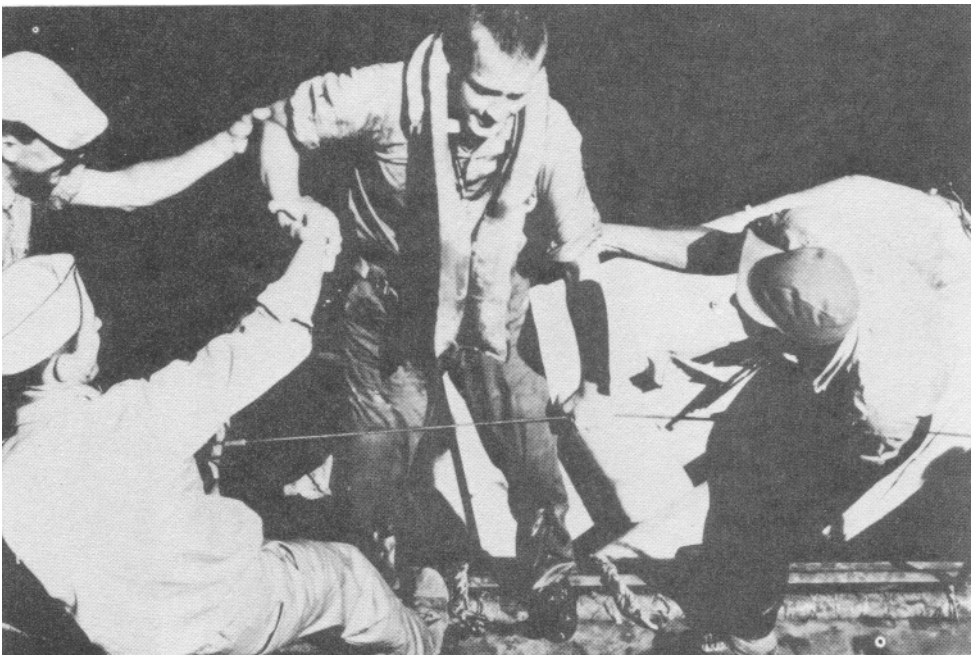
Cloudy weather along the Yalu diverted Superfortress attacks away from the international bridges for more than a week, but the Sabre patrols found the MIG force to be stirred up, noticeably aggressive, and determined to press home attacks. The MIG pilots, however, continued to be poor gunners, and in spirited engagements on 3 and 4 April Sabre airmen shot down four MIG's at no cost to themselves.[37] In the week that the Superforts waited favorable target weather General Stratemeyer gave some new thought to the matter of their fighter support. From the United States General Curtis E. LeMay, commander of the Strategic Air Command, suggested that the 27th Fighter-Escort Wing ought to get as many escort assignments as possible so that it could maintain its proficiency. General Stratemeyer passed the suggestion on to General Partridge with the request that the Thunderjets be staged through Korean bases and used for escort whenever possible.[38] Accordingly, General Partridge tapped the 27th Wing for escort duties on the medium-bomber mission scheduled for 7 April. On this morning, Itazuke was weathered in by a 400-foot ceiling and less than a mile visibility, but the 27th Wing nevertheless launched 48 F-84's in fifteen minutes, and the Thunderjet formation made rendezvous with the medium bombers within a minute of the stipulated time, 500 miles away from Itazuke. In the vicinity of the Yalu, as the Sabres screened and covered above, the Thunderjets flew parallel to the bomber boxes of the 98th and 307th Groups as they attacked the railway bridge at Sinuiju and a newly-built highway bridge at Uiju. Out of 30 MIG's which attempted to attack, only one Red plane got through the escorting Thunderjets, but this sole MIG damaged a 307th Group bomber so badly that it went down in enemy territory. In the engagement the Thunderjets claimed one enemy plane destroyed, while upstairs the Sabres again scored no kills. Despite the loss of a bomber, General Briggs called the fighter protection "well-nigh perfect."[39]

Aerial photographs showed that Sinuiju's massive railway bridge was battered but still standing, and in a final effort to take it down General Briggs ordered all three medium-bomber groups to attack the bridge on 12 April. According to plan, 4th Wing Sabres screened and flew high cover, and 27th

An H-19 of the 3d Air Rescue Group hoists an airman to safety.

Wing Thunderjets flew from Itazuke to escort the bombers. Not according to plan was a high rate of bomber aborts, which reduced the bomber force to 39 instead of 48 aircraft. The three bomber formations, moreover, strung out in the target area, compelling the Thunderjets to split up, and permitting the MIG's to concentrate their attacks against the weaker formations. Three minutes before they reached the target, the 19th Group's eight B-29's were attacked by 40 to 50 MIG's. One B-29 crashed in flames and five others were damaged. Next, about 20 MIG's jumped the 307th Group's twelve B-29's. One of the bombers crashed in enemy territory and another badly damaged ship barely got back to Suwon. Last over the target with 19 bombers, the 98th Group met a few wary MIG's and sustained no damage. The Thunderjets were not only badly outnumbered but the MIG tactics denied them any advantages. Braving the Sabre top cover (which destroyed four enemy planes and damaged six others), the MIG's dived through the Superfortress formations from above, virtually ignoring the slower Thunderjets, whose bewildered pilots shot at anything with swept wings—MIG's and Sabres alike. In the combat the MIG's did not escape unscathed: in addition to the Sabre score, B-29 gunners claimed to have destroyed ten hostile planes, and the Thunderjet pilots reported three MIG's as probably destroyed. Still the loss of three medium bombers was a prohibitive loss, and General Stratemeyer

SSgt. Dominic Pettinari, crew chief of the 3d ARS, looks at the cockpit ornament which serves as a reminder of the consequences of a simple mistake.



Another rescue is logged by the Crash Boat Detachment of the 6160th Air Base Wing.

directed that B-29 attacks in the Sinuiju area would be discontinued until some way could be found to protect them. General Stratemeyer also revised his opinion of the Thunderjets which, he stated, were much too slow to cope with the swept-wing MIG's. General Stratemeyer promised General LeMay that he would continue to use the Thunderjets for escort "whenever conditions justify their employment," but he noted that "forward-based F-86 aircraft are better suited to perform counterair and escort missions."[40]

### *5. FEAF Struggles to Keep the Communist Air Force at Bay*

In the air and on the ground all signs indicated that April 1951 was to be the month of destiny in the Korean conflict. For his own part, General Partridge feared an all-out Red air attack at any time. "Present world tension," he warned all his wing commanders on 31 March, "indicates that all possible action be taken in preparation for air attack without warning."[41] Events transpiring in the first fortnight of April gave little reason for optimism. In the air battle at the Yalu on 12 April the MIG's demonstrated their growing proficiency. In the next several days Sabre pilots commented that the MIG pilots were improving. They were aggressive and determined in pressing

home attacks. They displayed good unit discipline and an increasing mastery of the four-ship flight in formations of up to 16 aircraft. The Red airmen covered each other so well in aerial fights on 16 and 18 April that the Sabre pilots were unable to claim any hostile planes destroyed.[42] But the Red air threat had another even more sinister manifestation. Since February FEAF reconnaissance airmen had been watching the Reds repair and rehabilitate airfields through North Korea, and as April began FEAF photographic interpreters attested that the Reds were almost ready to move aircraft to the North Korean airfields. To Generals Stratemeyer and Partridge the Red airfield construction program had only one logical meaning: the Communists intended to use these airfields to launch an air attack in coordination with their impending ground offensive.

Although the Fifth Air Force was primarily responsible for maintaining air superiority in Korea and would necessarily participate in attacks against enemy airfields, General Stratemeyer had informed General Briggs that the FEAF Bomber Command had to be prepared to attack North Korea's airfields. In view of their large bomb-carrying capacity, the Superfortress bombers would be the work horses of the airfield neutralization effort. Counting on periodic reconnaissance coverage of the North Korean airfields, which would alert him for action in adequate time, General Briggs had devised a shrewd plan for the neutralization of these airfields. The Reds controlled such unlimited quantities of impressed labor that General Briggs reasoned that the Superfortresses could not expect to destroy the North Korean fields. The Communists, for example, would be able to repair a hundred bomb craters in approximately the same time that it would take them to repair a single bomb crater. Reasoning thus, General Briggs secured permission to wait his attacks until the Reds were almost ready to operate their airfields and then to neutralize them and keep them out of action with relatively small air attacks flown just often enough to disrupt and delay Red repair work.[43] Bomber Command's plan was well conceived, but the execution of the plan was going to require uninterrupted Superfortress attacks. If the MIG's put up strong resistance, they might prevent the Superfortresses from attacking the airfields. At any rate, however, the soundness of the airfield neutralization plan soon had to be tested, for on 16 April FEAF photo interpreters said that the time had come for airfield attacks. General Stratemeyer ordered Bomber Command to put the majority of its effort into airfield strikes beginning on 17 April.[44]

As was the case with most other air actions against North Korea, the success or failure of the FEAF airfield neutralization effort would depend upon the success with which the Sabres maintained control of the air at the Yalu. In view of the fact that the MIG airmen were showing good aptitudes with four-ship flights and 16-aircraft formations, the 4th Fighter-Interceptor Wing knew that it had to increase the size of its Yalu River patrols. With the 334th Squadron based at Suwon and the 336th Squadron at Taegu, the 4th Wing was not always able to mass its Sabres in MIG Alley. With the improvement of the facilities at Suwon, however, the 336th Squadron began to move northward on 6 April, and by 22 April both squadrons were together at Suwon. The 4th Wing also devised what seemed to be the answer for the four-MIG flights which invariably split into pairs, one climbing and the other

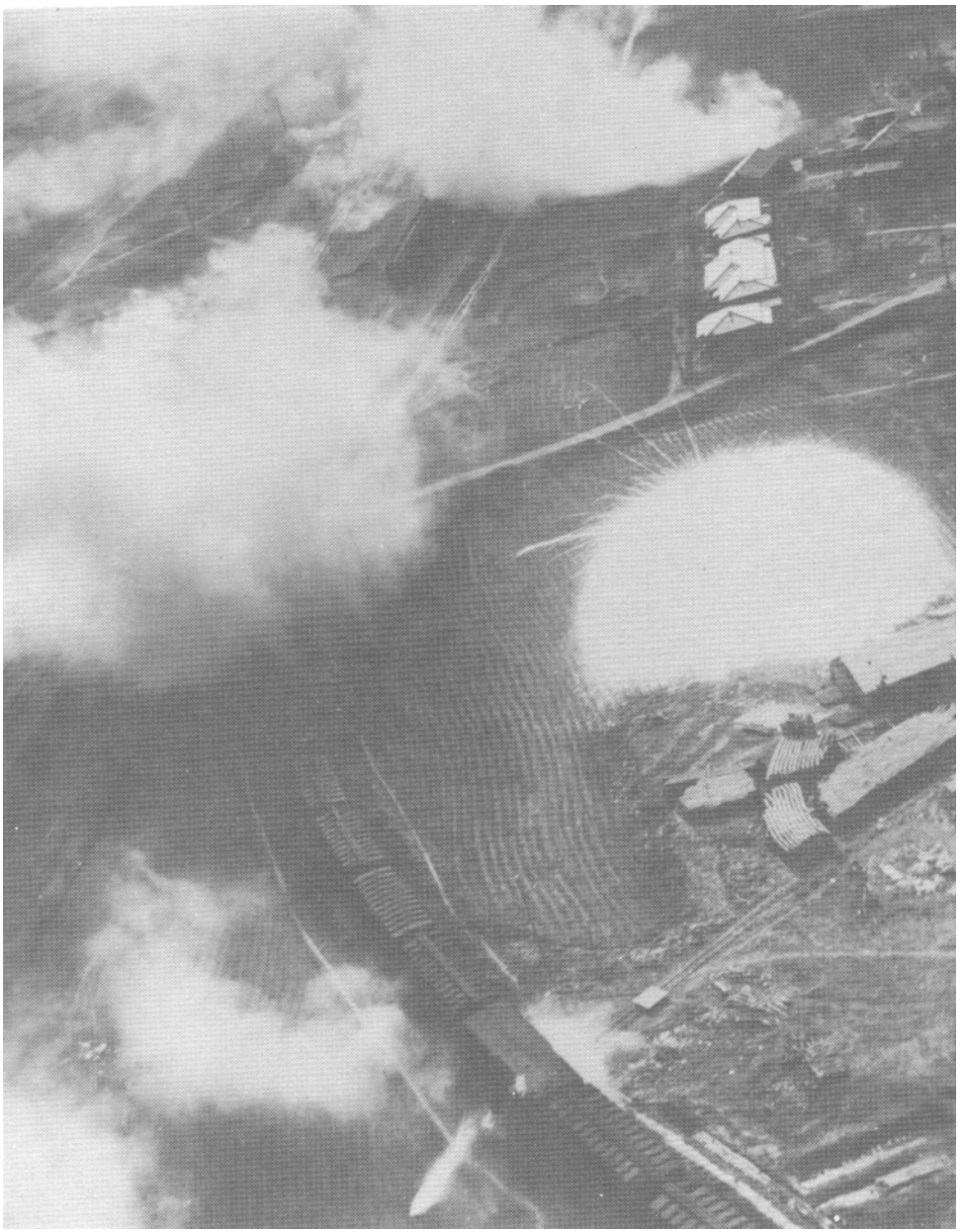
diving. Sabre flights were increased to six aircraft, so that four F-86's could follow the climbing MIG element and two could chase the diving MIG element. Elements of two Sabres would continue to pursue as the MIG elements broke down into singles, as they almost always did.[45] Benefiting from the closer timing between patrols and the six-Sabre flights, the 4th Wing soundly thrashed the MIG's on 22 April. Obviously picking their time of attack on the afternoon of this day, 36 MIG's swarmed across the Yalu to assault 12 Sabres which were completing their patrol and were starting to return home. The hapless MIG's, however, ran headlong into another formation of 12 fresh Sabres, which soon shot down four of the startled Communists and damaged four other MIG aircraft.[46]

Since the Sabres continued to manifest their mastery of the air at the Yalu, FEAF's airfield neutralization program progressed without much hindrance. Scheduling an average of 12 bombers daily for the work between 17 and 23 April, Bomber Command cratered the runways and strewed delayed-action bombs at Pyongyang Main, Pyongyang East, Anak, Sariwon, Kangdong, Yonpo, Hamhung, Sinmak, and Sunan Airfields. The Superfortresses made repeat raids against several of these fields in the period, and Fifth Air Force fighter-bombers further postholed many of the same airfields. Day-flying light bombers also worked against airfield targets, and B-26 night-intruders visited the targets to discourage the enemy's persistent repair efforts. On one occasion a flight of Sabres returning from MIG Alley dropped down and strafed Red repair workers at Pyongyang. Conducted under circumstances of complete freedom from enemy air opposition, FEAF airmen remarked that the airfield strikes were rather much like shooting sitting ducks. Although the Communists patiently continued to make repairs at the airfields, the FEAF Bomber Command's work had progressed so favorably that it returned to interdiction tasks after 23 April.[47]

The degree of United Nations air superiority which had been won over North Korea was measured best by the fact that the Communist ground offensive begun on the night of 22 April received no support from the Red air forces. All seemed to be going well, but General Partridge had reason to be apprehensive about a mischievous project which the Reds were about to get in operation at Sinuiju Airfield. Covered by a bristling array of antiaircraft artillery and by Antung's MIG's, the Communists apparently felt secure at Sinuiju. At the fringes of the airfield the Reds built new fuel, supply, and ammunition dumps, and they dispersed 38 Yak-9's, IL-10's, and LA-5's in revetments at the field. Early in May Fifth Air Force reconnaissance crews reported a frenzy of activity at Sinuiju. What use the Reds meant to make of the airfield and air garrison General Partridge did not know, but at the end of the first week of May he judged that Sinuiju Airfield was ripe for a massive Fifth Air Force attack.[48]

According to order and with careful attention to scheduled times of attack, beginning promptly at 1400 hours on 9 May, 312 Fifth Air Force and 1st Marine Air Wing fighter pilots attacked Sinuiju Airfield. Relays of 4th Wing Sabres, 27th Wing Thunderjets, and Marine Air Wing Pantherjets covered overhead but found little activity. About 50 MIG's took off from Antung, but only 18 of them made flitting passes across the Yalu. Most of the MIG's showed no desire to fight. The pilots of one Sabre flight reported that for a

Communist-held airstrip at Yonpo, 23 April 1951.

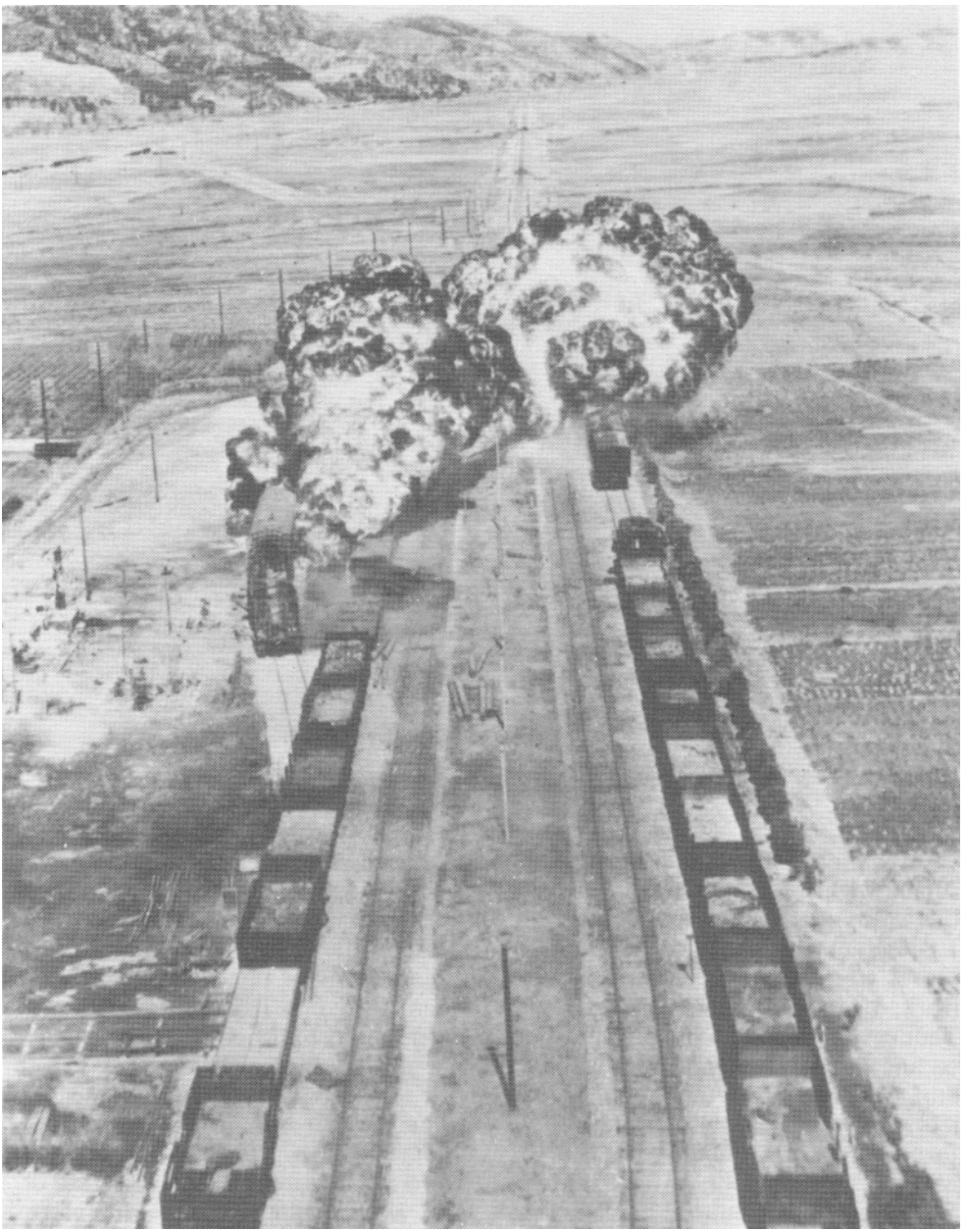


B-26 rockets, napalm bombs, and .50-caliber machinegun fire explode on an enemy marshalling yard at Masan-ni.

Path of destruction made by B-26 bombers on enemy warehouses near Munchon.

short while they flew alongside a similar flight of eight MIG's, with only the width of the Yalu separating them. Under such circumstances air-to-air scores were slender: one Sabre pilot marked damages on a single MIG and a Thunderjet pilot scored similar results on another MIG. Meanwhile, waves of 8th, 49th, and 51st Wing Shooting Star jets suppressed flak with proximity-fuzed bombs and rockets, while 1st Marine Air Wing Corsairs and 18th Wing Mustangs launched bombs, rockets, and napalm against prebriefed targets in the ten-square mile airfield area. The smashing air attack knocked out all the Red aircraft on the field, destroyed 106 buildings, fired an unusually large aviation fuel dump, exploded 26 other ammunition and supply dumps, and undoubtedly inflicted heavy casualties among the ranks of the enemy personnel who streamed out of the buildings into the open. Only one Thunderjet was damaged, and it returned safely to base, as did all American planes.[49]

It is possible that the Reds intended to employ the Sinuiju air garrison in support of their ground troops who were to initiate the second impulse of their vaunted spring ground offensive on the night of 15 May. If this was the plan, the Reds had again miscalculated, and at any rate the Red ground forces would obtain no assistance from the Chinese Communist Air Force. Carefully keeping on their own side of the



Fiery napalm marks direct hits on a rail junction at Munchon, deep in North Korea.

Yalu, the MIG's marked time and refused to fight.[50] Repair work on North Korean airfields dragged on lethargically, and a few well-timed FEAF strikes checked such progress as was made.[51] To one young Sabre pilot, Captain James Jabara, the refusal of the Red jets to come out and fight was aggravating. Strictly speaking, Captain Jabara should have returned to Japan on 7 May, when the 334th Squadron traded stations with the 335th Squadron, but Jabara's case was unique: he had destroyed four MIG's and needed one more aerial victory to make him history's first jet air ace. Finally, late on the afternoon of 20 May, two Sabre flights closed into MIG Alley and found that the Red airmen were willing to fight. Hearing the news by radio, two other Sabre flights, one of which included Jabara, arrived within fifteen minutes and shared the combat. As the fight progressed, the 36 Sabres battled some 50 MIG's and emerged with three victories, one probable destruction, and five claims of damage. Even at the last moment fate had seemed to frown on Captain Jabara because one of his wing tanks would not jettison. Under such circumstances, Sabre pilots usually went home, but Jabara plunged into the fight and destroyed not one but two of the Red MIG's, thus establishing himself as the first jet air ace in aviation history.[52]

Following the bloodletting on 20 May, the Red pilots were inactive until 31 May, when 12 MIG's surprised two 19th Group B-29's while the bombers were waiting for their Sabre escorts 75 miles southeast of Sinuiju. The MIG pilots had ventured far from the Yalu, but they did not appear to know how to make a successful pass against the bombers. The Superfortress gunners shot one MIG down, and the Sabre escorts arrived in time to destroy two more of the Red planes, whose pilots became so rattled that they shot at each other far more than at the Sabres.[53] On the next day—1 June—four 98th Group B-29's attempted a second run over a railway bridge northwest of Sinanju. Short on fuel, the escorting Sabres had to go home, and a few minutes later 25 MIG's swarmed down from out of the sun. The Red airmen shot the wing off one bomber and damaged two others, but they paid heavily, for the medium-bomber gunners claimed one MIG destroyed and a flight of Sabres heeded a call for help in time to down two more of the MIG's.[54]

### *6. The Reds Implement a Revised Air War Plan*

The general lethargy of the Chinese Communist Air Force throughout May doubtless reflected indecision on the part of the Communist air commanders, who were actively seeking some course of action looking toward victory in Korea. Intelligence data received in Tokyo, purporting to be a summary of high-level military conversations between Chinese and Russian officers in Mukden, indicated that the Reds attributed the failure of their ground campaigns to their inability to control the air over Korea. According to this

report, General Liu Ya-lou was roundly criticized for the ineffective employment of the Chinese Communist Air Force, but Liu rebutted the criticism with explanations that "incomplete preparations" and insufficiently trained air crews had prevented any all-out air offensives.[55] Sometime in May, probably after 10 May, when the Mukden conference was said to have been held, the Communists revised their air war plan for Korea. The details of the revised plan were mentioned in the report of the Red Chinese Aviation Inspection Group and were also manifest in the course of events in Korea. Since insufficiently trained Chinese pilots had been unable to take control of the air over northwestern Korea, a new "International Communist Volunteer Air Force" would lend a hand. Under cover of MIG sorties flown by the best Chinese pilots and "volunteer" airmen, the Reds would redouble their efforts to repair and rehabilitate airfields in North Korea. Members of the Special Aviation Inspection Group would supervise this intensified program. As quickly as any airfield could sustain the operations of light aircraft, North Korean pilots would institute night-heckling raids against United Nations positions. At an opportune time—depending on the success of the plan's other phases—the Reds would bring forward the more formidable Ilyushin ground-attack units which a Russian air general had been training in Manchuria.[56] At mid-June 1951, when the Reds began to implement the revised air war plan, Communist ground armies were in disorderly retreat along the 38th parallel, but the Communist commanders may have hoped that an air victory might yet save their cause in Korea.

According to Fifth Air Force photo interpretation reports, the FEAF airfield attacks flown in April had rendered all North Korean airfields "unserviceable," the major criterion for "serviceability" being an unobstructed 3,000-foot runway. Except for the once-substantial airfields at Pyongyang, Sinuiju, and Yonpo, however, most North Korean air facilities were dirt or sod airstrips, so simple in structure as to be easily repaired. In fact, the Fifth Air Force figured that the Reds, given a week of uninterrupted labor, could restore any airfield to serviceability. Overnight repairs, moreover, could enable some of the airfields to serve light aircraft.[57] As the Reds worked, Fifth Air Force reconnaissance teams watched. One Communist project which whetted the curiosity of the photo interpreters was under way in Pyongyang City, and early in May these photo scanners grasped the meaning of the peculiar activity. Within the North Korean capital the Reds demolished buildings along a straight stretch of paved street, giving themselves a hard-surfaced runway 7,000 feet long and 375 feet wide. Old intersecting streets substituted for taxiways, and the whole city could shelter dispersed airplanes. Fifth Air Force airmen sent to crater the "runway" named the unique facility "Pyongyang Downtown Airfield."[58] Recognizing that the Reds might be using some of their dirt strips after dark, the Fifth Air Force routinely dispatched 3d Wing night-intruder B-26's to maintain nocturnal surveillance and to harass Red labor troops. On the night of 24/25 May this classic intruder work bore first fruit, for a B-26 crew sighted an unidentified aircraft taking off from Yongyu Airfield, 25 miles northwest of Pyongyang. Both Pyongyang Downtown and Yongyu had been attacked before, but, to see the job well done, Bomber Command sent the 19th and 307th Groups to crater

them on 28 May.[59]

A survey of aerial photographic cover flown on 6 June showed that the North Korean airfields were unserviceable, but bad weather during the next several days held up routine airfield strikes and evidently allowed the Reds a long enough time to repair at least one of their airfields. Unknown to the Fifth Air Force, but revealed much later in the captured diary of a North Korean pilot, a handful of North Korean airmen assembled at Sariwon Airfield and galvanized into action.[60] Down in the Seoul area, in the early-morning hours of 14 June, 606th Aircraft Control and Warning Squadron observers marked two low and slow-flying "blips" emerge from the ground clutter on their radar scopes and head southward. Several minutes later, at about 0315 hours, one of the Red raiders dropped two bombs on Suwon Airfield, barely missing a squad of aviation engineers who were repairing the runway. The other raider cruised over Inchon and launched his bombs at an Eighth Army motor park. Both planes escaped northward, and, on the basis of numerous sightings, Fifth Air Force intelligence officers identified the little planes as Polikarpov PO-2 biplanes, little canvas-covered, open-cockpit trainers, which were probably among the oldest Soviet aircraft. On the night of 15/16 June an equally strange plane, identified as a Blochavidan MBE-2 pusher-type seaplane, made a strafing pass across Kimpo Airfield with no results other than some near misses against a jeepload of air policemen.[61]

These first heckling attacks should have warned the Fifth Air Force that the Reds were bent on mischief. Actually, North Koreans were employing tactics that the Russians had exploited in World War II, when Soviet pilots had used the little PO-2's in night attacks against the Germans. On the third night, when Comrade La Woon Yung and another North Korean pilot arrived over Suwon, they evidently found the field well lighted and ready to be attacked. As the 4th Wing officer of the day subsequently pointed out, a steady flow of lighted vehicles on the perimeter road around the airfield fairly well outlined the target for the North Korean raiders. Each of the PO-2's dropped a pair of small bombs. One bomb damaged equipment in the 802d Engineer Aviation Battalion's motor pool, and another scored a direct hit on the 335th Squadron's aircraft parking ramp, completely destroying one Sabre and damaging eight others, four of them seriously. "I saw with my own eyes that many of the enemy aircraft had been destroyed by my bombing," recorded the North Korean pilot in his diary.[62] One little PO-2 biplane, which directed a well-aimed blow against planes on the ground, where aircraft are always most vulnerable, had done more damage to the Sabres than had all combat with the MIG's up to this time.

Whether it was by design or by circumstances, the Communists first displayed their "big-team" MIG's on the morning of 17 June, for 4th Wing Sabre pilots patrolling the Yalu met a formation of 25 unusually aggressive adversaries. Up until this time the Sabre pilots had occasionally encountered extremely able MIG pilots, who often flew alone and exuded confidence. These men were evidently Red instructor pilots, men whom the Sabre force came to call "honcho" pilots, the word "honcho" meaning "boss" in Japanese. Now, however, a whole unit of able MIG pilots had evidently been committed in Korea. The fight on 17 June favored the Sabres, who downed one enemy plane, and damaged six

others without sustaining loss or damage.[63] Far from discouraged, more than 40 MIG pilots swarmed out to meet 32 Sabrejets on the morning of 18 June. In a furious air battle the Sabre pilots claimed the destruction of five MIG's, but one Sabre did not return from the combat—the second such loss in the Korean war.[64] For the third successive day Sabres tangled with MIG's over northwestern Korea on 19 June. In this engagement the Sabres damaged four MIG's, but again a Sabre pilot did not return to Suwon and was assumed to be lost.[65]

The vigorous action of the Communist jets quite probably marked a Red effort to set the stage for an initial employment of the Ilyushin ground-attack force against a Korean target. The MIG's had not subdued the Sabres, but the Communists nevertheless introduced their IL-10's for a limited test in combat on the morning of 20 June. For several days Communist ground troops had been trying to dislodge South Korean forces from the small island of Sinmi-do, which lay just off the Korean coast about 75 miles southeast of Sinuiju. Apparently the Reds deigned to give their ground troops some air support. Thus, early on the morning of 20 June, a flight of 18th Group Mustang pilots sweeping roads south of Sinuiju looked up to discover eight IL-10's on a beeline course for Sinmi-do. The Mustang pilots promptly pulled up and launched into the Ilyushin aircraft, destroying two and damaging three of the conventional ground-attack planes. Both adversaries evidently called for reinforcements, and another flight of Mustangs, which took station over Sinmi-do, soon met and worsted six Yak-9 fighters, shooting one of them down. A third Mustang flight, with Sabre cover, arrived at the scene at about the same time as MIG's first appeared there. In an aerial fight at jet altitudes the Sabres damaged four MIG's, but one MIG slipped through and literally shot the wing off of one of the slow-flying Mustangs. This ended the day's air actions in the Sinmi-do area. Although the Reds had managed to down a Mustang, the Ilyushin ground-attack force had clearly failed its initial test in combat. American pilots agreed that this Communist air offensive had been easily opposed. In fact, Lt. J. B. Harrison, the Mustang pilot who had downed the Yak with a beautiful deflection shot, was quoted to the effect that: "Them Yaks are flown by a bunch of Yuks and there ain't no sweat."[66]

While the major air battles were waging over MIG Alley the little North Korean PO-2 hecklers were arriving in the Seoul area so regularly after midnight that United Nations troops referred to them as "Bedcheck Charlies." Except for the destruction at Suwon on 17 June, the PO-2's accomplished very little, but they were admittedly "a small but very antagonizing thorn in the side of the United Nations force."[67] Geared to act against high-performance aircraft, Fifth Air Force air defenses were baffled by the 80-knot biplanes. Flying low down moon-illuminated valleys, the PO-2's did not appear on the 606th Aircraft Control and Warning Squadron's radar scopes until they were about 12 miles north of Seoul, and even then the little planes' wood frames and fabric covers offered poor electronics reflecting surfaces. Even when a raider was located and a night fighter of the 68th Fighter-Interceptor Squadron or of VMF(N)-513 was vectored to an interception, the PO-2's slow speed and extreme maneuverability often allowed it to escape. On several occasions Marine night fighters nearly rammed

the small planes and yet could not pick them up from amidst the ground clutter on efficiently operating airborne radar scopes.[68] But the little Red raiders did not always escape. On 23 June Captain Dick Heyman, an old fighter pilot who was flying an 8th Squadron B-26 intruder, responded to the Kimpo air direction center's call for help and throttled down slow enough to overhaul and shoot down a PO-2 north of Seoul.[69] On the night of 30 June, Captain E. B. Long, of VMF-513 Squadron, hovered his F7F night fighter behind one of the PO-2's and blasted it down on the banks of the Han River.[70]

The interception and destruction of the Bedcheck Charlie raiders over Seoul helped combat the menace, but the primary and most effective FEAF response to the night air attacks was an intensive neutralization of all possibly operational North Korean airfields, especially the complex of 15 fields up around the Pyongyang area. At the beginning of better weather, on 10 June, well before the first PO-2 attack, the Fifth Air Force had returned to its routine airfield strikes. And beginning on 17 June the FEAF Bomber Command placed the brawn of its medium bombers behind the airfield attack campaign. A gamut of air attacks kept most North Korean airfields under daily assault. Day-flying fighter-bombers, light-bombers, and Superfortresses postholed the airfields, while night-intruder B-26's made as many as five attacks across the more suspicious-looking airfields each night. A part of the airfields designated for attack were such obscure objectives that medium-bomber crews had trouble identifying them from the air, but intensive study of target photographs prior to missions helped the crews put their bombs on targets.[71]

For more than a week FEAF crews engaged in the airfield neutralization strikes met no enemy air resistance, but, effective on 22 June, the Communist air commanders evidently threw their MIG forces into the fray. On this day, as Shooting Star jet fighters swept Sinuiju Airfield unscathed, Sabres and MIG's tangled overhead, and at a cost of one F-86 the 4th Wing pilots destroyed two MIG's.[72] Given the mission of opposing the airfield neutralization strikes, the new breed of MIG pilots was quite willing to leave the sanctuary at the Yalu. Carrying wing tanks, which they dropped prior to combat, the MIG pilots overflew or evaded the Sabre patrols and penetrated as far southward as Pyongyang and Chinnampo. For the first time the MIG airmen exploited the advantages of their planes, especially the MIG's ability to fly and maneuver at high altitudes and outclimb the Sabres. The MIG airmen introduced a new maneuver which the 4th Wing described as the "Yo-Yo": 20 or more MIG's established orbits over United Nations air formations; then, preferably from up-sun and usually in elements of two, the MIG's dived downward and attacked United Nations aircraft from high astern; and, finally, the elements zoomed back up into the pool of orbiting MIG's overhead.[73]

The MIG pilots were so cool and canny that even FEAF intelligence could state that "more proficient pilots have recently been committed in Korea," but the Red airmen were nevertheless unable to have much effect upon United Nations pilots, even the fighter-bomber men who flew much slower aircraft. For one thing, the fighter-bomber pilots operated at lower altitudes, where the MIG's had fewer advantages. On 24 June a MIG formation jumped 51st Wing F-80's who were strafing Sinanju Airfield. In a running

fight at low level, where the Shooting Stars had all the advantages, the F-80 pilots damaged four MIG's and escaped unharmed.[74] On 26 June 12 "well-experienced" MIG pilots, who knew how to fly passes against bombers, penetrated the Sabre screen and attempted to attack four Superfortresses over Yongyu Airfield. Although relatively new to combat, Thunderjet pilots of the 136th Fighter-Bomber Wing successfully turned back the MIG's and shot down one of the Red planes.[75] In two separate instances, on 28 and 30 June, six MIG's attacked flights of F-51's near Sinanju and Songchon, and the Mustang pilots reported hearing a lot of radio chatter and even laughter on the Red communications channels, indicating that confident Communist pilots were getting pleasure from their work. But on each occasion the old Mustangs outmaneuvered the faster jets and fled home safely at treetop levels.[76]

With the beginning of July FEAF medium, light, and fighter-bombers continued day and night strikes against Communist airfields in northwestern Korea. Where enemy defenses warranted, the planes coordinated their attacks. Thus, on 3 July, 32 F-84 Thunderjets suppressed flak in Pyongyang City while six Superfortresses, escorted by 33 Sabrejets, dropped more than 850 x 100-pound bombs on the runway at Pyongyang Downtown Airfield.[77] Except on rare occasions, the MIG's did not show themselves, and when they did the Sabres made them suffer. Thus on 8 July 20 MIG's attacked a squadron of Mustangs which were returning from an airfield strike at Kangdong. The Mustangs scattered and called in 35 Sabres, who soon shot down three of the MIG's.[78] Again, on 9 July, a flight of MIG's intercepted six 19th Group B-29's as the bombers turned off their target run at Sinanju Airfield. Escorting Sabres shot down one MIG and Superfortress gunners destroyed another.[79] On 11 July 30 MIG's attacked 21 F-80's which had napalmed an enemy target south of Sinuiju. As the Shooting Stars counter-attacked, 34 Sabres joined the battle. One enemy plane was hit, caught fire, and exploded in midair. Another was hit, started burning, and the pilot bailed out. Still another MIG went into a spin all by itself and its pilot parachuted.[80] Near Uijongbu, before daybreak on 12 July, a Marine F4U pilot intercepted and shot down another PO-2 biplane.[81]

Quite suddenly, on 12 July, as if someone somewhere had given a controlling order, the Communist air offensive in Korea admitted its failure and came to a halt. At the North Korean airfields Communist laborers no longer attempted to fill the bomb craters placed there by FEAF airmen. After 12 July no more Bedcheck Charlies tried to come to the Seoul area. The report filed by Red China's Special Aviation Inspection Group left no doubt that the Communists knew that their revised air war plan had failed. The group noted that the Ilyushin ground-attack force had staged a single raid and had "failed." The group plaintively asserted that it had "spent two months on the battlefield supervising the repair of 69 airfields which in the end only helped facilitate the operations of 30 planes." Such a futile construction effort, stated the Red Aviation Group, "was far beyond the financial power of Red China to support."[82]

# 10. *Target Logistics*

## *1. An Appreciation of the Situation*

"In a long-term war," stated General Weyland on 28 December 1950, "tactical airpower will contribute more to the success of the ground forces and to the over-all mission of a theater air commander through a well-planned interdiction campaign than by any other mission short of the attainment of air supremacy." From the beginning of the war in Korea Generals Stratemeyer and Weyland had argued that air attacks against the enemy's logistical support could create conditions whereby friendly ground troops could battle a numerically superior enemy on more favorable terms.[1] United Nations ground commanders had not grasped the value of aerial interdiction, and, as he looked back at 1950's operations, General Weyland could see that this lack of understanding of the value of air assault at the enemy's rear had been nearly fatal to the United Nations Command. In South Korea the North Korean People's Army had been lashed between the frontal battle of the Eighth Army and rearward United Nations air attacks and had lost its fighting effectiveness. But the Inchon invasion had obscured the role that airpower had played in the victory, and General MacArthur had launched a ground campaign toward the Yalu. As United Nations ground forces drove northward, United Nations airpower was unable to cross the political barrier at the Yalu and thus could not attack the Chinese Communist armies. As a result, the Chinese Communist ground armies had overwhelmed United Nations ground forces. When United Nations ground forces retreated southward, however, the United Nations air forces found the time and space they needed to repeat their pattern of destruction and interdiction. After two months of air attack the same Chinese Communist armies which had made such an auspicious beginning in Korea had been defeated in South Korea.[2]

The tremendous casualties inflicted on the enemy by air strikes and ground defenses had hurt him badly in January, but General Stratemeyer correctly perceived that the Fourth Field Army's "Third-Phase" offensive had collapsed for want of logistical support. After an initial victory the Red Chinese had been compelled to pause, fall back, regroup, and prepare for another forward lunge.[3] After the first week of January 1951, when the Communist ground offensive was dwindling, General Stratemeyer directed the Fifth Air Force and the FEAF Bomber Command to concentrate against the enemy's lifelines. The plan of attack was already outlined in the directive for FEAF Interdiction Campaign No. 4, which, issued on 15 December, divided North Korea into 11 zones and named for destruction 172 targets—45 railway bridges, 12 highway bridges, 13 tunnels, 39 marshaling yards, and 63 supply centers.[4]

The pattern of the January communications attacks shaped up quickly. Since most North Korean streams were in the low-water season and many of them were frozen solidly enough to permit troops and vehicles to cross them, even if road bridges were cut, Stratemeyer ordered Bomber Command to use its whole striking force against railway bridges and marshaling yards in

the upper reaches of northwestern and central Korea. The Fifth Air Force was expected to employ its light bombers and fighters against rail and highway bridges on the principal routes converging toward central Korea.[5] Wishing to make the transportation blockade tight from coast to coast, General Stratemeyer asked Admiral Joy, on 15 January, to launch carrier air attacks against east-coast rail routes between Hamhung and Susong. Admiral Joy replied, however, that Task Force 77 was devoting its primary effort to close support and that future interdiction capabilities would depend upon close-support requirements.[6]

As executed by the FEAF Bomber Command and Fifth Air Force against northwestern and central Korean targets between 19 and 31 January, the FEAF communications attack was described as the most massive and sustained air effort yet employed in Korea. On one day, 26 January, FEAF planes attacked 16 separate key bridges, and in the thirteen-day period intensified air attacks were mounted against more than 80 key rail and highway bridges as well as marshaling yards and other primary communications targets. Excellent flying weather contributed to the success of the attack program, and while MIG's attacked fighter-bombers at the Chongchon on 21 January, the enemy's counterair effort did not materially hamper the interdiction program.[7] Under the cover of the massive interdiction attacks the Eighth Army's drive toward the Han River progressed against enemy troops whose combat efficiency was definitely waning. "The most probable causes for such a condition," said the Far East Command intelligence journal, "can be attributed to a rising rate of attrition due to heavy losses from United Nations ground and air action, to ravages of disease, cold weather-casualties, and, as a vital basic cause, to his inability to logistically support any operations involving a long supply line which can be struck by an aggressive, efficient air force."[8]

The FEAF transportation attacks prevented the Reds from using their rail arteries in northwestern and central Korea, but the Communists were quick to take advantage of the road and rail routes open to them in eastern Korea. Northward off Hamhung Communist rail travel revived, and on 24 January air-reconnaissance crews counted more than 500 boxcars in east-coast marshaling yards, principally at Kilchu and Chongjin.[9] A steady stream of reports arrived in Tokyo in early February, all indicating heavy enemy troop movements in progress along the northeastern coast rail lines from Hoeryong to Chongjin to Hamhung to Wonsan. Seeking to sever these east-coast rail lines, the 307th Bombardment Group attacked and destroyed nine spans on the railway bridges at Chuuronjang, Hongwon, and Tanchon on 1 February, receiving General Stratemeyer's commendation for exceptional bombing accuracy.[10] On the next several days the Superfortresses continued to give some attention to the east-coast bridges and marshaling yards.

By 6 February, however, the Communists were so openly active in north-central and northeastern Korea that General MacArthur directed General Stratemeyer to concentrate the combined efforts of the Fifth Air Force and Bomber Command in those areas until further notice. FEAF promptly ordered Bomber Command to attack bridges, choke points, and tunnel entrances, and directed the Fifth Air Force to attack rolling stock.[11] According to order, Okinawa-based B-29's hit targets between Kanggye and Changjin and

knocked a span out of the key east-coast railway bridge near Cho-ri on 7 February, while Fifth Air Force light bombers destroyed four bridges and attacked boxcars on the northeastern coastal supply route. Beginning with intruder raids before daylight, all types of FEAF planes kept the northeastern routes under constant assault on 8 February. Superfortresses attacked the key bridges at Toksil-li, Komusan, and Chuuronjang and cratered the highway paralleling the east-coast rail route. Fifth Air Force B-26's, F-51's, and F-80's damaged seven bridges and 11 tunnels, most of them near Kilchu. Farther south, at Hamhung, B-26's attacked boxcars which were backed up in the marshaling yard.[12] General Stratemeyer had intended to continue these cooperative attacks for several more days, but bad flying weather kept all planes out of the area on 9 February, except for a formation of B-29's which bombed Hamhung's marshaling yard by radar.[13]

"It is evident that the enemy has lost his chance for achieving a decisive military decision in Korea," General MacArthur informed the Joint Chiefs of Staff on 11 February.[14] This statement came on the eve of a Chinese "Fourth-Phase" offensive in central Korea, but when this short but intense enemy drive ran down General MacArthur was still optimistic. His communiqué of 20 February revealed that he had accepted the Air Force position on interdiction. "Our field strategy, initiated upon Communist China's entry into the war, involving a rapid withdrawal to lengthen the enemy's supply lines with resultant pyramiding of his logistical difficulties and an almost astronomical increase in destructiveness of our air power, has worked well," MacArthur stated. "The enemy," he continued, "is finding it an entirely different problem fighting 350 miles from his base than when he had this 'sanctuary' in his immediate rear and our air and naval forces practically zeroed out."[15]

Early in 1951, as United Nations ground commanders began to appreciate airpower's ability to reduce the enemy's strength by assaulting his logistical support, Communist commanders were also acknowledging that their logistical shortcomings were threatening the success of their mission in Korea. Not too well organized to begin with, Communist supply systems had all but collapsed during the drive to South Korea. As has been seen, General Lin Piao ordered the Fourth Field Army to fall back to the 38th parallel in order to resupply and regroup.[16] General Peng Te-huai, who took command of the Chinese Communist volunteers sometime early in March, also recognized the logistical difficulties facing his command. In an address delivered a few days prior to the "Fourth-Phase" attack, General Peng Te-huai acknowledged that his troops were not ready to fight. "This battle begins under unfavorable conditions," he said. "Our period of rest is interrupted and now, when we are not yet ready to fight, the fourth phase is under way."[17]

Although General Peng Te-huai ordered the abortive mid-February offensive to check the Eighth Army's forward progress, the Communist plan for the war in Korea required the Fourth Field Army to defend the 38th parallel at all costs until May 1951, by which time it should have received the logistical support that it would need for mounting an overwhelming ground attack.[18] From mid-January onward the major strategic concern of the Chinese was to provide their armies with replacements and supplies. Once again

there was evidently some disagreement as to whether the Reds could hope to provide logistical support in the face of United Nations air attacks. The Red Chinese air commander, General Liu Ya-lou, and the absent but still influential Fourth Field Army commander, General Lin Piao, apparently shared the view that nothing short of the attainment of Communist air superiority could protect the Red supply lines in North Korea.[19] General Peng Te-huai, however, was a strange combination of an old-fashioned guerrilla who was also rated as Red China's foremost military logistician.[20] General Peng Te-huai apparently intended to build a logistical support system in North Korea which would support his front-line troops even if the Chinese Communist Air Force did not attain air superiority over northwestern Korea. As long as the United Nations Command continued to possess air superiority, all Communist transportation movements would be limited to hours of darkness or bad weather. The task, under such circumstances, would be difficult but not impossible. Chinese and North Korean divisions could engage in combat with 48 to 50 tons of daily supply—about one-tenth of the daily-supply requirements of an American division. This daily-supply requirement included about 8 tons of petroleum products (POL), 10 tons of food, and 30 tons of ammunition.[21] To get these supplies forward the Communists would take three actions: they would organize a simple but effective logistical system, an air-defense organization, and persistent and tenacious road and rail route repair programs.[22] The Communist logistical system would be extravagantly expensive in manpower, but Red soldiers at all echelons would be well indoctrinated in the importance of logistical support. "The achievement of final victory," the Chinese 68th Army commander told his subordinates, "lies in timely food and ammunition supply and successful transportation."[23]

"Our interdiction from the air of the main enemy resupply lines, plus our continued and systematic destruction of such supply caches as he had been able to build up in his immediate rear areas," said General Stratemeyer on 25 February, "not only prevented the Communist from exploiting his initial momentum but also enabled our ground forces to resume the offensive."[24] General Stratemeyer's assessment of the situation was undoubtedly correct, but the United Nations air forces were facing critical months in which the Reds would do their utmost to provide their combat forces with logistical support. If the Communists could manage to supply their vastly superior numbers of ground troops in combat in Korea, they would likely win their objectives. On the other hand, if United Nations interdiction strikes could destroy, disrupt, and delay the Communist logistical system, the United Nations objectives would likely prevail.

Gen. Liu Ya-lou

## 2. North Korea's Communications Lines Were Prime Targets

As issued by General Stratemeyer on 15 December 1950, the FEAF Interdiction Campaign No. 4 manifested a keen appreciation for North Korea's geography and existing lines of communication. It recognized that the Reds could move supplies to the battle area either through northwestern Korea or through northeastern Korea. In northwest Korea the Reds possessed a complex and extensive double-tracked railway system and a well-developed highway net. In northeast Korea a single-track railway and adjacent highway paralleled the coast for long stretches. The eastern routes were very vulnerable, but the "H"-shaped configuration of the western rail and highway routes would permit the Reds to bypass many interdiction points merely by rerouting traffic. Considering tonnages to be hauled and distances involved, the Reds would undoubtedly make maximum use of their railways. This was a matter of simple arithmetic, for a Russian-built GAZ truck had a load capacity of about two tons whereas a Korean freight car carried approximately 20 tons. Thus the Red Chinese divisions in Korea in December could be supplied by some 100 freight car loads per day, which could be transported on seven 15-car trains. The FEAF target committee planners who drew up the interdiction campaign also noted that North Korea's rail routes passed through an incredibly large number of tunnels, which, if destroyed, would serve as obstacles to rail movement. On the basis of such study the FEAF interdiction plan divided Korea north of the 37th parallel into 11 zones, including 172 distinct targets—45 railway bridges, 12 highway bridges, 13 tunnels, 39 marshaling yards, and 63 supply centers. The basic concept was that FEAF planes would destroy all targets in each zone in succession according to the alphabetical priority of the zones. Zone "A" was adjacent to Sinuiju. "B" covered the routes to Manpojin, and "C" centered at Pyongyang.[25]

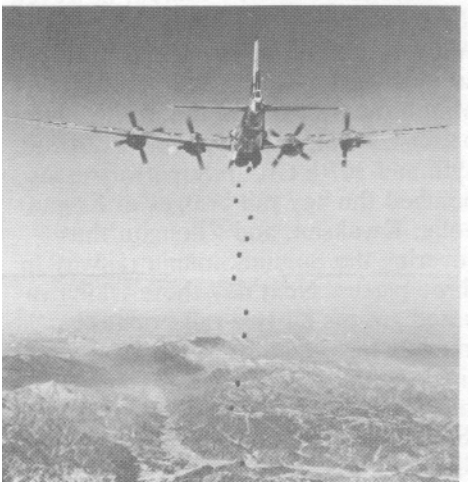
The target planners who laid out FEAF Interdiction Campaign No. 4 grasped North Korea's geography soundly and nominated a valid basic list of interdiction targets, but they displayed far too little concern for the capabilities of United Nations aircraft to destroy interdiction targets and for the counter-measures which the Communists would employ to mitigate the effect of air attack. The highest priority interdiction targets, for example, lay north of the Chongchon River in an area hazarded by MIG fighters, and if the vulnerable B-29's were to attack in this zone they would have to have substantial fighter escort. Rather than to attempt to provide such escort, the Fifth Air Force suggested on 5 February that its fighter-bombers could interdict targets in zone "A."[26] In the weeks that followed the Fifth Air Force made a few attacks against the major bridges in northwestern Korea, but on 26 February Col. Gilbert Meyers, the Fifth's deputy for operations, telephoned General Crabb at FEAF and asked to be relieved of the task. Colonel Meyers explained that the Fifth Air Force was again prepared to escort B-29's into the area and also stated that "fighters were not very effective in attacks on bridges." General Crabb accordingly directed Bomber Command to schedule interdiction strikes into area "A" effective on 1 March 1951.[27]

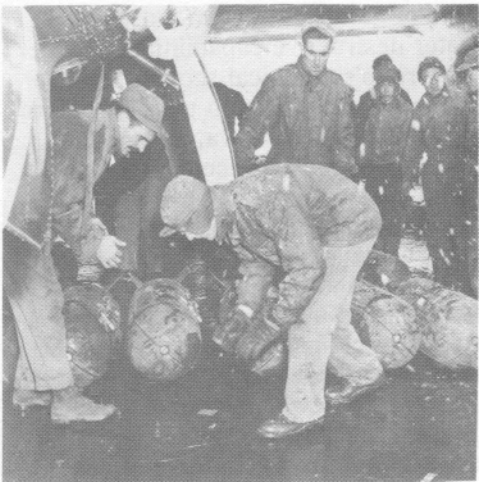
The FEAF target planners had also proposed to destroy all interdiction targets in each zone in turn according to the importance of the zone, but the Reds, at the end of January, showed that they were quite willing to use less efficient east-coast traffic routes when routes in the higher-priority "A" and "B" zones were interdicted. In order to maintain an effective blockade United Nations aircraft would have to keep targets interdicted simultaneously in all of the interdiction zones. Since the Far East Air Forces did not have strength enough for such a task, it was fortunate that Admiral Joy agreed that his Naval Forces Far East would assume the responsibility for interdicting Red lines of communications in zones "F," "G," and "H"—the three zones which ran north from Wonsan to the Siberian border. Admiral Joy put the Seventh Fleet's principal air effort on interdiction on 16 February and followed this up with a plan to coordinate air and surface gunnery attacks against the east-coast rail route on 20 February. The Navy reported that it actually "got its interdiction line effective on about 8 March 1951."[28]

Even though the Naval Forces Far East assumed responsibility for three of the interdiction zones, the FEAF Bomber Command was eventually responsible for interdicting 60 bridges, 39 marshaling yards, and 35 supply and communications centers—a substantial target list for three groups of medium bombers. In the autumn of 1950 bombing from 10,000 feet with no fear of enemy air opposition, each B-29 had usually dropped four bombs per run over bridge targets, and Bomber Command had computed that 13.3 runs were required to destroy an "average" bridge.[29] Such bombing was not quite up to standards of accuracy to be expected from Norden bombsights, but with five groups of bombers, Bomber Command had run through its bridge targets lists so rapidly that no one had bothered too much about the matter. In the early months of 1951, however, General Briggs had to expect the utmost of each bomber crew. Now, Bomber Command had a daily sortie capability of 24 B-29's. The 98th Bombardment Group usually furnished 24 sorties one day, and the 19th and 307th Groups furnished 12 sorties each on the following two days. And the bombing problem was much more complex. Because of Communist gun batteries, the medium bombers often had to attack bridge targets from 21,000 feet, and because of the MIG-15 fighters the bombers could seldom make more than a single run on a target.[30]

As the best answer to the changed operating conditions, Bomber Command began to attack bridges with formations of three or four aircraft, which approached the target on an inside acute angle of from 28 to 37 degrees. Larger bombs were needed for bridge destruction. The 19th Group already had heavy-type bomb racks, and in February 1951 the 98th and 307th Groups also obtained them. These groups noted that they got better results from 2,000-pound bombs. In an experimental mission flown in March, one B-29 formation dropped 4,000-pound light-case bombs with proximity fuzing to determine whether bridges could be destroyed by blast effect, apparently without worthwhile results. The four-plane formation also became standard for most marshaling-yard attacks. Usually long and narrow, the marshaling yards presented perfect targets for the four-ship formation, if raked along their length.[31]

The four-plane formation with 1,000- or 2,000-pound bombs became the



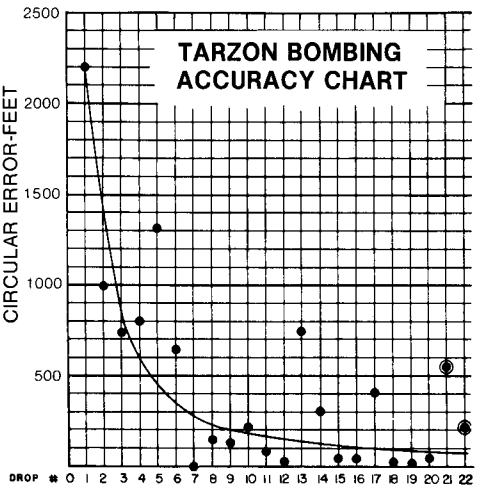


(top) B-29 bombs hit this storage area at Munchon.

(left) The lead B-29 during the 150th combat mission of the 19th Bomber Group, February 1951

(right) SSgts. Eddie O'Brien and Joseph A. Sanders work quickly but carefully arming these bombs despite the bitter weather.

standard means of destroying bridges, but Bomber Command had long hoped that radio-controlled bombs would add precision to its bridge attacks. Especially designated for the work and assisted by an Air Proving Ground technical team, the 19th Bombardment Group had tested 1,000-pound razon bombs in the autumn of 1950. This World War II bomb had remotely controlled tail fins which responded to a bombardier's radio signals and permitted its guidance to a target with range and azimuth corrections. At first the 19th Group met many malfunctions, but out of a total of 489 razon bombs dropped 331 (67 percent) responded to control. The last 150 razon missiles had a control reliability of 96 percent, and razon bombing destroyed 15 bridges. The razon bomb was performing well, but about four of these 1,000-pound bombs were required to take out an average bridge. In December 1950 the 19th Group accordingly de-emphasized razon in favor of the newly developed 12,000-pound tarzon bomb, which had a similar guidance system but much greater destructive capabilities. The 19th Group's technical section had never seen these six-ton missiles before they arrived at Okinawa, and of ten tarzons dropped in December, only one scored a direct hit. Only a few tarzons were available in the next two months, but technical skill in handling them was improving, and on 13 January a single B-29 dropped a tarzon from 15,000 feet and neatly chopped two spans out of the important railway bridge at Kanggye. When a new shipment arrived on 3 March, the 19th Group employed the missiles more freely. In three attacks tarzon bombers twisted the girders on one bridge and cut spans out of two others. Tarzon seemed to be developing into a reliable and highly effective air weapon.[32]




Throughout March 1951 Bomber Command's bridge interdiction program progressed methodically everywhere except in MIG Alley. The medium bombers regularly attacked assigned targets on the key railway running southward from Manpojin. After sustaining damages from MIG fighters over Kogunyong on 1 March, however, the mediums did not again enter MIG Alley, or interdiction zone "A," until several weeks had passed. On 23 March the Sabres had the MIG's under better control, and three formations of 19th and 307th Group Superfortresses bombed the key rail bridges at Kogunyong, Kwaksan, and Chongju, thus severing the Sinuiju-Sinanju railway in three places. Next day these Okinawa-based groups hit two rail bridges immediately south of Manpojin and single bridges at Huichon, Kunu-ri, and Sukchon, thus again immobilizing through rail traffic on the Manpojin to Sinanju line.[33] Although the medium bombers were displaying prowess in bridge destruction, which, by definition, required one or more spans of a bridge to be dropped into the water, the Reds had begun to display an amazing

ability to repair bridges and to build bypasses to them. The 3,500-foot-long railway bridge across the Chongchon River at Sinanju provided a typical case study in Communist actions. While retreating southward, the Eighth Army had demolished spans of this bridge, but by 4 February the Reds had a bypass bridge carrying traffic. On 1 March B-29's bombed out the bypass, but on 12 March the Reds were repairing this bypass, and on 24 March they had started construction on a bypass to the bypass bridge. And bypass number one was back in service on 26 March.[34]

As long as the Yalu River remained frozen, General Stratemeyer had been willing to postpone attacks against the international bridges which Bomber Command had not completely destroyed in November and December. With the coming of the spring thaw, however, General Stratemeyer wanted these key bridges taken out. Looking toward an efficient accomplishment of this project, FEAF intelligence officers secured blueprints of the Sinuiju railway bridge from the Osaka Railway Construction Company, which had built it. They studied these designs and plotted the bridge's weakest spots, where well-aimed bombs might take it down.[35] On 27 March the Yalu was thawing well up toward Manpojin, and Stratemeyer flashed orders for General Briggs to lay on the international bridge attacks. Lest there be a violation to Manchurian soil, the bridges could be attacked only under visual bombing conditions. On 29 March General Briggs sent the 19th and 307th Groups winging northward to the Yalu. Most of the medium-bomber formations found their assigned targets obscured by clouds and diverted to bomb Pyongyang Airfield. Three 19th Group B-29's, however, were scheduled to bomb the Sinuiju bridges with tarzon missiles, and this area was open. But misfortune dogged the tarzon force: one bomber returned to base with mechanical trouble; the second bomber, carrying Colonel Payne Jennings, the 19th Group's commander, evidently ditched at sea and was lost with all aboard; and the third continued to Sinuiju only to have its tarzon miss its target. On 30 March the 19th, 98th, and 307th Groups all went to the Yalu, and the day's raids dropped two spans of the Chongsongjin highway bridge, covered the pontoon bridge at Chongsongjin with 1,000-pound bombs, and knocked spans out of the Manpojin railway bridge. Again, on 31 March, the 98th Group sent bombers to attack the highway bridge at Linchiang, but it attributed disappointing results to newly arrived replacement crews, who were just beginning to develop their skills.[36]

During the first week of April cloud cover along the Yalu prevented medium-bomber attacks against the international bridges. On 7 April General Briggs dispatched the three medium-bomber groups against the highway bridges at Linchiang and Uiju and the railway bridge at Sinuiju. Finding Linchiang obscured by haze, the 19th Group diverted to Korea's east coast and hit the rail bypass bridge at Cho-ri. The 307th Group reported that its bomb pattern rendered the Uiju bridge unserviceable. The 98th Group's bombs straddled the rail bridge at Sinuiju, but the massive structure remained standing. In one final burst of effort, flown on 12 April, General Briggs sent all three groups to batter the Sinuiju bridge with 2,000-pound bombs. Despite bitter aerial opposition, many of the bomber formations reported good bomb patterns and noted numerous direct hits, but the Sinuiju

rail bridge remained standing. Two days later, on 14 April, Shooting Star jet fighter-bombers ranged to the Yalu to hit a pontoon bridge southwest of Manpojin, but the medium bombers were through on 12 April, for General Stratemeyer announced that the MIG interceptions had made Sinuiju's bridge too costly a target for the medium bombers.[37] General Stratemeyer had hoped that more effective fighter cover might yet allow the B-29's to take out the Sinuiju bridge, but the Reds soon revealed that they had no idea of being denied a crossing at Sinuiju. Almost immediately they began to build no less than eight bypass bridges to the main railway bridge.[38]

Except for the massive Sinuiju railway bridge, which stubbornly refused to fall, the Superfortress attacks along the Yalu had severed most of the key bridges connecting the Communist armies with their logistical base in Manchuria. Altogether, as of 9 April, Bomber Command's box score under Interdiction Campaign No. 4 stood at a respectable total of 48 of 60 assigned bridges unserviceable and 27 of 39 listed marshaling yards out of action.[39] But Bomber Command had been paying heavily for its victories, for in the month prior to 14 April it had lost eight bombers and their crews from combat and operational causes. Counting planes out of commission from combat damage, Bomber Command had only 75 aircraft for operations on 14 April. As General Stratemeyer requested, General Vandenberg agreed to build Bomber Command back to an authorized strength of 99 aircraft, but Vandenberg cautioned that the Air Force could not support Bomber Command at combat sortie rate exceeding 12 sorties per day.[40] Upon receiving this information General Stratemeyer dutifully cut the FEAF Bomber Command back to 12 combat sorties a day, thus necessarily limiting its interdiction capabilities. Moreover, between 17 and 23 April General Stratemeyer had to order the medium bombers against the airfields which the Reds were trying to open in North Korea. The Eighth Army also needed medium-bomber close support. Closely after the beginning of the Communist "Fifth-Phase" offensive on 22 April, General Stratemeyer acted on his own authority to authorize Bomber Command to fly 18 combat sorties a day, and he specified that its target priorities would be airfields, ground support, and interdiction.[41]

Even with a reduced sortie rate and priority commitment to airfields and ground support, Bomber Command made efforts to continue in the interdiction business. The 19th Group still had a supply of tarzon missiles, and, even though one of them had failed to hit the Sinuiju bridge on 12 April, tarzon might yet work. In the month's second employment a B-29 took off from Okinawa with a tarzon on 20 April but soon encountered mechanical difficulties and had to jettison the huge bomb at sea. The missile exploded on contact with the water, and subsequent investigation showed that a tarzon could not be salvoed "safe," for its tail assembly would pull off on impact and arm the blockbuster. This information suggested that Colonel Jennings and his crew had been lost when they had attempted to jettison their tarzon missile from a low altitude prior to ditching their plane. On the basis of this information FEAF suspended the use of all tarzons pending development of safe-salvo features, and eventually (on 13 August) it discontinued the tarzon program. The combat results of the tarzon missile stood finally at 30 bombs dropped, six bridges destroyed, one damaged, three

duds, and 19 targets missed.[42]

In April and May, as Bomber Command had reduced capabilities for interdiction, the Communists displayed what FEAF grudgingly described as "a remarkable engineering ability." Using crude methods and large amounts of impressed labor, the Reds replaced bridge spans on key routes in a matter of days. Sometimes the Reds anticipated air attacks and began to build bypass bridges before an original bridge was attacked. In other instances they fabricated and stored repair materials nearby in order to get to repairs immediately after an attack. Again the history of the Chongchon railway bridge at Sinanju furnished a case study. On 1 April the medium bombers knocked out bypass number one, but on 15 April the bypass was again in use. On 24 April air attack knocked it out again, but crews reported that bypass number two was nearly completed. On 2 May the medium bombers put both bridges out of action, but the Reds immediately began to make repairs. Before the end of the year, moreover, the Reds would have a total of four rail bridges across the Chongchon at Sinanju.[43]

Early in May the interplay of a number of factors led General Stratemeyer to modify the FEAF Interdiction Campaign No. 4. In Washington General Vandenberg was vexed to discover that Stratemeyer had been flying the medium bombers at a rate of 16.5 combat sorties per day, instead of the 12 sorties per day that USAF could support with attrition aircraft and replacement crews. General Vandenberg was also displeased that the medium bombers were still flying in small formations which made them vulnerable to MIG interceptors. "I feel," he told Stratemeyer, "that your use of bombers in flights of small numbers against many small targets is an expensive and arduous method of achieving small results."[44] After middle May, moreover, the Communist spring attacks had failed, and the Reds were retreating northward before the Eighth Army's attack. According to intelligence reports, the Reds were no longer trying to bring supplies southward but were, instead, attempting to save those supplies stockpiled in their forward areas.[45] In the light of these circumstances General Stratemeyer made the Fifth Air Force primarily responsible for interdicting the enemy's highways and railroads and directed Bomber Command to destroy marshaling yards and supply and communications centers.[46]

In the months following February Generals Partridge and Timberlake had given much thought to a search for some manner in which the Fifth Air Force could employ its capabilities most effectively to interdict the enemy's lines of communications. In the zone south of the Wonsan-Pyongyang line the 452d Bombardment Wing's light bombers had made low-level parachute-demolition bomb attacks against lighter rail bridges. In March Fifth Air Force fighter-bombers made many attacks against the railway tunnels which abounded on the lateral rail routes across Korea. These attacks, together with tests flown by the 7th Fighter-Bomber Squadron, had shown that the Fifth Air Force had next to no ability to destroy tunnels with available munitions.* However, Fifth Air Force

*The Fifth Air Force experience against tunnels agreed with Air Force experience in Italy, where tests made in 1944 had demonstrated that tunnels were "poor bombing objectives." (*See* AAF Evaluation Bd. MTO Rpt., vol. V: The Relative Effectiveness of Various Type Bombs and Fuzes Against Strategic and Tactical Objectives, 20 Oct. 1944, pp. 123-24.)

pilots found that they could skip 500- or 1,000-pound delay-fuzed bombs into the entrances of tunnels and destroy the personnel, materiel, and equipment which the Reds customarily concealed in them.[47] During the winter months, when North Korea's streams were in low-water stages and were frozen, the Fifth Air Force had seen little utility in destroying highway bridges, but intelligence officers at Taegu had not lost interest in the North Korean highways, for with the arrival of the spring rains and thaws the roads would again become profitable interdiction objectives.[48]

Toward the end of May, when the Fifth Air Force received the primary responsibility for interdicting the enemy's lines of communications, General Timberlake ordered the execution of an operation which he called "Strangle"—the name being devised to glamorize the task for the benefit of ground officers who had never been charmed by "interdiction." Proposing to paralyze enemy transportation in the zone between the railheads at the 39th parallel and the front lines, the Fifth Air Force program divided the key north-south traffic arteries into three sections for intensive attack by units of the Fifth Air Force, the 1st Marine Air Wing, and Task Force 77. The Fifth Air Force intended systematically to exploit all means of interdiction: bridge attacks, tunnel attacks, cratered roadbeds, delayed-action bombs. In addition to the "Strangle" attacks, the Fifth Air Force and Task Force 77 intended to keep key rail and highway bridges unusable by appropriately timed fighter-bomber attacks.[49]

Beginning on 31 May, the "Strangle" attacks went much the same in the Air Force, Marine, and Navy sectors. In the west 18th Fighter-Bomber Wing Mustangs scouted out sections of roads and railways where repairs or bypasses would be difficult and postholed them with 500-pound bombs, some contact-fuzed and some fuzed for delayed explosions. The wing found that filled roadbeds, through low, wet ground (such as rice paddies), were particularly vulnerable to being cut by bombs. In an effort to establish roadblocks, 3d Bombardment Wing B-26's strewed M-83 butterfly bombs at prebriefed choke points on the enemy's main supply routes. On release from a plane, the M-83 bomb cluster broke down into a number of smaller packages which fluttered to the ground and lay inert until they were disturbed. As the Mustangs worked to the southward, the 49th and 51st Wings sent their F-80 fighter-bombers against rail bridges in northwestern Korea with such regularity that the men of the 49th feared that the Reds would capitalize on the "dangerous pattern" of attack.[50] Early in June the Superfortresses of the FEAF Bomber Command gave the fighter-bombers some assistance with rail bridge attacks, but after a few days Bomber Command devoted its efforts to attacks against airfields, marshaling yards, and supply centers.[51]

Designed to accompany the United Nations counterattack toward the 38th parallel, Operation Strangle was initially successful in its efforts to throw a noose around the retreating Communists. Early in June advancing United Nations troops overran supply dumps which the Reds were unable to extricate and captured large quantities of enemy booty.[52] But by mid-June the Eighth Army had attained its objectives and slackened its pressure on the Communist ground armies. No longer hard pressed, the Reds could resupply and regroup their front-line troops

more at their leisure, and the Strangle operations bore diminishing results. If United Nations aircraft blocked one main supply route, the Reds could take the time they needed to repair it or else they could divert traffic to other less efficient routes. The Communists also mobilized labor troops to repair the damages to their roads. In the forward areas Chinese army service troops apparently performed the maintenance on the roads serving them, and farther to the rear the North Korean department of military highway administration repaired damages to main supply routes. As it continued through July, Operation Strangle got poorer and poorer results, and FEAF's final analysis noted that "Operation Strangle was not successful...due to the flexibility of the Communist logistic system."[53]

### *3. Night Intruders Had a Difficult Task*

"I believe that the paramount deficiency of the USAF today—certainly as regards air-ground operations—is our inability to effectively seek out and destroy the enemy at night." General Partridge had stated this before, but it was still his considered opinion on 15 April 1951.[54] As the North Koreans had done, the Chinese Communists sought to escape air attack by moving and fighting at night. Much was said about the Communist use of great numbers of human and animal transport bearers, but the prime movers of the Chinese logistical system were railway trains and trucks, which moved by night and remained in hiding during the day. To seek out and destroy Communist moving transport at night was a principal part of the mission assigned to the 3d Bombardment Group after August 1950. The group had performed the mission to the best of its ability, but a USAF evaluation board reporting in December had noted that night-intruder operations were successful only in harassing the enemy's movements.[55] During the autumn of 1950 Marine Squadron VMF(N)-513 had operated night-fighter versions of the old Navy Corsair (F4U) aircraft in night-intruder missions flown from Itazuke, Wonsan, and Yonpo. Like the 3d Group, which reported the B-26 to be a "marginal success" as an intruder, VMF(N)-513 called the old Corsair "most unsatisfactory for night operation."[56]

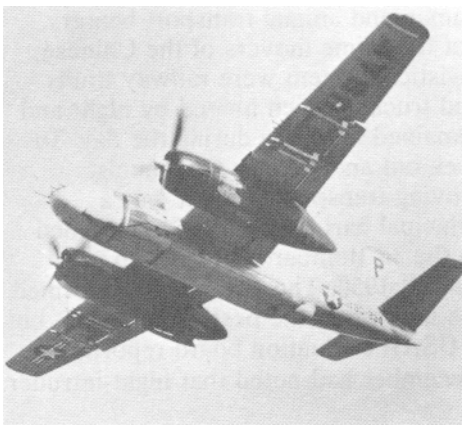
Viewed in terms of Communist movements after dark in North Korea, the Fifth Air Force's operational capabilities for night-intruder operations were extremely small. Based at Iwakuni Air Base on southern Honshu, the 3d Bombardment Wing and the attached 731st Bombardment Squadron (Light-Night Attack)* possessed an authorization for 64 B-26's, but it never had this many planes on hand. During the early months of 1951 the Fifth Air Force usually required the 3d Wing to

*Effective on 25 June 1951, the 731st Squadron was inactivated, and the 90th Bombardment Squadron (Light) was activated and assigned to the 3d Bombardment Wing (Light).

fly 38 combat sorties each night, an effort which could include ground-radar controlled strikes against fixed targets, ground-support missions, as well as intruder sorties. The 3d Wing staged all its missions through Taegu Airfield, a practice which was not entirely satisfactory since communications with Iwakuni were poor, gasoline and bombs were often in short supply at the forward base, and the deteriorating pierced-steel plank runway at Taegu shredded critically short B-26 tires. In the ground emergency, beginning on 23 April, the Fifth Air Force required the 3d Wing to fly 48 sorties each night, and the wing met the requirement by using each aircraft for two sorties a night from Taegu—one intruder and a second ground-support sortie.[57] Having secured a complement of Tigercat F7F-3N aircraft to replace a similar number of its old Corsairs, Marine Fighter Squadron VMF(N)-513 flew from Pusan Airfield (K-1) something on the order of 18 intruder and 6 combat air-patrol missions nightly.[58] After its initial success with Firefly C-47's in January 1951, the 3d Wing modified six C-47 transports for flare dropping and assigned them to the Tactical Flight Section, 3d Air Base Group. Several of these Fireflies customarily remained on the alert at Taegu. Early in May 1951, in recognition that the Firefly C-47's held importance for functions other than night attack, the Fifth Air Force transferred the tactical flight section to the recently activated 67th Tactical Reconnaissance Wing.[59]

Although the Fifth Air Force possessed few planes capable of night attack against moving targets, the Communists displayed more and more targets each month which were ripe for night assault. As they cruised over North Korean main supply routes in the dark of the moon, B-26 intruder, RB-26 night reconnaissance, and C-47 Firefly crews saw strings of lights moving below them. On moonlight nights these crews noted Communist trains speeding from tunnel to tunnel, hauling supplies over incredibly short stretches of open rail track. Each night's sightings were plotted and analyzed by the Joint Operations Center, but before dawn each day all Communist moving transport was halted and under cover. During daylight hours any sign of enemy movement was unusual, but sightings of three to five trains and as many as 2,000 vehicles moving at night were not unusual.[60]

"To find answers to certain problems which are peculiar to night-attack operations," stated Colonel Virgil L. Zoller, commander of the 3d Bombardment Wing, "we have often groped as we have operated in the darkness."[61] The tactics employed by the 3d Wing intruder crews were influenced by the rough and mountainous terrain of North Korea, where changes in weather made positive identification of landmarks difficult and low-level



B-26 Invader

attacks hazardous. Intruder tactics were also influenced by Communist actions, which varied according to their straits for supplies up forward. And, of course, intruder attack methods were different on moonlight nights, when Communist vehicles ran without lights but trains, which never used lights, could be spotted. The degree of natural illumination thus influenced intruder attack. In addition to all these factors, the night-intruder crews also experimented with "wild ideas" which might, or might not, pay off in terms of destruction to the enemy. Fundamental to any understanding of night-intruder tactics employed in Korea, however, is the recognition that the night-intruder crews, who flew alone in the dark, were unable exactly to determine what damage they were inflicting on the enemy. The Fifth Air Force counted automotive equipment destroyed if it exploded or burned violently or left the road at a high speed and collided with some other object. Railroad equipment could be claimed as destroyed if it exploded, burned intensely, or was derailed in an area where recovery was doubtful or improbable. But in the dark night-intruder crews were seldom able to score the results of their strikes in such positive fashion. Lacking an ability to assess, the night intruders could only hope that the tactics they used were the right ones.[62]

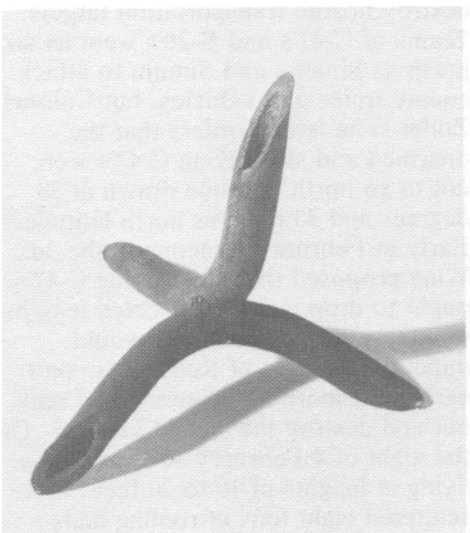
Damaged enemy rail bridge.

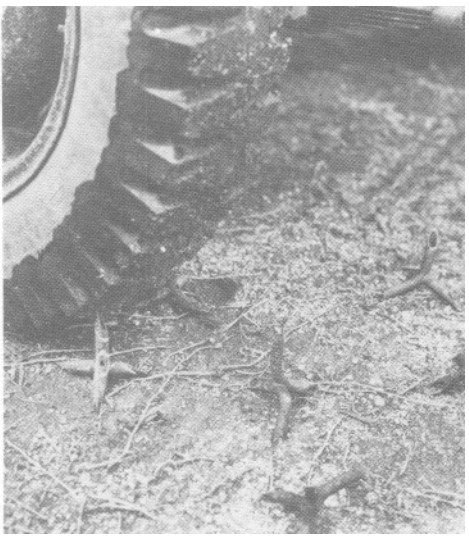
During February 1951 the 3d Bombardment Wing thought for a while that the "wild idea" which had given birth to the flare-dropping C-47 Firefly had at last provided the illumination which its night intruders needed to attack and destroy hostile transportation targets. Teams of C-47's and B-26's went as far north as Sinanju and Sinuiju to attack enemy trains and vehicles, but Colonel Zoller soon issued orders that the unarmed and slow-flying C-47's were not to go north of a line drawn at 39 degrees and 30 minutes north latitude.[63] Early in February someone in the 3d Wing proposed that night-flying C-47's ought to drop tacks on selected lengths of enemy roads. The tacks would puncture the tires of Red trucks, and early next morning fighters could seek out and destroy the stalled vehicles. On the night of 4 February several C-47's, flying at heights of 10 to 20 feet, scattered eight tons of roofing nails along four twisting highways south of Pyongyang. While flying his

C-47 along one of these routes, Maj. Robert V. Spencer almost collided with three Red tanks. Hurriedly pulling up, he called for B-26 attack bombers. When the B-26's appeared, Major Spencer flew over the flak-filled area twice more, once to draw fire and relocate the enemy, and again to drop a flare which allowed the bombers to see and destroy the hostile tanks. On the whole, Operation "Tack" was well executed, but the Fifth Air Force considered it only moderately successful, for the fighters subsequently discovered and destroyed only 28 stalled vehicles.[64] At the 3d Wing's request the Far East Air Materiel Command fabricated hollow tire-puncturing barbs, or tetrahedrons, and, on the night of 14 March, eighteen 3d Wing intruders scattered these barbs at several points along North Korea's roads. Adverse weather on the following morning thwarted fighter attack and prevented any assessment of the results of this unusual weapon, but the 3d Wing doubted that much success was achieved by this type of "wild-idea" operation.[65]

When it was evident that the C-47 Firefly planes could not safely go far beyond the battleline, the 3d Bombardment Wing began to seek some source of illumination which could be carried by the B-26 intruders. In February and March wing technicians obtained Navy adapters and installed them on the unused rocket rails of the B-26's, thus permitting each modified plane to carry either several Mark VI flares or 100-pound bombs. This expedient offered the best illumination yet achieved by the B-26's, but the intruder crews still reported a high percentage of dud flares.[66]

Despite its inability to obtain dependable illumination for night attack against moving targets deep within North Korea, the 3d Wing intensified its intruder operations in March. The intruder crews employed a variety of tactics depending upon the phase of the





The "wild idea" of the tetrahedron.

moon, the topography of the area they were operating in, and the configuration of their airplanes. Timed so the first wave of intruders reached the main supply routes at about dusk, the intruder crews took off from Taegu and spent approximately one hour and a half searching for and attacking targets of opportunity. On the few moonlight nights of a month the intruders flew low and searched for vehicles and trains. On the darker nights, the intruders searched for targets at altitudes of about 2,000 feet above the terrain, which meant that the searches were conducted at from 3,000 to 4,000 feet in the western half of Korea and from 5,000 to 6,000 feet in the mountainous regions of eastern Korea.[67] From these search altitudes the intruders seldom had difficulty spotting enemy convoys, especially on dark nights. Red truck drivers were supposedly instructed to travel without lights, but most of them used their headlights and depended upon guards stationed along the main supply routes to tell them when an aircraft was approaching. This warning system was evidently good, for Communist headlamps rarely remained illuminated to guide an attacking intruder for more than ten to fifteen seconds.[68]

In the fraction of a minute between the time that the intruder crew sighted and determined to attack a convoy and the time that the Red truck drivers switched off their lights, the intruder crew had to fix the location of the enemy vehicles in relation to some identifiable terrain check point. If the B-26 carried flares, its crew released one of them to burn at about 3,500 feet above the ground upwind of the target's location. Then the pilot made figure-eight turns to get in two and sometimes three strafing passes before the flare burned out. If visibility permitted, the strafing passes could be made down to as low as 200 feet. In western Korea, however, most pilots started firing from altitudes of 2,000 to 1,500 feet, and in eastern Korea pilots started their strafing passes from 6,000 to 5,000 feet and pulled up at a height of from 2,000 to 1,500 feet. Everyone recognized that these firing ranges were fairly long for much accuracy. The crews that flew the "hard-nose" B-26B strafer aircraft felt great need of flares for guiding their strafing attacks. On the other hand, the crews who flew "glass-nose" B-26C bombers saw little need for flares and preferred to make fixed-angle bombing attacks upon enemy convoys with 100-pound M-47 fire bombs or 260-pound M-81 fragmentation bombs. To set up a bombing pass in the ten to fifteen seconds that a convoy remained lighted required excellent coordination between a pilot and a bombardier, but by sighting directly through a reflex sight a bombardier could fix a target's location even after the lights went off by noting its relation to shadows on the ground.[69]

As the B-26 intruders sought their targets far to the northward, Marine Squadron VMF(N)-513 commenced a maximum interdiction campaign against the main supply routes closer to the front lines on 1 March. Almost invariably these Marine missions teamed together Firefly C-47's and attacking F4U's and F7F's. Flying in relays from Pusan Airfield, the Marine night fighters met C-47 flare-droppers over an assigned road, and both planes looked for enemy vehicles. When targets were located, the Marine crew requested the Firefly to light them with flares dropped upwind, well off to the side of the road. After orienting himself in the flare light, the Marine fighter went down and attacked the targets with rockets, napalm, fragmentation bombs, or proximity-fuzed 500-pound bombs, the

latter ordnance being used chiefly to suppress hostile antiaircraft fire. The ordnance load varied with target conditions, but the Marine airmen thought that their 20-millimeter cannons were their most effective weapons. After a Marine fighter stayed in the target area for about an hour and a half it was getting low on fuel and was customarily relieved on station by a fresh fighter. The cooperation between the Marine fighters and the Firefly was not simple, for the flare crew often had difficulty positioning itself over an invisible road and dropping its flares precisely in terms of wind and terrain.[70]

Even though the Air Force and Marine crews were frank to admit their inability exactly to report the results of their missions, General Partridge was pleased with March intruder operations. "There is every evidence," he stated, "that the enemy has been caused increasing difficulty by our concerted efforts in destroying his trains, trucks, and other equipment."[71] With the commander's approbation, the Marine and Air Force intruder crews continued to operate in much the same manner as in March. During the three months, which had begun on 1 March, the crews of VMF(N)-513 estimated that they attacked 11,980 enemy vehicles and destroyed 1,420 of them.[72] In April the 3d Wing claimed to have destroyed 16 locomotives and 227 vehicles, and in May it claimed 5 locomotives and 629 vehicles destroyed.[73] Concerning the effectiveness on one of its strikes, flown on the night of 8 May against road traffic north of Taegwangni, the 3d Wing secured a vivid on-the-spot description from an American airman who escaped his captors. "We came to the place where the B-26 had dumped his load," said this pilot. "The place was in an uproar. First we began meeting litter carts with wounded on them, then came hand-carried stretchers, and then handmade 'makeshift' stretchers, then men carrying others on their backs, and finally carts pulled by mules or Chinese soldiers with 10 to 15 dead bodies on each cart....I would estimate there were a minimum of 200 wounded and about 12 to 15 carts with the dead ones stacked solid on them. Probably 225 dead. I don't know how many B-26's had attacked, but it sure was a mess."[74]

In June the Fifth Air Force devoted its principal efforts to the "Strangle" attacks against the Communists' main supply routes and concurrently sought to increase its night-attack capabilities. In context with this latter objective, Colonel Brooks A. Lawhon moved the 452d Bombardment Wing to Pusan East Airfield (K-9) on 23 May, where, between 11 and 20 June, the wing converted to night operations.[75] Although neither the 3d nor the 452d Wing operated at maximum effectiveness during June, the Fifth Air Force intruder groups eagerly experimented with new methods of night attack against moving targets. On nearly every mission 3d Wing intruders carried some butterfly bombs, which they dropped to effect choke points before proceeding to their road sweeps.[76] The "Flying Nightmares" of VMF(N)-513 regularly utilized Firefly support to attack moving targets on four selected road routes south of Pyongyang, and on several nights used PB4Y flare support to attack enemy vehicles on the road south of Wonsan.[77] Employing tactics learned from the 3d Wing, the 452d Wing claimed 151 vehicles destroyed and 224 damaged in June. Operating throughout the month, the 3d Wing claimed 403 vehicles destroyed and 1,048 damaged.[78]

Once they had gotten the hang of flying at night, 452d Wing crews took

to intruding with a rare gusto, and in July a friendly rivalry with the 3d Wing did much to inspire the intruder forces to overcome adverse flying weather. Both the 3d and 452d Wings modified several of their B-26's to carry a full bomb-bay load of 52 flares, and the idea was that two attack B-26's would work with the B-26 flare plane.[79] Throughout July the 3d Wing worked its B-26's in teams of two, both aircraft fully loaded with armaments and wing-stowed flares. The two B-26's took turns illuminating and attacking targets. Such B-26 teamwork doubtless made for more effective attacks, but it necessarily limited the number of supply routes which could be covered.[80] Flying lone-wolf patrols in "glass-nose" B-26C's, which could either bomb or strafe, 452d Wing intruder crews not only covered more territory but claimed to have outstripped the more-experienced 3d Wing crews in the first full month of competitive operations. In one of the most spectacular night vehicular strikes of the war Captain William L. Ford and his 452d Wing crew met and attacked two enemy convoys north of Sinanju in the early morning hours of 14 July. The B-26 worked over the first convoy from end to end, destroying 13 trucks and damaging 15. Almost as soon as he returned to search altitudes, Captain Ford sighted another convoy of about 100 trucks "coming down the road with their lights blazing just like they owned the place." The B-26 attacked the second convoy from low altitude, strafing and placing frag clusters along its entire length. The crew estimated that 25 trucks were destroyed and that at least 15 were damaged.[81] At the end of July the 452d Wing claimed 471 vehicles destroyed and 880 damaged, while the 3d Wing claimed 240 vehicles destroyed and 693 damaged.[82] The B-26 night-intruder crews lacked much that they needed, but they were evidently causing the Communists plenty of trouble.

### *4. Fighter-Bombers Also Hunted Trucks*

As a routine practice, General Partridge had always emphasized armed reconnaissance during these periods when slack ground attack signified that the Reds were regrouping and resupplying their forces. In January 1951, following the collapse of the Red offensive, General Partridge again loosed his fighters for attacks against the enemy's lines of communications. But the Chinese Communists were clever opponents, and before coming to Korea Chinese troops had received special training in camouflage. Even if tracks of men and vehicles in the snow sometimes gave away their locations, the Reds were hard to discover from the air.[83] Problems of range and ground fire also had ill effects upon Fifth Air Force armed reconnaissance. Flying from Itazuke, 27th Wing F-84 Thunderjets were limited to approximately thirty minutes of road route coverage in their usual armed-reconnaissance areas. Shooting Star fighter-bombers flying from Japan had even less endurance over the enemy's territory, for the F-80 was a shorter-range aircraft than

was the F-84.[84] In 1950 Mosquito control aircraft had often penetrated as far as 50 miles in advance of friendly lines, seeking targets for fuel-hungry jets, but the Chinese Communists put up enough ground fire to force the unarmed T-6's to limit their operations to the immediate vicinity of the friendly front lines.[85] Early in February General Timberlake told a Fifth Air Force planning conference that he was not at all happy with the results of recent armed reconnaissance strikes. Each night reconnaissance and intruder crews spotted streams of Communist vehicles, but the Reds were hiding their automotive equipment so well before dawn that the fighter-bombers could not find much to attack.[86]

In an effort to come to grips with the elusive Red truckers, the Fifth Air Force implemented a new plan of action in the second week of February. It established three armed reconnaissance areas covering the band of territory 50 miles north of the bombline, and it assigned one each of the areas to the 18th, 35th, and 1st Marine Air Wings. According to the concept of the operation, these three wings would keep relays of Mustangs or Corsairs constantly on air patrol over the areas, locating and attacking targets of opportunity. By assigning certain routes or areas to the same organizations for continuing operations, the Fifth Air Force hoped that pilots would become intimately familiar with a single zone and would more readily recognize camouflaged objects.[87] In order to help armed reconnaissance missions determine where they might hope to find enemy vehicles dispersed and hidden, the Joint Operations Center began to prepare and issue each morning a master overlay of all vehicle sightings turned in by night-flying intruder and reconnaissance crews.[88]

The new Fifth Air Force "truck-hunting" plan was an outstanding success. On 12 February, just as the new armed reconnaissance zones were being established, the Communists launched their "Fourth-Phase" offensive along the Hoengsong-Wonju axis, and, desperate to get supplies forward, the Reds moved by daylight. Quick to react, Fifth Air Force fighter-bombers on 13 February destroyed 236 enemy vehicles and damaged 83 more to set a new day's record for such endeavor. Conventional fighters got the best scores, but 49th Group F-80's destroyed 40 vehicles to prove that they, too, could "bird-dog" enemy transport.[89] All available fighters were thrown into the Hoengsong area on 13 February, but the 18th, 35th, and 1st Marine Air Wings soon settled down to highly effective "saturation" armed reconnaissance coverage of their assigned areas. The 18th and 35th Groups soon subdivided their areas into squadron sectors. Flying over the same terrain day after day, pairs of Mustang pilots were soon able to pick out small changes and to find more and more camouflaged equipment. Benefiting from the new techniques of armed reconnaissance, the 18th Group destroyed 728 and damaged 137 enemy vehicles in February.[90] Attributing the better results to the new search plan, the Fifth Air Force claimed 1,366 enemy vehicles destroyed and 812 damaged in February, a substantial increase from the 599 destroyed and 683 damaged in the preceding month.[91]

Early in March the Fifth Air Force devised a concomitant search technique designed to help the jet fighters whose rate of fuel consumption allowed them limited time in armed reconnaissance areas. On the basis of night sightings reported to the Joint Operations Center, the 45th Tactical Reconnaissance

Members of the 35th Fighter Interceptor Group and the RAAF are debriefed after a F-51 attack.

Squadron projected the probable locations where enemy vehicles could be expected to take cover before dawn and then dispatched its RF-51 pilots for "Circle 10" missions. In these missions the visual reconnaissance pilots intensively reconnoitered a circle of ten miles radius around a suspected location of enemy vehicles. When the RF-51 crews found enemy targets, they led F-80 and F-84 fighter-bombers to them.[92] Thunderjet pilots of the 27th Fighter-Escort Wing "enthusiastically agreed" that the "Circle 10" missions guided them quickly to profitable armed-reconnaissance targets.[93]

It was Colonel Turner C. Rogers' Mustang-flying 18th Fighter-Bomber Wing that made the ultimate developments in truck hunting which caused General Partridge to name its aircrews as the "Ace Truck Busters of the Fifth Air Force."[94] "Thoroughness," explained the 18th Group, "is the secret of the successful 'Truck Hunter.' " Before a day's mission Mustang intelligence officers analyzed the preceding night's vehicle sightings and, figuring enemy vehicle movement at 15 miles per hour, calculated the areas where enemy convoys would have to take cover before dawn. Wherever possible Mustang squadron operations officers assigned flights the same areas or routes for reconnaissance each day. The first flight of two Mustangs off in the morning swept areas of suspected enemy activity both to pick up any vehicles damaged by night intruders and to force the enemy to camouflage before daybreak. Subsequent flights took small sections of the assigned area or route and searched them methodically. "There is only one way to detect

camouflaged vehicles," reported the 18th Group, "and that is by flying low and slow and thoroughly searching every foot of ground. Every building, haystack, ravine, wooded area, and side road must be checked and then double checked." In the standard two-plane flight the leader flew 100 to 300 feet above the terrain, while the wingman covered from a height of about 1,000 feet. The standard truck-hunting armament load for the Mustangs was maximum rockets and .50-caliber machine guns, the former being useful for suppressing flak and the latter lethal against vehicles. The 18th Group truck hunters commonly spent up to two hours in the target area and suspected everything large enough to hold a vehicle.[95] Benefiting both from the intensive armed reconnaissance tactics and from more effective night-intruder operations, the Fifth Air Force claimed to have destroyed 2,261 vehicles and to have damaged 1,326 vehicles in March 1951.[96]

Given time to react, an enemy can almost always devise countermeasures to almost any given line of military action, and in February and March the Chinese Reds sought to protect their vehicles and troops against United Nations air attack. Especially while flying armed reconnaissance missions, Fifth Air Force crews picked up an increasing amount of ground fire. This ground fire was particularly effective at the low altitudes needed for effective napalm drops and strafing runs.[97] In deference to the fact that the Mustang's liquid-cooled engine was particularly vulnerable to ground fire, the 45th Tactical Reconnaissance Squadron began to dispatch two RF-51's on all missions after 15 April. This permitted one reconnaissance pilot to survey the ground while another flew higher and watched for ground fire.[98] Because of the marked increase in antiaircraft fire, the Mustang groups dispatched four-ship flights on all longer range interdiction missions. One element scouted from 300 feet, while the other maintained a 3,000-foot altitude from which it could watch for enemy aircraft and suppress flak which might endanger the lead element.[99] Thunderjet pilots attempted to vary their low-altitude attack patterns as much as possible.[100] These precautionary measures were necessary, but they reduced the effectiveness of armed reconnaissance.

Coincidental with the increase in hostile ground fire, the 18th Fighter-Bomber Group noted in late March that it was increasingly difficult to find vehicles hidden in villages, woods, or disguised as straw stacks. Instead, the Reds had begun to conceal many of their vehicles in tunnels, and, where no tunnels were available, the enemy was building log-reinforced bunkers in inaccessible ravines in order to shelter their vehicles against daylight air attack. The Reds had also worked out some effective trucking schedules. They began to drive their convoys from flak-protected areas in the north to the bunker zone in one night, to the front lines and return to the bunkers the next night, and back to the flak-surrounded areas the third night. "The time is not far off," speculated the 18th Group in late March, "when no trucks will be found in the open or protected by camouflage only."[101]

The Communists were meeting measurable success in protecting their rearward lines of communications against United Nations armed reconnaissance strikes, but their hurried preparations for an earlier than planned April offensive forced them to concentrate large numbers of vehicles in the Chorwon-Kumhwa-Pyonggang triangle, beginning in the last days of March. In

preparation for this build-up and for the ground attack, United Nations airmen noted, and intelligence confirmed, the fact that Chinese regiments had obtained automatic weapons air defense companies, armed with Soviet-made 12.7-millimeter machine guns.[102] Similar to American .50-caliber weapons, the Soviet 12.7-millimeter machine guns were most effective at low altitudes. Despite the added defenses, the Reds had so many vehicles forward that they could not effectively protect them against armed reconnaissance and night-intruder strikes. When the Communists launched the "first impulse" of their "Fifth-Phase" offensive on 22 April they bared their supply lines and road transport to United Nations daylight air attack. As a result of its night-and-day air strikes, the Fifth Air Force claimed 2,336 Red vehicles destroyed and 1,496 damaged during April 1951.[103]

Communist vehicle sightings during the first week of May 1951 strongly indicated that the enemy was making extreme efforts to alleviate the logistical limitations which had long plagued him.[104] Both in the forward areas and back along the main supply routes, moreover, the Reds were significantly increasing their flak batteries. In May, for example, FEAF intelligence officers plotted the locations of 252 flak guns and 673 automatic weapons.[105] The antiaircraft guns were mostly deployed in fixed defenses, but truck-towed Soviet 37-millimeter M-1939 automatic weapons, which were effective against planes at altitudes up to 4,500 feet, were now encountered along the main supply routes.[106] On the first sixteen days of May, as the Reds attempted to resupply and regroup for the "second impulse" of their "Fifth-Phase" offensive, FEAF aircraft flew an average of 287 interdiction sorties each day. Because of the increased antiaircraft defenses, however, Fifth Air Force armed reconnaissance flights flew with higher power settings. The Mustangs no longer made missions with less than a complete flight of four aircraft. The F-80's practiced evasive action and avoided flak-defended areas where possible.[107]

In view of the more circumspect armed reconnaissance tactics, the Fifth Air Force claimed only 1,245 vehicles destroyed and 1,624 damaged in May, and most of these results were scored by the night-flying 3d Bombardment Wing.[108] But especially in the period when the enemy's 15 May offensive was routed, and the Reds were streaming backward in great disorder, the fighter-bombers struck telling blows. On 25 May, for example, Lieutenant Leo A. Higgins led a flight of four 8th Group F-80's to Hwachon, where he sighted nine trucks, an assortment of pack animals, and a body of troops streaming northward. The F-80's released their napalm from 100 feet and sent the flaming liquid over four of the trucks and many of the troops. Criss-cross strafing passes finished off the other vehicles and some 200 of the troops.[109] Again, on 26 May, General Timberlake flashed a report to his wing commanders that the roads around Inje, in the mountains of eastern Korea, were clogged with enemy troops and equipment. Weather in the area was so marginal that Timberlake left attacks to the discretion of the wing commanders. From Itazuke, however, the 27th Fighter-Escort Wing responded to the call to action with four flights of F-84 Thunderjets, which successfully penetrated the weather to get to Inje, where they inflicted more than 700 casualties to enemy troops and destroyed some 50 enemy vehicles. Next day General Timberlake flew to Itazuke

and presented Distinguished Flying Crosses to the four flight leaders—Captains Eugene H. MacMurray, John P. Torland, and Edwin R. Dischinger, and Lieutenant Guy B. Razzeto—and Air Medals to each of the twelve wingmen who had flown this smashing attack.[110]

In the tactical emergency posed by the Communist "Fifth-Phase" attacks the Fifth Air Force had struck some heavy blows, but it had also taken some telling losses. In April and May FEAF lost 59 aircraft to enemy ground fire, and June losses, which were running heavy at the beginning of the month, would be 22 planes to enemy antiaircraft fire.[111] At the end of May and early in June, as the Fifth Air Force implemented the "Strangle" road-interdiction attacks, operations officers at every echelon looked for tactics which could reduce the effectiveness of Communist flak. The conventional Mustangs had suffered the heaviest losses from enemy ground fire, and the 18th Fighter-Bomber Group again modified its armed reconnaissance tactics. Tests flown against friendly flak batteries at Seoul Airfield showed the group that the trailing wingman in the low-level element of its armed-reconnaissance flights had been a "sitting duck" to enemy gunners. In a change of tactics, the 18th Group kept the flight leader on the deck to search for targets of opportunity, while the element leader flew at 4,000 feet and looked for flak areas and the number-two and number-four men followed the element leader and kept a sharp watch for enemy fighters. Now, three men were covering the one pilot who was flying armed reconnaissance.[112] The F-80's flew their armed reconnaissance missions at higher altitudes and speeds and avoided needless exposure on flak-defended supply routes.[113] At the same time as hostile flak forced United Nations fighters to operate at higher altitudes, the Chinese made progress building caves, revetments, and trenches, which permitted them to protect their vehicles against day-flying fighters. According to one intelligence report, the Chinese mobilized 400,000 laborers in Manchuria to build trenches and caves along the highway from Sinuiju to the front lines.[114] During June the Fifth Air Force claimed the destruction of only 827 enemy vehicles, and most of these victories were scored by the night intruders of the 3d and 452d Wings.[115] The Fifth Air Force would continue to fly enough armed-reconnaissance missions to prevent the Reds from traveling the roads by day, but it was all too evident that the old days of really lucrative truck hunting at tree top heights were over.

### *5. Communist Logistical Systems in Action*

"It has frequently been stated by commanders in Korea," said Brig. Gen. Darr H. Alkire, the FEAF deputy for materiel, in June 1951, "that the one man they would like to meet when the war is over is the G-4 of the Communist forces." As an experienced logistician, General Alkire held a grudging admiration for the man who served as the Communist materiel

officer. "How he has kept supplies moving in the face of all the obstacles is a real mystery," Alkire stated. "He has done it against air superiority, fire superiority, guts, and brawn."[116] In the face of unrelenting air attacks the Communists managed to keep their front-line troops combat effective. In the course of this endeavor the Red high command skillfully linked an organized logistical supply system with an air-defense organization and an effective route-repair and maintenance program. Although plagued with insufficient equipment, which they supplemented by oxcarts, wagons, pack animals (including camels), and human porters, the Communists managed to move sufficient troop replacements, equipment, and supplies forward to support their armies in the field.

The Communist logistical system employed in Korea was based on the "delivery-forward" principle used by the Soviet army in World War II, a system whereby higher units supplied lower units. In this twofold effort rear-area logistical organizations provided supplies to the rear service departments of front-line troops. According to information secured from captured documents and prisoners of war, the Communist logistical organization was relatively new and was often changed in 1951. The Fourth Field Army Logistical Command, headed by General Tao Chu, was definitely located at Antung and supervised the flow of supplies and troops replacements into Korea. The Third Field Army Logistical Command, headed by General Wang Chien-An, had equivalent responsibilities toward this army's combat troops and was reportedly located at Chian, Manchuria, across the Yalu from Manpojin.[117]

In the early months of 1951 seven "Branch Units" or Logistical Commands held area responsibilites in Korea under direct subordination to General Peng Teh-huai, commander of the Chinese Communist Forces in Korea. Within their geographical areas these logistical commands were responsible for the movement of supplies to main depots, subdepots, and supply points. Each logistical command consisted of an ordnance section, a supply base with main and subdepots, a transportation section with four motor-transport regiments (each equipped with 120 GAZ-51 trucks), a porter battalion and an aircraft spotter unit of 1,200 troops. The main depots were organized into typical supply sections and possessed two motor companies, each with 65 trucks. The subdepots had a truck company and numerous porter teams. The logistical commands were responsible for the movement of supplies to forward depots and supply points. Movement from these points was the responsibility of the combat units, except that artillery and heavy mortar ammunition was delivered directly to the combat units. Whenever possible, the logistical commands employed railway transportation with auxiliary truck support as necessary. Vehicles carried supplies to the subdepots, the division and regimental supply points, and to artillery firing positions. Each Chinese army had organic truck companies in its rear service department. In addition to the truck organizations organic to the logistical bases and armies, at least seven other truck regiments were operational in Korea during the spring of 1951. As of July 1951 the Far East Command estimated that the Chinese and North Koreans were operating no less than 16,624 vehicles in Korea.[118]

At the same time that the Chinese were building a logistical organization

they made increasing efforts to protect their supply routes from United Nations air attack. As a first gesture, effective on 4 January, the Fourth Field Army organized special "Hunter Groups" whose volunteer members received special privileges and were promised "hero" decorations and furloughs for the destruction of three aircraft in any 90-day period.[119] Armed with infantry weapons, including heavy-caliber machine guns, the "Hunter Groups" frequently damaged low-flying United Nations aircraft. The Reds also employed clever flak traps, such as open parachutes hanging on trees, dummy troops made of straw, cables strung across valleys, and strings of lights at measured intervals along the sides of mountains, which, to night intruders, looked exactly like a convoy.[120] Aircraft warning sentries assigned to the logistical commands were stationed at intervals of 300 to 400 meters along main supply routes, serving both to keep night-traveling trucks warned of obstructions in the roads and of the approach of United Nations aircraft.[121] Notably in April and afterward the Chinese Communists rapidly augmented their flak establishment with regularly organized antiaircraft artillery regiments. By 1 July 1951 the Reds had 275 antiaircraft artillery guns and 600 automatic weapons emplaced in Korea.[122]

The Communists' ability to keep their supply lines open in the face of constant air attack showed a tenacity and determination which had been equaled by few armies. Rail transportation was so important to the Reds that they were willing to operate a train over as little distance as 11 miles of clear track and then unload and reload its cargo on another train waiting beyond whatever obstruction barred the right of way. Using organized recovery programs, Red engineers consistently met the physical destruction inflicted upon their supply routes. Road repairs were the province of the North Korean department of military highway administration, comprising 12 administrative regiments, each mustering three or more 550-man battalions. Each battalion was assigned to a sector of a main supply route, and platoons were stationed as close together as every three kilometers along important routes. The North Korean railroad bureau was responsible for the recovery and maintenance of rail lines. With headquarters in the outskirts of Pyongyang, this bureau controlled three brigades, each of 7,700 men. Units of 50 rail-repair troops were stationed at major rail stations, where they were immediately ready to move out and supervise repairs of damage inflicted by aircraft. Both highway and railway engineers commonly recruited by impressment the common labor they required in the immediate vicinity of a road or rail break.[123]

In much the same manner that they got supplies through the United Nations aerial blockade, the Communists provided troop replacements and additional combat units to their forces in Korea. According to prisoners of war, combat replacements were formed into regimental-sized units in Manchuria and marched southward, always at night. Reinforcement divisions also marched to the battle zone, for the Reds had no transportation to spare for personnel.[124] Most prisoners of war reported that they made the long trek to South Korea without experiencing a single night air attack. Of prisoners interrogated by Fifth Air Force analysts, 70 percent of the Chinese and 81 percent of the North Koreans reported that they were not attacked while marching at night. Most prisoners,

however, experienced at least one daytime air attack against their camp sites while marching southward, the proportion being 67 percent for Chinese and 62 percent for North Koreans. Although the enemy troops avoided the full measure of air attack, they nevertheless led the lives of hunted animals, with the result that they had suffered extraordinary deterioration of morale and physical well-being by the time they reached the front. The troops made long and hurried marches at night over difficult terrain and in bitter winter weather. Fearing to take cover in villages, the exhausted men commonly slept in trenches in daytime camp sites, thus falling prey to sickness caused by exposure. A report prepared by the political department of the Chinese 35th Division described the hectic march of this unit southward from the Yalu, beginning on 21 March. Apparently because of its accompanying equipment, which drew the attention of United Nations airmen, this division underwent "frequent air raids," each of which caused "consternation." Exhausted by forced marching and from digging air-raid shelters at every day's camp site, troops straggled and took sick. Meal hours were irregular at best, and the troops sometimes were unable to obtain any food for two or three days at a time. By the time this division reached the front lines, on 9 April, it was already suffering from combat fatigue.[125]

During months of defensive operations between February and April 1951 the Communists gathered an estimated 500,000 soldiers and civilians into a logistical system which served to support some 70 Red combat divisions echeloned in depth in Korea. The logistical system was effective but not efficient, for the tremendous size of the establishment generated requirements for its own support which reduced the effectiveness and the number of combat divisions which the Reds could employ at the front lines.[126] By the accretion of supplies in excess of reduced expenditures during defensive fighting, a process best described as "logistical osmosis," the Red supply system was able to concentrate logistic support stocks at depots, subdepots, and supply points ranging rearward behind the front lines. The Far East Air Forces well understood that the Reds were stockpiling, and, within context with its capabilities, FEAF attempted to locate and destroy Red supply dumps south of the Yalu. In almost daily strikes throughout the middle days of March Bomber Command crews attacked supply-storage areas at Hamhung, Yonghung, Chunchon, Pyongyang, Kumhwa, Chorwon, and Wonsan. Secondary explosions showed that the bombers got good results. Many of these targets had been hit before, but General Briggs discovered that the Reds liked to store supplies in buildings or villages which had already been attacked, probably on the theory that they would not be attacked again.[127] Increasingly in the rear areas and always in the forward areas the Reds prevented aerial destruction of their supply accumulations by literally sowing small dumps into the terrain, dispersing them in caves, tunnels, revetments, ditches, holes, ravines, houses, and under any possible cover or concealment. Such widely dispersed dumps were hard to discover and harder yet to destroy from the air.[128] The Fifth Air Force, for example, was never able to discover an air weapon practicable for destroying small caches of rice, the main staple in the Communist troop ration.[129] Although air attacks against Red supply dumps were probably not too effective in the spring

of 1951, the attacks forced the Reds to disperse their dumps, and this dispersal accomplished important results.

In spite of the fact that they were able to move 70 combat divisions into Korea and to supply them in defensive operations, the Communists were unable to mount effective offensive operations in April and May of 1951. Sapped of strength and of morale by months of continuous air attack, Communist troop units employed in the spring offensive were described as "appreciably inferior" to those United Nations troops had previously encountered.[130] Because of limitations of transport and of supplies in their forward areas, the Reds were unable to employ more than half of their combat divisions in offensive operations. In the fast-moving situations following initially successful penetrations of United Nations lines the Red logistical arrangements broke down. Rearward divisions lacked mobility to get forward. In the front lines, moreover, offensive actions rapidly depleted the seven to ten days' supplies at division supply points, and the widely dispersed, dug-in supply points and subdepots were virtually immobile. Carts, pack animals, and porters could move a great amount of tonnage in the front lines, but their efficiency was not great enough for a modern war of movement. As supplies forward were used up, the rearward logistical commands and depots were unable to speed up their deliveries forward. Thus in April and May, as in January and February, initially successful Communist offensives faltered and collapsed both from casualties sustained in the attack and for want of logistical support to continue on.[131]

In the early months of 1951 United Nations air attacks never completely interdicted the flow of logistical support to Communist front-line troops, but the pressure of air strikes to the rear of Communist lines prevented the Reds from developing the combat effectiveness and mobility they needed to win in Korea. In a message described as written on 10 May, General Cho El Ro, chief of staff of the Fourth Field Army, was reported to have named several causes for the Chinese defeat. "Chinese Communist forces," Cho stated, "had not been relieved from front-line duty since the outset of the war, and they were tired." The attacking forces had lacked air support and heavy equipment, and they had not known that United Nations airfields were so close to the front. "Food rations were inadequate," Cho stated, "and morale was low."[132] North Korean and Chinese prisoners of war captured during the spring offensives testified as to the low morale among their rank and file and to its causes. The majority complained of a lack of food and the remainder indicated that food was insufficient, improper, or poor. A second, and probably more realistic, cause for low morale was United Nations artillery and air bombardment. A third cause for troop inefficiency was the fatigue of long marches, night marches, poor physical condition, lack of rest, and long hours of work.[133] Both the testimony of the Communists and their actions in Korea demonstrated the truth of General Weyland's assessment sent to Washington on 10 June 1951. "Events since 25 June 1950," wrote Weyland, "have clearly indicated that air operations have been one of the most decisive elements in stopping the enemy's offensives and reducing his capacity to wage ground warfare."[134]

# 11. *Air-Ground Operations on the Field of Battle*

## *1. Attacks to the Han Exploit the Air-Ground Team*

"I would say the support that our tactical air has given to our ground troops in Korea has perhaps never been equaled in the history of modern war," stated General MacArthur in the spring of 1951.[1] Such a statement from the august United Nations commander could not have been lightly given, for General MacArthur had known exceptionally fine air-ground cooperation during his campaigns of World War II. In March General Ridgway similarly voiced confidence in the air-ground team. "I have complete and unswerving confidence," he informed MacArthur, "in the battle-tested team of Army, Navy, and Air Force, bound together by mutual respect and confidence—a respect and confidence built upon steadfastness in battle and devotion to one common purpose."[2]

As they had done since the beginning of the Korean hostilities, Generals Partridge and Timberlake continued to seek to perfect the system whereby Air Force, Navy, and Marine air units might be instantly responsive to ground-force requirements for air support. In the spring of 1951, more than ever, the success of the strategy announced by General Ridgway on 20 January—to seek out and destroy Red troops and not to hold ground for its own sake—demanded constantly changing air-ground actions, calculated in terms of tactical opportunities, which posed an utmost challenge to air-ground cooperation. Early in the Korean war General Partridge had hoped that the Joint Operations Center would be a joint planning and operating agency where ground and air efforts cooperatively would plan and implement operations, but the Eighth Army had not wanted this arrangement.[3] Under General Ridgway the Joint Operations Center continued to be an operating agency where Army officers requested tactical air support and Air Force officers ordered it flown.

In view of the limited development of the Joint Operations Center, it was fortunate that the headquarters staffs of the Fifth Air Force and Eighth Army were able to effect the common purposes which were so essential to air-ground operations. The headquarters staffs occupied buildings in close proximity in Taegu City, where common purposes could be discussed with a minimum of travel. At an early morning staff conference, attended by Air Force officers, General Ridgway and his Eighth Army staff reviewed planned operations of friendly forces, together with known or anticipated moves of enemy forces, and estimated air-support requirements for the following day, including the ground units whom they wanted to receive priority air support. After lunch—at 1300 hours—the Fifth Air Force planning conference convened in the air-operations office to determine the exact allocations of air effort for the following day. Fighter, light bomber, and reconnaissance operations officers and other services' liaison officers attended the planning conference, and their decisions provided the basis for daily fragmentary operations orders issued to tactical units. Each tactical wing operations officer called Fifth Air Force operations at about 1600 hours each day to learn the number and type of sorties to be required of their wing

next day, information which was required for planning purposes. Later in the day, usually in the early evening hours, the Fifth Air Force transmitted its fragmentary operations orders to the tactical wings by teletype, and to ensure against any misunderstandings a Fifth Air Force courier delivered two copies of the mimeographed "ops order" to each tactical wing's base, usually around midnight. When some sudden change in the ground situation demanded changes in operations orders, the Air Force duty officer in the Joint Operations Center saw that the necessary decisions were made. Later on the Fifth Air Force named a senior operations duty officer who handled necessary changes in operations orders during the night.[4]

While the Fifth Air Force's tactical air wings furnished a large proportion of the air support extended to the Eighth Army, General Partridge recognized that Marine and Navy air capabilities had to be integrated into the control system. Operating as it did from South Korean airfields, the 1st Marine Air Wing's operations were smoothly and effectively integrated into the control system. Although the Fifth Air Force possessed "coordination control" over the land-based Marine airmen, General Partridge recognized that the 1st Marine Air Wing was actually an air task force, capable of independent action and needing to maintain that capability. General Partridge therefore allowed the Marine wing considerable latitude for planning and ordering its air operations. Almost always the Fifth Air Force assigned tasks to the Marine air wing through its commander. Each morning the Marine air wing forwarded its capabilities and intentions for the next day to its liaison officer in Taegu. At the Fifth Air Force planning conference the Marine liaison officer submitted these planned operations, and at this time Marine wing intentions were approved or altered to conform to the over-all tactical air plan. Later in the afternoon Marine orders for the following day were published as a Marine annex to the Fifth Air Force fragmentary operations order. Only in one unusual circumstance did Fifth Air Force operations officers deal directly with Marine air units. Because the Marine squadrons occupied separated airfields, the Joint Operations Center "scrambled" Marine strip-alert flights by "hot-line" telephone without going through the Marine wing commander.[5] In order to maintain their primary specialty, the Marine airmen customarily used most of their sorties for the support of ground troops.

Unfortunately, Navy carrier-based air operations of Task Force 77 were not so completely integrated into the air-support control system. Early in November 1950, and continuously thereafter, the Seventh Fleet established and maintained a naval liaison group at the Fifth Air Force. At this same time Task Force 77 established continuous-wave radio and very-high-frequency voice communications with the Joint Operations Center. By noon each day Task Force 77's air schedule for the succeeding day was passed to the Joint Operations Center. Knowing the numbers of aircraft scheduled and the times over the targets, the Joint Operations Center requested the assignment of some aircraft to predesignated tactical air-control parties and others to related missions, such as armed reconnaissance sweeps over certain road nets. Operating through liaison, Task Force 77's airmen furnished valuable air support in Korea, but the availability of carrier airmen for such effort was not always certain. The senior naval officer

in the Joint Operations Center had no authority to commit Task Force 77 to a desired action; instead, he passed requests to the fleet. The continuous-wave radio and the voice-communications channel between Task Force 77 and the Joint Operations Center were frequently uncertain, and at best the radio nets were unable to handle more than one-tenth the volume of traffic that was needed. As a result, the Joint Operations Center seldom received from the Navy the detailed operations reports it needed to be conversant with the tactical air situation.[6]

The high degree of cooperation between the Fifth Air Force and Eighth Army emanating from Taegu meant that air resources could be centered wherever General Ridgway desired and thought necessary. Thus, on 25 January 1951, as the American I and IX Corps initiated "Operation Thunderbolt," the reconnaissance in force designed to push through to the Han River, the Fifth Air Force's close-support effort was centered behind these two corps. To cover the advancing task forces, Mosquito controllers of the 6147th Tactical Air Control Squadron staged forward from Taegu West Airfield (K-37) through the old airstrip at Taejon (K-5). By such expedient the Mosquitoes could remain aloft over the ground troops for up to three hours. The little airborne control planes commonly patrolled in front of friendly ground columns, and as they located enemy strong points they flashed the word over SCR-300 infantry radios which they carried in their cockpits. Because of the interest of General Partridge, who flew a mission to test the equipment, all Mosquitoes were so equipped to communicate with ground patrols in January.[7] In preparation for the drive northward, the Mosquito squadron initiated another communications measure, which would prove to be of great value. In order to relay line-of-sight very-high-frequency transmissions from the front lines to the tactical air-control center, the 6147th Squadron had been keeping aloft one T-6 midway between the front lines and Taegu. This "Mellow Control" T-6, however, had possessed only two radio channels for relaying messages, which meant that it could be swamped with messages. Effective on 26 January, the 6147th Squadron solved this traffic bottleneck by putting aloft a C-47 airborne relay aircraft with 20 channels of VHF communications. This "Mosquito Mellow" aircraft normally maintained a station 20 miles behind the front lines, whence it passed messages between tactical air-control parties, airborne controllers, fighter-bombers, and the "Mellow" station of the tactical air-control center.[8]

As "Operations Thunderbolt" thrust northward against the Red screening force provided by two divisions of the Chinese 50th Army, the American I and IX Corps witnessed that the close support they received was most effective. Air strikes softened points of enemy resistance almost as fast as they developed, and as Eighth Army soldiers flushed enemy troops into the open United Nations aircraft swooped in to slaughter them.[9] Soon General Ridgway sent the U.S. 3d Infantry Division to join the attack force and converted the reconnaissance in force into a full-scale attack. Since this expanding ground attack needed increased supplies, the 315th Air Division (Combat Cargo), which had been activated as the successor to the old FEAF Combat Cargo Command on 25 January, came to the assistance of the Eighth Army. On 28 January, while fighting continued just beyond the snow-covered airstrip, 315th Air

Division transports, led by Lt. James F. Horton, whose C-46 transport first touched down, began to deliver cargo to Suwon Airfield. On 30 January, the first full day of air resupply, the 61st Troop Carrier Group unloaded 270 tons at the newly recaptured airfield.[10]

When American ground troops began to move north and northwest of Suwon on 30 January, Mosquito controllers sighted larger concentrations of enemy troops. On 3 February Captain Edwin W. LaVigne, flying "Mosquito Cobalt," located a large body of enemy troops opposing the forward progress of the U.S. 25th Division. In more than two hours Captain LaVigne received and directed ten flights of fighter-bombers against the enemy's positions in the Anyang-Inchon-Yongdungpo area. Again, on 6 February, Captain Dorrence E. Wilkinson, flying "Mosquito Cobalt" in support of the U.S. 24th Division, located large numbers of hostile troops in the vicinity of Yangpyong, on the Han River east of Seoul. This Mosquito controller received and directed four F-84's, six F-4U's, and six B-26's, and in one area he estimated that the air strikes inflicted at least 300 casualties.[11] Survivors of the Chinese 50th Army continued to resist until 9 February, but then the Red defenses broke, and U.S. I Corps task forces raced northward to the Han. By dusk on 10 February Kimpo Airfield and the port of Inchon again belonged to United Nations forces.[12] In a visit to the U.S. I Corps at about this time General Timberlake noted that everyone he talked with seemed well satisfied with the air support they were getting. Some ground officers believed, however, that the forward air controllers were not becoming adequately skilled during the twenty-one-day tours that they served with tactical air-control parties. General Timberlake personally favored the short tours because they prepared a maximum number of pilots to fly more effective ground-support missions. General Partridge, however, agreed with the ground-force suggestion, and in mid-February the pilots nominated by the tactical air wings for the duty began to serve sixty-day tours as forward air controllers.[13]

Heartened by success in the west at the end of January, General Ridgway ordered the U.S. X Corps to move northward in central Korea. Although opposed by the North Korean II and V Corps, the X Corps troops captured Hoengsong on 2 February. Three days later General Ridgway ordered the X Corps to implement "Operation Roundup," an advance toward Hongchon. Now, however, United Nations forces were pressing the Communists too hard, and General Peng Teh-huai, commander of the Chinese "volunteers," felt compelled to counterattack. Designing to reduce the pressure on Seoul, General Peng Teh-huai launched the Chinese 40th and 66th Armies and the North Korean V Corps in an attack along the Hoengsong-Wonju axis, beginning after nightfall on 11 February. The Chinese general noted that the battle began under "unfavorable circumstances." "Our period of rest is interrupted," he said, "and now, when we are not yet ready to fight, the fourth phase [offensive] is under way."[14]

The Communist attack toward Hoengsong did not come as a surprise to the Eighth Army, since the X Corps had been battling stiff resistance and Fifth Air Force tactical reconnaissance pilots had noted the Red troops moving toward a line of departure. To meet the attack, General Ridgway assigned the U.S. X Corps the highest priorities for close air support. Fighter-bomber pilots

who had been assisting the U.S. I and IX Corps in the west now found themselves aiding the U.S. X Corps in central Korea. On 12 February, when the Reds attacked ROK troops north of Hoengsong, "Mosquito Liberator" flights were overhead to direct a close-support effort which, in large measure, would determine whether the friendly troops would be able to withdraw. During the morning the initial "Mosquito Liberator," piloted by Lt. Aubrey C. Edinburgh, found bands of up to 400 enemy soldiers moving by daylight. Five flights of F4U's, F-80's, F-84's, and F-51's came to Hoengsong to lash the Reds with napalm and rockets. Later in the day the relief "Mosquito Liberator," flown by Lt. Charles R. Wilkins, found a battalion of ROK's cut off by enemy roadblocks. This controller directed three flights of fighter-bombers, whose attacks allowed the friendly battalion to break out of the encirclement.[15]

When the Reds had captured Hoengsong on 13 February, Communist attack centered against another mountain-surrounded village—Chipyong-ni—lying northwest of Wonju and held by elements of the U.S. 2d Infantry Division. If the Reds captured Chipyong-ni, at the hinge of the sector defense lines manned by the U.S. IX and X Corps, they would endanger the whole Eighth Army front. Recognizing the hazardous situation at Chipyong-ni, where the U.S. 23d Infantry Regiment and the French battalion were soon surrounded, General Ridgway and General Partridge gave General Clark L. Ruffner's 2d Division the highest priorities for air support. Each day, from 14 through 16 February, ten flights of "Mosquito Cottonseed" control aircraft maintained constant daylight air patrols over the 2d Division, receiving and directing fighter aircraft of all kinds. The air support was not only generous but it was highly effective. General Ruffner subsequently told General Stratemeyer that, following one napalm strike against the reverse slope of a hill leading up to Chipyong-ni's defense perimeter, he had seen more enemy bodies than he had ever seen before.[16] Other FEAF airmen also assisted the embattled 2d Division. In the days when United Nations troops were surrounded in the village, 314th Troop Carrier Group C-119's dropped them 87 loads of ammunition, gasoline, and rations.[17] Crews of the 3d Air Rescue Squadron flew fragile H-5 helicopters through high winds and snowstorms to deliver blood plasma and medicines and to evacuate 52 badly wounded soldiers from the beleaguered village.[18] When the battle was over, General Almond, the X Corps commander, acknowledged that at Chipyong-ni "our air support and our flying ammunition into that circle [of defenses], about a half mile in diameter, sustained those men in that position, and they held it."[19]

Concurrently with the main assault along the Hoengsong-Wonju axis, the Communists made probing attacks which sought to dislodge United Nations troops from their gains in the west. Against these night attacks the U.S. I Corps reported that the services of C-47 Firefly aircraft proved invaluable. On the night of 20/21 February, for example, the U.S. I Corps used a flare ship to light six areas along its front. In each case friendly artillery registered on groups of up to 200 enemy soldiers caught in the open trying to cross the ice-covered Han River.[20] In the week before their "Fourth-Phase" offensive collapsed, the Communists were unable to budge the main portions of the United Nations lines in western and central Korea, but they were more

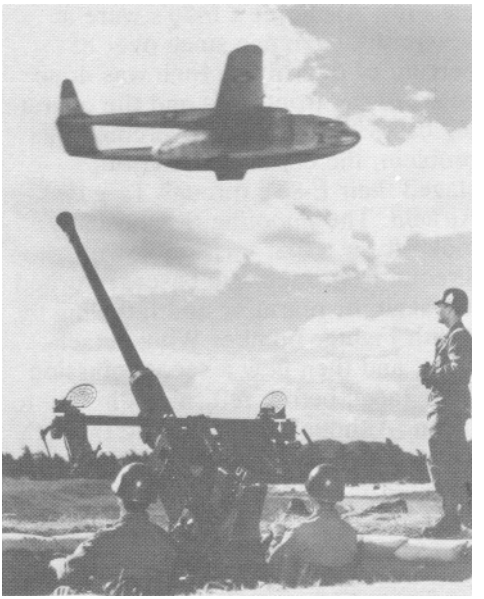
Combat rescue. *(Courtesy Air Force Art Collection)*

successful in the mountains of eastern Korea, where they drove a salient deep down toward Chechon.

When the initiative passed to the United Nations on 21 February, General Ridgway ordered the U.S. IX and X Corps to swing eastward and execute "Operation Killer," a maneuver designed to cut off and destroy the enemy troops who had penetrated into South Korea. The smartly mounted United Nations ground attack took the Reds off-balance, and supporting air strikes wrought heavy casualties on the overextended Communist forces. On 22 February, for example, "Mosquito Lawsuit," working with the 25th Infantry Division east of Seoul, brought 11 flights of fighters down below a solid overcast to attack and destroy some 1,000 Red troops. On 25 February "Mosquito Townsend" located large bodies of enemy troops dug in around Hoengsong. Since one enemy battalion was holding up the progress of the ROK 6th Division, the Mosquito called for and received seven flights of fighter-bombers at forty-five-minute intervals. A conservative estimate counted Communist casualties at 200 killed and 300 wounded. During the three-day period from 24 to 26 February 15 Mosquito missions worked with the U.S. 7th Infantry Division as these ground troops advanced to Pyongchang in the eastern mountains. Maj. Gen.

Claude B. Ferenbaugh, commander of the 7th Division, wired General Partridge: "Close air support given this division...outstanding. Excellent results of air strikes enabled taking objectives with minimum casualties."[21] Everywhere "Operations Killer" registered steady gains, but early spring rains and thawing ground began to muck the lines of communication supporting the U.S. IX and X Corps. The 314th Troop Carrier Group accordingly strained itself to support the troops in central Korea. Between 23 and 28 February this group dropped 256 C-119 loads or 1,358 tons of supplies to ground troops north of Wonju.[22]

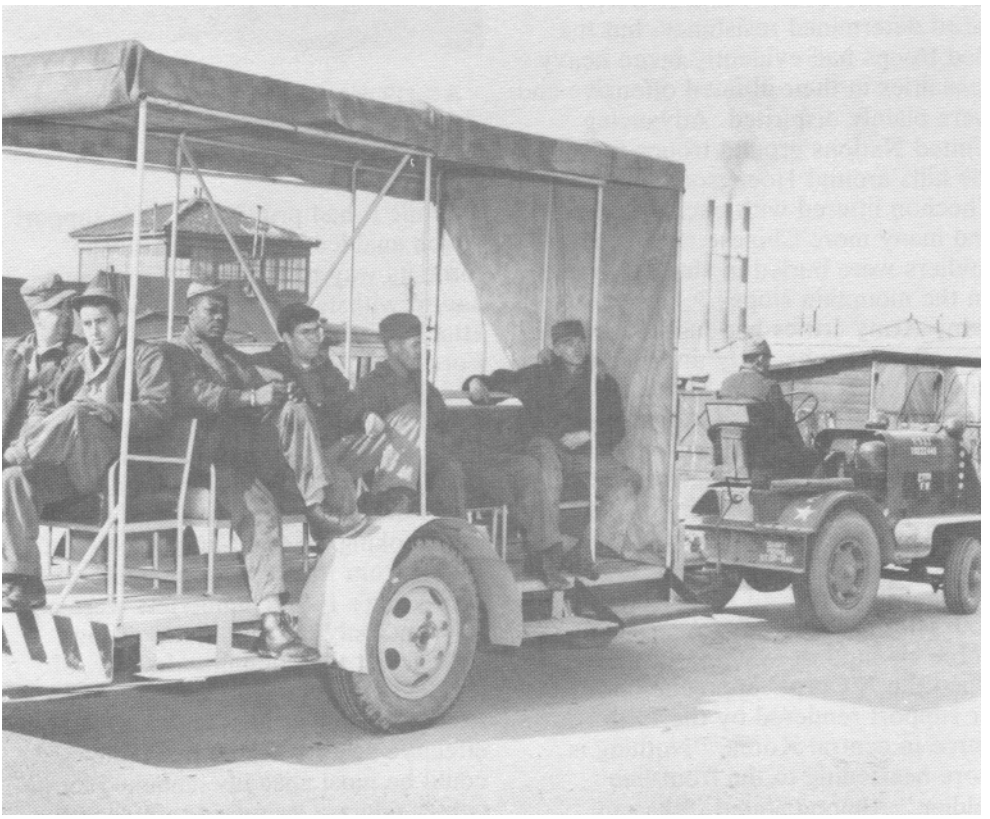
As "Operations Killer" forged forward, the U.S. IX and X Corps faced determined resistance, but the Red troops had evidently taken heavy casualties in their ill-fated offensive and were plainly dispirited. Advancing United Nations ground troops found the hills around Hoengsong and Chechon littered with enemy bodies, and many more Chinese and Korean soldiers were buried in shallow graves on the mountain slopes.[23] Up until now many Army critics had insisted that jet aircraft were inherently unsuited for close-support work. In February, however, an Army operations research study stated that: "Aside from endurance, it is difficult to determine any marked deficiency in ability of the F-80 or F-84 to bomb, napalm, rocket, or strafe a target."[24] Even General Almond, who had been a severe critic of both jet aircraft and the Army—Air Force air-support system, now messaged the X Corps' appreciation for the air support rendered by the Fifth Air Force in central Korea. "Nothing is more heartening to the front-line soldier," Almond stated, "than to observe such striking power as was displayed in the X Corps area."[25]



A C-119 departs a base while the Army's Anti-aircraft Artillery unit remains on alert.

While it had provided the air support which enabled the Eighth Army to force its way back to the Han River and to withstand Communist counter-attack in central Korea, the Fifth Air Force had been laboring under exceptionally difficult operational conditions. Its jet fighter-bomber wings were based in southern Japan, and all of these planes were too far distant from the target area to be able to spend much time looking for front-line objectives. Flying from Itazuke, for example, the 27th Wing's F-84 Thunderjets were able to spend only thirty minutes at low altitudes at the bombline. In view of this fact the 27th Wing gave preference to napalm and rockets which were effective against hostile personnel and could be most speedily launched by its fighter pilots.[26] Required to fly something on the order of 350 miles from their Japanese airfields to the bombline,

the Fifth Air Force's F-80's were at severe disadvantage since over 85 percent of their flying time was done between the front lines and the operating bases.[27] Seeking to overcome this problem, the 8th and 51st Groups staged their F-80's through Taegu Airfield. The Shooting Stars usually took off for a first mission flown directly from Japanese bases, returned to Taegu for rearming and refueling by a 49th Fighter-Bomber Wing detachment, and then flew a second mission from Taegu before returning directly to Japan. Although the air traffic through Taegu was heavy, the 8th Group recorded that the rearming and refueling detachment at Taegu did an "outstanding job" and usually got fighters turned around for a second combat mission within an hour and a half.[28] By using Taegu for a staging base, the Fifth Air Force overcame many of its operational problems, but the dependence upon a single base for such heavy operations carried an element of calculated danger. On the morning of 21 February, for example, marginal flying weather suddenly closed in over Taegu, forcing five 49th Group pilots to make crash landings along the Naktong River.[29]



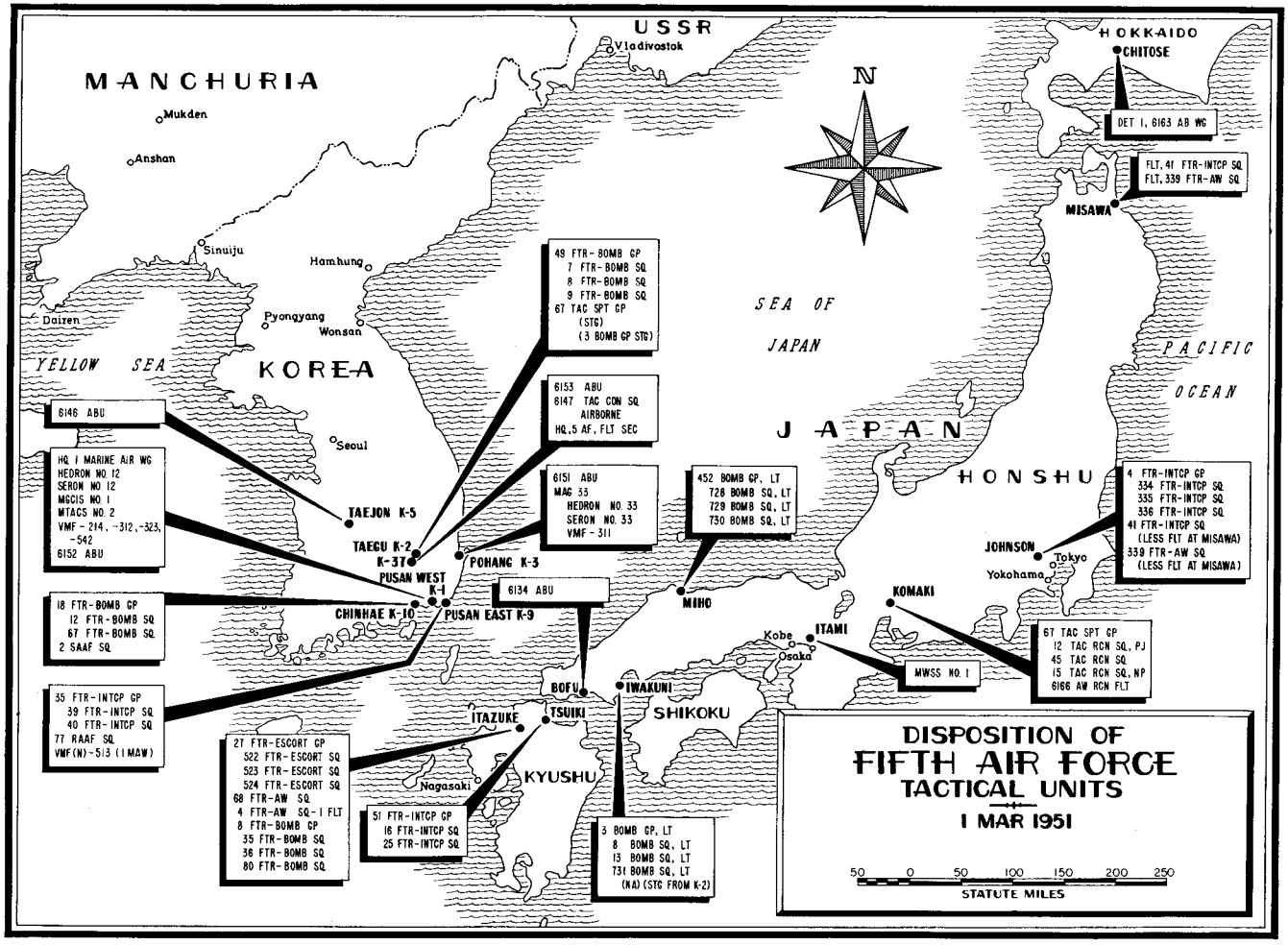
A tired maintenance crew takes a rest on a flightline tram.

*2. Airborne Invasion at the 38th Parallel*

Rather than attempt a frontal assault across the wide and thawing Han River at Seoul, General Ridgway, on 7 March, ordered the U.S. IX and X Corps to attack northward in central Korea. This attack, called "Operation Ripper," was designed to create a bulge east of Seoul, which would permit United Nations forces to envelop the capital city at their leisure. The most critical phase of this operation was expected to be at its starting, when the IX Corps' 25th Infantry Division would be called upon to brave enemy fire and establish a bridgehead across the Han River near its confluence with the Pukhan, about 15 miles east of Seoul.[30] Despite some bad-weather days, the Fifth Air Force in the week following 7 March would fly an average of 182 close-support sorties a day, a number slightly in excess of the month's average of 175 close-support sorties flown each day.[31]

Demonstrating airpower's ability to concentrate where it was most needed, on 7 March the Fifth Air Force and its attached pilots mounted some 575 sorties as the 25th Division began to cross the Han River. Of these sorties, about 200 supported the advancing ground troops and that many more attacked enemy personnel, supplies, and vehicles in the enemy's immediate rear. On 8 March Fifth Air Force and Marine fighter-bombers again assisted at the bridgehead, while 22 B-29's hit the major Red supply center at nearby Chunchon. Bad flying weather on 9 March reduced FEAF's effort, but the Fifth Air Force's Mustang groups found some worthwhile targets for effective strikes. Outside of Seoul, for example, a single flight of 35th Group pilots claimed 100 Communist troops killed and wounded, while near Chorwon 18th Group pilots destroyed 22 enemy trucks.[32] In describing the Han River crossing and the march northward, Lt. Col. Gilbert J. Check, commander of the 27th Regimental Combat Team, used these words: "The close support and coordination between air and ground units during this operation were unparalleled and can well serve as a standard for future operations." Colonel Check not only admired the way in which Mosquito controllers directed close support, but he considered that air strikes brought against hostile troops and weapons along the 27th Regiment's line of advance had prevented the Reds from mobilizing sufficient strength to threaten the newly won positions.[33]

Advancing through rugged mountainous terrain, where they were attempting a double envelopment aimed at Hongchon, the U.S. 1st Cavalry and 1st Marine Divisions found the going to be slow against well-entrenched enemy opposition. Major Wilbur C. Bechtold, who was serving as an air liaison officer, described the enemy's defenses and the best ways to attack them from the air. "The day before yesterday," Bechtold wrote, "I climbed a hill to take some pictures of a gang of dead and to look over their positions. About every other hole was dug down and then tunneled back into the hill, which makes it nearly invulnerable to strafing. The other holes seem to be much like the ones we dig and are usually in a position to offer a good firing point against ground attack. Mostly the deep holes seem to be living quarters and are well constructed. They also like to dig under the base of a large boulder; the open holes are often covered with


USSR
Vladivostok
MANCHURIA
Mukden
Anshan
Sinuiju
Hamhung
Dairen
Pyongyang
Wonsan
YELLOW SEA
KOREA
Seoul
SEA OF JAPAN
JAPAN
HONSHU
HOKKAIDO
CHITOSE
DET 1, 6163 AB WG
FLT. 41 FTR-INTCP SQ
FLT. 339 FTR-AW SQ
MISAWA
PACIFIC OCEAN
N
49 FTR-BOMB GP
7 FTR-BOMB SQ
8 FTR-BOMB SQ
9 FTR-BOMB SQ
67 TAC SPT GP
(STG)
(3 BOMB GP STG)
6146 ABU
6153 ABU
6147 TAC CON SQ
AIRBORNE
HQ, 5 AF, FLT SEC
HQ, 1 MARINE AIR WG
HEDRON NO. 12
SERON NO. 12
MGCIS NO. 1
MTACS NO. 2
VMF-214, -312, -323, -542
6152 ABU
6151 ABU
MAC 33
HEDRON NO. 33
SERON NO. 33
VMF-311
452 BOMB GP, LT
728 BOMB SQ, LT
729 BOMB SQ, LT
730 BOMB SQ, LT
4 FTR-INTCP GP
334 FTR-INTCP SQ
335 FTR-INTCP SQ
336 FTR-INTCP SQ
41 FTR-INTCP SQ
(LESS FLT AT MISAWA)
339 FTR-AW SQ
(LESS FLT AT MISAWA)
TAEJON K-5
TAEGU K-2
K-37
PUSAN WEST K-1
POHANG K-3
PUSAN EAST K-9
CHINHAE K-10
6134 ABU
MIHO
JOHNSON
Tokyo
Yokohama
KOMAKI
ITAMI
Kobe
Osaka
18 FTR-BOMB GP
12 FTR-BOMB SQ
67 FTR-BOMB SQ
2 SAAF SQ
MWSS NO. 1
67 TAC SPT GP
12 TAC RCN SQ, PJ
45 TAC RCN SQ
15 TAC RCN SQ, NP
6166 AW RCN FLT
35 FTR-INTCP GP
39 FTR-INTCP SQ
40 FTR-INTCP SQ
77 RAAF SQ
VMF(N)-513 (1 MAW)
BOFU
IWAKUNI
TSUIKI
ITAZUKE
SHIKOKU
KYUSHU
Nagasaki
27 FTR-ESCORT GP
522 FTR-ESCORT SQ
523 FTR-ESCORT SQ
524 FTR-ESCORT SQ
68 FTR-AW SQ
4 FTR-AW SQ-1 FLT
8 FTR-BOMB GP
35 FTR-BOMB SQ
36 FTR-BOMB SQ
80 FTR-BOMB SQ
51 FTR-INTCP GP
16 FTR-INTCP SQ
25 FTR-INTCP SQ
3 BOMB GP, LT
8 BOMB SQ, LT
13 BOMB SQ, LT
731 BOMB SQ, LT
(NA) (STG FROM K-2)
DISPOSITION OF
FIFTH AIR FORCE
TACTICAL UNITS
1 MAR 1951
50 0 50 100 150 200 250
STATUTE MILES

pine boughs. These are the ones we can get with our fifties with a high angle of attack. The uncovered holes are only about 18 to 24 inches deep. Good napalm coverage, as we already know, seems to be most effective."[34] Although attacks against such defenses had to be slow and methodical, the steady forward progress of "Operation Ripper" had one important significance to close-support management. For the first time in Korea the Fifth Air Force was able to assign jet fighter flights prebriefed to report to specified tactical air-control parties. This enabled the jet fighter squadrons to load their fighters with maximum ordnance selected for a particular mission and range factor. Up until now all squadrons had sacrificed ordnance in order to load extra fuel which might be needed if the fighter-bombers missed a close-support employment and had to continue northward to seek an armed reconnaissance objective.[35]

Quite suddenly, on the night of 14 March, Communist forces abandoned Seoul without a fight, and on 15 March the Eighth Army drove into Hongchon in central Korea. As the Reds broke cover and began to retreat, FEAF airmen flew more than 1,000 sorties almost every day to harry them unmercifully. On 16 March, for example, two Mosquito "Granite" controllers, Captains Dorrence E. Wilkinson and Joe T. Hargett, directed six flights of fighters against 1,200 enemy troops fleeing northward along a road east of Hongchon. The airborne controllers estimated that the air strikes killed 200 troops and 15 pack animals, but soon after the attack advancing U.S. 7th Division groundmen found 600 dead and 300 wounded enemy soldiers in the same vicinity.[36] Following the capture of Hongchon, the 1st Cavalry Division headed for Chunchon. In view of the fact that Chunchon was an enemy supply center, General Ridgway feared that a hard fight was in the making there, and, to help with the task, Ridgway asked General Stratemeyer to prepare to drop the 187th Airborne Regimental Combat Team at Chunchon on 22 March. On 20 March, however, Mosquito "Strategy," flown by Lt. Lloyd S. Nelson, directed several flights of Marine fighters against weapons positions in the hills south of the town and then buzzed over Chunchon at 50-foot heights to report that it was no longer occupied by the enemy. The airborne controller was apparently right, for the 1st Cavalry's tank columns drove into Chunchon without great difficulty on 21 March.[37]

The capture of Chunchon placed Eighth Army troops within eight miles of the 38th parallel in central Korea, but back at Taegu Brig. Gen. John P. Henebry, commander of the 315th Air Division, and Brig. Gen. Frank S. Bowen, commander of the 187th Airborne Regimental Combat Team, had lost the planned objective for an airborne attack. Ever since 8 February, when he had relieved General Tunner in command of the 315th Air Division, General Henebry had been keeping his troop carrier forces in readiness for an airborne operation. On 21 March, even though there was some doubt as to whether paratroopers would jump at Chunchon, General Henebry brought 80 twin-tailed C-119's of Colonel R. W. Henderson's 314th Group and 55 C-46's of Colonel John R. Roche's 437th Wing to Taegu Airfield. Parked wingtip to wingtip, the big transports filled the dusty graveled parking area to overflowing. Even though he canceled the drop at Chunchon, General Ridgway soon explained that he had another employment in mind for the 187th's paratroopers. In view of the Commu-

nist withdrawal from Seoul, Ridgway had directed an expansion of "Operation Ripper" to include a U.S. I Corps attack to the Imjin River. In order to trap enemy troops fleeing northward Ridgway wanted General Henebry to drop the 187th Regiment at Munsan-ni, a village lying athwart the Seoul-Kaesong highway, on the morning of 23 March.[38]

On the afternoon of 21 March, the same day they were assigned the new objective, Generals Henebry and Bowen visually reconnoitered the assigned drop zones at Munsan-ni from the vantage point of a low-flying C-46. Returning to Taegu, Henebry and Bowen met with Ridgway and Partridge to confirm the fact that they could execute "Operation Tomahawk" at 0900 hours on 23 March, weather permitting. The delay of the airborne operation by one full day must have caused General Henebry some little apprehension, for his big transports would have to sit on the ground at Taegu an overly long time. Because of the dust problem, the transports would not be able to run up their engines before they took off for their mission; and, although the base was blacked out, a full moon's light glistened off the shiny planes, making them perfect targets for an enemy air attack. With less than a day to make ready, on the other hand, Generals Henebry and Bowen had to use the same serials and loadings worked out for the Chunchon drop. And in view of the fact that some 12,000 North Korean troops were believed to be in the vicinity of Munsan-ni, General Bowen emphasized that there must be no slip-up in the timing of the airdrops. General Bowen wanted the 187th on the ground in the two drop zones without delay once the drops began.[39]

On the morning of 23 March a few drifting clouds over Korea promised a weather-perfect day for the airborne operation. Long before dawn everyone at Taegu was up and about, and by 0700 hours all paratroopers were loaded aboard their assigned planes. One after another, powerful propellers churned the dust, as the transports began to lumber to the runway and take-off. General Henebry's C-54 command ship led the way and the other transports followed, beginning at 0730.[40] As the C-46's and C-119's began to climb out of the clouds of dust which lay like a blanket over Taegu, two groups of B-26 light bombers from Japan had already begun to soften the objective areas with 500-pound airbursting bombs and low-level "ramrod" strafing attacks. The 452d Wing sent 32 B-26's to begin on the outskirts of Seoul and work northward against troop positions along the road to Munsan-ni. The 3d Wing employed 24 B-26's against personnel areas closer to the drop zones.[41]

Loading .50-caliber machinegun rounds which will feed the nose, wing, and turret guns of the B-26.

Sixteen Mustangs from the 35th Fighter-Interceptor Wing joined the transports as they passed into enemy territory. Promptly as scheduled, at 0900 hours, the first serial of C-119's began dropping paratroopers in the north drop zone, and five other serials launched paratroopers and dropped equipment during the day. Only one mistake marred the drop. Shortly after take-off the lead C-46 in the second serial encountered mechanical difficulties and had to turn back to the alternate airfield at Taegu West (K-37). When the leader turned back, the deputy leader took over, and when the heavily loaded C-46's began to get behind schedule, the deputy leader elected to skip his assigned initial point and to head directly for the south drop zone. Because of an error in low-level navigation, the deputy leader missed the assigned zone and the serial dropped its battalion of paratroopers into the north drop zone. Back at Taegu West Airfield the regular serial commander secured a spare C-46 and flew to the south drop zone, where, at the insistence of the battalion commander, the planeload of paratroopers jumped. Learning what had happened, General Henebry informed the 187th's command post by radio, and General Bowen sent a company to retrieve the 30 men from the south drop zone.[42]

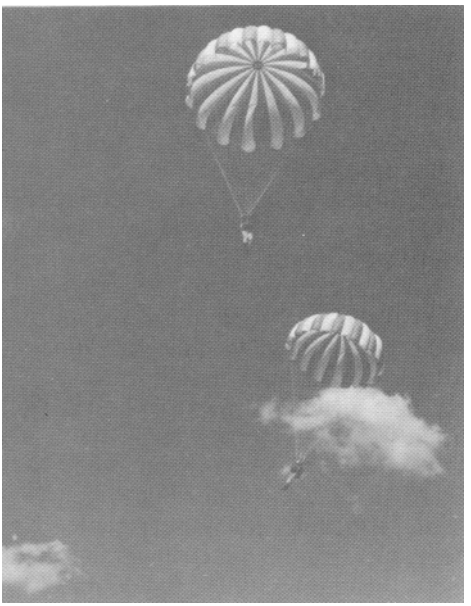
Other than for the misplaced planeload of paratroopers in the second serial, the airborne phase of "Tomahawk" went smoothly. Before the day was over 72 C-119's dropped 2,011 paratroopers and 204 tons of supplies and equipment, while 48 C-46's unloaded 1,436 paratroopers and 15.5 tons of ammunition, food, and signal equipment. Casualties from the low-level jump were light. During and immediately after the drop the 187th sustained 84 jump casualties, 18 wounded, and one man killed by enemy action. Forty of the jump casualties soon returned to duty. During the operation five C-119's incurred minor damage from hostile small-arms fire. Evidently one C-119 sustained greater damage from enemy action, for while returning toward Taegu this plane suddenly burst into flames. Five crewmen bailed out, but the pilot and copilot were killed when the plane exploded.[43]

In support of the 187th Airborne Regimental Combat Team and of Task Force Growden, which was driving northward from Seoul, the Fifth Air Force provided 31 F-51, 50 F-80, 31 F-84, and 56 B-26 sorties during the daylight hours of 23 March. Providing airborne control for the air-support effort, a C-47 airborne relay aircraft called "Mosquito Guarantee" orbited over Munsan-ni for more than nine hours, with a party of Fifth Air Force operations officers aboard it. Seven "Mosquito Nan" and "Mosquito Sugar" flights provided tactical air coordination and reconnaissance over the two drop zones, while "Mosquito Rakeoff" provided air control in support of Task Force Growden. In support of the 187th, the Mosquitoes received 31 flights of 108 fighter aircraft, which worked over 12 large enemy troop concentrations in dug-in positions, 7 concentrations in the open, 4 villages containing troops and supplies, 2 supply dumps, and 5 weapons positions. Four Fifth Air Force tactical air-control parties jumped with the 187th paratroopers. At the close of the day's operations General Ridgway, who had landed from a liaison plane in the drop zone, stated that the fighter support was the best he had ever seen in an airborne operation.[44] General Bowen fully agreed. "The air support the 187th Regimental Combat Team got

during our first two days of the attack on Munsan-ni," he said, "was one of the most beautiful things I have ever seen."[45]

Although the airborne operation at Munsan-ni enabled the U.S. I Corps to close up to the Imjin River very rapidly, its results in terms of Communist soldiers captured and killed were negligible. Enemy casualties inflicted by the 187th Regiment following its airborne assault were estimated at 200 killed and 87 captured, and an additional 24 prisoners were captured later within the perimeter defenses.[46] Contrary to expectations, the area around Munsan-ni was held by a single regiment of the North Korean 19th Division, a second-rate combat outfit. Disturbingly enough, moreover, Korean prisoners insisted that as early as 21 March their regiment had received warnings that the 187th was going to drop at Munsan-ni on 23 March.*[47]

With no profitable employment forthcoming for the 187th Airborne Regiment at the Imjin, the U.S. I Corps quickly ordered General Bowen's paratroopers to attack due eastward and capture high ground behind enemy troops opposing the advance of the U.S. 3d Division up the road from Seoul toward Yonchon. Launched on this attack over inaccessible roads before its supply lines were opened to Seoul, the 187th Regiment had great need for continuing air-dropped resupply. On 24 March 36 C-119's dropped 40 men and 187.7 tons of supplies at Munsan-ni to get the paratroopers started. When the 187th Regiment was on the road, 4 C-46's dropped ten tons of supplies on 26 March, and on 27 March 12 C-119's



Paramedics of the 3d ARSq "hit the silk."

dropped an additional 65.8 tons of supplies. The last two days' drops were of vital importance, for the men and guns of the 187th were getting hungry. Many of the men had eaten only once in thirty-six hours, and one battery was down to its last five rounds of ammunition. Once again General Bowen was complimentary. "The D plus 3 supply drop was as near perfect as anyone could imagine," he stated. "We recovered 95 percent of the supplies."[48] Despite the air support it received, the 187th Airborne Regimental Combat Team continued to be dogged by bad luck. Foul weather and all-but-impassable roads slowed the paratroop advance, and the Reds had withdrawn from the U.S. 3d Division's front before the 187th Regiment reached its objective.[49]

*The Communists employed many espionage agents in South Korea, especially around United Nations airfields, but there was official doubt that the Reds could have been so exactly cognizant of United Nations plans as this would indicate. Probably Red agents sighted the concentration of troop-carrier aircraft at Taegu, and Red commanders flashed a general alarm to all units that an airborne operation was impending.

### *3. FEAF Prepares for the Communist Spring Offensive*

In a little more than two months a ripping United Nations air-ground attack had driven the Communists back to the 38th parallel. Ever since the major Red offensive had bogged down in January, however, Radio Pyongyang had been boasting that a huge and invincible Communist spring attack would yet drive United Nations forces from Korea. So far as they were able, the FEAF commanders were making preparations to meet this major Red attack, preparations which included the development of techniques and procedures for rendering close air support at night, the use of weapons best calculated to destroy Red personnel, the revamping of air-support control system, and the development of airfields near the front lines in Korea required for combat-cargo and close-support aircraft.

Like the North Koreans, the Chinese Communists used the cover of darkness to cloak their movements against United Nations air attack on the field of battle. A Soviet-prepared manual published by the Chinese Reds in Manchuria in 1947 well illustrated the importance of night attack as a Communist military technique. "Night combat," stated this manual, "is a normal occurrence under conditions of modern warfare. Night combat can be conducted by a small unit, large unit, or by a combined force of the various arms....Despite the difficulty of control during night attacks, it offers many opportunities for success in an attack."[50] Almost at the beginning of the fight in Korea Generals Stratemeyer and Partridge had stated requirements for equipment and procedures which would allow their aircrews to provide close air support to friendly ground troops at night and in bad weather. Actually, in World War II, the Army Air Forces had possessed some capability for supporting ground forces under all-weather conditions, but in the years between wars much of the necessary knowledge about these techniques had been forgotten. "Apparently, over in Korea," said Mike Chafee, a civilian technical representative on General Partridge's staff, "we completely forgot that we knew anything about ways of doing things and equipment to aid in an...all-weather type of warfare."[51]

Requests made by the Fifth Air Force brought the 1st Shoran Beacon Unit and three detachments of the 3903d Radar Bomb Scoring Squadron to Korea in September 1950. Both organizations had radar equipment of types similar to that used with good effect for directing all-weather bombing in Europe during World War II. In Italy Shoran had demonstrated its ability to position bombers and photographic planes over fixed targets, but in Korea in October and November 1950 the Fifth Air Force was unable to secure satisfactory results from the small 1st Shoran Beacon Unit.* The 3903d Radar Bomb Scoring Squadron's Detachments "C," "K," and "N," each brought well-trained technicians and AN/MPQ-2 radars with them to Korea. The MPQ radars possessed by these detachments were improved versions of the old SCR-584 gun-laying radars which had been used as "Picklebarrel" blind-bombing directors in the latter stages of the war in Europe.[52] Sometime in

**See* Chapter 13, pp. 408-410.

November 1950 two of the 3903d detachments moved their truck-mounted MPQ radars to Pyongyang, and, according to one report, one of the MPQ detachments had directed a B-26 strike in support of the U.S. I Corps on the night of 28 November 1950.[53] As of the end of December 1950, however, the Fifth Air Force possessed no electronics-directed attack capability. "I could go over to Korea today," stated Col. Gilbert Meyers on 28 December, "and turn all the radar off, and it would not affect our operations a bit."[54]

Early in January 1951 FEAF insisted that the Fifth Air Force must find some electronics means which would permit aircraft to provide night close support along friendly front lines. General Stratemeyer was particularly interested in devising a procedure which would enable the Superfortresses, with their great bomb-carrying capabilities, to strike the enemy along his front lines at night. As a result of the interest manifested by the Tokyo air headquarters, the Fifth Air Force assigned the project to the 502d Tactical Control Group, which began to work along two lines of action. As suggested by FEAF operations officers, the 502d Group sited AN/UPN-4 radar beacons along the front lines to determine if the B-29's could pick up the signals of these beacons on their airborne radar bombing (AN/APQ-13) scopes. The Superforts had no great difficulty doing this, but the beacons could not be used as aiming points, and the bomber crews were not much better off than before.[55] As the second line of action began in January, the 502d Group assumed operational control over the three MPQ detachments and sited them in the field behind the command posts of the U.S. I, IX, and X Corps. During January and February the MPQ tactical air-direction posts worked with a small number of night-intruder missions.[56]

Apparently the new bombing technique did not immediately fire the imagination of the 3d Bombardment Group's intruder crews, and it is possible that the essential simplicity of the bombing technique led them to overlook its effectiveness. All that an aircrew had to do was to obtain a vector from one of the tactical air-direction centers—"Michael" at Taegu, or "Horseradish" at Pyongtaek—which would put a plane at a spot where the narrow-beam MPQ radar could pick it up. On the ground, the MPQ controller specified the altitude, airspeed, and heading which the crew would fly. At a proper point the MPQ controller gave orders to open bomb bay doors and to arm bombs, and, starting at 10,000 yards from the target, the controller began a countdown to "zero," at which point the bombardier released his bombs. Before an MPQ mission the controller obtained coordinates of an enemy target from the corps he supported, plotted them on the map at his control table, and then utilized his lock-on radar and the automatic tracking device which gave him a visual indication of the aircraft course in reference to the ground target.[57] From the first the Eighth Army liked the MPQ bombing. The U.S. I Corps reported that a goodly number of prisoners of war agreed that the radar-controlled night-bombing was hurting them. The Reds noted that they customarily came out of their fox-holes and moved around at night and were peculiarly vulnerable to bombing at such times.[58] In view of these favorable results, the Fifth Air Force abandoned its efforts to employ UPN-4 radar beacons in favor

of an expanded employment of MPQ-2 bombing.[59]

Late in February, when the MPQ detachments began to try to control B-29 night-bombing attacks, they encountered some new difficulties. In order to provide better radar reflection at more extended distances, the B-29's were carrying AN/APN-60 airborne radar beacons, but for some reason the bomber groups and the MPQ detachments could not get their radars exactly calibrated to work with each other. After several unsuccessful tests of the APN-60 beacon-MPQ combination, Bomber Command insisted that the MPQ controllers attempt to track the bombers without the aid of the radar beacons. Good results were obtained from "skin-tracking" tests, and on 13 March Bomber Command began regularly to attack ground targets with ground-radar direction, a technique which it first called "X-Ray" and later "Phantom."[60] These night-bombing attacks were judged to be outstanding. The U.S. IX Corps reported that 16 B-29's operating singly between 7 March and 10 April and using the special tactics for night close-support operations, destroyed an enemy army command post, a regimental command post, three supply dumps, two villages containing enemy troops and supplies, and effected unknown results against 20 hostile troop concentrations.[61] During March the mobile MPQ radar detachments followed the advancing ground troops northward and established positions much closer to the front lines. Tactical air-direction post "Island," which supported the U.S. I Corps, moved to a location north of Seoul; "Vaudeville," which supported the U.S. IX Corps, moved to a place near Hongchon; and "Hobnob," which supported the U.S. X Corps, emplaced itself east of Wonju. The two latter direction posts had trouble finding suitable operating sites in the mountains of eastern Korea, but the MPQ detachments were accumulating experience and getting ready to help bomber crews deal the Reds a shattering blow.[62]

1st Lt. Paul D. Lehman, radar navigator-bombardier adjusts his radar scope.

What was true of electronics in the period between World War II and Korea was also true of ordnance: USAF officers and airmen had forgotten much that they had learned concerning the most effective selection of air weapons for the accomplishment of air tasks. In the initial months in Korea FEAF air units had exhumed many old "ghosts," such as wire-wrapped general-purpose bombs, which were believed to be good for antipersonnel attacks. Because of the particular configuration of the Soviet-built T-34 tanks, napalm incendiary mixture had

been the most effective destroyer of Red armor,[63] but Fifth Air Force crews and Eighth Army ground troops had also come to believe that napalm was a most effective weapon for employment against hostile personnel. Enemy prisoners of war, however, indicated that they did not fear napalm very much unless it was dropped directly on them. Otherwise, the Reds said that they could run away from a napalm blast. This, in fact, was probably why United Nations airmen and ground troops liked napalm: they saw it make enemy soldiers run and concluded that it must be highly effective.[64]

Early in 1951 a team of United States Army, Air Force, and Bureau of Standards experts who came to the Far East was surprised to discover that neither FEAF nor the Eighth Army was making use of electronic variable-time or proximity fuzes, which received impulses from a target and detonated a bomb or projectile in proximity to the target. Tests conducted in the United States in 1945 had revealed that proximity-fuzed bombs, which burst in the air and showered thousands of steel fragments earthward, were the best weapons possible against lightly shielded personnel. The proximity fuzes, however, were tricky. If they armed too soon, they could go off as the bombs passed through clouds. For this reason the fuzes were supposed to be used in combination with arming delay devices. Bomber Command crews, who had forgotten about the arming delay requirement, had flown one mission with proximity-fuzed bombs in the autumn of 1950, and many of the planes had been rocked by bombs which fell 1,000 feet, armed themselves, and exploded. After this Bomber Command had not used proximity fuzes any more. Early in January 1951 the team of armament experts visited Yokota and persuaded Bomber Command to try proximity-fuzed bombs, this time with arming delays, for the attack made against the town of Wonju on 12 January. The bombs worked to perfection. In March, when the B-29's began to make radar-directed close-support attacks, Bomber Command immediately accepted proximity-fuzed bombs as the primary ordnance for use in combination with the MPQ system.[65]

Although the Fifth Air Force fighter-bomber wings would continue to use large quantities of napalm during the spring of 1951, the tactical air units also made efforts to equip themselves to employ proximity fuzes. The fuzing delay devices which worked for the bombers were not applicable to the externally carried ordnance which the fighters stowed on their wing racks. And the fighter-bomber pilots knew that the results would be fatal if a proximity-fuzed bomb became accidentally armed on their wing racks. Working in conjunction with the 7th Fighter-Bomber Squadron, the Fifth Air Force office of operational engineering soon developed an "L"-shaped metal bracket, which fitted on an F-80's wing racks and extended downward, positively preventing a bomb's fuze vane from moving before the bomb was dropped. In February the Far East Air Materiel Command fabricated enough of these safety devices to equip the Shooting Star fighter-bombers. In May similar devices were made for Thunderjets, and in June the Mustangs obtained the brackets which enabled them to carry proximity-fuzed bombs. The use of proximity-fuzed 260-pound fragmentation and 500-pound general-purpose bombs proved beneficial to Fifth Air Force fighters. Such munitions were not only effective against the enemy, but the fighter-bomber pilots could

launch their attacks from higher altitudes, out of reach of enemy ground fire, and still make their bombs explode at heights best calculated to kill the enemy's troops, destroy his equipment, or suppress his flak.[66]

The Eighth Army-Fifth Air Force system for requesting and controlling tactical air support had been working well, but both General Partridge and General Timberlake agreed that the system must be kept under scrutiny to ensure that it was meeting Army and Air Force requirements. Early in March General Partridge accordingly proposed to establish a joint Army-Air Force board which would hear witnesses and report such changes as were needed in the tactical air system. The Eighth Army agreed that such a study would be a good thing. Accordingly, the Army-Air Force board met at Taegu under the presidency of the Eighth Army's Brig. Gen. J. J. Burns, heard testimony concerning the workings of the cooperative system, and reported to Generals Partridge and Ridgway on 26 March.[67]

At the outset of its report the Burns board concluded that the Army-Air Force system of air-ground operations was "sound and adequate" and was "applicable to the Korean theater of operations." As far as the Air Force side of the air-support picture was concerned, the Burns board devoted most of its attention to the forward elements of the air-control system—the tactical air-control parties and the tactical air coordinators. Whereas General Partridge had always allocated the tactical air-control parties on a basis of one to each regimental, division, and corps headquarters, Eighth Army representatives urged that a tactical air-control party should be allocated to each Army battalion. Actually, however, the Eighth Army representatives noted that such an allocation was impracticable at this time in Korea because of a limitation on the number of communications channels available to the tactical air-control parties. The AN/VRC-1 radio-control jeeps in use in Korea had only four channels of very-high-frequency communications, and, even when the parties were employed at regimental level, they frequently interfered with each other's radio transmissions. Until such time as the tactical air-control parties could secure portable very-high-frequency radios, which would permit a forward controller to go on foot up to a ground observation post, the Burns board recommended that the parties should station themselves somewhere in the regimental area where they could obtain immediate communications with the artillery battalion's fire-direction center and thus be able to coordinate fire during air strikes or get the artillery to mark close-support targets with colored smoke shells. The Burns board found only one fault with the Mosquito controllers: there were not enough of them. Eighth Army representatives wanted one of the airborne controllers continuously on station over each front-line division during daylight hours.

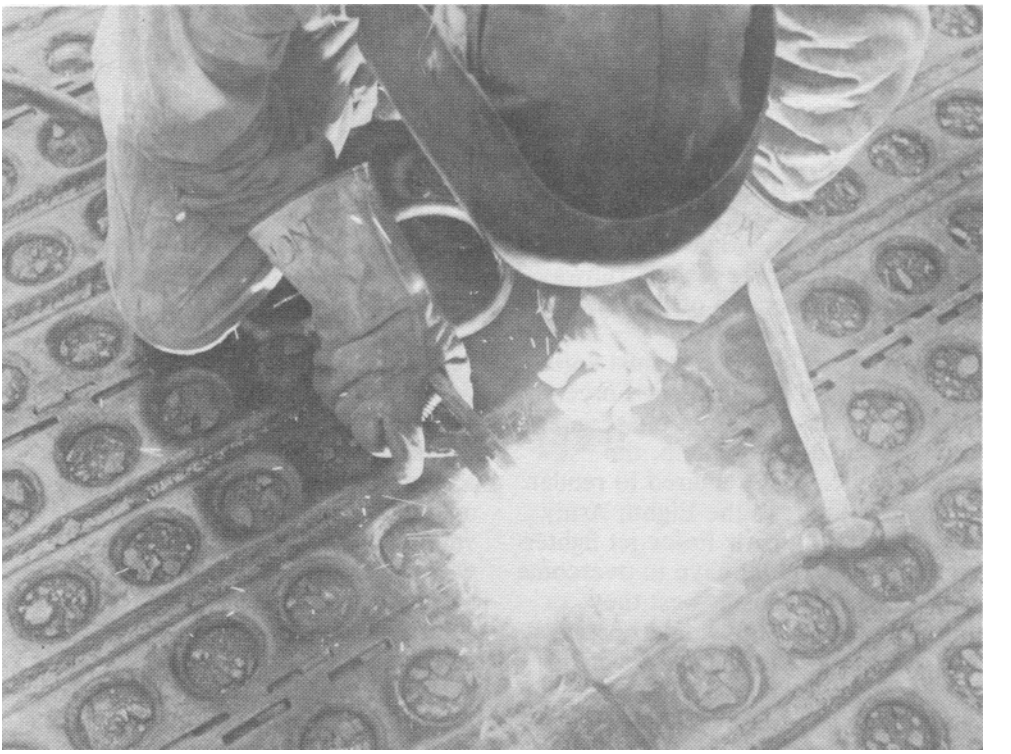
Partly in response to the Burns board suggestions and partly as the result of independent study, the Fifth Air Force soon undertook a general reorganization of the Mosquito and tactical air-control party functions. Since 1 August 1950 the 6147th Tactical Control Squadron (Airborne) had provided the Mosquito controllers, and since 25 December 1950 the 6164th Tactical Control Squadron had provided the enlisted members and equipment for tactical air-control parties. Both to provide more Mosquito controllers which the Army wanted and to provide

a more logical organizational framework for the whole control function, the Fifth Air Force, effective on 25 April 1951, established the 6147th Tactical Control Group (Provisional), including the 6148th and 6149th Tactical Control Squadrons (Air), the 6150th Tactical Control Squadron (Ground), and two supporting squadrons. The two air-control squadrons would now provide Mosquito controllers, and the ground-control squadron would provide the enlisted personnel and equipment for the tactical air-control parties. As for the radio equipment possessed by the tactical air-control parties, the Fifth Air Force had long recognized that more communications channels were necessary. Already the Far East Air Materiel Command was manufacturing new 12-channel AN/ARC-3 radio jeeps, and by 5 June all tactical air-control parties would be so equipped. General Partridge also requisitioned portable very-high-frequency radios for use by forward air controllers, but these sets would not soon be provided to the Fifth Air Force.[68]

The Burns board examination disclosed several faults in the Eighth Army's air-ground operations system, the Army contribution to the air-support establishment in Korea. Testimony of ground officers indicated that the SCR-399 high-frequency tactical air-request radio net between divisions and the Joint Operations Center was "generally dependable," but within divisions the board noted that battalion commanders who required immediate air support were compelled to forward their requests either by wire communications or over the division artillery or division command radio nets. When battalions were extended, or when the organic nets were crowded with other traffic, battalion commanders frequently relayed their air-support requests over the Air Force tactical air-direction net to division, or, more often, directly to the Joint Operations Center. This use of Air Force communications frequently overloaded them, and it also prevented regiment, division, and corps fire-support coordination centers from screening air-support requests to determine if artillery could not hit the targets. The board recommended that the Eighth Army establish special tactical air-request radio nets within divisions. Testimony heard by the board also indicated that some divisions and corps had not established G-3 air officers as a full-time duty and had not provided these officers with necessary assistants to permit twenty-four-hour duty schedules. The board recommended that the Eighth Army emphasize these G-3 Air duties. In response to the Burns board recommendations, the Eighth Army issued a directive establishing G-3 Air officers as a full-time twenty-four-hour duty at corps and divisions. It also instructed battalion commanders to forward their requests for air-support missions over Army communications; only in cases of emergency were battalion commanders authorized to use Air Force tactical air-direction communications for presenting their requests for air support.[69]

As the Eighth Army battleline reached the 38th parallel General Partridge and General Henebry knew added concern over the lack of airfields in Korea, especially advanced airstrips close behind the front lines. Early in March General Partridge approved plans for the development of all-weather airfields in Korea—including three airfields properly located for the support of the Eighth Army—but not before June would the Fifth Air Force be able to secure enough aviation engineer battalions to begin any

extensive airfield developmental programs. In the meantime, General Partridge asked the Eighth Army to use its combat engineers for some part of the necessary airfield construction.[70] In support of the ground operations in western Korea, General Henebry's 315th Air Division landed supplies first at Suwon, then at Kimpo (where a taxiway served as a landing strip), and finally at the Seoul Municipal Airfield. Following a slight amount of repair work, the 35th Fighter-Interceptor Group began to stage 12 Mustangs through Suwon Airfield on 1 March; and on 8 April the group moved its staging detachment—now expanded to 24 aircraft—to the Seoul Municipal Airfield.[71] After staging through the airfield for several weeks, the 6147th Tactical Control Squadron moved to the old airfield at Pyongtaek (K-6) late in March. This deployment brought the Mosquitoes closer to the western front, and in order to extend the time of Mosquito patrols over the eastern front the 6147th Squadron moved a detachment to an old fighter strip on the shores of the Japan Sea at Kangnung (K-18). In central Korea the scarcity of airfields and of acceptable sites for airstrips was most acute, and yet it was in this inaccessible area that the Eighth Army's combat troops most needed air-delivered supplies. In March Eighth Army engineers prepared a runway at the mountain-valley town of Hoengsong, and 315th Air Division planes



Locking slots and bayonet hooks are secured and welded by crews of the 930th Engineer Aviation Group of the U.S. Army.

Rollers pack down the asphalt surface of a runway.

rushed high-priority cargo there. Farther north, at Chunchon, other combat engineers worked with rifles on their backs to prepare a short runway in a burned-out section of the newly-captured town.[72]

On the eve of the Communist spring attack in Korea the Fifth Air Force and 315th Air Division did not possess, and would not be able to obtain, the airfields which they required to render optimum support to the Eighth Army. Accordingly, Fifth Air Force jet fighter-bomber wings would have to overcome their range problems as best they could. The 27th Wing would operate its relatively long-ranged Thunderjets directly from Itazuke. The 8th and 51st Wings equipped their short-legged F-80's with oversized wing tanks, which carried enough fuel for a trip from southern Japan to the front lines and return to Taegu Airfield. At Taegu, in March, the 8th and 51st Wings added personnel and equipment to the 49th Wing's refueling and rearming detachment, which now became "no longer an experiment but a much-used, high-performance operation."[73] Not only were Fifth Air Force wings based in Japan too far distant from the scene of battle, but the scarcity of airfields in Korea had another adverse effect on air operations which was derived from the variable seasonal weather. At times the weather over the front lines would be perfectly clear while the airfields in southern Korea were closed by spring storms. Under these circumstances the detachment of 35th Group Mustang fighters at Seoul would prove invaluable, but the Fifth Air Force had no such detachment available for operations in central Korea.[74]

### *4. Air-Ground Actions Defeat the Communist Spring Offensive*

At the beginning of April 1951 all signs pointed to the fact that the all-out Communist offensive would be launched within a few weeks. Inclement weather, together with fog and haze, would hamper United Nations air operations and also present the on-foot Red armies with advantages of maneuver over motorized United Nations ground troops. Communist ground opposition had begun to stiffen, but the Eighth Army was still moving ahead toward the enemy's vital Chorwon-Kumhwa-Pyonggang communications and supply area at a rate approaching two miles a day. General Ridgway well understood that the Communists could not allow United Nations forces to breach this "Iron Triangle" without making a major offensive effort of some kind, but he wished to straighten his defense lines and maintain pressure on the Reds.[75] General Ridgway, however, would not command in the field when the Red attack came. On 11 April, at the direction of President Truman, General Ridgway relieved General MacArthur as Commander-in-Chief, United Nations Command and Far East Command. Dispatched by air from Washington, Lt. Gen. James A. Van Fleet arrived in Korea to take command of the Eighth Army and its attached forces on 14 April.[76]

Sometime early in April General Peng Teh-huai began to send new and fresh Chinese Communist armies to the 38th parallel battleline. How deeply the Reds had drawn upon troop strength remaining in China was revealed by the designation of the armies. The Chinese First Field Army's XIX Army Group (63d, 64th, and 65th Armies) took a position behind the western front. The Second Field Army's III Army Group (10th, 12th, and 15th Armies) came to the central front. Having completed replenishing the combat losses it had sustained in December's fight in eastern Korea, the Third Field Army's IX Army Group (20th and 27th Armies) deployed part of its forces to east-central Korea. Added to the strength of North Korean and Fourth Field Army units already at the battleline, the Communists were poising something on the order of 70 divisions for the attack.[77] The Reds were evidently going to try to overwhelm and destroy the United Nations forces. From their deployment, it appeared that they would mount their strongest attacks in the west and west-central zones, where relatively flat terrain led southward toward Seoul. General Van Fleet took these factors into consideration on 18 April, when he revealed the Eighth Army's plans. Utilizing superior air and ground firepower to effect casualties on the enemy, United Nations forces would roll backward as necessary through a series of phased defense lines. When the Communist offensives faltered, the Eighth Army would counterattack. General Van Fleet intended to continue General Ridgway's strategy of "maximum punishment" and "maximum delay." General Van Fleet also intended to make more use of artillery than ever before in Korea. "We must expend steel and fire, not men," he said. "I want so many artillery holes that a man can step from one to the other."[78]

In bright moonlight, on the night of 22 April, General Peng Teh-huai launched the "Big Red Attack" which Radio Pyongyang confidently predicted would destroy the United Nations Command. The Reds attacked every-

where across the front, but the major offensive, mounted by an estimated 337,000 Red soldiers, was a double envelopment aimed against the American I and IX Corps, obviously designed to cut the trans-peninsular Seoul to Kangsong highway and to capture the South Korean capital. During the night when the attack began ground-radar-directed medium bombers bombarded enemy troop concentrations south of Chorwon and north of Munsan. And as Communist ground troops crossed the Imjin River the U.S. I Corps used MPQ control to direct B-26 strikes against the enemy forces readying themselves for a breakthrough. On this night the I Corps recorded that the B-26's not only bombed the enemy but strafed his weapon positions as well.[79]

Beginning at daybreak on 23 April and continuing throughout the day, FEAF warplanes flew more than 1,100 sorties, some 340 of them in close support of the Eighth Army.* In an effort to mask their movements against day-flying aircraft, the Reds started woods fires along the battleline, and the smoke and haze did impede low-level strafing attacks. But there were too many Red soldiers and not enough cover, and the fighters and light bombers flew all-out schedules to slaughter the enemy. A report filed by Capt. William A. Alden, who led two 35th Squadron F-80 fighter-bombers in an early-afternoon close-support strike near the Imjin River on 23 April well illustrated the devastating effect of airpower on the enemy. Captain Alden's flight found some 200 Chinese frantically trying to bury themselves in the ground. The Shooting Stars dropped four 260-pound fragmentation bombs, fired eight HVAR rockets, and expended 3,600 rounds of .50-caliber ammunition. The Mosquito controller who directed the attack reported that at least 175 enemy troops were casualties.[80] This was only one example of close support in action, and across the front lines, on 23 April, Fifth Air Force pilots estimated that they inflicted nearly 2,000 casualties on the enemy, a total which ground observers called modest.[81]

Although Eighth Army troops fought valiantly, the Red tide was too strong, and south of Kumhwa the ROK 6th Division collapsed. Rather than see his army engulfed, General Van Fleet gave the order for the I and IX Corps to fall back fighting. For three more days after 23 April FEAF pilots flew more than 1,000 sorties a day in weather marred only by low haze and smoke. The fast carriers of Task Force 77—the *Boxer, Princeton,* and *Philippine Sea*—had returned from a sweep through the Formosa Straits on 16 April and were ready to lend a hand with close support. Benefiting from the flexibility of airpower, which permitted the Joint Operations Center to throw daylight fighter-bomber and MPQ-directed medium-bomber attacks into the breach near Kumhwa, the U.S. IX Corps cleared up its difficulties and launched counterattacks to clear the Seoul-Kansong highway. On the U.S. I Corps front fighter-bombers and night-flying B-26's and B-29's assisted a withdrawal to defense positions three miles north of Seoul, where the ground troops stood firm. In this fighting withdrawal the I Corps recorded that airpower and

*This was the third largest number of close-support strikes yet to be flown by the Fifth Air Force and its attached units. On 6 August 1950 380 close-support sorties had been flown, and 19 September 1951, with 361 close-support sorties, was the second largest day. Although substantial, these daily ground-support peak totals were quite small when compared to the Fifth Air Force's performance late in the war. On 15 June 1953, for example, the Fifth Air Force flew 859 ground-support sorties. *See* Chapter 19, p. 674.

artillery "kept enemy activity near the friendly front lines to a minimum during daylight hours...and made it possible for the friendly forces...to move at will during daylight, and prepare for the inevitable enemy assaults at night."[82] All tactical air wings distinguished themselves, but the 35th Group's Mustangs, which flew more than a hundred sorties a day, many of them from Seoul Airfield, achieved especially meritorious results. Early on the morning of 27 April, for example, the Mustangs got under rain clouds north of Seoul to envelop advancing enemy columns with napalm fire bombs. In one last dying gasp before the offensive collapsed, the Reds attempted to ferry troops across the Han River to the Kimpo peninsula and outflank Seoul. United Nations airmen strafed an estimated 6,000 enemy troops trying to cross the Han, and such as got ashore were easily handled by ROK Marines. The Communists reckoned that the "First Impulse" of their "Fifth-Phase" offensive ended on 29 April.[83]

All United Nations forces worked together to inflict terrible casualties on the Communist aggressors. Ground observers reported that United Nations airmen were conservative in their estimates of the casualties which air attack inflicted on the enemy, and air units referred to "the astronomical losses inflicted upon the enemy by our ground forces."[84] For the first time in Korea, moreover, United Nations airmen waged a tremendous close-support effort at night as well as by day. "Enemy frontline troops have now learned," announced General Stratemeyer, "that darkness no longer provides a protective cloak against our pinpoint air attacks on their positions." During April, despite many moves, the MPQ detachments directed 450 bomb drops on 425 targets nominated by the ground forces for attack. Each B-29 which attacked the hostile ground positions at night trained out forty 500-pound proximity-fuzed bombs. Each of these bombs burst into about 15,000 fragments, which showered downward to saturate an area 150 feet in diameter. The full extent of the casualties inflicted by the night-attacking bombers could not be exactly assessed, but ground-force reports mentioned excellent results. On the night of 26 April, on the western front, a B-29 dropped its bombs on an enemy concentration forming for an attack against the U.S. IX Corps. The attack never came. That same night two B-26's attacked enemy forces with 260-pound fragmentation bombs. At daylight ground patrols counted more than 400 Red bodies. Near Kapyong, after a single B-29 attack, ground patrols counted 600 dead next morning. On the eastern front, near Inje, ROK troops driven from a hill called for a supporting B-29. Next morning the ROK's recaptured the hill and counted 800 Communist troops killed by the B-29 attack. "Prisoners of war that we are taking are really complaining about night bombing," reported the U.S. X Corps. "We think the night effort we have been receiving has done a great deal to discourage the enemy."[85]

Although the Communist offensive had been halted short of Seoul and north of the Han River, Red prisoners explained that General Peng Teh-huai meant to launch a "second impulse" attack very soon, and United Nations reconnaissance crews reported that Red divisions were sideslipping over toward the east-central and eastern fronts.[86] Designing to keep the Reds off balance, General Partridge ordered his air wings to emphasize armed reconnaissance, and General Van Fleet

directed his corps commanders to press forward with tank-infantry task forces. Every evidence indicated that the cooperative air-ground probes were hurting the Reds. On 2 May, for example, Lt. Col. Rexford H. Dettre led a flight of four 35th Group Mustangs which dropped napalm at each end of a tunnel near Chunchon. A Mosquito controller reported that an enemy battalion had taken refuge in the tunnel, and, when no enemy troops showed themselves after the napalm attack, the Mustangs sealed both ends of the tunnel with general-purpose bombs.[87] On 4 May Captain Gordon S. Bush, 45th Tactical Reconnaissance Squadron, who was covering an advancing column of American tanks, called for flights of Thunderjets and Corsairs which he directed against dug-in Red troops. After a scorching napalm strike, the Reds came out with their hands in the air and surrendered to the tank column.[88] During these first fifteen days of May United Nations armored task forces drove the Reds back from five to ten miles across the whole peninsula.

Despite the hindrance of United Nations air and ground attacks, the Communists completed a concentration against the Chunchon-Inje sector held by the U.S. X Corps and the ROK III Corps by mid-May. Beginning on 16 May, an estimated 125,000 Chinese and North Korean soldiers struck southward down the roads from Chunchon and Inje which converged on Hongchon. Near Hangye ROK forces broke under the attack, exposing the flank of the U.S. 2d Infantry Division. Until the U.S. 3d Infantry Division could come over from its reserve position southeast of Seoul, the U.S. X Corps faced serious trouble. On the initial day of the attack a blanket of rain and fog assisted the Reds, and variable weather conditions continued to hamper United Nations air strikes on the days that followed. Once again, however, the flexibility of airpower came to the assistance of the ground forces, and the U.S. X Corps had as much close support as it could profitably employ. General Almond recorded that the X Corps dispatched aircraft to its divisions as fast as the divisions could handle them—usually three to four strikes an hour. Evidently the Reds had decided to carry their objectives at any price. Fighter-bomber pilots and Mosquito controllers reported that the Reds made little effort to take cover. Red troops continued to march forward even when they were being blasted from the air. Under such circumstances air-support pilots rained heavy destruction on the Reds. On 17 May the 2d Division reported that supporting air strikes killed at least 5,000 hostile troops on its front. On 18 May the Joint Operations Center had even more aircraft available for close support, for Task Force 77's three fast carriers reported for close air-support missions. Although the force of the Communist attack drove forward almost to Hongchon, the staunch stand of the U.S. 2d Division, all-out air support, and monumental artillery fire punished the Reds severely.[89]

During the first few days of the Communist attack General Almond used a good many MPQ-directed bomber sorties against hostile targets along the front lines, but his shrewdly conceived defense plan comprehended an even larger use of night-bombing aircraft. General Almond knew that in several days the Red drive would begin to falter and that the Reds would then begin to reassemble and mass their reserves for a renewed attack. When this happened, Almond planned to hit the Reds with a major night-bombing

attack. The U.S. X Corps' G-2 and G-3 worked closely together to nominate MPQ targets on information obtained from prisoners, observation posts, artillery air observers, and fighter pilots. On the night of 19 May the X Corps implemented the massive night attacks. At about 1800 hours on 19 May the Corps' G-2 reported enemy troops preparing for an attack. Eight B-29's saturated the area with 80 tons of proximity-fuzed 500-pound bombs, and no enemy attack materialized. About 2100 hours, on the night of 20 May, 15 B-29's attacked enemy troops reported to be assembling against the U.S. 2d Division. On this night a captured soldier of the 2d Division told what happened. Shortly before midnight, while a Chinese battalion was forming for attack, it was hit by the B-29's. The radar-aimed bombs inflicted many casualties and caused the enemy battalion to retreat northward in disorder. The American prisoner escaped in the confusion. Infantry patrols went forward next day and estimated that 300 fully armed and dead Chinese were left behind. At about 2000 hours, on the night of 21 May, the X Corps received reports that enemy troops were massing on the roads near Hangye and Chunchon. Eight B-29's hit the former area and five worked the latter zone. The Reds finally attacked, but only with two battalions, which were easily repulsed.[90] General Ruffner, commander of the 2d Division, told General Stratemeyer that the precision with which the radar-directed bombers destroyed enemy troops at night within 400 yards of his front lines was "utterly amazing."[91] General Almond called the night close support "an epic in our warfare." Almond thought it highly significant that the Reds committed no reserves and made no major night attacks after 20 May.[92]

In the battles of April and May the combat cargo airmen of the 315th Air Division played a splendid role, which in some measure dwarfed anything they had done up to this time. In order to stop the Red attack and to effect major casualties on the enemy, General Van Fleet had authorized his artillery battalions to exceed any prior limitations on fire, and the gun crews had begun to fire what they called the "Van Fleet load," five times larger than ammunition allowances up until then.[93] As General Van Fleet later explained, the Eighth Army's ammunition stocks, never so great as he wished, fell below a danger point, and steadily firing guns had to be fed by airlift from Japan.[94] In April, during the six days the Communists attacked in the west, the 315th Air Division airlifted more than 4,500 tons of battle supplies to Korea. The cargo planes landed some 1,700 tons of these supplies on the taxiway at Kimpo.[95] Beginning on 16 May, and for ten days thereafter, the 315th Air Division hauled more than a thousand tons of air cargo each day. On 23 May, with 222 aircraft on hand, the 315th flew 409 transport sorties to lift 1,534 tons of cargo, so exceeding its stated maximum capacity of 1,291 tons. The great bulk of the cargo lifted was ammunition and petroleum products, nearly all of which were landed at Seoul or Hoengsong.[96] At one time during the Chinese offensive, Hoengsong was only six miles behind the X Corps command post, and during the several days of most furious fighting truck crews lined up 50 to 100 at a time waiting to take ammunition off the transport planes and carry it to firing batteries.[97] In spite of the fact that its C-119's were grounded during several weeks in the period, the 315th Air Division delivered to Korea, by airlift and airdrop, 15,900 tons of cargo in April and 21,300 tons in May 1951.[98]

### *5. Defeated Reds Request a Cease-Fire*

Everywhere along the United Nations lines in Korea the Communist "Second Impulse" of the "Fifth-Phase" offensive had collapsed on 22 May in a blood-soaked defeat so costly as to approach disaster. Always before, when their offensives spent themselves, the Reds had withdrawn beyond artillery range to reorganize and resupply. In May, however, United Nations ground forces recoiled only slightly, and by the fifth day of the Red attack, when the Red assault forces had hardly cleared their lines of departure, General Van Fleet launched the Eighth Army forward in a vicious counteroffensive, forcing the Reds into an exodus from South Korea which soon became a precipitous flight.[99]

According to General Van Fleet's order, the American I, IX, and X Corps launched a coordinated counteroffensive on 23 May designed to cut the enemy's main supply routes and destroy him. Preparing the way for the attack, 22 Okinawa-based Superfortresses of the 19th and 307th Bombardment Groups, together with 11 B-26's of the 3d Bombardment Group, employed MPQ-aiming techniques to lash enemy personnel across the entire front in the greatest single night close-support effort of the war.[100] Down on the ground, Army observers cheered the air-bursting bombs. One ground observer radioed the Superforts that bomber attacks in his area in two days had wiped out two regiments and a battalion of Chinese troops.[101] Although unfavorable weather conditions during the last week of May would hamper both close-air support and armed reconnaissance, the Joint Operations Center nevertheless managed lucrative attacks against Red troops who were desperately attempting to escape from the battlefield. On 23 May, when armor-infantry task forces began to attack forward the Joint Operations Center kept Mosquito controllers continuously over them and dispatched flights of supporting fighters to report every thirty minutes. This was the routine close support, and the Joint Operations Center had other policies concerning other targets which developed during a day's fighting. If enemy troops or vehicles were reported in the open, the Joint Operations Center gave highest priority to attacks against them, diverting pilots from other missions if necessary. If the targets were dug-in troops or parked vehicles, the Joint Operations Center usually scrambled alert planes to attack them. Supply dumps, bridges, and other immobile targets reported by ground forces had the lowest priorities.[102]

Supported by the full resources of FEAF and of Task Force 77, the Eighth Army made rapid progress against the demoralized Reds. The U.S. I Corps easily advanced north of Seoul to Munsan-ni and Uijongbu, while the U.S. IX and X Corps converged toward Hwachon to cut off Red troops south of the Hwachon reservoir.[103] In this area, on 28 May, Captain Edsel L. George, a Mosquito controller, witnessed an unusual sight. While the Mosquito orbited a flight of fighters overhead, Eighth Army artillery pummeled the enemy. When the artillery ceased firing, the Reds must have guessed what was in store for them, for the Mosquito controller saw them come down from the hills waving white flags. The Mosquito controller called off the air strike and told the Army tank men to close in and accept

North Korean soldiers surrendering to a U.S. Marine.

the surrender.[104] By the end of May Eighth Army troops had again advanced to the 38th parallel and had reconquered the ground given up in the Communist spring offensive. On all fronts the Reds showed their demoralization. In addition to heavy casualties inflicted upon the Reds, a total of 11,526 Chinese and Korean troops surrendered. Not since the period following Inchon had so many Communist soldiers given up the fight.[105]

While the pursuit phase of United Nations ground operations was ending on 2 June, and everywhere except in an indefensible area around Kaesong on the western front the Eighth Army was in full possession of South Korean soil, General Van Fleet had one more task for his ground forces to accomplish. He ordered the U.S. I and IX Corps to advance to Chorwon and Kumhwa and breach the southern limits of the Red "Iron Triangle," the fortified area which was the vortex of the enemy's road nets north of the 38th parallel.[106] Low-hanging clouds and pelting rainstorms now greatly hampered air support and retarded the progress of Eighth Army ground units. Moreover, the Reds kept in entrenched positions during the day, and the fighter-bombers scored no spectacular results other than a steady pounding against Communist caves and bunkers. As United Nations ground troops crept forward toward Chorwon and Kumhwa, however, FEAF unleased a crescendo of radar-directed attacks against enemy positions in the Pyonggang-Chorwon-Kumhwa triangle. At dusk on 7 June and at thirty-minute intervals throughout the night, 23 B-26's and B-29's of the 3d and 98th Groups showered air-bursting 500-pound bombs on enemy troops and

supply positions in the Iron Triangle. All during the night of 8/9 June 16 B-29's of the 19th Group and 17 B-26's of the 3d Group continued the MPQ-directed attack. On the night of 9/10 June five 307th Bombardment Group B-29's put finishing touches on such targets as remained.[107] The Red enemy, who had stubbornly resisted United Nations ground attack, quailed under the aerial punishment, allowing U.S. I Corps troops to enter Chorwon and Kumhwa virtually without opposition on 11 June. In fact, one American tank force drove all the way to Pyonggang, but fearing that it would be "mouse-trapped" at the apex of the triangle, General Van Fleet ordered it to withdraw.[108]

As the June cloudbursts turned Eighth Army lines of communications into quagmires, advancing ground troops depended heavily upon air-transported supplies. In central and eastern Korea the U.S. X Corps and the ROK I Corps were especially dependent upon airdropped and air-landed support. Aircrews of the 314th Troop Carrier Group accordingly threaded their C-119 Flying Boxcars through mazes of mountain peaks to parachute supplies into often inadequately marked drop zones from 800-foot altitudes. On such missions the Flying Boxcars usually picked up some enemy ground fire, but the only losses sustained occurred on 3 June when, in the ROK 5th Division's area, a C-119 formation searching for a vaguely marked drop zone flew through a friendly artillery barrage, which destroyed two of the transport planes.[109] Following this unfortunate accident, General Henebry issued orders that supply-dropping crews would make positive radio contact with a Mosquito controller or a tactical air-control party prior to entering a drop zone. General Henebry also sent a team of officers to visit the front lines and explain to ground units just what a drop zone was supposed to be.[110] In addition to the airdropped supplies, the 315th Air Division continued to lay down cargo at Korean airfields, and the heaviest Army shipments went to Seoul and Hoengsong. Even though Company C of the 811th Engineer Aviation Battalion had been improving Hoengsong Airfield since late April, this airfield was getting rather far to the rear. Early in June Company C accordingly sent a detachment to work on the recaptured airstrip at Chunchon. On 10 June Chunchon's clay-and-gravel runway was 4,200 feet long, and C-54's began to land Army supplies there.[111] Counting both the tonnage parachuted to front-line troops and that landed at airfields in South Korea, the 315th Air Division hauled 22,472 tons of cargo to Korea during June 1951.[112]

In a year of combat in Korea, and especially during April and May of 1951, the Communist armies in Korea had taken a bloodletting of tremendous proportions. In addition to the 163,130 enemy soldiers in United Nations Command prisoner-of-war camps, United Nations intelligence estimated that the North Koreans and Chinese Communists had sustained 863,949 battle casualties. Altogether, the Communists had lost a total of some 1,191,422 soldiers through capture and battle and non-battle causes.[113] At Peking and Moscow the scheming men who directed international communism must have at last recognized that no number of slaughtered Orientals could buy them a victory in Korea. In a radio address delivered in New York on 23 May 1951 Soviet Russia's delegate to the United Nations, Jacob A. Malik, suggested that the time had come for a peaceful solution to the Korean prob-

lem. Marking the first anniversary of Communist aggression in Korea, General Ridgway on 25 June broadcasted a message to the Chinese people in which he professed difficulty in understanding why their leaders continued to sacrifice men when they were so clearly incapable of making good in their boastful efforts to destroy the United Nations forces in Korea. In view of Russia's suggestion, General Ridgway on 30 June broadcasted another proposal to the commander of the Communist forces in Korea looking toward cease-fire meetings to be held aboard a hospital ship in Wonsan harbor. On 1 July Radio Peking addressed a reply to Ridgway, jointly signed by Premier Kim Il Sung, commander of the North Korean People's Army, and General Peng Te-huai, commander of the Chinese "Volunteers." The message stated that the Communists were authorized to suspend military activities and to hold peace negotiations. The Reds suggested that the Korean town of Kaesong should serve as the place of conference.[114] As United Nations and Communist leaders moved toward cease-fire talks, the war in Korea was entering a new phase, but United Nations air operations were going to progress unabated. "Combat operations," enjoined General Weyland on 1 July, "will continue at the normal rate until otherwise directed."[115]

In the year of combat following the Red aggression on 25 June 1950, the United Nations Command had defeated numerically superior North Korean and Chinese Communist ground armies. As their contribution to the victory, FEAF airmen had flown 223,000 sorties to drop 97,000 tons of bombs and 7,800,000 gallons of napalm, to fire 264,000 rockets and 98,000,000 rounds of ammunition, and to transport 176,000 tons of cargo and 427,000 passengers and air evacuees. The FEAF combat sorties had inflicted 120,000 casualties upon the enemy's personnel and had destroyed or damaged 391 aircraft, 893 locomotives, 14,200 railroad cars, 439 tunnels, 1,080 rail and road bridges, 24,500 vehicles, 1,695 tanks, 2,700 guns, and 125,000 buildings which sheltered enemy troops or supplies. FEAF strategic bombers had also neutralized the 18 major strategic targets in North Korea. In the year FEAF had lost 857 officers and airmen—187 killed, 255 wounded, 412 missing, and 3 known to be prisoners of war. Due to enemy action, FEAF had sustained the loss of 246 aircraft, including 188 fighters, 33 bombers, 9 transports, and 17 other planes. Told in terms of statistics, FEAF's combat record was enviable.[116]

The true role of airpower as the decisive force in the United Nations victory in Korea, however, could not be told solely in terms of damages wrought on the enemy. In the maintenance of air superiority over Korea FEAF destroyed or damaged a number of Communist aircraft, but the fact of the maintenance of the air superiority was far more important than the physical damage inflicted on the enemy. Free from the danger of hostile air attack, United Nations forces were able to maneuver as they wished during daylight hours. The Communists, on the other hand, were compelled to move and to fight at night. Air-interdiction missions destroyed enemy troops, equipment, and supplies before they reached the battle zone. Taken in conjunction with the United Nations ground fighting, the air-interdiction operations also impeded the flow of Communist troops, equipment, and supplies to the battle zone. With diligence and long-enough periods of

time between active campaigns, the frugal Orientals from the north were able to accumulate supplies for short and intensive periods of combat. In each offensive, however, the Reds took heavy losses, and each offensive dwindled for want of logistical support before it could bring decisive manpower to bear for a lasting ground decision. In his comments during armistice discussions in August 1951, Lt. Gen. Nam Il, the senior Red delegate, well summarized the dominant role that airpower had played in the Communist defeat. "I would like to tell you frankly," said Nam Il, "that in fact without direct support of your tactical aerial bombing alone your ground forces would have been unable to hold their present positions. It is owing to your strategic air effort of indiscriminate bombing of our area, rather than to your tactical air effort of direct support to the front line, that your ground forces are able to maintain barely and temporarily their present positions." Nam Il's torrent of words was not entirely clear. He evidently considered "strategic air effort" to mean both air attacks against the Communist's industrial capacity and the rear-area interdiction of enemy movement, while "tactical air effort" seemed to be in reference to battleline support. But General Nam Il made one point clear by repeating it several times: "Without the support of the indiscriminate bombing and bombardment by your air and naval forces, your ground forces would have long ago been driven out of the Korean peninsula by our powerful and battle-skilled ground forces."[117]

A B-26 crew makes final preparations for a night assault.

# 12. *Armistice Talks Mark a New Phase of Korean Hostilities*

## *1. United Nations Commanders Confront New Objectives*

As Vice-Admiral C. Turner Joy led United Nations armistice delegates to meet the Communist truce-talk delegation at the South Korean town of Kaesong on 10 July 1951, a new phase of hostilities—so far different from what had gone before as to constitute a virtually new war—was beginning in Korea. In the autumn of 1950 Chinese Communist intervention had convinced the United Nations of the futility of attempting to unify Korea by military force. Unable to accomplish this larger objective, the United Nations ground forces needed to go no farther north of the 38th parallel than the defendable terrain they held in early July 1951. In the spring of 1951 the Communists had been convinced by a series of major military disasters that they could not drive United Nations forces out of South Korea. Of course neither the United Nations nor the Communists could know the other's ultimate objectives, but for a time at least the United Nations and the Communists had abandoned their identical political objectives of unifying Korea by military force. Over the conference table at Kaesong both sides were beginning to seek acceptable terms for ending hostilities in Korea.

The United Nations and the United States had not easily abandoned the objective of unifying Korea by military means. During the cataclysmic month of December 1950, however, the United Nations had been forced to change its position on Korea. United States military leaders recognized that to continue to attempt to achieve the political objective of Korean unification by military means would incur the grave risk of an Asiatic war or perhaps World War III. The Joint Chiefs of Staff therefore accepted a State Department position paper submitted to President Truman for use in conversations with Prime Minister Attlee which stated that the most feasible solution to the Korean question would be to secure a cease-fire agreement and respite from combat, during which the United Nations could proceed with the political, military, and economic stabilization of the Republic of Korea while continuing to seek to accomplish Korea's eventual unification through political actions.[1]

The United States accordingly sponsored and the United Nations General Assembly on 14 December 1950 adopted a resolution proposing that immediate steps be taken to end the fighting in Korea and that existing issues there be settled by peaceful means. When Communist China did not seriously consider a cease-fire agreement, the General Assembly on 1 February 1951 declared the People's Republic of China to be in aggression in Korea and affirmed the determination of the United Nations to meet the aggression. At the same time, the General Assembly expressed its intention to bring about a cessation of hostilities and then to achieve the political unity and independence of Korea by peaceful means.[2] After December 1950 United Nations political objectives toward Korea continued to visualize a united and independent country, but the United Nations' military objective required the United Nations Command merely to conduct such operations, consistent with the

security of its forces, as would inflict maximum casualties on the Communist armed forces, thereby compelling Communist China and North Korea to seek a military armistice.

Whether the United Nations military objective was not clearly communicated to General MacArthur, or whether he was so fundamentally lacking in sympathy for the idea that he could not grasp it, cannot be determined, but General MacArthur later testified that he was "operating...in a vacuum" and, although aware that his directives had somehow been changed, was informed only that his military objective was the security of his forces and the protection of Japan.[3] At times during the spring of 1951 General MacArthur was openly critical of the "accordion fashion" fighting in Korea. "There is no substitute for victory," he noted in one letter released to the press.[4] Without clearing the statement with Washington, General MacArthur on 24 March implied that the United Nations might depart from its tolerant efforts to contain the war within Korea. Back in Washington President Harry S. Truman now thought it evident that General MacArthur did not agree with United States policy in Korea, and on 11 April 1951 President Truman relieved General MacArthur from all his commands in the Far East. To the American people President Truman explained that the United States military objective in Korea was "to repel attack...to restore peace...to avoid the spread of the conflict."[5]

Shortly after he became commander of the United Nations Command and the Far East Command, Lt. Gen. Matthew B. Ridgway announced: "Our principal objective is to keep the United States out of war and in Korea to restore international peace and to repel aggression. The job of unifying Korea, while desirable, is not an element of this principal mission."[6] During April, May, and June, the objectives of the United Nations and of the United States toward Korea were aired in public hearings conducted by a United States Congressional committee investigating General MacArthur's removal from command. Secretary of State Dean Acheson, for example, testified that the United Nations would be satisfied to end the fighting on terms which would ensure the security of the Republic of Korea. Although Acheson did not state it in so many words, he at least implied that the United Nations would accept the 38th parallel as the Republic of Korea's northern boundary.[7] Evidently the Communists also realized that they could no longer hope to unify Korea by force, for on 23 June in a radio broadcast in the United States, Russia's delegate to the United Nations, Jacob Malik, indicated that the time had come for the restoration of peace in Korea. "The Soviet peoples believe that as the first step," stated Malik, "discussions should be started between the belligerents for a cease-fire and an armistice providing for mutual withdrawal of forces from the 38th parallel." In response to an exploratory message from General Ridgway, Premier Kim Il Sung and General Peng Te-huai messaged on 1 July: "We are authorized to tell you that we agree to suspend military activities and hold peace negotiations."[8]

While technical arrangements were being made for the meeting of armistice delegates within Communist lines at Kaesong, President Truman and the Joint Chiefs of Staff provided General Ridgway with an official frame of reference for the armistice negotiations. "Our principal military interest in this armistice," stated the Joint Chiefs, "lies in a cessation of hostilities in

Gen. Matthew B. Ridgway, USA, watches planes returning from strikes during a visit to the USS *Bon Homme Richard (Courtesy U.S. Navy).*

Korea, an assurance against the resumption of fighting, and the protection of the security of the United Nations forces." The Joint Chiefs expressly enjoined Ridgway that "discussions...should be severely restricted to military questions," and charged him not to "enter into discussion of a final settlement in Korea or consideration of issues unrelated to Korea, such as Formosa and the Chinese seat in the United Nations."[9] Noting that the Communists evidently intended that hostilities would be suspended at the beginning of armistice negotiations, the Joint Chiefs stated that there must be no relaxation in United Nations military effort until proper arrangements for a cessation of hostilities had been agreed upon in armistice terms.[10] After two months of continuing discussions, the Joint Chiefs also provided General Ridgway with a codification of existing directives on 10 July, much of which had to do with objectives in Korea. The United Nations Command was charged "to assist the Republic of Korea in repelling armed aggression...and to restore international peace and security in Korea." Consistent with the security of forces under his command, General Ridgway was specifically charged to inflict maximum personnel and materiel losses on the Communist forces within Korea and adjacent waters. The policy objective of this military mission was to create conditions favorable to the settlement of the Korean conflict which would, as a minimum, terminate hostilities under appropriate armistice arrangements, establish the authority of the Republic of Korea over an area south of a northern border so located as to facilitate administration and military defense (but in no case south of the 38th parallel), provide for the withdrawal of non-Korean armed forces from Korea in appropriate stages, and permit the building of sufficient military power in the Republic of Korea to deter or repel a renewed North Korean aggression.[11] As armistice negotiations got under way at Kaesong on the morning of 10 July, Admiral Joy's opening statement emphasized that the United Nations delegation would not discuss political or economic matters of any kind, or military matters unrelated to Korea. Admiral Joy also stated that hostilities would continue in all areas except in the neutral zone around Kaesong until there was agreement on armistice terms. Following this initial statement, the United Nations delegation proposed the adoption of an agenda to include the establishment of a demilitarized zone representing military realities, concrete arrangements for a cease-fire to be supervised by an armistice commission and military observer teams, and arrangements relating to the disposition of prisoners of war.[12]

Somewhere in the policy-making echelons of the Soviet bloc of nations Communist planners must have been working out similar instructions for the Chinese and North Korean delegates who were to attend the meetings at Kaesong. The statement of Malik and the message of Kim and Peng already indicated what the Communist proposals were likely to be, but the peace terms were first stated in detail by the senior Communist delegate, Lt. Gen. Nam Il, at Kaesong, on 11 July. Nam Il proposed that, on mutual agreement, both belligerents would simultaneously order the cessation of hostile military actions of every sort. The 38th parallel would be fixed as the military demarcation line, and both armies would simultaneously withdraw to a distance of ten kilometers from the demarcation line. At this time talks should be

immediately conducted on the exchange of prisoners of war, so that these unfortunate men might return home quickly. All foreign troops should be withdrawn from Korea in the shortest possible time. The formal Communist agenda for the truce talks proposed acceptance of the 38th parallel as the military demarcation line, the implementation of a cease-fire and establishment of a demilitarized zone, and the withdrawal of foreign troops from Korea. On the same day as Nam Il made this statement of position at Kaesong, the Red propaganda radio stations at Peking and Pyongyang broadcasted these terms to the world. This action left little doubt that the Communist terms had been agreed upon and disseminated well before the assembly of truce delegates at Kaesong.[13]

After a few days of fruitless negotiations at Kaesong General Ridgway stated his conviction that the Communists believed that "an armistice is the short way to the attainment of their unchanged objective at minimum cost."[14] According to intelligence reaching Tokyo, for example, General Peng Te-huai, on 1 July, had advised all Chinese commanders in Korea that the Communist truce delegates were representing a victorious army. If the Kaesong discussions proved unavailing, Peng reportedly said, the Chinese Communists would launch a summer offensive.[15] General Ridgway began to suspect that the Reds were hoping to use the cover of the armistice negotiations to build up forces for a renewed attack in Korea. He later noted that the Communist counterproposal to hold the talks at Kaesong on South Korean soil rather than on a neutral hospital ship in Wonsan harbor was the "first harbinger of Communist delay."[16] Looking back at the beginning of the truce negotiations, General Weyland expressed a somewhat different viewpoint. Weyland thought that the Communist enemy "was prepared to accept what he thought to be our terms when he came to the conference table," but that "when he found the terms to be less favorable than he thought, the long negotiations began."[17] Whatever the Communist motives may have been as negotiations continued day after day without reaching agreement on mutually acceptable armistice terms, the United Nations Command and the Communists each possessed the same alternatives. They could compromise and accept less than they wanted in the way of armistice terms, or they could bring additional military pressure to bear to force the other side to accept terms which were less than it desired. From July 1951 onward the military objectives of both sides were the same—the accomplishment of an armistice on the most favorable terms.

In this same period which witnessed the defeat of the Communist armies in Korea and the incidence of the truce talks, the Far East Air Forces got a new slate of top-level commanders. Although General Stratemeyer professed loyalty to General MacArthur, he had been very reluctant to question national policy. "We are *prepared* to carry the air war to the enemy wherever he may be," Stratemeyer informed the press on 26 March 1951, "but a decision to extend the employment of our bombers or our fighters beyond the confines of Korea is not one that should be made by the field commander." "This," stated Stratemeyer, "is a basic decision that quite properly must be made at governmental and/or United Nations level." "It might be wise to point out," he added, "that the military man *implements* foreign policy in our democratic form of

Lt. Gen. O. P. Weyland (left) and Maj. Gen. Edward J. Timberlake.

government—the military do not *formulate* foreign policy."[18] General Stratemeyer's statement was a model reporting of military ethics in a constitutional government. Unfortunately, however, General Stratemeyer would not much longer command the Far East Air Forces, for on 20 May 1951 he suffered a severe heart attack which would force him to undergo a long period of hospitalization.[19]

The sudden illness of General Stratemeyer brought immediate changes in commanders in the Far East Air Forces. As the senior air officer present, Lt. Gen. Earle E. Partridge flew to Tokyo to assume the duty as acting commander of FEAF, and Maj. Gen. Edward J. Timberlake became acting commander of the Fifth Air Force.[20] Already, however, USAF had selected both Generals Partridge and Timberlake for rotation to important commands in the United States—Partridge to take command of the USAF Air Research and Development Command and Timberlake to take charge of the Ninth Air Force. As a result, General Vandenberg soon announced that Lt. Gen. O. P. Weyland would return to Tokyo to command the Far East Air Forces. At the outbreak of the Korean conflict General Weyland had been temporarily assigned as General Stratemeyer's vice chief of staff for operations, but he had recently returned to the United States to serve as deputy commander of the USAF Tactical Air Command. Vandenberg also stated that Maj. Gen. Frank F. Everest,

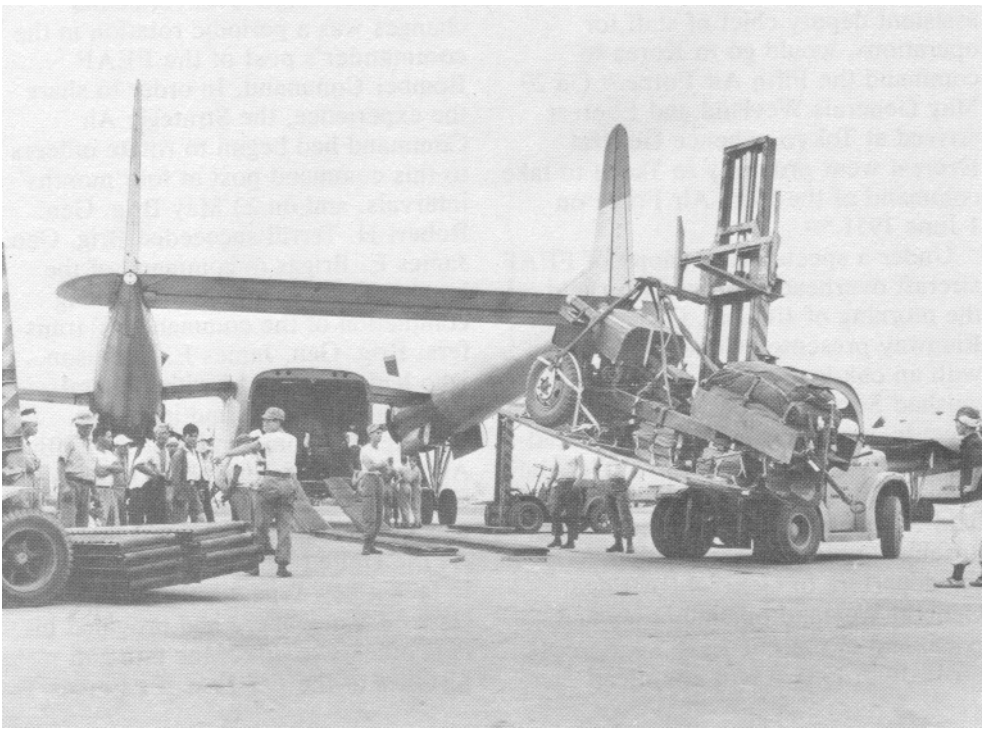
who had been serving as USAF's assistant deputy chief of staff for operations, would go to Korea to command the Fifth Air Force.[21] On 29 May Generals Weyland and Everest arrived at Tokyo, whence General Everest went promptly to Taegu to take command of the Fifth Air Force on 1 June 1951.*[22]

Under a spectacular canopy of FEAF aircraft overhead at Haneda Airfield on the morning of 10 June, General Ridgway presented General Partridge with an oak-leaf cluster to his Distinguished Service Medal and wished him success in his new assignment. Recalling their association in Korea, General Ridgway commented: "I doubt if any field commander ever had more loyal, unselfish, unfailing cooperation." Upon the departure of General Partridge, General Weyland officially assumed command of the Far East Air Forces on 10 June 1951.[23] Not unnoticed among these high-level command changes was a periodic rotation in the commander's post of the FEAF Bomber Command. In order to share the experience, the Strategic Air Command had begun to rotate officers to this command post at four months' intervals, and on 23 May Brig. Gen. Robert H. Terrill succeeded Brig. Gen. James E. Briggs in command of the bomber force at Yokota.[24] Marking completion of the commanders' transfers, Brig. Gen. James E. Ferguson, who had long served with General Weyland in Europe and in Tokyo, became vice-commander of the Fifth Air Force on 18 June 1951, relieving General Timberlake for return to his new command in the United States.[25] As the United Nations Command began to face a new-type war in Korea, General Vandenberg had provided his best officers to direct the fate and fortunes of the Far East Air Forces.

### *2. Combat Cargo, Air Defense, and Bomber Command Reorganizations*

At the start of the Korean war, because of optimistic expectations that the hostilities would be of short duration and because available resources demanded expeditious actions, Generals Stratemeyer and Partridge had attempted to stretch an existing organizational framework far enough to encompass old duties in Japan and new air war tasks in Korea. Looking back shortly before he left the Far East, General Partridge wondered whether the improvisations had been wise. "One of my major failings...has been to take a look at the chips I have and say, how can I best accomplish my mission with what I have?" said General Partridge. "What we should have done," he remarked, "was to sit back and scream for more and get what we needed to fight a war and accomplish our mission."[26] Fortunate for the cause of the United Nations Command was this ability and willingness of the FEAF commanders to improvise and fight with what they had, but the pragmatic command arrangements made early in the Korean war were not wholly

*In accordance with a USAF policy granting such rank to the commander of the Fifth Air Force, General Everest was promoted to the temporary rank of lieutenant general on 20 December 1951.



Skilled cargo handlers perform a tricky loading maneuver on this C-119.

satisfactory, chiefly because they expected the Fifth Air Force to accomplish too many divergent tasks. During the first half of 1951 General Stratemeyer had at last been able to lighten the duties of the Fifth Air Force and to permit it to devote its entire attention to the Korean air war.

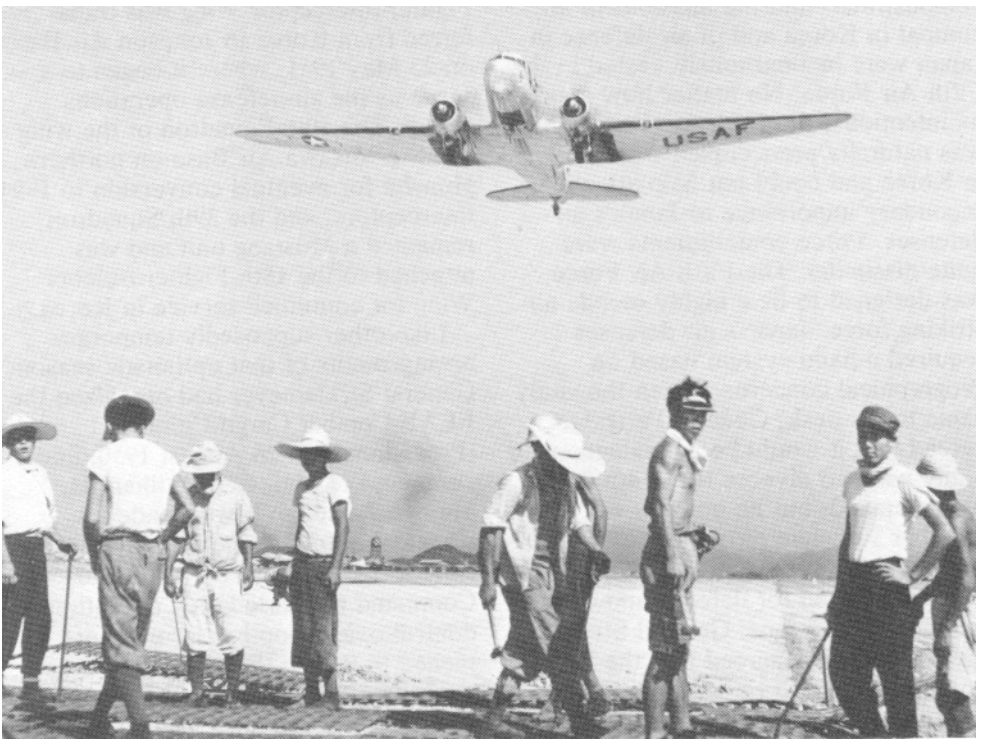
As the war continued in Korea the problem of the air defense of Japan and the administration of air facilities in the Japanese islands became more difficult for the Fifth Air Force to handle. Seeking to relieve the Fifth Air Force's headquarters staff of the immediate management of air affairs in Japan, General Partridge activated the 314th Air Division at Nagoya on 1 December 1950, under the command of Brig. Gen. Delmar T. Spivey. At this time General Partridge had proposed that the 314th Air Division should report directly to FEAF, but General Stratemeyer had preferred that it be assigned to the Fifth Air Force. General Stratemeyer's reasoning was that the 314th and the Fifth would have to share the same air units and air bases for air-war and air-defense functions.[27]

As Soviet and Chinese air capabilities increased in the Far East in the spring of 1951, however, the air defense of Japan loomed as a matter of added importance. General Spivey warned that a single successful hostile air attack against the Far East Air Materiel Command shops and warehouses at Tachikawa "could paralyze the technical supply of...our forces."[28] In March, moreover, a 314th Air Division study

demonstrated that the missions of air combat in Korea and of air defense in Japan were incongruously vested in the Fifth Air Force. No matter how good its intentions, the Fifth Air Force staff was naturally preoccupied with the war in Korea and could not help attaching secondary importance to Japan's air defenses. Force commitments were quite dissimilar. The Fifth Air Force was designed to be a highly mobile air-striking force. Japan's air defenses required a fixed system based on geographical concerns. When the study came to his desk, General Partridge agreed that it would be advantageous in many ways to divorce the 314th from his command, but he questioned whether sufficient air resources would ever be available so that certain units could be tagged for defense and others for tactical missions. General Stratemeyer, however, agreed that the two commands should be separated. At this time the Fifth Air Force was slated for deployment to Korea, and this satisfied one of General Stratemeyer's earlier objections to the divorcement.[29]

Effective on 18 May 1951, FEAF established the 314th Air Division as a separate major air command, directly responsible to General Stratemeyer. The 314th was charged to provide an air defense for Japan, to support the Fifth Air Force as mutually agreed, to conduct joint training and operations with the two partly trained National Guard divisions which had come to Japan to compose the XVI Corps, and to administer assigned air bases in Japan.[30] The 314th Air Division assumed command over the 68th and 339th Fighter-Interceptor Squadrons which were based in Japan. In order to provide the 314th with an air-defense organizational framework, and because FEAF no longer had enough Mustang fighters to go around in Korea, the 35th Fighter-Interceptor Wing was transferred from Korea to Johnson Air Base on 25 May 1951, where it began to serve as the air-defense operations center. The 40th Squadron of the wing went to Misawa Air Base on northern Honshu for eventual conversion to F-94 interceptors, and the 39th Squadron remained a Mustang unit and was attached to the 18th Fighter-Bomber Wing for continued service in Korea.[31]

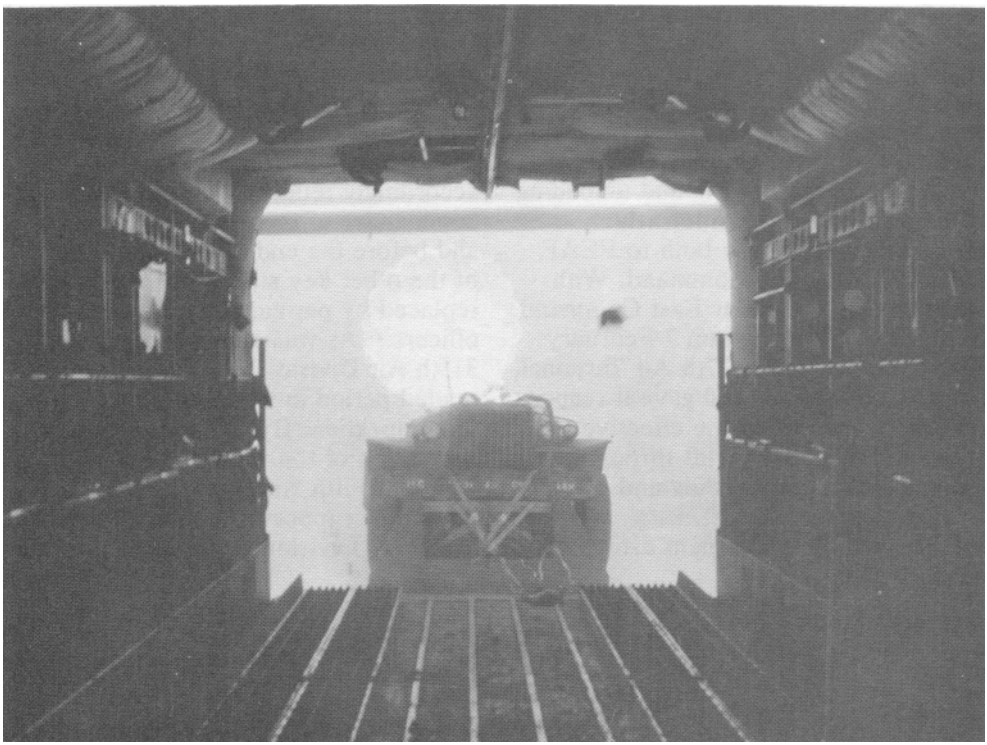
Like other supposedly temporary arrangements of that optimistic season, General Stratemeyer had organized the FEAF Combat Cargo Command (Provisional) on 26 August 1950, under command of Maj. Gen. William H. Tunner. Although it was made a principal air command directly responsible to FEAF, the Combat Cargo Command possessed only operational control over troop-carrier units attached to it, and the Fifth Air Force was charged to provide administrative and logistical support. These interrelationships puzzled both organizations. The Fifth Air Force was charged to provide manning for all troop-carrier units and the bases supporting them. Such manning was calculated on requirements stated by the Cargo Command, and the Fifth Air Force often had to withdraw personnel from other functions to meet troop-carrier requirements. According to a Fifth Air Force study, Cargo Command always submitted urgent requirements "on the basis of what they thought they needed and assigned the first available body to the job regardless of...the individual's qualifications or pending requisitions."[32] General Tunner also found the arrangement unsatisfactory for sustained operations. "We are limited to operational control of our subordinate units," he wrote, "which is all right for a short period of time, but after a while it becomes unwieldy. We are faced with




C-47 of the 315th Air Division (Combat Cargo).

administrative matters every day which we are not prepared to handle."[33]

Noting that the "temporary nature" of the Combat Cargo Command was giving him "considerable concern," General Stratemeyer, on 29 December 1950, asked Washington for authority to activate an air-division headquarters to control combat cargo. Stratemeyer also asked for permission to reorganize the 374th and 437th Wings on a four-squadron war-strength basis. Without delay, USAF approved much of the request, but it was unable to authorize a fourth squadron for the 374th Wing.[34] Knowing of Stratemeyer's requests, General Tunner had been making plans. Given approval of the proposed organization and necessary personnel to relieve the temporary-duty people he had brought to Japan, Tunner was confident that he could permanently organize the air-cargo function and turn it over to the Fifth Air Force within two weeks. At such a time as this General Tunner felt that he could give his command to Brig. Gen. John P. Henebry, the young Air Reservist general who had brought the 437th Wing to Japan.[35] There was something to be said for the assignment of the combat-cargo function to the Fifth Air Force, for it would permit the Eighth Army to look to one officer in Korea for the accomplishment of all air support. General Stratemeyer disagreed politely but firmly. "As long as the ground situation remains up in the air," he told Tunner, "I desire to retain my Combat Cargo Command separate from



The interior of a C-119 as a truck is airdropped to frontline forces.

the Fifth Air Force and I desire that you continue as its commander."[36]

In accordance with plan, FEAF discontinued the FEAF Combat Cargo Command (Provisional) and simultaneously activated the 315th Air Division (Combat Cargo) on 25 January 1951. The 374th and 437th Troop Carrier Wings and the 6122d Air Base Group were assigned to the 315th, but they were attached to the Fifth Air Force for administrative and logistical support except for the assignment and promotion of personnel. The 1st Troop Carrier Group (Provisional) was disbanded, and most of its men and equipment were transferred to the newly activated 86th Troop Carrier Squadron of the 437th Wing. The temporary-duty organizations—the 314th and 61st Troop Carrier Groups and the 4th Troop Carrier Squadron—were attached to the 315th Air Division for operational control and to the Fifth Air Force for administrative and logistical support.[37] In the fortnight that followed the activation of the new air division General Tunner made other necessary changes. Because of overcrowding at Ashiya Air Base, headquarters of the 315th Air Division moved to Higashi Fuchu, near Tachikawa Air Base, on 2 February.[38] More significant in terms of operational efficiency was an authority which General Tunner received to operate aerial ports in the Far East theater. Beginning at Kimpo in September 1950, General Tunner had sent detachments to Korea to handle loading and unload-

ing of air-transported cargo. In Japan, however, the Japan Logistical Command had been loading air cargo at the major aerial ports. General Tunner insisted that he could not completely guarantee airlift capabilities unless he could control the loading and unloading of his planes, a proposition which seemed logical enough both to FEAF and to the Far East Command. With the approval of the Far East Command, the 315th Air Division on 7 February 1951 organized the 6127th Air Terminal Group (Provisional) and gave it responsibility for increasing the effective utilization of FEAF airlift through prompt and proper loading and offloading of cargo aircraft.[39]

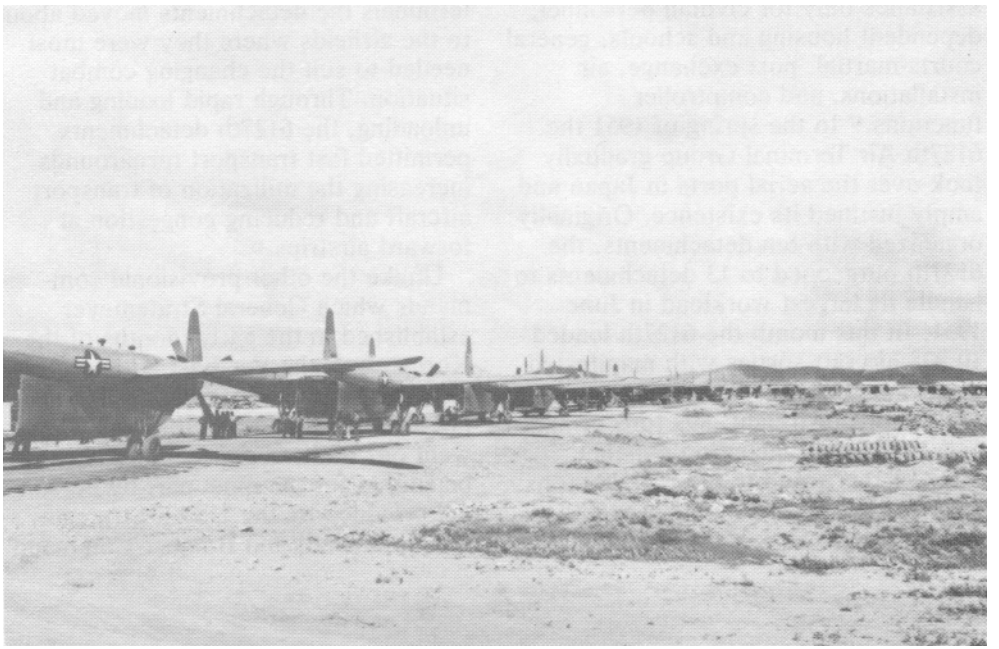
Following the permanent establishment of the 315th Air Division, General Stratemeyer consented "with considerable reluctance" to the termination of General Tunner's prolonged temporary duty in the Far East.[40] On 8 February 1951 Brig. Gen. John P. Henebry accordingly relieved General Tunner as commander of the 315th Air Division and before the end of the month most of the other key staff officers were also replaced by permanently assigned officers.[41] As was contemplated, the 315th Air Division required an extended period in which to effect its reorganization. By 11 June, when separation of the 314th Air Division from the Fifth Air Force had necessitated new support agreements, the 315th Air Division required the 314th's

These battle veterans are being logged for a trip from Korea to Japan aboard one of 315th Air Division's transports.

assistance only for civilian personnel, dependent housing and schools, general courts-martial, post exchange, air installations, and comptroller functions.[42] In the spring of 1951 the 6127th Air Terminal Group gradually took over the aerial ports in Japan and amply justified its existence. Originally organized with ten detachments, the 6127th burgeoned to 13 detachments to handle its largest workload in June 1951. In this month the 6127th loaded 10,938 aircraft sorties with manifested cargo including 60,475 passengers, 17,146 tons of freight, 899 tons of mail, and 10,520 air-evacuation patients. Most of this grand total of 25,480 tons was also off-loaded by other 6127th detachments. At the Korean airlift terminals the detachments moved about to the airfields where they were most needed to suit the changing combat situation. Through rapid loading and unloading, the 6127th detachments permitted fast transport turnarounds, increasing the utilization of transport aircraft and reducing congestion at forward airstrips.[43]

Unlike the other provisional commands which General Stratemeyer established in the early months of the Korean war, the Far East Air Forces Bomber Command (Provisional) was fated to be little changed as the war went on. Its headquarters continued to be staffed for the most part by personnel provided by the USAF Strategic Air Command, and Bomber Command

These soldiers wait to board this C-54 for a rest and relaxation leave.



C-119's await the take off signal.

continued to exercise operational control over the Twentieth Air Force's 19th Bombardment Group (Medium) and the Strategic Air Command's 98th and 307th Bombardment Groups (Medium) and 91st Strategic Reconnaissance Squadron. Located at Yokota Air Base, Bomber Command headquarters, the 98th Group, and the 91st Squadron drew administrative and logistical support from the 314th Air Division. On Okinawa, at Kadena Air Base, the Twentieth Air Force similarly supported the Advance Echelon, FEAF Bomber Command and the 19th and 307th Bombardment Groups. Because of the Strategic Air Command's experimental elimination of combat group headquarters in its bombardment wings, the 98th and 307th Groups were redesignated with provisional wing status in February 1951. On 12 September 1951 the 307th Wing assumed the operational functions of the Advance Echelon, FEAF Bomber Command, thus eliminating this small organization.[44]

Originally conceived to be a strategic bombing force, the FEAF Bomber Command found other worthwhile duties as the Korean war continued. Several influences nevertheless worked to keep Bomber Command at a modest size. On 5 December 1950, when the Chinese Communist armies were attacking, General MacArthur had requested the Joint Chiefs of Staff to return the 22d and 92d Bombardment Groups to the theater. The Joint Chiefs, however, were unwilling to risk these groups on bases which might be hazarded by an all-out Communist air attack.[45] In March 1951, moreover, USAF operational circles in Washington began to question whether the 98th and 307th Wings could not be relieved

from duty in the Far East. So far the medium bombers had not proved to be good for ground support, and there were no more strategic targets in Korea. At this time General Stratemeyer cited the development of the MPQ close-support techniques and justified the retention of the two Strategic Air Command wings.[46] In June 1951 Assistant Secretary of the Air Force John A. McCone queried USAF about the advisability of sending the 22d and 92d Wings back to FEAF, but USAF did not believe that additional medium-bomber wings could find worthwhile employment in Korea.[47] By the spring of 1951, moreover, the USAF Strategic Air Command was finding it difficult to provide replacement aircrews and aircraft to the FEAF Bomber Command. Replacement Superfortresses had to be removed from storage and reconditioned in the United States. In March 1951, when general aircrew rotation began in the medium-bomber units, the Strategic Air Command did not wish to disrupt the combat effectiveness of its battle-ready wings by drawing replacements from them. As a result, nearly all B-29 replacement crews sent to the Far East in the spring of 1951 were recalled Air Reservists who had flown B-29's in World War II.[48] In April General Vandenberg cautioned Stratemeyer that this problem of providing replacement aircraft and aircrews would prevent USAF from supporting more than 12 Superfortress combat sorties per day in Korea.[49] On 18 May General Vandenberg additionally informed Stratemeyer that USAF would maintain the FEAF Bomber Command at a strength of 99 aircraft (30-unit equipment, plus 3 command support planes per group). Once again, however, Vandenberg warned Stratemeyer that USAF was figuring attrition replacements on the basis of 12 combat sorties per day, and he stated that the Strategic Air Command would provide a replacement flow of three aircraft and aircrews per month.[50] For the duration of the war in Korea Bomber Command would have to husband its resources.

### *3. General Weyland Requests "Long-Haul" Programming*

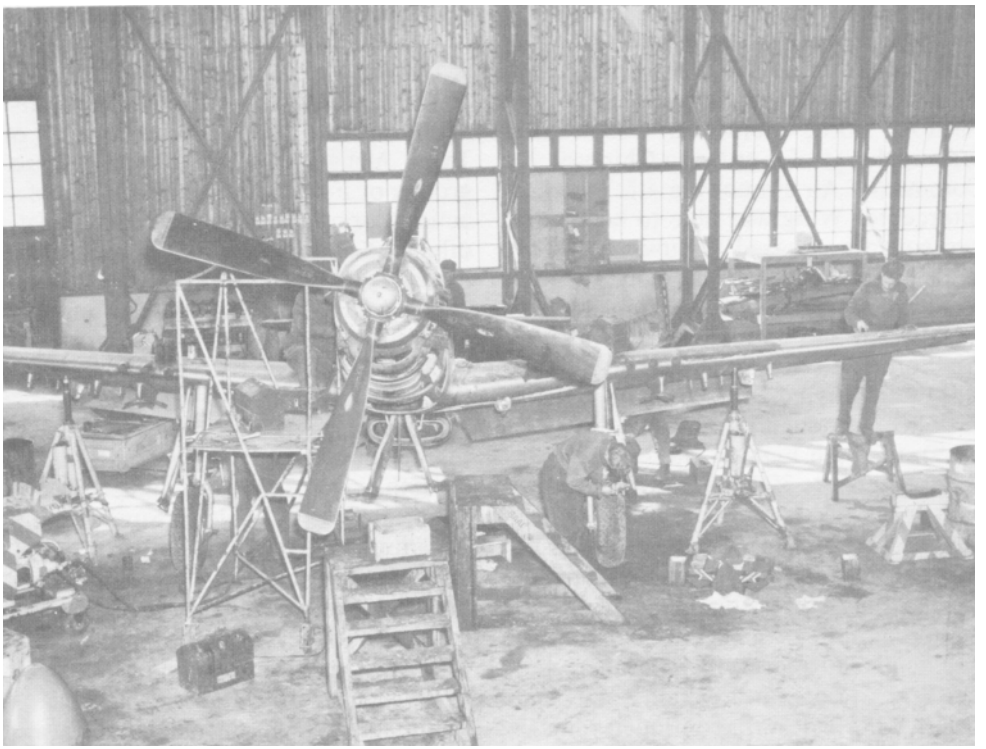
According to General Partridge, the Fifth Air Force in May 1951 was "short of everything." As General Partridge reviewed the events of the year of combat, it was evident to him that the Fifth Air Force had never possessed the engineer aviation battalions it needed to build tactical airfields in Korea and it had not had the aircraft in the types and numbers which were best suited for tactical air operations. General Partridge ordered his staff to get down to business and figure its requirements for another year of war. "There is nothing to point to the fact," he said, "that we won't be here next year."[51] A month later General Weyland urged USAF to augment the minimum FEAF forces, equipped below authorized levels, which had contributed so mightily to the initial year of Korean operations. "To accept the theory," Weyland warned, "which envisages the current United Nations military position in Korea as...a stalemate is to completely ignore the innumerable

advantages of air power as a predominant weapon for destroying the enemy fighting machine and to acquiesce to the dangerous 'rule of thumb' whereby military success, regardless of cost, is measured solely in terms of geographical gain." General Weyland suggested that USAF ought to "plan for a 'long haul' and program accordingly."[52]

At the beginning of the Korean war USAF had known no choice but to equip the Fifth Air Force with older-type aircraft which were the only planes that it possessed in substantial numbers. The decision was one of necessity, since USAF did not have sufficient numbers of modern planes to program for Korea. In defense of the decision, USAF cited the fact that older, conventional planes were good enough to meet the quality of the enemy's air opposition. Apologists for the policy also pointed out that the conventional aircraft could operate from rough airfields in Korea. Since USAF could obtain limited numbers of engineer aviation troops from the Department of the Army, the Fifth Air Force would obviously have to depend upon limited air facilities in Korea for some time to come.

Although the Fifth Air Force accomplished superior results against the Communist forces in Korea, the hydra-headed problem of old planes and inadequate numbers of aviation engineers (which translated into inadequate airfields) began to cause General Stratemeyer and Partridge much concern in the early spring of 1951. Months of combat from crude air facilities, where maintenance was often rudimentary, began to exhaust USAF inventories of Mustang and Shooting Star fighter-bombers, neither of which were any longer produced in the United States. Although the F-80 Shooting Stars proved admirable fighter-bombers and stood up amazingly well under rough field conditions, the strain of combat from Taegu Airfield caused these planes to deteriorate faster than they could be repaired. After four months of flying from Taegu, ten 49th Wing F-80's were withdrawn for exploratory maintenance tests at Tachikawa, where it was found that an average of 7,500 man-hours would be needed to recondition each one of them.[53] The appearance of Communist MIG-15 jet fighters over Korea vitiated the proposition that old-type planes were good enough to meet enemy air opposition in Korea. While not quite high enough in performance to stand air combat on even terms with the MIG's, the F-84 Thunderjets could at least hope to live in the same air with the Communist interceptors and they were, according to Colonel Ashley B. Packard, the 27th Wing commander, "the best ground-support jet in the theater today."[54] Early in March General Stratemeyer wrote General Vandenberg of his concern about the old F-51's and F-80's and requested that immediate action be taken to accelerate the conversion of all Fifth Air Force fighter-bomber squadrons to F-84E aircraft. In order to build the airfields which these newer planes would require, General Stratemeyer asked USAF to send him five engineer aviation battalions and other engineer units.[55]

In Washington USAF proved unable to comply with General Stratemeyer's requests. The United States had declared itself in full support of the North Atlantic Treaty Organization and a build-up of F-84 strength in the Far East would seriously disrupt the scheduled augmentation of North Atlantic Treaty Organization air forces. The Air Staff, moreover, estimated for planning purposes that the Korean



A SAAF Mustang undergoing a complete overhaul by mechanics and technicians of the 18th Fighter Bomber Wing.

hostilities would end by 1 January 1952. As a result of both factors, the Air Staff programmed attrition support for Fifth Air Force F-51 and F-80 fighter-bomber squadrons and made no promises to convert any of them to F-84 aircraft. None of the engineer aviation units requested by General Stratemeyer were available to USAF, and the Air Staff directed that Stratemeyer should convert his rear-area construction from troop labor to civilian contract and concentrate all available FEAF aviation engineer strength in Korea.[56] On the basis of this decision, the 931st Engineer Aviation Group liquidated its projects on Okinawa, and in April and May began to move to Korea with its 802d, 808th, and 839th Engineer Aviation Battalions and 919th Engineer Aviation Maintenance Company.[57]

Because of long-standing inadequacies of aviation engineers and of old aircraft, the Fifth Air Force was hard pressed to meet the challenge of the Communist spring attacks in 1951. The Fifth Air Force's 930th Engineer Aviation Group, with the 811th and 822d Engineer Aviation Battalions, had been able to do no more than to work at company-sized projects designed to keep Pusan, Taegu, and Chinhae Airfields in operation. So that combat cargo planes could land there, one company of the 811th made limited improvements at Chunchon, Hoengsong, and Chungju, working in turn at

whichever of these sites happened to be within United Nations lines.[58] Everywhere in Korea in the spring of 1951 airfields were a limiting factor on Fifth Air Force operations. Despite the serious threat of a growing Chinese Communist Air Force, the 4th Fighter-Interceptor Wing was able to keep only two squadrons based at Suwon's inadequate and positively dangerous air facilities. Because of the seriousness of the Red ground offensives, the Fifth Air Force had to sacrifice its aircraft in all-out employments from inadequate airfields. Although based at Pusan (K-9), the 35th Fighter-Interceptor Wing staged its 39th and 40th Squadrons from the stretch of Han River alluvial plain which was called Seoul Airfield. In a four-day period in late April these two Mustang squadrons mounted more than 400 combat sorties, a magnificent effort which strained the old F-51's to a near-breaking point. On 20 May 1951, despite continued remedial work of the 822d Engineer Aviation Battalion, Taegu Airfield's pierced-steel plank runways—never satisfactory because they were laid on unstabilized ground and were pounded by up to 10,000 landings and take-offs a month—finally went to pieces.[59] The collapse of Taegu Airfield threatened to take three groups of F-80 fighter-bombers out of action during the renewed Communist offensive in Korea, but operational ingenuity stood the Fifth Air Force in good stead. The 49th Fighter-Bomber Group loaded its planes for combat back at Tsuiki Air Base and landed them for refueling at Taegu after combat missions.[60] On 18 May the 51st Fighter-Interceptor Group transferred its 16th Squadron to the rain-soggy, Sabre-crowded airfield at Suwon and began to stage its 25th Squadron through this same airfield.[61] For the time being the 8th Fighter-Bomber Group could get no staging rights anywhere in Korea, and its F-80's had to fly combat from Itazuke Air Base. The distance from this Japanese base to the front lines was so great that the 8th Group F-80's could spend no more than five minutes seeking targets. Meanwhile, 8th Wing air installations personnel had been employing a large force of Korean laborers to fill bomb craters on the shorter runway at Kimpo Airfield, and on 25 June the 8th Group was able to move to this base.[62]

Japanese laborers pause to watch this C-119 come in for a landing at an airlift base in Japan.

Through staunch determination, the Fifth Air Force met the challenge of Communist ground attack in April and May 1951, but it paid a heavy price both to operating conditions and to hostile small-arms fire and flak. Their vulnerable engines and coolant systems caused the Mustangs to suffer most heavily, but the Shooting Stars were also vulnerable. During April, for example, the Fifth Air Force lost 25 F-51's, 13 F-80's, and 2 F-84's to hostile ground fire. Already thwarted in his efforts to secure Thunderjets, General

Stratemeyer now asked USAF to send him equally old-fashioned but more-rugged F-47 Thunderbolt fighters as replacements for the Mustangs.[63] The Fifth Air Force also noted that its F-80 attrition rate was averaging 18.3 planes per month. If it was to continue to operate the jet fighter-bombers at the same combat rates, it would have to convert one group of F-80's to F-84's very soon.[64] At about this same time—on 6 April—General Curtis E. LeMay, the Strategic Air Command's commander, secured consent from General Vandenberg to withdraw the 27th Fighter-Escort Wing from the Far East. This Thunderjet wing was a substantial part of the long-range escort capability which the Strategic Air Command possessed, and, employed as fighter-bombers in Korea, the wing's pilots were losing their specialized skills.[65]

Once again USAF had to consider the problem of replacements for FEAF's fighter-bombers. Mr. John A. McCone, Assistant Secretary of Air Force, urged that the F-51's and F-80's should be replaced with F-84's, but a USAF operations spokesman pointed out that the proposal for sending "increased numbers of first-line equipment" to FEAF was not consonant with Joint Chiefs of Staff policy which accorded higher priorities to Europe.[66] Unwilling to introduce a second type of obsolete fighters into combat, General Vandenberg advised Stratemeyer to forget about F-47's. General Vandenberg noted that the Mustangs would eventually be replaced by jet aircraft, but for the immediate future he urged Stratemeyer to move the F-51's back to the defense of Japan, where attrition rates would be acceptable.[67] Partial compliance with this suggestion came on 25 May 1951 when FEAF moved the 35th Fighter-Interceptor Wing structure and one Mustang squadron back to Japan. At this time the 35th Wing's other Mustang squadron was attached to the 18th Fighter-Bomber Wing, which also assumed responsibility for operating the staging detachment at Seoul Airfield.[68] While General Vandenberg was willing to allow the redeployment of the 27th Wing to the United States, he did not wish to deprive FEAF of the Thunderjet fighter-bombers. Therefore, USAF decided to deploy the 136th Fighter-Bomber Wing, an Air National Guard organization which had been mobilized in late 1950, to Japan to assume the equipment and duties of the 27th Wing. In order to relieve the strain on F-80 resources, moreover, USAF had no

An F-51 loaded with rockets and bombs takes off for a pre-dawn mission.

recourse but to program the 49th Fighter-Bomber Wing for conversion to F-84 Thunderjets. Late in May the Fifth Air Force charged the 27th Wing to provide transition training to both the 49th and the 136th Wings. According to plan, the 136th Wing began to replace the 27th Wing, squadron by squadron, on 1 June, and the process was complete on 1 August. By the end of August the 49th Wing's three tactical squadrons completed transition to Thunderjet fighters, and the personnel of the 27th Fighter-Escort Wing were relieved from duty in the Far East.[69] In this elaborate transaction the Fifth Air Force had obtained one wing of new planes, but on 20 July General Vandenberg warned General Weyland that no more FEAF squadrons would be converted to Thunderjets in the foreseeable future. Because of shortages in aircraft, moreover, USAF was not going to be able to provide FEAF with a desired 50 percent theater reserve of fighters. Possibly USAF would be able to manage a 10 percent theater reserve.[70]

The story of the provisioning of the Fifth Air Force's two light-bombardment wings paralleled that of the fighter-bombers. At the beginning of the Korean war the 3d Bombardment Wing had possessed two squadrons of B-26 bombers, planes which had not been produced since World War II. In the late autumn of 1950 USAF had dispatched to Japan the recently mobilized 452d Bombardment Wing, which possessed four squadrons of B-26 aircraft. The 731st Squadron was trained for night attack and was attached to the 3d Group. According to USAF programming documents, the 3d Wing's two squadrons were each authorized 24 B-26 aircraft and the 452d Wing's four squadrons were each authorized 16 B-26 aircraft. In order to provide replacement crews, the USAF Tactical Air Command instituted a B-26 combat crew training center at Langley Air Force Base, Virginia, which turned out 12 crews each month.[71] On 3 February 1951 General Stratemeyer requested authority to reorganize the 452d Wing at a war strength of 24 aircraft to each squadron, but USAF disapproved the request on the grounds that the combat-crew output at Langley would not support so many aircraft.[72] Partly because of strong representations made by Col. Virgil L. Zoller, while he was on a visit to the United States, the Tactical Air Command took steps to increase its combat-crew output to some 45 B-26 crews a month, beginning after May 1951.[73]

As long as the 452d Wing operated by day, FEAF could tolerate its reduced-strength peacetime authorizations, but in April 1951 General Stratemeyer and Partridge undertook to convert the 452d Wing to night operations. Desiring to increase the critically important night-intruder capability on 14 April, General Stratemeyer renewed his request for additional light bomber authorizations, specifically asking for six squadrons with 144 unit equipment aircraft, plus 50 percent theater reserves, or a total of 216 B-26's.[74] Not only was USAF unable to grant Stratemeyer's requests for increased B-26 authorizations, but on 17 April, citing overloaded modification facilities and shortages of night equipment, it was compelled to reduce the unit equipment authorizations of the two light bombardment wings to a total of 96 aircraft. By the end of August USAF planners expected FEAF to possess the 96 unit equipment aircraft, plus 50 percent theater reserves, or a total of 144 light bombers.[75] As a part of the request for "long-haul" programming on 10 June, General Weyland

again asked that the two light bomber wings be brought up to war strength.[76]

Despite these insistent and urgent requests and an appreciation of the fact that FEAF needed a larger night-intruder capability, USAF was unable to promise FEAF any B-26's other than those required to compensate for attrition. In the spring of 1951 a USAF board of senior officers selected the British Canberra (B-57) jet bomber as a proposed replacement for the B-26 as a night intruder,[77] but until these aircraft could be produced in quantity USAF was committed to a B-26 program which was replete with configuration changes, parts shortages, and modification difficulties. Altogether USAF possessed an inventory of approximately 400 B-26's in various configurations, and before these planes could be dispatched overseas they all required modifications. The Fifth Air Force, for example, specified some 40 changes to fit B-26's for night intruding. These modifications, many of which called for equipment in short supply, taxed the civilian contractor who handled the work. Back in the United States, moreover, the USAF had ordered the Tactical Air Command to prepare the newly-mobilized 126th Bombardment Wing (Light) for deployment to Europe, and this wing was supposed to receive the entire output of modified B-26's during August and September 1951. These factors, plus the increase of FEAF's B-26 attrition rate to 11 aircraft per month, prevented USAF from augmenting FEAF's light bomber wings to a war strength. The best that USAF could do, stated General Nathan F. Twining, USAF vice chief of staff, would be to authorize FEAF 96 unit equipment B-26's plus 50 percent theater reserves.[78]

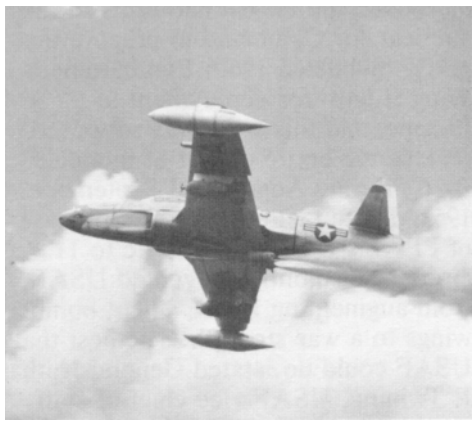
If General Weyland was unsuccessful in his efforts to obtain more light bombers, one of his follow-up statements of FEAF deficiencies written on 12 July at least brought a commitment of more aviation engineers. In addition to the five engineer aviation battalions which were buckling down to work in Korea, General Weyland stated a requirement for five battalions from the United States. The additional battalions, Weyland explained, were required to construct additional airstrips to meet the Eighth Army's need for contiguous combat-cargo and air-support fields, as well as to expand and maintain the tactical airfields being built in Korea.[79] General Vandenberg committed two engineer aviation battalions and an engineer maintenance company to FEAF at such time as they could complete their training and secure the necessary equipment. While this commitment did not wholly satisfy General Weyland's request, General Vandenberg noted that each engineer aviation battalion had recently been augmented to a 997-man strength. This augmentation, plus the additional committed units, promised FEAF an engineer force equivalent to nine old war-strength battalions.[80] Back in the United States the Department of the Army remained responsible for recruiting and training engineer aviation troops, but on 10 April 1951 USAF organized an Engineer Aviation Force under its Continental Air Command to provide operational training for aviation engineer units.[81] After stripping zone of interior units of critical items of equipment and obtaining other machines from current production, the Engineer Aviation Force sent the 622d Engineer Aviation Maintenance Company and the 809th Engineer Aviation Battalion to Korea in September 1951. The 1903d Engineer Aviation Battalion arrived in Korea in November 1951.[82]

### *4. The Fifth Air Force Makes Permanent Deployments*

Despite the possibility that hostilities might soon be ending in Korea, Generals Partridge and Everest agreed that the Fifth Air Force had to call a halt to short-sighted construction objectives and effect more permanent deployments in South Korea. "Build the best establishments you can," ordered General Partridge in May 1951, "and assume you will be staying there."[83] Shortly after he assumed command of the Fifth Air Force, General Everest authorized an expanded construction program looking toward the preparation of semipermanent facilities, which would have a life expectancy of as much as two years under sustained operations. Early in June General Everest went a step farther and directed that 9,000-foot runways would be built in Taegu, Kunsan, and Suwon airfields. Such runways would be more expensive in terms of construction effort, but a FEAF study had demonstrated that "logistically and from a cost standpoint the extension of runways to 9,000 feet would be far more economical than to employ JATO."[84] The jet-assisted takeoff "bottles" which combat loaded fighter-bombers used to get airborne off short runways rapidly ran up operating costs.

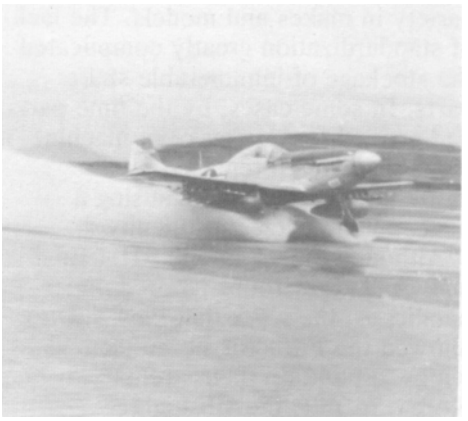
Leading the way toward a permanent deployment in Korea, the Fifth Air Force closed its headquarters in Taegu City and reopened in Seoul City on 14 June 1951. The original movement plan required the headquarters to move northward in two echelons, with the second echelon scheduled to arrive at Seoul within a month. Within this month, however, another plan providing for emergency evacuation from Seoul demonstrated the rashness of moving the whole headquarters so far forward and the difficulty of splitting the existing headquarters structure into two echelons.[85] To remedy both aspects of this situation, the Fifth Air Force eventually secured authorization for a double deputy system which it instituted on 14 February 1952. Under this arrangement the deputy for adminstration supervised rear-echelon activities at Taegu, including the directorates of materiel, personnel, installations, organization and manpower, comptroller, and the special staff. The deputy for operations supervised the forward echelon at Seoul, including the directorates of operations, intelligence, and communications.[86]

When the 931st Engineer Aviation Group joined the 930th Group in Korea in May 1951, the Fifth Air Force was at last able to institute a fairly ambitious construction program which sought to



A JATO-equipped F-80 takes off with a 500-pound demolition bomb nestled beneath each wing.

provide five tactical airfields to be operational as wing bases by September 1951. The 931st Group was directed to repair Kimpo Airfield, to extend the runway and construct taxiways and parking aprons at Suwon, and to build a new airfield at Kunsan, on the southwestern coast of Korea.[87] The 930th Group was charged to renovate and expand Taegu Airfield as a major task, and to perform smaller company-sized projects at Chunchon, Hoengsong, Seoul, and Pyongtaek.[88] As the engineer aviation battalions went about their assigned tasks, summer rains and Korean soil instabilities greatly hampered all projects. Working conditions were especially bad at Suwon, where the subsoil was a spongy mass and air traffic continued to be heavy. At Kimpo the aviation engineers had great difficulty filling and stabilizing more than 40 bomb craters which pocked the main runway. Construction troops at Kunsan Airfield encountered Korea's worst drainage problems. The site was only a little way inland from mud flats bordering the Yellow Sea, and the local soil was a grayish-blue clay which had long been inundated for rice culture. At Taegu the engineers first rehabilitated the pierced-steel plank runway and then began to work on the long-term project of building a 9,000-foot cement concrete runway.[89] All base-construction projects involved far more than building runways and their appurtenances. Since a jet air wing in combat could consume as much as 125,000 gallons of fuel each day, two detachments of the 931st Engineers supervised Korean laborers in the erection of tanks to hold a five days' supply of jet fuel at each of the major jet bases. The Eighth Army's 82d Engineer Petroleum Company pushed a pipeline from Inchon to Kimpo and Suwon by October 1951, but fuel consumption at both bases often outran pipeline supply and had to be supplemented by rail shipments. The major airfield at Taegu remained dependent upon fuel deliveries by rail tankers.[90] In the early days, at all Korean airfields, Air Force troops lived and worked in winterized tents, but more permanent buildings gradually replaced the tents. At Taegu air installations personnel contracted with Korean builders for stucco buildings. The initial cost was low, but these oriental structures rapidly deteriorated and required heavy maintenance costs. For this reason, steel quonset huts and "tropical shell" kits prefabricated in Japan were extensively used in Korea, both for housing and working quarters. Most structures were put up by Korean laborers or contractors under the supervision of base air installations personnel.[91]

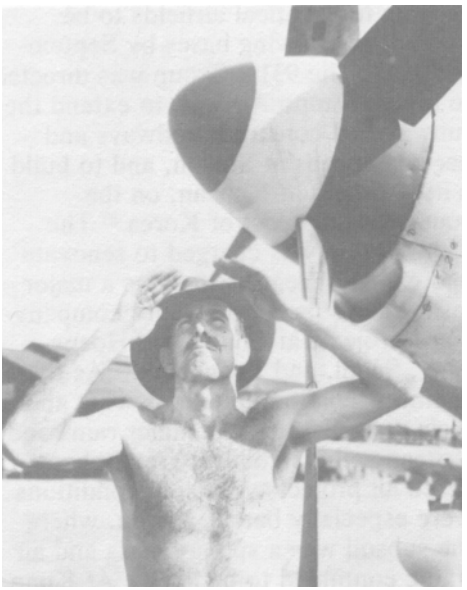


An F-51 on a watery start.

"The quality and volume of the airfield construction accomplished in Korea," commented a USAF consulting engineer in August 1951, "in spite of the shortcomings, has been remarkable."[92] Many of the "shortcomings"

were attributable to personnel and equipment difficulties of the engineer aviation units which were manned and equipped by the Department of the Army. The new engineer battalions, like those available in the theater at the outbreak of the war, lacked much in the way of skilled personnel and basic equipment. Prior to its shipment overseas, for example, the 1903d Engineer Aviation Battalion had sustained three major personnel levies in six months, levies which had drawn heavily upon the battalion's trained specialists.[93] Fearing to tap its sources of trained engineer cadres too heavily, the Army sparingly provided highly skilled replacements, with the result that FEAF obtained permission to move Air Force air-installations personnel into engineer units when requisite skills could not be obtained from Army sources. In November 1951 the Army assigned 1,100 basic engineer soldiers to FEAF to replace rotational personnel. Although these people were inexperienced and not completely trained, they proved worthwhile potentials for on-the-job training. Unfortunately, however, men who had to be trained for operating complicated machines in Korea were about ready for rotation by the time they were becoming proficient in their assigned duties.[94]

Throughout 1951 all engineer aviation units were constantly short of equipment and spare parts, shortages which forced improvisations, often to the detriment of sound construction.[95] During peak operational periods in-commission rates as low as 15 percent were the rule rather than the exception on critical items of equipment. Some part of the low serviceability rates was caused by abuse of complicated machines by unskilled operators, but maintenance also suffered from a



Crew chief Lance Corporal Bob Bell sweats out the return of the RAAF Mustangs.

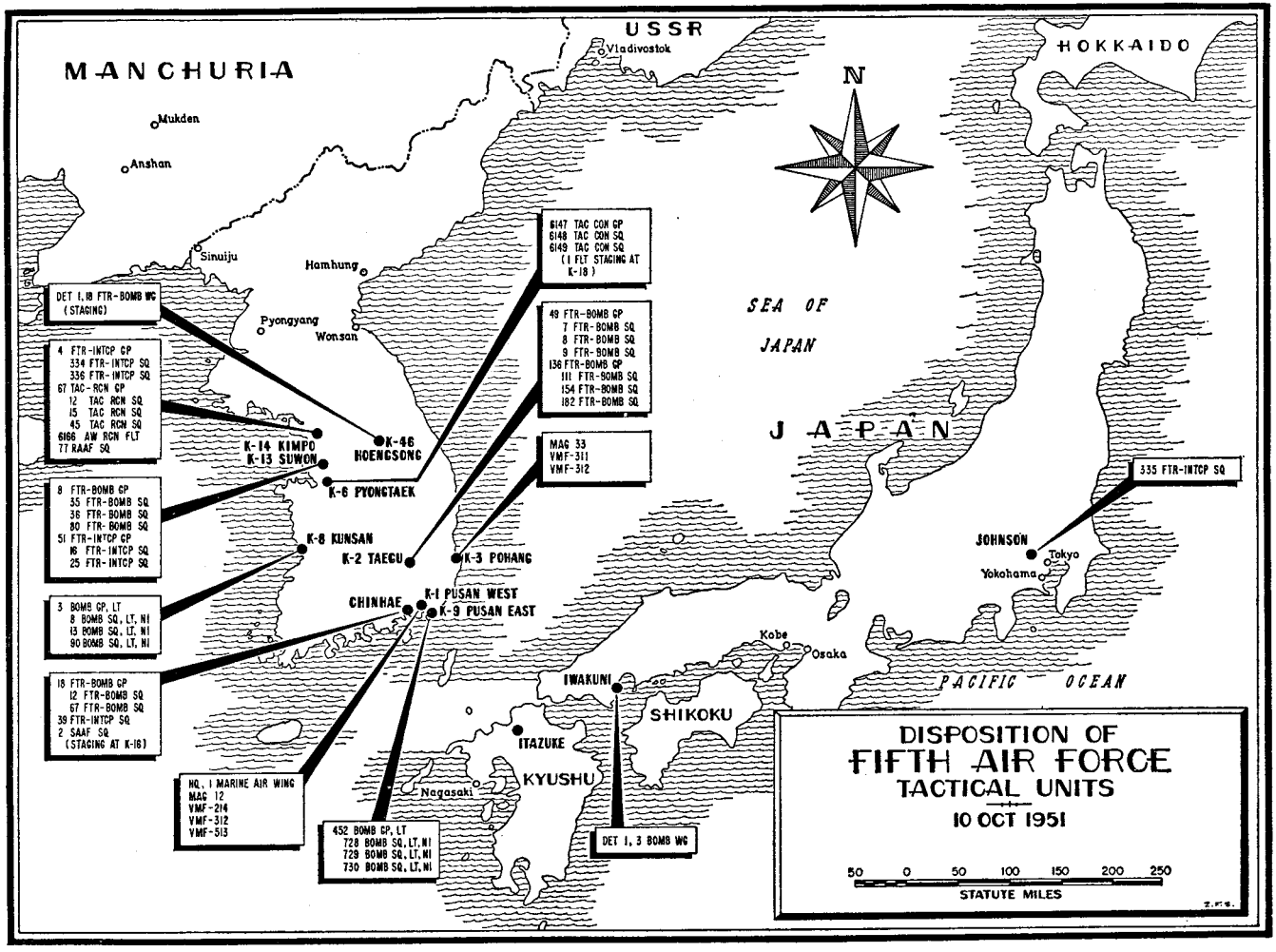
shortage of technicians and spare parts. In the spring of 1952 some new engineer equipment began to arrive in Korea, but much of this new equipment had been procured as an emergency action from domestic production in the United States, and there was a great variety in makes and models. The lack of standardization greatly complicated the stockage of innumerable spare parts. In some cases, by the time parts had arrived for one make of machine, it would have been replaced by an entirely different make, causing a never-ending cycle of difficulty.[96]

Although the 930th and 931st Engineer Aviation Groups labored under handicaps, the work that they did allowed the Fifth Air Force tactical wings to build up their strength in Korea. In June the 4th Fighter-Interceptor Wing left a squadron and a detachment behind at Johnson Air Base and moved to Suwon Airfield. Later in

the same month the 8th Fighter-Bomber Wing concentrated at Kimpo Airfield, where, in July, the RAAF No. 77 Squadron, newly equipped with British Meteor-8 jets, was attached to it.[97] While the aviation engineers made good progress rehabilitating Kimpo, this airfield's runways were short and still rough. Two months of operations at Kimpo amply demonstrated that combat-loaded F-80 fighter bombers could not safely use this cramped airfield. On the other hand, the Sabres did not carry external ordnance and could use the short runways. Consequently, in late August the 4th and 8th Wings traded bases. At Kimpo the RAAF No. 77 Squadron was now attached to the 4th Wing.[98] Beginning on 16 August and continuing during the remainder of the month, the 67th Tactical Reconnaissance Wing assembled at Kimpo. The tactical squadrons came from Taegu and the supporting elements moved from Japan to bring the wing together for the first time since its activation.[99] Following additional construction at Suwon, the 51st Fighter-Interceptor Wing moved its command post from Tsuiki to Suwon on 1 October.[100]

At Itazuke, in August, the 136th Fighter-Bomber Wing completed its in-place relief of the 27th Wing, and during September the 136th moved its fighter group and essential supporting elements to join the 49th Fighter-Bomber Wing at Taegu Airfield.[101] In southwestern Korea, at the new Kunsan Airfield (K-8), the aviation engineers completed 5,000 feet of asphalt runway in mid-July, and this and other airfield facilities permitted the 3d Bombardment Wing to establish itself there on 22 August.[102] The 18th Fighter-Bomber Wing and the attached South African Air Force Squadron No. 2 continued to base on the south coast of Korea at Chinhae Airfield, but during the last days of September the 18th Wing cleared the way for an extensive rebuilding of Seoul Airfield (K-16) by moving its staging detachment from this field to Hoengsong Airfield (K-46) in central Korea.[103] The 6147th Tactical Control Group continued to be located at Pyongtaek Airfield, where a company of aviation engineers built a short pierced-steel plank runway to serve the Mosquito aircraft.[104]

In August 1951 the Fifth Air Force was deploying its tactical air wings to the airfields in Korea which most of them would occupy during the remainder of the Korean hostilities. The deployment was advantageous to operations, for aircraft were closer to their targets and were operating from improving airfields. The deployment to Korea, however, introduced a number of major logistical problems. Several of the Korean airfields served two combat wings, and with two wings fully in place at one base there would be an excess of base-service personnel. Even more serious than this problem, which could be alleviated by making one wing the "owner" of a base and the other the "tenant," was the prospect confronting aircraft maintenance in Korea. Each tactical wing's maintenance and supply group possessed large tonnages of tools, supplies, and equipment. During the first year of hostilities most of the air wings had moved so often that a few of them had never removed their heavier equipment from boxes and crates. Even the 49th Wing, which enjoyed a comparatively stable existence at Taegu, did not get its first machine tool into operation for nearly a year after its movement to Korea. As they located at the Korean airfields, all of the tactical wings faced the prospect that scarce maintenance shelter and warehousing for supplies would compli-


USSR
Vladivostok
MANCHURIA
Mukden
Anshan
Sinuiju
Hamhung
Pyongyang
Wonsan
HOKKAIDO
N
SEA OF JAPAN
JAPAN
DET 1, 18 FTR-BOMB WG (STAGING)
4 FTR-INTCP GP
334 FTR-INTCP SQ
336 FTR-INTCP SQ
67 TAC-RCN GP
12 TAC RCN SQ
15 TAC RCN SQ
45 TAC RCN SQ
6166 AW RCN FLT
77 RAAF SQ
8 FTR-BOMB GP
35 FTR-BOMB SQ
36 FTR-BOMB SQ
80 FTR-BOMB SQ
51 FTR-INTCP GP
16 FTR-INTCP SQ
25 FTR-INTCP SQ
3 BOMB GP, LT
8 BOMB SQ, LT, NI
13 BOMB SQ, LT, NI
90 BOMB SQ, LT, NI
18 FTR-BOMB GP
12 FTR-BOMB SQ
67 FTR-BOMB SQ
39 FTR-INTCP SQ
2 SAAF SQ
(STAGING AT K-18)
K-14 KIMPO
K-13 SUWON
K-46 HOENGSONG
K-6 PYONGTAEK
K-8 KUNSAN
K-2 TAEGU
K-3 POHANG
CHINHAE
K-1 PUSAN WEST
K-9 PUSAN EAST
HQ, 1 MARINE AIR WING
MAG 12
VMF-214
VMF-312
VMF-513
452 BOMB GP, LT
728 BOMB SQ, LT, NI
729 BOMB SQ, LT, NI
730 BOMB SQ, LT, NI
6147 TAC CON GP
6148 TAC CON SQ
6149 TAC CON SQ
(1 FLT STAGING AT K-18)
49 FTR-BOMB GP
7 FTR-BOMB SQ
8 FTR-BOMB SQ
9 FTR-BOMB SQ
136 FTR-BOMB GP
111 FTR-BOMB SQ
154 FTR-BOMB SQ
182 FTR-BOMB SQ
MAG 33
VMF-311
VMF-312
335 FTR-INTCP SQ
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DISPOSITION OF
FIFTH AIR FORCE
TACTICAL UNITS
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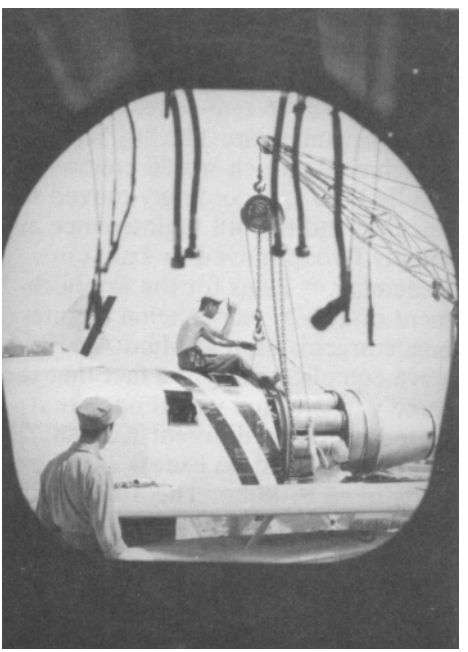
cate their efforts to keep their airplanes in commission. At the sparsely occupied airfields on Kyushu there were ample shops, warehouses, and skilled indigenous labor.[105]

As the Fifth Air Force sought answers to its logistical problems, it noted the records of experience of some of its tactical wings. The 4th and 27th Fighter Wings had never attempted to move completely to Korea. Although Sabre squadrons had deployed to Korea, the 4th Maintenance and Supply Group had remained at Johnson Air Base, where specialized maintenance crews drawn from the tactical squadrons and the 4th Maintenance Squadron had performed the more comprehensive periodic inspections, field maintenance, engine buildup, and engine overhaul on all Sabres. The Sabre experience was not completely conclusive since it had been largely dictated by a shortage of F-86 parts which made it advisable to keep the maintenance and supply group near the Tachikawa air depot.[106] More to the point was the experience of the 27th Fighter-Escort Wing. Upon its arrival in the Far East in December 1950, this Thunderjet wing had sent an advance echelon comprising a small part of wing headquarters, the combat group, and necessary service elements to Taegu Airfield. The rear echelon of the 27th Wing settled at Itazuke Air Base, where major inspections and maintenance were performed on aircraft rotated there from Taegu. Utilizing production-line techniques, the 27th Wing's rear echelon had successfully maintained 48 aircraft in commission at all times in Korea. The 27th Wing's Thunderjets, moreover, did not deteriorate in combat. In May 1951, when its combat elements moved to Pusan East Airfield (K-9), the 452d Bombardment Wing followed the same maintenance pattern used by the 27th Wing. Remaining behind at Miho, under supervision of the commander of the 452d Maintenance and Supply Group, the wing's field maintenance squadron and a specially organized organizational maintenance squadron performed major periodic inspections and repairs on aircraft returned from Korea at scheduled intervals. The 452d Wing's aircraft-in-commission rate increased from 57 percent in July to 82 percent in November 1951. In this same period the 3d Bombardment Wing moved completely to Kunsan, where it attempted to perform maintenance under field conditions. The 3d Wing's aircraft-in-commission rate dropped from 78 percent in July to 65 percent in December 1951. Staff inspection visits revealed that the 3d Wing's B-26's were in poor condition, while



An aircraft maintenance crew hoists a Sabrejet engine into position for installation.

the B-26's of the 452d Wing were in excellent condition.[107]

Recognizing that its aircraft resources would continue to be so limited as to demand maximum utilization, and noting the beneficial aspects of more stable rear-echelon maintenance, the Fifth Air Force on 18 August 1951 ordered the establishment of rear-echelon maintenance organizations for Shooting Star and Thunderjet aircraft at Tsuiki and Itazuke airfields.[108] Both organizations were set up during the last half of the month. At Tsuiki the 51st Maintenance and Supply Group, augmented by a detachment of personnel from the 8th Wing, accomplished major inspections and repairs on F-80's. At Itazuke the 136th Maintenance and Supply Group, augmented as agreed by personnel from the 49th Wing, had similar duties toward F-84 aircraft. Only minor maintenance and temporary repairs were performed at Suwon and Taegu. In November, when the 51st Wing began to convert to Sabres, Tsuiki was designated as the site for the F-86 rear-echelon maintenance organization. The 8th Wing's detachment, which would continue to handle F-80's, accordingly moved to Itazuke, and the 4th Maintenance and Supply Group moved to Tsuiki in December.[109] Plans for the establishment of a B-26 rear-echelon maintenance organization at Miho Air Base were complicated by the fact that the three wings which would operate it were located on different Korean airfields and had no excess service units to go to Miho. The 314th Air Division, however, assumed base service and supply (less B-26 service stock) responsibilities at Miho, and in November 1951 the 3d Bombardment and the 67th Tactical Reconnaissance Wings sent detachments to join the 452d Wing's establishment at Miho. These detachments were charged to perform battle-damage repairs, structural repairs, engine build-ups and changes, aircraft modification, equipment installations, technical order compliances, and 1,000-hour inspections.[110]

The rear-echelon maintenance detachments provided positive results in the form of higher aircraft-in-commission rates, more flying hours, and better maintained planes, but the organizational structures initially set up at Tsuiki, Itazuke, and Miho were very complex. At first each commander attempted to maintain the integrity of his men and property, so there was a duplication of supply accounts, of personnel, and of equipment. Many combat commanders, moreover, did not like the system. They objected to the time lost ferrying aircraft to a rear-area base and pointed out that the concentration of skilled maintenance personnel in the rear areas deprived lesser-skilled men in the tactical squadrons of the benefits of association with seasoned maintenance men. One B-26 squadron commander spoke caustically of the "super service station" at Miho and commented that "when such an organization dictates to a tactical squadron how much flying time it can or must fly to meet the production-line schedules, all unit control is lost."[111] In these formative months, however, the value of rear-echelon maintenance was amply demonstrated, and the Fifth Air Force had begun to move toward a combination of the separate detachments which would alleviate the problems of duplication and provide centralized control in the form of rear-echelon maintenance combined operations.

# 13. *MIG's Seek Air Superiority*

## *1. Red Air Forces Dwarfed FEAF*

"Unless our relative air strength here is maintained equal to or better than the Chinese Communist Air Force," General Weyland stated, when the truce talks were beginning at Kaesong, "I feel that our expenditures of men and money in the Korean war have been in vain." If the armistice talks failed and the war continued, General Weyland predicted that "the success of the United Nations campaign will be determined by a struggle between the Chinese Communist Air Force and the Far East Air Forces."[1] This and other references to the "Chinese Communist Air Force" were euphemistic, for FEAF intelligence had well-substantiated evidence that powers other than China had begun to crew many of the MIG-15 fighters and probably to direct the Red side of the air war in Korea. In Mukden a "Supreme Joint Headquarters" of Chinese and North Korean forces apparently served policy-making and administrative functions for the Communist air forces, but an "Allied Joint Headquarters" at Antung exercised day-by-day control of Red air activities over North Korea. The Antung center appeared to be managed by Chinese Communist officers, but an intelligence informant reported that it was actually run by Russian advisers who were present in the control room at all times.[2] Some of the MIG's were also flown by Soviet or Soviet-satellite pilots. Such was reported by covert intelligence, and on occasion Sabre pilots saw blond Caucasians parachute from stricken MIG's. A Polish air force pilot who defected in Europe stated that many Russian flight instructors in his country had previously fought in Korea.[3]

In the spring of 1951 the men of the Far East Air Forces had fought the Chinese Communist Air Force to a standstill, but the Red Chinese air aggregation was nonetheless formidable. In June 1951 the Chinese Communists possessed a total of 1,050 combat planes, of which some 690 fighters, ground-attack, and light bombers were based in Manchuria.[4] Thwarted in their initial efforts to develop airfields within North Korea, the Chinese Reds began to construct new airfields just beyond the Yalu River in the Antung complex. The first of these new airfields were at Ta-tung-kou and Ta-ku-shan. Antung continued to be the main base, but these three airfields were soon able to support the operations of more than 300 MIG fighters.[5] Already the Red Chinese air force had been lavishly supplied with Soviet-built MIG's, and the construction of still more new airfields indicated that Red China expected to obtain still more of the jet interceptors, with which it could seek a decision in Korea.

Apprehensive about the continuing augmentation of Communist air forces in the Far East on 10 June 1951, General Weyland looked to the air defenses of Japan and requested two additional jet fighter wings to be stationed there.[6] But General Weyland's apprehension was not completely accepted either in Washington or in Tokyo. From Washington, General Nathan F. Twining, USAF vice chief of staff, explained that the USAF believed that the Sino-Soviet air force augmentation was mainly defensive. Prudence nevertheless dictated that General Weyland receive some reinforcement, and USAF looked at its resources.

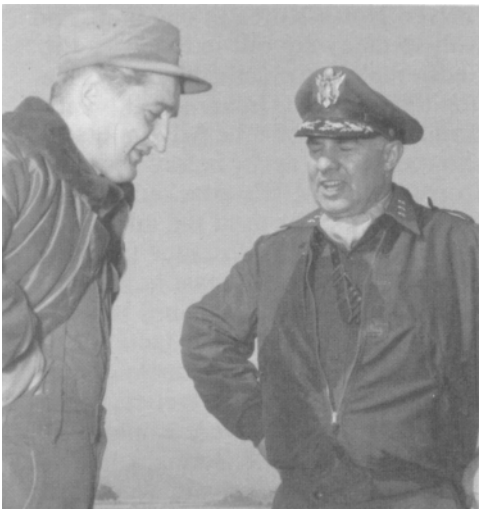
Nine months earlier the 116th Fighter-Bomber Wing had been mobilized from the Air National Guard, and in early July 1951 it was preparing to deploy to Europe. With approval from the Joint Chiefs of Staff, USAF ordered the 116th Wing to proceed instead to the Far East.[7] At this point General Ridgway suggested to the Joint Chiefs that the movement of the 116th Wing to the Far East might be "ill advised," since the Reds might claim that the United States was preparing for war while discussing an armistice. In fact, Ridgway was willing to postpone the deployment until the "course armistice negotiations may take shall have become clear."[8] The Joint Chiefs nevertheless ordered the 116th Wing to deploy as scheduled and publicized its transfer as an augmentation of Japan air defense.[9] In view of earlier corrosion troubles during trans-Pacific crossings, the 116th Wing's Thunderjets received a heavy coating of cosmoline at Alameda, California. When the two escort carriers put to sea on 10 and 12 July, accompanying service crews inspected and refurbished the deck-loaded planes' waterproofing each day. Despite these precautions, nearly half of the 75 F-84's suffered either structural damage or sea-spray corrosion during the ocean crossing. Had the 116th been slated for immediate combat, such damages would have been costly, but the 116th was designed for defense and would have time to repair its planes. Arriving in Japan on 24 July, the 116th Wing and two of its squadrons took station at Misawa Air Base, while the third squadron settled at Chitose Air Base.[10]

Commitment of the 116th Fighter-Bomber Wing to the Far East only partially satisfied General Weyland, who, on 12 July 1951, was even more concerned about the Communist air order of battle than he had been only a month before. At this time General Weyland informed USAF that he needed another wing for station in Japan and two more jet fighter wings for deployment to Korea.[11] In Washington this request fell on deaf ears of USAF leaders who had no more air units to spare. Beginning in July USAF had already undertaken to replace FEAF's old F-86A aircraft with more-modern F-86E models on a one-for-one exchange which would continue for many months,[12] but USAF professed its utter inability to furnish Weyland another wing of air-superiority fighters. The only source of Sabre aircraft was the USAF Air Defense Command, which was not up to strength and which could not safely be denuded of another of its fighter-interceptor wings. "The conditions under which an additional three F-86 squadrons would be greatly needed in FEAF," stated General Vandenberg, "might well be the same conditions under which these same three F-86 squadrons could make a greater contribution to the over-all USAF mission in the air defense of the United States."[13]

What was happening in the Far East in the summer of 1951 was one more indication of the truth in the observation that in the years since World War II the United States had become fat and complacent and had dropped its guard. America's superior technology was not yet able to match the totalitarian economy of Soviet Russia in the quantity production of swept-wing air-superiority fighters. The contrast in numbers of the fighting air forces in the Far East was little short of shameful. In June 1951 Communist China possessed some 445 modern MIG-15 fighters, while FEAF possessed 89 F-86's in theater inventory, including 44 assigned to the 4th Fighter-Interceptor

Wing's two committed squadrons in Korea.[14] There was little doubt that the Reds recognized that they had a numerical superiority in swept-wing fighters, for Communist agents apprehended in South Korea as early as April had begun to display a predominant interest in air order of battle intelligence.[15] By June 1951, moreover, the Red pilots were displaying a growing familiarity with the planes they flew. Using wing tanks, the MIG pilots penetrated as far southward as Pyongyang. The Red pilots had also learned that at altitudes above 35,000 feet their MIG's possessed flight-performance advantages over the heavier Sabres.[16] When flown by experienced pilots, the MIG's were excellent aircraft. After returning from aerial combat on 8 July, Colonel Francis S. ("Gabby") Gabreski, America's leading ace who became deputy commander of the 4th Wing in June, credited the MIG-15 with "excellent performance."[17]

Evaluation of the patterns of Communist air activities clearly indicated that the Reds began to implement a new air campaign designed to establish air superiority over MIG Alley in the latter part of July 1951.[18] At first the Reds were evidently testing new tactics. Exploiting their numerical and altitude superiority, the Red airmen evaded Sabre patrols at the Yalu and then continued southward at altitudes above 35,000 feet as far as Pyongyang, where they turned back and let down to attack the fighter-bombers they sighted while en route homeward to Antung.[19] Effective on 1 June, FEAF had already placed MIG Alley off limits for all Bomber Command aircraft not accompanied by fighter escort.[20] Now the new Red tactics hazarded unescorted jet-reconnaissance planes and



Col. Francis S. Gabreski (left) and Lt. Gen. Frank F. Everest.

fighter-bombers. On 29 July and 9 August, for example, the MIG's evaded Sabre patrols and attacked lower-performance jets. In both instances the fighter-bombers evaded and escaped damage, but on the latter date four MIG's intercepted and badly damaged an RF-80.[21] In other battles fought on 18, 19, and 24 August, the Sabre patrols held firm and, despite unfavorable odds of two to one, destroyed four MIG's.[22]

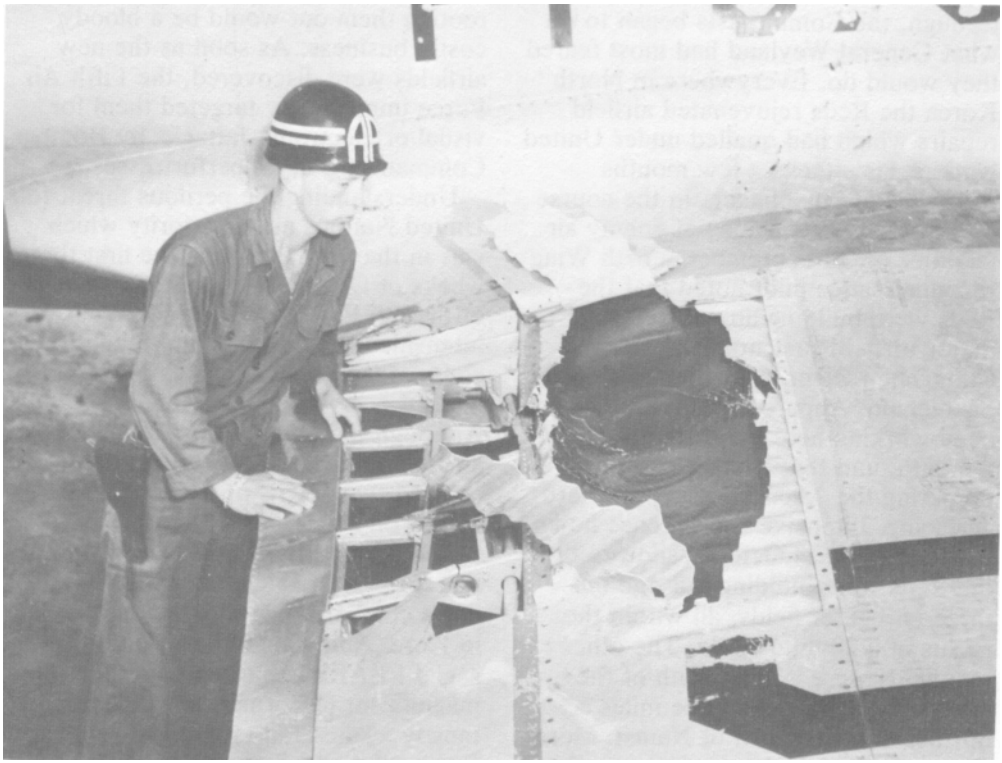
Employing what they had learned in the past two months and an order of battle which had grown to 525 MIG's, the Communist air forces launched into a bitter and all-out air campaign on 1 September 1951. Why the Reds selected this date for mounting their air offensive was easily surmised. On 23 August truce talks had broken down at Kaesong, and since 18 August FEAF fighter-bombers had been hammering North Korea's railway lines of communications.* As many as 90 MIG's now

*See Chapter 14, p. 455.

entered North Korea at one time, and with so many aircraft in the skies the Reds employed practically any formation they desired. In aerial fights on 8 and 9 September the MIG pilots showed tactics never before seen in Korea. Some MIG's attacked in trail formation, others used the lufbery circle, while in one instance four flights of MIG's flew line-abreast head-on passes in which all 16 planes blazed at a single Sabre. The latter tactic puzzled the Sabre pilots, but Colonel Gabreski, an expert on Luftwaffe tactics, recognized that the Reds were employing a technique which the Germans had used against B-17 formations in World War II.[23] All hostile air formations were tighter and better organized. One formation was particularly hard to combat. Pools of MIG's orbited at superior altitudes waiting to make passes downward at United Nations aircraft which came within range. After diving down and making firing passes, the MIG's zoomed back upstairs.[24]

During September 1951 4th Fighter-Interceptor Wing pilots sighted 1,177 MIG sorties over North Korea and engaged 911 of the MIG's in combat. Considering that they commonly fought at odds of three or four to one against them, the Sabre pilots gave good account of themselves. Shortly after noon on 2 September, for example, 22 Sabres tangled with 40 MIG's in a thirty-minute air battle which raged between Sinuiju and Pyongyang and resulted in the destruction of four MIG's. Again, on the afternoon of 9 September, 28 Sabres opposed 70 MIG's, and in this air battle Captains Richard S. Becker and Ralph D. Gibson each destroyed one of the jet fighters, thus becoming the second and third jet air aces of the Korean conflict.[25] In the course of September's all-out air battles the Sabres destroyed 14 Red MIG's, and on 19 September a 49th Group Thunderjet pilot, Captain Kenneth L. Skeen, jettisoned his bombs and shot down an intercepting MIG. In air-to-air engagements the Fifth Air Force lost three F-86's, one F-51, one F-80, and one F-84.[26] While losses to Communist interceptors were moderate, the MIG's were seriously impeding the progress of the United Nations railway interdiction campaign. On many days the MIG's evaded Sabre patrols and pounced on the fighter-bombers, who had no recourse except to jettison their bombs, to scatter, and to run for their lives.

Alarmed by the developments in Korea on 15 September, General Weyland frankly warned General Vandenberg that the Communist air force was rapidly getting out of control. The Red MIG's were hampering United Nations air-to-ground attacks as far southward as Pyongyang. General Weyland stated that FEAF had a "vital and immediate" requirement for another wing of Sabrejets. If USAF could not provide the wing, Weyland recommended that one of FEAF's F-80 wings should be converted to F-86's. "If the present trend continues," Weyland warned, "there is a definite possibility that the enemy will be able to establish bases in Korea and threaten our supremacy over the front lines."[27] In Washington General Vandenberg knew serious concern over the increasing Communist air strength in Manchuria, but his operations officer informed him that USAF could not provide FEAF with any more F-86's without seriously impairing the effectiveness of the Air Defense Command. "Our present capability of supporting one F-86 unit in FEAF is questionable," Vandenberg was told, "and the ability to support two does not exist." Aside from its inability to



Despite a ruptured fuel tank and wing laceration caused by enemy .50-caliber and 37-mm fire, this RF-80 returned safely to base.

provide and support more Sabres in combat, USAF operations felt that no number of additional fighter units could assure air superiority in Korea unless the source of the enemy's air supplies could be attacked. On the basis of this précis, General Vandenberg informed Weyland on 20 September that USAF could neither provide nor support additional Sabre squadrons in Korea.[28]

## *2. Communist Air Forces Come of Age*

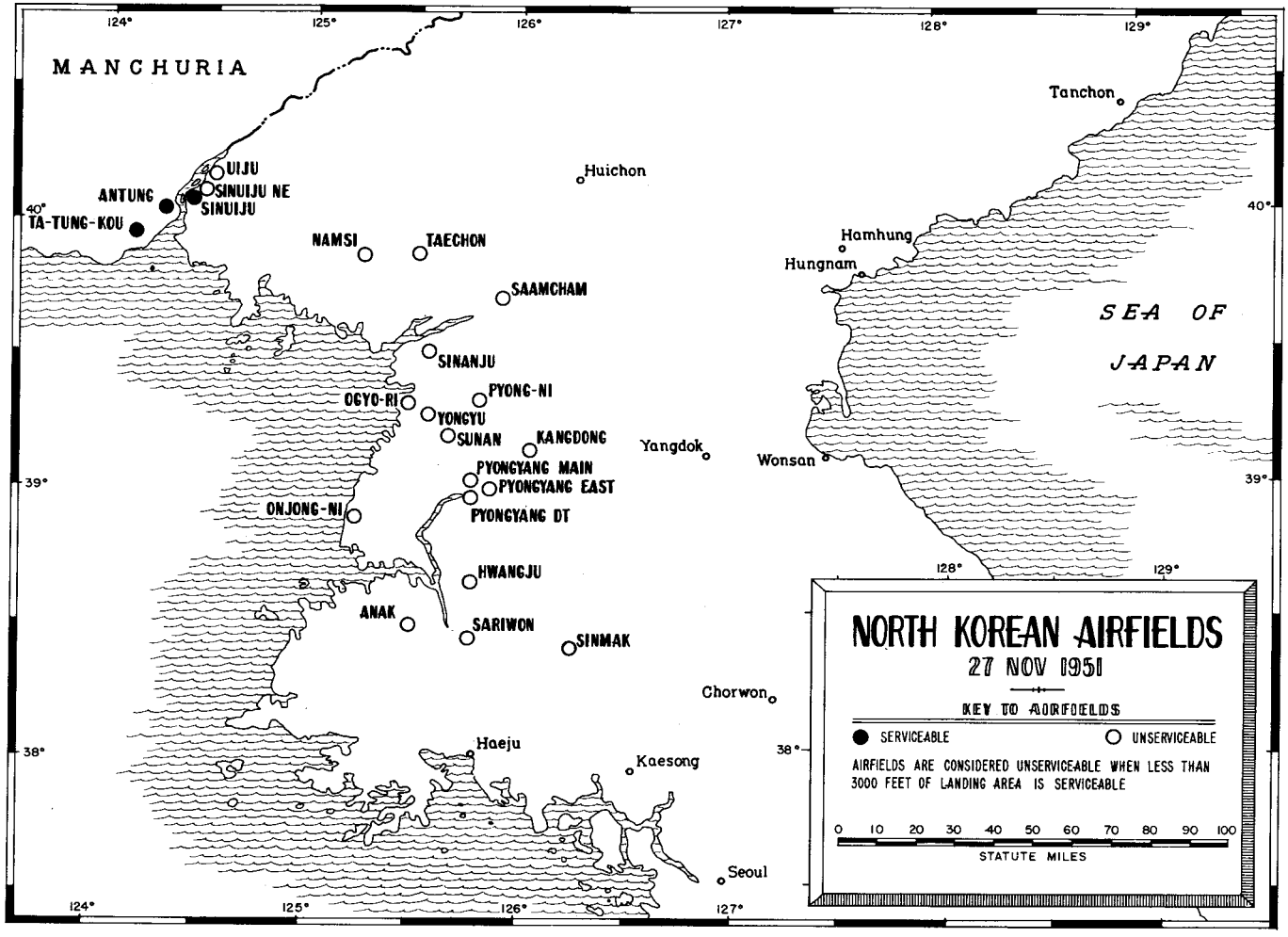
When the Fifth Air received the news that it could expect no additional air-superiority fighters, General Everest had no choice but to pull his fighter-bomber interdiction attacks back out of MIG Alley. The fighter-bombers now attacked the railway lines in the zone between Pyongyang and the Chongchon River. The change in rail-target areas narrowed the choice of rail targets, but it intensified air attacks against the middle reaches of the enemy's rail network.[29] Evidently sensing that their air forces were about to score a break-

through, the Communists began to do what General Weyland had most feared they would do. Everywhere in North Korea the Reds rejuvenated airfield repairs which had quailed under United Nations air attacks a few months before. Quite by chance, in the course of a routine surveillance of enemy air facilities on 25 September, a 67th Wing reconnaissance pilot noted that the Reds were building an entirely new major airfield just north of the Chongchon River, near the town of Saamcham. Apparently the Reds had been working here unnoticed for nearly a month, and they were already preparing the 7,000-foot strip for hard surfacing. Intensive air searches flown in the area on 14 October showed that the Reds were building not one but three jet fighter fields, all within the radius of a 20-mile circle. The other two fields were a mile south of the town of Taechon and three miles northeast of the town of Namsi. More than a thousand laborers were working at each location, and construction was proceeding rapidly, not only on runways but on aircraft revetments and other installations. Each airfield was already defended by antiaircraft guns and automatic weapons.[30]

The significance of the three MIG Alley airfields to the United Nations cause in Korea was obvious and ominous. The Reds evidently intended to fight strongly to protect their investment, for the fields were located close enough together so that one force of airborne MIG's could easily defend any one of them. If the Reds managed to complete the airfields and deploy MIG's to them, they could extend the no-man's air of MIG Alley all the way south to Pyongyang. And if MIG's were dispersed within the revetments being built at the airfields in the Saamcham-Taechon-Namsi triangle, rooting them out would be a bloody, costly business. As soon as the new airfields were discovered, the Fifth Air Force immediately targeted them for visual or electronics attacks by Bomber Command's B-29 Superfortresses.[31]

Understanding the perilous threat to United Nations air superiority which was in the making during the first three weeks of October 1951, the Sabre pilots of the 4th Fighter-Interceptor Wing intensified their patrols and fought some of the greatest air battles of history over northwestern Korea. Although the odds against them steadily increased, the Sabres destroyed two MIG's on 1 October, six MIG's on 2 October, one MIG on 5 October, one MIG on 12 October, and nine MIG's on 16 October. The latter day's combat score was the biggest yet in Korea, and General Weyland messaged FEAF's admiration for the magnificent performance.[32] Operating mostly against rail targets between Pyongyang and Sinuiju or eastward of MIG Alley on the railroad to Kunu-ri, Fifth Air Force fighter-bombers were generally but not always free from MIG attack. On 3 October, for example, 12 F-80's of the 8th Fighter-Bomber Wing, led by Colonel James B. Tipton, responded to a call for help from another fighter-bomber formation received while they were en route homeward from a rail-cutting strike north of Kunu-ri. The old Shooting Stars evidently caught the MIG's by surprise and were able to claim two of the Red interceptors as probably destroyed.[33]

As the Sabres battled to bring the MIG's under control, Brig. Gen. Joe W. Kelly, who had taken command of the FEAF Bomber Command on 30 September 1951, was studying the knotty problem of how best his old Superforts would be able to neutralize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STATUTE MILES

(left to right) Brig. Gen. Joe Kelly, commanding general, FEAF Bomber Command, Gen. Hoyt S. Vandenberg, Col. William H. Hanson, 307th Bomb Wing commander, and Col. Adam K. Brackenridge, 19th Bomb Group commander.

airfield construction at Saamcham, Namsi, and Taechon. The problem concerned probabilities as well as capabilities. Not for several months had MIG's bothered the Superfortresses, but the Reds would most probably react with all their strength to protect the Chongchon airfields, which were nearer to Antung than most targets the B-29's had been attacking. As for capabilities Bomber Command had been flying some 16 combat sorties a day, comprising three flights of three aircraft against airfields or two flights of four aircraft against bridge targets, plus three aircraft for MPQ ground support, one aircraft for evaluation of APN-60 radar beacons, one aircraft for the distribution of psychological warfare leaflets, and two aircraft for shoran-directed bombing attacks against hostile marshaling yards at night.[34] The shoran-bombing capability, which paired two AN/APN-2 radar ground beacon stations of the 1st Shoran Beacon Unit with an AN/APN-3 transceiver in an aircraft, was relatively new to Bomber Command. The 1st Shoran Beacon Unit belonged to the Fifth Air Force, which had obtained it in order to guide its night-flying B-26's and RB-26's. In the autumn of 1950 the shoran beacon unit had proven ineffective, but by February 1951 the organization had again deployed to Korea and was working successfully with B-26 crews. Observing these favorable results and anticipating that summer cloud cover wold hamper its daytime bombing effort, Bomber Command had equipped a 98th Wing plane with airborne shoran

B-29 of the 19th Bomb Wing.

components and had flown an experimental shoran-bombing mission on 1 June. When the tests were successful, each medium-bomber wing equipped a couple of B-29's with APN-3 transceivers. In bad weather these shoran bombers frequently served as lead ships for daytime formation attacks, and, beginning in August Bomber Command customarily dispatched two B-29's each night to attack enemy marshaling yards with shoran-bombing techniques. Studying shoran-bombing results between 1 June and 30 September, operations analysts figured the average shoran circular probable error* to be 485 feet.[35] Although its reliability and accuracy were good, the shoran system demanded extremely accurate mapping data. Moreover, each aircraft employing shoran had to be equipped with the airborne system components. In a first venture against Saamcham Airfield, made by two 30th Wing B-29's on 13 October, Bomber Command employed a night shoran attack, and on following nights single shoran-bombing B-29's continued the Saamcham attack.[36] This means of attack, however, was progressing too slowly. Of 278 bombs dropped on the night of 13 October, for example, only 24 cratered the extreme northeast end of Saamcham's runway.[37]

Desiring to speed the airfield neutralization, General Kelly knew no alterna-

*Circular error probable (CEP) is the probable bombing error, expressed in terms of the radius of a circle centered on the desired mean point of impact of a bomb fall and containing half of the expected bomb fall, excluding gross errors.

tive but to lay on formation attacks by daylight, shoran runs of three flights of three aircraft with visual bombing assists as practicable. The bombers would take advantage of the Sabre screen and would be given heavy fighter escort. These mission planning factors seriously limited operational flexibility. To take advantage of the Sabre screen, the Superforts would have to schedule their strikes between first light for bombing and 1000 hours, or else in the afternoon between 1500 hours and last light for bombing. In order to attain maximum effectiveness, the 4th Wing had to have five hours turnaround time for its Sabre screen. Only four shoran arcs or approaches were available to any target, and flak considerations and the lower limits at which shoran beams could be received dictated the bombing altitudes which would have to be used. Northwestern Korea was too small a geographic area to permit the Superforts to employ diversionary tactics.[38]

Although the missions were fraught with potential hazard, Bomber Command sent nine B-29's of the 19th Group to bomb Saamcham and scheduled nine B-29's of the 98th Wing to attack Taechon on 18 October. The 98th Wing formations missed their rendezvous with fighter escort and diverted to a secondary target, but the 19th Group's Superforts plowed ahead to Saamcham where they placed 306 x 100-pound bombs on the runway. The attack evidently surprised the Reds, for no MIG's showed up to challenge the bombers.[39] On 21 October the 98th Wing again attempted to attack Taechon but again diverted when its bombers failed to meet friendly fighters. Picking up 24 escorting Thunderjets as scheduled, nine 19th Group B-29's successfully bombed Taechon on the afternoon of 22 October. Shortly after bombs-away the Thunderjets were drawn off by some 40 MIG's. Within a moment three other MIG's dropped down out of a cloud bank and attacked so suddenly that the B-29 gunners were too startled to return the fire. Already crippled by flak hits, one Superfort was further damaged by the MIG's. The crew managed to hold the stricken bomber aloft long enough to reach the Korean coast, where all members parachuted and were subsequently rescued.[40] The Red jets had scored a kill, but the interception did not seem to have been planned in advance.

But the morning of 23 October found the Communist air force obviously briefed and prepared to engage the medium bombers in what would be one of the most savage and bloody air battles of the Korean war. South of the Yalu some hundred MIG's engaged and boxed in the 34 Sabres of the screening force. The Sabres dropped two MIG's, but the American swept-wing pilots were effectively out of action for the combat taking place to the south.[41] On this morning three flights comprising eight Superforts (one had aborted) of the 307th Bombardment Wing made rendezvous with 55 Thunderjets of the 49th and 136th Wings and headed for Namsi Airfield. As the leading "Charlie" flight turned on course to the target, some 50 MIG's circled the formation like Indians around a covered-wagon train. When the Thunderjets would not let themselves be decoyed away, the MIG's bored in with determined attacks. Red jets raked the lead ship of "Charlie" flight, but Captain Thomas L. Shields nevertheless held his burning bomber on course long enough to drop his bombs, thus fulfilling his duties as a leader. Between their initial point and the target all of the ships in "Charlie" flight were under attack, and as the bombers dropped

their loads and broke left, some confusion on the part of escorting Thunderjets left them inadequately protected. Actually, however, the Thunderjets were so badly outclassed that they could not offer too much protection. Most of the attacking MIG's flew normal pursuit curves, but some of them dived downward through the bomber formation so as to deny the Thunderjet pilots or the Superfortress gunners much opportunity to fire. One flight of MIG's came straight up under the B-29's with all guns blazing. In the lead flight, Captain Shields coaxed his bomber back to the coast, where his crew bailed out, but Shields did not get free from the stricken ship in time to save his own life. While rallying to the left after bombs-away, "Able" and "Baker" flights each lost a bomber to the MIG's. In twenty minutes it was all over. Superfortress gunners claimed three MIG's destroyed, and Thunderjet pilots also claimed a MIG as shot down. All but one of the bombers which survived the attacks received major damage, and most of them had dead and wounded men aboard when they made emergency landings in Korea and Japan. One F-84 was also lost in the air battle.[42] Describing the holocaust in its mission report, the 307th Wing praised the efforts of the Thunderjets, but it wryly observed that nothing less than 150 F-86's would have been an adequate escort for the bombers.[43]

On the day following the bloody battle over Namsi, General Kelly sent eight B-29's of the 98th Wing to attack a bypass railway bridge at Sunchon, a target south of MIG Alley. Despite the escort provided by 16 RAAF Meteors and ten F-84's, the Superfortress formation was systematically attacked by some 40 to 70 MIG's, some of whom pursued the medium bombers almost all the way to Wonsan. In the running fight B-29 gunners claimed a MIG destroyed, but one of the B-29's went down in Wonsan harbor, where eight crewmen were rescued. For two days after 24 October General Weyland canceled all main effort daylight B-29 attacks while operations officers assessed the situation. On 27 October, however, Bomber Command sent eight 19th Group B-29's to attack a railway bypass bridge at Sinanju. Since the Sabre pilots had reported that the MIG's would not fight over water, the 19th Group routed its bombers to remain over the Yellow Sea as long as possible. But in the short time while the bombers turned inland to the Sinanju bridge, some 95 MIG's overwhelmed the 16 Meteors and 32 Thunderjets flying escort. Superfort crews did not think that the MIG pilots were particularly aggressive, and they claimed three of the Red jets destroyed in a ten-minute fight. One Superfort was severely damaged, and three other planes received lesser damages. In the swan song of Superfortress daytime operations over Korea the 98th Wing sent eight B-29's to bomb a bypass bridge at Songchon on 28 October. MIG's were aloft in the area, but the B-29's met no hostile interceptions.[44]

All through the month of October 1951 the Communist air forces were operating at high tide over North Korea. United Nations air superiority was in jeopardy. During the month United Nations pilots had sighted 2,573 airborne MIG's, and 2,166 of these MIG sorties had been willing to engage in combat with United Nations aircraft. According to evaluated combat claims, 32 MIG's were destroyed—24 by Sabres, 7 by B-29 gunners, and 1 by a Thunderjet—but FEAF had lost seven Sabres, five B-29's, two F-84's, and one RF-80 in aerial combat.[45] The old

Superforts of Bomber Command had taken their worst losses of the Korean war. Up until October Bomber Command had lost only six aircraft in combat, yet in one week at the end of this month Bomber Command lost five planes to flak or fighters and suffered major damages to eight other planes. In the week 55 B-29 crewmen were dead or missing and 12 others had been wounded.[46] Many pessimists were saying that the old Superforts were through in Korea. Made bold by their success, the Communists moved aircraft across the Yalu to Sinuiju and Uiju airfields. For the first time some 26 MIG's were dispersed at Uiju, and some 64 conventional aircraft were now parked at Sinuiju. So far, moreover, the FEAF attacks had not neutralized the new airfields at Saamcham, Namsi, and Taechon. Thousands of laborers were rapidly refilling such bomb craters as had been made and were building other facilities.[47] After a flying trip to the Far East, General Vandenberg returned to Washington with a gloomy report. "Almost overnight," he told the press, "Communist China has become one of the major air powers of the world."[48]

### *3. Sabres and Superforts Battle the Communist Air Threat*

With the beginning of winter in 1951 the growing Communist air order of battle in Manchuria and China forced the United Nations to make some recalculations of its emergency plans. Movement of a new Chinese air regiment to Ta-ku-shan brought the aircraft complement at the Antung bases to 290 MIG-15 fighters. Other MIG's based at such rearward bases as Anshan, Liaoyang, and Mukden swelled the number of airborne sorties counted over northwestern Korea by staging forward through Antung.[49] In the skies over North Korea Sabre pilots began to encounter large numbers of new and improved MIG's. These planes would prove to be of a type designated as the MIG-15 BIS ("BIS" meant "encore")—aircraft powered by a more-powerful 6,000-pound-thrust VK-1 engine, designed by Russia's Vladimir Klimov.[50] Employing their superior numbers of aircraft at a respectable operations rate, the Communists sent 2,326 observed sorties over North Korea in November and 3,997 observed sorties in December 1951. On 3 and 8 December flights of high-flying MIG's were sighted south of Seoul.[51]

The growing Communist air capabilities gravely concerned Air Force leaders in Washington and Tokyo. "In my opinion," stated General Weyland on 2 December, "the main reason the enemy has not yet attacked in force from north of the Yalu is that he operates under restrictive directives to reduce the likelihood of retaliation." In view of the growing Red air order of battle, general Weyland had to credit the enemy with a "capability of eventually attacking our forces." Up until now United States policy had assumed that the United Nations air forces would be allowed to retaliate against China's Manchurian air bases if the Red air forces attacked South Korean installations. Now, however, Weyland warned that FEAF was certainly not strong enough to attack

all major airfields in Manchuria and China. In the event of expanded air hostilities FEAF would expect to attack only those Red airfields offering direct and positive threats to United Nations forces.[52] In Washington General Vandenberg's planners advised him that the old proposals of "hot pursuit" had been overtaken by events. In case of Communist air attacks from north of the Yalu, the USAF planners recommended that FEAF should be cleared to obliterate the Antung bases. This course of action was accepted by the Joint Chiefs and approved by the National Security Council in December 1951.[53] Pending overt Communist air attacks made against United Nations installations from the Antung bases, or a change in United Nations policies accompanied by a marked augmentation of FEAF, General Weyland knew no course of action except to continue to battle the Red jets over North Korea and to give the highest priority to the neutralization of airfields in North Korea which could support Red jet air operations against United Nations installations.[54]

Following the Communist air victories over Bomber Command's Superfortresses in late October, USAF no longer questioned whether it could provide FEAF with more air-superiority Sabres but instead figured how soon these planes could be delivered in the Far East. News of the blood bath over Namsi overtook USAF planning looking toward the conversion of a Fifth Air Force F-80 wing to Sabres sometime in the late spring of 1952, and on 22 October General Vandenberg ordered the Air Defense Command to dispatch 75 F-86's with pilots and crew chiefs immediately to Alameda, California, for a deck-loaded, escort-carrier ocean voyage to Japan.[55] General Weyland readily agreed to return equal numbers of F-80 pilots and crew chiefs to the Air Defense Command, but in accordance with General Everest's wishes Weyland proposed to use the 75 Sabres to equip the two-squadron 51st Fighter-Interceptor Wing. Staff officers at USAF were inclined to argue about this action, for General Weyland had earlier proposed to take three F-80 squadrons out of action by equipping them with Sabres, thus lowering demands for scarce Shooting Star replacements as well as increasing air-superiority potentials. In a conference with General Weyland in Tokyo, however, General Vandenberg agreed to the Everest plan.[56]

Shipment of deck-loaded aircraft to Japan through angry winter seas involved a calculated risk, for green water could be expected to spray across the decks of the escort carriers. At Alameda, however, the Sabres were given the best waterproofing possible in the time available, and the *Cape Esperance* and the *Sitkoh Bay* departed for Japan on 1 and 9 November.[57] While the new Sabres were en route to the Far East, General Everest decided to concentrate the whole of the 4th Fighter-Interceptor Group in Korea. Because of shortages of operating facilities at Kimpo Airfield and of logistical support for F-86 aircraft, the 4th Wing had kept one fighter squadron in rotation at Johnson Air Base in Japan. On 2 November the 335th Squadron joined the group at Kimpo. At first the commitment of the three squadrons to combat did not markedly increase the 4th Group's capabilities, for the 335th Squadron merely shared the planes already held by the other two squadrons in Korea.[58]

As the Fifth Air Force awaited Sabre reinforcements, Colonel Harrison R. Thyng's 4th Fighter-Interceptor Wing

was hard pressed to handle the many Communist MIG's which appeared over North Korea almost every day in November. After long experimentation, the Communists had begun to exploit a fully-developed "pincer-and-envelopment" technique. Coordinated "trains" of 60 to 80 MIG's crossed the Yalu over Antung and over the Sui-ho reservoir at altitudes above 35,000 feet. Both the "west coast train" and the "central train" dropped off flights or small sections to engage the Sabre patrols, but the main bodies traveled on southward to converge over Pyongyang and begin a return trip to the Yalu. While en route homeward a part of the MIG's dropped down to 15,000-foot altitudes to attack United Nations fighter-bombers, homeward-bound Sabres, or straggler aircraft. To cover the mass withdrawal of Red planes, a fresh section of MIG's usually penetrated at least as far south as Sinanju.[59] The Red "pincer-and-envelopment" tactics were formidable, but many of the pilots who flew in the "trains" were evidently untrained and quite unwilling to engage in combat. In fact, only about half of the Red air sorties sighted over Korea in November engaged in combat.[60]

Because of their superior numbers, the Communist MIG's possessed the initiative everywhere north of Pyongyang during November, and all United Nations pilots could do little more than to counter such actions as the Red airmen initiated. The 4th Wing Sabre patrols could not prevent MIG's from entering Korea, but the 4th Wing made efforts to devise tactical changes which would work against the "trains." In the summer of 1951 the 4th Wing had experimented with six-ship flights, but with the appearance of larger numbers of MIG's the wing dropped the larger flights as too unhandy in aerial combat. The MIG's, moreover, now understood their climbing advantages and almost never tried the old tactic whereby flights split up into elements, one of which dived and the other climbed when jumped by Sabres. Once again the Sabres employed jet-stream patrol formations of fluid-four flights staggered to arrive in patrol areas either at separate intervals or different altitudes generally ranging downward from 35,000 feet. Because of limited visual acuity at high altitudes, which restricted the number of planes one air commander could control, the 4th Wing usually employed not more than 32 Sabres on a patrol, and these usually flew in two 16-ship supporting sections.[61] Although customarily escorted by 12 to 16 F-86's, 15th Tactical Reconnaissance Squadron RF-80's were bounced by MIG's 11 times during November. Some photo missions had to be flown five or six times in order to procure requisite photographic coverage.[62] Fighter-bomber pilots got accustomed to MIG interceptions, especially on missions north of Pyongyang. Some pilots noted that the MIG's were more of a psychological threat than anything else, since on numerous occasions the Red airmen appeared content if they could make the fighters jettison their bombs. On occasion, however, both adversaries drew blood. On 9 November 80th Fighter-Bomber Squadron F-80's tangled with three times their number of MIG's south of Kunu-ri and handled themselves well enough to shoot down two of the Reds. On the other hand, the MIG's downed one F-80 and three F-84's during the month.[63]

On a few days of profitable aerial combat in November, the 4th Wing's Sabres downed a total of 14 MIG's, but the more spectacular Sabre achievements represented far from routine

combat. On 18 November, while on a regular sweep to the Yalu, one Sabre flight spotted 12 MIG's parked at the south end of the runway at Uiju Airfield. While their two comrades covered, Captain Kenneth D. Chandler and Lt. Dayton W. Ragland made a large circle downward and swept in ten feet high down Uiju's runway. In the strafing pass, Captain Chandler triggered off bursts which destroyed four of the Red planes and damaged several others.* Heading southward on the deck, the two Sabre pilots escaped without harm.[64] In a major air action on 27 November 4th Group pilots shot down four MIG's. Maj. Richard D. Creighton scored one of the victories and became the fourth jet ace of the Korean war.[65] But the big day for the Sabres was 30 November. Since early in the month Communist landing parties had been battling South Korean troops for control of offshore islands in the Yellow Sea, and on 6 November a force of twin-engine TU-2 conventional light bombers had successfully attacked Taehwa-do.[66] Late on the afternoon of 30 November 31 Sabres led by Colonel Benjamin S. Preston, the 4th Group's commander, sighted a force of 12 TU-2 bombers, escorted by 16 LA-9 fighters, and covered by 16 MIG's, heading for Taehwa-do. Fighting in elements of two in a battle which raged all over the sky, the Sabres slaughtered eight of the TU-2 bombers, three LA-9 fighters, and one MIG-15. Major George A. Davis, who had already begun to make his mark in Korea, shot down three TU-2's and the single MIG to become the fifth jet ace of the Korean conflict. Major Winton W. Marshall destroyed one TU-2 and one LA-9 and was recognized as the sixth jet ace. General Weyland called this mission "highly gratifying" and believed that it might "teach the Commie a lesson."[67]

While the 4th Wing was holding the line, the 51st Fighter-Interceptor Wing had been preparing to convert its two squadrons to Sabres. In preparation for the change, Colonel Gabreski took command of the 51st Wing at Suwon on 6 November. Lt. Col. George L. Jones, another 4th Wing veteran, took command of the 51st Group. On 19 November the 51st Wing transferred its F-80's to the 8th Fighter-Bomber Wing, and after a short period of transition with its new planes, the 51st Wing flew its first Sabre combat missions on 1 December.[68] Effective with the receipt of the additional Sabres, FEAF possessed 165 F-86 aircraft in December. Since some of the additional planes were assigned to the 4th Wing, FEAF could count a total of 127 Sabres committed to battle in Korea.[69] The additional planes proved worthwhile, for early in December the Communist pilots continued to display the same aggressive streak which had shown itself late in November. On 1 December, for example, more than 40 MIG's launched vicious attacks against 14 Australian Meteor jets. The RAAF pilots destroyed two MIG's but lost three of their number to the enemy. In almost daily attacks during the next several days the MIG's destroyed two F-80's and an F-84. To achieve these victories, however, the Red aircraft had to come down to lower altitudes where they furnished a mark to the Sabres. On 2 and 4 December the Sabres scored five victories on each day, and the neophyte pilots of the 51st Wing

*In aerial combat on 13 December 1951 Captain Chandler destroyed another MIG-15. In terms of numbers, Captain Chandler could have been recognized as an "ace," but FEAF counted only aerial destructions as the criteria for recognition as an "ace."

accounted for one of the kills on both days. The big victory came on 13 December, and it belonged to the 4th Wing. In morning and afternoon sweeps over Sinanju, the 4th Wing met 145 MIG's and destroyed 13 of them. The indefatigable Major George A. Davis, commander of the 334th Squadron, had chalked up two additional victories on 5 December, and he claimed four of the Red kills on 13 December. General Vandenberg cabled his congratulations to the 4th Wing and especially to Major Davis for the fine day's work.[70] After this smashing victory the Reds still appeared over Korea in great numbers, but they flew high and had little inclination to fight. On 14 December the 4th Wing achieved a single victory, and on 15 and 28 December 51st Wing pilots destroyed two MIG's but these were the only combat results in the latter half of December 1951.[71]

Magnificent though it was, the Sabre victory represented only a part of the story of United Nations air superiority in Korea during the early winter months of 1951. In these months Bomber Command's old Superfortresses had made an amazing comeback. At a commander's conference held at Itazuke Air Base on 28 October Fifth Air Force and Bomber Command officers had agreed that virtually no amount of fighter escort could keep MIG's off the medium bombers. The straight-wing Meteors and Thunderjets, when attempting to escort the B-29's at bombing altitudes above 20,000 feet, had to operate so close to their mach limits that they could not maneuver to fend off attacking MIG's without losing control. The only real defense for the B-29's was an impenetrable Sabre screen, but the Fifth Air Force did not have enough F-86's to fly such a screen.[72] Facing up to the problem, General Kelly came through with a somewhat remarkable proposal. Bomber Command would operate only at night. Using its immediate capabilities, Bomber Command would fly each night five to seven individual shoran sorties, three to four MPQ-2 ground-support sorties, two leaflet-dropping sorties, one APN-60 beacon-evaluation sortie, and one MSQ-1 ground radar-evaluation sortie, together with reconnaissance effort based on weather and requirements. As soon as possible, General Kelly wanted to develop shoran bombing as Bomber Command's principal attack capability.[73]

When General Weyland had approved the proposal, Bomber Command commenced to build up its shoran capabilities. The Fifth Air Force obligingly surrendered most of its shoran transceivers, and, with the assistance of Far East Air Materiel Command technicians, Bomber Command undertook to install the shoran equipment in each of its standard bombardment aircraft.[74] Safe in the dark from MIG interceptors, B-29 crews launched intensive shoran bombing attacks against Saamcham, Taechon, Namsi, and Uiju airfields on 4 November. Begun by a few planes, the attacks swelled in volume as more medium bombers got their shoran equipment. In November 26 B-29 sorties dropped 170 tons of bombs at Namsi, 23 sorties dropped 160 tons at Taechon, 12 sorties dropped 85 tons at Saamcham, and 12 sorties dropped 80 tons at Uiju. Flying singly along the shoran arcs, the medium bombers employed the cratering effect of 100- and 500-pound bombs against the runways at Namsi, Taechon, and Saamcham. At Uiju the night-flying bombers blanketed dispersal areas with air-bursting 500-pound bombs in an effort to destroy the MIG's based there.[75]

Saamchan airfield after the "B-29 treatment."

As the bomb tonnages indicated, Bomber Command's shoran bombing was not too accurate at first. Most medium-bomber crews had never before employed shoran, and they had to get their training in combat. Because of the exigencies of the situation, Bomber Command could give its crews only eight practice drops before putting them on combat missions, whereas a crew needed as many as 35 practice drops before it became really proficient in shoran bombing. Almost immediately Bomber Command was impressed with another shoran problem which was caused by inaccurate maps. The airfields at Namsi, Taechon, and Saamcham were not exactly where existing maps showed them to be. As a result of both factors the shoran-bombing circular probable error against the three airfields was 1,220 feet.[76] The large error factor required additional tons of bombs, but the medium bombers nevertheless scored damages at Namsi, Taechon, and Saamcham faster than Red laborers could effect repairs. By the end of November the bombing effort had progressed so well that the medium bombers could return to attacks against transportation objectives. Of all the Communist airfields in Korea, only those at Sinuiju and Uiju could be counted as operational.[77]

By guise and by guile the Communists attempted to counter the night-flying bomber attacks. Evidently hoping to confuse the B-29 crews, the Reds

piled circular rings of dirt on the runways at their MIG Alley airfields to simulate bomb craters. A sharp-eyed FEAF photo interpreter almost immediately noted that the dummy bomb craters were not the right size, and low-level reconnaissance verified that the craters were piles of loose earth, banked up on unharmed sections of the runways. Especially along the Yalu, the Reds threw up increasingly large amounts of flak. On the evening of 8 November Red ground fire scored against a B-29 which was flying a leaflet mission—or "paper route," as the crews called these missions—along the Yalu. The bomber limped to the coast, where the crew parachuted to safety. At Namsi, Taechon, and Saamcham the Reds soon gauged the shoran arc approaches and sited heavy guns along these corridors, but only five B-29's sustained battle damage. Only at the Yalu were the Reds able to effect a semblance of organized defense against night air attack. Uiju Airfield, for example, was defended by radar-controlled flak, more than 50 searchlights, and by fighter aircraft. Over this target on the night of 4 December searchlights coned a B-29 while two MIG's attacked and damaged it. On the night of 23 December, when the B-29's returned to Uiju, they employed several shoran arcs, staggered attack times and altitudes, and, before the B-29's arrived, a cooperating 3d Wing B-26, piloted by Capt. William Jessup, knocked out eight searchlights. The remaining searchlights nevertheless kept the Superforts illuminated, permitting cooperating Red fighters to attack and damage one B-29. Another B-29 was damaged by flak, but both planes returned safely to their base.[78]

### *4. Sabres Stalk Elusive Red Airmen*

In the autumn of 1951 the Communist air forces had made strenuous and not entirely ineffectual efforts to wrest air superiority over northwestern Korea away from the United Nations Command. Despite their utmost efforts, however, the Reds had failed to gain air superiority, and sometime in the middle of December 1951 the Communist air command evidently implemented a new operations plan. During the latter part of December United Nations Command intelligence reported that the Chinese Reds moved several air divisions from the Antung bases to other airfields in China proper and replaced the older air divisions with new organizations.[79] The Communist airmen abruptly abandoned their "pincer-and-envelopment" tactics. Large numbers of Red aircraft continued to fly in "trains," but these formations came into Korea over the Sui-ho reservoir, patrolled unaggressively at altitudes between 35,000 and 42,000 feet, came as far south as the Chongchon River, and then returned northward to Antung.[80] Except for routine efforts to maintain the airfields at Uiju, Sinuiju, Pyongyang, and Sariwon, the Reds abandoned seriously sustained efforts to build or rehabilitate airfields in North Korea.[81]

The United Nations Command was unable to offer any satisfactory reason for the sudden change in Communist air war objectives. Quite probably, however, the Red air commanders perceived the hopelessness of their

efforts to attain air superiority and resolved to begin to use Korea as a training and testing ground which would prepare Red airmen for combat in some future air war. After December 1951 the Sabre pilots noticed that the Reds followed a definitely cyclical pattern of air operations over northwestern Korea which indicated that combat training was their primary concern. Each "class" of Communist pilots followed a clearly distinguishable training cycle. At first the new "class" flew high and fast, in large formations, was neither aggressive nor proficient, and usually declined to engage in combat. As they gained proficiency, the "class" flew at lower altitudes, became more aggressive, and engaged the Sabres in fairly well-planned tactics. In its final period the "class" reached its peak proficiency and aggressiveness, flew at altitudes permitting combat, and engaged the Sabres more frequently. Then the "class" evidently graduated, and a new "class" came in, once more flying high and in large formations. In the airspace over MIG Alley the Communists were now seeking to train a maximum number of pilots and to test their equipment and organization against the United States Air Force.[82]

To the men of the 4th and 51st Fighter-Interceptor Wings the early months of 1952 were times of bitter frustration. Possibly it was just as well that the MIG's did not want to fight, for the unprogrammed conversion of the 51st Wing to Sabre aircraft placed a severe strain on logistical support which USAF had earlier described as inadequate to support a single Sabre group in combat. Although FEAF obtained more Sabres, the aircraft-out-of-commission rate spiraled rapidly upward. An average of 45 percent of the Sabres had to be carried as out of commission in January 1952, 16.6 percent for want of parts, and 25.9 percent for want of maintenance.[83] With two Sabre wings flying combat, requirements for external fuel tanks jumped approximately 500 percent in four months, so that theater supply levels of these tanks were nearly exhausted in January 1952. Throughout January Sabre pilots flew combat patrols with only one wing tank. They reduced their patrol time to compensate for the reduced fuel, but many pilots barely managed to make it home for dead-stick landings.[84] To make up this deficiency, USAF C-124 transports shuttled tanks from the contractors' plants in the United States to the combat area, where the tanks were unloaded and installed on Sabres waiting to take off. Even with this emergency supply, the Sabre wings had to cut back their combat sorties to a minimum in February.[85] The problem of providing replacement parts for the Sabres was more difficult to alleviate, for USAF had contracted to buy parts in terms of peacetime consumption factors. Early in February 1952 an inquiry from a congressional committee concerning Sabre supply support brought a USAF Air Materiel Command team headed by Maj. Gen. George W. Mundy to the Far East. General Mundy's team found a few evidences of a lack of supply control within the Fifth Air Force, but it laid most blame for the Sabre parts shortages on deficient initial provisioning, based upon peacetime rates of consumption rather than combat rates. The Mundy team made a list of critically short Sabre parts, and the Air Materiel Command initiated a project called "Peter Rabbit" to buy on a crash basis a one-year level of all the deficient items. Deliveries of these parts slipped a little, but by April 1952 the rate of F-86's out of commission

for parts was down to 2.4 percent.[86]

The unprogrammed conversion of the 51st Wing to Sabres also contributed to a serious deficiency of replacement pilots. When it had arrived in the Far East, the 4th Wing had been manned by highly qualified regular and reservist career pilots, not a few of whom were conventional air aces. By usual standards for fighter pilots, most of the pilots were "old" men, but most of them had started out in fighters and were still extremely able in combat. By the late summer of 1951, however, most of the original cast of pilots were rotating as 100-mission veterans.[87] Since the unprogrammed conversion of the 51st Wing occurred at about this same time, USAF was strapped to supply adequately qualified replacement pilots for service in Korea.[88] As a result, the 4th and 51st Wings received a large number of pilots in the winter of 1951–52 whose previous combat experience had been attained in multi-engine transports and bombers. Transitioning these men to Sabres in the Far East not only imposed an unwarranted task upon combat units but the training was often impossible to accomplish.[89] In February, when the Sabres had to cut back their rate of operations because of logistical shortages, replacement pilots continued to arrive in undiminished numbers. As a result, Sabre pilots were able to fly an average of only ten combat missions a month, too few to permit a flier to maintain his combat proficiency. To get temporary relief, the Fifth Air Force rotated some Sabre pilots on an "available-replacement" basis rather than the rigid 100-mission standard.[90] An increased rate of Sabre operations in March further relieved the pilot overage, and in this same month the 4th and 51st Wings began to receive increasingly large numbers of young fighter pilots from replacement training centers in the United States. These young pilots required additional training, but the results were encouraging. "The training of a young jet fighter pilot," noted the 335th Squadron, "is easier than the conversion of an older transport pilot.... As long as we continue to receive qualified jet pilots, the training program will not be impossible, merely difficult."[91]

If the Sabre wings knew discouragement because of logistical concerns, the men who flew the sleek air-superiority fighters were equally vexed at the elusiveness of MIG pilots who appeared high over Korea in large "gaggles" or strung-out formations almost every day yet virtually refused to fight. Day after day the MIG's followed the same pattern. Forces of MIG's numbering anywhere from 100 to 200 planes formed over Manchuria and swept into Korea at speeds of about .99 mach. Within a formation, one section generally flew just below the contrail level, a second section would be in the contrails, and a third section would fly above the contrails—sometimes as high as 50,000 feet.[92] When the MIG's began to fly high and fast, the Sabre pilots varied their tactics and began to enter their patrol areas at altitudes up to 40,000 feet. Possessing newer F-86E's, the 51st Wing patrolled a few thousand feet higher than this. Even at these altitudes the MIG's were almost always higher, and, in such event, the Sabres tried to maneuver and pace below the MIG formation in the same direction of travel, hoping that some of the Red pilots might be tempted to come down and fight.[93] Flying a mixed complement of F-86A's and F-86E's, the 4th Fighter Wing was not at its best at high altitudes and could claim only five MIG's destroyed during January 1952.[94] Flying newer, low-time, and better-

tuned F-86E's, the 51st Wing scored 25 kills during the month, many of them on 6 January and 25 January. On these days 51st Wing patrols entered the combat area at 45,000 feet and were able to make high astern attacks against MIG's whom they sighted at lower altitudes.[95] At about this time the Sabres began to call the high-flying Red formations, "jackpot flights," meaning that such planes could be easily destroyed if the Sabres could just manage to get up there where the enemy was flying.

Probably mindful of their losses in the few instances that the Sabres got on top of them, the Communist airmen were discreetly circumspect and flew even higher as they trained for combat over North Korea during February 1952. According to United Nations intelligence, 540 Red MIG's were now based at the Antung airfields and still other Red air units flew combat missions from bases farther within Manchuria. As a general rule, the Red formations flew at 40,000 feet and above. In fact, on 4 February MIG flights were sighted at 53,000 feet.[96] Held to a reduced combat rate because of logistical deficiencies and forced to stalk an enemy who did not wish to fight, the 4th Wing claimed only six MIG's and the 51st Wing claimed only 11 MIG's destroyed during February.[97] If air combat during February was not very spectacular it was nevertheless marked by moments of pathos and elation. On 10 February Maj. George A. Davis, Jr. led eighteen 4th Wing Sabres to a patrol station to shield fighter-bombers attacking rail targets near Kunu-ri. Far to the west Major Davis saw hostile contrails to the northwest of the Yalu River, and, desiring to nip the hostile threat in the bud, Major Davis and his wingman left the main flight of Sabres and went to the Yalu. At the scene of action the Sabre flight evidently surprised the MIG's, for Major Davis descended to 32,000 feet and shot down two Red airmen within a matter of a few seconds. But as Davis pulled in behind a third MIG, a fourth Red pilot came in from seven o'clock and scored with a burst of cannon fire which sent Davis earthward. At the time that Major Davis went down he was the leading jet ace of the Korean conflict with a victory record of 11 MIG's and 3 TU-2 bombers to his credit.* For his conspicuous gallantry and intrepidity in combat, Major Davis was posthumously awarded the Congressional Medal of Honor.[98] An aerial fight between MIG's and 51st Wing Sabres on 23 February had happier results for Maj. William T. Whisner, commander of the 25th Squadron, who destroyed his fifth MIG to become the seventh jet air ace of Korea and the 51st Wing's first jet air ace.[99]

After two months of training the Red airmen must have received instructions to fight early in March 1952. During March and April some new MIG "classes" continued to avoid action by flying at high altitudes, but many Red airmen were willing to fight in two-, four-, and six-ship formations at lower altitudes. Far from being "Tigers" even yet, the Red pilots came out of Manchuria at high mach and at above 40,000 feet, made turning sweeps to lower levels in MIG Alley to search for United Nations fighter-bombers, and then scooted for home at low altitudes.

*On 1 June 1951 USAF had stated a policy that required jet fighter aces to be returned to the United States. Many of the jet aces, however, wanted to remain in combat, and the FEAF commander was accordingly authorized to return or retain jet aces who volunteered to remain in the theater. (Hist. Dep. CofS Pers. USAF, July–Dec. 1951, p. 14.)

Capt. Robert J. Love, the 11th USAF jet ace.

The tactics were reminiscent of the "hit-and-run" passes employed by Red China's pilots in their first winter of combat in Korea.[100] With more aircraft in commission and ample supplies of fuel tanks, Fifth Air Force Sabre pilots were not sorry to see the Red airmen turn aggressive. The Sabres continued to employ their old tactics and they also entered the combat area stacked down from 40,000 feet. Since the active MIG's also kept below the contrail level, the Sabre pilots had trouble spotting the enemy or catching them before they escaped across the Yalu.[101]

Even though the Communist pilots were not mean adversaries, the American airmen could not be denied some smashing victories. At a cost of six of their own number lost in the two months, the Sabres destroyed 39 MIG's in March and 44 in April, the latter total comprising a record which would hold good for several months to come.[102] Both Sabre wings shared the new jet fighter aces who emerged from April's aerial fights: Colonel Francis S. Gabreski on 1 April, Captain Robert H. Moore on 3 April, Captain Iven C. Kincheloe on 6 April, Captain Robert J. Love on 21 April, and Major William H. Wescott on 26 April.[103] At the same time as they paid so dearly for their operations at lower altitudes, the Red airmen were not notably successful in their efforts to attack United Nations fighter-bombers. Two Thunderjets in March and a single Shooting Star in April were lost in air-to-air combat.[104]

The increased Communist air activities bespoke a superiority of numbers and was probably designed to cover activity on the ground. On 13 April amazed Fifth Air Force pilots saw some 400 to 500 MIG's parked at Ta-tung-kou Airfield. This was the highest number of enemy aircraft ever observed on a single Manchurian airfield, and it indicated the capacity of these border bases for serving Red fighters.[105] The Reds also moved conventional planes into North Korea. While leading a flight of 51st Wing Sabres late on the afternoon of 22 April, Captain Kincheloe spotted partially concealed planes near the runway at Sinuiju Airfield. Captain Kincheloe initiated a strafing run and destroyed a Yak-9. Moments later Major Elmer W. Harris strafed and destroyed another Yak-9. In a follow-up strafing assault against the 24 dispersed planes at Sinuiju on 4 May, Kincheloe left ablaze three Yak-9's and Harris destroyed two Yak-9's which were parked in revetments on the west end of the runway.* In a pioneer

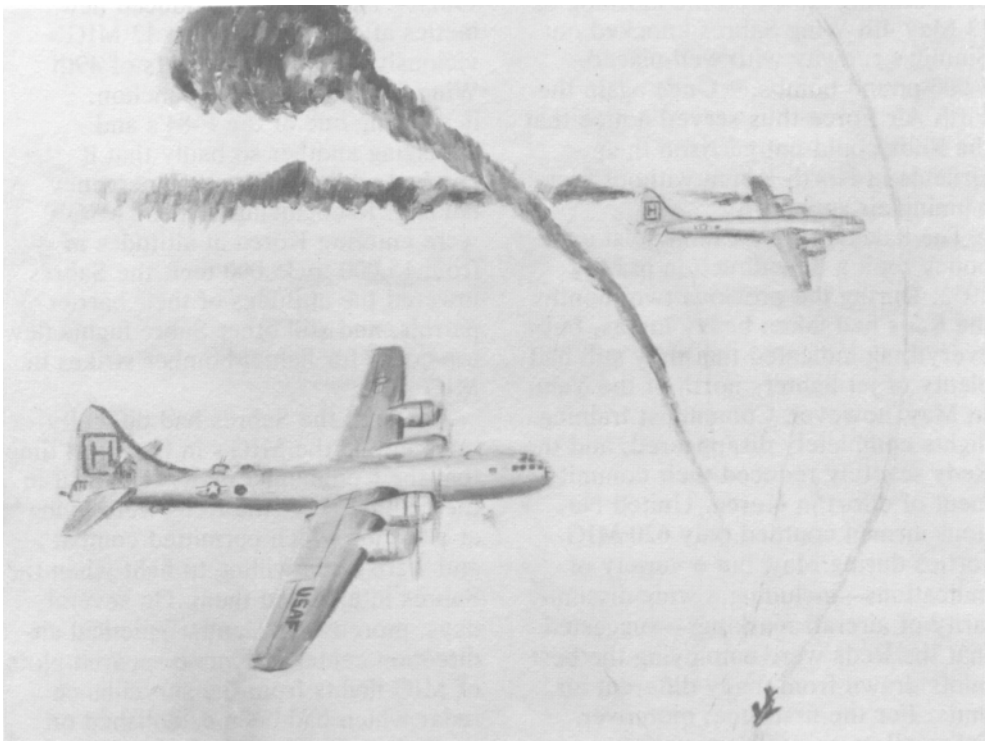
*In addition to these three Yak-9's destroyed on the ground at Sinuiju, Major Harris shot down three MIG-15's in aerial combat during his tour in Korea. Like Captain Chandler, Major Harris had destroyed enough enemy planes to be counted as an "ace," but FEAF recognized only air-to-air victories for naming "aces."

divebombing attack on the morning of 13 May 4th Wing Sabres knocked out Sinuiju's runway with well-placed 1,000-pound bombs.[106] Once again the Fifth Air Force thus served notice that the Reds could not garrison their airfields in North Korea without first winning air superiority.

The kaleidoscopic Communist air policy took a new direction in May 1952. During the previous two months the Reds had taken heavy losses, but everything indicated that they still had plenty of jet fighters north of the Yalu. In May, however, Communist training flights completely disappeared, and the Reds severely reduced their commitment of effort in Korea. United Nations airmen counted only 620 MIG sorties during May, but a variety of indications—including a wide dissimilarity of aircraft markings—suggested that the Reds were employing the best pilots drawn from many different air units. For the first time, moreover, Sabre pilots gained unmistaken evidence that the Communists had begun to employ ground-controlled radar interceptions over MIG Alley. On numerous occasions during May MIG flights dropped down through cloud ceilings precisely upon United Nations aircraft. Evidently profiting from the electronics assistance, the MIG fliers avoided the Sabres as much as possible and launched attacks against United Nations fighter-bombers, especially when these planes were attacking targets within 40 miles of the Yalu River.[107]

Buoyed in spirit by the best logistical support they had ever been able to obtain in Korea and determined to check the depredations against slower-flying United Nations airmen, the Fifth Air Force's two Sabre wings flew the Korean war's peak monthly total of 5,190 F-86 combat sorties during May 1952.[108] The Sabres introduced new tactics after 17 May, when 12 MIG's viciously attacked six flights of 49th Wing Thunderjets near Sonchon, destroying one of the F-84's and damaging another so badly that it crashed while making an emergency landing. Recognizing that the MIG's were entering Korea at altitudes of from 15,000 to 35,000 feet, the Sabres lowered the altitudes of their barrier patrols, and still other Sabre flights flew top-cover for fighter-bomber strikes in MIG Alley.[109]

Although the Sabres had difficulty intercepting the MIG's in the short time that the Communist pilots remained in the combat area, the Reds were flying at altitudes which permitted combat and were often willing to fight when the Sabres intercepted them. On several days, moreover, "Dentist" tactical air-direction center at Kimpo secured plots of MIG flights from the surveillance radar which had been established on the Yellow Sea island of Cho-do and scrambled 4th Wing Sabres to make interceptions. As yet the Cho-do installation was not a full-scale tactical air-direction center, but the electronics assistance helped Sabre pilots intercept and destroy six MIG's during the month.[110] In the course of aerial combat during May, the MIG's shot down an F-51, three F-84's, and five F-86's, but the Sabres destroyed 27 MIG's and five other Red aircraft.[111] Four Sabre pilots scored their fifth kills and became jet air aces: Captain Robert T. Latshaw, Jr., and Maj. Donald E. Adams on 3 May, Lieutenant James H. Kasler on 15 May, and Col. Harrison R. Thyng on 20 May.[112] More proficient Communist pilots, enjoying electronics guidance, made May a costly month for the Fifth Air Force, but the Reds nevertheless suffered more damage than they inflicted.



Aerial Battle (Art By Arthur W. Rodriguez, *Courtesy Air Force Art Collection)*

During the spring of 1952 the Communists were unable to find a solution for the air superiority which United Nations airmen maintained during daylight hours over northwestern Korea. In these same months the vulnerable old B-29's of the FEAF Bomber Command flew by night and were able to escape damage from hostile causes. Even though its forces were escaping damage, Bomber Command nevertheless realized that the Communists would sooner or later devise countermeasures to night bombardment. After 23 December 1951, when a Communist fighter-searchlight team damaged several B-29's over Uiju Airfield, Bomber Command freely acknowledged its potential vulnerability to Communist night defenses, particularly the radar-controlled searchlights. Directed to strike the well-defended Sinuiju Airfield, Bomber Command waited until the night of 26 January 1952, when a solid bank of low-lying clouds masked the Red searchlights and allowed the 98th Wing to bomb the target by shoran with impunity.[113] By February 1952, however, the Reds began to build up bands of searchlights and flak well south of the older defended areas along the Yalu. At Sinanju, for example, the Reds covered the shoran-arc approaches to the Chongchon River bridges with radar-controlled searchlights and with flak batteries. As soon as they established ground-controlled-

interception radar capabilities over northwestern Korea, the Reds stepped up their nightly air action. Sightings of airborne Communist night fighters increased from 17 in April to 50 in May 1952.[114]

On the moonlit night of 10 June, when four B-29's of the 19th Bombardment Group were sent on a shoran-bombing mission against a railroad bridge at Kwaksan, Communist night defenses suddenly came alive. As the bomber stream followed the only satisfactory shoran-arc to this target at the south end of MIG Alley, some 24 searchlights locked on them and kept them constantly illuminated. The Superfortress crews soon noted an unidentified aircraft flying above and evidently pacing them. This was evidently an airborne Red commander, for when the bombers were illuminated they were almost immediately taken under attack by some 12 jet fighters. One of the B-29's exploded over the target, a second went down somewhere over North Korea, and a third was so badly damaged that it barely made an emergency landing at Kimpo. The last bomber over the target broke the grip of the hostile searchlights with electronics countermeasures and escaped the attacking fighters.[115] Over Kwaksan, on the night of 10 June 1952, the Communists thus served notice that darkness would no longer shield the old B-29's against interception. Once again Bomber Command's old planes were facing a grim battle for survival in the skies over North Korea.

### *5. Building an Air Defense for South Korea*

Charged with the air defense of the whole Far East Command, the Far East Air Forces had vested authority for the air defense of Korea and its adjacent sea frontiers in the Fifth Air Force. During the first year of the Korean war, the Fifth Air Force had been unable to establish much semblance of a formal air-defense system in war-torn Korea, but it had kept the Communist air forces at bay by threats of reprisal attacks against the enemy's Manchurian bases and by an active neutralization of all airfields in North Korea. When he took command in Korea in June 1951, General Everest recognized that informal defenses would no longer be adequate. The Communist air forces in Manchuria were getting so strong that they might be tempted to risk reprisals and attempt all-out air attacks against United Nations installations in South Korea. By the autumn of 1951, moreover, the Fifth Air Force was scheduled to be fully deployed to South Korean airfields. Because of a shortage of airfields, many tactical air units would be located at the same bases—thus presenting lucrative air targets for possible Red air attacks. In recognition of these factors, General Everest gave considered attention to the construction of a formal air-defense system in South Korea.[116]

As he began to implement a formal air-defense system for South Korea, General Everest appreciated that the narrow, mountainous Korean peninsula offered a difficult defensive problem,

especially with the limited amounts of electronics equipment, antiaircraft artillery, and all-weather fighters that were available. Up until this time, moreover, the Fifth Air Force had been more interested in securing electronics control for its own fighters than for search and warning of enemy aircraft. As a result, the deployment of the 502d Tactical Control Group's tactical air-direction centers was better suited for friendly control than for warning of enemy air attack. Despite these defects, the Fifth Air Force sought to make use of the existing deployments when it ordered the establishment of a formal air-defense system on 25 July 1951. According to this order, the tactical air-direction center manned by the 605th Tactical Control Squadron at Seoul would continue to exercise overall air-defense responsibilities for South Korea. However, local control in four air-defense sectors would be exercised by tactical air-direction centers manned by the 606th Aircraft Control and Warning Squadron at Kimpo Airfield, the 607th Aircraft Control and Warning Squadron at Yoju Airfield, the 6132d Aircraft Control and Warning Squadron at Taegu Airfield, and the 1st Marine Air Wing's ground-control intercept squadron at Pusan Airfield. Each tactical air-direction center was made responsible for controlling night fighters and antiaircraft artillery batteries within its sector.[117]

As initially established on 25 July, the Korean air-defense system was unrealistic on several counts. Since the pick-up range of the ground-control-intercept radars possessed by the tactical air-direction centers was only about 75 miles, the locations of the tactical air-direction centers did not provide proper electronics coverage of the northwestern and northeastern sectors of the ground battleline nor of the southwestern part of Korea where the new airfield was being built at Kunsan. Their microwave radar equipment, moreover, was not too effective for the initial detection of jet aircraft which did not show identification beacons.[118] During the first year in Korea FEAF had authorized the use of Mark III identification friend or foe airborne radar beacons for the identification of friendly aircraft over Korea. Many sets of this equipment had been provided to the Russians during World War II, and on 3 May 1951 FEAF ruled that a plane showing Mark III IFF could not be assumed to be friendly. Thereafter the tactical air-direction centers were expected to identify aircraft by air-traffic control, position reports, flight plans, movement control, or voice authentication.[119] In an effort to simplify identification of friendly aircraft, the Fifth Air Force designated two air corridors for the use of planes reporting in and out of enemy territory. Under this arrangement, the 607th Squadron's tactical air-direction center at Yoju handled most identification and MPQ-positioning and the other two tactical air-direction centers devoted their efforts to surveillance and ground-control interception work.[120]

In August 1951 Fifth Air Force air-defense planners knew where they wanted to locate tactical air-direction centers in order to provide a rounded coverage of South Korea's air frontiers, but they faced the problem that the tactical control group's equipment was mobile for road movements but was too bulky and heavy to transit Korean trails. The narrow and mountainous Korean peninsula presented few radar sites which were both operationally suitable and logistically feasible. To provide ground-control intercept capabilities at the northwestern extremity of the ground battleline, the Fifth

Air Force deputy for communications wanted to relocate the 607th Squadron's tactical air-direction center on Paengnyong-do, an island off the western coast of Korea where the squadron already operated a lightweight search radar. To cover the northeastern extremity of the battleline, he wanted to relocate the 6132d Squadron's tactical air-direction center on Hyangbyong-san, a mountain near Kangnung. The 502d Tactical Control Group stoutly maintained that it was unable to support a full-scale tactical air-direction center on an offshore island such as Paengnyong-do. When no other suitable island site could be found, the Fifth Air Force finally moved the 607th Squadron's tactical air-direction center to a site atop Kuksa-bong, a mountain north of Seoul. From this site the 607th Squadron handled long-range surveillance and guarded the air space over Kaesong, while the 606th Squadron's center at Kimpo controlled local air defense and directed tactical air strikes. In this manner the two centers avoided duplication. Movement of the 608th Aircraft Control and Warning Squadron (the 6132d Squadron was discontinued and the 608th activated on 2 November 1951) to Hyangbyong-san was delayed until South Korean engineers could build a road up the 4,000-foot-high mountain. At this same time 1st Marine Air Wing electronics organizations relocated at sites where they could provide better control and warning services. At separate sites near Pohang, Marine Tactical Air Control Squadron No. 2 opened a tactical air-control center and Marine Ground Control Intercept Squadron No. 3 operated a tactical air-direction center. Marine Ground Control Intercept Squadron No. 1 moved to Kunsan Airfield and opened another tactical air-direction center. In the following months the Fifth Air Force filled out its radar surveillance coverage with

Base Operations and control tower, Kimpo AB.

lightweight and early-warning radars. Thus, in February 1952, the 606th Squadron established a search radar at Cho-do, the island off the northwestern coast of Korea. From this vantage point the Cho-do search radar could "see" Communist aircraft over the airfields at Antung.[121]

The relocation of its surveillance radars permitted the Fifth Air Force to establish a more logical Korean air-defense system effective on 15 November 1951. At this time General Everest divided Korea into northern and southern air-defense sectors. Through the tactical air-control center at Seoul, General Everest commanded the northern sector. The commander of the 1st Marine Air Wing, acting through the Marine tactical air-control center at Pohang, commanded the southern sector. Everest divided the northern air-defense sector into two air-defense subsectors, the northwest under the 606th Aircraft Control and Warning Squadron and the northeast under the 608th Aircraft Control and Warning Squadron. The southern air-defense sector was similarly subdivided into southwest and southeast air-defense subsectors. The subsector tactical air-direction centers performed surveillance, plotting, and identification functions and cross-told information on aircraft entering adjacent air-defense subsectors. They passed plots on all unidentified air targets to their parent tactical air-control centers, scrambled allocated interceptors to intercept and identify "bogie" aircraft, and controlled the firing status of local antiaircraft artillery.[122]

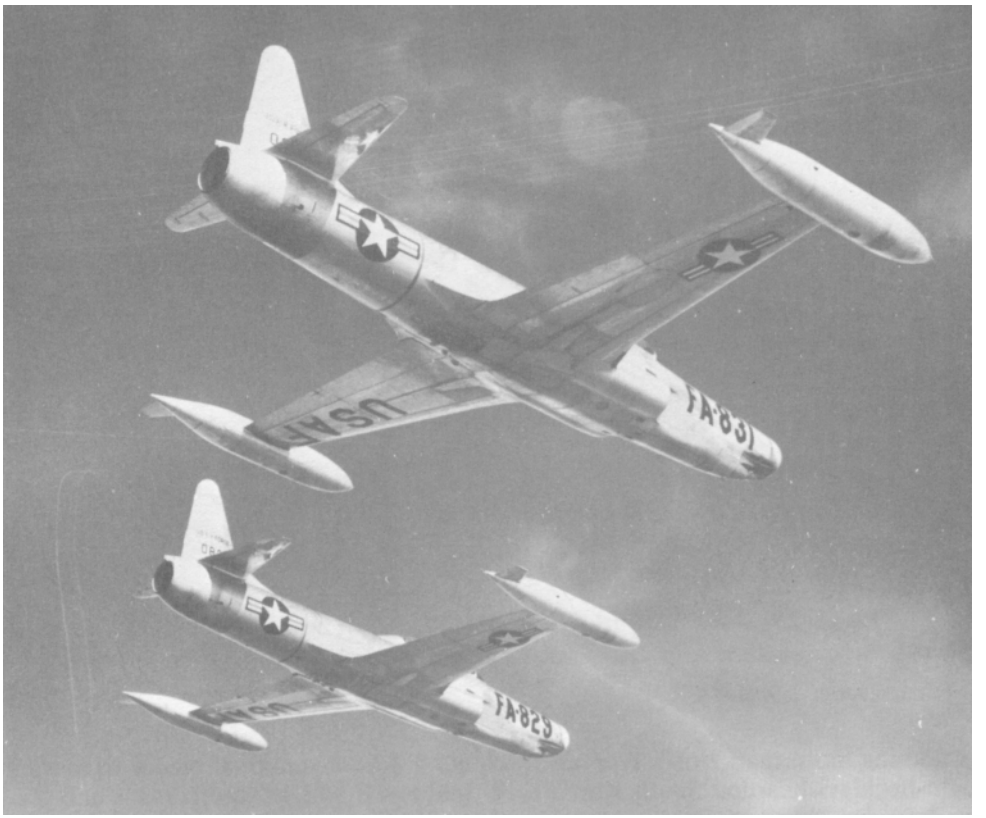
In the same period during which the Fifth Air Force was reshuffling its radars General Weyland was conducting negotiations with USAF concerning identification radar. In preparation for a war emergency, the United States armed services possessed new Mark X identification radar, but there was some question whether this system and its equipment should be subjected to possible compromise in Korea. Through some circumstance, however, two Navy planes with Mark X transponders aboard crashed in enemy territory in Korea, and the U.S. Joint Communications-Electronics Committee had to assume that the classified equipment was physically compromised. The committee therefore ruled that Mark X could be used in Korea.[123] FEAF began to install Mark X interrogators at its radar stations and Mark X transponders in its aircraft, and, pending the availability of the Mark X system, FEAF allowed the Korean air-defense system to employ Mark III equipment, this effective on 15 November 1951. The employment of electronic identification greatly aided the tactical air-direction centers both in tracking and identifying friendly aircraft over Korea.[124]

At any time in Korea the Fifth Air Force could have diverted its tactical fighters from offensive missions to air defense, but the increasing Communist air-attack potential and the deployment of United Nations tactical air units to crowded Korean bases demanded additional all-weather fighters and antiaircraft artillery defenses. As a matter of routine, the Itazuke-based 68th Fighter-Interceptor Squadron kept several Twin-Mustang F-82 fighters on strip alert at the Seoul area airfields during the hours of darkness and bad weather. Marine Squadron VMF(N)-513 also used a part of its F4U Corsairs and F7F Tigercats for air defense. In an effort to deal with the slow-flying "Bedcheck Charlies," the Fifth Air Force equipped four T-6 trainer aircraft with .30-caliber machine guns and held them on strip alert at Kimpo.[125] As long

Control tower, Suwon AB.

as nothing more than North Korean night-hecklers bearded South Korea's air defenses, these slight all-weather capabilities seemed adequate, but the appearance of high-flying MIG's over Seoul early in December disturbed General Weyland and General Everest profoundly. "Present night fighters in Korea limited to six F-82's and depleted squadron Marine F7F's," General Weyland reminded Washington.[126] General Everest began to keep an average of 45 combat fighters on dawn readiness alert and 30 more on evening alert at the main Korean airfields. He also warned all his wing commanders to emphasize passive defense measures.[127]

Recognizing the incipiently dangerous air-defense situation, USAF accelerated the conversion of FEAF's all-weather fighter squadrons from the old F-82 conventional planes to more modern F-94B jet interceptors and committed an additional F-94 squadron for deployment to Korea. When it secured its new planes, the 68th Fighter-Interceptor Squadron began to post two F-94's on strip alert at Suwon Airfield in December 1951. Back at McChord Air Force Base, Tacoma, Washington, the 319th Fighter-Interceptor Squadron was alerted for movement to Korea, and on 22 March 1952 it got its F-94's into operation at Suwon Air Base. Once again a gimmick of security hampered the employment of these new jet fighters. In view of the fact that the F-94B's carried the latest airborne interception radars, USAF directed that they should be used only for local air-defense scrambles under positive ground-radar control. The F-94's could not be employed for mis-



All-weather F-94 Interceptors

sions over enemy territory where their secret electronic equipment would be unusually susceptible to loss or compromise.[128]

Unlike the radars and fighter-interceptors, which belonged to the Air Force, the third member of the air-defense team—antiaircraft artillery—was manned and equipped by the Army. How much control the Air Force was to exercise over Army antiaircraft artillery had been a question in the years after World War II, but on 1 August 1950 Generals Vandenberg and Collins formally agreed that an Air Force air-defense commander would exercise operational control over antiaircraft artillery "insofar as engagement and disengagement of fire is concerned."[129] In the Far East antiaircraft artillery battalions deployed to Korea were assigned to the Eighth Army, but Far East Command operations instructions vested the air-defense commander with "operational control" over all separate (nondivisional) antiaircraft artillery units. In coordination with the Eighth Army and subject to approval of the Far East Command, the Fifth Air Force attempted to secure a maximum defense of the most vital installations in Korea with too few

antiaircraft artillery battalions.[130] Exclusive of antiaircraft artillery units organic to ground divisions, Eighth Army antiaircraft strength in Korea in June 1951 numbered ten automatic-weapons batteries and two gun battalions. The 90-millimeter gun batteries provided defense against high-level air attacks and were sited at Pusan, Inchon, and Seoul. Providing defense against low-flying aircraft, the 40-mm. automatic-weapons batteries covered airfields and port installations. In June 1951 the Fifth Air Force stated a requirement for a minimum of three gun battalions and 20 automatic weapons batteries, and in October 1951 the Fifth Air Force increased the requirement to five gun battalions and 36 automatic-weapons batteries. The Department of Army professed its inability to provide all the antiaircraft artillery units that were needed in Korea, but in July 1951 General Weyland secured permission to move five automatic-weapons batteries from Japan to Korea. In September 1951 the arrival of a Marine gun battalion at Pusan permitted three gun batteries to move to the higher-priority Inchon-Kimpo defense area. Arrival of another Army gun battalion, which was split between Inchon and Pusan, and the activation of an additional automatic-weapons battery in the field brought the effective antiaircraft artillery strength in Korea to four gun battalions and four automatic-weapons battalions (16 batteries) at the end of 1951.[131]

As the Fifth Air Force built up the air defense of South Korea, the Communists periodically tested the system with low-level, moonlight-flying PO-2 hecklers. The air-defense system was designed to handle attacks by high-performance aircraft, but it measured a fair defense against the low- and slow-flying Red planes. The tactical air-direction center at Seoul was able to pick up and plot the course of many of the hecklers, but the chief difficulty in shooting them down was the speed differential between the Red aircraft and American interceptors. After a lull during the summer months, the Red night hecklers again began to visit the Seoul area in mid-September 1951, and on the night of 23 September tactical air-direction center "Dentist" followed the course of a PO-2 as it dropped two small bombs at Kimpo to cause minor damage to a couple of Sabres. When the automatic-weapons batteries failed to score against this heckler, "Dentist" control scrambled Marine Major E. A. Van Grundy in an F7F, and Major Van Grundy downed the Red raider north of Seoul.[132] Alerted by "Dentist," antiaircraft artillery automatic-weapons shot down another Communist light plane over Inchon on the night of 2 October.[133] On other occasions, however, Communist hecklers got through the Fifth Air Force's defenses to bomb and then to escape unscathed. In the early morning hours of 1 January 1952 three Communist raiders dropped several small bombs at Kimpo and Inchon.[134] Such experiences made the Fifth Air Force pessimistic on the subject of air defense. The Fifth Air Force director of operations well summed up the matter as he said: "Shortages in antiaircraft artillery weapons, deficiencies in available radar equipment, limitations in the number of aircraft and air-crews detailed to air-defense duties, lack of sufficient dispersal space at our overcrowded air bases, the incompleteness of the Mark X IFF program, and the normal passive resistance to defensive measures after prolonged freedom from enemy attack, find both Air Force and other installations vulnerable to enemy air attack."[135]

MIG ALLEY 200 MILES

# 14. *Ten Months of Comprehensive Railway Interdiction*

## *1. General Weyland Seeks an Acceptable Air Strategy*

"Of the many opinions formulated during the course of current hostilities," General Weyland informed General Vandenberg on 10 June 1951, "few have had less foundation than that which envisages the current United Nations military position in Korea as being in the nature of a stalemate." "To accept the theory which envisages the current United Nations military position in Korea as ...a stalemate," Weyland explained, "is to completely ignore the innumerable advantages of air power as a predominant weapon for destroying the enemy fighting machine and to acquiesce to the dangerous 'rule of thumb' whereby military success, regardless of cost, is measured solely in terms of geographical gain." As Weyland saw the situation on 10 June, the United States Air Force had "its first real opportunity to prove the efficacy of air power in more than a supporting role."[1] Unfortunately, however, General Weyland would not be permitted to exercise the decisive attributes of airpower for nearly a year.

When the armistice discussions at Kaesong were only two days old, General Ridgway had seen enough of Red intransigency and ordered intensified air operations. "Desire action during this period of negotiations to exploit full capabilities of airpower to reap maximum benefit of our ability to punish enemy wherever he may be in Korea," Ridgway ordered Weyland on 13 July 1951. General Weyland passed the message to the Naval Forces Far East for their information and ordered the Fifth Air Force to "step up the tempo of fighter and light-bomber activities...with emphasis on vehicular movements and pre-planned targets of known enemy troops, supplies, or installations."[2] Within a week FEAF planned a massive air attack against military targets in the North Korean capital city of Pyongyang, an attack which was designed both to eradicate build-ups of enemy troops and supplies and to impress the North Korean government. Preparatory to the attack, FEAF proposed to drop leaflets at Pyongyang, Chinnampo, Kanggye, and Wonsan warning citizens to leave these cities where the Communists had arms depots and war installations.[3] The Joint Chiefs of Staff, however, disapproved of such an attack in the manner suggested because, they said, "to single out Pyongyang as the target for an all-out strike during the time we are holding conferences might in the eyes of the world appear as an attempt to break off negotiations."[4] General Ridgway nevertheless insisted that the many legitimate military targets in Pyongyang ought to be attacked by massed aircraft, and the Joint Chiefs approved of the mission but added that no publicity was to be given to the "mass" nature of the attack.[5] On 30 July the Fifth Air Force sent 91 F-80's to suppress flak at Pyongyang while 354 Marine and Air Force fighter-bombers attacked specified military targets. The FEAF press release observed that its warplanes "continued to batter the enemy's supply and communications facilities." Any mention of Pyongyang was studiously ignored.[6]

Alertly seeking significant air targets, FEAF immediately shifted its attention to the city of Rashin, a port city far up the northeastern coast of Korea, only

Rashin—2 weeks after the bombing raid on 25 August.

17 miles from the Siberian border. Fearful of border violations, the Joint Chiefs of Staff had put Rashin off limits to air attack on 1 September 1950,* and in July 1951 FEAF aerial reconnaissance indicated that the Communists were extensively stockpiling supplies in the city. On 1 August General Ridgway requested permission to bomb the city, and, when the Joint Chiefs asked for more details, he indicated that the most valuable targets were Rashin's marshaling yards, including the rail facilities and a large collection of rolling stock. Following President Truman's approval, the Joint Chiefs permitted the attack, provided it was conducted in visual bombing conditions and received "no unusual publicity."[7] After waiting two weeks for favorable target weather predictions, Colonel Harris E. Rogner, vice-commander of the FEAF Bomber Command, led 35 B-29's of the 19th, 98th, and 307th Wings to Rashin on 25 August. Flying from the *Essex*, 23 F9F and F2H jet fighters provided the bombers with a half-hour of excellent escort in the target area, but no enemy aircraft appeared. Of more than 300 tons of bombs dropped, 97 percent hit in the marshaling yards. "We had good weather over the target, good formation, and an excellent bomb pattern. We clobbered them," said Colonel Rogner.[8]

Although the Joint Chiefs of Staff authorized these maximum-effort missions against military targets in Pyongyang and Rashin, they were fearful of an overly aggressive air

*See Chapter 6, p. 192-193.

employment. Taking into consideration the climate of world opinion and the viewpoints of nations which were furnishing troops to the United Nations cause, the Joint Chiefs stated the rule on 11 August that "If Armistice discussions fail, it is of the greatest importance that clear responsibility for failure rest upon the Communists."[9] Under the operation of this rule, United Nations forces were denied any really effective employment which might bring pressure upon the Communists. Brig. Gen. Don Z. Zimmerman, then FEAF director of plans, later described the official policy as "Don't employ airpower so the enemy will get mad and won't sign the armistice."[10] In retrospect, Admiral Joy observed: "The armistice negotiations were profoundly affected by the restraints imposed on the United Nations Command forces in Korea.... The armistice effort in Korea taught this: never weaken your pressure when the enemy sues for armistice. Increase it."[11]

Instead of being allowed to exercise a decisive role designed to speed armistice negotiations, United Nations airpower was once again cast into a supporting role for the Eighth Army, which was itself limited to an active defense of its fortified positions along the 38th parallel. Even before the peace negotiators met at Kaesong, General Ridgway was gravely concerned by intelligence reports which stated that the Reds were increasing their offensive capabilities.[12] On 6 July he informed the Joint Chiefs that numerous reports "indicate a planned large-scale [enemy] offensive effort to be launched in the event...peace overtures fail."[13] According to an Eighth Army estimate, the Reds were stockpiling a minimum of 800 tons of supplies each day behind their front lines.[14] In August Ridgway further reported that the enemy was "capable of launching limited attacks to gain local advantages and of expanding such piecemeal efforts rapidly into a general offensive at a time suiting his purpose."[15] These estimates that the Communists had not recognized their defeat but were instead utilizing the truce negotiations as a respite in which to prepare for another offensive were completely accepted by the United Nations Command and "deeply concerned" the Joint Chiefs of Staff.[16] In Kaesong the armistice negotiations made no headway since the United Nations insisted that the military demarcation line must conform to the military realities of the ground front and the Reds demanded that United Nations troops must withdraw to the 38th parallel. As the negotiations dragged on, the Reds occupied the no-man's land around Kaesong and on 4 August marched armed troops through the Kaesong neutral zone. Although a few errant planes admittedly crossed over Kaesong, the Reds on 22 August manufactured an incident and claimed that an airplane had bombed the city. In view of this perfidy, the United Nations suspended negotiations. At this juncture, relatively high-ranking prisoners of war stated that a Communist "Sixth-Phase" ground offensive was going to take place at the end of August.[17]

Presented with the United Nations intelligence evaluations that the Communists were building up their strength preparatory to a ground attack, noting the Red obstructionist tactics at Kaesong, and lacking any better employment for FEAF, General Weyland thought that it would be sheer folly not to concentrate the bulk of his air effort against interdiction targets in the enemy's rear areas. Otherwise, available airpower would be frittered away against relatively invulnerable targets along the front lines, while the

enemy remained free to build up his resources to launch and sustain a general offensive.[18] From the outset, however, both General Weyland and General Vandenberg had misgivings regarding the possible success of any air-interdiction campaign conducted under the circumstances prevailing during the Korean truce negotiations. In his earlier discussions of aerial interdiction General Weyland had been careful to point out that interdiction attacks worked best when opposing ground forces were locked in battle and the enemy was forced to use up his front-line supplies.[19] During World War II comprehensive interdiction had prevented the Germans from marshaling their strength during the Allied invasion of Normandy, but General Vandenberg emphasized that the situation in Korea was quite dissimilar to the situations which had lent themselves to successful air interdiction in World War II. In Europe aerial interdiction campaigns to the rear of the German armies had been in combination with surging Allied ground offensives. In Korea, in the autumn of 1951, the ground front was stabilized and interdiction could only hinder a major enemy offensive by delaying the movement of materiel and personnel to the front. General Vandenberg cautioned that it would be "scarcely possible to bring about a complete collapse of the Chinese army by such a process of delay."[20]

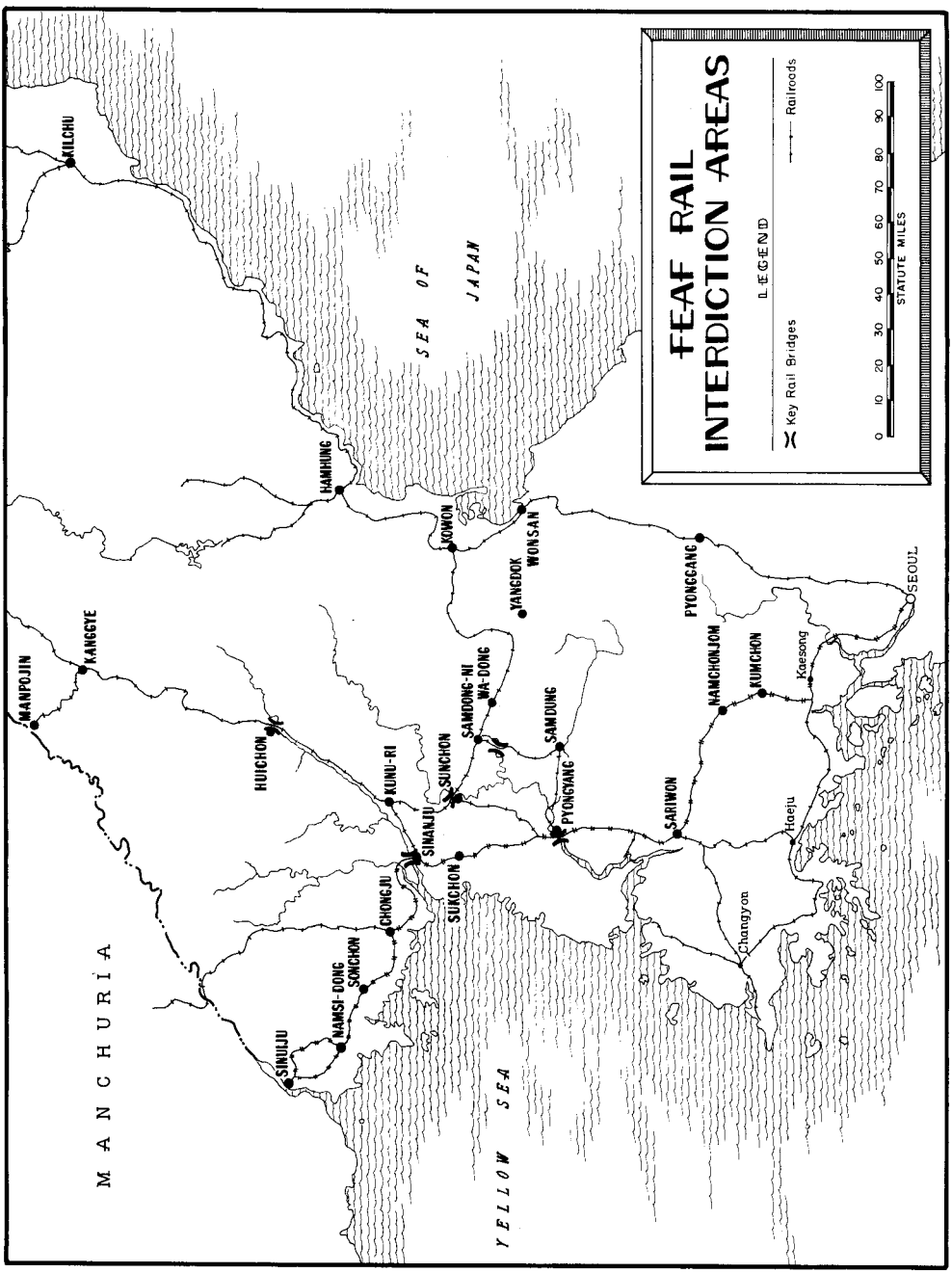
Incendiary and fragmentation bombs leveled this enemy supply build-up in North Korea.

*2. North Korea's Railways as a Target System*

Concurrently with the Eighth Army's attack northward late in May 1951 United Nations air forces had implemented "Operation Strangle," which sought to interdict the Communists' highway communications between railheads at the 39th parallel and the front lines.* In June and July 1951 the Fifth Air Force and Task Force 77 centered their aerial attacks against the seven main enemy supply routes coming into the battle area from the north. When the enemy began to divert traffic to secondary roads, these roads were added to the attack program. Initially successful while the Eighth Army was pressing northward, the attacks against the enemy's roads lost effectiveness as the Eighth Army attained its objectives and slackened its ground pressure. The attacks slowed Red motor transport, but they were never able completely to knock out a road because repair materials—rock, timber, and earth—and unlimited labor were readily accessible to the Communists.[21]

Eighth Army and Fifth Air Force intelligence officers in Seoul noted the declining effectiveness of the air attacks against the enemy's roads and studied the enemy's logistical system in search of more effective interdiction targets. The intelligence officers recognized that the Communists had no major industry in North Korea capable of supporting their war effort, and, except for a few arms factories at Pyongyang and Kunu-ri, the Reds were compelled to bring their war supplies from Manchuria or Siberia. According to Eighth Army intelligence, the Reds had 60 divisions of various types in the battle zone south of a line drawn through Sariwon. The Eighth Army conservatively estimated that each enemy division could maintain itself in limited combat with 40 tons of supplies each day. Therefore, the Red logistical system had to transport 2,400 tons of supplies to the battleline each day. Having determined the amount of supplies the Reds required, Fifth Air Force officers examined the Red transportation system and found that it comprised motor and rail transport. In the front lines the Reds used human and animal bearers, but they depended upon trucks and trains for long hauls. The Russian-built trucks that the Communists possessed each carried approximately two tons, which meant that 1,200 trucks were required to haul a day's supplies to the Communist armies. The Eighth Army estimated that the round-trip time of a truck from Antung to the front lines was ten days, and, to play safe, the Fifth Air Force figured the round-trip time at five days. According to the Fifth Air Force figure, the Reds would need 6,000 trucks to transport 2,400 tons of daily resupply from Antung to the battle zone south of Sariwon. Each Korean boxcar had a load capacity of 20 tons, and thus only 120 boxcars could transport the Red daily-supply requirement. The Reds had always attempted to use their railways to the maximum, and, in the period during which United Nations pilots were attacking the roads, the Communists had begun to move supplies by rail into such southern terminals as Sariwon and Pyongyang. Because of its greater load-hauling capacity, the North Korean railway

*See Chapter 10, pp. 324-325.


FEAF RAIL INTERDICTION AREAS
LEGEND
Key Rail Bridges
Railroads
0 10 20 30 40 50 60 70 80 90 100
STATUTE MILES
MANCHURIA
SEA OF JAPAN
YELLOW SEA
KILCHU
HAMHUNG
KOMON
WONSAN
YANGDOK
PYONGGANG
SEOUL
MANPOJIN
KANGGYE
HUICHON
KUNU-RI
SUNCHON
SAMDONG-NI
WA-DONG
SAMDUNG
PYONGYANG
SARIWON
NAMCHONJOM
KUMCHON
Kaesong
Haeju
Chaegyon
SINANJU
SUICHON
CHONGJU
NAMSI-DONG
SONCHON
SINUIJU

network was clearly the primary transportation capability of the Reds. Rail transport was also cheaper to the enemy. The Reds had to import motor gasoline from China or Russia, but coal was locally available from North Korean mines.[22]

On the basis of this evaluation of the Communist logistical support system, the Fifth Air Force determined that the North Korean rail-transportation system was of supreme importance to the Communists. From the airman's viewpoint, moreover, rail lines offered attractive targets. Rail lines could not be hidden, nor could rail traffic be diverted to secondary routes or detours as could motor vehicles. The Fifth Air Force saw three methods of rail attack. Air attack could blow out rail bridges, or destroy railway rolling stock, or destroy the tracks and roadbeds of the railways. Fifth Air Force planners believed that air attack could destroy rail bridges and keep them destroyed, but rail bridges were not the best targets for the new program. On the east coast, in the spring of 1951, Navy aircraft had done an excellent job of continuous bridge destruction, but the Reds had been willing to move a train 11 or 12 miles and then to reload its supplies on another train waiting beyond a blown-out bridge. If fighter-bombers repeatedly attacked the same bridges, moreover, the Reds would undoubtedly mount antiaircraft defenses at such objectives. Railway rolling stock was in short supply in the Far East, but Fifth Air Force planners did not believe that air attack could destroy enough of it to hinder the Communists. The last remaining method of rail attack was to bomb the enemy's railway track and roadbeds. In experimental attacks, late in July, the 8th and 49th Fighter-Bomber Groups got good results in skip-, dive-, and glide-bombing attacks against the enemy's railroad tracks. Glide-bombing attacks with 100-pound general-purpose bombs apparently gave the best results and accuracy against railway tracks. In making its rail attacks, moreover, the 8th Group was easily able to avoid areas defended by flak, and it lost no planes on its rail-cutting missions. The Fifth Air Force reasoned that replacement railway rails were too heavy to be transported by coolies with "A-frames" or even, as a usual thing, by trucks. In short, the Reds would require rail equipment to repair rail equipment. In order to prevent the Communists from bringing in heavy rail-repair equipment to patch breaks in their railway tracks, the Fifth Air Force planners decided that a few key rail bridges should be destroyed and kept out of use.[23]

By early August 1951 the Fifth Air Force had arrived at the concept of the interdiction plan against North Korea's railroads, and Fifth Air Force operations officers began to compute the aerial capabilities which would be required to do the job. Whether or not the Fifth Air Force planners drew upon operational experience of World War II in computing air capabilities against rail targets is not evident,* but the Fifth Air Force nevertheless computed that it would require six to eight months to destroy the enemy's rail system with its own aircraft. In order to shorten the time required to something on the order of 90 days, the Fifth Air Force re-

*In Europe, during World War II, the IX Tactical Air Command, using fighter-bombers, each carrying two 500-pound bombs and divebombing in deference to German flak defenses, had learned to expect no more than one rail cut for each eight or nine sorties flown. At this time the Germans had repaired ordinary rail-line cuts in as little as five hours. (Hq. IX Tac. Air Comd., Opns. Research Sect., Rpt. No. 67, 28 Nov. 1944.)

quested the Navy to assume responsibility for interdicting the lateral rail line across Korea between Samdong-ni and Kowon and the east-coast rail line from Kilchu through Hungnam and Wonsan to Pyonggang. The Fifth Air Force asked Bomber Command to assume responsibility for interdicting the key rail bridges at Pyongyang, Sonchon, Sunchon, Sinanju, and Huichon. The Seventh Fleet accepted its share of the rail routes, and Bomber Command agreed to neutralize all the bridges except the one at Huichon, which was too far north and endangered by MIG's. Four bridges were not quite as good as five, but the Fifth Air Force thought that four would suffice. For its own part, the Fifth Air Force undertook to interdict the predominantly double-tracked North Korean railway lines in northwestern Korea. In order to release the maximum Fifth Air Force capability for the execution of the interdiction program, General Van Fleet agreed to limit the Eighth Army's requirement for close support to 96 sorties per day, a number which averaged out at approximately eight sorties to each front-line division. All of the arrangements coordinating the employment of United Nations air forces in the comprehensive railway interdiction campaign were apparently worked out by the Fifth Air Force in Korea, but General Weyland later emphasized that the interdiction program was developed in detail by collaboration between Army, Navy, and Air Force staff officers and was approved by "responsible commanders of all services in the theater."[24]

Although the attack plan comprehended intensive attacks against the North Korean railway system, the Fifth Air Force expected to obtain important concomitant results. The official Fifth Air Force estimate of 14 August stated: "The Fifth Air Force and attached units in conjunction with the U.S. Naval Air Units and FEAF Bomber Command have the capability of destroying the enemy's rail system in North Korea." Colonel William P. McBride, the Fifth Air Force's director of combat operations, explained that "We decided to destroy the enemy's rail system to where its rail traffic was as near zero as we could make it." Even if the enemy's railways south of a line between Sinanju and Kilchu were destroyed, the Fifth Air Force recognized that the Reds could still supply their forces by employing 6,000 motor trucks. The Fifth Air Force believed, however, that motor transport would prove too costly for the Reds. Fifth Air Force light bombers would hunt trucks as a major endeavor, and natural attrition would take an additional toll of the Red vehicles. From such causes Communist vehicular attrition would range up to 7,500 a month, whereas Communist China and Russia were manufacturing only about 33,000 trucks a month. Thus the United Nations air force was not only capable of destroying the enemy's rail system but "of hindering his highway transportation system to such an extent that he will not be capable of opposing the U.S. Eighth Army effectively." "We are optimistic enough about it," said Colonel McBride, "to believe that with this program we can force the enemy to retire from a line generally from Pyongyang through Kowon, which is a line generally 100 miles from and parallel to the Yalu River."[25] In September 1951 General Everest reportedly explained to pilots at Taegu that Fifth Air Force planners believed that the comprehensive railway-interdiction attacks would so weaken the enemy

Five rail and highway bridges are knocked out at this rail complex near Sinanju, 4 September 1951.

that he could easily be routed by an Eighth Army ground offensive or he would be forced voluntarily to withdraw his troops closer to the Manchurian border in order to shorten his supply lines.[26] Enthusiastic concerning the prospects for the new operations plan, Fifth Air Force officers used the same name which they had given to the earlier road-interdiction program and called it "Operation Strangle." At a briefing for General Vandenberg Fifth Air Force officers referred to the rail-interdiction campaign as "Operations Strangle," and, subsequently in Washington, General Vandenberg used this same code name in a press conference. In a special press release of 18 February 1952, the Fifth Air Force public-information officer described the results of "Six Months of Operation Strangle."[27]

Within a few weeks both the Fifth Air Force and FEAF began to tone down the earlier exuberant expectations forecast for the railway-interdiction operations. In December 1951 General Ferguson, the Fifth's vice-commander, noted that the railway attacks were a "sort of prophylactic measure." "One wants to be sure," Ferguson said, "that the enemy has not got the means to launch a major offensive."[28] In an effort to clarify air policy in Korea, the FEAF intelligence journal explained that "The present objective of the isolation or interdiction program is to cripple the Communist logistic system to the extent that rapid redeployment of their forces and supplies in support of a sustained

offensive is impossible."[29] Ultimately, FEAF stated the official purpose of the railway-interdiction operations as being: "To interfere with and disrupt the enemy's lines of communications to such an extent that he will be unable to contain a determined offensive by friendly forces or be unable to mount a sustained offensive himself."[30] By the spring of 1952 FEAF officers would have gladly expunged the tricky code name "Strangle" from the record. General Everest made efforts to eliminate the use of the term "Strangle" when he explained to newsmen on 12 April 1952 that "Operation Strangle" had been the name for the short-lived highway-interdiction program and that the aerial interdiction campaign against North Korea's railroads was properly termed the "Rail Interdiction Program."[31]

### *3. Working on the Railroads: The "Strangle" Attacks*

Launched suddenly and without warning, on 18 August 1951, the United Nations air campaign against North Korea's railroads soon gave evidences of its apparent success. Day after day, following 18 August, the Fifth Air Force scheduled its fighter-bomber wings for rail-cutting attacks in northwestern Korea. Recognizing that lateral rail routes on the "H"-shaped rail network would be useless if the main north-south routes were destroyed, the Fifth Air Force aimed its heaviest air attacks against the double-tracked rail lines between Sonchon and Sariwon. It also attacked the single-track rail lines which connected Huichon and Kunu-ri and Kunu-ri and Sunchon. Each day Fifth Air Force fragmentary operations orders specified a 15 to 30 mile stretch of rail line for attack by each fighter-bomber wing. Under cover of the Sabre screen the fighter-bomber wings ordinarily attacked their sections of rail line twice each day.[32] Most wing commanders employed "group gaggles" of 32 to 64 aircraft and varied their tactics according to enemy opposition and the weather. They used glide- and dive-bombing attacks, the former being more accurate and the latter offering the advantages of lower losses and damages from enemy ground fire.[33] Some fighter-bombers carried 1,000-pound bombs in August, but the standard ordnance for use against rail tracks soon became two 500-pound bombs. Track-breaking was not as simple as it appeared. The Communist railway track was only 56 inches wide, and only a direct hit on this narrow-line target was effective. Assessable bombing results for August and September nevertheless revealed that the Fifth Air Force was bettering bombing expectations of World War II. Some 12.9 percent of the bombs dropped cut the tracks, or one-fourth of the total sorties flown obtained rail cuts.[34]

Simultaneously with the fighter-bomber strikes, FEAF Bomber Command's Superfortresses attacked the key railway bridges at Pyongyang, Sinanju, Sunchon, and Sonchon as a second priority to a continued neutralization of Communist airfields in North Korea. As a matter of routine, Bomber Command attacked bridges when photographic reconnaissance showed they were serviceable. On a rail-cutting

Task Force 77 planes ranging the East Korean coast stop this supply train.

day, Bomber Command ordinarily sent out two flights of four aircraft against two bridges. Each flight utilized an axis of attack as close to 90 degrees to the axis of the bridge as possible, thus permitting the bombardiers to use the long axis of the bridge as an aiming point for rate adjustments.[35] Used initially to overcome the obstacle of cloudy summer skies, shoran proved adaptable to bridge busting. As an illustration, the 19th Bombardment Group utilized shoran bombing techniques to aim through nine-tenths cloud cover and knock the center span out of the Sunchon railway bypass bridge on 23 September.[36] The bypass bridges at the principal river crossings were easy for the Superfortresses to chop down, but the Reds also repaired them quickly. In August, however, nature gave Bomber Command an assist, for Chongchon River floods swept over the rail and road bridges at Sinanju.[37] On Korea's northeastern coast Task Force 77's three aircraft carriers—the *Bon Homme Richard, Essex,* and *Antietam*—altered their pattern of previous interdiction attacks in order to maintain the neutralization of 10 rail bridges and 17 highway bridges and to devote the remainder of their effort to attacks against railway lines in isolated areas where the enemy would have difficulty repairing cuts.[38] The Navy airmen performed excellently against the coastal rail routes, but they did not like the lateral rail route between Samdong-ni and Kowon. This route was said to be so well protected by Red ground fire that the Navy airmen called it "Death Valley." Although the Fifth Air Force considered the interdiction of this lateral rail route to be critically important, Task Force 77 devoted little effort to this section of track.[39]

The United Nations railway-interdic-

Rippled trackage, cratered railbeds, and damaged box and rail cars are evidence of the accuracy of B-29 attacks.

tion campaign bested the Communists in August and September 1951. Each night streams of Red vehicles moved southward to make up for the traffic which could not move by rail. Red rail traffic was evidently much reduced, for counts of railway cars in marshaling yards showed little change. Obviously in desperation, the Reds were cannibalizing their double-track railway line, their marshaling yards, and their spur lines to get undamaged rails. By mid-September Fifth Air Force attacks had reduced the main line from Sinuiju to Sinanju to 70 percent single track, from Sinanju to Pyongyang to 90 percent single track, and from Pyongyang to Sariwon to 40 percent single track. In order to keep a single crisscrossed rail line open, the Reds cannibalized 117 miles of track between Antung and Sariwon, and south of Sariwon they took up an additional 13 miles of track which had not been attacked, presumably to make repairs elsewhere.[40] The Fifth Air Force was not only meeting good success in efforts to block rail traffic, but it was enjoying a bonus effect of attacks against enemy vehicular traffic. The B-26 night-intruders reported large kills of night-moving trucks and trains,* and the fighter-bomber wings swept southward after making rail cuts looking for strafing. Such armed reconnaissance was often fruitful. Suddenly clearing weather on targets and also emphasized dawn and dusk armed-reconnaissance sweeps. 24 August allowed a 16th Fighter-Interceptor Squadron flight to catch the Reds ferrying a large convoy across a river, and this F-80 flight, plus two

**See* Chapter 14, pp. 455-456.

others speedily dispatched to the scene, accounted for more than 40 trucks, 20 railway cars, several supply-laden barges, and a large dump of goods on the riverbank.[41] On 30 September a notable last-light flight of two 80th Fighter-Bomber Squadron F-80's destroyed an estimated 40 trucks out of a large convoy caught moving southward.[42] Early-morning Thunderjet attacks found and destroyed Red locomotives which were tardy taking cover.[43]

The Fifth Air Force's fighter-bomber wings destroyed North Korea's railways faster than the Reds could repair them in October and November 1951, but the Communists were beginning to effect countermeasures to the railway attacks. Up north of the Chongchon River MIG's shot down some fighter-bombers and forced more of them to jettison their bombs harmlessly. Unable to oppose this menace, General Everest was compelled to abandon efforts to destroy the enemy's rail lines between Sonchon and Sinanju.[44] South of the Chongchon River the Reds concentrated automatic weapons along their rail lines and moved them to meet changes in Fifth Air Force objectives.[45] In October group gaggles gave way to five-minute-spaced squadron takeoffs, permitting lead flights more time to search out and neutralize hostile flak and preventing air jams over targets.[46] To counteract the growing flak, the Fifth Air Force allowed the fighter-bomber groups to arm up to 20 percent of their sorties with proximity-fuzed bombs.[47] Dive-bombing became the rule for all rail attacks, antiflak loadings reduced rail-cut potential, and bombing accuracy fell off.[48] In an effort to increase their hit probabilities by carrying more bombs, the 8th and 49th Fighter-Bomber Wings worked out devices which permitted their planes to carry additional small bombs on their unused rocket racks. The additional loading so markedly decreased speed and range, however, that the Fifth Air Force soon gave up efforts to increase the combat loadings of the fighter-bombers.[49]

Although the Reds were striking back with growing vigor, Fifth Air Force interdiction efforts were making substantial progress. After 2 October the Communists were unable to make any rail movements on the line between Sariwon and Pyongyang. After 25 October the stretch of rail line between Sukchon and Sinanju was completely unserviceable, but the Reds made herculean efforts to keep one rail line open from Sinuiju to Pyongyang and another from Huichon through Kunu-ri and Sunchon to the Yangdok area of central Korea. For a period of a week late in October the Fifth Air Force luckily blocked both of these lines by wrecking three locomotives along the stretch of track between Kunu-ri and Sunchon. At the end of October, however, a few days of bad weather allowed the Reds to clear away the derelict locomotives and reopen this key link in their rail net.[50] Early in November the United Nations victory in the air battle against North Korea's railroads seemed imminent. The Communists could still move trains over a circuitous route south from Sinuiju to Sinanju, then east to Kunu-ri, then south to Sunchon (a slow movement because of limited serviceability of the Sunchon bridge), and from there to Samdung and Yangdok. The Reds could also move from Kanggye to Kunu-ri, then to Sunchon, and thence into Pyongyang. On the east coast the Reds had no through traffic from Kilchu to Wonsan, but they still were shuttling trains between breaks in the tracks.[51] In order to sever the rail

routes in northwestern Korea, the Fifth Air Force needed only to destroy the short key link of railway between Kunu-ri and Sunchon, a task which appeared possible with a week of intensive attack.

Just when victory for the comprehensive rail attacks seemed to be in sight, Communist countermeasures to the rail campaign began to work against the United Nations cause. Communist fighters and flak had already substantially lessened FEAF's interdiction capabilities. After the bloodletting over the MIG Alley airfields late in October, Bomber Command was unable simultaneously to neutralize the airfields the Reds were building and the bridges they were repairing. Early in November, moreover, Bomber Command was surprised to learn that the clever Reds had actually been using a bypass bridge at Sunchon which was assumed to be out of service. Day photos showed the bridge with two spans out in its middle, but the Fifth Air Force was suspicious and sent an RB-26 there to take pictures on the night of 7 November. These night photos showed that the Reds were placing removable spans in the bridge and using it throughout the night.[52] With Bomber Command unable to hit the bridges, the Communists redoubled their efforts to repair those that had been cut. On 15 November the Reds completed reconstruction of the main highway bridge at Sinanju, and by 30 November they completed a rail bypass bridge at Pyongyang, thus permitting through rail traffic eastward to Samdung for the first time since August 1950. At the end of November Bomber Command's B-29's began to direct shoran attacks against the bridges at Sunchon and Sinanju, but the former bridges remained serviceable and the rail crossings at Sinanju were never made unserviceable for more than two days hand-running.[53]

Communist flak and fighters also reduced the Fifth Air Force's interdiction capabilities. Although the Misawa-based 116th Fighter-Bomber Wing began on 30 November to stage one squadron to Taegu for limited periods of fighter-bomber work with the 136th Wing, the conversion of the 51st Fighter-Interceptor Wing from F-80's to F-86's reduced the Fifth Air Force's interdiction capabilities.[54] Hostile ground fire was also taking a substantial toll of Fifth Air Force fighter-bombers. To such cause the Fifth Air Force lost 26 fighters and had 24 damaged in August, lost 32 and had 233 damaged in September, lost 33 and had 238 damaged in October, and lost 24 and had 255 damaged in November.[55] The damage rate was especially high and placed burdens upon maintenance crews at the same time a high operational rate was already giving them trouble. In-commission rates for the old Shooting Stars declined appreciably.[56] Flying from the dusty drome at Taegu, the 49th and 136th Wings experienced an unusually high number of engine failures. Shortages of spare engines and inadequately programmed supply support severely reduced the number of combat-ready Thunderjets at Taegu.[57] The swelling volume of Red gound fire also lowered the accuracy of the fighter-bombers. According to a Fifth Air Force operations analysis study made in December, only 7 percent of bombs dropped by Thunderjets were cutting the enemy's railway tracks.[58]

"With deadly monotony and a somewhat creeping paralysis of enthusiasm," 8th Fighter-Bomber Group Shooting Star pilots in November and December 1951, "returned again and again to hit a piece of terrain that

became as familiar as Main Street, USA." The 8th Group's rail target was the critically important, 25-mile-long stretch of winding, twisting railway between Kunu-ri and Sunchon.[59] Despite the almost undivided efforts of this peerless fighter-bomber group, Communist repair troops filled the bomb craters as fast as the Shooting Star pilots could make them. From the outset of the "Strangle" attacks the Reds had managed to repair rail cuts very quickly. No doubt assisted by frozen ground which caused some delayed-fuzed bombs to skip off the target and reduced the dimensions of bomb craters of those that hit the target, the Reds seldom left rail cuts unrepaired for more than twenty-four hours in November. When it appeared that the battered Kunu-ri to Sunchon track defied further repair, the Reds redoubled their efforts elsewhere in December. South of Sukchon on the Pyongyang-Sinanju line, Communist laborers laid a rail bypass around a badly mauled section of track. Within a few days they started work on a similar bypass on the Kunu-ri to Sunchon line. In December photo interpreters indicated that coolie laborers, beginning work at dusk, could repair a rail cut within eight hours, thus opening a railway track for traffic between midnight and sunrise.[60] Early in December Communist construction crews began to restore the badly damaged rail line between Pyongyang and Sariwon. Communist repairs progressed so rapidly that Fifth Air Force intelligence, on 23 December 1951, acknowledged that Red railway repairmen and bridge builders "have broken our railroad blockade of Pyongyang and ...won...the use of all key rail arteries."[61]

### *4. Operation "Saturate" Replaces "Strangle"*

At the medical college in Seoul, where the Fifth Air Force made its headquarters, and in the Meiji and Dai Ichi buildings in Tokyo, where Generals Weyland and Ridgway had their command posts, United Nations commanders puzzled over the results of "Strangle" during December 1951. According to prisoner-of-war reports, Communist plans to mount a "Sixth-Phase" ground offensive in August had been called off because of the air attacks against North Korean railways. At a Fifth Air Force planning conference in Seoul on 12 December General Ferguson was completely candid in his interpretation of the enemy's actions. "Although the enemy has made no large-scale attack," he said, "we don't know whether it is the result of the interdiction or whether he never intended to attack." General Ferguson reported, however, that intelligence did not believe that the Reds had been able to accumulate the supplies they needed for a two-week ground offensive.[62]

To newsmen in Tokyo General Weyland announced on 26 December 1951 that the "Strangle" operations had shattered the North Korean rail-transportation net, had resulted in the destruction or damaging of some 40,000 Communist trucks, and had prevented the Reds from building up for a future

offensive.[63] After a thorough study and review of the results of the interdiction program, General Ridgway messaged his conclusions to the Joint Chiefs of Staff on 4 January 1952. General Ridgway noted that the air-interdiction campaign had slowed and seriously affected the enemy's supply operations and had increased the time required to move supplies to the front lines. It had forced the Reds to divert thousands of troops and much materiel in order to maintain and protect their lines of communications. It had destroyed thousands of vehicles and pieces of railway rolling stock and a significant quantity of supplies. On the opposite side of the ledger, Ridgway noted that the air-interdiction program had not prevented the enemy from moving the supplies he needed to support a static defense or from making troop movements into North Korea. Under conditions of static defense, Ridgway recognized that the Communists could eventually accumulate the supplies they needed to support a major offensive despite the aerial interdiction. If the program should be discontinued or reduced, however, Ridgway thought that the enemy could, in a relatively short period of time, accumulate sufficient supplies to permit him to launch and sustain a major offensive.[64]

As a result of the discussions during the Fifth Air Force planning conference on 12 December, General Ferguson announced that the "Strangle" operations ought to be continued for at least thirty more days, pending the development of more lucrative air targets. In his press conference on 26 December General Weyland stated that the air-interdiction campaign would be continued "until the tactical situation or cease-fire agreements dictate a change."[65] Both officers nevertheless recognized that the aerial interdiction problem in Korea had become much more difficult. Following the resumption of truce talks at Panmunjom on 25 October, the United Nations delegates had soon suggested a compromise whereby the existing battleline would become the effective demarcation line in any armistice settlement signed within thirty days after 27 November. Even before this *de facto* cease-fire went into effect, General Ridgway had, on 15 November, directed the Eighth Army to cease offensive operations and begin an active defense of its front. The Communists would not agree to an armistice during December 1951, but they took advantage of the respite on the ground to fortify their front lines. Having secured their battle positions, the Reds moved troops to rearward support positions, thus reducing the logistical support required at the front lines.[66]

Since both General Ridgway and General Weyland were in favor of continuing the North Korean railway interdiction campaign, the Fifth Air Force began to figure how rail attacks could be most effectively accomplished with declining air capabilties. On the operating level, Lt. Col. Levi R. Chase, commander of the 8th Fighter-Bomber Group, phrased the problem succinctly. "Our goal," Chase said, "has resolved itself into a simple equation—to achieve a maximum percentage of rail cuts in inverse proportion to personnel losses and battle damage to our aircraft."[67] Fifth Air Force fighter-bomber pilots were fairly unanimously agreed that the manner in which the Fifth Air Force had been scheduling the railway attacks had made them vulnerable to enemy flak. Each day, morning and afternoon, the 12 to 24 fighter-bombers had been hitting targets selected on 15- to 30-mile stretches of railroad. The pilots argued

Battered marshalling yard, 18 December 1951.

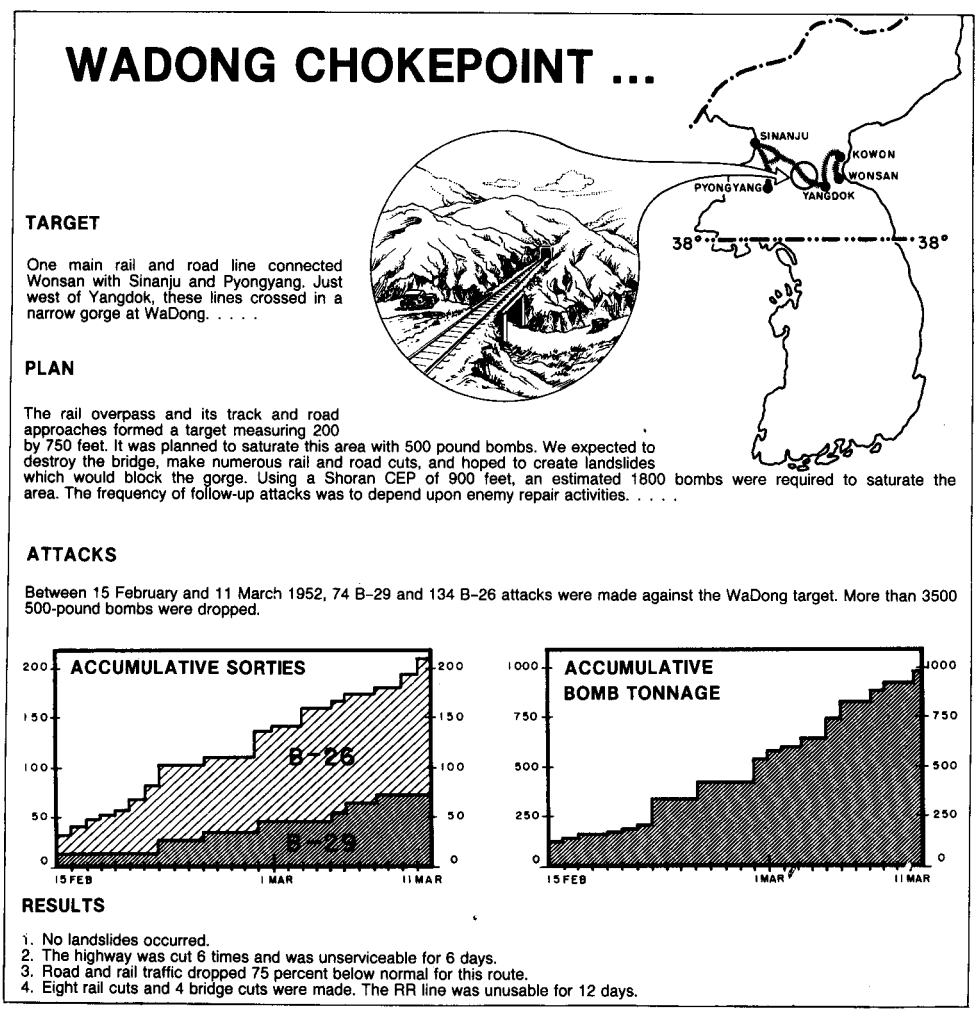
that enemy gunners knew exactly when and where to expect them. Fifth Air Force operations analysts disagreed with the contention that the Reds concentrated their flak against fighter-bomber strikes. Flak plots actually indicated that the Reds uniformly distributed their automatic weapons along their railroad lines south of the Chongchon. Along the six main stretches of track which the Fifth Air Force had been attacking the Reds had emplaced flak positions at four-mile intervals.[68]

Early in January 1952 Fifth Air Force operations officers acknowledged that Communist flak was getting too concentrated south of the Chongchon and directed changes in the rail-interdiction areas. A few months earlier MIG's had driven the fighter-bombers south of the Chongchon, but now the MIG's were not aggressive, and the Reds had not yet emplaced much flak along the rail lines between the Yalu and the Chongchon. The Fifth Air Force accordingly assigned the Thunderjet wings target areas on the main railway line northward from Sinanju to Sonchon and ordered the Shooting Star wing to attack the rail line between Kunu-ri and Huichon. After this change, the fighter-bombers encountered less flak and scored a larger percentage of rail cuts, but the ground was frozen so hard that bombs often skipped off the ground and exploded in the air. Other bomb-blasts in the frozen ground deflected debris upward. As a result of both phenomena, many planes were damaged by their own bomb-blasts as they made low-level attacks.[69] During February the fighter-bomber groups continued to attack rail targets north of the Chongchon, but they attempted to avoid the enemy's growing flak by moving around from one rail line to another.[70]

At the December planning conference in Seoul General Ferguson had expressed confidence that Bomber Command would be willing to help with rail-line interdiction provided intelligence could find some bottlenecks in the enemy's rail system which could be pulverized by the B-29's. Late in January 1952 Fifth Air Force intelligence came up with such a target. Near the village of Wadong, on the lateral railway running across central Korea, Fifth Air Force target men located a defile where a main highway crossed the railroad. The countryside was rugged and remote from populated areas, and the Fifth Air Force recommended that night-flying B-26's and B-29's should saturate the rail line and highway with 500-pound bombs.

Beginning on 26 January and continuing through 11 March, 77 B-29 and 125 B-26 sorties dropped 3,928 x 500-pound bombs into the "Wadong Choke Point." The results of these shoran-directed attacks were completely disappointing. The bombing effort scored only 18 rail cuts and 15 road cuts, and the remainder of the bombs merely churned up the countryside. During the forty-four days of the attack the rail line was blocked for only seven days and the highway for only four days. From an analysis of the "Wadong Choke Point" attacks, FEAF soon recognized that the B-29's ought to attack definite targets such as bridges. It ultimately noted that proper targets for interdiction strikes were road and rail lines, bridges, and rolling stock. "It is a fallacy," FEAF reported, "to assume there is an 'area target' for traffic interdiction."[71]

At the same time the shoran bombers



were hammering the Wadong crossroads the Fifth Air Force was making an analytical study of what was wrong with its fighter-bomber rail-interdiction efforts. Each day the fighter-bombers were cutting North Korea's railroads at many points, but the obstructions were not maintained at night, or in bad weather, or in many instances during the day. Enemy repair crews stationed at regular intervals along all major rail lines impressed local laborers and easily repaired small rail cuts in a few hours. Using large numbers of laborers, the Reds could repair several rail cuts in the same elapsed time as one rail cut. The scattered air attacks which resulted when wing commanders were permitted to select their own objectives on given stretches of railway worked detriment to good flak intelligence planning, with the result that each fighter-bomber formation used a part of its ordnance for flak suppression. The flak-suppression strikes usually drove enemy gunners under cover but seldom destroyed enemy weapons. Fifth Air Force intelligence had noted that the enemy repaired simple rail cuts with facility, but he had more trouble making repairs at those places where the fighter-bombers did sufficient damage to compel him to bring in heavy rail-repair equipment. The coming spring thaws, moreover, would probably complicate the enemy's rail-route maintenance and rehabilitation effort.[72]

Sections of enemy rail lines have been repaired repeatedly, only to be cut and cratered again.

After surveying these deficiencies of the "Strangle" attacks, Colonel Jean H. Daugherty, the Fifth Air Force director of intelligence, on 25 February 1952 strongly recommended the implementation of "Operation Saturate," or round-the-clock concentration of available railway-interdiction effort against short segments of railway track. The plan was to mutilate these segments of track by sustained day and night attacks. During the day the fighter-bombers would do the work; at night B-26 intruders would attack at periodic intervals under flare illumination with 500-pound bombs. Colonel Daugherty recommended four main railway lines for intensive railway interdiction: Kunu-ri to Huichon, Sunchon to Samdong-ni, Sinanju to Namsi-dong, and Pyongyang to Namchonjom. Believing that the B-29's had been given more bridges than they could handle in the old program, the Daugherty study recommended that the medium bombers should concentrate large-scale bombing attacks against principal river crossings such as the rail

bridge complexes at Sinanju and Sunchon.[73]

With General Everest's approval, the Fifth Air Force put Operation "Saturate" into effect on 3 March 1952. Unlike the earlier operational pattern, the Fifth Air Force Joint Operations Center now picked exact targets and closely controlled all flights of aircraft, directing routes of approach, initial points, withdrawal procedures, and altitudes to be flown to and from each target, the purpose being to compress the time interval of the attacks and to shift targets when weather or flak dictated.[74] Among other considerations, the Fifth Air Force attempted to select targets which were as free of flak as possible, but photo reconnaissance planes now not only reconnoitered planned target areas in advance but also slipped into take pictures between fighter-bomber strikes. Working with wet prints, 67th Tactical Reconnaissance Wing photo interpreters flashed mission-results and flak-movement reports to the Joint Operations Center in time to assist fighter-bomber attacks later in the day.[75] The fighter-bomber wings employed massed formations, but intensive study of flak positions prior to missions allowed the formations to neutralize the enemy's automatic weapons.[76] As a planning objective, the Fifth Air Force sought to expend an average of 300 fighter-bomber sorties and 600 bombs on each rail-track segment each day. On 15 March 3d Bombardment Wing B-26's began to unload internally carried 500-pound bombs over the rail cuts at periodic intervals during the hours of darkness.[77]

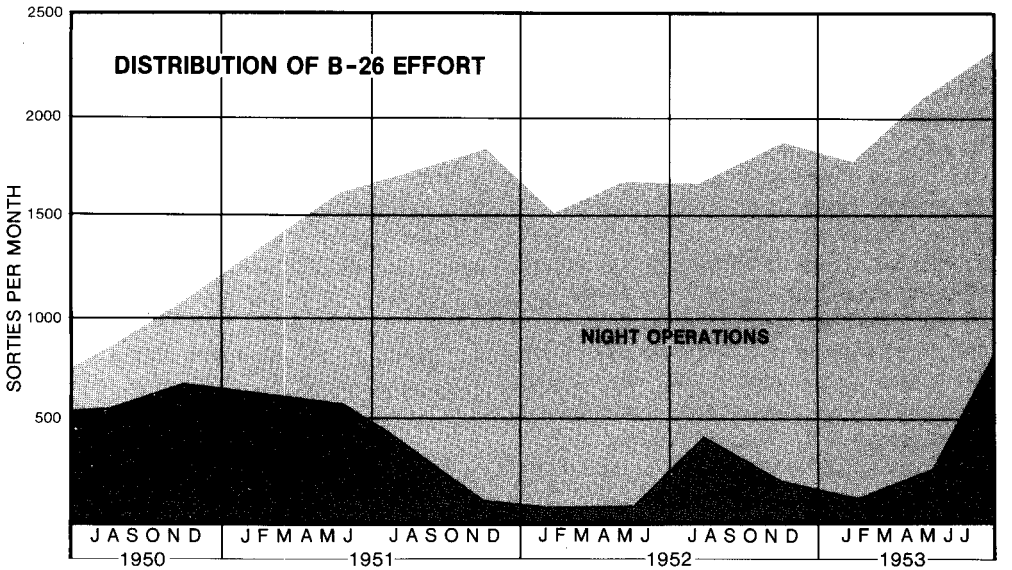
Adverse flying weather handicapped the sustained motive of the "Saturate" attacks, and the results of the new attack plan were inconclusive until 25 March. On this day the "Saturate" target was a segment of railway track between Chongju and Sinanju, especially selected because it included a long roadbed fill through swampy terrain, two bridges across small streams, and a minimum of flak. On 25 March 307 fighter-bombers dropped 530 x 1,000-pound bombs and 84 x 500-pound bombs; on the night of 25/26 March 8 B-26's covered the target with 42 x 500-pound bombs; and on 26 March 161 fighter-bombers expended 322 x 1,000-pound bombs. In the two-day attack, only one F-51 sustained minor flak damage. Photographic reconnaissance revealed that the Reds began to bring forward repair materials but attempted no repairs until the attacks were finished. By 30 March, five days after the initial strikes, the Reds had rebuilt their roadbed, and they replaced the tracks on the following day. The two-day maximum interdiction attack had put the rail line out of operation from 25 to 30 March and possibly for another day, but the success of the effort was partly attributable to thawing soil which caused bomb craters to fill with water and forced the Reds to haul in dry fill and ballast.[78] In this same last week of March the B-29's were also successful against bridge targets. At Pyongyang, on the 25th, 41 B-29's knocked down 225 feet of the bridges; at Sinanju, on the 28th, 47 B-29's took out 320 feet of bridges; and on the last day of the month 13 B-29's chopped spans from the Sinhung-ni railway bridge.[79]

Since the tactics had proven practicable, the Fifth Air Force continued the "Saturate" attacks during April and May, albeit with strikes of lesser magnitude than the initial efforts, but still concentrated against two-mile-long sections of track on the enemy's main rail lines. At first, when the Fifth Air Force was able to outguess the Reds

and strike where they had little flak, bombing accuracy was good and damages to aircraft were slight. But by the end of April the Reds had emplaced flak batteries along nearly all of their rail lines and there were virtually no flak-free targets to be found. During April "Saturate" attacks kept the enemy's rail line between Sinuiju and Sinanju continuously out of operation, illustrating the validity of the tactics, but the Fifth Air Force's rundown fighter-bomber strength was too small to permit it to effect a simultaneous interdiction of the enemy's other rail lines. In April the Fifth Air Force reached a nadir of fighter-bomber strength. Chiefly during railway interdiction strikes it had lost 243 fighter-bombers and had sustained major damages to 290 other tactical airplanes. In compensation for these losses, it had received only 131 replacement aircraft. The 49th and 136th Fighter-Bomber Wings were woefully deficient in aircraft. Instead of the 75 unit equipment aircraft authorized, the 49th possessed 41 aircraft and the 136th had only 39. As replacements for the F-84E Thunderjets, USAF was shipping outdated F-84D (Modified) aircraft, planes which General Everest had protested strongly but unsuccessfully against taking.[80] Employing all units, including the 1st Marine Air Wing, the Fifth Air Force could possibly have made and maintained six intensive cuts on the enemy's rail lines, but several times this number of continuous cuts would have been required to deny the enemy use of his 600 miles of railways in North Korea.[81] Despite a recognition that it lacked requisite strength needed fully to exploit the "Saturate" tactics, the Fifth Air Force continued to effect a partial blockade of North Korea's rail routes in the first half of May.[82] Already, however, air-operations planners were seeking an application of effort which would be more profitable than interdiction had been.

### *5. Night Intruders Hunted Moving Transport*

"On the whole," wrote Colonel R. J. Clizbe, as he looked back at a tour of duty in Korea which had culminated in command of the 452d Bombardment Wing, "night interdiction in the USAF was born in 1944 in an atmosphere of crisis, nourished during emergency, and virtually abondoned when actual wartime need ceased to exist."[83] With no prior preparation in August 1950, the 3d Bombardment Wing and Marine Squadron VMF(N)-513 had begun to employ their B-26's and F4U-5N's as night intruders. Needing still more night effort, the Fifth Air Force had converted the 452d Bombardment Wing's B-26's to night intrusion. Since USAF had no other plane for the purpose, the 3d and 452d Wings were expected to do the best they could in Korea with a scarce number of obsolete B-26 bombers. The two wings were attempting to develop effective night-attack tactics, without possessing any effective means of assessing the results of their missions. Both wings regularly sought bomb-damage assessment photography, but little or no reconnaissance effort could be made available to them. Operating at night




against targets of opportunity, B-26 intruder crews were usually unable to pinpoint their exact target locations well enough to allow RB-26 crews to find the spot and take photographs. "We can go out night after night," said a Fifth Air Force officer, "and come home and not be too sure what we have done.... We are not able to measure our effectiveness."[84]

With the beginning of the "Strangle" railway-interdiction campaign, the 3d and 452d Wings' mission of night interdiction assumed added importance in August 1951. If the night intruders could make night vehicular movements too expensive for the enemy to continue, the Reds would find themselves in an impossible logistical situation. Looking toward more effective night operations, the Fifth Air Force divided Korea between the two B-26 wings. Based at Kunsan Airfield (K-8), the 3d Wing was made responsible for covering the main supply routes in western Korea. Flying from Pusan East Airfield (K-9), the 452d Wing drew the duty of covering the main supply routes in eastern Korea. Marine Squadron VMF(N)-513 continued to work with flare aircraft against enemy traffic on supply routes near the rear of the main lines of resistance. Fifth Air force operations assigned color designations and numbers to each main supply route within enemy territory, and its daily operations orders directed the particular routes over which the night-attack units would maintain surveillance and attack.[85] Ordinarily, the B-26 wings dispatched "lonewolf" intruder crews at periodic intervals throughout the night, and the four-hour flights were timed to cover assigned supply routes or railways from dusk to dawn. In the winter months the usual interval between takeoffs was thirty minutes, but on shorter summer nights the interval was reduced to fifteen minutes.[86]

Intruder crews of the 3d and 452d Wings varied their tactics according to the model of planes they flew, the terrain they flew over, and the availa-

bility of natural or artificial illumination. Even if an intruder crew had flare support, Korea's rugged terrain hazarded low-level operations. Since aerial charts were frequently inexact, B-26 crews usually pulled up from strafing attacks at altitudes not less than 1,000 feet higher than the highest published height of terrain features in the vicinity of a target. One pilot further added that the "safe" pull-out altitude was actually 1,000 feet higher than the published altitude of the highest obstacle, plus an additional 500 feet for each married man on the crew.[87] When night-intruder crews could secure flare support, they could work closer to the ground. Pointing out that the Marine squadron, which always worked with flare planes, claimed three times as much destruction as the 3d Wing in April, General Everest asked that the "Firefly" flight of the 67th Tactical Reconnaissance Wing be augmented by an additional 20 C-46's. When this request was made in September 1951, however, FEAF had to refuse it because its stocks of flares were already critically short and would remain so during the autumn of 1951.[88] Denoting an increased interest in bombing as the optimum intruder tactic, FEAF had requested USAF in May 1951 to send glass-nose B-26C's to the Far East as replacement aircraft. With a bombardier's position forward, the B-26C was much more suitable for bombing attacks than was the hard-nose B-26B strafer. Although it was unable to honor this request, USAF nevertheless undertook to secure British Mark IX fixed-angle bombsights for the Korean B-26 groups. For a trained bombardier the Norden M-9 reflex sight was more satisfactory, but the Mark IX was thought to be easier for lesser-skilled bombardiers to operate.[89]

When the daytime "Strangle" attacks successfully interdicted the Red rail lines in North Korea in late August 1951, 3d and 452d Wing night-intruder crews reported that they had never before seen so many enemy vehicles traveling the roads of North Korea. In view of the emergency, the Reds evidently threw caution to the wind and sent large convoys southward with headlamps blazing. "The traffic reminded me of the crowd leaving the Cotton Bowl football game," said Captain Clay C. Stephenson of Dallas, Texas. "The roads," he added, "were clogged everywhere."[90] With so many Red convoys on the roads, the night intruders turned in large claims of vehicles destroyed. On the night of 24/25 August B-26 crews claimed nearly 800 vehicles destroyed or damaged, meriting General Weyland's congratulations. During the month of August the intruder crews claimed 1,935 vehicles destroyed and 3,633 damaged.[91] The lighted convoys, moreover, were natural targets for bombing attacks. According to 452d Wing pilots reports, 71 percent of the vehicles destroyed during August were dispatched by aircraft with bombs.[92] The 3d Group reported that "tests" of an undescribed nature demonstrated the effectiveness of synchronous bombing attacks against Red convoys employing 500-pound proximity-fuzed bombs from altitudes up to 8,000 feet.[93]

With all available B-26's working at night interdiction, the 3d and 452d Wings claimed to have destroyed 2,362 enemy vehicles and to have damaged 4,959 others between 25 August and 15 September 1951.[94] Despite a tightened Fifth Air Force definition issued late in the month—a definition that allowed aircrews to claim vehicles "destroyed" only if they were seen to burn or explode—the Fifth Air Force claimed 5,318 vehicles destroyed in September.

In October the Fifth Air Force posted claims of 6,761 enemy vehicles destroyed, the highest monthly total for vehicles destroyed during the Korean war.[95] Both bombardment wings agreed that synchronous bombing attacks against hostile convoys offered the optimum means of destroying these targets of opportunity. Bombing tactics worked best on the darkest nights, but on at least 20 nights each month the enemy had to use headlamps. The 3d Group explained that its crews scouted for the lights of enemy convoys and located and analyzed the convoy's size and direction of movement. Once the analysis was completed, the bomber's crew took an attack heading, usually one which paralleled the road or intersected it at a slight angle. When the aircraft was committed to the attack, the bombardier synchronized on either the first available light or the portion of the road containing the largest number of vehicles. Bombing from 7,500 feet, a crew got success which varied with its successful analysis of the bombing problem. The thing to remember, noted the 3d Group, was to take the whole convoy under attack rather than a single light. The 3d Group positively asserted that synchronous bombing was highly effective and capable of greater results than strafing. Any effort to "turn night into day" with flares, the 3d Group reported, should be used only as a last resort. The 452d Wing concurred. "Irrefutable evidence," it reported, "indicates that bombing is much more effective than strafing over a period of time and under all conditions."[96]

In the autumn of 1951, the Fifth Air Force intruder wings also tested another one of their "wild ideas"—this time U.S. Navy searchlights mounted on the wings of B-26 intruders. In February 1951, while on a visit to the United States. Colonel Zoller of the 3d Wing had first inspected an 80-million-candlepower searchlight at Langley Air Force Base. Mounted on airships, the Navy had used the light to seek out enemy submarines during World War II, but it was a package unit which could be attached under a B-26's wing.[97] In July, when the lights began to arrive in Korea, Colonel Nils O. Ohman, who now commanded the 3d Wing, ruled that only two aircraft in each bomber squadron would be equipped with searchlights. Each of the lights was as big as a napalm tank, and its drag promised to reduce the range of the plane that carried it. Colonel Ohman also thought that the lights would increase the vulnerability of the plane to enemy ground fire. At the start both the 3d and 452d Wings had trouble getting the lights into action so that they would test them. Some snapped off the brackets which held them and others caught fire and had to be jettisoned. The first few searchlight missions flown by the 3d Group revealed the tactics which would be useful. The B-26 crew would first locate a convoy and mark its position with fire bombs. Then the crew would switch on the searchlight—which was limited to approximately fifty seconds' burning at a time—and prosecute low-level attacks.[98]

On the night of 12 September, north of Hwangju, Captain John S. Walmsley of the 8th Bombardment Squadron first revealed that the searchlight had utility. After halting a convoy with 500-pound fire bombs, Captain Walmsley used the searchlight on a part of ten passes which the crew made back and forth across the convoy. Fragmentation bombs and gunfire destroyed at least 16 trucks. Riding in the nose of the plane, Lt. William D. Mulkins got a bombardier's look at what happened. He

One-hundred-pound fragmentation bombs being prepared for delivery by Night Intruders.

reported that the Red truck drivers were literally scared out of their wits by the blazing searchlight and drove their vehicles into trees, off the road into ditches, or into one another.[99] On the night of 14 September Captain Walmsley located and disabled a train. When he ran out of ammunition, Captain Walmsley called another B-26 to the scene and then attempted to illuminate the train for the second bomber. In doing this, however, Walmsley's plane was exposed to heavy ground fire that shot it down. In recognition of the act of bravery, Captain John S. Walmsley was posthumously awarded the Congressional Medal of Honor.[100] Somehow, after this, neither light bomber wing had much success getting the searchlights to work, and after futile efforts in October FEAF finally reported that it was abandoning use of the lights, which were too fragile to stand the normal stress of combat.[101]

On 15 September, when the "Strangle" operations were nearly a month old and seemed eminently successful, General Weyland began to mature a relationship between the day fighter-bomber rail-cutting missions and the night-intruder operations. "As a

conservative estimate," Weyland informed General Twining, "we have damaged 5,621 and destroyed 2,559 vehicles during the past twenty-three days." No new techniques or revolutionary tactics of night attack had been devised. The increased results were attributable to the fact that all light bombers were devoting all their efforts to night interdiction. Although the intruders were claiming many vehicles destroyed, many others were doubtlessly getting through with Red supplies. The only known method of choking off the enemy's supplies, Weyland said, was to increase the scope of the night-interdiction effort with additional B-26's. If USAF still could not increase the aircraft authorizations of the 3d and 452d Wings, Weyland recommended that USAF should lend him the 126th Light Bombardment Wing, which was training for deployment to Europe. When the Korean war was over, Weyland promised to deploy to Europe a light bomber wing, fully trained, in combat trim. "The increased effort thus available," he said, "should raise our night claims proportionately and might well be the deciding factor in our effort to destroy the enemy's resupply capabilities."[102] On 20 September, however, General Vandenberg again reported that USAF could not provide or support additional B-26's in Korea.[103]

According to the mission reports of the night-intruder crews—purposefully kept conservative by more rigid criteria—the 3d and 452d Wings destroyed an average of 164 hostile vehicles per day during September and 181 per day during October 1951. Within the validity of the crew claims, Fifth Air Force operations analysts concluded that the principal result of the "Strangle" interdiction campaign was not the throttling of the flow of supplies to Communist front-line troops, but the attrition of at least 15 percent of the Soviet bloc's monthly truck production by less than a hundred old B-26 aircraft. If the crew reports were right, the Reds were facing difficult logistical days. They could continue to support their front-line troops only by expending 5,000 trucks a month.[104] No doubt influenced by the remarkable reported results of the light bomber wings, USAF continued to study the possibilities on increasing FEAF's B-26 strength. Early in October USAF determined that by cannibalizing some old B-26's for spare airframe parts and by sending non-standard B-26's to Korea it could possibly provide General Weyland with six squadrons each with 24 B-26's plus 50 percent theater reserves, or a total of 216 B-26's. In order to attain the war strength he had so long requested, General Weyland agreed to accept B-26's which would not possess shoran and various other items of equipment suiting them to a night-attack configuration. On 27 October General Vandenberg ordered that FEAF's B-26 unit equipment authorization be increased from 96 to 144 aircraft and specified 1 May 1952 as the target date for the completion of the augmentation.[105]

Both FEAF and USAF apparently gave credence to the report that less than a hundred old B-26's were destroying up to 15 percent of the Soviet bloc's monthly truck production. Especially in the Fifth Air Force, the report engendered optimistic predictions that aerial interdiction would force the Red gound forces to retire northward. Although the night intruders were undoubtedly more effective than usual against the streams of Communist vehicles which jammed the roads in the autumn months of 1951, it was all too evident later on that the

claims of the night-intruder crews were exaggerated.* Flying alone at night, unable to secure photographic verification of their claims, the night-intruder crews were understandably unable to determine the exact results of their missions. Apparently several factors determined the extent of claims turned in by the night-intruder crews. As early as September 1951 some Fifth Air Force operations analysts noted that night-intruder crews did not indicate that any one type of bomb was better than another for destroying hostile vehicles and suggested that crews were claiming vehicles destroyed in proportion to the number of vehicles sighted and the number of B-26 sorties flown.[106] General Weyland also attributed the increased night-intruder claims of August and September to the fact that the B-26 wings were flying more night-intruder sorties than ever before.[107] The number of Communist vehicles sighted showing headlamps had some correlation with night-intruder claims, for the B-26 crews to some extent measure the success of their missions in terms of the size of the enemy convoy sighted and attacked.

With the arrival of winter weather in November 1951, the Communists began to break the fighter-bomber blockade of North Korea's rail lines, and the night intruders accordingly sighted fewer Red vehicles moving with lights on North Korea's roads. As the convoys became smaller and better dispersed, Fifth Air Force claims of vehicles destroyed declined to 4,571 in November to 4,290 in December 1951.[108] In the latter month, moreover, the Fifth Air Force also lost a part of its night-intruder capability, for Marine Squadron VMF(N)-513 ran short of aircraft and crews and was forced to suspend its intruder operations. Accordingly, 3d Wing intruder crews began to cooperate with the Firefly flare ships for attacks along the road route between Pyongyang and Sariwon.[109] On the cold moonlight nights of these winter months, however, the night intruders reported some good success against the increasing number of Communist trains that were sighted. Locomotives never showed headlamps and could be sighted and destroyed only by crews who hunted them at low altitudes and looked for plumes of smoke or steam. It must have been easier said than done, but the 3d Group noted that "one very successful method of attack [against trains] stops the locomotive by cutting the rails ahead and behind the initial position of the train; marks the position of the train with a fire bomb; and then applies low-level bombing attacks using 500-pound parademos."[110] Apparently because Fifth Air Force regulations allowed a locomotive to be claimed as "destroyed" only when such ordnance was used, the night-intruder crews who hunted locomotives almost always employed some type of 500-pound bomb.[111]

As the Communists built up their battleline logistical stocks and grew better able to cope with daytime railway interdiction, the number and

*A tragic example later illustrated the wide discrepancy between a night intruder's actual and claimed destruction. On 30 March 1953 a B-26 crew made five separate attacks with 500-pound general-purpose bombs and fragmentation clusters against a well-lighted South Korean motor pool and adjacent road traffic. Upon returning to its base, the B-26 crew claimed to have destroyed six trucks and to have started a raging fire in the target area. In the ensuing investigation it was found that four Koreans were killed and the tires on two jeeps were punctured by bomb fragments. Such were the total results of the bombing attack. The pilot of the attacking aircraft was also said to have been one of the most conscientious men in his organization, but under conditions of darkness and in the excitement of combat he had been totally unable to judge the damage done to ground targets. *See* Colonel George H. Kneen, Jr., "The Night Intruder in Tactical Air Operations" (Air War College thesis, Apr. 1954), pp. 24–25.

1st Lt. James D. Todd, B-26 navigator-bombardier, checks his bombsight.

density of vehicle sightings continued to decline and the night intruders reported poorer and poorer results during the early months of 1952. Other tasks, moreover, diverted B-26's from intruding. In accordance with the "Saturate" operations, the 3d Wing after 11 March each night scheduled approximately 49 B-26's to make intensive railway interdiction cuts, each employing six 500-pound general-purpose bombs. These bombers saved their externally carried bombs (160-pound parafrags in the dark of the moon and 500-pound parachute demolition bombs in moonlight periods) for route-reconnaissance attacks against enemy vehicles. Since the rail-cutting endeavor greatly shortened the time available for route-reconnaissance and vehicle claims decreased, the 3d Wing secured permission late in March to schedule 12 B-26's each night exclusively for rail-cutting missions in three target areas. Other planes flew standard "lone-wolf" night-intruder sorties. Until the end of May the rail-cutting B-26's sought to intensify rail blockage by night attacks with 500-pound bombs, but at this time, in deference to an operations analysis suggestion, the rail-attack B-26's began to employe antipersonnel bombs, the idea being to hinder nocturnal rail repair rather than to inflict more damage to the rail lines.[112] The 452d Wing continued to emphasize night-intruder route reconnaissance, but in March it reported some highly-successful results obtained by bomber-stream attacks against accumulations of enemy supplies in Hwangju, Chunghwa, and Sariwon. On occasion both wings were diverted to shoran targets, though neither wing had much shoran capability. Ground-radar-directed close-support missions also engaged an increasing number of the light bombers.[113]

Lacking any better means of assessing their mission accomplishments, the B-26 wings could judge their success only by aircrew claims of vehicles destroyed which plummeted downward to 2,489 in January, 2,397 in February, 1,750 in March, and 1,723 in April.[114] The additional support which USAF had undertaken to provide did not help the B-26 wings with the accomplishment of their night-attack mission. The wings reported that the nonstandard B-26's sent to them from the United States were "shocking disappointments." Some of the old planes still had "flat-top" canopies, which disqualified them for combat since crewmen who wore winter flying equipment and survival gear could not squeeze out of them in a bail-out emergency.[115] Even with the nonstandard B-26's, moreover, USAF ultimately had to recognize its inability to bring the 3d and 452d Wings up to war strength. In the spring of

1952 a final USAF programming action allocated 24 B-26's to each 3d Wing squadron and 16 B-26's to each 452d Wing squadron. The FEAF authorization for light bombers thus included 120 B-26's as unit equipment and 60 B-26's in theater reserve.[116] The supply of B-26 replacement crews was also deficient. Geared to produce 45 crews every five weeks, the combat crew-training school at Langley Air Force Base could not satisfy FEAF's attrition and rotation requirements which went from 58 crews a month to 63 a month, and then to 93 a month in the last half of 1951. USAF had to obtain the additional crews by levying on zone of interior commands for casual crew personnel who were formed into crews for training in the Far East.[117] The British Mark IX bombsights delivered to the B-26 wings in November 1951 proved no better in the hands of poorly qualified bombardiers than the Norden sights, and in May 1952 the Fifth Air Force accordingly retired the British sights from operation.[118] In these same months during which each intruder sortie flown reported fewer enemy vehicles destroyed. Communist ground fire wrought increasing losses on the B-26's. By the summer of 1952 Col. G. S. Brown, the Fifth Air Force's director of operations, could only report that "we were trading B-26's for trucks in a most uneconomical manner."[119] It was evident that the Fifth Air Force's light bombers were no longer scoring positive results against the enemy.

### *6. Close Support Was Not Neglected*

Since the Eighth Army had occupied in June 1951 the line that it required to shield the Republic of Korea against Communist aggression, General Van Fleet limited his forces to a defense of existing positions in the summer of 1951. During these months the Mosquito controllers who hovered over the front lines every day noted that the Reds were not deeply dug in but were too widely dispersed to offer adequate air targets. After a ground reconnaissance, Major Roswell E. Currie, air liaison officer with the 1st Cavalry Division, described the enemy's emplacements as networks of open trenches with occasional dugouts covered with small logs and earth. The true "bunker" was exceptional in the summer of 1951, and most emplacements sheltered no more than five enemy soldiers. At the front lines, Currie wrote, the Reds had reached a point of widest dispersion and smallest concentration and offered the poorest targets for air attack.[120] Acknowledging his reduced requirements for air support in the defense of stable positions, General Van Fleet (as he expressed it) "played ball" with General Everest and held his requests for air support to a minimum in order that the Fifth Air Force would have enough effort to accomplish its tasks of counterair and interdiction.[121]

Although both generals recognized that close air support had limited possibilities against an entrenched enemy, other than for sharpshooting attacks against hostile positions on the

reserve slopes of hills which could not be hit by friendly gunfire, Generals Van Fleet and Everest nevertheless sought to bring the close-support control system up to the standard required by joint doctrine. As contemplated in joint agreements, General Van Fleet established the positions of G-2 and G-3 Air officers as full-time jobs at corps and divisions and provided sufficient personnel to permit them continuous schedules of operations. These officers were normally located for business in divisions and corps fire-support coordination centers (FSCC's). In infantry battalions and regiments as assistant S-3 (Operations) officer additionally served as S-3 Air. To request an immediate air strike, a battalion S-3 normally dispatched a message over organic communications to the division G-3 Air, who consolidated the battalion requests and forwarded them over the air-request net directly to the Joint Operations Center. If appropriate, the division G-3 Air might arrange for division artillery to perform a task nominated for air, in which event he would disapprove the request for air support. At the corps FSCC, the corps G-3 Air monitored all immediate air-strike requests, indicating his approval by maintaining silence. On the other hand, if corps artillery could handle the target, the corps G-3 Air entered the air-request net and disapproved the air-support request. Preplanned air-strike requests went up from battalion, through regiment, through division, and through corps, being evaluated and consolidated at each echelon before arriving at the Joint Operations Center.[122]

Recognizing that effective air support against immediate targets depended in no small part upon an efficiently operating tactical air-request net, the Eight Army looked toward improvement of its communications. Several divisions attempted to establish tactical air-request nets to link S-3 Air officers with the division G-3 Air, but terrain obstacles and enemy jamming of the radio transmissions were said to have rendered the reliability of these nets uncertain. At about this same time the Eight Army was also wiring itself in for a static defense. Apparently, the divisions elected to discontinue special tactical air-request nets and to use organic wire communications for requesting close-support missions. These wire communications continued to be overloaded with other traffic, with the result that battalion S-3 officers not infrequently met delays when they attempted to call for immediate air support.[123] Actually, however, in view of the static ground front, the Eighth Army commonly required ground units to submit requests for "immediate" air strikes on a prescribed schedule starting at 0100 hours each morning. The result of this arrangement was that few of the targets submitted were legitimately "immediate" and most targets so submitted could have been better handled as preplanned targets. For handling air-support requests between divisions, corps, and the Joint Operations Center, the Eighth Army continued to employ SCR-399 high-frequency radio sets, but it was making plans to replace these old radio sets with AN/GRC-26 radio teletype equipment.[124]

In recognition of its responsibilities for air-ground operations, the Fifth Air Force continued to make improvements in its tactical air-operations system. Organized at Pyongtaek Airfield on 25 April 1951, the 6147th Tactical Control Group (Provisional) provided a desirable organization framework for Mosquito tactical air-coordinator and tactical air-control party functions, but

the new organization did not immediately solve personnel or equipment problems of the two functions. Because Korea's terrain was rugged and the tactical air-control parties on the ground were seldom able visually to direct close-support strikes, Mosquito tactical air coordinators continued to direct nearly all fighter-bombers to their targets.[125] Like the control party's jeep, the T-6 trainer aircraft used by Mosquito controllers was not entirely adequate as a control vehicle. The slow and unarmed trainer planes were no longer able to rove through flak-free skies far behind the enemy's lines in search of targets. By the summer of 1951 the Mosquito planes were seldom permitted to penetrate more than two miles into enemy territory, and 45th Tactical Reconnaissance Squadron RF-51's instead sought targets to the rear of the enemy's lines.[126] The Fifth Air Force gave some thought to employing F-51 aircraft as Mosquito planes, but the problem of getting additional communications equipment into the Mustangs was too great.[127] On the other hand, the T-6 was too "hot" to operate from an average ground division's light aviation airstrip. At the Eighth Army's suggestion, the 6147th Group tested L-19 aircraft as control planes in July 1951 but rejected them as being too vulnerable to enemy ground fire.[128] While the T-6 would continue to be a not entirely satisfactory vehicle for an airborne coordinator, the Fifth Air Force continually worked to adapt it to its mission. Initially, Mosquito controllers "talked" fighter pilots to their targets, but by the summer of 1951 the Fifth Air Force had installed rocket rails which allowed the T-6's to carry 2.25-inch subcaliber aircraft rockets for designating ground targets.[129] Early in August 1951 Far East Materiel Command technicians completed additional communications installations, which allowed the Mosquito controllers to use the same 12 channels of very-high-frequency communications now employed by the tactical air-control parties. For direct communications with front-line ground troops, all Mosquitoes were equipped with SCR-300 infantry radio sets.[130]

The personnel and equipment available to tactical air-control parties continued to influence their effectiveness and in good part to determine their tactical employment. As for personnel, the 6150th Tactical Control Squadron (Ground) furnished the enlisted radio operator and radio mechanic to each tactical air-control party. From the outset of the Korean war the tactical air wings had provided experienced pilots to serve detached service tours as forward air controllers, at first, twenty-one days, and after February 1951 sixty days. The longer tour allowed a pilot to become familiar with his duties, but such a tour seriously interfered with the pilot's flying proficiency. According to the usual criteria, a pilot selected to serve as a forward air controller had flown some 20 missions in combat, and during his tour at the front lines he not only lost flying proficiency and flight pay, but when he returned to his squadron to complete his 100 combat missions he usually found a changed combat situation and new flying companions.[131] Seeking to remedy these inequities, the Fifth Air Force on 1 October 1951 instituted a new procedure whereby all forward air controllers were to be pilots assigned to the Mosquito squadrons of the 6147th Tactical Control Group. The success of this system was essentially dependent upon the caliber of pilots assigned to the Mosquito squadrons, but to some extend it improved the proficiency of forward air

Grumman F9F-2 fighter prior to landing on the USS *Boxer.*

controllers since a pilot normally flew 20 missions as a Mosquito coordinator before embarking on an eighty-day tour with a tactical air-control party. Improved personnel efficiency and availability enabled the 6150th Squadron to rotate airmen after a sixty-day tour with a tactical air-control party, but the airmen were expected to serve several tours with control parties during their year of duty in Korea.[132]

More than anything else, the tactical air-control party's equipment dictated its employment in Korea. As a control vehicle, the jeep was never adequate, but some needed improvements were made in its radio equipment. By 5 June 1951 all control parties in the field were provided with AN/VRC-3 radio jeeps which possessed 12 channels of very-high-frequency communications. The Fifth Air Force promptly set aside two of the frequencies for common use and allocated the other ten frequencies as unit tactical frequencies, one being assigned to each tactical wing, to the Marine wing, and to Navy aircraft. The new signals capability greatly reduced communications jamming, for a close-support flight reported to a tactical air-control party on the common reporting-in-and-out frequency and then both the party and the strike pilots switched to the unit tactical frequency for the management of the air strike.[133] As had always been the case, the jeep vehicle was too small and light to stand up under rugged field conditions and too

large to approach forward observation posts from which a forward air controller could visually control air strikes. In July 1951 the Fifth Air Force secured portable AN/TRC-7 radio sets which in theory allowed a forward air controller to go on foot to a forward observation post. These sets, however, had only two channels of very-high-frequency communications and were thus not very practicable.[134] To keep radio equipment in the tactical air-control parties in operating order was a problem of extreme complexity since the fragile signal equipment was subject to rough usage and was always remote from any Air Force unit. The 6150th Squadron kept a traveling technician team working in the field and stationed spare radio jeeps at the corps and divisions. By local arrangements the ground forces generously provided as much cross-servicing for the control-party equipment as was possible.[135]

Because the 3903d Radar Bomb Scoring Squadron's MPQ-2 radar detachments had provided outstanding nighttime close-support control in support of the Eighth Army during the spring of 1951, the Fifth Air Force and Eighth Army devoted much attention to evaluating and improving the blind-bombing technique. In order to permit the 3903d Squadron's detachments to return to their regular duty in the United States, the 502d Tactical Control Group fed its own peronnel into the tactical air-direction posts (or "Tadpoles"), and in September 1951 took command of the three posts, one being assigned to each aircraft control and warning squadron.[136] Each of these "Tadpoles" established semipermanent positions approximately ten miles behind the front lines of the three American corps. Designation of targets for radar-directed bombing was normally the province of the corps G-3 Air officer. Using all sources of information available to him, the corps G-3 Air screened and plotted worthwhile objectives on a target work map. To request an air mission, the G-3 air established two pairs of eight-digit grid coordinates to mark the beginning and the end of the best straight-line bombing run across a given target. The corps G-3 Air then sent the coordinates to the Joint Operations Center for approval.[137] Seeking to improve the equipment possessed by the tactical air-direction posts, the Fifth Air Force secured two new and improved AN/MSQ-1 radar bomb-direction sets in October 1951, but some time was required to "shake down" the new sets. In one early test an MSQ controller had not completed all necessary steps in the bombing procedure and directed a B-29's bombs against his own installation. Fortunately, the B-29 was carrying incendiaries, which burned several tents but caused no loss of life.[138] Several more months would be required to get the MSQ sets into working order, but the MPQ system directed planes to ground support targets almost every night. In fact, most Eighth Army divisions seemed to want a part of the B-29's bomb load dropped in front of them each and every night.

It was ironic that the air-support control system in Korea began too flesh out to its required capabilities in the summer of 1951, when the ground fighting was slack and not much close air support was needed. Early in August 1951, when the Fifth Air Force began its intensive attacks against North Korea's railways, General Van Fleet agreed to establish the Eighth Army's requirement for close air support at 96 sorties each day. In case of emergency, General Everest would of course give the Eighth Army as much air support as it required, but

Members of the 35th Infantry Regiment keep a sharp lookout for enemy movement, while U.N. Forces bombard the area with white phosphorous.

under the existing situation General Everest thought that the 96-sortie figure was a fair division of effort. With this amount of air support, the Eighth Army would be able to handle special targets, and the Fifth Air Force would be able to get the practice it needed to retain its air-support skills. In order to provide the required sorties, the Fifth Air Force commonly committed most of the 1st Marine Air Wing and part of the 18th Figher-Bomber Wing to the close-support effort. At their airdromes Mustangs and Corsairs were held on strip alert awaiting scramble orders from the Joint Operations Center.[139]

Despite the fact that the responsible Eighth Army and Fifth Air Force commanders had decided that the rail-interdiction attacks would best accomplish the United Nations mission in Korea, Eighth Army subordinate commanders were gravely dissatisfied with the limitations placed on close support. Late in August, when he ordered the U.S. X Corps to move forward and straighten its lines in eastern Korea, General Van Fleet still considered that the stipulated amount of close support was enough to satisfy the Eighth Army. Beginning on 2 September, the X Corps offensive against "Bloody" and "Heartbreak" Ridges in the "Punchbowl" area of eastern Korea came to a successful conclusion on 19 September. During September the Fifth Air Force and its attached units flew 2,451 close-support sorties, of which total the U.S. X Corps received 1,664 sorties, the U.S. I Corps received 335, the U.S. IX Corps received 356, and the ROK I Corps

Heartbreak Ridge

received 96 sorties. Of the X Corps troops, the 1st Marine Division, which was engaged in the heaviest fighting in the "Punchbowl," received 687 close-support sorties during September.[140]

Even though his division had received a lion's share of close support during September, Maj. Gen. Gerald C. Thomas, commander of the 1st Marine Division, personally took his dissatisfaction to General Everest on 2 October. In conversation with Everest, General Thomas stated that his division had taken unnecessary casualties because its air support had not been adequate or timely. Through the Joint Operations Center the 1st Marine Division had requested 271 air-support missions but only 187 missions had been approved. The average time between the division's request and the air strike had been 113 minutes. Only 32 immediate air-support requests had been accomplished within thirty minutes. According to General Thomas, Marine aircraft had flown 367 support sorties for his division while Air Force and Navy planes had provided 320 sorties. As a matter of policy, General Thomas stated that Marine ground troops wanted to be supported by Marine airmen. When General Everest asked him how many close-support sorties he considered adequate for his division, General Thomas replied that the 1st Marine Division required a minimum of 40 close-support sorties a day.[141] In response to the Marine general's criticisms, General Everest noted that the Joint Operations Center, whenever possible, dispatched Marine pilots to support the 1st Marine

Division, but Everest asserted that he could not agree to discriminate in favor of the 1st Marine Division by giving it 40 close-support sorties a day when the Eighth Army received only 96 sorties under usual circumstances.[142] General Van Fleet stated that the aerial interdiction program ought to be continued and noted that he could not allocate any specific number of close-support sorties to a ground unit on an exclusive and continuing basis.[143] Back in Tokyo General Ridgway sympathized with the Marine groundmen for desiring support from Marine airmen, but he could not agree that any one division in the battleline should receive a disproportionate amount of close air support at the expense of the other fighting divisions.[144]

Desultory throughout October 1951 the Eighth Army's ground probes were virtually halted by General Ridgway's order on 12 November 1951. Reasoning that the reopened truce negotiations at Panmunjom offered such a good prospect for peace as to rule out large-scale ground offensives by either side, and noting that the cost of major attacks against Red defenses could not be justified in terms of the limited results which would ensue, General Ridgway directed the Eighth Army to cease offensive operations and begin an active defense of its front.[145] Under the philosophy of air-ground doctrine which recognized that air support was made available to ground commanders on the basis of their need for it, virtually all of FEAF's air striking power had supported the Eighth Army during the crucial ground battles in the spring of 1951. Now in the winter of 1951, when the Eighth Army was undertaking no offensive action and the Communist ground armies were quiet, the Fifth Air Force had reason to expect that ground commanders would request a minimum of close air support. This, however, was not the case. Some divisions vigorously insisted upon getting their "share" of air support. One air liaison officer stated that a division commander had ordered his G-3 Air "to request 15 prebriefed flights per day and to *find* targets to justify this many flights."[146] Another air liaison officer reported that another division commander had instructed his G-3 Air to initiate requests for large numbers of air strikes against small dugouts which probably did not contain more than two or three enemy soldiers.[147] Occasionally close-support strikes paid dividends. In November Mosquito controller Captain Walter Bullock spotted six enemy tanks and two self-propelled guns firing at friendly troops near Hupyong. Bullock summoned a flight of 18th Wing Mustangs which burned out four of the tanks and one of the guns. More often than not, however, the Mosquitoes led supporting pilots against ground-designated objectives where no sign of hostile activity could be observed from the air.[148]

"When required," stated the Far East Air Forces late in November 1951, "close air support of United Nations Army forces may take precedence over other FEAF programs."[149] In the winter of 1951-52, however, the static ground situation was limited to clashes between opposing patrols and allowed few opportunities for effective close support. A blanket of snow covered most air targets along the bombline and to the enemy's immediate rear. Now the fighters were often forced to circle their target areas for long periods of time while they searched for obscure objectives. Under such circumstances, the growing order of Communist automatic weapons in the front lines took a toll of Mosquitoes and of fighter-bombers.[150] In January 1952 General

Van Fleet implemented a month-long artillery-air campaign against enemy field positions. Designing to impress the Reds with United Nations firepower, artillery batteries fired at hostile targets on one day and on alternate days aircraft struck the targets with high-explosive and napalm bombs. In response to these attacks, the Reds dug deeper into the ground and built deeply covered trenches and bunkers which could be destroyed only by precisely aimed 500- or 1,000-pound bombs.[151] For a week in mid-February 1952 General Van Fleet's forces employed "Operation Clam-Up," whereby outposts temporarily abandoned their positions and all air-support missions within 20,000 yards of the front lines were canceled. The Eighth Army hoped that the Reds would increase their patrolling and that the enemy patrols would fall into ambuscades. But the Reds refused the bait, and "Clam-Up" ended on 16 February without success.[152]

In the spring months of 1952 seasonal rains limited United Nations and Communist ground forces to patrolling activity. Fearing that the summer months would bring a resurgency of Communist ground attacks, General Everest and General Van Fleet gave attention to improvements in the air-ground system and to training. To get closer to the front lines, the 6147th Tactical Control Group moved to Chunchon Airfield (K-47) in April 1952. During the spring new LT-6G aircraft replaced the tired old T-6C and T-6F Mosquito aircraft. These new planes had many improvements such as a larger internal-fuel supply, centralized radio controls, a better rocket sight, and an ability to carry 12 target-marking rockets.[153] Arrival of officer personnel familiar with the AN/MSQ-1 in November 1951 sped the preparation of the new sets for field operations, and by May 1952 two MSQ-1 radars were supporting the U.S. I and IX Corps. Mountainous terrain somewhat negated the MSQ-1's longer theoretical range, but the accuracy of the MSQ-1 was better and its computer was more refined and faster working than that of the old MPQ-2.[154] Early in 1952, the Eighth Army obtained needed new equipment for the operation of its tactical air-request net when AN/GRC-26 radioteletype sets replaced the old SCR-399 radio equipment. At first the need to encode and decode messages transmitted over the radio-teletype net slowed the passing of immediate air requests, but the installation of automatic on-line security devices later took care of this. Another defect in the tactical air-request net was not so easily overcome. The AN/GRC-26 sets at divisions and corps were located in the local fire-support coordination centers, but the other terminals of the corps' nets were in the Eighth Army's communications center, located some five miles from the Joint Operations Center in Seoul. Received at the communication center on several radioteletype machines, air requests had to be retransmitted to the Joint Operations Center on a single machine. This communications bottleneck slowed traffic and raised a further problem of which corps' requests for immediate air support would receive priority in the retransmission to the Joint Operations Center.[155]

From the beginning of the war in Korea Far East Air Forces leaders had been impressed by their observations that many Army and Air Force leaders did not understand the principles of tactical air operations. In March 1951 the Eighth Army-Fifth Air Force board which had studied air-ground operations had recommended the establish-

ment of an air-ground operations school in Korea to train current commanders and future unit commanders as they reported for duty. The Fifth Air Force had been in favor of the school, but the Eighth Army had stated that such training was impracticable in the combat zone.[156] In Japan at Johnson Air Base, however, the Japan Air Defense Force had begun to operate an abbreviated air-ground operations course in conjunction with the U.S. XVI Corps. In Korea, in the autumn of 1951, Fifth Air Force air liaison officers attempted to disseminate a sound understanding of the principles of air-ground operations, but these officers reported that the Eighth Army's replacement turnover had brought in more and more new people who were not familiar with air support and had never experienced combat which required all-out air support.[157] On 17 September 1951 the Fifth Air Force's air liaison division accordingly instituted a three-day "routine familiarization course" for air and ground officers at Seoul. The air liaison division also sent teams to the field to make special presentations to Eighth Army divisions. The small school was not well attended, and the instructional teams seldom secured attendance of key people at their briefings.[158] After visiting Korea in January and February 1952 representatives of the U.S. Joint Tactical Air Support Board reported that "The most outstanding discovery of the tour was the quite apparent lack of indoctrination within both Army and Air Force units in the fundamental principles and concepts of Tactical Air Operations."[159]

In response to this criticism, General Ridgway ordered the Japan Air Defense Force to expand its activity at Johnson Air Base into a Far East Air-Ground Operations School capable of providing a week's indoctrination for 30 air and ground officers.[160] Although the air board's remarks brought no additional students to the Fifth Air Force's little school in Seoul, General Everest nevertheless recognized that his pilots had been so long engaged in interdiction attacks that they were losing their skills in close support. Such was especially true in the Thunderjet wings, for the 49th Group reckoned that 90 percent of its pilots had never flown close-support missions.[161] The Eighth Army's machinery for requesting close support was also getting rusty and needed a workout. In order to develop proficiency, General Everest began in March 1952 to rotate all fighter-bomber squadrons on weekly stints of close-support duty. Held on "JOC Alert" at their bases, fighter-bomber pilots worked hard to meet Fifth Air Force standards of scramble time, which was to get airborne in fifteen minutes. Over the front lines the fighter-bombers found few really worthwhile targets. For the most part, Mosquito controllers directed them to put their ordnance upon bunkers and weapons emplacements. The fighter-bomber pilots knew that their activity was mostly for training, but the 49th Group reported that the close-support missions "offered a welcome relief to all pilots who have been constantly flying rail-cutting missions in the seven months of Operation Strangle."[162] When the increased close-support effort continued into April, a USAF officer frankly questioned whether the close-support commitment was accomplishing anything worthwhile. The Fifth Air Force replied that the ground stalemate offered little justification for a heavy close-support effort. What it was attempting to do was to maintain its readiness to oppose a Communist ground attack.[163]

## 7. *Rail Interdiction in Retrospect*

At the Panmunjom truce talks Communist delegates showed no signs of desiring peace as the winter gave way to spring in 1952. On instructions from Washington, Admiral Joy offered concession after concession until the United Nations could give little more if it was to attain the peace with honor. Ten months of comprehensive railway interdiction had evidently failed to hurt the Reds enough to compel them to accept United Nations armistice terms. In fact, the Reds were obviously proud that oriental manpower was overcoming western technology. Radio Peking would gloat that the United Nations Command "mobilized more than 2,000 military aircraft and still failed to cut off the supply line to tiny North Korea."[164]

Despite the magnitude of the United Nations air effort—which included 87,552 interdiction sorties flown by FEAF aircrews alone and claims for over 19,000 rail cuts plus the destruction of 34,211 vehicles, 276 locomotives, and 3,820 rail cars[165]—the Communists had been able to supply their front-line troops and to build logistical dumps in the forward areas. Early in April the Fifth Air Force knew of the locations of major depots at Sopo, Pyongyang, and Yangdok and of forward depots at Mulgae-ri, Koksan, Singosan, Sepo-ri, and Hoeyang.[166] Along the front lines the Reds displayed more firepower than ever before. In July 1951 Communist ground troops fired only about 8,000 rounds of artillery and mortar, but in May 1952 they directed some 102,000 rounds against United Nations positions.[167] There was little doubt that Communist ground divisions had accumulated adequate supplies. "I think that the hostile forces opposing the Eighth Army...have a substantially greater offensive potential than at any time in the past," General Ridgway told questioning senators on 21 May 1952.[168] Many high-ranking officers were quick to discount the success of the aerial interdiction campaign. Back in Washington General Lemuel C. Shepherd, commandant of the Marine corps, publicly stated that "Operation Strangle" was "recognized as a fizzle" and that the Reds were steadily building up their land forces in spite of it.[169] "The interdiction program was a failure," said Vice-Admiral J. J. Clark, commander of the Seventh Fleet. "It did *not* interdict. The Communists got the supplies through; and for the kind of war they were fighting, they not only kept their battleline supplied, but they had enough surplus to spare so that by the end of the war they could even launch an offensive.[170]

The critics of the United Nations aerial-interdiction campaign in Korea apparently failed to evaluate the railway-interdiction operations in terms of the stated purpose, which was: "To interfere with and disrupt the enemy's lines of communication to such an extent that he will be unable to contain a determined offensive by friendly forces or be unable to mount a sustained offensive himself." Viewed in terms of its stated purpose, the railway-interdiction campaign had not failed. "It is believed," stated an Eighth Army intelligence report on 22 March 1952, "that the air and naval interdiction program...has limited the enemy capability of successfully maintaining an all-out, major, sustained offensive."[171] Despite the shift of United Nations air effort away from

Maj. Gen. Edward M. Almond, USA, commander, X Corps, and Lt. Gen. Lemuel C. Shepherd, Jr., USMC, commander, Fleet Marine Force, Pacific.

interdiction beginning in May 1952, the North Korean rail network had been so badly battered by ten months of intensive attack that it would not again be able to support a major and sustained Communist ground offensive.

Although the comprehensive railway-interdiction campaign attained its limited purpose, the operation nevertheless disclosed certain regrettable failures in command, in planning, and in execution. Involving all theater air forces and far-reaching in scope, the air campaign against North Korea's railroads should properly have been ordered and controlled at theater air-force level. The facets of the interdiction program were completely interrelated and the program had to succeed or fail as an entity, yet no one air officer could be considered responsible for the success or failure of the interdiction campaign because there was no single responsible air commander. The Fifth Air Force planned and after a measure supervised the interdiction attacks, but it was powerless to direct the operations of the independent Seventh Fleet or of the equally independent FEAF Bomber Command.[172] Forced to cajole when it could not order, the Fifth Air Force employed the flamboyant code name "Strangle," a caption which gave those who did not understand the real objective of the interdiction program a vehicle for proclaiming its failure.[173]

The Fifth Air Force planning for the comprehensive railway attacks correctly identified the importance of the

North Korean railway system to the Red war effort, but it displayed two serious defects. The planners did not adequately compute the force capabilities of the United Nations air forces required to effect the desired degree of interdiction of the North Korean railway system. At the beginning,the Fifth Air Force apparently assumed that United Nations air forces had the capability to destroy the enemy's rail system in North Korea. At the end, United Nations air forces failed in their efforts absolutely to interdict North Korean rail transportation because they lacked sufficient aircraft strength to maintain by day and night the intensive rail cuts required to keep all rail lines out of operation. "Nothing is so bad in air campaigns as not to have enough force to do a job completely," commented General Weyland. "For example," he added, "all but 4 or 5 percent of pre-war rail traffic in North Korea was stopped, but this was sufficient to form a solid base upon which to add enough truck and A-frame transportation to maintain a static supply line."[174]

Closely related to the failure of the Fifth Air Force's operational planners to calculate the friendly forces which would be required to interdict North Korea's railways was the failure of intelligence officers to assess the enemy's countermeasures to the planned air attacks. Since operations officers very seldom asked for enemy reaction studies, air intelligence officers very seldom accomplished such studies. Despite the fact that the success of the railway-interdiction program would depend upon the enemy's countermeasures, Fifth Air Force operations officers called for no enemy reaction estimates. This was a mistake.[175] Modest in their supply requirements and able to give or decline combat, Communist front-line troops were able to gauge their supply expenditures so as to survive periods of disruption in their logistical support. Back of the lines, moreover, the North Korean railroad bureau managed a crude but wonderfully effective rail-recovery effort. Units of 50 rail-repair troops were stationed at major rail stations, while crews of ten men were located every four miles along the tracks. Because of the abundance of unskilled labor and the crudeness of the repairs, the section gangs were able to repair rail cuts in a remarkably short time. According to FEAF surveillance studies, the Reds fixed rail cuts in from two to six hours, made bridge repairs in from two to four days, and repaired "maximum-effort" damages to rail lines in from four to seven days.[176] Defecting North Korean railway employees presented a picture of limited but persistent rail movements.[177] Communist truck transport was slow, but captured documents indicated that each truck was expected to cover 62.5 miles per day, or 1,562.5 miles per month, five days being allocated each month for maintenance. Captured documents also revealed that the Reds waged a constant campaign to sustain the morale of their truck drivers, rewarding some with the honor of "transportation hero" and punishing "rightists who are fearful of death." One propaganda leaflet emphasized that "the loss of one trip due to illness of the driver means that 2,250 men cannot get food for one day."[178] Although the railway attacks initially appealed to Fifth Air Force planners because the targets were lightly defended by flak, the Reds began to concentrate their automatic weapons along the rail lines very quickly. By June 1952 the Communists were using over half of their antiaircraft artillery (132 heavy guns and 708 automatic weapons) to protect their key

bridges and their rail lines.[179] By the standards of World War II, the Red flak order was weak, but it was strong enough to take an unacceptable toll of FEAF planes in Korea.

Although ten months of sustained air attacks against North Korea's railroads attained their stated purpose of slowing and disrupting the Communist logistical support system, one may nevertheless wonder whether a more forceful air campaign against more vital target systems might not have been more profitably employed from the beginning of the armistice talks. Seen abstractly, the United Nations railway-interdiction campaign was defensive and preventive rather than offensive and positive. United Nations airpower sought to disrupt the Communist logistical system because the Eighth Army feared that the Reds might otherwise easily accumulate the supplies they required to mount a major and sustained ground offensive. Even though the Eighth Army was stalemated and not intending to attack, United Nations airpower was again supporting the United Nations ground forces. Within their limited scope of possible accomplishment, United Nations railway-interdiction attacks apparently brought some degree of military pressure to bear upon the Communists in the autumn and early winter of 1951, thus justifying the operation as a worthwhile short-time application of airpower. Given enough time, any astute enemy will devise countermeasures to a given line of military action, and the Reds began to practice effective countermeasures to the interdiction attacks by December 1951. As a result, the United Nations railway-interdiction strikes attained progressively diminishing results after January 1952. Had United Nations airpower been permitted to attack more decisive target systems as early as August 1951 or certainly in January 1952, the Communists might very probably have been willing to accept reasonable armistice terms much earlier than was the case. But the Korean war was fought in the goldfish bowl of world opinion, and more forceful air operations were prohibited until the United Nations Command had presented its "final" offer of armistice terms in April 1952. If the rail-interdiction campaign lacked the military effect which possibly could have been attained by other operations, it nevertheless conformed with a contemporary climate of world opinion which earnestly desired to end the fighting in Korea even with some sacrifice of principle.

# 15. *Toward an Air-Pressure Strategy*

## *1. Thoughts on Airpower as a Political Weapon*

"In time," wrote General Weyland, "the pressure from air attack came to be recognized as the primary objective of the air offensive."[1] The concept of airpower as a political as well as a military weapon was not new. In the strategic air campaign against Japan during World War II American airpower had demonstrated an ability to produce psychological responses in the control elite and people of the Japanese nation which were possibly of equal significance to the physical damage done to hostile targets in the homeland. After sustaining a year of unrestrained Superfortress attacks which threatened to destroy all of the accumulated wealth of the Japanese homeland, Japan's leaders had surrendered without ground invasion. The employment of atomic bombs at Hiroshima and Nagasaki obscured the effect of the sustained aerial campaign as the causative factor in Japan's surrender. Actually, well before August 1945 the Japanese government had been seeking a means to end the war.[2]

Early in the Korean hostilities Maj. Gen. Emmett O'Donnell, Jr., had wished to use the FEAF Bomber Command to put "a very severe blow on the North Koreans, with advanced warning...telling them that they had gone too far in what we all recognized as being an act of aggression." Again, at the end of September 1950, General Stratemeyer had proposed to issue a warning and then to send a massive B-29 strike against Pyongyang, which would destroy military objectives and cause the tottering North Korean government to listen more attentively to United Nations terms for ending the war. Again, in July 1951, as armistice negotiations were beginning at Kaesong, General Weyland had proposed to drop warning leaflets which would permit civilians to escape harm and then to mount a massive air attack against military targets in Pyongyang. Each of these proposals to flex the psychological attributes of superior United Nations airpower had been forbidden by orders from Washington. General O'Donnell had best described the politico-military limitations imposed on the employment of airpower within Korea. "We are fighting distinctly 'under wraps,' " O'Donnell said.[3]

Largely because of limitations imposed upon airpower by Washington, the first year of the Korean war had been fought according to the rules for a ground campaign. To some extent, moreover, both Generals MacArthur and Ridgway gave indications that they viewed air and naval forces as supporting agencies for the ground forces. General Ridgway's official mission directives, issued in April 1951, implied a superiority of the Army mission in Korea. "Your mission," Ridgway informed the Eighth Army commander on 22 April, "is to repel aggression against...the territory...of the Republic of Korea.... You will direct the efforts of your forces toward inflicting maximum personnel casualties and materiel losses on hostile forces in Korea, consistent with the maintenance intact of all your major units and the safety of your troops."[4] On 30 April Ridgway ordered the FEAF commander to maintain theater air superiority and to "provide general air support for United Nations forces in Korea, to include:

(A) Close air support of surface forces. (B) Interdiction, including isolation of the battle area. (C) Air transport, troop carrier, and air evacuation. (D) Special missions, including electronic countermeasures, psychological, and clandestine."[5] In the summer of 1952 Brig. Gen. Jacob E. Smart, FEAF's deputy for operations, finally requested that all United Nations Command forces should be made aware that the United Nations commander and his staff "recognize that the Army, Navy, and Air Force are each responsible for attaining the theater commander's overall objective." General Smart desired such a command statement in order to "put an end to the opinion so often expressed or implied that the Eighth Army is responsible for winning the Korean war, and that the role of other services is to support it in its effort."[6]

During the initial year of Korean hostilities United Nations airpower had been predominantly employed in a tactical role in Korea. It had maintained air superiority, interdicted enemy movement, and provided close support for friendly ground forces. While airpower was supposedly supporting the ground campaign, however, air strikes directed at the rear of the Communist front-line combat zone had actually proved to be a principal means of stopping the enemy's offensives and of reducing his capability to wage ground warfare. A minimum-strength air force, equipped for the most part below authorized levels, had actually proved to be extremely destructive of the enemy's personnel and equipment. Up until Korea the destruction of enemy forces in being and of their support elements had not been considered to be a priority Air Force mission, but such had proven to be a distinct capability against the North Korean People's Army and the Chinese Communist forces in Korea. Excited by the new thought on 19 January 1951, General Stratemeyer had called General Vandenberg's attention to the fact that airpower had proven to be a primary and most economical means of waging war. In Korea, Stratemeyer pointed out, airpower had been able effectively to destroy enemy forces in being. General Stratemeyer thought that airpower's demonstrated ability to destroy hostile armed forces would be of value in defending other areas of the world against Communist aggression, particularly if the air forces were authorized to employ nuclear weapons. On 10 June 1951 General Weyland again reminded General Vandenberg that airpower had demonstrated "innumerable advantages...as a predominant weapon for destroying the enemy fighting machine." At this time General Weyland asked that FEAF's capabilities for destructive attacks should be increased "to a level whereby doubt can no longer exist relative to the true part airpower has played in the final defeat of the current enemy."[7]

The United States Air Force could correctly maintain that "The Korean war has had first priority in every respect and has been equipped to our poor best at the expense of the Strategic Air Command, the Air Defense of the United States, and our overseas deployment program."[8] Chiefly because of its scant resources, USAF had been unable to provide General Weyland's stated requirements for increased combat effectiveness in June 1951, but it was in some part true that Air Force leaders in Washington questioned whether airpower could exercise a more decisive role during the truce negotiations. General Nathan F. Twining, the USAF vice chief of staff, noted that "it is quite clear that airpower is a

dominant factor in the ability of the United Nations forces in Korea to hold their own against the much larger forces available to the enemy." But General Twining doubted that airpower could prove decisive under the limitations imposed on air operations in Korea. "Current policy precludes the United Nations air striking at the sources of the enemy's strength beyond the Manchurian border," he said. "The United Nations air effort being limited to the confines of Korea, the full effect of air striking power cannot be achieved." Under these circumstances, General Twining told General Weyland that "it would not be economical to build up the United Nations air resources above the requirement for operations in Korea and air defense of Japan.... The vital object under the present conditions," Twining said, "...is to maintain air superiority over Korea."[9]

At the beginning of the Korean truce negotiations General Weyland was unable to secure either the tactical opportunity or the logistical wherewithal that he needed for more aggressive air action. In some measure, moreover, General Weyland was held prisoner by the doctrinal concepts for the employment of airpower in land campaigns, even though such a campaign was no longer in progress in Korea. General Weyland understood that he must preserve United Nations air superiority as a matter of first priority, but aside from this the only possible employment for airpower under the existing climate of politico-military decisions was either against interdiction objectives or close-support targets along the stalemated front lines. Viewing this choice, General Weyland reasoned that "in the fall of 1951 it would have been sheer folly not to have concentrated the bulk of our air effort against interdiction targets in the enemy rear areas. Otherwise the available firepower would have been expended inefficiently against relatively invulnerable targets along the front, while the enemy was left free to build up his resources to launch and sustain a general offensive."[10]

Initially meaningful in terms of its impact upon the Communist military situation, the United Nations air campaign against North Korea's railroads soon lost any ability that it might have had to influence the course of armistice negotiations at Panmunjom. Still confronting the choice as to whether it would be interdiction or close support, however, General Weyland positively asserted on 26 December 1951 that the Air Force was going to continue railway interdiction on a top-priority basis. Soon, however, a powerful new voice in the Meiji building began to question the existing United Nations strategy and the ability of the railway interdiction program to attain meaningful results in terms of the armistice negotiations. The voice was that of Brig. Gen. Jacob E. Smart, who on 18 January 1952 replaced General Crabb as FEAF's deputy for operations. In the month that he had understudied General Crabb, General Smart had witnessed the declining effectiveness of FEAF's efforts to utilize tactical air doctrines in a stalemated truce-talk situation where conventional doctrines for the employment of tactical air forces applied only to the air-superiority portion of the air effort.[11] Up until this time FEAF had explained its air operations in terms of air superiority, interdiction, and ground support, but in February General Smart secured acceptance of a new statement of FEAF operations policy which noted that the command sought to maintain effective and positive

military pressure upon the Communist military forces in order that the United Nations Command might obtain the most favorable results in the Korean armistice negotiations.[12]

The Far East Air Forces accepted the proposition that aerial operations ought to maintain military pressure upon the Reds in order to influence Korean armistice negotiations, but there was little agreement as to how military pressure could be waged. Over in Korea General Everest was said to believe that railway interdiction might yet attain positive results. In Tokyo Brig. Gen. Charles Y. Banfill, FEAF's deputy for intelligence, argued that the Reds would soon be able to mount substantial ground attacks if aerial interdiction were lightened or discontinued.[13] Early in March 1952 General Smart decided to get some concentrated thinking on the subject of FEAF's efforts in Korea. He accordingly relieved Col. Richard L. Randolph from his regular duties as assistant chief of FEAF's combat operations division and briefed him on the job he wanted done. In essence, Smart wanted to know what FEAF could do in Korea. He wanted 90 percent thinking and 10 percent writing. He was primarily interested in findings and recommendations. At Randolph's request General Smart also assigned to the study Lt. Col. Ben I. Mayo, another young officer who had been a combat commander in Korea from the earliest days of the hostilities. General Smart notified the FEAF staff of the project and requested full support. He imposed no time restrictions and asked only that Randolph and Mayo "dig as completely and fully into the problem as it required and...come up with the best possible answers on how to prosecute more effectively the air war in Korea."[14]

Working in and out of the office General Smart made available next to his own in the Meiji building, Colonels Randolph and Mayo discussed the problem with FEAF staff officers and personnel from Bomber Command and Fifth Air Force. They studied photographs of North Korea analyses of FEAF's operational capabilities. On 12 April 1952, after six weeks' work, they submitted a staff study covering their findings and recommendations to General Smart.[15] The study did not pretend to have all the answers but it was a shrewd analysis of shortcomings in Korea and suggested the concept of a new strategy which might be of value. Colonels Randolph and Mayo did not consider that the months of comprehensive railway interdiction had been wasted, for North Korea's railways had been so badly mauled that they could not be easily rehabilitated. In the future small but periodic air attacks would keep the rail lines in marginal operating condition. Tried against the standard of air pressure, however, the railway-interdiction program was no longer practicable. As an economic item, railway track was not expensive to the enemy. As a military effort after December 1951, moreover, United Nations air attacks against the North Korean railway system had reached a virtual state of balance wherein the United Nation's ability to inflict damage was roughly equalled by the enemy's ability to repair the damage. To continue the rail attacks would be, in effect, to pit skilled pilots, equipped with modern, expensive aircraft, against unskilled coolie laborers armed with picks and shovels. Even if United Nations air action did delay or diminish the flow of hostile supplies to the enemy, such action could not place intolerable military pressure upon the Reds as long

as they maintained a static ground front.

After this introduction Colonels Randolph and Mayo examined the alternative employments of FEAF airpower which seemed possible under the circumstances prevailing in Korea. FEAF could maintain United Nations air superiority through counterair fighting and airfield bombing attacks. Or FEAF could destroy and damage enemy supplies, equipment, and personnel. Or FEAF could delay the movement of enemy supplies, equipment, and personnel. Or FEAF could provide close support for friendly ground operations. In view of the static ground situation, air actions which delayed the movement of hostile supplies or attacked entrenched troops along the front lines promised no more than minimal achievements with the possibility of costly air losses. Since the enemy based his air force north of the Yalu, on airfields which could not be attacked, FEAF could hardly bring pressure upon the enemy by destroying his air capability, but FEAF nevertheless had to maintain air superiority over North Korea in order to prevent the Reds from bringing pressure to bear on United Nations Command forces. Airplanes, moreover, were an economic cost to the Reds, and Randolph and Mayo felt that as many of them as possible should be destroyed in air-to-air fighting. The real opportunity which FEAF could exploit in Korea would be to take the Communist armies under attack. From their study of the alternative courses of action, Colonels Randolph and Mayo recommended that the first priority of FEAF effort should be given to United Nations air-superiority tasks and that such effort as remained should be employed to accomplish "the maximum amount of selected destruction, thus making the Korean conflict as costly as possible to the enemy in terms of equipment, supplies, and personnel."

Having arrived at the broad concept that the Far East Air Forces should achieve air pressure through the selective destruction of items of value to the Communist nations fighting in Korea, Colonels Randolph and Mayo discussed the sorts of targets which could be attacked. In order to exploit the inherent flexibility of airpower, any air-pressure target list had to be highly flexible and kept under constant review. Evaluation of specific targets, moreover, would need to consider the importance and value of the target to the enemy, airpower's ability to destroy the target, and the estimated cost in loss and damage to air units to be expected in the course of attacks against the target. These factors had to be weighed and balanced, for FEAF would have to live within its means. Other than North Korea's hydroelectric power facilities—which should be attacked—Randolph and Mayo admitted that "gold targets" were scarce in North Korea. They suggested that one solution to the scarcity of targets might be to attack targets which were least unremunerative. Finding lucrative targets in war-torn North Korea did not promise to be easy, but the problem would not be insurmountable, once available reconnaissance and intelligence effort was directed toward the end. "It is believed," the planning pair stated, "that once the concept—destruction—is clearly stated and made known to all operations and intelligence agencies, targets can be found, developed, and successfully attacked."

Before FEAF could expect to secure adoption of the strategy of air pressure through selective destruction, Colonels Randolph and Mayo recognized that they had to offer answers to two

questions which would interest the theater commander. Would the Reds be able to stockpile logistical support at an appreciably faster rate if FEAF applied its effort in a different way? What risk did the United Nations Command incur if the Reds did stockpile faster? Colonels Randolph and Mayo assumed that United Nations airmen would, to a great extend, continue to interdict enemy movement as long as they continued to maintain air superiority and to operate over North Korea every day. Under these circumstances the Reds would be unable to move during daylight hours. Moreover, interdiction would not be abandoned but instead focused upon destroying materiel and killing troops. Under the conditions of the static ground front the Reds could be expected eventually to build their supply level up to any degree which they desired by merely accumulating a little more than they expended. But as long as the United Nations Command maintained air superiority and held the whiphand of air attack, the Reds could never hope for an ultimate ground victory in South Korea, no matter what their jump-off supply level might be. Just as in 1950 and 1951, a Communist ground offensive would force the enemy to expose his troops and supply lines to a violent air attack as he moved from prepared defenses and dispersed supply dumps. Once again the Eighth Army could preserve itself by fire and maneuver. Back of the enemy lines, moreover, the cumulative effect of the anti-railway attacks would prevent the fast and reliable resupply which the enemy would require for an all-out ground campaign. Since the Communists could not expect to win ground victory in Korea, Randolph and Mayo argued that the United Nations Command incurred very little real risk even if the Reds did build up their front-line supplies at a faster rate.

Following the completion of their study on 12 April, Colonels Randolph and Mayo verbally briefed their conclusions and recommendations to General Smart and selected members of his staff. General Smart agreed with the findings and presented them to General Weyland, who gave his concurrence to the study.[16] The concept of air pressure through selective destruction was in fact a development of the germ of the idea which Weyland had submitted to USAF in June 1951. The idea of selective destruction appealed to Weyland for another reason. Limited to attacks against conventional targets within the territorial confines of Korea, the Far East Air Forces apparently had little ability to influence the actions of Soviet Russia and Communist China, the powers who were actually calling the tune at Panmunjom. These Communist bloc nations, however, had economic and military property at risk in North Korea. If, through selective attack, the Far East Air Forces could destroy targets in North Korea which had significance to the Soviet bloc they could make the direct effect of air campaign in North Korea felt as far away as the seats of power in Moscow and Peking.[17]

Even though he personally endorsed the concept of air pressure through selective destruction, General Weyland must have had his doubts as to whether the United Nations Command would support more forceful air operations. For several months General Weyland had been unsuccessful in his efforts to get approval for air attacks against North Korea's hydroelectric power facilities. Ever since September 1950, when the Joint Chiefs of Staff restraining order against further strategic air attacks saved them from impending

destruction,* North Korea's major hydroelectric power systems—Sui-ho, Fusen, Choshin, Kyosen, Funei, and Kongosan—had been giving aid to the enemy cause. When the Chinese Communists had seemed about to intervene in Korea in November 1950, the Joint Chiefs of Staff had accepted the estimate that the loss of "electricity from these power systems...would be a severe economic blow to Manchuria." In November 1950 the Departments of State and Defense had apparently hoped that preservation of North Korea's hydroelectric power resources might reduce the risk of Chinese Communist intervention in the Korean war.[18] Subsequent to the Chinese intervention, Secretary of Defense George C. Marshall had explained that North Korean hydroelectric facilities had not been attacked because their relation to the United Nations military effort was "not immediately so direct as to demand that destruction, and they always remained a possibility in negotiations."[19]

Although the Fifth Air Force intended to continue its railway-interdiction campaign on 5 January 1952 General James Ferguson urged that the Panmunjom truce talks had been so long-drawn-out as to warrant attacks against North Korea's hydroelectric plants. "These targets," Ferguson wrote, "are some of the most lucrative in North Korea, and their destruction would hinder the enemy's ability to wage war."[20] General Weyland was in favor of the proposal and recommended to General Ridgway that destruction of the hydroelectric power complex would "accomplish immediate as well as long-range military effects against the enemy, and would additionally create psychological and political effects to our advantage."[21] When the request came across his desk on 3 March, however, General Ridgway refused to approve it but informed Weyland that he would consider the proposal "in the event that a decision is reached that the Communists are deliberately delaying armistice negotiations and are increasing their offensive capabilities."[22] On 11 March General Ridgway informed the Joint Chiefs of Staff that he was planning to loose the Eighth Army from its operations restrictions if the Reds broke off the truce talks. General Ridgway believed, however, that the truce negotiations would succeed provided the United Nations stood inflexibly on major issues. He stated that he was not ready for the last resort, which was "to apply the one influence which the Communists the world over recognize, and that is force."[23]

General Ridgway's hope that the armistice negotiations would succeed was unfounded. Having wrangled throughout the autumn of 1951 about so simple a matter as the demarcation line, the Reds were even more bitterly obstructive about other items on the agenda. In order to ensure that neither side reinforced during the military armistice, the United Nations Command demanded the creation of a neutral-nations supervisory commission with inspection authority and insisted that neither side should build or rehabilitate airfields during the armistice. The Communists were agreeable to the supervisory commission but they insisted that Russia must be invited to join it. The Reds stoutly opposed any prohibition on the construction or rehabilitation of military airfields. Discussions concerning the agenda's fourth item dealing with the disposition

**See* Chapter 6, p. 193-194.

of prisoners of war deadlocked early. The United Nations favored an all-for-all exchange, with the war prisoners to be permitted to accept or reject repatriation. The Communists desired compulsory repatriation.[24]

As the Panmunjom negotiations moved toward a complete stalemate, Air Force planners in Washington followed Joint Chiefs of Staff orders and sought to decide what actions could be takin if the armistice talks foundered. In response to a request for information on 29 April, General Weyland told the USAF planners that North Korea's hydroelectric power facilities were legitimate and profitable military targets, which, if suddenly destroyed, would deny electrical power to many small war factories and might "impress the North Koreans with the price they are paying for their continued recalcitrance."[25] When USAF assured Weyland that his views would be submitted to the Joint Chiefs, General Ridgway stated on 1 May that he saw no reason for the Joint Chiefs to direct air attacks against the hydroelectric plants without following the normal procedure of allowing him to make the first recommendations.[26] The Joint Chiefs of Staff replied that Washington studies showed that the destruction of the plants was desirable and reminded Ridgway that except for Sui-ho he had authority to order the attacks, but they assured the theater commander that further action would await his recommendations.[27]

The Far East Air Forces' plans for a more forceful air campaign to begin with all-out air attacks against the North Korean hydroelectric facilities seemed stymied. And at this juncture the Panmunjom truce negotiations were approaching a complete impasse. Acting on instructions from Washington, Admiral Joy offered a package proposal on 28 April which sought to break the deadlock. The United Nations Command would concede on the airfield question and would accept Poland and Czechoslovakia as "neutral" nations—but not Russia. In return the United Nations Command insisted that the Reds accept the principle of voluntary repatriation for prisoners of war. After a short recess the Reds rejected this solution on 2 May 1952. As he was instructed to do in this event, Admiral Joy was careful not to break off negotiations, but he announced that the position of the United Nations was "clear, final, and irrevocable."[28]

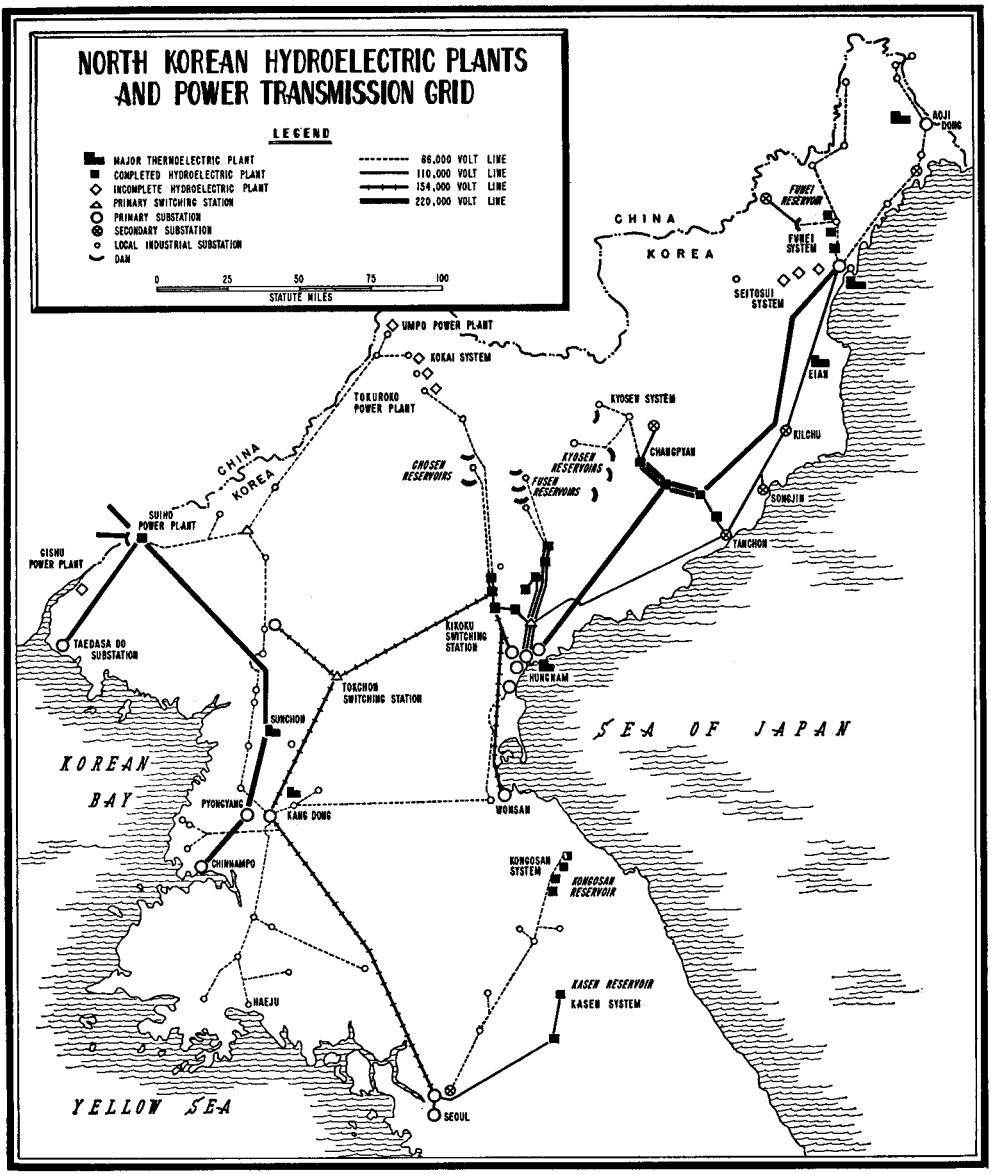
### *2. Hydroelectric Attacks Test the Air-Pressure Concept*

The United Nations Command had attempted to negotiate with the Reds for almost a year and had compromised on point after point in the discussions. In order to attain its objectives, the United Nations Command could no longer afford to yield to the implacable Reds. The time had come to apply additional military force. General Ridgeway's successor had already been named in Washington. On 28 April President Truman announced Ridgway's relief for other duties and the appointment of General Mark Wayne Clark as Commander-in-Chief, United Nations Command and Far East Command.

Commander of the U.S. Fifth Army in Italy during World War II and postwar commander of American occupation forces in Austria, General Clark had more recently been the chief of Army Field Forces. When he arrived in Tokyo on 12 May 1952, General Clark already believed that "only through forceful action could the Communists be made to agree to an armistice the United States considered honorable." General Clark asked each of his force commanders the same question: "What can I do militarily and otherwise to make the Communists realize that the price of peace is not as cheap as they are trying to make it?"[29] The change in theater command was only one of several changes in key commanders in the theater at this time. Promoted to the rank of general on 5 July 1952, General Weyland would continue to command FEAF, but, in accordance with USAF rotation policies, General Everest yielded command of the Fifth Air Force to Maj. Gen. Glenn O. Barcus on 30 May 1952. On 10 June General Barcus was promoted to the temporary rank of lieutenant general. An experienced air officer, General Barcus had commanded the XII Tactical Air Command in Europe and the USAF Tactical Air Command. In 1950 he had headed a USAF evaluation board which had made an exhaustive study of Korean air operations. As he took command of the Fifth Air Force, General Barcus noted the "partial paralysis" which had settled over Korea and resolved that the Fifth Air Force should attack the Communists with "increasing vigor and efficiency."[30]

"A significant change in combat-operations policy took place in May," wrote General Weyland. "The scope of interdiction operations was expanded to include destruction of important targets, target complexes, and target systems."[31] Nothing much seems to have been put in writing, but all air commanders recognized that they could now take more forceful actions. For several months in Korea Fifth Air Force intelligence officers had been targeting significant centers of hostile logistical activity. In a specially ordered, one-time, day-long assault on 11 March, the 8th Fighter-Bomber Group had already flown 254 fighter-bomber sorties to deliver 154.2 tons of high-explosive bombs, 33,660 gallons of napalm, and 63,900 rounds of ammunition against well-dispersed dumps comprising the Red branch logistical depot behind the western end of the front lines at Mulgae-ri.*[32] In view of its concern for railway interdiction, the Fifth Air Force had not followed through with other attacks on this target list, but in May the Fifth Air Force began similar massed fighter-bomber attacks against other logistical targets. On 8 May 485 fighter-bomber sorties blasted the Red supply depot at Suan in the "biggest single attack since the beginning of the Korean conflict." On 15 May 256 fighter-bomber sorties completely destroyed a vehicle-repair factory at Tang-dong, a few miles north of Pyongyang. On 22 May 472 fighter-bomber sorties destroyed factories near Kijang-ni where the enemy was making hand grenades and ammunition. On 23 May 275 fighter-bomber sorties returned to this same area to attack a steel-fabricating plant. Photo interpret-

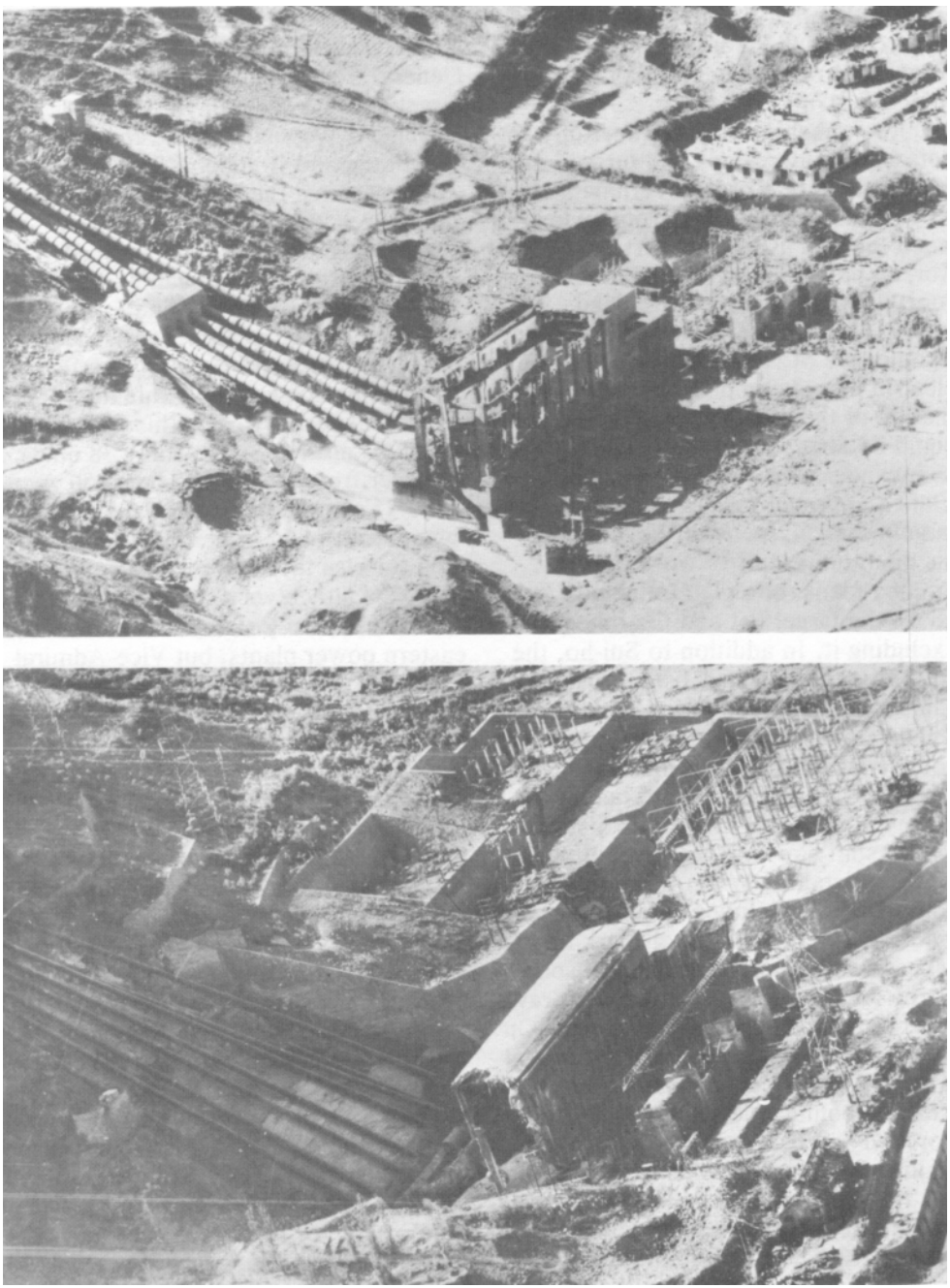
*The 8th Fighter-Bomber Group performed this magnificent feat with only 51 F-80C aircraft. The number of sorties flown by each plane, together with the exceptionally heavy amount of ordnance delivered, demonstrated how splendidly the Shooting Star jet interceptor had been made over into a fighter-bomber. For this mission, however, the F-80's did not require external fuel and could carry ordnance on their wing tips. There was another factor in the mission accomplishment. "We all worked like hell!" said Lt. Col. Levi R. Chase, the 8th Group's commander.


NORTH KOREAN HYDROELECTRIC PLANTS AND POWER TRANSMISSION GRID
LEGEND
MAJOR THERMOELECTRIC PLANT
COMPLETED HYDROELECTRIC PLANT
INCOMPLETE HYDROELECTRIC PLANT
PRIMARY SWITCHING STATION
PRIMARY SUBSTATION
SECONDARY SUBSTATION
LOCAL INDUSTRIAL SUBSTATION
DAM
66,000 VOLT LINE
110,000 VOLT LINE
154,000 VOLT LINE
220,000 VOLT LINE
0 25 50 75 100
STATUTE MILES
AOJI DONG
FUSEI RESERVOIR
FUSEI SYSTEM
CHINA
KOREA
SEITOSUI SYSTEM
EIAN
KILCHU
SONGJIN
TANCHON
KYOSEN SYSTEM
CHANGPIAN
KYOSEN RESERVOIRS
FUSEN RESERVOIRS
CHOSEN RESERVOIRS
UMPO POWER PLANT
KOKAI SYSTEM
TOKUROKO POWER PLANT
SUIHO POWER PLANT
GISHU POWER PLANT
TAEDASA DO SUBSTATION
IKOKU SWITCHING STATION
HUNGNAM
TOKCHON SWITCHING STATION
SUNCHON
SEA OF JAPAN
KOREAN BAY
PYONGYANG
KANG DONG
WONSAN
CHINNAMPO
KONGOSAN SYSTEM
KONGOSAN RESERVOIR
KASEN RESERVOIR
KASEN SYSTEM
HAEJU
YELLOW SEA
SEOUL

ers revealed that the attacks destroyed 93 percent of the first day's target and 80 percent of the second day's objective.[33]

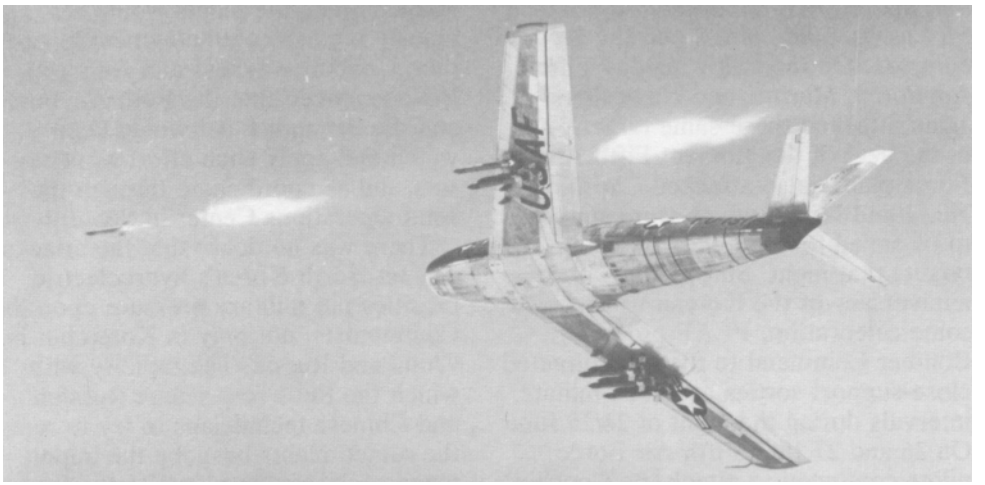
During much of May prisoner-of-war riots at Koje-do camps and turmoil in the Republic of Korea government prevented General Clark from giving much thought as to the course the Korean hostilities were to take. On 6 June, however, General Weyland visited Clark and explained to him the significance of North Korea's hydroelectric power complex and emphasized that all of the plants except Sui-ho could be attacked on the theater commander's order. Given General Clark's approval for developing the targets system, General Weyland put his operations staff to work on two briefing plans, one plan to include Sui-ho on the target list and the other excluding it. In addition to Sui-ho, the FEAF operations staff listed Fusen, Choshin, and Kyosen for attack. The smaller Funei and Kongosan complexes could wait for another time. To get the job done in two days' time, before the enemy could react to the attacks, the FEAF staff saw that they would need Navy assistance. When the plans were completed on 11 June, General Weyland took them to General Clark and asked him to approve attacks as soon as the Air Force and Navy could draw up coordinated schedules of attack. On 17 June General Clark ordered General Weyland and Vice-Admiral Robert P. Briscoe, commander of the Naval Forces Far East, to attack all of the major power installations except Sui-ho. For the coordinated attacks Clark named Weyland as "coordinating agent."[34] After studying an information copy of Clark's directive in Washington, the Joint Chiefs of Staff decided on 19 June that Sui-ho's generating plant should be added to the attack program. Getting President Truman's approval, the Joint Chiefs authorized General Clark to add Sui-ho to the target list that same day.[35]

General Weyland alerted the Fifth Air Force and Bomber Command for strikes against the North Korean power complexes on 23 or 24 June, these dates being selected in deference to Admiral Briscoe, who wanted to have four fast carriers on the line for the first time since the Hungnam evacuation. Over at Seoul General Barcus had been doing some serious thinking, for he was expected to send his fighter-bombers against Sui-ho, only 38 miles up river from the lair of some 250 MIG-15's at Antung. All of the power-plant strikes had to be timed to perfection, or else the MIG airmen could make the attack very costly. Navy airmen were already slated to bomb the eastern power plants, but Vice-Admiral J. J. Clark, the aggressive new commander of the Seventh Fleet, flew to Seoul and proposed that Navy airmen should join the attacks against Sui-ho. Not since the Yalu bridge attacks of 1950 had Navy pilots entered MIG Alley, but when Barcus accepted the Navy's offer coordinated plans shaped up rapidly. General Weyland would name the day and time of the attack in accordance with target weather at Sui-ho, and no electric power plant would be hit until the Navy dive-bombers and Fifth Air Force fighter-bombers began their runs at Sui-ho. After the Sui-ho strike was in progress, Fifth Air Force pilots would hit Choshin No. 3 and No. 4 plants and Fusen No. 3 and No. 4 plants, while Navy pilots would be hitting Fusen No. 1 and No. 2 plants and the four plants at Kyosen. Shoran-bombing B-29's would attack Choshin No. 1 and No. 2 on the night of the daylight strike. If weather permitted, the United National hydroelectric



(top) Hits on Kyosen No. 4 destroyed the generator house (foreground) and damaged the transformer yard.

(bottom) At Kyosen No. 1 U.N. bombing rendered the entire plant unserviceable.




An F-86 releasing 5-inch high velocity rockets in test runs over Nellis AFB range, Nevada.

strikes would begin at 0930 hours on 23 June.[36]

At daybreak on 23 June 1952 Fifth Air Force weather reconnaissance crews reported heavy clouds along the Yalu, and the planned attacks were off. Toward midmorning, however, the weather was drifting southward and it was clearing at the Yalu. This sort of weather would benefit the United Nations attack, since it would cover attacking planes en route to and from the Sui-ho target. In a rapid recasting of plans General Weyland flashed orders for an afternoon strike to begin at 1600 hours. The attack would be followed up on the next day and concluded by a medium-bomber attack on the night of 24/25 June. Promptly at the appointed time, as 84 Sabres patrolled watchfully overhead, 35 AD Skyraiders from the *Boxer, Princeton,* and *Philippine Sea* accompanied by 35 F9F jet fighters from the same ships arrived at Sui-ho. As the F9F's suppressed flak, the Navy dive-bombers attacked Sui-ho's generating plant. In procession between 1610 and 1700 hours, 79 F-84's and 45 F-80's ran the bomb total on Sui-ho up to 145 tons on target. Two hours later 25 F-86's escorted two RF-80's back to Sui-ho to record what had happened. The strikes went off to perfection. Although the area was defended by 44 heavy guns and 37 automatic weapons, Communist ground fire was well neutralized and inflicted only minor damage to two aircraft. Strangely enough, the 250 MIG fighters based at Antung and Ta-tung-kou made no attempt to resist the raid. In fact, while the strikes were in progress some 160 of the Red planes took off and fled to the interior of Manchuria. Evidently some rattled Red air commander at Antung feared that his airfields were gong to be attacked and pushed the panic button.[37]

A few minutes after the attacks got under way at Sui-ho on the afternoon of 23 June, Fifth Air Force Mustangs attacked Fusen No. 3 and No. 4 while 1st Marine Air Wing pilots hit Choshin No. 3 and No. 4. Skyraiders, Corsairs, and Panthers from the *Boxer, Prince-*

*ton,* and *Bon Homme Richard* bombed Fusen No. 1 and No. 2 and the Kyosen complex. On the following day Fifth Air Force, Marine, and Navy fliers again attacked these same targets, and in the heat of the moment Fifth Air Force planes also attacked Choshin No. 1 and No. 2, which were supposed to be saved for Bomber Command targets that night. Since the second anniversary of the Korean war needed some celebration, FEAF ordered Bomber Command to fly radar-directed close-support sorties at fifteen-minute intervals during the night of 24/25 June. On 26 and 27 June Fifth Air Force pilots continued to attack the Choshin and Fusen plants. As the four-day assault ended, the Fifth Air Force had flown 730 fighter-bomber and 238 counterair sorties and had sustained no casualties from enemy action. In two days of attack the Navy had flown 546 sorties and had lost two planes to ground fire. Both of the Navy pilots had been rescued.[38]

To Air Force and Navy commanders and pilots alike the sustained strikes against such a vital target system as the North Korean hydroelectric plants were especially pleasing. When the smoke cleared away from the targets, photo reconnaissance showed that something more than 90 percent of North Korea's electric power potential had been knocked out. Of the 13 plants in the four major complexes attacked, 11 were clearly unserviceable and the other two were doubtful. For the first time in Korea Navy and Air Force pilots had worked together against a single target, and Admiral Briscoe called Weyland's planning "superb." Looking back on the Korean war, General Weyland later wrote that the hydroelectric attacks stood out in his mind as one of two particular strikes that were "spectacular on their own merit." Since the plants would obviously require continuing neutralization, General Weyland and Admiral Briscoe agreed that the Fifth Air Force and the Seventh Fleet would keep watch and apply such effort as necessary and as coordinated through the Joint Operations Center in Seoul.[39]

There was no doubt that the attacks against North Korea's hydroelectric facilities put military pressure upon the Communists, not only in Korea but in China and Russia. The rapidity with which the Reds sent scarce Russian and Chinese technicians to try to repair the ruined plants bespoke the importance of the power plants to the Soviet bloc.[40] For more than two weeks, moreover, North Korea sustained an almost complete power blackout, and after this the production of small thermoelectric plants plus some limited use of the lesser damaged hydroelectric plants restored North Korea's power to perhaps 10 percent of its former capacity.[41] Intelligence agent reports confirmed FEAF's prediction that the loss of electric power would curtail war production in many small factories, themselves so dispersed as to be impracticable air targets.[42] Intelligence reports received from Manchuria indicated that the neutralization of Sui-ho's generators represented a loss of 23 percent of the 1952 electric-power requirements of northeast China. Because of power shortages, 30 out of 51 key industries at Port Arthur, Dairen, Funchun, and Anshan failed to meet the annual production quotas prescribed by Peking. The Reds tried a variety of expedients to compensate for 120,000 kilowatts of power which no longer arrived from Sui-ho, but these expedients provided only a fractional part of the power deficit.[43]

Although the North Korean hydro-

electric plants were military targets and no violation of Chinese or Russian territory could even be alleged, the air attacks brought world-wide repercussions. In the British Parliament Laborites Clement Attlee and Aneurin Bevan denounced the bombings as provocation which might lead to World War III. Prime Minister Winston Churchill admitted that he had not been consulted prior to the hydroelectric raids but insisted that there was no change in United Nations policy toward Korea. Announcement by Churchill that he was appointing a British deputy in Tokyo did much to clear the controversy on 1 July, and a Labor motion criticizing Churchill's failure to "secure effective consultation" on Korean matters failed of adoption in the House of Commons.[44] In Washington the Department of Defense received queries from congressmen wanting to know why the North Korean power plants had not been bombed earlier. General Clark stated his personal opinion that the power stations had been potentially profitable military targets any time after Chinese Communist intervention, but in replies to congressmen the Department of Defense stressed the military characteristics of the targets and explained that military considerations had forestalled attacks until June 1952.[45] The result of the British furor and the congressional queries was again to inform the enigmatic Reds that the United Nations stil intended to wage a limited war in Korea. "Once again," noted FEAF, "the persuasive threat of airpower had been lessened."[46]

### *3. Reorientation and Reorganization of the Far East Command*

After he had gotten an opportunity to study the political and military situation in Korea, General Clark informed the Joint Chiefs that the "underlying reason for failure thus far to achieve an armistice is that we have not exerted sufficient military pressure to impose the requirement for an armistice on the enemy." Unless an Eighth Army ground offensive could destroy the numerically superior and well-entrenched Red ground armies and carry victory to the Yalu, General Clark did not believe that ground action could compel the enemy to seek an armistice. Anything short of complete military victory attained by the Eighth Army, Clark said, would be "purchased at highly unpalatable personnel cost." Even if the Korean war were to be expanded, Clark indicated that he would prefer to extend the air war to Chinese and Manchurian targets and institute a naval blockade of China before launching a United Nations Command ground offensive.[47] Under the existing truce-talk situation, General Clark favored the maintenance of maximum pressure upon the Reds. "The capability for such pressure, without unacceptable cost," Clark told the Joint Chiefs, "lies in the air arm."[48] With one significant limitation, the Joint Chiefs also accepted the strategy of air pressure. In their first formal reference to the matter on 8 August, the Joint Chiefs ordered General Clark to "continue, within existing directives, to make maximum practicable use of available air strength in attacks upon all military targets in North Korea." They cautioned, however, that it was "con-

sidered important to avoid public statements ascribing the high level of air activity as bringing pressure on the Communists to agree to an armistice, so that Communist prestige is not so seriously engaged as to make more difficult ultimate Communist agreement to an acceptable armistice."[49] Somewhat later General Omar N. Bradley, chairman of the Joint Chiefs of Staff, recognized that the airpower of the United Nations Command "constitutes the most potent means, at present available to the United Nations Command, of maintaining the degree of military pressure which might impel the Communists to agree, finally, to acceptable armistice terms."[50]

When he began to search for the ways and means of exercising maximum military pressure against the Communists in Korea, General Clark soon noted that the organization of the United Nations Command and the Far East Command did not permit each of its force components to attain their maximum capabilities. As theater commander, General Clark recognized that he was expected to stand above armed-service connections and to seek to accomplish the objectives of the United Nations and the United States. In other words, General Clark was vested with the accomplishment of the over-all mission. According to the principles of armed-force unification, Clark also recognized that each of his force components contributed its own specialized capabilities to the attainment of the theater commander's mission and in so doing assisted the other components. No single service, however, existed solely or primarily for the support of another service.[51] In a letter issued to all commands on 11 August 1952 General Clark recalled that in the critical days of ground battle earlier in the Korean war all theater airpower had supported the embattled Eighth Army. Such had been in accordance with the theater commander's desire at times of ground emergency, but General Clark emphasized that the theater commander's purpose now was to "exploit throughout North Korea the intrinsic capabilities of air forces."[52]

As early as December 1946 the Joint Chiefs of Staff had directed theater commanders to provide themselves with a "joint staff with appropriate members from the various components of the services...in key positions of responsibility." In the Far East, however, the United Nations Command and Far East Command headquarters had continued to be staffed by Army officers. The headquarters staff also doubled in duty as the theater Army headquarters, which had never been activated.* General Clark soon recorded the opinion that his headquarters "should be a joint, tri-service operation, rather than an army project."[53] On 20 August he announced that he intended to organize a joint Far East Command headquarters staff, to comprise appropriate members from each of the three military services in key positions of responsibility. Concurrently, he intended to establish the long-missing Army Forces Far East, which would be the senior Army command on the same level with the Far East Air Forces and the Naval Forces Far East.[54]

According to plan, the Army Forces Far East was activated on 1 October 1952, with manning provided from the simultaneously inactivated Japan Logistical Command and the Headquarters and Service Command, Far East Command. Actually, the organiza-

**See* Chapter 2, pp. 44-45.

tion of the new command resulted in a small savings of personnel, thus disputing the old story that the absence of the Army command represented an economy in people.[55] The reorganized United Nations Command and Far East Command headquarters did not begin to function until 1 January 1953. As a joint organization, the new headquarters was staffed by 91 Army officers, 48 Air Force officers, and 43 Navy officers.[56] The new joint staff included a chief of staff, three deputy chiefs of staff representing Army, Navy, and Air Force components, and five "J-staff" positions. Two of the top-level positions were allocated to the Air Force: a deputy-chief-of-staff position filled by Maj. Gen. Ernest Moore, who came from command of the Thirteenth Air Force to assume the duties, and the J-2 Intelligence position, a job which FEAF released in order to nominate an Air Force officer as J-3 Operations. For some reason, however, an Air Force officer did not serve as J-3 until the Korean war was over.[57] General Clark was highly enthusiastic concerning his new joint staff members. "They all had outstanding records," Clark wrote, "and...pulled together in the tri-service team." At its late date of accomplishment, the top-level reorganization lacked great significance to the Korean fighting, but Clark observed: "Had we carried the war to a victorious conclusion it would have required the closest kind of integration of ground, naval, air, and amphibious operations. A truly integrated staff of the three services, in which men were picked for their ability rather than the color of their uniforms, is the answer to combined operations."[58] In several respects the headquarters reorganization of the United Nations Command and the Far East Command proved less than a complete solution to existing interservice problems. Stating that such was necessary to avoid the requirement for another senior Army general officer, General Clark assumed command of the new Army Forces Far East. General Clark also made the new command "executive agent" for many theater functions. Thus the Army Forces Far East took over allocation of surface transportation in Japan, whereas all theater allocations of surface transport might more properly have been managed by a joint theater transportation board, as was the case with the allocation of air transportation.[59]

Establishment of the United Nations Command and Far East Command joint staff ensured that service problems received more sympathetic staff consideration at the theater level, but the reorganization did not secure a desired unity of air operations since the Far East Air Forces and the Naval Forces Far East continued as independent equals in the theater command structure. Although the new strategy of air pressure demanded integrated United Nations air attacks employing Air Force and Navy pilots, General Clark perferred to attain such unity of air actions through "team play."[60] On several occasions, when Air Force and Navy airmen attacked the same target, General Clark recognized FEAF's "coordination control" authority over air operations in Korea and named General Weyland as "coordinating agent" for the planning and execution of the particular attacks.

In the absence of a single controlling authority for air operations against North Korea, the United Nations air-pressure campaign was managed in the same informal fashion as had other air campaigns in Korea in the past. To ensure the most effective employment of Fifth Air Force and Bomber Com-

F9F fighters from the USS *Boxer* armed with 5-inch rockets. *(Courtesy U.S. Navy).*

mand efforts for the air-pressure operations, General Weyland rejuvenated the FEAF Formal Target Committee,* which had become somewhat moribund in the year that the Fifth Air Force had managed comprehensive railway interdiction from its command post in Seoul. Comprising operations and intelligence representatives from FEAF, Bomber Command, and the Fifth Air Force, the FEAF Formal Target Committee met biweekly, usually in Tokyo, to study and recommend a fortnight of operational activity. When General Weyland approved them, the Target Committee's recommendations were distributed to the Fifth Air Force and to Bomber Command for execution and to the Naval Forces Far East for information.[61] Admiral Briscoe also directed his Navy air commanders to give advance notice of independently planned naval air strikes in order to ensure effective coordination with other air operations which might be planned or scheduled.[62]

Directed to work cooperatively through the Joint Operations Center in Korea in order to maintain surveillance and continued neutralization of the North Korean hydroelectric plants, the Fifth Air Force and Seventh Fleet established such harmonious relations by August 1952 that General Weyland authorized General Barcus to request naval air strikes when he required assistance for a particular operation. At this same time, however, FEAF reserved the right to negotiate for assistance from the Naval Forces Far East when such was advisable.[63] In the last weeks of the Korean hostilities, after the Seventh Fleet agreed to participate integrally in the Joint Operations Center in Korea,† the Fifth Air Force suggested that a Navy

**See* Chapter 2, pp. 54-55.
†*See* Chapter 19, pp. 676-677.

airman might well be included in the membership of the FEAF Formal Target Committee. Since he possessed no operational control over naval air units, General Weyland reasoned that he could not order a naval air officer to attend the FEAF Formal Target Committee meetings. Nevertheless, General Weyland reasoned that FEAF did possess "coordination control" over air operations in Korea and that Navy representation on the FEAF Formal Target Committee would be highly desirable. General Weyland accordingly directed the Fifth Air Force to invite a Navy member of the Joint Operations Center to attend meetings of the FEAF Formal Target Committee.[64] In the last year of the Korean hostilities the Far East Air Forces and the Naval Forces Far East worked together well for the accomplishment of a common air strategy, but this "team play" came from the fortunate personalities of the commanders concerned rather than from more stable dictates of command authority and organization.

### *4. FEAF States Policy and Examines Capabilities*

Although the United Nations air attacks against North Korea's hydroelectric facilities must have made the Reds begin to wonder whether their game at Panmunjom was worth the candle, the attacks produced such a furor that FEAF was not at all sure that the United Nations would accept a strategy of air pressure through selective destruction. Obviously embarrassed by high-level statements in Washington and London that United Nations policies were unchanged, the FEAF combat operations division replied to a request for information on that score from USAF that there had been no basic change in policy but that "there had been a change in the weight of effort expended against various targets."[65]

Such circumspection may have been justifiable under the circumstances, but on 26 June the FEAF Target Committee nevertheless proposed that FEAF combat-operations policy ought at least to be rewritten sufficiently to direct the Fifth Air Force and FEAF Bomber Command to maintain air pressure through destruction operations rather than to continue with the old policies of delay, disruption, and dislocation. General Weyland approved the recommendation, and within the next two weeks FEAF intelligence and operations officers matured a new policy directive.[66] Even before this directive was released, however, General Smart cautioned the FEAF Formal Target Committee "to keep in mind that his modification is not a major change in policy, but rather a shift in emphasis from delay and disruption operations to destruction."[67]

As issued to the Fifth Air Force and FEAF Bomber Command on 10 July 1952, the new FEAF operational policy directive recognized three factors. The first was that the Communists had amassed in the Far East large air forces which could be offensively employed against United Nations forces at any time. The second was that the major

sources of enemy supply were off limits to United Nations air attack, and the enemy supply "pipeline" from the sanctuary to the front lines was relatively short. Moreover, the ground front had been so long stable that enemy resupply requirements were low. Thus the obstruction of enemy supply movements in Korea could not prevent the enemy from building up his supply stockpiles. The third factor was that friendly ground forces in a stabilized ground situation did not require great amounts of close air support.

In order to exert the maximum pressure against the Communist forces in North Korea, FEAF air effort was to be employed with first priority given to the maintenance of control of the air. Second, such other combat air effort as was available would be employed to accomplish the maximum selected destruction in order that the Korean conflict should be made as costly as possible to the enemy in terms of equipment, supplies, facilities, and personnel. Third, such air operations as were feasible would be conducted to reduce the immediate threat to United Nations forces posed by Communist ground armies. Direct air support would be provided to United Nations ground forces as required by the initiation of friendly or enemy offensive ground action. As a general principle, the scope and tactics of air employment would be constantly monitored in order to assure that all units were kept at a high level of readiness for combat. The air-attack program would also include provisions to assure crew proficiency in any type of mission they might be required to fly in a future emergency or a renewed ground campaign.

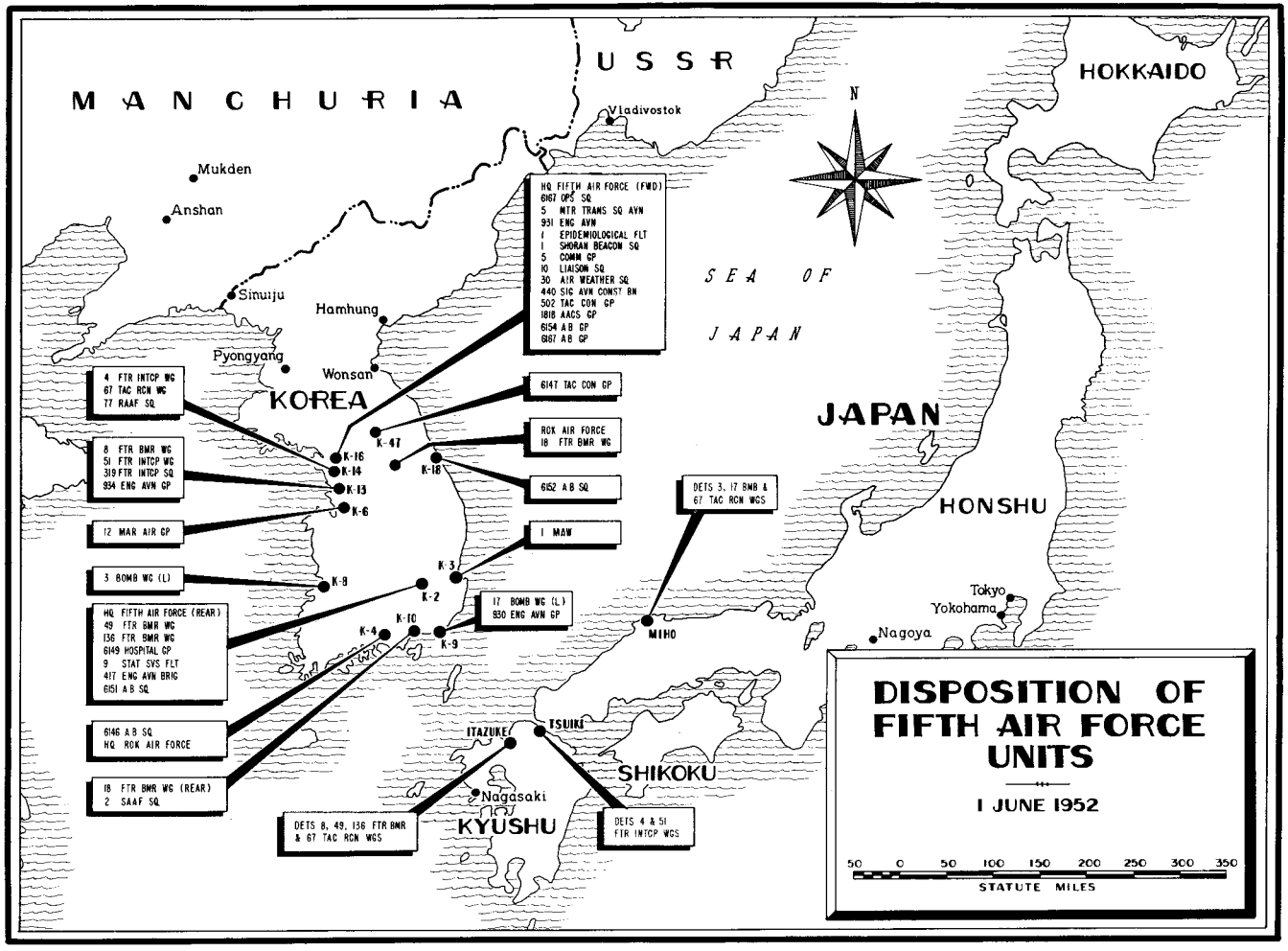
As long as there was no significant change in the tactical situation in Korea, the major proportion of air capabilities would be employed in destruction operations. The following specific target categories were listed in order of their priority: aircraft; serviceable airfields; electric power facilities; radar equipment; manufacturing facilities; communications centers; military headquarters; rail-repair facilities; vehicle-repair facilities; locomotives; supply, ordnance, and petroleum products; rail cars; vehicles; military personnel; rail bridges and tunnels; marshaling yards as facilities; and road bridges. The selection of specific targets for attack was to be made with a consideration to the relative listed priority of the target category, the vulnerability of the target to air attack, and the defenses of the targets. Within the target categories all sources of information would be exploited in order to search out and identify the most lucrative objectives. The possibility of developing worthwhile objectives was to be exploited, and sufficient attack would be employed against the enemy rail system in order to develop targets such as locomotives and rolling-stock concentrations and to ensure that the system was not rebuilt to such an extent that it would support extensive sustained enemy ground operations.

In order that fleeting targets developed by destruction attacks would be followed up and attacked with the least delay, close coordination between the Fifth Air Force and Bomber Command was essential. Since it had the more flexible capability, the Fifth Air Force was vested with responsibility for exploiting fleeting-type targets. The Fifth Air Force was also made responsible for maintaining air superiority in Korea, but Bomber Command would attack such airfields as the Fifth recommended and FEAF directed. Bomber Command would normally apply its efforts against communica-

tions centers, manufacturing facilities, rail bridges, and concentrations of supplies and railway equipment. Such targets, however, could also be attacked by the Fifth Air Force.[68]

The FEAF air-pressure directive showed a distinct concern for air-force capabilities, for General Weyland understood how vitally shortages of logistical support had hampered air operations in the first two years of the Korean war. Fortunately, FEAF's logistical support was improving. In two years of war everyone agreed that the Far East Air Materiel Command (FEAMCom) had done a marvelous job. With little expansion other than the employment of many skilled Japanese technicians and the mobilization of Japanese productive enterprise, Brig. Gen. John P. Doyle had been supporting four times as many air organizations as in June 1950. FEAMCom, however, had long required expansion, and, effective on 1 February 1952, General Doyle had undertaken a general reorganization of his command. Creation of the 6400th Air Depot Wing at Tachikawa relieved FEAMCom of the direct management of depot functions there and freed it to provide an over-all guidance of theater air logistics functions. The 6148th Air Depot Wing was organized at Iwakuni Air Base, with plans for its later expansion into a full-fledged depot wing. In the Philippines the 6208th Depot Wing was little changed, but the 6405th Korea Air Materiel Unit in Korea was expanded to handle battlefield recovery of air materiel as well as aircraft maintenance and ammunition-supply missions. Following this reorganization, General Doyle yielded command of FEAMCom to Brig. Gen. Paul E. Ruestow on 10 June 1952. In order to provide increased recognition of the logistics function, FEAMCom was redesignated as the Far East Air Logistics Force (FEALogFor) on 2 July 1952, and General Ruestow was promoted to major general on 6 September 1952. During the autumn of this year General Ruestow planned a continued expansion of his force, which would be possible when the 75th Air Depot Wing arrived from the United States on 30 December 1952. The new wing would detach a part of its units to flesh out the 6148th Wing at Iwakuni, and it would establish a new air depot in Korea at Chinhae Airfield (K-10). Early in 1953 the Far East Air Logistics Force would be prepared to provide expanded logistical support to the fighting air forces.[69]

When General Weyland and his staff planned the sustained air-pressure compaign in July 1952, they could also take some comfort from the fact that American production was beginning to catch up with the demands imposed by the Korean war. In February 1952 the Joint Chiefs had notified General Ridgway that USAF had bought 60 F-86's from a Canadian aircraft company (Canadair), which, with domestic Sabre production, should enable FEAF to achieve two war-strength Sabre wings, together with 50 percent theater reserve, by June 1952. To provide the 51st Fighter-Interceptor Wing with three tactical squadrons, General Everest chose to transfer the 39th Fighter-Interceptor Squadron from its attachment to the 18th Wing on 1 June 1952. Attached to the 51st Wing at this time, the 39th Squadron began to receive new F-86F aircraft. The Sabre equipment program met some slippages, but the two Sabre wings would be up to authorized unit-equipment strength in August 1952.[70] Further to augment the air defenses of the Far East, the Joint Chiefs of Staff authorized USAF to maintain a Strategic Air


MANCHURIA
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TSUIKI
SHIKOKU
Nagasaki
KYUSHU
N
HQ FIFTH AIR FORCE (FWD)
6167 OPS SQ
5 MTR TRANS SQ AYN
931 ENG AVN
1 EPIDEMIOLOGICAL FLT
1 SHORAN BEACON SQ
5 COMM GP
10 LIAISON SQ
30 AIR WEATHER SQ
440 SIC AVN CONST BN
502 TAC CON GP
1818 AACS GP
6154 A B GP
6187 A B GP
4 FTR INTCP WG
67 TAC RCN WG
77 RAAF SQ
8 FTR BMR WG
51 FTR INTCP WG
319 FTR INTCP SQ
954 ENG AVN GP
12 MAR AIR GP
3 BOMB WG (L)
HQ FIFTH AIR FORCE (REAR)
49 FTR BMR WG
136 FTR BMR WG
6149 HOSPITAL GP
9 STAT SVS FLT
417 ENG AVN BRIG
6151 A B SQ
6146 A B SQ
HQ ROK AIR FORCE
18 FTR BMR WG (REAR)
2 SAAF SQ
DETS 8, 49, 136 FTR BMR & 67 TAC RCN WGS
6147 TAC CON GP
ROK AIR FORCE
18 FTR BMR WG
6152 A B SQ
1 MAW
17 BOMB WG (L)
930 ENG AVN GP
DETS 3, 17 BMB & 67 TAC RCN WGS
DETS 4 & 51 FTR INTCP WGS
K-16
K-14
K-13
K-6
K-9
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DISPOSITION OF FIFTH AIR FORCE UNITS
1 JUNE 1952
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STATUTE MILES

Command fighter wing on rotational tours of duty in Japan. Until this time fighter aircraft had always been moved by surface transport across the Pacific, and expedited movements of assembled aircraft had often subjected hurriedly waterproofed planes to significant corrosion damages. Seeking to attain global mobility for fighters as well as for bombers, Strategic Air Command fighter wings had been developing in-flight refueling capabilities. Early in July 1952, led by its commander, Colonel David C. Schilling, the 31st Fighter-Escort Wing accordingly took off from Turner Air Force Base, Georgia, and employed in-flight refueling for a pioneer fighter flight across the Pacific. After an easy-stage, 11-day flight, the 31st Wing reached Misawa Air Base in Japan on 15 July 1952. Arrival of the 31st Wing not only provided needed F-84E aircraft for the defense of Japan, but its trans-Pacific flight demonstrated the practicability of moving operational fighters to the Far East by air in a short time and without the corrosion difficulties of a water voyage.[71]

Late in the spring of 1952 the Fifth Air Force's fighter-bomber strength had been seriously depleted both by logistical causes and by excessive losses sustained during the railway interdiction campaign. As attrition replacements for its F-84E Thunderjets, the Fifth Air Force had long been expecting either more F-84E planes or the new model F-84G, basically the same plane but especially designed to be a fighter-bomber. In an emergency action announced in February 1952, however, USAF ruled that the Fifth Air Force would for five months have to receive a total of 102 F-84D (Modified) aircraft instead of the standard-model Thunderjets. General Everest protested that the F-84D plane had less speed and range so that it could not be employed in formations with the F-84E, but the USAF decision stood.[72] General Everest therefore ordered that the 49th Wing would take over all F-84E's while the 136th Wing would receive the F-84D's, and this conversion was completed in May 1952.[73]

Fortunately for the Fifth Air Force, which encountered multifold logistical and operational problems stemming from the old F-84D's, USAF indicated in May 1952 that it would be able to bring three Far East Thunderjet wings up to strength and provide 50 percent theater reserves by deliveries of latest model F-84G's during the first quarter of fiscal year 1953. In this same period the completion of additional construction at Kunsan Airfield (K-8) and the scheduled arrival of the 31st Wing for air defense duty at Misawa would permit the 116th Fighter-Bomber Wing to move to Korea. Like the 136th Wing, the 116th Wing was a former Air National Guard organization whose period of authorized service was running out and required designation as a regular Air Force unit. Accordingly, on 10 July 1952, the 116th and 136th Wings were relieved from the federal service and their personnel and equipment were assumed by the simultaneously activated 474th and 58th Fighter-Bomber Wings.[74] Transported by air from Misawa, the 474th Wing opened its command post at Kunsan Airfield on 10 July and began to fly its first combat missions from the Korean airfield on 1 August.[75] Beginning in August and swelling in volume in September 1952, deliveries of new model F-84G's accelerated the phasing-out of the troublesome F-84D aircraft and also began to bring the three Thunderjet wings up to strength. Two shipments of these planes flew the Pacific and a third arrived by aircraft

carrier.[76] Although some of the new planes arrived without various items of needed supporting equipment, the F-84G's were available in sufficient numbers by September 1952 to permit the Fifth Air Force to bring its Thunderjet wings up to unit-equipment strength for the first time in more than a year.[77]

The Thunderjet wings comprised only a portion of the Fifth Air Force's fighter-bomber problem, for old Mustangs and Shooting Stars had long required relief from combat. Seeking to determine whether or not the Sabre could act as a fighter-bomber during May 1952, the 4th Fighter-Interceptor Group flew a few experimental dive-bombing attacks, getting well-placed hits with 1,000-pound bombs against Sinuiju and Uiju airfields and against the marshaling yards at Kunu-ri. In this latter attack, on the afternoon of 13 May, Col. Walker M. Mahurin, the group commander, was shot down by enemy ground fire and captured by the Communists. Despite this tragedy, the 4th Group experiments showed that the F-86 Sabres could serve as fighter-bombers as well as fighter-interceptors.[78] In a long-range projection calculated on the promise of increasing F-86 production, USAF on 18 July agreed to plans whereby the 8th Fighter-Bomber Wing and the 18th Fighter-Bomber Wing with its attached 2d South African Air Force Squadron would be converted to F-86F aircraft, properly modified as fighter-bombers, with a target date beginning in November 1952.[79] This conversion would be of advantage to the Fifth Air Force in two ways: it would acquire new fighter-bombers, which could, if need be, serve also as fighter-interceptors. Achievement of this action was far in the future, but the Fifth Air Force undertook one effort to help the old Mustangs keep flying. Leaving the 18th Wing as the rear echelon at Chinhae Airfield (K-10), the 18th Group and the 2d SAAF Squadron moved up to Hoengsong Airfield (K-46) during June 1952. At this airfield the Mustangs were only 60 miles behind the front lines and they could reduce their flying time.[80]

As a result of long negotiations and by agreeing to take nonstandard B-26's, FEAF possessed 187 B-26's in theater inventory in May 1952. Many of these planes were "cats and dogs" models in various configurations which required a large amount of depot modification before they could be assigned to the combat wings in Korea. Although the change had no effect on combat capabilities, the Fifth Air Force inactivated the reservist 452d Bombardment Wing (L) and concurrently activated the regular 17th Bombardment Wing (L) effective on 10 May 1952. In September 1952 the 3d and 17th Wings attained their unit-equipment authorizations of B-26 light bombers.[81] Other than getting the light bomber wings up to authorized strength, there was not much more that FEAF could do for them. After long study FEAF had now concluded: "The B-26 is nearly completely inadequate to perform night-intruder missions and there is not too much that can be done to develop that airplane to perform in the proper night-intruder role."[82]

In two years of war in Korea no single factor had so seriously handicapped Fifth Air Force operational capabilities as the lack of adequate air facilities. Operations from short and rough runways damaged and deteriorated combat aircraft, posing inordinate maintenance, supply, and attrition burdens upon the combat wings and tactical air force. Except for the single 9,000-foot cement-concrete runway opened at Taegu Airfield on 28 June

1952, Fifth Air Force flight surfaces were still of such a polygenous composition as to limit the ordnance carried by planes and to require constant heavy maintenance. The Fifth Air Force, however, was belatedly acquiring the aviation engineer units which it required to build adequate air facilities. In May and June 1952 the 417th Engineer Aviation Brigade, the 934th Engineer Aviation Group, and the 366th, 840th, and 841st Engineer Aviation Battalions unloaded in Korea. From its command post at Taegu, the 417th Brigade filled a long-standing need for an agency which could supervise the construction of air facilities in the combat zone. The Fifth Air Force's director of installations now ordered construction and specified requirements; the 417th Brigade supervised the actual work and administered the aviation engineer troops. According to a divison of effort specified by the brigade, the 930th Engineer Aviation Group became responsible for new construction and heavy maintenance at airfields in southern Korea, the 931st for similar duties in the Seoul-Suwon and central reaches of Korea, and the 934th for the construction of an entirely new jet fighter airfield on the flood plain of the Chinwi-chon River, south of Suwon, at the village of Osanni.[83] In the year following July 1952 the Fifth Air Force could at last expect to get more adequate air facilities everywhere in Korea.

According to official USAF programs, FEAF's combat capabilities were to increase in fiscal year 1953, which began on 1 July 1952. The air-pressure policy directive, however, posed a requirement which was somewhat new in Air Force annals. In order to provide for possible emergency requirements, such as an all-out Communist air attack or ground assault, FEAF expected to employ its aircraft at a rate which it could sustain indefinitely and still keep some 75 percent of its aircraft combat-ready. For much of the time during World War II American aircrew training and aircraft production had been so bountiful that combat air forces had been reasonably sure of obtaining timely replacements as they were needed. In critical periods in Korea FEAF had also allowed the emergency to justify the expedient and had knowingly used up aircraft and exhausted aircrews without regard to replacements. Such, however, would not be practicable for sustained air operations, which would have to hammer the Reds day after day without respite. Supply support for the new Sabres and Thunderjets, moreover, would continue to be so limited as to demand rigorous control. The rate of the air-pressure operations would have to be carefully regulated in terms of spare parts and supply, engine availability, aircraft age, expectations of loss and damage, and personnel manning and experience, all of which FEAF had to forecast and requisition up to six months in advance of the time they would be needed.[84]

The maximum combat capability which FEAF would be able to sustain and still keep 75 percent of its aircraft combat-ready would be a derivative of the number of aircraft possessed by tactical units calculated in terms of operational planning factors representing logistical support and aircrew replacements. In June 1952 FEAF planning factors set the maximum monthly sortie rate for tactical aircraft as follows: F-51—25.5 sorties, F-80—28.5 sorties, F-84—25 sorties, F-86—25 sorties, and B-26—17 sorties. Although the number of combat sorties which would be flown would increase with additional possessed aircraft in the

autumn of 1952, and could be juggled by flying shorter combat missions than the planning factors contemplated, the Fifth Air Force could in mid-1952 sustain each day something on the order of 115 F-86 counterair sorties, 220 fighter-bomber sorties, and 63 light-bomber sorties. While the planning factors were not known for these units, the 77th Royal Australian Air Force Squadron customarily flew approximately 18 Meteor counterair sorties and the 1st Marine Air Wing averaged approximately 100 sorties of all types each day in the autumn of 1952.[85] The Fifth Air Force accepted the validity of the FEAF planning factors and resolved to pitch its operations at a sortie rate which could be sustained.[86] As formally instituted in September 1952, the Fifth Air Force operations program required its tactical air wings to fly a fairly constant rate of combat and training sorties so as to ensure that logistical pipelines would sustain the total effort. When combat sorties fell below the programmed effort because of such conditions as adverse weather, the tactical wings were expected to take up the slack by flying additional training sorties. In this way tactical aircraft and crews would fly a predetermined number of hours each month and all support and maintenance would be geared to such standards.[87]

In context with the requirements of its global responsibilities for strategic bombardment in May 1951, USAF had established the aircraft strength of the FEAF Bomber Command at 99 B-29's, counting aircraft out of commission but repairable in the theater and pipeline factors of planes in transit to and from the United States. The USAF Strategic Air Command was responsible for providing combat attrition replacements. Because of difficulties in providing logistical support for the Superfortresses in the spring of 1951, USAF had demanded that FEAF reduce the combat rate of Bomber Command to 12 sorties each day. Considering the number of planes assigned in August 1951, however, General Weyland had been reluctant to establish Bomber Command's operational rate at only 12 sorties a day. According to FEAF calculations, Bomber Command actually should be able to fly 16 sorties a day. As a compromise, General Weyland accordingly authorized Bomber Command to fly 12 combat sorties a day except on days Weyland called for more effort, and to use the remaining sorties for training. This arrangement held good in June 1952. Bomber Command could actually fly at a sustained rate of 16 sorties a day, but it preferred to schedule 12 to 15 combat sorties and to devote its remaining capability to sorely needed shoran bombing practice.[88]

When Brig. Gen. Wiley D. Ganey, who had taken command on 15 March 1952, mustered the FEAF Bomber Command's strength for the new air pressure operations, he was assisted by various developments which were taking place in the Strategic Air Command. Seeking maximum organizational mobility, the Strategic Air Command inactivated all combat group headquarters and made the combat wings directly responsible for the operations of the combat squadrons. On 8 July 1952 the complete headquarters of the 98th and 307th Bombardment Wings were accordingly transferred to the FEAF Bomber Command for an indefinite period of temporary duty.[89] Conversion of Strategic Air Command wings to more modern aircraft released B-29 aircraft so that the FEAF Bomber Command did not have to be charged with

pipeline factors. The authorized strength of Bomber Command remained fixed at 99 aircraft, but it actually would possess an average of 105.6 planes in the year following July 1952.[90] When additional logistical support became available in August 1952, USAF authorized Bomber Command to increase its sortie rate by 50 percent. Because of a slow increase in theater B-29 stock levels, however, General Ganey decided to make no immediate increase in the combat sortie rate but instead to allocate the increased logistical support to training.[91]

If the emergency justified it, FEAF's combat wings could exceed their programmed operations factors for a day, a week, or a month, but, in compensation for the added sorties flown, the wings had to reduce their operations in a later period or else face logistical bankruptcy. Viewed in terms of the rates of air operations which could be sustained in combat, FEAF's striking power was always a finite quantity and actually quite small in comparison with the tasks presented to it. The manner in which essentially scarce air effort could be most profitably employed against the best possible air targets would be a major concern of the air-pressure strategy.

### *5. Finding Targets for Air-Pressure Attacks*

Up until the middle of 1952 USAF doctrines had always been concerned with "strategic" and "tactical" air missions, and FEAF leaders found it difficult to pioneer in new doctrines which visualized airpower as an instrument of national policy. Viewed in relation to existing doctrine, the air-pressure strategy appeared to require "strategic" target systems, which were no longer very numerous in Korea. On 28 August 1952, for example, General Banfill flatly stated that "Fifth Air Force and BomCom's earlier work, coupled with the recent destruction of the enemy's power system, has left Korea almost devoid of targets that are suitable in a strategic or economic sense."[92]

In terms of historical operations and established concepts of target selection very few "lucrative" air targets remained in North Korea, but when intensive target analysis keyed to the destruction operations was put to work it turned up a good many worthwhile targets. Some of these targets had been overlooked in the initial strategic attack plans of 1950, some of them had recuperated from earlier bombings, and some new targets were discovered which might have escaped notice had they not been closely scrutinized in the light of the air-pressure strategy. This experience led Brig. Gen. Don Z. Zimmerman, successor in the duties as FEAF's deputy for intelligence, to point out the lesson that "A dynamic and constant expansion of the target horizon...will always reveal that an efficient employment of airpower can be made regardless of the circumstances of the operation, the geographical location, the composition, deployment, and tactics of the enemy forces. It is the mission of the targets people to research and reveal the most effective way of employing all our combat air strength."[93]

When the FEAF commands began the

work of selecting and nominating air targets under the dictates of the FEAF operational policy directive of 10 July 1952, the Fifth Air Force was in relatively good shape. Located with the forward echelon of Fifth Air Force headquarters in Seoul, the Air Targets Division was already a small assembly plant for the production of targets. Immediately the targets division regeared itself to collate and confirm target intelligence with photography on an assembly-line basis. In this work the Fifth Air Force made heavy use of Detachment No. 2, 6004th Air Intelligence Service Squadron, which, in fact, proved to be its most important single collector of tactical air intelligence. Under the command of the same Major Donald Nichols who had been so active in the early days of the Korean war, Detachment No. 2 collected information from agents, prisoners of war, and refugees, submitting between 600 to 900 air-intelligence information reports to Fifth Air Force intelligence each month. In order to develop targets from the voluminous quantities of photo cover taken daily by its aircraft, the 67th Tactical Reconnaissance Wing established a targets section within the 67th Reconnaissance Technical Squadron. The findings of this photographic interpretation agency were issued in the form of target special reports.[94] As was anticipated, the Fifth Air Force did not experience any great difficulty in finding destruction targets. Early in November 1952 Fifth Air Force targets representatives reported that they had a backlog of 300 targets ready for attack, in addition to some 600 troop concentrations that were noted and targeted. In the mill at that time were about 330 potential objectives, of which approximately one-third would prove suitable for air attack. Most of the Fifth Air Force's targets were Communist headquarters, troop concentrations, supply dumps, and communications centers.[95]

The FEAF policy directive of 10 July 1952 required the FEAF Bomber Command to direct its B-29's against communications centers, manufacturing facilities, supply concentrations, and other similar targets. The new strategy posed a requirement for between 60 to 80 diversified shoran targets each month, a requirement which would be difficult for Bomber Command to meet on two accounts.[96] For one thing, FEAF Bomber Command's deputy for intelligence lacked sufficient personnel to handle any large day-to-day quantity of targets. The FEAF Targets Directorate recognized this, but, instead of assigning additional people to Bomber Command, the directorate decided to "operate" and to assist in the research and preparation of target materials for the B-29's.[97] This action seemed necessary at the time, but its results were said to be disappointing. Almost all of the FEAF Korean Targets Analysis Division's effort was diverted from its primary duty of maturing overall target recommendations and priorities while it made a slight contribution to Bomber Command in view of the large quantity of targets which that organization required.[98] As the destruction operations progressed, the Fifth Air Force turned over to Bomber Command a good number of targets which were worth attacking but not suited for light bombers or fighter-bombers. The 67th Tactical Reconnaissance Wing also furnished a continuous flow of information, either in the form of photo prints or of completed reports and studies accomplished in Korea. Another source of target photography was the 91st Strategic Reconnaissance Squadron, whose RB-29's flew regular missions over the eastern part of North Korea. The 548th Reconnaissance Technical Squadron also provided medium-bomber targets.

Actually, there was no shortage of intelligence information, but Bomber Command's real difficulty lay in its shortage of people available for the intensive study required to locate and develop profitable medium-bombardment targets.[99] Seeing Bomber Command's continuing targeting troubles in retrospect, General Zimmerman drew the lesson that "If a command, through some limitation or inadequacy, is unable to fulfill a required function, the higher headquarters, rather than to attempt to assist in the actual production, should instead provide the command with the necessary wherewithal to maintain a capability commensurate with its responsibility."[100]

A second major problem affecting Bomber Command's targets was the fact that all of its shoran targets, because of inaccuracies in existing Korean maps, had to be especially processed for attack by a multiplex stereoplotting process, which, in effect, justified maps against aerial mapping photography. In July 1952 the Far East Command's 64th Engineer Base Topographic Battalion could provide Bomber Command with only five sets of multiplexed shoran coordinates a week.[101] Early in July FEAF air-targets people were so hard pressed to supply medium-bomber targets that they flatly stated that the North Korean transportation system was the "only target system suitable for B-29's in North Korea."[102] During July the FEAF Bomber Command accordingly used aircraft not scheduled for special targets in attacks against marshaling yards along the enemy's rail routes. These July marshaling-yard attacks yielded pitifully small returns. Assessment of the results of nine missions involving 71 B-29 sorties showed only 17 rail cars destroyed or damaged.[103] On 1 August FEAF accordingly directed that the medium bombers would thenceforth seek enemy materiel, military personnel, and supplies.[104] But until FEAF could expand its multiplexing capability, Bomber Command continued to get reduced bombing accuracy. When supply targets near Pyongyang were attacked in September, for example, the bomb patterns were not uncommonly a thousand feet away from the mapped aiming points.[105] In August, however, the 548th Reconnaissance Technical Squadron had assembled the necessary equipment at Yokota, and by the end of the year all multiplex coordinates were being determined by the 548th Squadron. By January 1953 the 548th Squadron could multiplex a maximum of 90 average-difficulty targets each month and could complete such coordinates on priority targets in three to four days.[106] This capability solved Bomber Command's requirement for the exact locations of incorrectly mapped bomber objectives in North Korea.

In the coordination of the effort of the FEAF Bomber Command and the Fifth Air Force, the FEAF Formal Target Committee performed a splendid role. The usual agenda for the biweekly meetings in Tokyo began with an intelligence briefing on such matters as the status of air targets in North Korea. Following this, Bomber Command and Fifth Air Force representatives presented statements of the general intent of their respective operations planned for the next two weeks. The committeemen gave constant attention to the elimination of competition for air targets. On occasion FEAF targets representatives outlined target systems or a desired line of air activity which was to be exploited, and the other committee members took steps to implement the desired actions. The meetings of minds at these sessions ensured that the fighter-bombers and the

F4U Corsair from the USS *Boxer* makes a rocket attack on a North Korean tank. (Art by Herbert C. Hahn, *Courtesy U.S. Navy).*

medium bombers both received the targets which they could best handle and that targets developed as a result of a given attack would be followed up by other strikes. Old concepts that certain targets were "tactical" and others were "strategic" were abandoned, and, so far as FEAF resources were concerned, airpower was undivided by artificial and unreal attempts to classify targets by types of aircraft.[107]

Although FEAF intelligence agencies successfully accomplished a selection of targets for the air-pressure attacks, they never solved one major problem. Air intelligence could target physical objectives for attack and could calculate the physical damage done to the air targets by air strikes, but it was not able to determine what significance a particular physical objective might have to the Communist regime nor could it project the effect of a given amount of destruction upon the hostile regime's primarily political decision to end the fighting. As General Zimmerman pointed out, Army forces had always judged and portrayed their success by a line drawn on a map which showed the current position of the fighting front in relation to the enemy's territory. The Air Force, however, had no way of judging or portraying the effect of its attacks which could range all over the enemy's homeland. The air-pressure attacks thus posed a requirement for new types of social and political intelligence which were unknown to Air Force intelligence. "Briefly stated," said Zimmerman, "the problem is to determine the effect of air action in war and then to present this effect in a simple, brief way so that it may be clearly understood and appraised."[108]

# 16. *Summer, Autumn 1952*

## *1. The Problem at Panmunjom*

At Panmunjom on 8 May 1952 Vice-Admiral C. Turner Joy summed up the United Nations position in regard to Korea. In order to create a neutral nations armistice surveillance commission to monitor the cease-fire agreement, the United Nations Command would accept Poland and Czechoslovakia as members, provided the Communists would accept Sweden and Switzerland. The United Nations would agree that the armistice provisions would make no reference to the reconstruction or rehabilitation of airfields. The United Nations would exchange approximately 70,000 prisoners who were not opposed to repatriation for the 12,000 soldiers the Reds claimed to be holding as prisoners of war. But the United Nations could not agree to forcible repatriation of Chinese and North Korean prisoners who did not wish to return to their Communist-dominated homelands. "The issues are clear; the stakes are manifest," said Joy. "Our position is one from which we cannot and shall not retreat."[1] At Washington on 7 May President Truman spoke his deep conviction. "We will not buy an armistice," he said, "by turning over human beings for slaughter or slavery."[2]

When the Communist delegates at Panmunjom would not accept the United Nations compromise but responded with "firm and final" offers of their own narrowing disagreement to the prisoner-exchange issue, General Clark and Admiral Joy advocated a unilateral suspension of the plenary armistice sessions until such time as the Reds would accept the United Nations compromise. Washington, however, wanted to keep the truce talks going.[3] Even though the Red delegates at Panmunjom displayed faces of stone and tongues of serpents, the United Nations Command had begun to receive reports that Communist China did not like the first measures of air pressure and wanted a military armistice in Korea. According to a reliable source, Chinese and Soviet diplomatic representatives met at Peking on 28 June 1952 to discuss new policies to be followed at Panmunjom.[4] If the United Nations Command could maintain and increase its pressure on the Reds, the Chinese might eventually buckle under the strain and agree to reasonable truce terms.

## *2. Sabres Maintain Air Superiority*

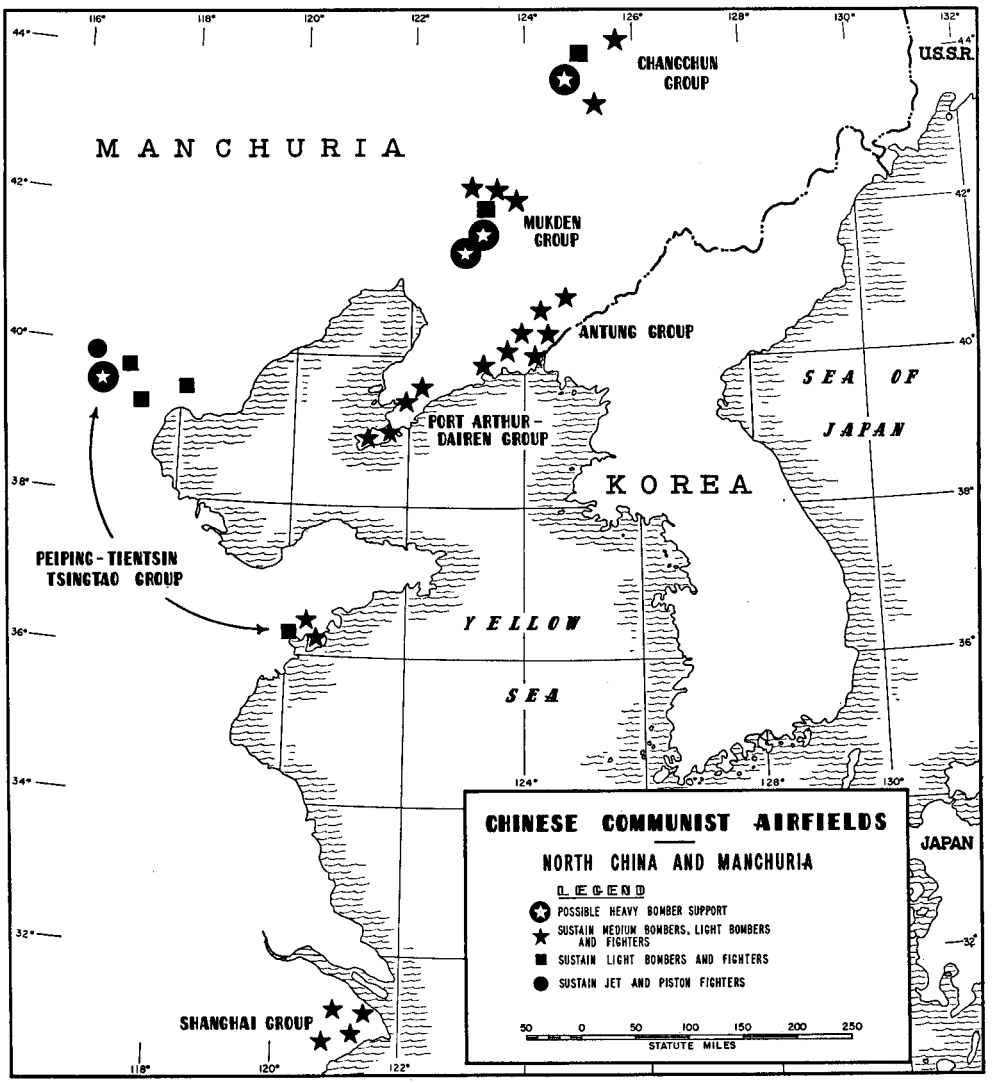
The success or failure of the United Nations Command air-pressure campaign depended upon whether or not the United Nations could maintain friendly air superiority over North Korea. General Weyland's air-pressure policy directive of 10 July 1952 therefore accorded first priority to operations required to maintain control of the air over North Korea. Friendly air superiority was important for several reasons. Only with friendly control of

the air could United Nations airpower attack targets which might motivate the Reds to accept reasonable truce terms. Friendly control of the air also paralyzed the mobility and thwarted offensive plans of the superior numbers of Red ground forces north of the battlelines. United Nations control of the air made the Communists appreciate the essential hopelessness of their situation in Korea. Long before now Chinese foot soldiers had recognized the irony of their situation. "We have superior air power," said some, "while we hide in air-raid shelters." "Our President Mao loves airplanes, not soldiers," said others.[5] Without air support the men of the Chinese Communist field armies knew they were beaten.

Obviously because of their recognition that airpower was the key to victory in North Korea and because of their fear that the United Nations Command might extend air attacks to other Far East target areas, the Communist powers had been hurriedly building major air forces around the periphery of Korea. In June 1952 the Chinese Communist Air Force evidently reached its authorized strength of 22 air divisions and 1,830 aircraft, including 1,000 jet fighters. Some 1,115 of these planes were massed at airfields within Manchuria.[6] During the first half of 1952 Soviet air units in the Far East also reached a probably authorized strength of approximately 5,360 aircraft.[7] After June 1952 the Communist air order of battle in the Far East remained stable at approximately 7,000 aircraft, some 5,000 of them belonging to Russia, 2,000 to Communist China, and about 270 to North Korea. While the numbers remained stable, the Reds nevertheless conducted a vigorous modernization program, replacing conventional planes with modern jet types. In November 1952, for example, FEAF learned that the Red Chinese had obtained 100 latest-model IL-28 light jet bombers and had them stationed in Manchuria.[8] The Communist air order of battle in the Far East not only dwarfed the United Nations air forces, but the Reds also possessed more modern planes than did the United Nations air forces.

Any time after June 1952 the Communists possessed a vastly overwhelming theoretical air superiority over the United Nations Command, but, for the time being at least, the Communist air commanders gave signs that they intended to use their aerial might for a vigorous defense of North Korea and Manchuria and not for offensive air strikes. Sabre pilots who patrolled the Yalu reported that the Reds were building additional airfields to those at Antung, Ta-tung-kou, and Ta-ku-shan. The new airfields were at Kuan-tien, Feng-cheng, Tapao, and Kachiapa. Antung continued to be the central command post and the logistical center of the complex, but MIG-15 interceptors were based at five of the airfields, each of which could support continuing operations of up to 300 aircraft. By American standards these Chinese airfields were poor installations, lacking facilities for maintenance and service of aircraft, but the Reds showed that they could accept lower standards of flying safety and personal comfort and still operate at a fairly high rate.[9]

Feeding information which permitted the Chinese Communist-North Korean joint operations center at Antung to scramble MIG-15 interceptors was an extensive Communist radar network which included as many as 25 early-warning and 11 ground-control intercept stations. Hostile early-warning coverage ultimately extended well south of the 38th parallel, and the




hostile ground-control intercept coverage was most effective along the west coast of Korea and particularly within a 90-mile radius of Antung. At first Communist radars were a miscellany of old obsolete models, some of which were evidently of American manufacture, but late in 1952 at Antung the Reds established a new model ground-control intercept radar, evidently of the latest Soviet type, which was as good as any set possessed by the United Nations Command.[10] Employing MIG-15 fighters based around Antung by day and a miscellany of jet and piston day-fighters by night, the Communist air

forces began to integrate ground-control interception techniques into their air defenses after June 1952. Either by day or by night the ground-control intercept radar at Antung could position Red fighters within two to five miles of United Nations planes out to a distance of 70 miles. This was about as much assistance as any ground-control intercept radar could give to fighter pilots because at closer distances the "blips" of friendly and enemy planes merged on the ground radar scope.[11]

To provide local defense of their installations in North Korea the Communists increased their flak order of battle to reach peak totals of approximately 786 antiaircraft artillery guns and 1,672 automatic weapons in the winter of 1952-53. The principal heavy gun was the Soviet 85-mm. M-1939 piece, whose effective ceiling was about 25,000 feet. The principal automatic weapon was the Soviet 37-mm. M-1939, which could fire approximately 160 rounds a minute up to an effective ceiling of about 4,500 feet. The Reds moved their flak in context with United Nations air objectives, but most guns, gun-laying radars, and a large share of the automatic weapons were customarily concentrated around Pyongyang, Sinanju, Antung-Sinuiju, the Sui-ho dam, and Manpojin. Lacking enough gun-laying radars and forced to use day-fighters in a night-fighter role, the Reds made extensive use of searchlights, eventually displaying about 500 of them. From 20 to 30 searchlights were customarily deployed around Antung-Sinuiju, the Sui-ho dam, Pyongyang, and the Sinanju bridges, but anywhere north of the Chongchon River Red searchlight belts could usually pick up and illuminate night-flying aircraft. On clear nights the searchlight beams ranged up to 30,000 feet, and enough of them had radars or sound-control mechanisms to locate and track an aircraft until other visually directed lights could switch on and cone the plane. The Reds usually kept their searchlights mobile and moving from place to place.[12]

After June 1952 the Communist air-defense system featured fighter-interceptors, ground-control intercept radar, antiaircraft artillery, and searchlights, but the major threat to United Nations air superiority was still the MIG-15 aircraft. These Red interceptors were not only a threat to the success of the air pressure operations, but as planes they represented a not-inconsiderable cost to the economy of Red China. To make the war expensive to the Reds, General Weyland wanted to destroy as many of the Red interceptors as possible in air-to-air combat. Later on, when the Sabres were improved enough to do battle on more equal terms with the MIG's, General Barcus was going to turn the "Tigers" loose, but in the summer of 1952 Barcus told Sabre pilots that they were not to get overanxious. "This is not the time to do or die for dear old Rutgers," he warned. "I'll let you know when the time comes, and then I will expect the very best of everything you have."[13] Colonel Gabreski of the 51st Wing explained that the Sabres were continuing to go to MIG Alley only for the purpose of "maintaining air superiority so that the fighter-bombers can perform their mission."[14]

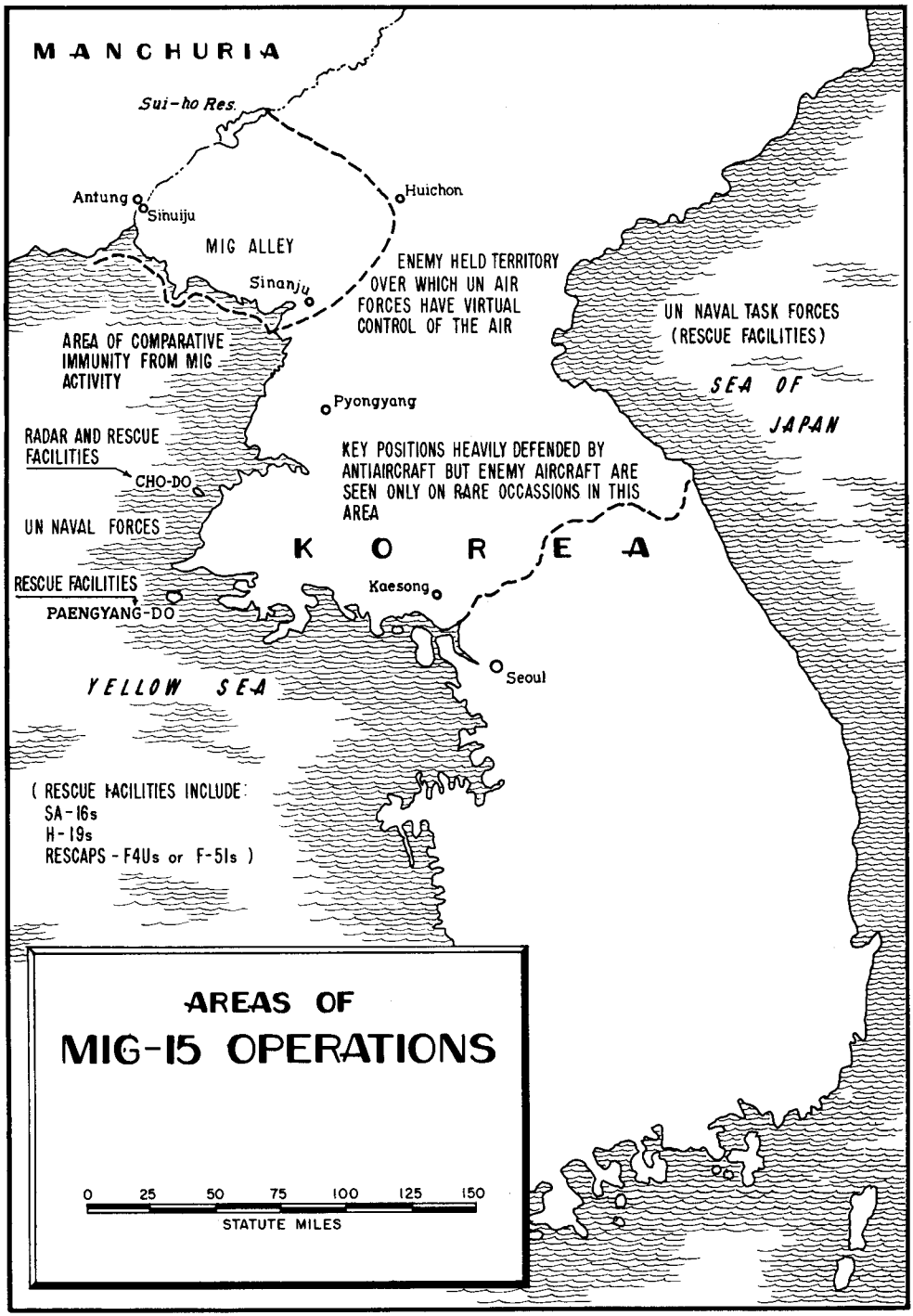
Under the circumstances wherein the Communist MIG pilots possessed sanctuary bases just beyond the Yalu, flew an aircraft with a higher service ceiling than any United Nations fighter, and possessed ground-control intercept radar direction, the Communist air forces had almost all of the natural advantages for aerial combat in the segment of airspace north of the

Chongchon River called MIG Alley. Nearly 90 percent of the MIG's sighted in North Korea after June 1952 would be in MIG Alley's 6,500 square miles, or (since the altitude of combat went up to 50,000 feet) 65,000 cubic miles.[15] Charged to protect friendly fighter-bombers against an enemy who was able to choose when he would commit his aircraft and whose MIG's were nearly always able to initiate combat from higher altitudes, the Sabre wings were forced continually to revise their tactics to thwart the tactics of the enemy. "Tactics that are successful in the morning may be obsolete in the afternoon," noted a 51st Wing study on the subject.[16]

Although the standard Sabre tactics had come to include the Yalu barrier patrol, flown at high cruising speeds, by fluid-four flights, Major Winton ("Bones") Marshall suggested that the Sabre pilots had another tactic which was worthwhile. "One of the best tactics we had was the good old American fight," he said. "Regardless of how many 86's we had, we would pile into any number of Communist MIG's which usually resulted in confusion in their ranks, and many times they turned around and went back across the river again even though they had us badly outnumbered."[17] The quality of the Communist pilots who flew over North Korea also affected the accomplishment of the Sabre mission. "We've placed the MIG pilots into two classes, the 'Honcho' or professional and the 'Students,' " explained Colonel John W. Mitchell, who took command of the 51st Wing on 13 June 1952. "We can always tell which one we are up against.... When we hit the 'Students' we have an easy time of it, but when we run into a 'Honcho' we know immediately that we've got to exert every bit of skill and technique at our command to set this bird down."[18]

In the months since December 1950 F-86A and F-86E model Sabres had battled MIG-15 aircraft under unfavorable terms in Korea. Nearly everyone had a different opinion as to which was the "best" airplane—the Sabre or the MIG—but the contest involved a fundamental equation that the MIG-15 had a light airframe and a powerful engine whereas the F-86 had a heavy airframe with a powerful engine. No one wanted to change the rugged reliability of the Sabre's airframe, but in the autumn of 1951 the 4th Fighter Group had called for the development of a new engine which would deliver as much as 6,500 to 7,000 pounds of thrust for incorporation on the Sabre. In December 1951 USAF stated the requirement for such a powerful jet engine, but for the near future it could provide nothing better than the J-47-GE-27 engine, which could deliver 5,910 pounds of thrust under full military power. This engine was already incorporated in the F-86F Sabre.[19] The first of these F-86F's to reach the Far East came to the 51st Wing's new 39th Squadron in June 1952. In September 1952 the 4th Wing's 335th Squadron also received these new-model Sabres.[20]

Knowing Korean requirements firsthand, General Partridge in early January 1952 put the full resources of the USAF Air Research and Development Command to work on a top-priority search for ways and means to increase the performance of Sabre aircraft. Several approaches were tried, but the most significant development was to reduce the Sabre's air resistance, or "drag." Because of the stalling characteristics of the swept-back wing, the Sabre had been designed with leading-edge wing slats


MANCHURIA
Sui-ho Res.
Antung
Sinuiju
Huichon
MIG ALLEY
Sinanju
ENEMY HELD TERRITORY OVER WHICH UN AIR FORCES HAVE VIRTUAL CONTROL OF THE AIR
UN NAVAL TASK FORCES (RESCUE FACILITIES)
AREA OF COMPARATIVE IMMUNITY FROM MIG ACTIVITY
SEA OF JAPAN
Pyongyang
RADAR AND RESCUE FACILITIES
CHO-DO
KEY POSITIONS HEAVILY DEFENDED BY ANTIAIRCRAFT BUT ENEMY AIRCRAFT ARE SEEN ONLY ON RARE OCCASSIONS IN THIS AREA
UN NAVAL FORCES
KOREA
RESCUE FACILITIES
PAENGYANG-DO
Kaesong
Seoul
YELLOW SEA
( RESCUE FACILITIES INCLUDE:
SA-16s
H-19s
RESCAPS - F4Us or F-51s )
AREAS OF
MIG-15 OPERATIONS
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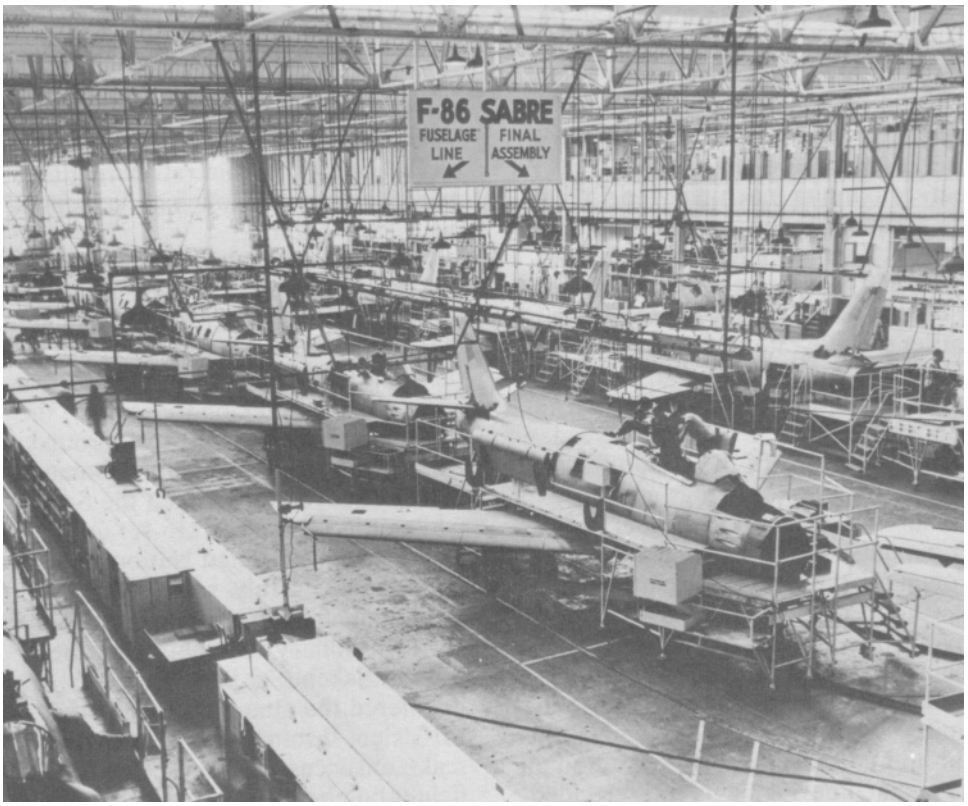



(top left) F-86E; (top right) F-86F; (bottom) the assembly line at North American Aviation, Inc.

which aerodynamically extended or retracted to provide low stalling speeds for landings and high speeds for flight. Even when retracted, however, the wing slats still provided some air resistance. At the suggestion of North American technicians, Wright Air Development Center test pilots obtained favorable results from a Sabre whose wing slats were sealed with fabric and dope. Further tests with "solid leading edges," which extended each wing chord by six inches at the base and three inches at the tip, indicated a noteworthy improvement in performance. In August 1952, 51st Wing pilots who flew three F-86F's with solid leading wing edges were highly enthusiastic, and the Fifth Air Force took steps so to modify all its Sabres. When retrofitted with the solid leading edges, the F-86F greatly reduced the advantages previously enjoyed by the MIG's. Maximum operating altitude jumped to 52,000 feet. Maximum mach went to 1.05 and the modified F-86F could make tighter turns at high altitudes. In level flight, the F-86F was some ten knots faster than the F-86E, and it exceeded the earlier plane's rate of climb by 200 to 300 feet a minute.[21]

Confident in the knowledge that their Sabre aircraft were being improved, aggressive pilots of the 4th and 51st Fighter-Interceptor Wings earnestly met the threats of superior numbers of Communist MIG's. At mid-1952 the Communist air forces began to follow a new concept of operations which involved exploitation of all phases of their developing air-defense system. Although the Reds did not oppose the United Nations air attacks against their Sui-ho hydroelectric plant, the Red air forces in June 1952 evidently decided to employ quality instead of quantity. Only 298 MIG sorties were sighted in the air over northwestern Korea in June, but the Red airmen who met the Sabres were aggressive and willing to fight. The Sabres still had the edge in June's combat. At a cost of three friendlies lost, the Sabres destroyed 20 MIG's. Only one Sabre pilot became an ace in June, but his was a most exceptional case. Second Lieutenant James F. Low had volunteered for flight training in July 1950 and became a 4th Wing jet ace on 15 June 1952, only six months after he had graduated from flying school. While the Communists were conservative in daylight hours, they manifested a growing interest in night activity. Over the not-too-important railway bridge at Kwaksan, on the night of 10 June, Red jets destroyed two Superforts and damaged a third so badly that it barely survived an emergency landing in South Korea. Counting the 12 aircraft which attacked on 10 June, 76 enemy sorties were seen by night-flying FEAF aircraft during the month, marking a new high in Communist night action.[22]

When United Nations airmen began massed attacks against more significant air pressure targets in July 1952, the Communist airmen made good use of their air-defense system. Profiting from radar control and cloudy weather, the MIG pilots made "end runs" around the Sabre screen at the Yalu. Some MIG's decoyed or engaged the Sabres, while others attempted to set up attacks against United Nations fighter-bombers. On 4 July, when Fifth Air Force fighters were bombing the North Korean Military Academy near the Yalu at Sakchu, at least 50 MIG's countered the attack. A part of the MIG's got through the Sabre screen to make unsuccessful passes against the fighter-bombers. In the engagement the Sabres claimed 13 MIG's destroyed but lost two of their own number. There

was no longer any doubt that some of the "honcho" pilots were Russians. On 4 July a Sabre pilot pulled in close to a stricken MIG and observed that the enemy pilot had a ruddy complexion and bushy eyebrows of light red. After 4 July Sabres continued to fly the Yalu patrols, but they held their screen closer to the area where fighter-bombers and reconnaissance planes were working. They also scheduled heavy escort for the unarmed reconnaissance planes which scouted hostile targets deep within MIG Alley. During July the Reds flew only 404 observed daytime sorties, but the MIG pilots were more adept than usual. The Sabres destroyed 19 MIG's and the Reds shot down four Sabres. During the hours of darkness United Nations radar plotted 63 Communist flights, but the B-26's and B-29's saw only 16 enemy planes, probably because the bombers generally avoided the heaviest defended areas.[23]

Evidently rankled by the United Nations destruction operations and having profited from three months of reduced activity, the Communist air forces surged back into full action on 1 August 1952, as if by special order. Once again the majority of Red pilots did not have enough combat experience and were reluctant to tangle, but other MIG's employed end-runs, decoys, and "yo-yo" tactics. In an effort to attack United Nations fighter-bombers, the MIG's successfully evaded the Sabres four times to come as far south as the Haeju peninsula. This evasion came to naught, however, for the MIG pilots lost all their potential fighter-bomber kills because of poor gunnery, inept maneuvers, and simple overeagerness. In the major air battle of the month, on 6 August, 35 Sabre pilots engaged 52 MIG's and shot down at least six MIG's. In another engagement, on 8 August, Captain Clifford D. Jolley scored the victory he needed to become a jet air ace. The increased tempo of the air-to-air war, marked by sightings of 1,155 MIG's, permitted the Sabres to destroy 33 enemy aircraft at a cost of only two friendly interceptors. At night the Reds were not as active as usual, and United Nations crews observed only ten enemy aircraft, four of which came close enough to make unsuccessful firing passes.[24]

The 18th jet ace, Capt. Clifford D. Jolley.

As FEAF badgered the Reds by

attacking targets close to the Yalu during September, the Reds responded with 1,857 observed sorties. Showing an ability to evade the Sabres on 1 September, eight MIG's got down to Haeju where they bounced and damaged a Mustang. In the first of several major air duels during the month 39 F-86's fought 17 separate engagements with 73 MIG's north of the Chongchon in a daylong air battle on 4 September. In this unequal fight against enemy pilots who flitted back and forth across the Yalu, the Sabre airmen destroyed 13 of the enemy planes at a loss of four of their own number. During the day Major Frederic C. ("Boots") Blesse of the 4th Wing destroyed his fourth MIG and fifth enemy aircraft, making himself the 19th jet ace of the Korean war. By the end of the month Major Blesse would have eight MIG's and an LA-9 to his credit. In a thirty-minute air battle on 9 September, stirred up by fighter-bomber attacks against the North Korean Military Academy at Sakchu, the Sabres and Thunderjets encountered some 175 MIG's. The enemy attack appreciated the situation, for some flights engaged the Sabres while others jumped the Thunderjets. In the latter half of September the MIG's continued to be active, but they attempted only two brief passes against the fighter-bombers, both on 21 September during an attack against a munitions plant south of Sinuiju. In this day's fighting Captain Robinson Risner destroyed his fifth MIG to become the theater's 20th jet air ace. In this month of intensive air actions the Fifth Air Force lost six Sabres and three Thunderjets, but the Sabres racked up a new monthly high of 63 MIG's destroyed in combat.[25]

With the beginning of October 1952 the Communist air forces again revised their tactics and employed a pattern of operations similar to the one they had used in the same season of the previous year. Some 1,360 Communist aerial sorties were observed during the month, but most of the Red planes flew at altitudes of 43,000 feet or higher and in large formations. Most of the Red pilots were unaggressive, but the "honcho" leaders could be lethal when they saw a favorable opportunity. On three days Red airmen penetrated to Wonsan to meet and shoot down three conventional Navy aircraft. When they got the chance, moreover, the Red pilots singled out small Sabre formations and worked coordinated attacks against them with superior numbers of aircraft. As the Sabre wings attempted to combat the changing Communist tactics, certain developments lent a hand to the swept-wing American jets. After a long delay the 502d Tactical Control Group opened a limited-scale air-direction center off North Korea's western coast on the island of Cho-do in October, and this facility could give the Sabres ground-control intercept vectors of the same kind that the Reds had enjoyed for several months. In order to combat the high-flying MIG's and simultaneously to catch other MIG's who attempted to penetrate at lower altitudes, the Sabre wings began to fly high patrols with their F-86F's at about 40,000 feet and lower patrols with their F-86E's at about 30,000 feet. When the MIG's got down to Wonsan, the Fifth Air Force established a subsidiary daylight barrier patrol along the Chongchon River which was flown by four Sabres or Meteor-8 aircraft. Noting that the "fluid-four" flights were vulnerable to attack by superior numbers of MIG planes, the 51st Wing began to fly missions with flights of six aircraft and the 4th Wing employed sections of eight aircraft. The changed Sabre tactics evidently mastered the

Reds, for the Fifth Air Force lost a single Thunderjet and four Sabres while the Sabres were destroying 27 MIG's. At night, during October, United Nations bombers reported 128 observations and encounters with enemy planes. These sightings apparently increased as the bombers hit targets close to the Yalu. Thus, on 17 October, when eight B-29's attacked a military headquarters at Tosong, 19 Red aircraft attempted unsuccessfully to find and attack the bombers.[26]

At the end of October 1952 two years of jet air warfare were drawing to a close in Korea. In these years the Communists had not yet produced an aircraft-pilot combination of a high enough standard to combat the Sabres. Even though the primary duty of the Sabres had been to defend friendly fighter-bombers, the Sabre pilots had been destroying MIG's with a margin of superiority of eight to one. The Sabre victory must have been persuasive to the Communist aggressors everywhere. "The ability of our pilots to take the MIG," thought Colonel Mitchell, "...has undoubtedly slowed the Russian in his headlong rush into another war. It has made him consider the fact that he is not quite ready yet, and it must rankle him to know that we are getting better and stronger all the time."[27] But the story of the air war over North Korea was not as one-sided as it appeared, for Communist air defenses had given the United Nations Command much concern in the latter half of 1952. In no small part United Nations destruction operations were succeeding because good planning was mitigating the effectiveness of the Red air defenses.

### *3. Massive Air Assaults Serve Psychological Purposes*

When the air-pressure attacks were about to get under way in July 1952, FEAF target men had in mind several targets which were worthy of massed strikes. Two months before FEAF target experts had made detailed studies of command posts, communications centers, troop billets, and supply warehouses which had sprung up in the city of Pyongyang. The North Korean capital had not been subjected to air attack for nearly a year and it was crowded with military targets. On 13 May General Weyland had asked General Clark for permission to send a massed attack against military targets in Pyongyang. Clark was agreeable, but he asked Weyland to hold up the attacks until the armistice delegation could get the Reds to mark all prisoner-of-war camps, as both sides had agreed to do. The Joint Chiefs of Staff authorized the attacks on 3 July, and on 5 July General Clark directed Weyland to attack specific military targets at Pyongyang and to make every effort "to avoid needless civilian casualties." General Clark also authorized Weyland to seek naval participation in the attacks and to employ all the United Nations air units he thought necessary.[28]

Over in Korea Fifth Air Force and Eighth Army intelligence officers had been working on another target system. From long study these intelligence

planners knew that Red supplies entered Korea at Sinuiju, Okkang-dong, Manpojin, and Linchiang and traveled southward to major supply-dispersal areas in the vicinity of Singosan and Singye. Supplies imported through the first three gateway cities came southward through Pyongyang and Kunu-ri. Supplies entering at the last gateway city traveled by rail to Hamhung and thence by rail and truck to the major dispersal areas. The supply dumps at Singosan and Singye were well dispersed and difficult for air attack to destroy, but the Reds were using towns and villages along their main supply routes to store supplies, to service vehicles, and to shelter troops. At about the same time that the intelligence planners noted the importance of the towns and villages along North Korea's main supply routes, General Barcus was concerned with the lack of imagination manifest in the employment of his light-bomber force. They follow the same schedule night after night, he said. Almost immediately Fifth Air Force operations officers decided to make use of the light bombers for attacks against the communications centers along the enemy's main supply routes. Guided by a pathfinder crew which would identify the target for attack, streams of light bombers would arrive at five-minute intervals to drop incendiary and delay-fuzed bombs on the towns and villages sheltering Red supplies. After dropping their internal bombs at the primary targets, the B-26 crews would proceed to a designated main supply route and perform route reconnaissance with their external ordnance and guns. The program would have twofold results. It would destroy supplies in transit and create effective roadblocks for short periods of time. At first the Fifth Air Force designated 35 towns and villages for light-bomber attack, but it soon increased the list to 78 towns and villages.[29]

The massive assault against Pyongyang and the attacks against town and village communications centers were aimed at military objectives, but General Smart wanted to exploit psychological as well as destructive attributes of airpower. "Whenever possible," he directed, "attacks will be scheduled against targets of military significance so situated that their destruction will have a deleterious effect upon the morale of the civilian population actively engaged in the logistic support of the enemy forces."[30] Psychological warfare planners at FEAF accordingly recommended a specific prestrike warning program, and the necessary warning leaflets were prepared by the Far East Command. In support of the assault against Pyongyang, plan "Blast" would be executed. Several days prior to the attack planes would drop leaflets over Pyongyang warning civilians to stay away from military installations of any kind. Several days after the attack planes would drop companion leaflets stressing the fact that civilians had been warned to avoid military targets. In support of the communications center attacks, plan "Strike" was applicable. Planes would drop leaflets showing the main supply routes and warning that all military targets along these lines would be attacked. After a communications center had been bombed, other leaflets would be dropped there to inform all concerned that they had been warned of the impending attacks.[31]

While the Fifth Air Force was awaiting approval for the Pyongyang strikes, it attacked other targets of importance. On 4 July 70 fighter-bombers attacked North Korea's Military Academy, near the Yalu and some 50 miles northeast of Antung.

The fighter-bombers successfully evaded MIG interceptors who got through the Sabre screen, but they turned in relatively poor bombing results.[32] On 8 July 84 fighter-bombers attacked bridges on the rail line between Kanggye and Kunu-ri, while 41 other fighter-bombers hit the generators, transformer yards, and penstocks at Choshin No. 1 and No. 2, which were still possibly useful to the enemy.[33]

Everyone in the United Nations air forces was waiting for 11 July 1952—the day which General Weyland had designated as the date for "Operation Pressure Pump." Practically every operational air unit in the Far East was to have a part in the savage assault against 30 targets designated in Pyongyang. The massive strikes carried an element of risk, for they would be in progress nearly all day, giving the MIG's plenty of time to react. Pyongyang was also defended by 48 guns and more than 100 automatic weapons, making it one of the worst "flak traps" in Korea. But on 11 July the strikes went off well. As Sabres and Meteors stood patrols north of the Chongchon without incident, aircraft from the Seventh Fleet, *H.M.S. Ocean*, the 1st Marine Air Wing, the Republic of Korea Air Force, and the Fifth Air Force made strikes at 1000, 1400 and 1800 hours. After the first strike weather on the east coast prevented the Seventh Fleet's planes from returning to their carriers and so kept them out of action at South Korean airfields during the remainder of the day. Operating on the west coast, Seafuries and Fireflies from *H.M.S. Ocean* flew two missions, while most of the Fifth Air Force's jet fighter-bombers made all three strikes. Timed to hit just before the first strikes were on target, Marine and Navy flak destroyers worked effectively, but there was still enough flak in the air to shoot down two Navy planes and a Thunderjet. In addition to these losses, eight Fifth Air Force planes sustained major damages and 19 others suffered minor damages. That night 54 shoran-directed B-29's attacked eight targets which had been saved for them. This was the biggest air attack so far in the Korean war, for 1,254 aircraft sorties had been committed in "Operation Pressure Pump."[34]

Examination of bombing assessment photographs showed that the aerial blow was quite successful against the command posts, supply aggregations, factories, troop billets, railway facilities, and gun positions marked for destruction in Pyongyang. At least three of the 30 targets were completely destroyed, and all but two of them were heavily damaged. According to agent reports, the North Korean Ministry of Industry's underground offices were destroyed and a direct hit on another air-raid shelter was said to have killed 400 to 500 Communist officials. Off the air for two days, Radio Pyongyang finally announced that the "brutal" strikes had destroyed 1,500 buildings and had inflicted 7,000 casualties.[35]

Approaching their problem with the view toward making the war expensive to the Communists, United Nations target planners turned up a good number of significant targets. The North Korean hydroelectric plants required continual serveillance and repeated strikes to prevent the Reds from repairing them. Some industrial targets had been missed in the strategic air campaign in 1950, and others had recuperated from earlier attacks. The destruction strategy, moreover, turned up an entirely new target category—the North Korean metals and mining business. "Any mines...which are in

operation," reasoned FEAF's director of targets, "are being operated for just one outfit—the USSR and the Chinese Communist Forces, to help pay for the war." Air attacks could not hurt mine shafts, but they could put the mines out of operation by destroying hoist houses, compressor shacks, or transformer yards.[36] On 15 July the Fifth Air Force sent 171 sorties to gut the Sungho-ri cement plant and an adjacent locomotive repair shop. The cement plant had been bombed before, but it had recovered and was again working.[37] Seventh Fleet carrier pilots attacked both Choshin power plants on 19 and 20 July, and the No. 2 plant was bombed by 44 B-29's on the nights of 19/20 and 21/22 July.[38] On 27 July carrier-based aircraft attacked and largely destroyed the Sindok lead and zinc mill, a facility which was reportedly shipping 3,000 tons of processed ore to Russia each month.[39] On the night of 30/31 July 63 shoran-bombing B-29's attacked the Oriental Light Metals Company, near Sinuiju and only four miles from the Yalu. This was the largest medium-bomber strike against a single target during the Korean war, and post-strike reconnaissance showed that this militarily important factory—which had been overlooked in the 1950 strategic strikes—was 90 percent destroyed.[40]

Taking advantage of good flying weather early in August, the Fifth Air Force directed heavy attacks at Communist troop concentrations and industrial remnants. Agent reports and aerial photographs indicated that the General Headquarters of the North Korean People's Army was located in a built-up area about four miles outside Pyongyang City. Dividing the objective area into targets for nine wings, the Fifth Air Force sent 273 sorties there in two strikes on 4 August. Late on the afternoon of 5 August 111 fighter-bomber aircraft attacked a tungsten mine at Kiju. A troop concentration and a chemical plant near In-hung-ni were attacked by 145 fighter aircraft on 11 August.[41] On the night of 18 August Bomber Command employed 14 B-29's to effect 60 percent destruction of the Nakwon Munitions Plant. This factory, a few miles southeast of Sinuiju, was reported to be producing thousands of antitank and hand grenades each day.[42]

According to plan, the Fifth Air Force light-bomber wings commenced their night attacks against Communist communications centers on 20 July. Employing M-20 incendiary clusters and M-76 fire bombs, the 3d and 17th Wing crews arrived at heights of about 4,000 feet at five-minute intervals to bomb targets marked for them by the incendiary bombs carried by a pathfinder lead crew. Once the fire got going, each bomber added to the conflagration. The usual target was about one-fourth square mile in size, and B-26 crews put 50 to 60 percent of their bombs into these designated areas without much difficulty.[43] From their beginning the light-bomber fire raids were marked with success. Bomb damage assessment of one of the first targets hit—the Namchonjom supply center—showed that it was 95 percent destroyed. Intelligence agents within the enemy's lines forwarded enthusiastic reports. A light-bomber strike against Changyon caught a battalion asleep in the village and killed nearly 300 North Korean troops. At Pomhwa-dong a company of troops assembled for supper was said to have been wiped out.[44]

As the communications center attacks got under way, General Barcus implemented a vigorous warning program, both to save the lives of innocent civilians and to cause maxi-

mum disruption of civil order. Fifth Air Force operations officers were a little dubious about disclosing targets that the light bombers would attack, but General Barcus favored an even more vigorous warning program than the leaflets would afford. Preparatory to attacks against Sinchon and Yonan, Radio Seoul warned the people to leave these towns right up to the time of the B-26 attack. On 5 August, moreover, General Barcus announced to press and radio the names of the 78 North Korean centers which were scheduled to be destroyed.[45] While these warnings were both humanitarian and utilitarian, the U.S. Department of State on 6 August announced that it deplored the attack warnings as "an unfortunate move" which would be intensively exploited by Communist propaganda. In a message to the American embassy, which was passed to General Clark, the State Department noted that oriental audiences were particularly vulnerable to "psywar" since they tended to see the use of massive airpower as the symbol of "western technology domination" of Asia. No matter how it was handled, the State Department message said, the subject of mass bombing of military targets in or near heavily populated areas could not be useful to the United Nations Command. The State Department recommended that the main theme of "hard stories" should be that targets for United Nations air attack were selected on a strictly military basis and that air action was not aimed at the civilian population.[46]

One of the major objectives of the United Nations air pressure strategy was to hurt the Communists as badly as possible while denying them an ability to retaliate. Because of this objective, General Barcus was forced to make a few operational restrictions and to redirect the work and organization of his light-bomber wings. For several months prior to July 1952 the Fifth Air Force had been losing more aircraft to enemy action than were replaced. Even more serious was a high damage rate which placed a severe burden on the Fifth Air Force's combat capabilities. Operations analysis studies showed that the fighter-bombers were sustaining most of their losses and damages from ground fire hits received at altitudes below 2,500 feet.[47] During the daylong strikes against Pyongyang, Fifth Air Force fighter-bombers sustained damages at a rate of 27 per 1,000 sorties.[48] Shortly after this General Barcus accordingly established a minimum altitude of 3,000 feet for fighter-bomber attack. At about this same time Admiral Clark took similar action and ordered the carrier pilots of Task Force 77 to recover from dive-bombing attacks at altitudes not lower than 3,000 feet.[49] General Barcus recognized that the price in bombing accuracy to be paid for the 3,000-foot-minimum-attack altitude would be appreciable, but he expected additional training and better mission planning to increase the bombing accuracy of the fighter-bomber crews.[50] Despite an extensive continuation dive-bombing training program effected by squadrons in rotation between August and October 1952, the Fifth Air Force fighter-bomber wings did not regain their bombing accuracy. In order to pull out at 3,000 feet, the fighter-bombers had to release their bombs from about 4,500 feet, and the overall result scored in the continuation training program was an average circular error probable of 225 feet. Operations analysts doubted that any group of USAF pilots could have done better than this when they released bombs from such altitudes. Strangely enough, the minimum altitude

restrictions, which accepted lowered bombing accuracy, were distasteful to a good many pilots. "If it is worth being here at all," one of them commented, "it is for the damage we can inflict on the enemy."[51]

Early in August General Barcus reorganized and reoriented the Fifth Air Force's light-bomber wings in accordance with their operational capabilities and vulnerabilities. Because they were sighting fewer Red vehicles moving at night and had fewer bombs to drop after they had unloaded their internal ordnance at the communications centers, the 3d and 17th Wings claimed only 0.97 enemy vehicles destroyed per sortie flown during July, and from combat and operational causes they lost 2.6 B-26's per hundred sorties.[52] After the 3d Bombardment Wing lost three aircraft in rapid succession, General Barcus took the wing off operations on 10 August for a period of evaluation and training. The evaluation soon convinced him that the light-bomber crews were not well enough prepared to fly at night at low altitudes, and he accordingly specified that ordinary crews would not fly combat missions at altitudes lower than 4,000 feet. At about this same time, on 4 August, Fifth Air Force operations analysts published the results of a test run against old trucks on a friendly bombing range, which demonstrated that "lone-wolf" B-26's, using any method of bombing against dispersed vehicles, had an expectation of destroying only 1.8 vehicles with each hundred bombs dropped.[53] General Barcus therefore directed that the majority of light-bomber crews would be employed in bomber-stream attacks against hostile communications centers, and, since such attacks against targets in areas not defended by MIG's could be more effectively made by day than by night, General Barcus directed the light-bomber wings to regain a capability for daylight formation attacks. A survey of the crews possessed by the two wings showed that there were enough proficient night-fliers to man two night-intruder squadrons, and these crews were accordingly segregated into the 13th Squadron of the 3d Wing and the 37th Squadron of the 17th Wing.[54] The more experienced crews in these two squadrons were exempt from the 4,000-foot-minimum-altitude restriction, and both squadrons were charged to devise more effective techniques for night-intruder operations.

Throughout the summer of 1952 Brig. Gen. Wiley D. Ganey, who had assumed command of the FEAF Bomber Command on 15 March, had been racking his brain to devise countermeasures to Communist flak, fighters, and searchlights. For more than a year Bomber Command had been making some use of electronic countermeasures, but such techniques were given added emphasis after the losses at Kwaksan on the night of 10 June. After Kwaksan, all medium-bomber units began to camouflage the undersides of their bombers with black gloss lacquer. In an expedited action General Ganey secured gun-flash suppressors from the Far East Air Logistics Force and ordered his gunners to return the enemy's fire. But the surest means whereby the old medium bombers could escape the enemy's air defenses was to attack the well-defended targets on a night when the area was shrouded by bad weather. The efficacy of timing B-29 night attacks to coincide with adverse weather was again demonstrated on the night of 30/31 July when the bombers attacked the Oriental Light Metals Company. The bomber stream received a number of firing passes from hostile fighters, but a thin

undercast confused the searchlights and allowed the bombers to escape damage. But it went against General Ganey's grain to have to depend upon bad weather for his attacks. "Given sixty-hour notification," Ganey told Weyland early in August, "60 B-29 aircraft can be placed within 1,000 feet of any target within shoran range. To limit such a force to bad weather conditions indicates that targets remaining in North Korea either are not suitable for medium bombing or that the Air Force is at the mercy of a defensive tactic discarded as outmoded...five years ago."[55]

Although many combat officers in the FEAF Bomber Command and the Fifth Air Force did not like the conservatism which was necessary to sustain the relentless impact of the air pressure strategy, the Communists revealed that the destructive strikes were hurting them without allowing them to retaliate. At Panmunjom, on 11 August, General Nam Il indicated that the Reds had heard of air pressure. The United Nations Command, the North Korean general said, had "brazenly attempted to apply the so-called 'military pressure' and carried out wanton and indiscriminate bombings of our peaceful towns and inhabitants." He warned United Nations delegates that "any so-called 'military pressure' on your side will only invite you to miserable defeat."[56] Broadcasts from Peking on 11 and 12 August charged that the "new program of blanket bombing of civilians is not aimed at any military targets." *Pravda* stated on 12 August that the United States was trying to "force on the Korean peoples unjust armistice conditions" and promised that the North Koreans were determined to "break up the new monstrous provocations of the American interventionists" and "to conduct their struggle to a full victory." Apparently the Reds were seriously concerned about civil order in North Korea. FEAF learned that top-level Communists met at Pyongyang on 18 August and resolved to reorganize their counterintelligence nets in order to maintain tighter control over the civilian population. A "usually reliable" source informed General Clark that the bombing program was having a material effect on civilian morale. Great numbers of workers, who had earlier flocked to the cities and towns, were deserting war jobs and returning to the safety of their farms and villages.[57]

Despite the mistrust of the U.S. Department of State, the psychological warfare warnings proved quite successful. Lt. Gen. William K. Harrison, senior United Nations truce talk delegate after 23 May 1952, cited the warnings as evidence that United Nations air attacks were not directed against civilians. General Weyland reported no evidence that the warning leaflets compromised air-attack plans. Instead, the audacity of the warnings of impending strikes hurt civilian morale, for it emphasized the ability of the United Nations to strike targets at will and the inability of the Red regime to ward off the blows. Reliable reports stated that whole populations of the villages and towns warned of attack fled to safety. To keep civilians at work, Red security agents diligently collected the warning leaflets and threatened punishment to anyone who read or retained them. This redounded to the credit of the United Nations Command, since the people now saw plainly that their Red masters were trying to keep them ignorant of impending disaster.[58]

### *4. Relating Air Pressure to Sino-Soviet Negotiations*

"While we consider it probable that the Communists wish to conclude an armistice," stated the Joint Chiefs of Staff on 8 August 1952, "we see little or no indication that various factors exerting pressure on the Communists are sufficient to make an armistice a matter of urgency." Reasoning thus, the Joint Chiefs instructed General Clark to put forth no new proposals at Panmunjom and to continue to make maximum practicable use of available air strength in attacks upon all military targets in North Korea.[59] Shortly after the Joint Chiefs gave these orders signs of stress began to show in the Sino-Soviet pact. In a surprise move on 17 August, Chinese Premier Chou En-lai and a delegation of military, political, and economic officials arrived in Moscow. Few pronouncements were forthcoming in regard to the purpose of the top-level talks, but the composition of the Chinese delegation indicated that the discussions would seek military and economic aid. American intelligence thought that Chou would probably discuss the Korean war, at least its effects upon China's economy.[60]

When the Chinese Communist delegation began its discussions with Russian officials, U.S. Ambassador George F. Kennan suggested from Moscow that the visit presented an excellent opportunity to obtain an armistice in Korea. Mr. Kennan thought that anything the United Nations Command could do "to frighten" the Chinese and to increase their demands on Russia would be good. He believed that "something in the nature of an increased military threat or feint might come to good effect." The action would have to be one which would cause the Chinese to increase their demands on their Soviet ally for military and economic aid. Ambassador Kennan recommended that the United Nations Command threat should be accompanied by some sort of conciliatory gesture to indicate to the Soviets that it would not be hard to move toward a cease fire. Russia would thus have an easy alternative to acceptance of the Chinese demands for more aid.[61] General Clark agreed with Ambassador Kennan's plan, but he pointed out that he could do little more than to continue to employ airpower to impose maximum punishment on the Reds.[62]

Called upon to exert more intense pressure on the Reds, General Smart suggested to the FEAF Formal Target Committee on 21 August that the location of the target attacked and the power of the attacking force might create the proper psychological effort needed to influence the Sino-Soviet negotiations in Moscow. In order to display the might of United Nations airpower, General Smart suggested that FEAF should attack targets in far northwestern Korea, such as military installations in Sinuiju City, the partly recuperated Sui-ho hydroelectric power plant, and an important chemical plant which had been located and targeted at Namsan-ni. From a study of photography flown since the 11 July attack, FEAF target experts had located 45 additional military targets in Pyongyang City, and both General Clark and General Weyland agreed that another massed attack against North Korea's capital might cause repercussions in Moscow. General Smart furnished the Fifth Air Force with annotated photography of targets in Pyongyang and advised that the objectives ought to be

(top) Pre-strike photo of the storage center which supplied Anak airfield; (bottom) the supply center after it was hit by more than 400 bombs, August 1952.

Communist munitions factory at Nakwon.

attacked in force and with high priority and that the Navy should be invited to participate. After hearing General Smart's ideas, Bomber Command representatives agreed to bomb the Sui-ho hydroelectric plant and the Namsan-ni chemical plant when suitably bad weather promised to negate Red searchlight defenses. The Bomber Command men also announced that the B-29's could attack many of the supply dumps which the Fifth Air Force had targeted. Fifth Air Force representatives agreed to attack "sensitive" targets along the Yalu, but, in recognition of the fact that industrial targets were getting scarce, they stated that the Fifth Air Force intended to begin to inflict punishment upon Communist military personnel. Believing that the North Koreans had little to do with the continuation of the hostilities, the Fifth Air Force wanted to attack Chinese military personnel, and any concentration of as many as 500 Chinese soldiers was to be eligible for attack. Before the meeting broke up General Smart informed the committeemen that General Clark wanted three days' advance notice of any attack against a "sensitive" target so that he could notify the Joint Chiefs of the impending operation.[63]

While FEAF leaders were planning to punish the Reds in northwestern Korea, the Naval Forces Far East leaders interested themselves in other targets along Korea's borders in northeastern Korea. Long immune to air attack in the border zones of

northeastern Korea, the North Koreans built up many industrial plants close to the borders of Manchuria and Siberia. At Aoji, only eight miles from Russian territory and four miles from the Manchurian border, the North Koreans were operating at least 12 war-production factories and a major synthetic oil-processing center, which was said to be one of the major sources of gasoline for the enemy forces in Korea. In view of the military significance of Aoji and of Admiral Clark's assurance that Navy airmen could destroy facilities there without violating the borders, General Clark asked the Joint Chiefs of Staff for permission to order attacks in the area. For the strikes, the Joint Chiefs waived its rule against air or naval operations within 12 miles of Soviet territory, but they insisted that General Clark must notify the British of the impending attack and wait two or three days for them to react.[64] In addition to the attacks at Aoji, the Naval Forces Far East knew of other North Korean targets close to the Manchurian borders in northeastern Korea which were worthy of show-of-force attacks.

The massed raids against military targets in Pyongyang had the highest priority, and on 29 August an operation called the "All United Nations Air Effort" against Pyongyang marked the initiation of attacks which were designed to cause a noise in Moscow. The list of targets marked for attack read like a guide to public offices in Pyongyang and included such points of interest as the Ministry of Rail Transportation, the Munitions Bureau, Radio Pyongyang, plus many factories, warehouses, and troop billets. In order to permit turn-arounds of all attack planes, the Fifth Air Force began the assault at 0930 hours and allowed four-hour intervals between strikes so that the additional attacks took place at 1330 hours and 1730 hours. As a protective measure, Sabres and Meteors flew screens along the Chongchon before and during the thirty minutes that each attack lasted. All known flak positions were plotted, and at the H-hour of each strike pilots of the 8th and 474th Wings attacked hostile flak batteries. In addition, one flight of each attack group was briefed to hit gun positions in the group's target area. During the day most Fifth Air Force planes flew all three strikes, and the aircraft carriers *Boxer* and *Essex* sent 216 sorties to join the attacks. In all, United Nations aircraft employed 1,403 sorties in the Pyongyang raid. Bomb-damage assessment photography revealed moderate to severe damage to 31 targets, a good result since many of the targets had been somewhat large in area.[65] On the night of 30 August, the 19th Bombardment Group sent 11 medium bombers against several of the targets in Pyongyang which still required attack.[66] A few installations still remained unscathed in Pyongyang, but FEAF ruled that the value of these targets was not worth the risk involved. Within a few days the Reds increased their flak defenses from 64 to 110 heavy and automatic weapons, which, together with the dispersion of the remaining objectives, made Pyongyang a risky objective for fighter-bombers. The medium bombers could have picked off the remaining targets in night attacks, but most of the objectives were too near to camps where the Reds were holding United Nations prisoners to take a chance on bombing errors.[67]

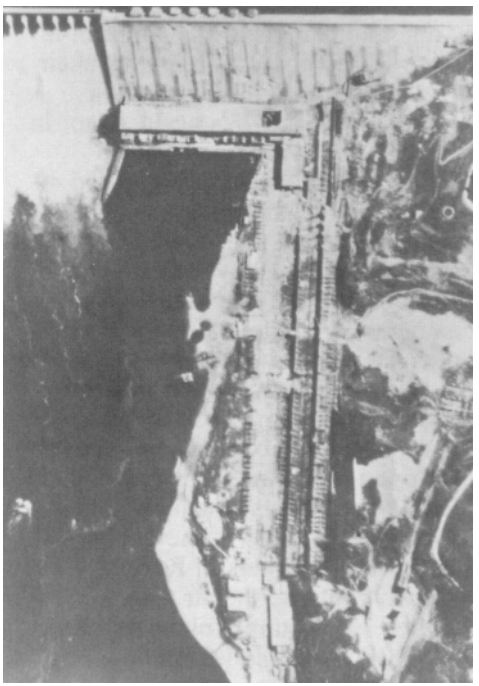
While Pyongyang still smoldered, United Nations airmen turned their attention to targets along the northern borders of Korea. Steaming northward on 1 September, the Seventh Fleet carriers, *Essex, Princeton,* and *Boxer*

launched morning and afternoon deckload strikes to smash the synthetic oil refinery at Aoji, and the 259 sorties flown made this the largest all-Navy air attack of the Korean war. In this out-of-the-way corner of Korea, the Reds must have felt safe from air action, and the carrier airmen devastated the target with almost leisurely and completely unopposed attacks.[68] Navy fliers again tweaked the Russian bear's tail on 13 September when pilots from the *Bon Homme Richard* and *Princeton* pounded warehouses and troop billets at the North Korean border town of Hoeryong. The fleet's radars marked presumably Soviet bogies orbiting 50 miles east of the target over Siberia, but there was no local opposition other than meager small-arms fire.[69]

A foreknowledge that Communist defenses were slight permitted the Seventh Fleet to attack targets in northeastern Korea without much trepidation, but the Fifth Air Force and FEAF Bomber Command faced a far more difficult problem in northwestern Korea. Nearly half of the Red antiaircraft artillery guns in Korea were sited along the Yalu between Antung and Manpojin, and the zone was well defended by searchlights. Since they could not transgress Manchurian airspace, the Sabres would be hard put to defend daytime fighter-bomber attacks against hostile MIG's. In order to hit targets in Sinuiju City, General Barcus figured that he would have to use a full complement of Sabres as top cover for about 150 jet fighter-bombers, of which about half would be charged with flak suppression. Even with this force General Barcus feared that he would lose from six to eight fighter-bombers. In planning the shoran attack against Sui-ho General Ganey intended to take advantage of all possible countermeasures, including adverse target weather. Failing to find the desired clouds over Sui-ho on the night of 3/4 September, the airborne B-29 commander accordingly diverted the attack planned against this objective to the Choshin hydroelectric plant.[70]

Having observed that the MIG's were most active early in the month, General Barcus obtained permission to defer the Sinuiju attack until later in September and instead to attack the North Korean Military Academy, which had not been sufficiently destroyed in the earlier mission flown against it. In theory, the North Korean Military Academy was a safer target than those in Sinuiju City, but the Sabres and fighter-bombers must have doubted this on 9 September. On this day some 175 MIG's swarmed out to make a well-planned defense. Most of the MIG's battered against the Sabre screen, but some 77 of them made 12 attacks against the 82 Thunderjets as they prepared to bomb their target. The Sabres destroyed six MIG's and damaged six more of them, but the MIG's shot down three Thunderjets and forced several flights of fighter-bombers to jettison their bombs. A critique held soon after this attack disclosed several things which had gone wrong. Communications had been partly at fault, for only a few of the Sabres had known that the Thunderjets were being attacked. The Thunderjets had also paralleled the Yalu while inbound to their target. After this General Barcus ordered that the fighter-bombers would enter and withdraw perpendicularly to the Yalu whenever possible.[71]

Weather service men predicted cloudy skies over the North Korean border on the night of 12/13 September, and General Ganey dispatched his bombers to destroy the long concrete



The North Koreans are already making progress to put the Suiho power plant back into operation.

building at Sui-ho in which photo interpreters said that two generators must be again working. When the B-29 commander arrived at the target area he found clear weather instead of the cloud cover which had been predicted, but General Ganey had arranged for so many other countermeasures that the airborne commander let his bombers proceed as scheduled. Before and during the B-29 bomber stream strikes six Fifth Air Force B-26's sought to suppress searchlights with low-level fragmentation bomb attacks. The light bombers managed to knock out eight of an estimated 30 lights, but a part of the searchlights were across the Yalu and could not be hit. Fortunately, Bomber Command had also arranged that six B-29's would orbit east of Sui-ho and jam hostile radars with electronic countermeasures. Although their radars were evidently jammed, the Reds still threw up box-barrage flak which one veteran B-29 crewman said was "as good as I ever saw the Germans put up." A few bombers were successfully illuminated by searchlights, and sporadic fighter attacks shot down one 307th Wing bomber. Several other bombers were damaged by flak, but 29 Superfortresses successfully dropped their 2,000-pound semi-armor-piercing bombs to score five hits, four probables, and three near misses on the powerhouse. Many more hits in the adjacent transformer and switching yards combined with the other damages and again neutralized Sui-ho. After the mission was over, the Fifth Air Force described its searchlight-suppression effort as "unsuccessful," but FEAF concluded that the combination of electronic countermeasures and searchlight suppression had saved the old Superforts from much higher losses.[72]

In September the MIG's were so stirred up that they did not relax their efforts after strong activity in the first part of the month, but the Fifth Air Force nevertheless capitalized upon surprise and speed to make attacks deep in northwestern Korea. With strong Sabre top cover, Colonel Victor E. Warford's 58th Fighter-Bomber Wing sent 24 of its most experienced Thunderjet pilots to attack a major port of entry and supply depot in Sinuiju City on 15 September. The Thunderjets sustained no damages, and Sabres who watched overhead reported huge fires and billowing smoke rising from the target areas.[73] On 21 September, while the Sabres battled MIG's over Sinuiju and also covered the fighter-bombers, Colonel William W. Ingenhutt's 474th Fighter-Bomber Wing attacked a munitions factory at Pukchong with 41

F-84's. A few MIG's got through to make two brief and unsuccessful passes against the Thunderjets.[74]

During September 1952 United Nations air operations emphasized attacks against North Korea's borders, but the vast majority of air strikes were directed against Communist industrial remnants and troop concentrations throughout North Korea. Fifth Air Force and Navy planes hit gold, tungsten, monazite, zinc, and lead mines. Rear-area concentrations of Communist troops proved to be good targets, for the Red soldiers in rearward locations had not been much bothered by air attacks and commonly lived in villages or barracks. During the month the Fifth Air Force made 47 separate attacks against rear-area troop concentrations. Bomber Command also participated in this type of attack, and in one notable mission flown on 19 September it sent 35 heavily escorted B-29's to make a daylight formation attack against three troop and supply concentrations at Yonpo, Tongchon, and Chigyong, all near Hamhung, on Korea's east coast, where MIG's were seldom seen. Almost every night in September Fifth Air Force light bombers continued their fire raids against North Korean communications centers.[75]

As a part of the air campaign to make United Nations airpower felt in Moscow, the FEAF Bomber Command had agreed to bomb the Namsan-ni Chemical Plant, which was located on the Yalu near Sui-ho. After waiting to get bad weather, Bomber Command planes on the night of 30 September/1 October again braved the Red air defenses for an all-out shoran-bombing attack. Led by three B-29's, which first suppressed flak with air-bursting bombs, and then established a nearby orbit and jammed enemy radars with electronic gear, 45 B-29's arrived one by one and blanketed the Namsan-ni plant with bombs. Coordinating their efforts with those of the medium bombers, seven B-26's again swept in at low altitudes and managed to suppress eight out of an estimated 40 searchlights. Chaff and electronic countermeasures kept the other searchlights sweeping wildly through the murky skies, and only a few of the bombers were illuminated. Several Superfortresses were holed by flak, but the Red fighters that were aloft were unable to make any successful firing passes. This bomber strike effectively destroyed the Namsan-ni Chemical Plant, which was subsequently described as the "last of the marginal strategic-type targets in Korea."[76] In order to continue the air-pressure attacks, FEAF target planners would now have to devise yet-unthought-of target systems, for as yet the air pressure campaign had apparently failed to persuade the Reds to make peace.

"Another week has passed and you continue to reject an armistice, insisting as its price that we return to you a few thousand Chinese prisoners who are determined never again to live under Communist control at any cost." General Harrison was speaking at Panmunjom on 4 September. "North Korea is a small country, economically poor, its people have already suffered much from the two years of conflict. Its economic life is gradually being destroyed as a result of your continued use of its area and facilities for the operations and support of your military forces."[77] The eloquence of the chief United Nations truce negotiator fell on the deaf ears of obdurate Communist delegates who clung to their doctrinaire positions. "Any proposal of the so-called no-forced repatriation which

would detain war prisoners...is...what our side absolutely cannot consider under whatever circumstances," declared General Nam Il on 12 September. "No matter what your side should do inside or outside of the conference," he continued, "the Korean People's Army and the Chinese People's Volunteers will fight to the very end for the return of every single war prisoner home to lead a peaceful life."[78] Although no one knew the full details as to what had been discussed in Moscow, the United Nations air attacks had apparently failed to affect the solidarity of the Sino-Soviet alliance. As Chou En-lai departed for Peking on 16 September, the Reds issued a laconic communiqué that "important political and economic questions" had been discussed "in an atmosphere of friendly mutual understanding and sincerity." The lack of precise detail in the communiqué and the unusual demonstrations of respect for the Chinese delegates led Western commentators to speculate that the Kremlin had not met China's demands for economic and military aid. Information reaching Tokyo from Peking, moreover, indicated that Chou had sought an end to the Korean hostilities, which were draining China and hindering the initiation of her five-year industrialization plan.[79]

### *5. Intensified Operations Followed the Recess at Panmunjom*

The armistice negotiations had failed to make any progress, and the Red delegates were using Panmunjom solely as a forum for venting scandalously false charges of germ warfare and the like. On 25 September 1952 President Truman and the Joint Chiefs of Staff accordingly directed General Clark to cause a final summary of the United Nations proposals to be made. If the Reds did not accept these terms or offer some concrete proposals worthy of consideration at the next subsequent meeting, General Harrison would declare an immediate recess of the meetings. "It is essential, of course," President Truman directed Clark, "that throughout this coming period the military pressure which you are so effectively applying against the enemy should not be lessened."[80] At Panmunjom, on 28 September, the United Nations Command presented the proposals looking toward the screening of prisoners for voluntary repatriation and recessed until 8 October.[81] On this day the Communists remained unwilling to accept anything short of forced repatriation. "I have nothing more to say," stated General Harrison. "Since you have nothing constructive, we stand in recess."[82] Military liaison officers would continue to meet at Panmunjom, and when the Reds had some constructive proposal the armistice negotiations could continue.

"Within your capabilities, you should maintain unrelenting military pressure on the enemy, particularly through air action," the Joint Chiefs had instructed Clark on 25 September. "No major ground action should be contemplated at this time."[83] In order to intensify military pressure on the Communists

following the recess in armistice talks, General Clark had been planning an amphibious demonstration which would involve redoubled activity by all forces. Since a movement of 1st Cavalry regiments from Japan to Korea was to be made, Admiral Briscoe had suggested that the troop transfers could be combined with a live amphibious demonstration which would lure Red defense forces out onto the roads where they could be attacked by gunfire and aircraft. On 13 September General Clark agreeably issued an operations plan which envisaged a joint amphibious assault at the coastal village of Kojo, midway between Wonsan and the bombline, in conjuction with an attack by the Eighth Army and an airdrop by the 187th Airborne Regimental Combat Team. D-day was to be 15 October 1952. In a letter of instructions issued on 3 October, General Clark explained that the operation was to be tactically complete—except that the amphibious landing and the airborne operation would not be carried out. Only the top-level commanders, however, knew that the operation was to be a hoax.[84]

In support of the Kojo amphibious attack, General Weyland ordered the Far East Air Forces to execute a ten-day intensified air-attack program, which, in concept, would amount to an "intensified dispersion" of effort. General Weyland asked Brig. Gen. William P. Fisher, who had taken command at Yokota on 5 October 1952, to step up Bomber Command's operations by 30 percent so as to fly about 18 sorties a night. General Weyland wanted Fisher to hit at least two targets each night between 9 and 18 October. General Fisher accordingly scheduled shoran attacks against 49 supply concentrations.[85] During these same ten days General Barcus planned a 50 percent increase in the Fifth Air Force's combat effort. General Barcus and his staff scheduled attacks against numerous diversified targets to include approximately 50 primary fighter-bomber targets such as mines, factories, radar stations, military headquarters, 40 troops concentrations, 60 communications centers, and some 500 centers of miscellaneous military activity along the main supply routes. Each day the Fifth Air Force planned to attack four primary targets and four troop concentrations with 21 to 36 fighter-bombers, some 48 centers of military activity with elements of four fighter-bombers, and six communications centers with light bombers. The flights of fighter-bombers which hit the small centers of enemy activity would also be expected to fly armed reconnaissance over enemy supply routes. Maximum use was to be made of psychological-warfare warning leaflets.[86] Brig. Gen. Chester E. McCarty, whose force had seen very little tactical employment since he had assumed command of the 315th Air Division (Combat Cargo) on 10 April 1952, concentrated C-46 and C-119 aircraft of the 315th and 403d Troop Carrier Wings at Taegu for three days of intensive paradrop training with the 187th Airborne Regimental Combat Team and drew up an operations order scheduling an airborne assault near Simpo-ri in eastern Korea.[87] Securing General Clark's approval, General Van Fleet planned a limited Eighth Army offensive, named "Operation Showdown." On the night of 13/14 October the U.S. IX Corps would launch a two-battalion limited-objective attack to seize "Triangle Hill" and "Sniper Ridge," northeast of Kumhwa.[88]

Early in October FEAF and Navy airmen banded together in strikes designed to soften eastern Korea for

the amphibious landing. Fifth Air Force and Navy airmen launched combined attacks against barracks and supplies of the Chinese 67th Army at Hoeyang on 5 October, and similar combined attacks lashed the Chinese 26th Army at Yongpyongni on 7 October. At the railroad junction city of Kowon in eastern Korea Navy pilots had long been troubled with flak, and the Seventh Fleet secured Bomber Command's assistance for an attack there on 8 October. Escorted by Banshee jets, 10 B-29's of the 98th Bombardment Wing plastered Kowon with 500-pound proximity-fuzed bombs in a daylight formation attack. Immediately following this Navy planes struck the town at low altitudes. Thanks to the effectiveness of the Superfortress flak suppression, only one hostile flak gun fired at the Navy pilots.[89] After these three days of excellent coordination arranged between Air Force and Navy officers at the Joint Operations Center in Seoul, the United Nations air forces formally began their intensified operations designed to cover the approaching amphibious assault at Kojo.

Preparations for the Kojo amphibious hoax followed the normal patterns for any amphibious landing. Joint Amphibious Task Force Seven conducted mine sweeping operations and held rehearsals on the beaches at Kangnung. At Taegu Airfield, on the four days following 9 October, 315th Air Division C-46's and C-119's conducted battalion-sized paratroop and heavy-equipment drops in the Naktong Valley. After this the 187th paratroopers were confined to their camp waiting orders. Before day, on 14 October, however, assembled troop-carrier crews were told that weather had caused postponement of the day's mission, and after nightfall that evening the C-46's and C-47's began to airlift the 187th back to Japan.[90] Northeast of Kumhwa, on the night of 13/14 October, the U.S. IX Corps launched "Operation Showdown" which sent two battalions forward to capture Communist positions on Triangle Hill and Sniper Ridge. The battalions took their objectives, but the fighting soon became a bloody seesaw contest in which the hills changed hands several times.[91] At 0300 hours on 15 October 403d Troop Carrier Wing crews were hurriedly assembled at Ashiya and told that General Clark wanted them to fly a feint. Before dawn 32 C-119's left Ashiya and crossed in tight formation to Korea, where they flew to Chorwon and let down to paradrop altitudes of 800 feet. Just before the Flying Boxcars crossed into enemy territory, they wheeled abruptly southward and returned to Taegu, where they landed and loaded more paratroopers for return to Japan.[92] On the morning of 15 October Joint Amphibious Task Force Seven—the largest naval force assembled since 1945—bore down on Kojo. After an agonizing delay caused by bad weather, the 8th Cavalry Regiment launched in landing boats at 1400 hours and headed for shore. At a point 4,000 yards from the beaches the landing craft reversed direction and returned to the transports. The Kojo amphibious hoax was completed.[93]

Charged to support the Kojo assault, Seventh Fleet pilots flew 667 sorties on 12 October and their four days of peak activity beginning that day contributed to the Navy's score of 11,004 sorties flown in October—the highest total of any month in the Korean war.[94] Unfavorable flying weather curtailed the Fifth Air Force's planned operations on seven out of the ten days beginning on 9 October, but the fighter-bombers nevertheless flew 2,938 sorties and the light bombers flew 791 sorties. In the

period Fifth Air Force pilots attacked 19 of the primary-type targets, 37 troop concentrations, 37 communications centers, and 274 military activities areas.[95] These intensified air operations just about exhausted General Barcus' list of centers which were suitable for B-26 fire raids. In this same ten-day period Bomber Command attacked 43 small and scattered targets, each with a force of four aircraft, and it attempted to harass rather than to destroy. Bomber Command had hoped to hit more targets but because of the flare-up of ground fighting it had to fly three radar-directed close-support sorties each night.[96]

When the ten days of intensified air operations incidental to the Kojo amphibious hoax were completed, United Nations commanders attempted to decide what lessons had been learned. General Clark noted that the Reds had been "genuinely afraid of our amphibious threat" but that they had mustered enough defense to show him that an actual assault against Kojo "would have been more difficult."[97] In view of the "heavy and excessive casualties" sustained by the Eighth Army in "Operation Showdown," General Clark informed General Van Fleet that "We should not unless absolutely necessary initiate another action which may be a repetition of the bloody battle for Triangle Hill and Sniper Ridge."[98] Although it sought to learn, the FEAF Formal Target Committee confessed that it was never able to discover "just what was accomplished by the intensified dispersion of effort" which had marked the air attack in the ten days following 9 October.[99] While pilot opinion differed, Air Force and Navy men agreed that the Reds had not been provoked enough by the fear of the amphibious attack to bring their troops out of their fixed defenses.

Kim Il Sung

The Reds either lacked mobility enough to react to the threat, or else they had not been fooled. According to report, Fifth Air Force crews, who generally disliked the "leisurely pace" of the war, were enthusiastic about the intensified effort and felt that more destruction had been meted out to the Reds than in the previous several months. But the commander of the *Bon Homme Richard* protested that the Kojo hoax had caused a great morale letdown among his pilots, who had taken great risks and had sustained unnecessary losses in a mistaken belief that a real landing was under way. The 315th Air Division had obtained some invaluable airborne refresher training, and Bomber Command had learned something new about its shoran bombing capabilities. In the large-scale shoran attacks it had not been obvious, but when four B-29's

Peng Te-huai

attacked small targets it was all too plain, and General Fisher noted that about half of his B-29 crews were doing most of the good bombing in his command. A need for more thorough shoran training was indicated.[100]

The Communists did not reveal their opinions of either the Kojo amphibious demonstration or of the intensified air attacks which accompanied it, but it was possibly significant that on 16 October Kim Il Sung and Peng Te-huai dispatched a strongly worded protest to General Clark concerning the recess in armistice negotiations. These two top Reds still insisted that "total...repatriation must be carried out." Replying to the Red letter on 19 October, General Clark found "nothing new nor constructive" in the proposals to warrant reopening negotiations. "It should be clear to you by now," Clark wrote, "that the United Nations Command will never agree to nor negotiate further on the basis of any proposal that would require the United Nations Command to use force to repatriate prisoners to your side."[101] With peace negotiations in recess in Panmunjom, the General Assembly of the United Nations would have to serve as the forum for debate on the Korean armistice.

### *6. Aerial Interdiction Continued on a Reduced Scale*

The FEAF operational policy directive of 10 July 1952 shifted emphasis from all-out interdiction attacks to destruction strikes designed to make the war costly to the Communists, but General Weyland never intended to abandon interdiction attacks completely. The United Nations Command possessed aerial superiority and could most profitably wage an air-pressure campaign against the Reds, but the Communists possessed superior numbers of ground troops, who, if left unchecked by air attacks, might cause the United Nations ground forces a lot of trouble. After June 1952, however, FEAF devoted less effort to interdiction activities, and the Communists were able to make some progress in restoring the serviceability of their lines of communications. During August the key railway lines, "Able" from Sinuiju

A rail bridge near Sunchon, North Korea before B-29's of the 98th Bomb Wing dropped it on 1 September.

to Sinanju and "Baker" from Manpojin to Kunu-ri, were operational for through traffic about 87 percent of the time.[102]

Speaking for FEAF intelligence on 28 August, General Banfill saw a direct relationship between the relaxation of railway attacks and a steadily improving enemy supply situation, which, he said, was detrimental to United Nations ground forces. Hostile artillery and mortar fire, Banfill said, had increased in a direct ratio to the increased serviceability of the enemy's rail lines. United Nations troop casualties had increased in proportion to the growing volume of hostile fire. "Although rail interdiction may not prove decisive," Banfill stated, "statistical evidence indicates that immediate resumption of the rail-interdiction program is warranted."[103] At a FEAF target committee meeting on 2 September the FEAF air-targets representative repeated these same arguments and recommended that a portion of the air effort be reassigned to a rail-interdiction program. At least one river crossing should be kept unserviceable on the "Able" and "Baker" lines, he urged.[104] In response to General Banfill, General Smart commented that the relationship alleged between reduced railway interdiction and increased hostile fire was "speculative in nature." Since the destruction air operations had provoked far more propaganda outbursts from the enemy than had earlier rail-interdiction operations, Smart thought it reasonable to believe that the increased enemy fire might be a retributive reaction to the air-pressure attacks. "Goading the

enemy into eruption along much of the front with the possibility of generating truly remunerative air targets incident to a dynamic situation," said Smart, "is infinitely more conducive to...his defeat than allowing him to languish in comparative quiescence while we expend our efforts beating up supply routes." General Smart also noted that the new FEAF operations policy reduced the emphasis upon interdiction but did not prohibit such aerial endeavor.[105] At the FEAF target meeting on 2 September General Smart's representative agreed that a limited amount of air effort would have to be used to keep the Red rail lines in disrepair, and at a meeting of the FEAF Formal Target Committee on 9 September Fifth Air Force and Bomber Command representatives were told to put "some effort" on the interdiction of hostile rail lines, "but not to an extent where it detracts from the primary purpose of our program."[106]

In August 1952, when he directed Colonel Eugene B. LeBailly and Colonel Clinton C. Wasem to reorganize the 3d and 17th Bombardment Wings and to devote most of their efforts to communications-center attacks, General Barcus did not want to abandon night-intruder operations altogether. Those crews who were most proficient in night operations were accordingly segregated into the 13th Squadron of the 3d Wing and the 37th Squadron of the 17th Wing, which would continue to be night-intruder squadrons. Since General Barcus prescribed a minimum attack altitude of 4,000 feet for nearly all B-26 aircrews, and operations analysis tests indicated that a light bomber, flying alone and attacking from such an altitude, had small chance of destroying scattered and moving vehicles at night, the 3d and 17th Wings had to devise new tactics for night-intruder work. The Fifth Air Force accordingly attempted to develop a new technique which would concentrate hostile vehicles and make them more profitable targets for the fragmentation bombs which operations analysis tests indicated to be the optimum weapons against hostile vehicles.[107]

Late in August 1952 the Fifth Air Force helped the night-intruder squadrons with a cooperative roadblock plan. At last light fighter-bombers cratered selected highway intersections, and at first darkness two intruder B-26's dropped butterfly bombs and delayed-action ordnance on adjacent feeder and secondary roads. Two major and two minor blocks were usually established each night on the highway net south of Pyongyang and on the lateral road to Wonsan. Forty-five minutes following the establishment of a major roadblock, and at such intervals throughout the night, individual B-26 intruders flew armed reconnaissance missions over the isolated roads, attacking stalled motor vehicles with M-18 and M-81 fragmentation bombs. The new tactics worked well. Up to 25 vehicles were frequently found and destroyed within a roadblock area, and the September destruction claims rose to 2,167 vehicles.[108]

Seeking to perfect still more effective night attack tactics, Lt. Col. Estes B. Sherrill, 13th Squadron commander, required his pilots to write critiques after each mission. With this as a starting point, Colonel Sherrill and his executive officer, Capt. John A. Powers, drew up a new roadblock plan which was presented to a wing commander's conference on 20 September. Shortly afterward both the 3d and 17th Wings implemented Colonel Sherrill's "Hunter-Killer" plan. The intelligence and operations officers of each light-

bomber wing examined their assigned reconnaissance routes and drew up three sets of roadblock areas. Before a night's mission the "Hunter," "Killer," and flare crews were informed which set of preselected roadblocks would be used. The first "Hunter" crew reconnoitered the assigned roadblock area and determined the exact spot where an obstacle to enemy traffic would be most effective. A cross-trained navigator-bombardier aboard the "Hunter" established the roadblock with a mixed load of fire, general-purpose, and butterfly bombs. After making the block, the "Hunter" called in a flare B-26 and a "Killer" B-26 to prosecute attacks against backed-up enemy vehicles. When the last "Killer" expended his ordnance, the "Hunter" again reconnoitered the assigned route and determined where another roadblock could best be established. Having found this spot, the first "Hunter" called in a second "Hunter," who made the roadblock and started a new cycle of search and attack. These "Hunter-Killer" cycles were repeated as long as traffic remained lucrative. Employing experienced crews, especially selected for good judgment, finest techniques, and cool heads, the "Hunter-Killer" procedure paid dividends. During October 2,502 enemy vehicles were claimed as destroyed, and the night intruders were boasting a kill rate of 3.94 enemy vehicles per B-26 sortie flown.[109]

According to FEAF's instructions of 9 September, the Fifth Air Force and Bomber Command were charged to give "some effort" to interdiction strikes against the Red railway lines in northwestern Korea. Each of the commands attempted to make interdiction incidental to other operations, and neither of them achieved significant results. In September the Fifth Air Force committed "a much greater portion" of its effort to rail interdiction, but the fighter-bombers devoted most of their attention to the "Item" line between Kichang and Kowon and to the "Dog" line between Pyongyang and Sariwon. The more important "Able" and "Baker" lines were so heavily defended by hostile flak that the Fifth Air Force did not attack them. Bomber Command agreed to schedule the rail bridges on "Able" and "Baker" as secondary targets, but during most of September the B-29's did not divert from their primary targets. On the night of 27 September Bomber Command finally sent 12 B-29's on a primary mission against the rail bridges at Yongmi-dong, Huichon, and San-wang-dong, but the bombers did no appreciable damage.[110] During the intensified air operations of mid-October coincidental to the amphibious demonstration off eastern Korea, neither the Fifth Air Force nor Bomber Command gave much attention to railway interdiction. Taking advantage of the respite, the Communists speedily repaired the "Dog" rail line which the Fifth had put out of action in September. The Reds also moved in flak enough to make the Fifth Air Force reticent about attempting additional attacks on the "Dog" line. At other places the Reds seemed determined to forestall any renewed rail attacks. At Yongmi-dong, where "Able" line crossed the Taeryong River about ten miles northwest of Sinanju, the Communists already possessed three operational rail bridges, but photo reconnaissance flown on 19 October revealed that Red laborers were building a fourth rail bridge. The Communists evidently considered Yongmi-dong to be a critical bottleneck in their main rail-transportation route.[111]

## 7. *Close Support Was Practiced and Tested*

"During the entire time I was in command in the Far East," remarked General Clark, "the front-line infantry units and tactical air-support units worked closely together in Korea, and understood and respected each other's problems. When the foot soldier needed close air support, he got it."[112] Even though he recognized the diminished utility of close-support strikes against deeply entrenched enemy troops in the stalemated ground situation, General Weyland was determined not to stint in the support of friendly groundmen. "FEAF and Fifth Air Force," said Weyland, "leaned over backward to provide more than adequate close air support when ground forces became actively engaged, and at other times maintained a rather high level of effort on close support in order to maintain the air-ground teamwork and know-how in a state of well-oiled proficiency."[113] General Weyland must also have again justified the overgenerous allocation of close air-support effort in terms of Eighth Army reports that it was still deficient in organic artillery. "In Korea," General Van Fleet stated in April 1953, "we have only 25 percent, approximately 25 percent or less, the number of guns we had per division in France."[114]

In the summer of 1952 the United Nations ground forces and the Communist field armies maintained an active defense of front-line positions which had been dug deeper and deeper into the earth. In June, at the western end of the battleline, the Eighth Army staged several hard-fought attacks to wrest forward positions from the enemy. Each time the Reds invariably launched counter-attacks against the newly won outposts. In the west-central sections of the front lines in July the Communists launched attacks which captured Hill 266 ("Old Baldy") after a battle that saw the land mass change hands several times. These intensified outpost attacks caused no major changes in the line-of-ground contact, but they marked the sharpest fighting so far that year. In June and July FEAF planes accordingly flew 1,893 and 2,057 close-support sorties. In these same months 1st Marine Air Wing pilots flew 897 and 731 close-support sorties, and friendly foreign air units provided an additional 114 and 98 close-support sorties.[115] When cloud cover thickened along the battleline after mid-June, FEAF used MPQ-2 and MSQ-1 bombing director radars to place close-support bombs. During June the three tactical air-direction posts controlled aircraft on 779 bomb runs and directed 1,606 tons of bombs against enemy front-line positions. In a round-the-clock effort beginning at daybreak on 29 June, when the fighter-bombers were grounded by weather, the tactical air-direction posts controlled 128 B-26 sorties in close support of friendly ground troops.[116] As low clouds continued to blank out the front lines in July, the radar controllers worked day and night to guide 1,221 bombing runs and 2,388 tons of close-support bombs. Night-flying B-26's and B-29's provided the bulk of these missions, but Mustang flights of the 18th Fighter-Bomber Wing flew formations of fours and salvoed their ordnance on the order of the ground controller.[117]

Heavy rains brought United Nations and Communist outposts battles to a virtual standstill after 25 July, but General Van Fleet nevertheless ur-

The path of a high-velocity rocket from the release point to within a few feet of its target. The Pantherjet was called to the area by a Mosquito controller.

gently requested a maximum B-29 effort to be flown in front of the U.S. IX Corps and the ROK II Corps on the nights of 31 July and 1 August. General Van Fleet argued that the Eighth Army had plotted the locations of many lucrative supporting targets and that the Reds had been hurt by the heavy rains and would be more vulnerable to air attack than at any time during the several months past. General Clark would not order the diversion of the medium bombers on such a slender justification, but General Barcus allocated a maximum B-26 support effort to the IX Corps and General Weyland committed three B-29's each night for radar-directed bombing.[118] This radar-directed bombing effort contributed to August's total of 1,078 tons of bombs dropped by this medium, but with improving weather the bulk of close-support effort was again furnished by fighter-bombers. In support of ground action generally characterized by numerous clashes of up to battalion-sized troop units, and a successful United Nations recapture of "Old Baldy," FEAF planes flew 1,836 effective close-support sorties, while attached Marine and friendly foreign units flew an additional 1,466 sorties, to swell the monthly total to 3,302 sorties.[119] In this same month, primarily for training, Admiral Briscoe sent his carrier-based pilots back into the close-support business and furnished a daily average of 12 air-support sorties to friendly ground forces at the eastern end of the battleline.[120]

Drenching rains again halted ground fighting late in August, but as September brought clear skies the Reds renewed attacks against the Eighth Army's outposts. The principal ground fights simmered on Capitol Hill and Finger Ridge, where United Nations forces remained in control. FEAF

planes flew 1,797 close-support sorties, while Marine, South Korean, and South African aircraft flew 1,111 close-support sorties, to bring the monthly total of such effort to 2,908 sorties.[121] Early in September Admiral Briscoe proposed that his carrier air groups should be employed across the entire Eighth Army front where needed, and he asked that limited numbers of carrier airmen should fly close-support strikes under Marine ground controllers. FEAF readily agreed with both of these proposals.[122] In September, as in the summer months, the close air support afforded by United Nations pilots was substantial in volume, but it was seldom directed against any really lucrative targets. The Communists always launched their outpost attacks under the cover of darkness and nearly always completed their raids before dawn, at which time they were usually safe and secure against air attacks, deep within their tunnels, caves, and bunkers.

In preparation for the Far East Command amphibious demonstration off eastern Korea early in October, the Fifth Air Force and Task Force 77 executed front-line air attacks which were a mixture of close and general air support. Working against Red troops who had long felt safe from air attack because of the closeness of their positions to the neutral ground at Kaesong, the Fifth Air Force between 8 and 25 October executed "Operation Red Cow." In this operation Mosquito controllers carefully directed the efforts of 105 fighter-bomber sorties against 24 troop and artillery targets. The fighter-bombers hit enemy positions close to the main line of resistance and the neutral zone.[123] On 9 October Admiral Clark began to employ massed carrier air flights in "Cherokee" strikes against prebriefed targets in front of friendly ground positions. The targets were normally designated by Eighth Army corps and were usually supply dumps, personnel bunkers and artillery positions. A Fifth Air Force Mosquito assisted the Navy pilots to locate their targets and performed post-strike damage assessment. The first Cherokee strikes were flown against targets within the bombline, and they consequently employed normal close-support control procedures. Since it was difficult to place more than eight aircraft on a target in a short time when such control procedures were employed, the Seventh Fleet soon began to direct its Cherokee strikes at general-support targets beyond the bombline.[124] To support the renewed ground operations taking place in the U.S. IX Corps' area, General Weyland made up to three B-29's available for radar-directed close-support missions each night in the period 10 through 16 October.[125] During the month, moreover, the Fifth Air Force and its attached units flew a total of 4,488 close-support sorties, of which 2,217 were in support of the IX Corps "Operation Showdown" fight at Triangle Hill and Sniper Ridge.[126] On 21 October the IX Corps commander messaged his "grateful thanks" for the Fifth Air Force's "magnificent help." The air support was timely and effective, he said. "The courage of the fliers and the effectiveness of their combat action against enemy ground targets," he added, "were magnificent to those of us who observed them."[127]

Callous to the slaughter of their troops, Communist field commanders pressed attacks against Sniper Ridge and Triangle Hill early in November and finally regained possession of the latter terrain mass. In support of the U.S. IX Corps and other Eighth Army troops, the Fifth Air Force flew 2,374

close-support sorties and its attached units flew 1,172 additional close-support sorties during November.[128] Ground officers testified that this air support gave a "tremendous lift" to the infantry. On 5 November, for example, Maj. Gen. J. C. Fry, commander of the U.S. 2d Infantry Division, commented on the effectiveness with which a 58th Group flight of Thunderjets destroyed a Chinese gun position with a low-level napalm strike. Fry reported that his men said "It takes real guts to go in and do that job."[129] Enemy artillery and mortar fire continued to bombard United Nations outposts on Sniper Ridge, and on 22 November 1952 Maj. Charles J. Loring, Jr., a flight leader of the 8th Wing's 80th Fighter-Bomber Squadron, led his four-plane element against a Red gun position which was hazarding friendly ground troops. In pressing the attack, Major Loring's F-80 aircraft was hit and crippled. Deliberately, then, Major Loring turned and dived his plane into the gun emplacement, destroying the target and killing himself. For his selfless and heroic action in eliminating a dangerous threat to United Nations ground forces Maj. Charles J. Loring, Jr., was awarded the Congressional Medal of Honor.[130]

In the last two years of the Korean war, while the ground combatants were fighting from prepared emplacements which were reminiscent of the trench warfare of World War I, fully 30 percent of all United Nations offensive air strikes were employed in close support of friendly ground troops. In Europe, during the bitterly fought ground campaigns of World War II, approximately 10 percent of Allied tactical air effort had provided close support to friendly ground armies.[131] Despite the magnitude of close support in Korea, some officers of the Eighth Army were dissatisfied with the Army-Air Force system for air-ground operations. During the autumn of 1952 General Clark accordingly directed some far-reaching tests and experiments designed to "perfect" the approved system.

The genesis of the Far East Command air-support tests went back to 17 December 1951, when General Van Fleet had visited General Everest to explain that his subordinates were dissatisfied with the Army-Air Force system of air-ground operations. General Van Fleet first talked about the way in which the Eighth Army was organized for combat. So long as he kept within the Eighth Army's plan, General Van Fleet explained that each of the corps commanders was largely autonomous in his area of responsibility. Each controlled all forces that he required for combat—except his air support. Van Fleet proposed that some air—how much he was not sure, but something like a squadron of fighter-bombers—should be assigned to each corps. Such an assignment would eliminate, Van Fleet said, the "continual competition between divisions and corps for close support." General Van Fleet admitted that the three squadrons so committed would not offer the same quantity of air support that the Eighth Army was accustomed to receive, but he thought that the reduction in effort would be more than compensated for by the satisfaction of the corps commanders in having something they could count on and run themselves. General Everest turned thumbs down on the proposal, which he knew to be unsound and contrary to established procedures.[132] On 20 December 1951 Van Fleet nevertheless made his proposals official in a letter to General Ridgway. He recommended that the

Eighth Army be permitted to assume operational control over three squadrons of Marine aircraft, one of which would be allocated to each of the three corps commanders. Operating from airfields near the corps headquarters, the Marine squadrons would fly close-support sorties and would also attack "close" interdiction targets which lay within 40 miles of the front lines. Army personnel—field artillery observers wherever possible—would control the air-support strikes. The Eighth Army would monitor the employment of the squadrons and divert them when necessary to the support of other corps or make them available to the Fifth Air Force if need be. The Eighth Army would also expect additional close support from the Fifth Air Force in times of major ground attacks.[133] General Ridgway evidently took no action on General Van Fleet's proposals.

With the arrival of General Clark in the Far East, Eighth Army officers who desired to establish a *de facto* Army air force must have taken heart, for, as Chief of Army Field Forces, General Clark had gone to lengths to describe the kind of air support that the Army wanted. At a Tokyo briefing on 1 July 1952, however, General Clark heard General Van Fleet's plan to employ the Marine Air Wing exclusively in support of the Eighth Army and announced that such an undertaking could not be favorably considered. General Clark later explained that he had not come to the Far East to aggravate any differences of opinion between the Army and Air Force. "With a specific job to do," he said, "I had to maintain an air-ground team working as efficiently as possible." General Clark also expressed confidence in the *Joint Training Directive for Air-Ground Operations* which described the Army-Air Force system for air support. This directive, Clark said, was based on a vast reservoir of experience amassed on all fronts and representing the composite view of senior officers who had had the longest and most responsible experience in close support during World War II. General Clark nevertheless directed that the Far East Command should "tackle objectively the existing problems of close air support with a view toward developing and improving procedures in the implementation of current air-ground operations doctrine."[134]

When he had completed a review of the particulars of the Eighth Army discontent with close air-support procedures on 11 August General Clark issued a command letter prefaced by his "considered opinion" that no far-reaching or drastic changes which were contrary to existing doctrine ought to be attempted, based solely on the often-unique conditions, prevailing in Korea. Instead, Clark instructed his force commanders to study their positions and to direct their efforts "toward perfecting the present system." In attachments to the long command letter, General Clark indicated 13 areas wherein the efficiency of the existing system might be improved, and outlined three progressive "experiments" looking toward the study and improvement of the existing system.[135]

The initial areas for investigation and the first phase of the experiments outlined by General Clark were generally concerned with additional air-ground training and were readily accepted for implementation by Generals Weyland, Van Fleet, and Barcus. An immediate result of General Clark's interest was to increase enrollment of ground officers in the Fifth Air Force's air-ground operations course at Seoul. In order to orient air officers in Army

problems, General Barcus also began to send groups of 15 pilots on three-day tours at the front lines beginning on 15 September. At Johnson Air Base in Japan, after 27 October, the Far East Air-Ground Operations School began to receive larger quotas of Eighth Army and Fifth Air Force officers for its week-long indoctrination program. In Korea a traveling Eighth Army-Fifth Air Force indoctrination team began to visit Eighth Army units in the field on 29 October. When the team completed its tour on 19 November, it had made 15 presentations to 530 key command and staff officers of the Eighth Army. These periodic briefings on the nature and functioning of the air-ground system proved so beneficial that General Barcus and Lt. Gen. Maxwell D. Taylor, the Eighth Army commander after February 1953, agreed that the traveling indoctrination team would continue to visit each American division and corps at least once every four months.[136]

Several of the fields for improvement outlined by General Clark merely recognized subjects which were already under investigation. One of these fields concerned artillery flak suppression for close air-support strikes. The Reds had built heavy concentrations of automatic weapons along their front lines, and the Fifth Air Force had noted that for several months its losses and damages were heaviest during close-support strikes. As a matter of custom, the Eighth Army held up its artillery fire during air strikes lest friendly shells destroy aircraft. No one had apparently studied whether enemy ground fire, if not neutralized by friendly artillery fire during an air strike, might not actually present a greater danger to friendly aircraft than would the continuation of friendly artillery fire. Beginning at a meeting in Seoul on 23 July and continuing in accordance with General Clark's directive, the Eighth Army and Fifth Air Force perfected a procedure whereby close-support flight leaders might call for proximity-fuzed flak-suppression fire against enemy gun positions before they attacked ground targets. As perfected over a period of several months, this artillery flak suppression was described as "highly successful," but no one could know its applicability in a war of ground movement.[137] Recognizing that the Mosquito controllers were extremely vulnerable to hostile ground fire and would be anachronistic in a major war, the Fifth Air Force began experiments with a "pathfinder" fighter-bomber technique on 20 July. The pathfinder flight of two experienced pilots left the tactical airdrome ten minutes ahead of the main fighter-bomber strike, reconnoitered the assigned target, and subsequently marked the objective for the fighter-bombers by making the first attack. After tests in January 1953, the 8th Fighter-Bomber Wing recommended that pathfinder aircraft should be used on all large-scale close-support strikes.[138] In view of the disagreements between air and ground officers as to what constituted a valid target for MPQ-2 or MSQ-1 bombardment, General Clark invited investigation and report. This investigation had to do with the inherent accuracy of this bombing system, for the Eighth Army frequently wanted night-flying bombers to hit pinpoint targets such as enemy artillery positions. Even before Clark's directive, a Fifth Air Force evaluation project called "Pinpoint" had indicated that the circular error probable of ground-radar directed B-26's was 1,177 feet. Subsequent study of ground-radar directed B-29's revealed that these larger planes had an average circular error probable of 1,300 feet. General

Planes on the deck of the USS *Essex* wait for a break in the weather *(Courtesy U.S. Navy).*

Barcus and General Taylor therefore agreed that only relatively large-area targets such as supply and personnel concentrations were suitable targets for MPQ-2 or MSQ-1 attack.[139]

Generals Weyland, Van Fleet, and Barcus agreed readily enough to General Clark's proposals for increased air-ground training and for specific investigations, but each found something objectionable with the second and third phases of the air-support experiments. In the second phase General Clark wanted to allocate 50 to 100 air-support sorties to the exclusive use of a corps commander in various types of air strikes to be requested through the Joint Operations Center. The strikes would be run against targets which could be viewed by friendly ground troops. Generals Barcus and Weyland objected to the commitment of one-third of the Fifth Air Force's capability to an endeavor in which ground troops would witness nothing more than a demonstration against targets of little importance while the Fifth Air Force would suffer losses and damages and a substantial diversion from its air-pressure attacks. In the third phase of the experiments General Clark proposed to allocate "mission control" of one or more fighter-bomber squadrons to a corps commander for a definite period of time. General Weyland flatly called this phase "a regression which is contrary to established doctrine." Strangely enough, since he had earlier urged just such an arrangement, General Van Fleet now pointed out its hazards. Weather might keep a designated squadron grounded on its home airfield when the corps needed it, while other squadrons at other airfields might be able to fly. Van Fleet also recognized that aircraft loss and damage rates were running highest on close-support missions, and he suggested that any squadron specially designated for nothing but close-support missions

would soon lose its combat effectiveness. In view of the objections to his proposals, General Clark instructed Generals Weyland and Van Fleet to recommend a series of experiments which would provide air and ground personnel with the experience they required to conduct air-support strikes in a manner prescribed by current doctrine.[140]

The Fifth Air Force and Eighth Army prepared plans for a modified air-ground operations experiment, and General Clark approved them on 24 November. Beginning on 26 December 1952 and concluding on 14 February 1953, the Fifth Air Force employed the 8th, 58th, and 474th Fighter-Bomber Wings in operational demonstrations with each American division in Korea. Each daylong exercise included elaborate planning and briefing phases attended by key officers of the division whose personnel would witness the strikes and of the fighter-bomber wing which would fly the attacks. On the day of the demonstration, the Fifth Air Force tactical air wing attacked a prebriefed target with 24 aircraft, a second target with a strip-alert flight of eight aircraft, and a third target with an air-alert flight of four aircraft. So far as Air Force personnel were concerned, these demonstrations produced next to nothing of value. The planning phase was normal and routine for air personnel and the front-line briefings were interesting but inessential for a successful accomplishment of a mission. The Fifth Air Force had hoped to learn something from the 24-aircraft close-support strikes, and it did learn that this many planes could not be directed against pinpoint targets in close proximity to friendly ground troops within a three-minute period required for maximum shock effect on the enemy.[141]

On several occasions while the demonstrations were in progress air officers protested the inadvisability of risking the lives of friendly personnel for the sake of training, and on 25 January 1953 one of the experiments caused violent repercussions in the United States. On this day the 7th Infantry Division was supported by the 58th Fighter-Bomber Wing in "Operation Smack." To add realism, the 7th Division decided to combine the air strikes with a daylight raid against enemy positions on "T-bone Hill." As customary in maneuvers, the 7th Division issued a stiff-backed operations order to observers, which was labeled as the "scenario." Through a combination of circumstances, however, the two infantry platoons which attacked suffered 64 casualties and captured no prisoners. The Department of Army explained the affair to the satisfaction of a congressional committee, but American newspapers raised the cry that American lives had been needlessly lost in a demonstration viewed by high-ranking officers.[142] General Clark's air-ground operations experiment thus closed on a somewhat sour note, but the official view was that it "had proved of considerable value in reaffirming the basic principles set forth in established doctrine."[143]

An F-84 returns to home base.

# 17. *Air Reconnaissance, Transport, and Rescue Support the United Nations Forces*

## *1. Air Reconnaissance Systems in Action*

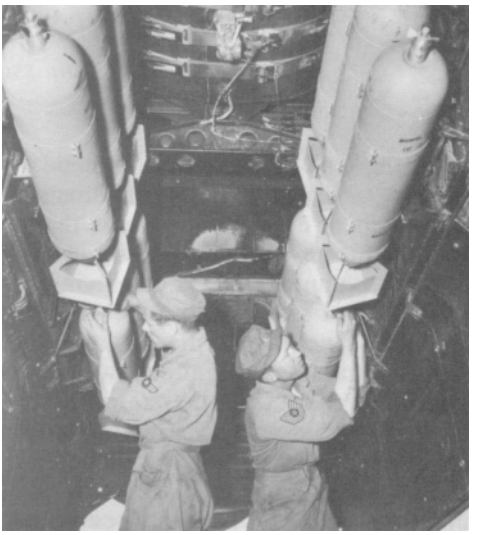
During United Nations Command campaigns in Korea aerial reconnaissance was of even greater value than it had been in previous wars, and it was the most valuable means of obtaining intelligence of enemy activities. Aerial reconnaissance was critically important to the outnumbered United Nations ground forces. "It is the one positive means by which we are able to study the enemy's back yard," explained an Eighth Army officer. "Its relative importance cannot be overrated—we have to have it."[1] Photographic reconnaissance was vital to United Nations air forces. It allowed FEAF to keep abreast of the Communist air order of battle, not only within North Korea but at the Manchurian airfields across the Yalu. It permitted FEAF to attack Red airfields within Korea when they were nearing a serviceable status, thus permitting an economy of force. Oblique photos of Antung and Ta-tung-kou airfields provided a wealth of information about the characteristics of the hostile air force, such as the length of runway which a MIG required for operations. Continuous aerial surveillance allowed photo interpreters to plot the changing locations of hostile flak batteries. Photographic reconnaissance also provided the basic information for air-objective folders and target dossiers used in all preplanned air strikes. Finally, bomb-damage assessment photography afforded air units a means of evaluating the success or failure of their tactics and techniques.[2]

At the end of World War II everyone acknowledged the importance of aerial reconnaissance, but in the years before 1950 USAF "economy" programs had severely curtailed the development of air-reconnaissance systems—aircraft, cameras, and skilled technicians—so that these systems had not been able to keep pace with the requirements of a jet air age. In the spring of 1949 USAF had inactivated all of its tactical reconnaissance organizations except the equivalent of one group (two squadrons in the United States and one in the Far East). Skilled personnel of the inactivated organizations had either returned to civilian status or had been scattered throughout the Air Force. When the fighting began in Korea, FEAF did not have a reconnaissance system. Its badly under-strength and poorly equipped reconnaissance units were a "series of dangling and disconnected minorities." The 31st Strategic Reconnaissance Squadron had RB-29's at Kadena, the 8th Tactical Reconnaissance Squadron flew RF-80A aircraft from Yokota, the provisional 6204th Photo Mapping Flight possessed two RB-17's at Clark Air Force Base, and the 548th Reconnaissance Technical Squadron was based at Yokota and kept detachments at Kadena and Clark.[3]

Because of the dubious economy which had severely curtailed reconnaissance aviation between wars, FEAF was compelled to use what it had while it rebuilt a reconnaissance establishment. Sending a detachment to Itazuke within hours after the start of the war, the 8th Tactical Reconnaissance Squadron moved to this southern Japanese airfield by 9 July to provide photo-reconnaissance requirements of the Fifth Air Force and Eighth Army. The 8th Squadron's negatives had to be

ferried up to Yokota to the 548th Reconnaissance Technical Squadron for mass reproduction and interpretation. This worked fairly well when flying weather was good, but when weather was bad, which was often, photo-reconnaissance products might not reach requesting agencies for as long as a week. Conveyed by air and water from the United States, the 162d Tactical Reconnaissance Squadron (Night Photography) and the 363d Reconnaissance Technical Squadron reached Itazuke late in August 1950. On 3 September 1950 the Fifth Air Force activated the 45th Tactical Reconnaissance Squadron at Itazuke, but this visual reconnaissance organization would not receive its RF-51 aircraft until November 1950. To provide a headquarters organization for its reconnaissance squadrons, the Fifth Air Force activated the 543d Tactical Support Group at Itazuke on 26 September 1950.[4]

When it established its units at Taegu Airfield during October 1950, the 543d Tactical Support Group found that its status and deployment were unsatisfactory. Instead of being properly assigned to the Fifth Air Force directly, the 543d took its orders from the 6149th Tactical Support Wing at Taegu. Located in a school compound in Taegu City, the 363d Squadron met delays in receiving photographic film from the air units at Taegu Airfield. The 162d Tactical Reconnaissance Squadron, which was expected to use artificial illumination to take night photos, met difficulties from a fairly high dud rate among the flash cartridges used in its newly developed night photographic system.[5] In December 1950 the 45th Tactical Reconnaissance Squadron was just beginning to provide needed visual reconnaissance services, and the 543d Group was finding solutions to some of its other problems, when the Chinese Communist attack forced a withdrawal of all but advanced echelons of the 543d Group and its squadrons to Tsuiki and Komaki Air Bases in Japan.[6]



Armament technicians insert the nose fuses into photo-flash bombs used on RB-26 night reconnaissance missions.

Recognizing that the Fifth Air Force needed help in organizing the tactical reconnaissance wing that it required, General Stratemeyer asked for Colonel Karl L. ("Pop") Polifka, one of the USAF pioneers in the field of aerial reconnaissance, and Colonel Polifka was attached to the 543d Tactical Support Group on 24 January 1951. As a result of Polifka's work, the 67th Tactical Reconnaissance Wing was activated effective on 25 February 1951, with direct assignment to the Fifth Air Force. A concurrent change in designations gave the wing the following tactical units: 67th Group (543d), 12th Tactical Reconnaissance Squadron (162d), 15th Tactical Reconnaissance Squadron (8th), the 45th Tactical Reconnaissance Squadron, and

the 67th Reconnaissance Technical Squadron (363d). During March 1951 echelons of these organizations were located at Taegu Airfield. The reconnaissance wing was beginning to function as an organization should, when, on 1 July 1951, Colonel Polifka was shot down in an RF-51 at the front lines and died in action. But Colonel Polifka had pointed the way, and by 22 August 1951 the 67th Wing and its squadrons established themselves at Kimpo Airfield, thus clearing out rear-echelon remnants from Tsuiki and placing the whole establishment at one base for the first time in its history.[7]

During much of its early history the 543d Group's operations had been anything but systematic. In January 1951 the group complained of "the many telephone calls, at all hours of the night...in regard to missions" and observed that "everyone wished to have a personal rundown as to the results of each sortie."[8] As he organized the 67th Wing, Colonel Polifka worked with Fifth Air Force intelligence to provide regular procedures. Special requests for photo coverage followed a normal channel to the Fifth Air Force, where they were incorporated in the daily operations order or else were telephoned directly to the 67th Wing. Requests of Eighth Army units for special photo cover were screened and consolidated in division and corps G-2 Air offices and were forwarded to the Eighth Army G-2 Air in the Joint Operations Center, who passed them to the Fifth Air Force reconnaissance officer. The Army requests were either incorporated in the daily Fifth Air Force operations order or were telephoned directly to the 67th Wing, according to their urgency. Most reconnaissance, however, was of a periodic and continuing nature, or was handled in automatic fashion. The 67th Wing maintained periodic surveillance of enemy airfields in Korea, the main supply routes, and other important military targets. It automatically flew bomb-damage assessment photography of targets ordered attacked in Fifth Air Force operations orders, either completing the mission within three days or canceling it. Consistent with the tactical situation, the 67th Wing flew large-scale front-line block coverage photography which was automatically delivered to the Eighth Army. The 45th Squadron also maintained RF-51 patrols over sectors of responsibility extending 15 to 20 miles forward of each corps. The visual reconnaissance pilots reported sightings directly to the corps fire-support coordination centers, and these "Hammer" aircraft also directed friendly fighter-bomber strikes against some of the targets they located.[9]

According to agreements between the U.S. Army and the Air Force undertaken in 1946, the Army was supposed to manage the interpretation and quantity reproduction of photography flown for it by the Air Force. The *Joint Training Directive for Air-Ground Operations* provided that a Joint Photo Center, located at the reconnaissance airfield, would comprise on the air side a reconnaissance technical squadron and on the ground side an engineer photographic reproduction and distribution organization and Army photo interpreter teams. Once the Air Force developed, titled, and made five prints of each negative on photography requested by the Army, the Army photo interpreters were expected to provide necessary interpretation and the engineer organization was supposed to reproduce desired quantities of the photographs and deliver them to ground units.[10] The Eighth Army knew its responsibilities, but it was unable to

secure any photographic technicians until February 1951 and then it received only 86 men who were organized into interpreter and reproduction detachments. Using the Army technicians, the Fifth Air Force organized what was erroneously called a Joint Photo Center at Taegu, wherein the Army detachments were integrated with Air Force personnel in the interpretation and reproduction functions. Up until February 1951 the Air Force handled all quantity reproduction of photography for the Eighth Army.[11] Because it was unable to interpret or reproduce aerial reconnaissance photography in requisite amounts, the Eighth Army was unable fully to exploit the 67th Wing's ability to fly reconnaissance for it. In the ground campaigns of 1950 and 1951 the Eighth Army should have had daily front-line photo cover of enemy-held territory to a depth of 10,000 yards, but such cover was flown only in special "blocks" because the Army could not interpret larger amounts. The Eighth Army also discouraged its subordinate units from submitting many requests for special photo coverage. The delivery of requested photography to battalions and regiments was frequently so slow that in fluid conditions these forward units often overran the territory they wanted to study before they received photographs of it.[12]

Operating against virtually no opposition over North Korea in the first months of the Korean war, FEAF reconnaissance planes could fly far more photography than could be interpreted or reproduced for mass distribution. Gradually, however, the Communist air defenses took effect, and the USAF again learned the lesson that it could not operate second-rate reconnaissance planes against even passably adequate air defenses with much satisfaction. When Communist MIG-15 jet fighters appeared over North Korea, the old RF-80A photo aircraft was hopelessly outclassed. Redlined at .8 mach, the reconnaissance version of the old Lockheed jet fighter was a good 200 miles an hour slower than the MIG. Without heavy Sabre escort, the RF-80's were unable to operate in MIG Alley. When Communist flak defenses increased, the RF-80's began to encounter another problem which defied solution. The Lockheed jet photo plane's cameras and magazines had been designed for the speeds of conventional planes, and, in order to secure large-scale photographs with the overlap for stereoscopic viewing, an RF-80 had to throttle down over a target or along a flight line, making itself an easy mark for flak or fighters.[13] The RF-51's were also hazarded by enemy flak. Expected to operate its RF-51 planes on hour-and-a-half flights over the enemy's front lines at altitudes ranging upward to 4,000 feet, the 45th Tactical Reconnaissance Squadron was hard hit by enemy ground fire. After five RF-51's were lost to enemy ground fire, the 45th Squadron in February 1952 set a minimum altitude of 6,000 feet for its visual reconnaissance missions, and added a wingman who flew some 1,000 feet higher and called out ground fire.[14] Understanding the need for higher-performance reconnaissance planes in Korea, USAF intended to equip the day photo squadron of the 67th Wing with RF-84F aircraft, a swept-wing version of the Thunderjet fighter. From time to time USAF posted dates when the RF-84F's would arrive in Korea, but for various reasons these planes were never ready for combat while the hostilities continued in Korea.[15] As an interim solution until RF-84F's were ready, USAF allowed FEAF to modify

RF-86A

six F-86A aircraft for photo reconnaissance. Done in a hurry after October 1951, and consisting of a camera mounted parallel to the longitudinal axis of the Sabre with a mirror arrangement to secure vertical coverage, the photo-modified Sabre never secured adequate quality photography. The RF-86A's were nevertheless able to operate in MIG Alley with a minimum amount of Sabre escort.[16]

Unable to get more modern reconnaissance planes, the Fifth Air Force recognized in the spring of 1952 that the 15th and 45th Tactical Reconnaissance Squadrons would take emergency measures to continue to operate. Purely as an expedient, Colonel E. S. Chickering, the 67th Wing's commander, worked out a plan whereby some RF-80's were transferred to the 45th Squadron and both the 15th and 45th Squadrons received a number of F-80C fighters which had been released by the conversion of the fighter wings to more modern aircraft. At first the F-80C's flew wing for RF-80A planes, but eventually 67th Wing technicians were able to replace the old fighter's guns with a single vertical camera. The F-80C, moreover, turned out to be adequate for visual reconnaissance. In the autumn of 1952, when it was evident that the two squadrons could use the F-80C's, the 67th Wing began to cross-train the 15th and 45th Squadrons for identical visual and photo missions. Following this, the 67th Wing's authorization of RF-80A's and RF-80C's was equally divided between the 15th and 45th Squadrons, with the former being authorized five RF-86's in lieu of an equal number of RF-80A's.[17] Although the 67th Wing patched up its day reconnaissance capability, the Fifth Air Force continued to possess far fewer day photo planes than it needed. Fortunately, the Fifth Air Force possessed coordination control over Marine Squadron VMJ-1, whose ten F2H-2P Banshee photo-jet aircraft were based at Pohang Airfield and were able to supplement the slim capabilities of the 67th Wing. When engaged in high-priority tasks, these Banshees landed at Kimpo at the conclusion of their missions and gave their film to the 67th Reconnaissance Technical Squadron. Lower priority missions returned to Pohang, where the film was processed by a Marine laboratory.[18]

When the Korean war continued and enemy air defenses grew, the 12th Tactical Reconnaissance Squadron knew more difficulties as it operated its RB-26 aircraft over North Korea. The usual night-reconnaissance missions flown by this squadron were routine surveillance sorties which averaged about three hours in duration and normally included photography of prebriefed objectives along the route.

Successful accomplishment of these night-reconnaissance missions depended upon precise navigation and the reliability of the artificial illuminants carried aboard the RB-26's. When in transit to the Far East in 1950, the RB-26's had been equipped with a new A-3 cartridge-ejection illumination system which employed A-14 magazines and M-112 flash cartridges. This new system gave the 12th Squadron a lot of trouble. The first lots of cartridges were defective, and, when more dependable consignments were received, the increased use of the system caused wear malfunctions of the magazines. The fundamental defect of the system, however, was that the planes using it had to fly at 3,000-foot altitudes, which was not high enough to be safe against terrain obstacles and enemy ground fire. For this reason the 12th Squadron abandoned the cartridge-illumination system in May 1952. During the periods when the cartridge system had been out of order, the RB-26's employed M-46 photoflash bombs for illumination, and with the discontinuation of the cartridge system the 12th Squadron exclusively employed photoflash bombs. The combination of the light intensity of the M-46 bomb and the night cameras which the RB-26's carried gave good results in terms of photo quality and scale when the night photo planes maintained altitudes of 7,000 to 8,000 feet. As a standard procedure, therefore, the 12th Squadron's crews habitually operated at these altitudes.[19]

Before they could photograph objectives at night, the RB-26 crews of the 12th Tactical Reconnaissance Squadron had to find their targets, and the 67th Wing frankly admitted that many times night-flying crews were unable to photograph deserving objectives because they could not locate them in the dark. For precision navigation, the RB-26's carried shoran, but they were unable to receive the shoran beams when flying north of the bombline at altitudes of 7,000 to 8,000 feet. In order to employ shoran, the RB-26's wanted to be able to secure photography from higher altitudes. Their first problem was that the M-46 photoflash bomb did not provide sufficient illumination at altitudes higher than 8,000 feet, but in the autumn of 1950 the 12th Squadron received new and more powerful M-120 photoflash bombs which gave enough light for effective night photography from altitudes of up to 25,000 feet. Provided the 12th Squadron could obtain night cameras with longer focal lengths which would permit adequate scale photography, the RB-26's could operate at the higher altitudes where they could secure shoran guidance. Armed with the new photoflash bombs, the 12th Squadron attempted to operate at about 14,000 feet, but, despite much experimentation, the RB-26's never found a night camera which would serve its purposes. As a result, the RB-26 crews continued to operate at the altitudes which were optimum for photography but which denied them the advantages of shoran.[20]

The experience of the FEAF Bomber Command with photographic reconnaissance roughly paralleled that of the Fifth Air Force. At its organization Bomber Command assumed operational control over the 31st Strategic Reconnaissance Squadron, which was returned to the United States in a paper transaction and replaced by the 91st Strategic Reconnaissance Squadron (Medium), effective on 16 November 1950. Located at Yokota Air Base after December 1950, the 91st Strategic Reconnaissance Squadron used its RB-29 aircraft to perform targeting and

bomb-damage assessment photography desired by Bomber Command and special missions ordered by FEAF.[21] Early in the Korean war the RB-29's operated over North Korea with impunity, but on 9 November 1950 the MIG's damaged one of the Superfort photo planes so badly that it crashed on landing at Johnson Air Base. In an effort to maintain its reconnaissance capability in the face of the MIG jets, Bomber Command on 31 January 1951 took control of Reconnaissance Detachment A, 84th Bombardment Squadron, which had brought two light jet RB-45 aircraft to the Far East for tests. Attached to the 91st Squadron, the RB-45 crews managed to outrun and outmaneuver the MIG's for several months, but on 9 April 1951 four of the Red fighters got on the tail of an RB-45 and pursued it until they discharged all their ammunition—amazingly enough without securing any hits. Meanwhile, the RB-29's had been operating into MIG Alley at their own hazard. The continued growth of MIG forces caused FEAF to place MIG Alley off-limits to all unescorted Bomber Command planes on 1 June 1951. Rather than commit eight to 16 fighters to the escort of bomber-type reconnaissance planes, the Fifth Air Force at once arranged for the 67th Wing to accomplish targeting and assessment photography for Bomber Command in northwestern Korea. After October 1951 RB-29's were no longer allowed to enter northwestern Korea, even with escort, but the RB-45's could still enter the MIG-infested area if they had jet fighter escort. After another harrowing experience on 9 November 1951, when an unescorted RB-45 was intercepted by nine MIG's near Haeju, only to escape because of remarkably poor Communist gunnery, FEAF restricted the RB-45's from daylight penetrations into the sensitive areas of northwestern Korea.[22]

After the middle of 1951 Bomber Command generally obtained adequate reconnaissance from the 67th Tactical Reconnaissance Wing, but the arrangement did not give complete satisfaction. Especially during periods of marginal weather, the 67th Wing was often unable to perform bomber reconnaissance as rapidly as Bomber Command desired. The medium bomber wings needed bomb-damage assessment photography as quickly as possible after a strike so that they could repeat it if necessary, before the enemy strengthened his target defenses. In order to be ready to attack targets which suddenly appeared, Bomber Command needed faster targeting photography than the 67th Wing often provided. For these reasons Bomber Command directed the 91st Squadron in January 1952 to convert to night operations and to prepare to reassume responsibility for bomber reconnaissance in northwestern Korea. Tests soon showed that the RB-45's could not be used for night photography because they buffeted too badly when their forward bomb bay was opened to drop flash bombs. From here on out the jet reconnaissance bombers would be used for reconnaissance trips to northeastern Korea, where MIG's seldom were sighted. As the 91st Squadron began to try to convert its RB-29's to night photography, each problem encountered appeared to be individually solvable, but when the problems were met in a system they reacted together to produce new difficulties, almost in geometrical progression. For safety's sake and to receive shoran guidance over northwestern Korea, the RB-29's had to operate at altitudes above 20,000 feet. From such heights the M-46 photoflash bomb did not afford suffi-

cient illumination and the standard night cameras could not secure photography of a scale large enough for photographic interpretation. In July 1952 the 91st Squadron received the M-120 photoflash bombs which were powerful enough for its purposes, but in spite of almost every conceivable experiment the 91st Squadron never secured a long focal-length camera installation which would allow it to perform dependable large-scale photography at night. "With equipment available within this organization," stated Lt. Col. Vincent M. Crane, the 91st's commander, "the capability to take high-altitude large-scale night photography with consistently acceptable results does not exist."[23]

According to Strategic Air Command procedures, B-29 strike crews secured strike photography of the targets they bombed in order to reveal the effectiveness of the effort. When they began to fly at night in October 1951, the Bomber Command crews had even greater need for strike photography because they could no longer visually observe and report the results of their missions. At first the bomber wings attempted to use their standard day cameras in an "open flash" arrangement to secure strike photographs from illumination provided by M-46 photoflash bombs. These cameras produced pictures of a desirable scale, but the negatives displayed much image motion. First to realize that largeness of scale was not so important in strike photography as was the clearness of picture, the 98th Wing pioneered in the employment of standard short-focal-length night cameras, whose photoelectric shutters were tripped by the light of M-46 flash bombs. In the autumn of 1952 Bomber Command standardized on the employment of standard night cameras and M-120 photoflash bombs for strike photography. The improvisation did not produce consistently satisfactory results, and the scale of the photography was too small for photographic interpretation, but the strike photos were usually good enough to permit mission assessors to estimate the success of a strike and the proficiency of an aircrew. In some cases, where bomb damage assessment photography was not rapidly accomplished by the 67th Wing, the B-29 strike photos often indicated whether a quick follow-up strike might be needed.[24]

Deficient in photographic aircraft, plagued by technical problems, and charged to provide strategic reconnaissance in addition to its regular mission, the 67th Tactical Reconnaissance Wing consistently met the requirements laid upon it up until June 1952. Recognizing its token contributions to the Joint Photo Center, the Eighth Army had arbitrarily limited its photo requirements to 1,229 negatives and 5,000 prints a day, and this limitation had lightened the 67th Wing's burden. In July 1952, however, the Eighth Army obtained its long-awaited 98th Engineer Aerial Photo Reproduction Company. Stationed in Seoul, the engineer company gave the Eighth Army a planned capability for handling 5,900 negatives and making 25,000 photographic prints each day. If the ground fighting broke out again in Korea, the Eighth Army estimated that it would require 4,900 negatives a day, but as long as the static ground front prevailed the Eighth Army wanted the Fifth Air Force to provide 3,600 negatives each day.[25] Most of the Eighth Army's expanded photographic requirement was for vertical mosaic surveillance photo cover of the enemy's territory behind his front lines.[26] Recognizing in August that the 67th Wing would be

Colonels Edwin S. Chickering (seated) and Russell A. Berg review aerial photographs at the 67th TWRg in Korea.

hard-pressed to accomplish the expanded requirements for surveillance photography along the Eighth Army's abnormally long front, the Fifth Air Force attempted to effect better economies in the use of available photo aviation. At the suggestion of the Fifth Air Force, the Eighth Army agreed to cooperate in the establishment of a Reconnaissance Branch in the Joint Operations Center, an agency which was mentioned in official air-ground doctrine but which had not been established in Korea. As organized early in September 1952, the Reconnaissance Branch of the Joint Operations Center did little more than centralize the exercise of various duties previously accomplished by other agencies, but the centralized control of the requests for and the scheduling of reconnaissance missions resulted in surprising economies. Following a review of recurring photo-target lists by the Reconnaissance Branch, for example, Bomber Command agreed to delete its requirements for continuing surveillance over many targets at which the enemy had long been inactive.[27]

At a joint reconnaissance conference held in Seoul in August, Fifth Air Force officers worked out an amicable arrangement for the accomplishment of the Eighth Army's surveillance photography. In a war of fluid ground movements the Fifth Air Force accepted the concept that front-line photo cover to the depth of 15 miles within enemy territory ought to be flown daily, as should deep cover of approximately 10 percent of the Army's area of responsibility farther behind enemy lines. The

ground war was not active, however, and the 67th Wing could not cover the Eighth Army's long front lines so often. The Fifth Air Force accordingly agreed to fly front-line cover once a week. In addition to the front-line cover, the Eighth Army's corps were interested in another band of enemy territory running from the 15-mile line to a depth of 30 miles behind the main line of resistance. The Fifth Air Force agreed to fly corps area photo cover three times monthly. For its own part, the Eighth Army claimed an interest in everything from the front lines to the Yalu, but it was willing to settle for photo cover over hostile territory northward from the battlelines to the main supply route connecting Pyongyang and Wonsan. The Fifth Air Force agreed to cover the army area of interest as often as practicable, which turned out to be once every ninety days.[28] Because the 67th Wing could not practically fly all front-line or corps cover in a given day and because some sections of the Eighth Army's front were more vulnerable to enemy attack than others, the Fifth Air Force and Eighth Army agreed to continue to employ block-cover scheduling. The 30-mile zone of enemy territory was subdivided into two tiers of territorial blocks, each about 15,000 meters square. The result was 27 blocks, each of which could be normally photographed at a scale of 1:6,000 or 1:7,000 by a single RF-80 sortie. The Eighth Army G-2 Air in the Joint Operations Center determined the priority in which the blocks would be covered, making his decisions in context with enemy activities.[29] Approximately 30 percent of the Fifth Air Force's photo capability was committed to the front-line and corps surveillance cover on the schedules agreed upon, and the decision not to fly photo cover more frequently was a calculated risk necessitated by a shortage of reconnaissance capabilities.[30]

Even though these arrangements were amicably negotiated, Fifth Air Force and Eighth Army officers soon began to dispute two separate problems concerning photography. One dispute arose from the Eighth Army's rigid requirement for 3,600 photo negatives a day, regardless of weather or the length of daylight. With the beginning of the short days of winter, the Fifth Air Force asked the Eighth Army on 1 November 1952 to reduce its negative requirement to 2,400 a day. The Eighth Army's G-2 Air was willing to accept the fact that the Fifth Air Force could provide only 2,400 negatives a day but insisted that the requirement for 3,600 negatives remain unchanged. Acting on its own for planning purposes, the Fifth Air Force reduced the number of negatives to be delivered to the Eighth Army to 2,400 a day, and during November it actually provided an average of 2,000 negatives a day to the Eighth Army.[31] The second matter of dispute had to do with the scales of photography which were to be considered as acceptable for photographic interpretation. The Fifth Air Force accomplished the Eighth Army's surveillance cover at scales of 1.6,000 or 1:7,000, which was the same scale the Air Force used for target photography. In World War II such scales as these had been the optimum size for photographic interpretation, but jet photo aircraft in Korea flew too fast for their cameras, and most photography was marred by a slight image motion blur. Air Force photo interpreters had learned to live with the problem, for slightly blurred photography was better than none. In September 1952 Eighth Army interpreters incorrectly assumed that larger image sizes would improve

their visual acuity and suggested that they would like to have 1:3,000 scale surveillance photography.[32] Confronted by a loss and damage rate which was high for reconnaissance aircraft in October 1952, General Barcus issued the rule that reconnaissance crews would fly at altitudes of not less than 9,000 feet when within 30,000 yards of the front lines and at heights of not less than 12,000 feet over any heavily defended target. Under this rule Marine Banshee jets, which mounted a 24-inch oblique camera, could still take a few of the oblique photographs that the Eighth Army wanted from high altitudes, but Fifth Air Force planes were no longer able to accomplish Army requests for large-scale special photography or oblique photography, since most of these photo objectives were along the front lines. On 1 November the Fifth Air Force accordingly notified the Eighth Army that "only in rare instances...with ample justification" would it accept requests for 1:3,000-scale photography or low-level obliques within 30,000 yards of the front lines.[33]

After much discussion Fifth Air Force and Eighth Army officers cleared up some of the controversy, though not to the complete satisfaction of either side. Instead of arbitrarily defining its requirements in terms of so many negatives a day, the Eighth Army agreed to submit valid and justifiable requests for aerial reconnaissance to the Reconnaissance Branch of the Joint Operations Center, where final acceptance or rejection would be made. In a compromise concerning photographic scales, the Fifth Air Force agreed to fly front-line cover every fourth week and corps cover once a month at a scale of 1:5,000. At other times the scale would normally be 1:7,000. In the front-line areas, where reconnaissance planes were exposed to heavy ground fire, the Fifth Air Force could not ordinarily agree to accept requests for photos in scales larger than 1:4,000 or for oblique photographs which would require flight altitudes of less than 9,000 feet. In the event of a ground emergency, the Fifth Air Force promised to review all these operational restrictions. The Eighth Army tacitly agreed to all these policies, but the G-2 Air consistently continued to request more photo sorties than the Fifth Air Force could fly. And the G-2 also continued to request low-level oblique photography, explaining that he did not wish to discourage field commanders from seeking such photography as they needed.[34]

Despite the fact that the 67th Tactical Reconnaissance Wing was handicapped by the failure of USAF reconnaissance systems to keep pace with the requirements of a jet air age, it nevertheless far outstripped all existing reconnaissance performance records. In Europe during World War II the highest number of sorties flown in any month by a Ninth Air Force reconnaissance group was 1,300 in April 1945. In Korea the 67th Group flew 2,400 sorties in May 1952. From D-day to VE-day in Europe, the sortie rate of the average Ninth Air Force reconnaissance group was 604 sorties a month, but in the 12-month period of April 1952 through March 1953 the 67th Group averaged 1,792 sorties per month. In these same comparable periods the photo group which supported the Third U.S. Army in Europe made 243,175 negatives, while the 67th Group in Korea made 736,684 negatives. Since the 67th Wing accomplished far more reconnaissance than did similar units in World War II, it would be logical to assume that it more than satisfied requirements laid upon it.

A C-124 Globemaster soars past Mount Fuji, Japan.

Such, however, was not true. In March 1953, for example, the Fifth Air Force furnished the Eighth Army with 64,657 photographic negatives representing a several-time coverage of 129,314 square miles of Korean soil, and yet the Eighth Army counted its requests as being only 75 percent accomplished. Thus, while reconnaissance units in Korea flew more sorties and accomplished more photography than ever before, a still larger amount was requested. At the end of the Korean war, moreover, Eighth Army representatives said that reconnaissance requirements would be even greater in future wars. Calculating requirements on the basis of a 75-mile front and a 1:5,000 scale, Eighth Army planners stated that a field army would require 5,000 photographic negatives a day in defensive situations and 6,000 negatives a day during offensives. After examining these requirements, FEAF doubted that the national resources could sustain such an immense reconnaissance effort in a future global conflict, unless other forces could be reduced proportionately with the increased expenditure for reconnaissance.[35]

### *2. Flexible Air Transport Sustained Combat in Korea*

As employed in Korea, the FEAF Combat Cargo Command and the 315th Air Division represented a new concept in transport aviation—one fleet of cargo planes was to be sufficiently flexible to handle airborne assault and air-dropped resupply as well as airlanded movements of cargo and personnel. Maj. Gen. William H. Tunner and his staff officers brought the concept to Japan when they organized the FEAF Combat Cargo Command (Provisional) on

26 August 1950. After the provisional organization proved its merit, it was replaced by the regularly constituted 315th Air Division (Combat Cargo) on 25 February 1951. With the passing months command of the 315th Air Divison devolved successively upon Brig. Gen. John P. Henebry (8 February 1951), Colonel Cecil H. Childre (26 February 1952), and Brig. Gen. Chester E. McCarty (10 April 1952),* but the basic organizational concept of the theater airlift effort did not change. Each of the commanders was dedicated to the principle that given direct responsibility to the theater air commander and continuous centralized control over subordinate transport units, a single airlift command with one fleet of aircraft could successfully carry out all airlift missions. Centralized control and responsibility and flexible airlift were the answer to reliable and adequate air transportation.[36]

Under the Far East Command air-transport control and priorities system established in August 1950 and continued throughout the war, whereby the Far East Command Joint Air Priorities Board allocated airlift capacity to using commands in tonnages and the Joint Airlift Control Organization (JALCO) made known the priorities of air-transport movements,† the 315th Air Division was not concerned with the allocation of its airlift capabilities, or with the designation of priorities for the movements of individual shipments of men or materiel. But the 315th zealously maintained its responsibility for determining how it would most efficiently execute its assigned tasks. Organizational actions within the 315th varied according to the transport task being performed, but all missions were closely scheduled, controlled, and reported. The 315th's Transport Movement Control section functioned as a nerve center which directed the movement of all transport aircraft. Other headquarters sections assisted in planning and ordering missions, but Transport Movement Control monitored and controlled all airlift operations. If a day's operations did not proceed as scheduled, the duty officer in Transport Movement Control made decisions to change the plans. When unforeseen circumstances, such as unfavorable weather, interrupted cargo lifts, the Transport Movement Control duty officer made immediate readjustments after consultation with the Army or Air Force coordination officer in JALCO. Transport Movement Control possessed communications which permitted it to reach aircraft in flight or on the ground in Korea and to divert them where they were needed.[37]

Centralized scheduling and continuous control permitted the 315th Air Division's small fleet of transport aircraft to accomplish what may well have been "the greatest airlift." During the Korean hostilities the 315th Air Division and its predecessor command employed an average of 210 possessed transports (of which an average of 140 were kept combat ready) and flew 210,343 sorties. These sorties lifted 307,804 medical air-evacuation patients, 2,605,591 passengers, and 391,763 tons of air freight. Altogether, the 315th Air Division and the FEAF Combat Cargo Command flew 15,836,400 ton miles and 128,336,700 passenger miles.[38] The concept of flexible air transport stood the 315th Air Division in good stead as it managed the changing transport tasks presented to it during the Korean

*General McCarty was promoted to Major General on 23 June 1953.
†*See* Chapter 5, pp. 154-156.

Personnel boarding a C-119 at the Air Logistic Force's 6148th Depot Wing in southern Japan for the trip to Korea.

hostilities. As a general rule, the major work of the 315th Air Division was to transport airlanded cargo and personnel to and from Korea and Japan.* Whenever possible, the 315th Air Division attempted to schedule two-way traffic with Korea. Thus transport aircraft which laid down air cargo at Korean airfields lifted air-evacuation patients back to hospitals in southern Korea or in Japan. During the months of heaviest ground fighting medical air evacuation casualties dominated the outbound passenger lists, but with the beginning of the truce talks in July 1951 casualties took a sharp drop and the outbound transport space was utilized for an expanded rest and recreation troop movement to Japan. The Eighth Army had instituted "Operation Relax" on 30 December 1950, whereby some 200 battle-fatigued men were given five-day passes to Japan each day, and FEAF inaugurated a similar program for its people in Korea on 19 January 1951. The Far East Command standardized the "R&R" program on 18 September 1951, when it ordered that "packets" of 46 persons with an officer or noncommissioned officer in charge would be airlifted. During 1952 the "R&R" traffic amounted to a substantial portion of all persons airlifted, and by the end of June 1953 the 315th had lifted 800,000

*Effective on 1 May 1951, the 315th Air Division reassumed the responsibility for operating the scheduled interisland flights in the Far East, which had been taken over temporarily by the Military Air Transport Service in July 1950. These flights connected Japan with Iwo Jima, Guam, Okinawa, Formosa, and the Philippines.

"R&R" passengers between Korea and Japan—enough people to populate a city the size of Boston, Massachusetts.[39]

In addition to its scheduled flights which lifted cargo and passengers, the 315th Air Division airlifted entire Army and Air Force tactical organizations and their equipment. Observing early in the war that unit air movements were nearly always emergencies, the 315th Air Division prepared a uniform plan for air movement and sent out instructional teams to lecture and to assist units in preparing air-mobility plans. A comprehensive booklet, entitled *Here Today—Gone Tomorrow*, was distributed in the Far East Command. Although experience showed that Air Force and Army tables of unit equipment were not completely suited to air movements, the 315th nevertheless managed some highly effective unit movements. An outstanding example was the 315th's "off-the-cuff" movement of the 187th Airborne Regimental Combat Team from Ashiya and Brady airfields to Pusan East Airfield (K-9), whence the paratroopers went by landing ship to quell rioting prisoners of war at Koje-do. Alerted at 0900 hours on 16 May, the last of 160 transport planes landed at Pusan at noon on 17 May 1952, completing a lift of 2,361 persons and 889.1 tons of equipment, including mortars, vehicles, weapons, and ammunition. The largest single airlift of an Air Force unit extended over a three-week period beginning on 8 July 1952, when the entire 474th Fighter-Bomber Wing was moved by air from Misawa Air Base in northern Japan to Kunsan Airfield (K-8) in western Korea.[40]

The tactical situation in Korea made for periodicity in movements of air-dropped and airlanded supplies to Korea—the former being more important in fluid ground warfare and the latter being more reliable and always practiced when the tempo of ground fighting permitted. Although supply from the sky for fighting ground troops was not new, the Korean battles of 1950 and 1951 required the greatest airdrop resupply operations in history. Successful accomplishment of drop techniques allowed the 315th to assert: "Air drops have replaced the glider. We drop anything by parachute that can be loaded into a glider with less ... loss of life and equipment." At Ashiya the 2348th Quartermaster Airborne Air Supply and Packaging Company and the successor 8081st Army Unit packaged, loaded, and lashed; and provided the trained "kickers" who ejected the cargo over drop zones in Korea. As the 315th was free to admit, airdrops were not always "a big, howling success." A 10 percent loss of airdropped supplies was assumed, but the 315th calculated actual losses at something less than 3 percent. One of the major problems in airdropping supplies was poorly marked or inaccessible drop zones. No small part of these troubles was caused by the ground troops' lack of training in airdrop procedures. Late in June 1951 a 315th liaison party visited Eighth Army battalions and briefed personnel responsible for selecting and marking drop zones. The 315th Air Division also prepared a pamphlet, entitled *Supply from the Sky*, which was of educational value to the ground units. This training, however, came too late to be of great value, for with the beginning of the truce talks in July 1951 the 315th Air Division received few calls for air-dropped supplies. In order to maintain its proficiency, the 315th continued to fly each month a few "Aching-Back" supply drops, which delivered supplies to isolated Fifth Air Force radar

C-119's drop paratroopers of the 187th Regimental Combat Team during a simulated assault on a Korean drop zone.

stations and shoran beacon units.[41] The periodicity of the airlanded and air-dropped supply requirements ultimately indicated the need for some reorganization of the 6127th Air Terminal Group, which loaded and unloaded airlanded cargo, and the 8081st Army Unit, which loaded, lashed, and kicked airdropped cargo. When one of these organizations worked hardest, the other had reduced responsibilities, and General Henebry urged that the Air Force ought to develop an aerial port squadron which could perform all necessary airlift functions. After maneuver tests in the United States, the Army and Air Force agreed on 23 December 1952 that the Air Force should load and eject airdropped cargo. Well after the end of Korean hostilities, on 8 February 1955, the 6127th Air Terminal Group was replaced by a new-type 7th Aerial Port Squadron.[42]

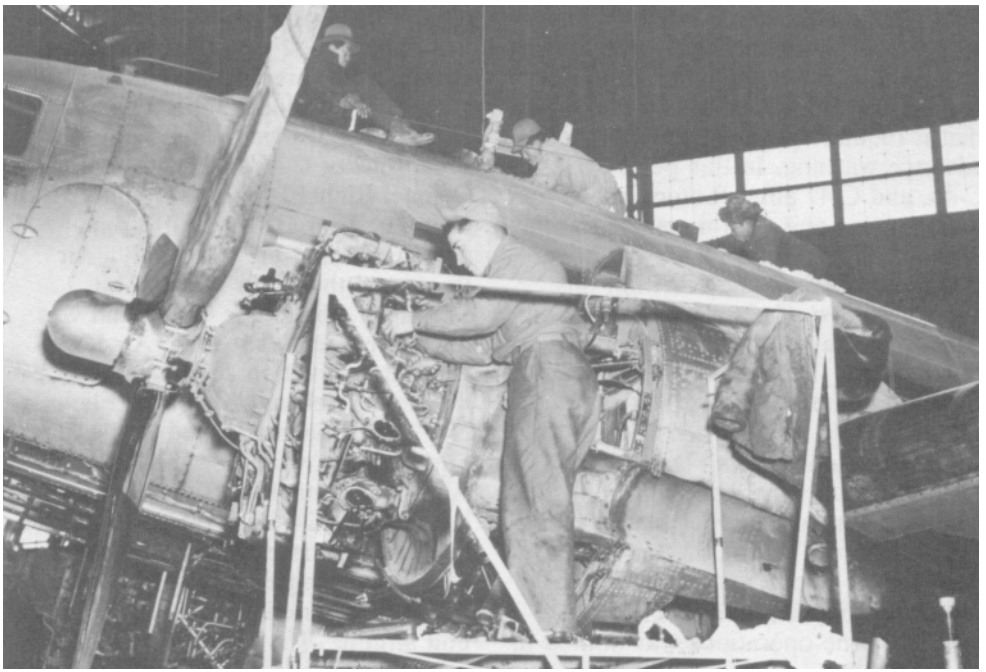
The real test of the validity of the 315th Air Division's concept of flexible airlift came when it twice engaged in airborne assault operations in Korea—the airborne attack at Sukchon-Sunchon in October 1950 and at Munsan-ni in March 1951. Prior to Korea most airborne leaders believed that airborne operations required a joint airborne headquarters with operational control over attached airborne and troop-carrier units. Such a concept—which visualized that air and airborne units should live, train, and operate together for long periods of time—was too expensive of a scarce air-transport effort to be followed in Korea. The successful management of the airborne assault missions in Korea was primarily attributable to an always harmonious relationship between the 315th Air Division and the 187th Airborne Regimental Combat Team. A permanent exchange of liaison officers linked the two headquarters, and small-scale

airborne training was constantly under way except when the 187th was fighting in Korea. For the execution of airborne attacks the 315th Air Division learned that it required a minimum of 72 hours' advance warning. In this period C-119, C-46, and C-47 aircraft stood down for maintenance and then marshaled at the forward airfield from which the operation would be launched. Within this same period staff planners of the 315th and 187th drew up necessary operations orders. The 315th also arranged for such combat support as was required from the Fifth Air Force. Since only some of its planes were needed for the airborne operation, the 315th continued its larger planes on air-transport tasks during the several days required to launch and resupply the airborne troops. While its experience with airborne operations was limited to the airlift required to lift, drop, and resupply a single airborne regimental combat team, the 315th Air Division was confident that its flexible procedures could be "successful where airborne units of army size and a considerable number of transport groups are employed."[43]

The concept of flexible air transport enabled one small fleet of air transports to accomplish all theater airlift tasks, but the 315th Air Division nevertheless long knew the consequences of the hurried deployments of a heterogeneous collection of troop-carrier units to the Far East in 1950, some permanently and some supposedly for a short stay of temporary duty. At its activation in January 1951 the 315th Air Division assumed command or control over Colonel Troy W. Crawford's 374th Troop Carrier Wing, with two squadrons of C-54's at Tachikawa; Colonel Frank Norwood's 61st Troop Carrier Group, with three squadrons of C-54's at Ashiya;* Colonel John R. Roche's 437th Troop Carrier Wing, with four squadrons of C-46's at Brady Air Base; Colonel Richard W. Henderson's 314th Troop Carrier Group, with four squadrons of C-119's at Ashiya Air Base; and the 374th Wing's 21st Squadron which flew C-47's and was for the moment at Itazuke Air Base. Upon its arrival on 26 November 1950 the Royal Hellenic Air Force Flight No. 13 had been attached to the 21st Squadron, as would be the Royal Thai Air Force Detachment for a time when it arrived on 24 June 1951.[44]

The deployment of the 315th Air Division permitted a maximum utilization of the varied characteristics of its unit aircraft. The C-54's performed most efficiently on long hauls and were the major personnel and cargo carriers and air-evacuation planes. At Tachikawa the 374th Wing was able to airlift the men and supplies pouring into Haneda International Airport and the port of Yokohama. At Ashiya the 61st Group was near the Kokura general depot, from which large quantities of combat materiel were lifted to Korea. The C-119's were the planes best fitted for airborne and airdrop operations, and their roomy and rear-loading cargo compartments could accommodate bulky loads with ease of handling. At Ashiya the 314th Group was near the Kokura depot and the home camp of the 187th Airborne Regimental Combat Team. The old C-46's could haul cargo and personnel and were able when need be to drop paratroopers or parasupply bundles. At Brady the 437th

*Hurriedly dispatched to Japan in December 1950, the 61st Group brought two of its own squadrons and the 4th Squadron which belonged to another group. This anomalous situation was remedied on 16 November, when the 4th Squadron's designation was returned to its parent group and the 14th Squadron's designation was transferred to Japan.



A C-47 undergoes a 2000-hour inspection at a repair hangar of the 18th Fighter Bomber Wing in Korea.

Wing was near its sources of cargo. The ancient C-47's of the 21st Troop Carrier Squadron customarily hauled cargo to the small combat airstrips of Korea. Employed where it was needed, the 21st "Kyushu Gypsy" Squadron during 1951 alone was located at Itazuke, Tachikawa, Taegu, Kimpo, and Ashiya.[45] Each aircraft type possessed by the units of the 315th Air Division had special characteristics, and by its unit deployment the 315th attempted to locate the various aircraft types for the most efficient performance of what they could do best.

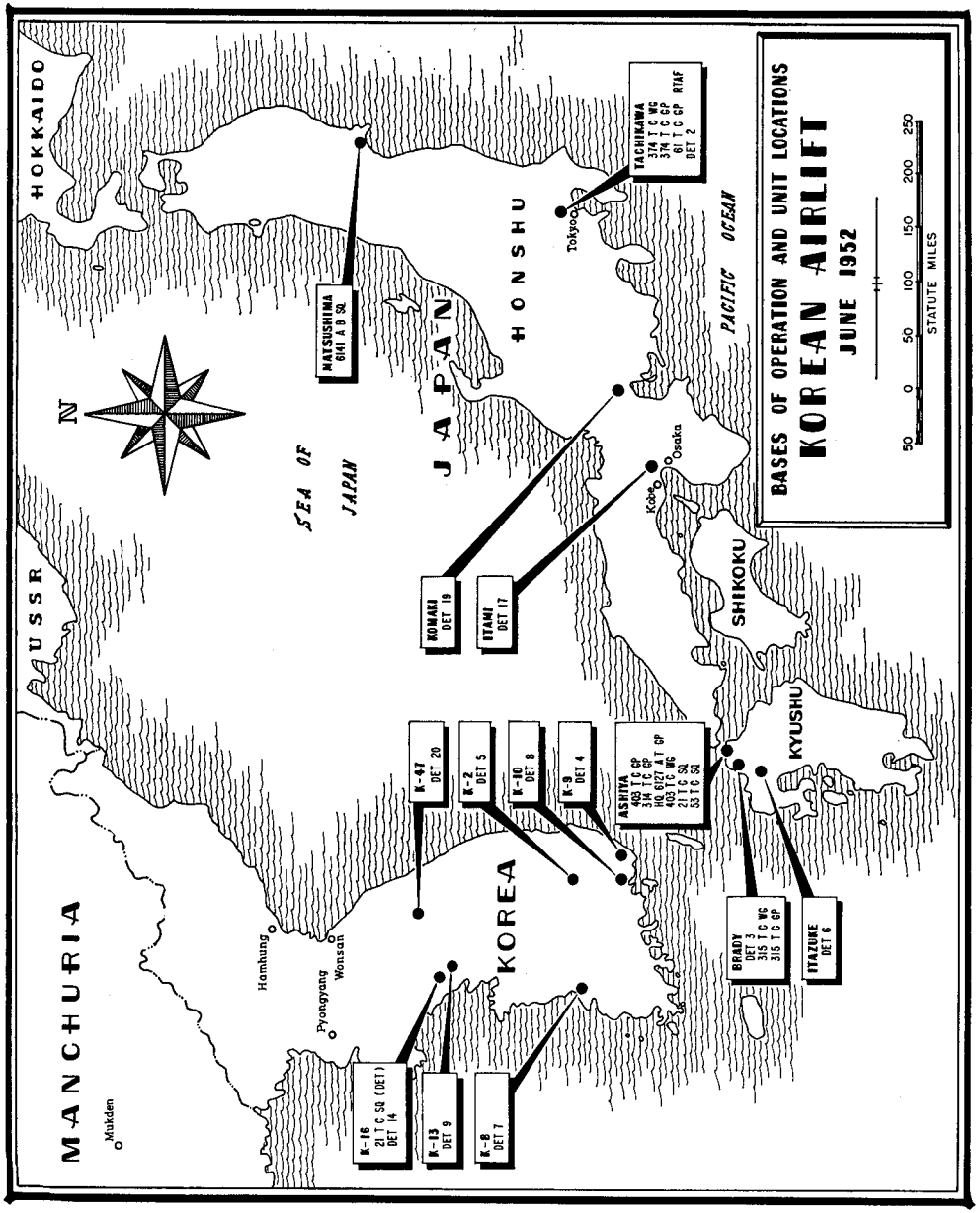
Looking back at the Korean war, General McCarty remarked that the needs of flexible theater air transport could have best been served if the 315th Air Division had possessed specially designed "all-purpose theater-airlift type" aircraft which could have performed any theater airlift task and could have been easily diverted from one task to another.[46] During 1951 and 1952 the 315th Air Division sought solutions for problems arising from its several types of aircraft and the logistical support available for these aircraft. Initially established as an operational headquarters, the FEAF Combat Cargo Command lacked logistical capabilities, and the 315th Air Division long suffered the consequences. At Ashiya Air Base the 6122d Air Base Group provided services to the 61st and 314th Troop Carrier Groups. With only 704 troop spaces, in its table of distribution, the air-base group maintained a base with a population approaching 5,000 men. After General Henebry long argued the case FEAF eventually allowed a redesignation creating the 6122d Air Base Wing

at Ashiya effective on 5 November 1951, but the new organization continued with the same manning as the group had because FEAF could authorize no additional personnel.[47] The deficient logistical support structure at Ashiya combined with insufficient USAF supply-support programming to send the serviceability rate of the C-119 Flying Boxcars plummeting downward. The loss of more and more C-119's from the airlift reduced the 315th's capability for air-assault operations. From the beginning of its employment in Korea, despite its augmentation with a fourth squadron, the 314th Troop Carrier Group had never possessed strength enough in C-119's to launch the 187th Airborne Regiment in one lift.[48]

Aside from the logistical concerns of his command, General Henebry pointed out in April 1951 that he was operating old-type transport aircraft. He argued that if he had more modern aircraft with larger load capacities, he could accomplish his mission with fewer planes, crews, and less congestion of the crowded airfields in the Far East. In order to test Henebry's hypothesis, USAF ordered the Air Proving Ground Command to send a giant Globemaster C-124 to Japan for service tests. Beginning on 27 September 1951, the C-124 made 26 flights to and from Korea, carrying an average cargo load of 34,400 pounds, or double the maximum carried on the same runs by C-54's. When the results of these tests seemed favorable, Henebry asked USAF to hasten the conversion of the 374th Troop Carrier Wing from C-54's to C-124's, which was already programmed to occur in the autumn of 1952.[49]

In October 1951 USAF proposed a troop-carrier reorganization plan which sought to meet many of the 315th Air Division's unit organizational problems. In order to provide a wing-base structure for Ashiya Air Base, USAF proposed to trade a new C-119 wing for the 61st Troop Carrier Group. With two C-119 groups, each with three squadrons, the 315th Air Division would be able to handle the 187th Regiment in one lift. At Ashiya the C-119 wing structure would support both C-119 groups. As Henebry wished, USAF agreed to speed the conversion of two squadrons of the 374th Troop Carrier Wing to C-124 aircraft by beginning the transfers of planes in May 1952. When this proposition matured into a plan, it was changed in a few respects. The 403d Troop Carrier Wing, which had been recalled to federal service at Portland, Oregon, on 1 April 1951, would be transferred to the theater less aircraft, and it would initially share the aircraft held by the 314th Group. The latter's group's extra 37th Squadron would be returned to the USAF on paper, and the two C-119 groups would each be authorized three squadrons with a total of 48 C-119's as unit equipment. In order to keep one C-54 squadron in the Far East, USAF agreed that the 374th Wing could retain one of the 61st Group's squadrons which would be redesignated as the 21st Squadron. The old 21st "Kyushu Gypsy" squadron would be replaced by a table of distribution unit which would continue to fly C-47 aircraft. Beginning in the spring of 1952, the reorganization would be effected over a period of several months.[50]

The reorganization of the 315th Air Division's subordinate units began on 10 April 1952, when Brig. Gen. Chester E. McCarty, who had commanded the 403d Wing since its recall to federal service, assumed command of the 315th Air Division. At Ashiya Air Base Colonel Philip H. Best discontinued the


BASES OF OPERATION AND UNIT LOCATIONS
KOREAN AIRLIFT
JUNE 1952
STATUTE MILES
50 0 50 100 150 200 250
N
HOKKAIDO
HONSHU
JAPAN
SEA OF JAPAN
PACIFIC OCEAN
USSR
MANCHURIA
KOREA
SHIKOKU
KYUSHU
Mukden
Hamhung
Pyongyang
Wonsan
Tokyo
Kobe
Osaka
MATSUSHIMA
6141 A B SQ
TACHIKAWA
374 T C WG
374 T C GP
61 T C GP RTAF
DET 2
KOMAKI
DET 19
ITAMI
DET 17
ASHIYA
HQ 6127 A T GP
374 T C GP
HQ 6127 A T GP
403 T C WG
21 T C SQ
53 T C SQ
K-47
DET 20
K-2
DET 5
K-10
DET 8
K-9
DET 4
K-16
21 T C SQ (DET)
DET 14
K-13
DET 9
K-8
DET 7
BRADY
DET 3
315 T C WG
315 T C GP
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6122d Air Base Wing on 14 April 1952 and simultaneously assumed command of the 403d Troop Carrier Wing, which comprised personnel of the 403d Group transferred physically from Portland and personnel and equipment of the 314th Group which was already in the theater. Since Colonel Best had been named to attend the Air War College, Colonel Maurice F. Casey, Jr., took command of the 403d Wing on 15 May 1952, and immediately attacked the problem of restoring the faltering operational capabilities of the Flying Boxcars.[51] Colonel Casey's task was not enviable, for only 28 out of 71 C-119's were in commission during June 1952 and none of these planes were counted to be actually safe for flying. Stern measures being required, General Weyland on 19 June informed General Clark that the Boxcars would have to be relieved from all routine airlift employments. Although FEAF and the 315th Air Division had long urged remedial action for the C-119 situation, the collapse of these aircraft finally brought strong logistical support. The USAF Air Materiel Command prodded manufacturers who had been delinquent in delivering spare parts and expedited deliveries of the needed spares to Japan. The USAF Tactical Air Command provided deliveries of serviceable and newer model C-119's, permitting the 403d Wing to return some of its "maintenance hogs" to a newly opened modification center in Birmingham, Alabama, for complete reconditioning. On 2 September 1952 Colonel Casey announced the beginning of a month-long "Operation Get Ready" which he hoped would put a standard 75 percent of the wing's aircraft in commission. Spurred by this challenge, the 403d Wing got its in-commission rate up to 60.2 percent in September, and the growing airlift capabilities allowed Colonel Casey on 12 September to release the 53d Troop Carrier Squadron whose C-54's had been the main airlift capability out of Ashiya during the summer, for return to the United States with the 61st Group. In October 1952 the 403d Wing was able to participate in the airborne feint which was a part of the United Nations Command amphibious demonstration off eastern Korea.[52]

The Flying Boxcar C-119's continued to present logistical and operational problems, but these planes never again lost their airlift capabilities. On 1 January 1953, when the reservist 403d Wing was relieved from the federal service and replaced by the 483d Troop Carrier Wing, Colonel Casey still possessed 46 of the original C-119's which had come to Japan in 1950. Many of these planes were now so decrepit that they contributed little to airlift capabilities. As a class, moreover, the Flying Boxcars continued to be temperamental aircraft. Because of landing-gear weaknesses, the C-119's were not allowed to lift more than six tons of cargo to Korea. Propellers, like landing gears, were weak articles on the C-119's, for they had hollow steel blades which developed infinitesimal cracks and then failed in flight. As a result of a sweeping investigation held following the loss of a C-119 in March 1953 because of propeller malfunctions, General McCarty decided to bar C-119's from carrying passengers, but he allowed them to continue to haul cargo and to engage in airborne training with paratroopers, who knew how to parachute to safety if they had to do so. Benefiting from a favorable receipt of replacement C-119's, the 483d Wing attained its unit-equipment allocation of 96 C-119's in April 1953. With improving supply support and the receipt of newer C-119's as replacements, more-

Seven tons of fresh fruit will be loaded into this C-119 for delivery to frontline units in time for Christmas, December 1952.

over, the 483d Wing's technicians were able to check many minor discrepancies before they could grow to major proportions. During the first half of 1953 the 483d Wing kept 67.2 percent of its aircraft continuously in commission, and in June 1953 it had 78.8 percent of its C-119's in commission.[53]

At Tachikawa Air Base Colonel C. W. Howe began the conversion of the 374th Troop Carrier Wing to C-124 Globemasters, and Colonel J. W. Chapman, who became wing commander on 9 August 1952, completed the job. Preparatory to the conversion, the 61st Troop Carrier Group moved with its 15th Squadron from Ashiya to Tachikawa on 26 March, in order to continue the airlift while the 374th Group's two C-54 squadrons stood down during conversion. The 374th Wing used the six C-124's it received in May 1952 for transition training and assigned the seven it received in June to its 6th Troop Carrier Squadron. General McCarty piloted the first operational Globemaster flight from Japan to Korea on 3 July, and by 25 August these huge planes were scheduled on a one-per-day flight between Tachikawa and Korea. At the end of September the 374th Wing had 26 C-124's and was up to unit equipment plus combat support strength. According to agreement, the 61st Group and its 15th and 53d Squadrons began to phase its C-54's out of the airlift on 1 November and were officially relieved for return to the United States on 21 November. Remaining at Tachikawa, the 14th Squadron was redesignated as the 21st Squadron on 1 December 1952,

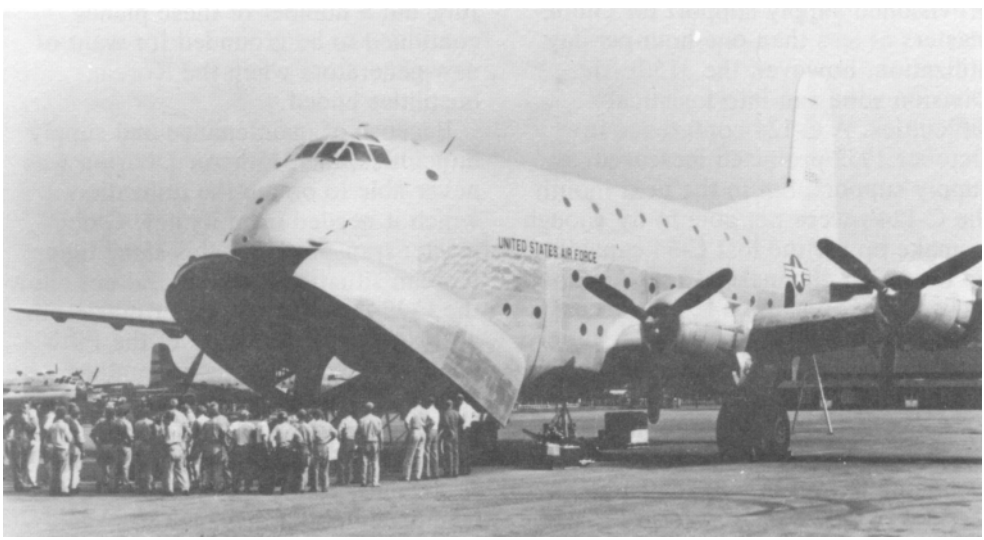
at which time the 6461st Troop Carrier Squadron was organized at Ashiya to receive the personnel and equipment of the Kyushu Gypsy Squadron.[54]

When it asked for two squadrons of C-124A Globemasters, the 315th Air Division had been willing to pioneer into the unknown. The giant aircraft was designed to gross 175,000 pounds on takeoff, but only Kadena Air Base could handle such a load weight in the Far East. Fearing damage to its fields, the Fifth Air Force would allow the C-124's to land only at Kimpo, Taegu, Suwon, and later Osan-ni. In order to keep the Globemasters off its more important tactical fields, the Fifth Air Force employed its aviation engineers and built a heavy-duty runway especially for combat cargo operations at the Seoul Municipal Airfield (K-16). This project was completed on 27 October 1952. Even when limited to a landing weight of 160,000 pounds, the 315th Air Division figured that the Globemasters, given five hours a day utilization, would markedly increase its airlift capabilities. Since USAF had provisioned supply support for Globemasters at less than one-hour-per-day utilization, however, the 315th Air Division soon ran into logistical difficulties. A C-124 conference in October 1952 promised increased supply support, but in the next month the C-124's were not able to fly enough to make up for the lost C-54 capability on the cargo channel between Tachikawa and Korea. As a result, excess air freight from Tachikawa was shipped by rail express to the air terminals in southern Japan and lifted to Korea by C-119's and C-46's. In December 1952 Globemaster supply support was beginning to improve, when suddenly the newer C-124's assigned to the 22d Squadron developed leaks in their gasoline tanks and had to be grounded for repairs. Pending the completion of this work on 17 February 1953, the 6th Squadron used the grounded squadron's personnel and supply support and flew its planes overtime to make up for the lost effort. Everything now went well until 29 May, when a Globemaster's number-two engine caught fire in flight. On 11 June another Globemaster had a fire in one of its engines. General McCarty asked the USAF Air Materiel Command to send out a team to investigate the fires, which were apparently caused by faulty generators. No one realized it but these generator fires portended what would be history's worst air disaster up to the time. On the evening of 18 June 1953 a 22d Squadron Globemaster lost power from an engine on takeoff and spun into the ground, killing all 129 passengers and crewmen. Once again a generator had failed and had fired an engine. After this crash at Tachikawa, Colonel Chapman immediately grounded all C-124's. Following a rigid examination by inspectors, most C-124's were released for flight on 8 July, but a number of these planes continued to be grounded for want of new generators when the Korean hostilities ended.[55]

Because of maintenance and supply difficulties, the 315th Air Division was never able to obtain the utilization which it needed from its new Globemaster transports. At this same time Korean situational factors did not allow the C-124's to develop their maximum airlift potential. Because of the Fifth Air Force's restrictions on landing weight, the C-124 could carry a maximum potential payload of only 36,000 pounds. Because of these same restrictions, most of the Globemaster flights terminated either at Seoul Municipal (K-16) or Taegu (K-2) airfields. As a matter of practice the Korean airlift

sought expeditiously to deliver critical items, and backlogs of cargo seldom developed. Under this circumstance the Globemasters had trouble filling up with 18 tons of permissible cargo. In the interest of flying safety, moreover, General McCarty standardized passenger loadings on the C-124's at 120 persons, well short of the number of people they could have carried. Globemaster payloads accordingly averaged only 24,346 pounds per flight between November 1952 and April 1953. Since most Globemaster flights terminated at Seoul or Taegu, while the Fifth Air Force required daily delivery of small-package loads of air freight and air passengers at its tactical K-sites, the 315th Air Division moved the 6461st Troop Carrier Squadron and the RHAF detachment to Seoul on 1 February 1953 to serve as a feeder airline for the Globemaster route. As the war closed FEAF stated that the C-124 "proved itself a valuable addition to the fleet of transport aircraft." The report noted, however, that an airlift command employing Globemasters would require a balanced capability of smaller transports which could feed air cargo from Globemaster terminals to tactical airfields.[56]

Although classed as obsolete, the 315th Air Division's four squadrons of C-46 aircraft based at Brady Air Base provided a reliable cushion of airlift capability which allowed the division to maintain an adequate airlift in months when the more spectacular Globemasters and Boxcars were in logistical doldrums. In order to return the old designation to the Air Reserve, Colonel Kenneth W. Northamer activated the 315th Troop Carrier Wing with personnel and equipment received from the 437th Wing at Brady on 10 June 1952.[57] Benefiting from good supply support and high-in-commission rates, the 315th Wing carried a heavy workload on a sustained basis, even though a limited

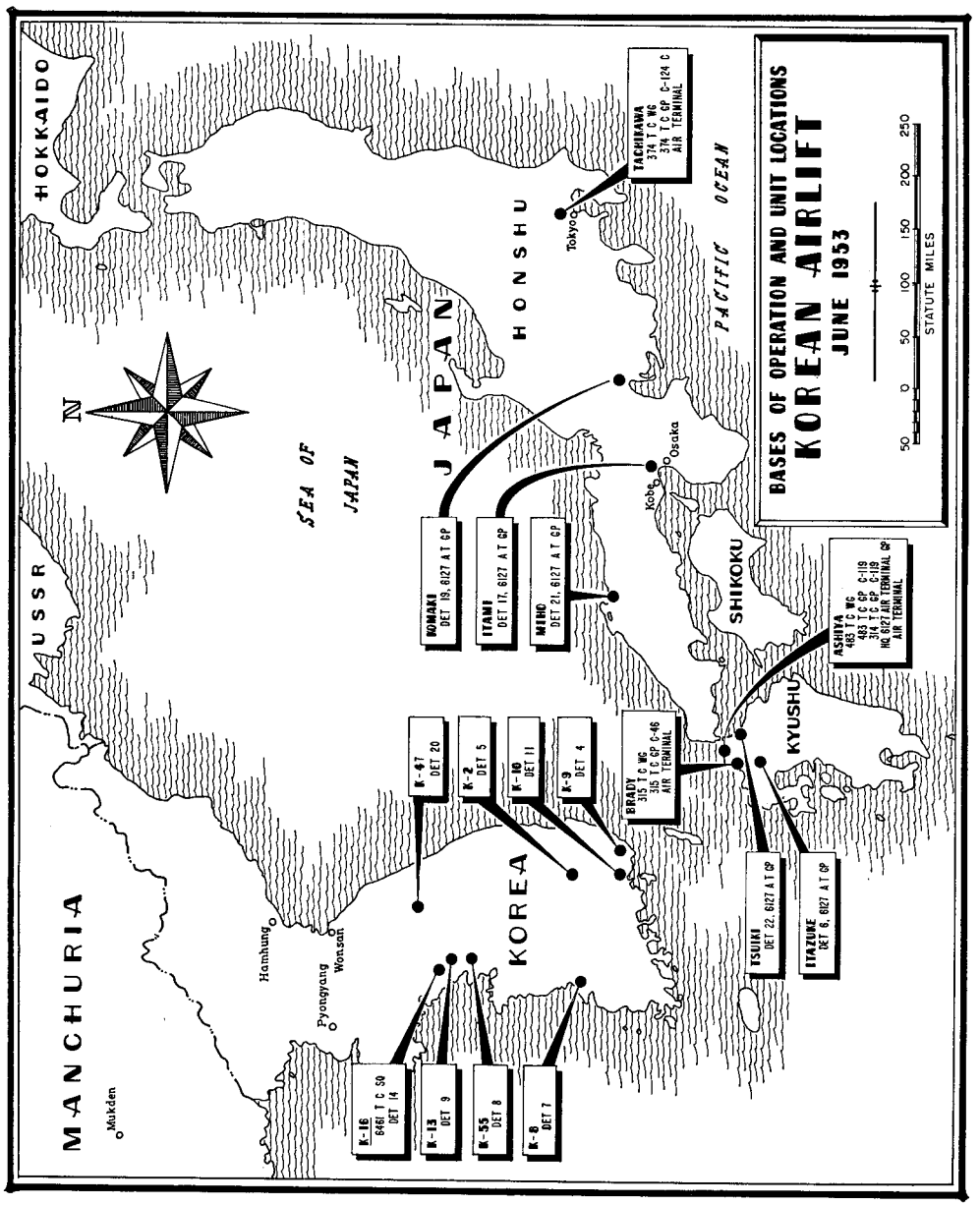



This giant C-124 "Globemaster II" will carry 30 tons of cargo on the Korean airlift.

availability of aircrews and trained mechanic replacements held the C-46 utilization rate down to four hours a day. When necessary, the Commando aircraft could do almost anything. They dropped supplies and paratroops to spell the ailing C-119's. After September 1952, when the C-54's left Ashiya, the C-46's handled routine medical air evacuation between Korea and southern Japan. When the FEALogFor moved its personnel processing center from Iwakuni to Tachikawa and the C-124's could not absorb the extra load, the 344th Squadron moved to Tachikawa on 15 December 1952 to provide airlift for some 200 combat replacements and returnees who moved between central Japan and Korea each day. In March 1953, when the Boxcars were forbidden to carry passengers, the 315th Wing moved all personnel between Korea and southern Japan.[58] But the 315th Wing was the sole remaining USAF organization equipped with the old Commando aircraft, and USAF planned its conversion to C-119's beginning in July 1953. Hearing this news in December 1952, General McCarty admitted that the C-119's were more desirable aircraft than the C-46's under normal circumstances, but he wanted to maintain the old Commando aircraft in service because of their reliability. USAF agreed to postpone conversion until January 1954, but even this was too soon to suit FEAF, which asked permission to keep the C-46's in service until the end of the Korean war. This time USAF was no longer willing to postpone the conversion because the Tactical Air Command was having trouble furnishing C-46 replacement personnel and it would be faced with difficulties in storing the Boxcars ordered for the 315th Wing. As events transpired, the Korean hostilities would be completed before the old Commando C-46's were to be relieved from combat.[59]

At the end of the Korean war General Weyland reported that FEAF had learned three major lessons concerning the command and employment of air-transport aviation: (1) Airlift missions and priorities should be established by the theater commander. (2) Airlift could not be allocated exclusively for the use of any service except for special one-time requirements. (3) All theater airlift should be concentrated to a maximum degree in one command for flexibility and best utilization.[60] Despite the demonstrated validity of these lessons and a recognition that airlift capability was a limited quantity which demanded the most efficient use, these lessons were evidently not accepted by the Navy, or the Army, and not wholeheartedly by the Air Force.

Throughout the Korean war the Naval Forces Far East operated an air-transport organization into and within the Far East theater for fleet logistical support. For a short time in the autumn of 1950 the FEAF Combat Cargo Command exercised operational control over a Marine R5D (C-54) squadron, but Marine transport units which subsequently came to the Far East were exempt from the control of the theater airlift commander. On 30 August 1951, moreover, Marine Helicopter Transport Squadron 161 arrived at Pusan with 15 Sikorski HRS-1 helicopters, and, in accordance with the Navy's wishes, General Ridgway attached the squadron to the 1st Marine Division. In the autumn of 1950 the Navy and Marines accepted approximately 10 percent of Combat Cargo Command's airlift capability, but later, when they had their own airlines in operation, they required something less than 1 percent of the 315th Air Division's capability.[61]


BASES OF OPERATION AND UNIT LOCATIONS
KOREAN AIRLIFT
JUNE 1953
STATUTE MILES
50 0 50 100 150 200 250
HOKKAIDO
HONSHU
SHIKOKU
KYUSHU
JAPAN
SEA OF JAPAN
PACIFIC OCEAN
USSR
MANCHURIA
KOREA
N
Mukden
Hamhung
Pyongyang
Wonsan
Kobe
Osaka
Tokyo
K-16 8461 T C SQ DET 14
K-13 DET 9
K-55 DET 8
K-6 DET 7
K-47 DET 20
K-2 DET 5
K-10 DET 11
K-9 DET 4
BRADY 315 T C WG 315 T C GP C-46 AIR TERMINAL
TSUIKI DET 22, 6127 A T GP
ITAZUKE DET 6, 6127 A T GP
ASHIYA 483 T C WG 483 T C GP C-119 374 T C GP C-119 HQ 6127 AIR TERMINAL GP AIR TERMINAL
BOMARI DET 19, 6127 A T GP
ITAMI DET 17, 6127 A T GP
MIHO DET 21, 6127 A T GP
TACHIKAWA 374 T C WG 374 T C GP C-124 C AIR TERMINAL

USS *Sicily* launches Sikorsky/Marine Corps HRS-1 helicopters off the west coast of Korea.

In the Joint Action Armed Forces agreements of 1948 USAF was assigned a primary responsibility for providing air transportation and airlift support to the United States Army. Throughout the Korean war the Eighth Army always received the largest portion of the theater airlift. Very early in the Korean war, however, it was evident that helicopter aircraft would be of great importance in the front-lines area. Thus on 10 August the USAF Tactical Air Command moved to meet the need for helicopters by drafting requirements for an assault transport wing, which would possess one group of conventional assault transports and one group of rotary-wing aircraft. USAF approved this proposal and placed orders for cargo helicopters.[62] In Korea the Eighth Army also knew the need for more helicopters, which it desired to employ as organic aircraft within its division, corps, and army headquarters. On 20 August 1950 General MacArthur forwarded the request to the Department of Army. Back in Washington the Department of Army not only ordered substantial numbers of utility helicopters for assignment as organic aviation, but it also planned the activation of several transport helicopter companies which were to be equipped with light-cargo helicopters.[63]

According to the Army and Air Force agreements on aviation, "organic" aircraft—which included aircraft used for such purposes as local liaison, artillery spotting, and courier duty—were defined in terms of airframe weight restrictions, so that a "light" airplane could be assumed to be "organic aviation." On 2 October 1951 Army complaints concerning the restrictive nature of these agreements were momentarily allayed by an agreement between Secretary of the Army Frank Pace and Secretary of the Air Force Thomas K. Finletter. The Pace-Finletter agreement deleted references to the weights of organic aircraft and stated that the Army would

possess organic aircraft needed "as an integral part of its components for the purpose of expediting and improving ground combat and logistical procedures within the combat zone." The "combat zone" was the area from 60 to 75 miles rearward of the battleline. The agreement stipulated that the Air Force had a primary function of providing airlift to the Army, but Army aircraft would also transport supplies, equipment, and small units within the combat zone.[64] In the autumn of 1951 Eighth Army officers were impressed with the utility displayed by Marine helicopters in Korea, and in November 1951 General Ridgway asked the Department of Army to provide four Army helicopter transport battalions, each with 280 helicopters. Korea, Ridgway said, had conclusively demonstrated that the Army vitally needed helicopters, and he recommended that the typical field army of the future should have ten helicopter transportation battalions. On a lesser scale than Ridgway proposed, the Department of Army was favorable to the idea that a field army should have helicopter transport units, and it approved an allotment order assigning four helicopter transport battalions, each with three companies, to a field army.[65]

Although the USAF had always recognized the Army's need for organic aviation which could perform necessary liaison functions, General Ridgway's proposals seemed to aim at the establishment of an Army air-transportation force which would operate within the combat zone. Such an objective duplicated functions which were assigned to the Air Force.[66] In an effort to clear up this jurisdictional controversy, the Army and Air Force jointly approved a second memorandum of understanding on Army aviation on 4 November 1952. This second memorandum renewed a weight limitation on fixed-wing Army aircraft, but defined the Army's authorization for rotary-wing aircraft in terms of functions to be performed within the Army combat zone, an area now said to extend 50 to 100 miles behind the front lines. Within this combat zone Army aviation was charged to transport Army supplies, equipment, personnel, and small units. The Air Force would provide airlift for the movement of Army supplies, equipment, personnel, and units from points outside to points within the combat zone; for the evacuation of personnel and equipment from the combat zone; and for the movement of troops, supplies, and equipment in airborne operations into the combat zone.[67] This second memorandum patently recognized the establishment of an Army category of air-transport aviation. It also required the Air Force to program for helicopter squadrons which would be required in airborne operations but which would be surplus to routine airlift operations.

The Army-Air Force agreements on Army aviation actually had little significance in Korea, for the hostilities were in their last stages before either the Army or the Air Force began to receive the cargo helicopters which they had put on order in 1950 and 1951. According to USAF programming, the 315th Air Division was slated to receive a troop-carrier assault wing in 1954,[68] but the end of the Korean war canceled these plans. Desiring to test H-19C Sikorski light-cargo helicopters in combat, the Army sent its 6th Transportation Company (Helicopter) to Korea. In May 1953 the 6th Company used 12 H-19's to supply three front-line infantry regiments for three days in an exercise called "Skyhook." Late in June the 6th and 13th Transportation Companies (Helicopter) formed an air bridge to a regiment

which was cut off from highway support, enabling it to maintain its position against Red attacks. On the basis of these limited experiences, General Taylor stated that "The cargo helicopter, employed in mass, can extend the tactical mobility of the Army far beyond its normal capability. I hope that the United States Army will make ample provisions for the full exploitation of the helicopter in the future."[69]

During the Korean hostilities the 315th Division functioned as theater airlift, and yet the Navy and Marines ran private airlines and the Army secured authority to maintain its own airlift in the combat zone. Had they been permitted to do so, moreover, the Fifth Air Force and the Far East Air Materiel Command/Far East Air Logistics Force would have operated separate air logistical airlifts. Since some 95 percent of aircraft support items for units in Korea traveled by air and the air wings in Korea were held to small stock levels, the Fifth Air Force was peculiarly vulnerable to anything which disrupted its air transportation. Shortly after the FEAF Combat Cargo Command was established as the theater airlift force, the Fifth Air Force complained that "in altogether too many instances supplies for combat units of the Air Force were backlogged...due to assignment of a higher priority to Army personnel, supplies, and equipment." A USAF evaluation board therefore recommended "that the Air Force, through its depots, must operate its own airlift."[70] In the spring of 1952 Maj. Gen. George W. Mundy of the USAF Air Materiel Command, who visited the Far East to investigate the threatening collapse of support for the Fifth's jet fighters, recommended that the Far East Air Materiel Command should be assigned organic air transports. This logistics airlift would not be subject to withdrawal for other purposes. General Mundy argued that a dependable air-logistics airlift would not only expedite the flow of air supplies from depots to tactical units but would also allow the Air Force to reduce pipeline stocks and permit monetary savings.[71]

On at least three occasions a collapse of a part of the 315th Air Division's airlift capability gravely threatened the Fifth Air Force's logistical support, twice during a period of ground emergency when the Fifth Air Force was attempting maximum effort. In April and May 1951, when the Communists were making all-out ground attacks, the Flying Boxcars were grounded for propeller changes. During this period the Eighth Army received priority claims on available airlift, thus hurting the logistical support of the Fifth Air Force.[72] In August 1952 Fifth Air Force maintenance efforts were hindered when the Boxcars were again taken off the airlift, for these planes commonly shuttled jet engines to and from air depots and rear-echelon maintenance detachments.[73] For more than two weeks, while the Globemasters were grounded during June and July 1953, General Clark gave priority to the airlift of Army reinforcements to Korea. The result was a serious dislocation of the Fifth Air Force's maintenance activities at the same time the tactical air wings were making supreme efforts to stop the Red ground offensives. After this last episode Colonel H. A. Budd, the Fifth's director of materiel, stated: "In order that Air Force tactical operations be sustained under existing methods of resupply from rear-echelon maintenance and supply activities, the Air Force must have its own fleet of logistics-support type aircraft."[74]

Despite the validity of the arguments advanced to support the contention that the Air Force needed a separate air-logistics airlift, General Weyland

continued to support the concept that airlift was essentially scarce and had to be flexibly employed to achieve the theater commander's objectives. Each serious reduction in the Fifth Air Force's logistical support, moreover, was occasioned by the grounding of air-transport planes. Had these transport aircraft been assigned to the Far East Air Logistics Force, or to the Fifth Air Force, they would have been equally prone to mechanical disorders. Twice during the time that General McCarty commanded the 315th Air Division, the Far East Air Logistics Force made strong efforts to obtain its own organic airlift, but each time General Weyland disapproved the request. Both Weyland and McCarty recognized that airlift would always be a scarce item. The tasks it would perform would be varied, and from time to time first one and then another of the tasks would take precedence and require a concentration of all or most of the airlift capability for its accomplishment. The responsibility for determining the priority of the tasks had to be vested in a theater commander who alone could impartially assess the relative importance of airlift objectives. The concentration of airlift resources for the performance of priority tasks could best be accomplished when all airlift resources were controlled by a single airlift commander. "Piecemealing of airlift resources," General McCarty reminded, "is just as dangerous a route to travel as the piecemealing of Air Force resources."[75]

A C-46 Commando awaits a sunset take off from an air base in southern Korea.

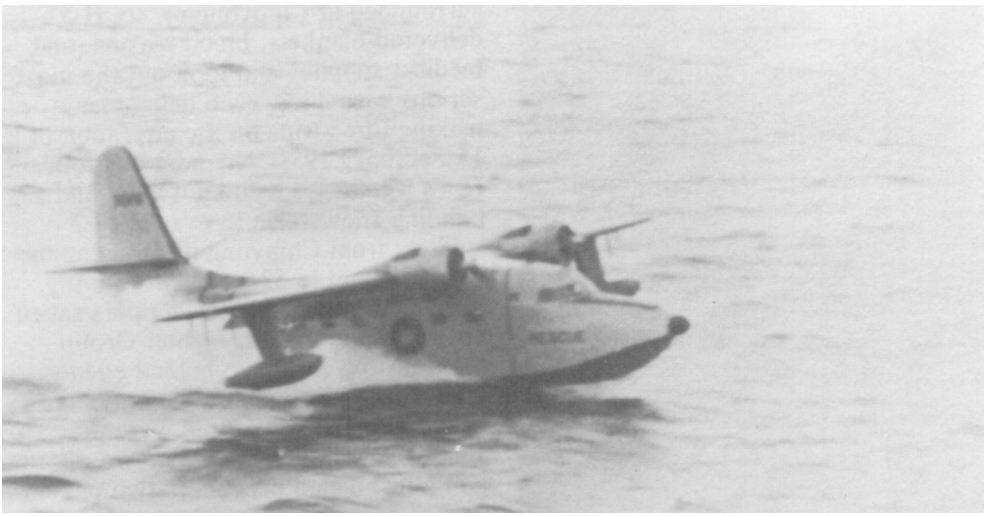
An Air Rescue Squadron chopper lands at the front to pick up a wounded G.I.

### *3. Air Rescue's Mission Was Expanded*

The Korean war offered the first test for search and rescue organizational tactics developed in World War II. For the performance of search and rescue functions in June 1950, FEAF possessed the 2d and 3d Air Rescue Squadrons. Administratively, these units were a part of the world-wide Air Rescue Service—a subordinate command of the Military Air Transport Service—but their operations were controlled by FEAF and its subordinate commands. Flights of the 2d and 3d Air Rescue Squadrons were located at various bases where they could best perform emergency search and rescue services. The 2d Squadron served the Thirteenth and Twentieth Air Forces, while the 3d Squadron was based in Japan and came under the operational control of the Fifth Air Force and later the 314th Air Division and its successor Japan Air Defense Force. At the Korean war's beginning a search and rescue version of the Flying Fortress bomber—the SB-17—was the standard aircraft of the rescue squadrons, but the 3d Rescue Squadron had a few Sikorsky H-5A helicopters—small, two-seat, rotary-wing aircraft which were used for short-range rescue pickups. In the first month of the war, on 28 July 1950, the 3d Squadron received a detachment of Grumman SA-16 amphibian aircraft. If the seas were smooth enough, these "Albatross" SA-16's could land and retrieve downed airmen from the water.[76]

Under the command of Lt. Col. Klair E. Back after 28 August 1950, the 3d Air Rescue Squadron pioneered in the employment of new search and rescue equipment and techniques, which, for the first time as a standing procedure, included the rescue of stranded personnel from behind enemy lines. At first the 3d Squadron employed its SB-17's primarily as orbit aircraft for the B-29 strikes, and the new SA-16's maintained continuous daylight patrols over the Tsushima Straits. Seven days after their arrival an SA-16 piloted by Captain Charles E. Schroder picked up Ensign Glenn T. Farmworth, a Navy pilot who had been in the water off Korea less than two hours. On 15 August an SA-16 crew picked up a Mustang pilot only five minutes after he had parachuted into the water off southern Korea.[77]

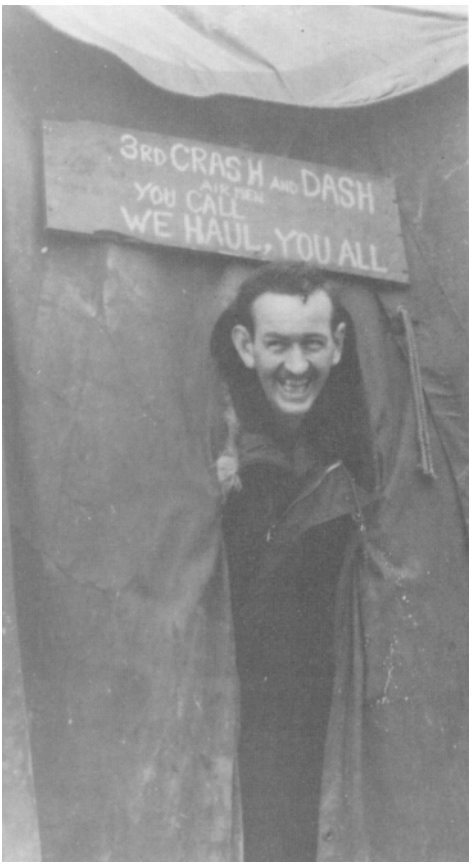
The newest developments in air rescue were taking place in the immediate area of the ground fighting in South Korea. On 7 July 1950 the 3d Squadron sent two L-5 aircrews and aircraft to Korea. Called Mercy Mission No. 1, the L-5 pilots attempted several pickups without much luck, for the little liaison planes could not operate from the rice paddy lands of Korea. On 22 July, however, the rescue flight at Ashiya sent an H-5 helicopter detachment to Taegu, which soon attracted General Partridge's notice. In a few days, moreover, the Eighth Army's surgeon called on the helicopters to help him evacuate critically wounded soldiers from front-line aid stations to the 8076th Mobile Army Surgical Hospital at Miryang and the 8054th Hospital in Pusan. The helicopters could operate in the mountainous and rice-paddy terrain where the liaison planes could not function. Early in August 1950 General Partridge accordingly directed the 3d Squadron to station six of its nine helicopters in Korea, and General Stratemeyer asked USAF to give him 25 H-5's to be used



Because of its ability to land on water and land, the SA-16 Albatross is used to cover aircraft water routes throughout the Far East.

by a special evacuation and utility squadron. By stripping other commands, USAF started 14 H-5's to the Far East, but it ruled that the 3d Squadron would continue to handle the mercy missions. By 29 August the Helicopter Detachment had evacuated 83 soldiers whom the Eighth Army surgeon said would never have survived a ten-to-fourteen-hour trip by ambulance to a field hospital.[78]

Evacuation of front-line Army casualties continued to be a major concern, but the 3d Air Rescue Squadron and the Fifth Air Force recognized that new arrangements would be needed as United Nations Command forces attacked northward from the Pusan perimeter. On 27 August 1950 the Fifth Air Force accordingly established a Rescue Liaison Office in the Joint Operations Center, and on 30 August the 3d Squadron formally organized Detachment F in Korea, under the command of Captain Oscar N. Tibbetts. The close coordination between the Joint Operations Center and Detachment F soon permitted the first rescue of a pilot from behind the enemy's lines. Covered by a rescue combat air patrol (ResCAP) of friendly fighters, Lt. Paul W. Van Boven flew his H-5 to Hanggan-dong on 4 September and successfully retrieved Captain Robert E. Wayne. When the United Nations front lines advanced, Detachment F moved from Pusan (K-1) to Taegu (K-2) and then on to Seoul (K-16). From this location on 10 October, Lt. David C. McDaniels and paradoctor Captain John C. Shumate made a 125-mile trip to save a wounded British Navy flier, Lt. Stan W. Leonar from under enemy fire at Changjon. Employing two H-5's and three L-5's from Pyongyang, Detachment F evacuated 47 injured paratroopers from the drop zones at Sunchon and Sukchon on 22 and 23 October. Flying from Kunu-ri and Sinanju in November, the H-5 elements rescued pilots at extreme distances, one as far north as Kanggye. When the Chinese troops attacked southward, Detachment F withdrew its




TSgt. Basil L. Boatright of the 3d Air Rescue Squadron doesn't mind advertising his work.

forward elements, and on 2 January 1951 the detachment evacuated Seoul and moved to K-37 airstrip south of Taegu. In the autumn of 1950 the 3d Squadron had also begun to station SA-16 aircraft on strip alerts at Wonsan and Seoul. With the retreat of the United Nations forces, the strip-alert SA-16's stationed themselves at Taegu Airfield.[79]

In the early months of 1951 the helicopter pilots of Detachment F, 3d Air Rescue Squadron, continued to render meritorious services. When elements of the U.S. 2d Division were surrounded at Chipyong-ni, six H-5's delivered blankets, blood plasma, and medical supplies and took out the most serious casualties, each helicopter making three trips on the afternoon of 15 February 1951. The next day four H-5's weathered a 40-knot wind and a blinding snowstorm to evacuate 22 soldiers from Chipyong-ni, bringing the two-day total to 52 evacuees. During March 3d Squadron rescue pilots saved six out of seven 35th Fighter Group pilots who went down behind enemy lines. Up until this time the only helicopters used in Korea were the small H-5's, which could carry a pilot and a technician inside and two passengers in external litter capsules, but in March 1951 an Air Proving Ground team brought two test-model Sikorsky YH-19's to Korea. The day after their arrival one of the YH-19's helped the H-5's evacuate wounded and injured paratroopers from the Munsan-ni drop zone. In this effort, on 24 and 25 March, the helicopters flew 77 sorties to evacuate 148 paratroopers from under intense mortar and small-arms fire which damaged two of the helicopters. For work such as this the YH-19 excelled, for it could carry eight litter patients or ten passengers, plus a pilot and medical technician. At this time, however, Detachment F regarded the larger helicopter as a complement rather than a replacement for the smaller H-5. Most front-line evacuations or pilot pickups involved single individuals. When friendly pilots went down off Korea's coast, strip-alert SA-16's were dispatched to recover them. In a heroic demonstration after dusk on 11 June 1951 Lt. John J. Najarian landed his SA-16 in the shallow, debris-filled Taedong River, one mile south of Kyomipo, and picked up Captain Kenneth Stewart, who had bailed out of a flak-damaged Mustang

at twilight. Covering flights of Mustangs beat down flak coming from both banks of the river and switched on their landing lights to show Lieutenant Najarian low-hanging high-tension wires which he had to avoid. In spite of every possible obstacle Lieutenant Najarian saved the Mustang pilot.[80]

As United Nations Command forces defeated the Communist armies in Korea in the late spring of 1951, the search and rescue mission in Korea began to change. The Eighth Army had fewer front-line casualties, and its new organic helicopters undertook a larger proportion of the front-line medical-air evacuation missions. At this same time, however, Communist flak was beginning to down more and more United Nations fliers over enemy territory. In recognition of the growing importance of aircrew rescue work, the 3d Air Rescue Squadron reorganized its old Detachment F on 22 June 1951 and redesignated it as Detachment 1, 3d Air Rescue Squadron. Personnel augmentations allowed Detachment 1 to open a full-scale Search and Rescue Coordination Center in the Fifth Air Force's Tactical Air Control Center at Seoul. From this central location the Korea rescue coordination center received requests for rescue action through the facilities of the tactical-control system and used these same communications to direct the rescue effort.[81] Since the H-5 helicopters had a radius of action of only 85 miles, the Korea rescue detachment had always divided its planes and personnel into elements which were based where they were apt to be needed. In the summer of 1951 one element was located at the 8055th Mobile Army Surgical Hospital, a second element was placed near the U.S. 45th Division command post at the center of the battleline, a third element served the truce negotiators at Munsan-ni, and the remaining element stood strip-alert at Seoul Airfield (K-16), which was also the main base for Detachment 1. A search and rescue radio net connected the several rescue elements, and every ten days the elements rotated their H-5 crews and planes to Seoul for rest, inspections, maintenance, and repairs. The Grumman SA-16's, which rotated to Korea from Japan, were also based at Seoul Airfield.[82]

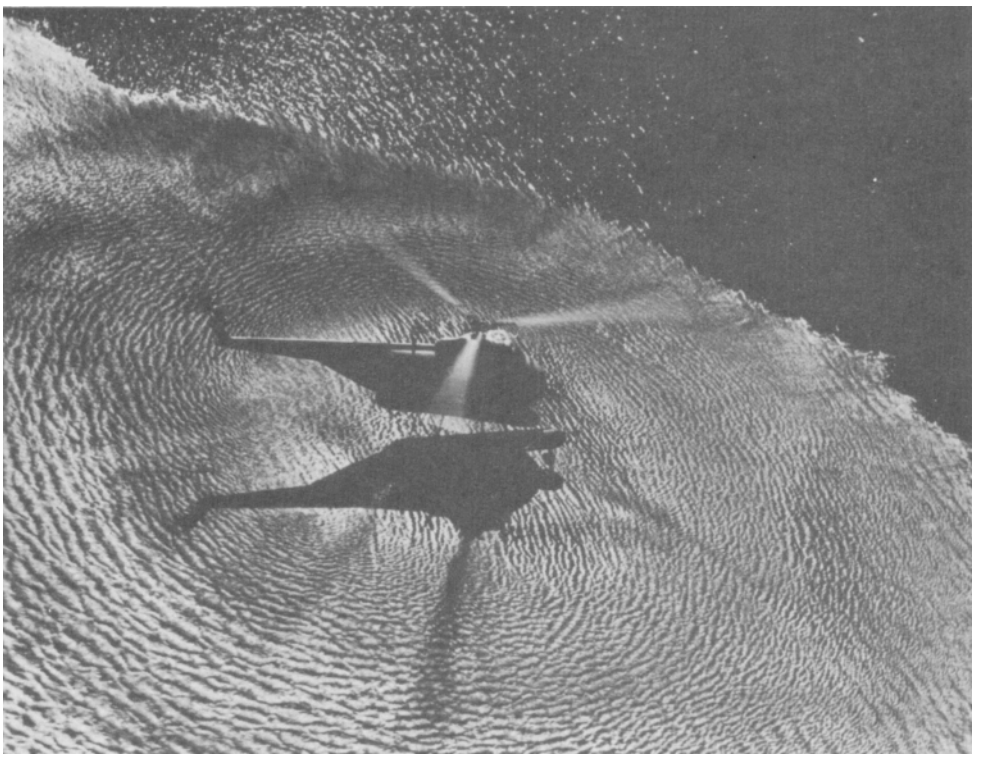
Rescue helicopter

During the months of heavy ground fighting marked by large close-support efforts, the lateral disposition of rescue elements along the front lines had been proper, but in the autumn of 1951 the Fifth Air Force began to attack rail-transportation targets in northwestern Korea. When the Sabres and fighter-bombers went into this sector of enemy territory, an SA-16 from Seoul customarily orbited north of Cho-do. If a fighter pilot ran into trouble, he called out a "Mayday" and, if possible, headed to the predetermined orbit-rescue point off Korea's western coast. When the pilot ditched, crash-landed,

or parachuted, his own flight gave him rescue combat air patrol until the SA-16 arrived. In order to augment the rescue potential, the Fifth Air Force in November 1951 required the 3d Rescue Squadron to keep three SA-16's in commission at Seoul at all times, and the 3d Squadron promptly required its Flights A, C, and D to provide one rotational amphibian apiece, which, in order to secure closer coordination, were now placed under the operational control of Detachment 1. In smooth seas and warm summer weather the amphibians had little difficulty landing to pick up surviving airmen, but with the coming of winter weather in 1951 matters took a new turn. The SA-16's could not normally chance landings if waves ran higher than five feet, and in freezing weather the amphibians could soon accumulate too much ice to take off. Even when protected by anti-exposure suits, moreover, the downed pilots could not long survive in the frigid water of the Yellow Sea. To speed the rescue work in December 1951, the Fifth Air Force asked Detachment 1 to move an H-5 helicopter element from Seoul to Cho-do. At this time the little island of Cho-do was not secure enough from the danger of enemy raids, and Detachment 1 accordingly based two H-5's on the island of Paengnyong-do, and each day that weather permitted the H-5's moved up to Cho-do for daytime alerts. Within a month Cho-do was firmly in friendly hands, and in January 1952 Detachment 1 stationed two H-5's there for a rescue alert.[83]

Exploiting the opportunity permitted by the circumstance whereby the Red MIG's virtually refused to operate over water, Detachment 1, 3d Air Rescue Squadron operated a highly effective rescue effort off Korea's northwestern coast. Since many water rescues and all land pickups were made by helicopters from Cho-do or Paengnyong-do, the closer a pilot got to either of these two points before he abandoned his plane, the better were his chances of survival. The slow and vulnerable helicopters were ordinarily able to go inland for some distance, but could not cross the belt of enemy defenses along the main west-coast supply routes. Beginning in February 1952, Detachment 1 received H-19 helicopters as replacements as the H-5 helicopters were wrecked or worn out. These larger helicopters proved more suitable for water rescue work, since they had a radius of 120 miles. Originally, the H-19's were outfitted with floats for water landings, but most H-19 pickups were made by means of a line dropped from the H-19's hydraulic-powered hoist. Two H-19's were finally stationed on Cho-do, and one H-19 handled rescue work from Paengnyong-do.[84] Although the rescue establishment grew strong in northwestern Korea, it remained unavoidably weak at the other end of the battleline and in southern Korea. Most airfields in South Korea were served by amphibious vehicles and crash boats, but these surface vessels often could not get to pilots who went down in the tidal swamps and offshore mud flats. Detachment 1 stationed an H-5 at Kunsan Airfield, but its limited resources would allow nothing more in the summer of 1952.[85]

During the autumn of 1952 the Fifth Air Force managed to get a slim augmentation of its rear-area rescue facilities. Effective on a world-wide scale on 14 November 1952, all Air Rescue Service units were reorganized on a group-squadron basis, so that the 2d and 3d Air Rescue Groups replaced the similarly numbered squadrons. At this same time the regularly constituted



An H-19 rescue chopper over the Han River near Seoul.

Air Rescue flights became numbered squadrons, and, effective on 1 March 1953, Detachment 1, 3d Air Rescue Group, was redesignated as the 2157th Air Rescue Squadron. To help in southern Korea and at the eastern end of the battleline, the 2d Air Rescue Group in December 1952 provided two SA-16's, two H-19 helicopters, and a paramedic team, and these planes and people were organized at Pohang Airfield as Detachment 2, 3d Air Rescue Group. In March 1953 one H-19 moved from Pohang to Kangnung, giving additional rescue coverage of Korea's east coast. During December 1952 the Fifth Air Force also received a small windfall of helicopters when FEAF sent four H-19's of the Philippine-based 581st Air Resupply and Communications Wing to Seoul. In March 1953 two SA-16's from the 581st also went to Seoul. These 581st Wing planes were supposed to fly covert missions, but they also helped with rescue work.[86]

Rescue resources continued to be spread thin in Korea, but the 3d Air Rescue Group added distinguished service to its already outstanding Korean war record. During the floods of July 1952 helicopter crews saved 710 United Nations soldiers who were stranded in exposed forward positions by high waters. Enemy opposition and mechanical troubles continued to send friendly pilots to Cho-do and Paengnyong-do bail-out zones, where air-alert

Maj. Frederick C. Blesse

SA-16's and ground-alert H-19's picked them up. Using standardized rescue procedures, Detachment 1 and 2157th Squadron crews worked fast and effectively. In probably the fastest air-sea rescue on record, an H-19 from Cho-do hoisted a reconnaissance pilot from the water in fifteen seconds. In September 1952 an H-19 crew rescued a downed airman and two men from a naval helicopter which had crashed in an attempted rescue. The SA-16's commonly flew escort for the H-19's and other Grumman crews also made rescues. In September 1952 an SA-16 saved Major Frederick C. Blesse, then the leading Sabre ace, when he ran out of fuel over the Yellow Sea after combat in MIG Alley. Outstanding rescues continued in the spring of 1953. On 12 April an H-19 crew rescued Captain Joseph C. McConnell, Jr., when he parachuted into the Yellow Sea. Already an ace, McConnell would continue in combat and become the leading jet ace of the Korean war. In three days, 16–18 May 1953, the H-19's made five aircrew pickups to save six lives. In the first four incidents the H-19's lifted fighter pilots from the Yellow Sea, and in the last episode an H-19 from Seoul penetrated far into enemy territory to save two survivors from a B-26 which had crashed north of Haeju.[87]

Operating rescue control centers at Misawa, Johnson, Komaki, and Ashiya air bases, and a flight-following service at Johnson Air Base, the 3d Air Rescue Squadron and Group afforded search and rescue services over Japan's land areas and sea frontiers. Equipped with a principal component of SA-16's early in the Korean war, Flight D at Ashiya (which became the 39th Squadron) was always active in the water areas off southern Korea. Using first SB-17's and then the newer SB-29's, Flight B (37th Squadron) at Komaki early provided offshore orbit patrols for B-29 strikes made by Bomber Command. The RB-45's of the 91st Strategic Reconnaissance Squadron were so unsafe for ditching that a Japan-based rescue plane held a station orbit over the Japan Sea each time these planes crossed to Korea. When the B-29's went to night operations they did not immediately require any route or orbit patrols by SB-29's, but in November 1952 hostile night fighters were stalking 98th Wing bombers and Bomber Command asked the 3d Air Rescue Group for help. Accordingly, the 37th Air Rescue Squadron began to send an SB-29 to trail the last B-29 in a bomber stream. Keeping continuous radio watch, the SB-29 followed the B-29's to their coast-in point in Korea and then orbited at a point where it could render assistance to distressed bomber crews when they coasted out of Korea.[88]

Operating in an area remote from Korea, the 2d Air Rescue Squadron

and Group used only a part of its capabilities in support of the Korean war effort. Based at Kadena, however, Flights C and D (which became the 33d and 34th Air Rescue Squadrons) initially possessed short-range H-5's, OA-10's, and SB-17's, and had to limit their rescue work to their immediate vicinity. In March 1952 Flight D received its fourth SB-29, which brought it to authorized strength and permitted a new service to B-29 crews. Searching for lost B-29's was always time-consuming and often ended in failure. Flight D therefore proposed to fly precautionary escort and orbit for the B-29's as the bombers traveled to and from Korea. When the bomber crews liked the idea, Flight D began to provide the service on 8 May 1952 and it was continued throughout the war. Prior to the departure of the first B-29 from Kadena, an SB-29 took off and stood patrol out to sea. After all bombers were successfully airborne, the SB-29 accompanied the bombers to their coast-in point at Korea and then waited for their return. When the bombers came from their mission, the SB-29 shepherded them back to Kadena. These "guardian angels" were always handy if B-29's were crippled. They could alert other rescue facilities, and if the B-29 ditched at sea the SB-29 could light the ditching area with flares and drop its 30-foot A-3 lifeboat.[89] It so happened that the SB-29's of the 34th and 37th Squadrons fortunately did not get an opportunity to use their A-3 boats to assist downed B-29 crews, but the precautionary escort and orbit tactics greatly increased the morale and well-being of the Superfortress crews.

During the Korean war the USAF Air Rescue Service met and overcame many problems and demonstrated that aircrews would be rescued from behind enemy lines as a normal operation. Contributing to the successful accomplishment of the air-rescue mission in Korea was the United Nations aerial superiority which allowed vulnerable rescue planes to operate without fear of enemy air attack, a centralized control and coordination of air-rescue capabilities in Korea within the Joint Operations Center and the Tactical Air Control Center, the employment of such new aircraft as the SA-16 amphibian and the H-19 helicopter, and the use of new emergency-survival equipment, including the little URC-4 emergency radio transceivers which were ultimately carried by all aircrews.[90] Taking advantage of these fortunate conditions, the Air Rescue Service crews ably accomplished their mission. During the Korean war 1,690 USAF airmen went down in enemy territory and many of these men doubtless did not survive their landings, but air-rescue crews saved 170, or 10 percent, of USAF airmen who were lost in action over enemy territory. The rescue crews also retrieved 84 airmen of other United Nations air services from areas held by the enemy. Counting both aircrewmen and other personnel, the Air Rescue Service crews rescued 996 men from enemy territory. Within friendly lines, the rescue crews also picked up and evacuated 86 airmen to places of safety. As a secondary mission, the Air Rescue Service organizations in Korea performed emergency front-line medical air-evacuation tasks. In fulfillment of this secondary task, Air Rescue Service aircrews evacuated a total of 8,598 men, most of whom were front-line ground casualties.[91] Without in any way reducing the luster of the Air Rescue Service achievement in Korea, it is appropriate to note that rescue crews were required to perform many tasks

Casualty Evacuation (Art by David S. Hall, *Courtesy Air Force Art Collection)*

which were not necessarily in context with their main mission of rescuing downed airmen. Foremost of these diversions was front-line medical air evacuation. The Air Rescue helicopter crews were often required to land or recover intelligence agents along the mud flats of Korea's northwestern coast, an undertaking which did not contribute to the search and rescue mission. The test of combat nevertheless indicated that in the future—as new search and rescue equipment was produced and rescue units gained the ability to penetrate deeper into enemy territory—a larger search and rescue force would be required to support a tactical air force in combat.[92]

### *4. Medical Air Evacuation Saved Countless Lives*

In the theaters of operations of World War II United States armed forces had moved sick and wounded men by air to places of medical care and hospitalization. In this war, however, medical air evacuation had always been thought to be an emergency method of transporting the wounded, and it was used only when casualties could not be transported by normal

means of stretcher-bearers, field ambulances, hospital trains, and hospital ships. As a matter of policy, the Army sought to keep a casualty as far forward as possible in order to return him to combat as soon as possible. The echelons of the medical system and the normal surface means of transportation were keyed to keeping wounded men forward. When a man was wounded in combat he was transported to a battalion aid station by litter-bearers or by a litter jeep. From the battalion aid station he was evacuated by motor ambulance to a regimental collecting station and thence to a division clearing station, at which point he could either be dispatched to an evacuation hospital or routed to a mobile army surgical hospital which could provide emergency surgery and short periods of hospitalization. Either directly, or through the mobile army surgical hospital, the more seriously wounded patient, or the man who required special treatment, moved by motor ambulance or hospital train to an evacuation hospital, where he was hospitalized pending recovery or removal to a general or a convalescent hospital in the communications zone.[93]

If aeromedical air evacuation had not been fully developed within the theaters of operations during World War II, the AAF Air Transport Command's work in moving casualties from the theaters to the United States had nevertheless won wide acceptance. In the years after the war the Military Air Transport Service had so expeditiously managed world-wide aeromedical evacuation that in September 1949 the Secretary of Defense had made air the primary method for transoceanic movements of military patients.* Despite the recognition that aircraft provided the fastest and cheapest means of moving patients between theaters of operations and the United States, neither the Army nor the Air Force had given enough thought to the possible use of aeromedical evacuation of sick and wounded within theaters of operations. Exact service responsibilities and the procedures to be employed were not fixed. The Far East Command did not have a regulation governing medical air evacuation until 18 December 1951, and the directive issued at this late date did little more than confirm existing policies and practices which had been informally effected in the theater.[94] In the absence of established procedures and responsibilities, aeromedical evacuation gained acceptance through its demonstrations of utility, but the system employed was always far from perfect.

When American troops landed in Korea in July 1950, the Eighth Army implemented traditional systems for moving and hospitalizing its sick and wounded. As a matter of policy, the Eighth Army stated the rule that patients expected to return to duty within thirty days would be hospitalized in Korea. Men requiring specialized treatment or more than thirty days' hospitalization could be moved to general hospitals in Japan. Recognizing that the speed with which a front-line casualty received adequate medical

*At the outbreak of the Korean war, the Military Air Transport Service was providing aeromedical evacuation for about 350 patients a month who were moved from Tokyo to the United States. The first C-54 loaded with Korean war casualties left Haneda International Airport on 20 July 1950, and the Military Air Transport Service soon employed the routes, facilities, and planes that transported personnel and cargo to Japan to return casualties to the United States. Between 26 June 1950 and 31 July 1953 the Military Air Transport Service transported 43,196 Korean war casualties to the United States for further hospitalization or special medical treatment. *USAF Statistical Digest*, Fiscal Year 1953, p. 520.

care frequently determined his survival, and knowing of Korea's limited surface transportation, General Stratemeyer moved quickly to afford medical air evacuation to the Eighth Army troops in Korea. At the war's beginning Flight 3, 801st Medical Air Evacuation Squadron, was attached to the 374th Troop Carrier Wing at Tachikawa, and on 4 July 1950 General Stratemeyer informed General MacArthur that FEAF was prepared to accomplish air evacuation of casualties from Korea.[95] During July and August 1950, however, the Eighth Army made only a token use of medical air evacuation. Up to 15 September 13,105 patients were evacuated from Korea, of whom only 3,855 (29.6 percent) were evacuated by air, although it was estimated that as many as 36,000 could have been accommodated in empty cargo planes. Because of the rough roads between Taegu City and Taegu Airfield, the Eighth Army preferred to move its casualties southward by train to the evacuation hospital in Pusan. Most of the patients evacuated from Pusan to Japan were moved by ship. Some patients were taken to Pusan East Airfield (K-9) for air evacuation, but the airfield had no medical holding facilities, and patients often had to wait for excessive lengths of time before someone arranged for air transportation. The Eighth Army could not afford to count on a "catch as catch can" system of air evacuation and accordingly used more reliable and orderly surface transportation.[96]

While the Eighth Army was initially lukewarm toward the evacuation of its casualties by Air Force transports, the Eighth Army's surgeon eagerly exploited the 3d Air Rescue Squadron's helicopter detachment for the evacuation of front-line casualties to mobile army surgical hospitals. As has been seen, General Stratemeyer asked USAF on 14 August 1950 to organize and dispatch to him an "evacuation and utility squadron" with 25 H-5 helicopters and the trained medical personnel required to handle front-line evacuation work. Later on USAF would percieve that such a function as this was a logical and desirable extension of its assault troop-carrier effort, but in August 1950 some USAF officers in Washington observed that their planning for aeromedical evacuation "has not included the U.S. Army function of evacuation from front-line battle stations" and hesitated to set a precedent. The USAF Surgeon General nevertheless urged that Stratemeyer's request should be met, and USAF on 21 August agreed to send FEAF 14 H-5's and to raise the 3d Air Rescue Squadron's allocation to 23 helicopters. USAF ruled at this time that the Air Rescue Service must have first claim on all helicopters, and it refused to allow Stratemeyer to form a special evacuation squadron.[97] Following receipt of the Eighth Army's request for organic helicopters, which was passed through General MacArthur on 20 August, the Department of Army authorized organic helicopters to many of its units and organized helicopter ambulance detachments.[98] The Eighth Army would not begin to receive its organic helicopters in any numbers until January 1951, but a tacit decision had been made which would be of long-lasting significance. The Army would handle aeromedical evacuation forward of its mobile army surgical hospitals, while Air Force transports would provide medical air evacuation rearward of the initial points of medical treatment in the combat zone.

With the establishment of the FEAF Combat Cargo Command on 26 August 1950, General Tunner directed his staff to take a look at aeromedical evacua-

tion. Up until this time in Korea aeromedical evacuation was judged to have had "a rather spotty history." Although one flight of the 801st Medical Air Evacuation Squadron was attached to the 374th Wing, the Headquarters, 801st Squadron and two flights were in the Philippines, where their personnel authorizations augmented the staff of the Clark Air Force Base hospital. Making a trip to Korea on 9 September, Colonel Clyde L. Brothers, FEAF's surgeon, Colonel F. C. Kelly, the Fifth Air Force's surgeon, and Major George Hewitt, Cargo Command's assistant director of traffic, discovered that the Eighth Army wanted aeromedical evacuation but only if it could be placed on an orderly basis. Cargo Command soon effected the procedures which would give the Eighth Army the service it wanted. Wherever possible, Cargo Command preferred to develop aeromedical evacuation as a concomitant to the delivery of personnel and cargo to Korea and, after off-loading in Korea, C-54, C-47, and C-46 aircraft picked up casualties for delivery to hospitals farther south in Korea or in Japan. The command preferred to use C-54's and C-47's for the work and could employ C-46's, but the noise and drafts in the cargo hatches of the C-119's prevented use of the Boxcars for medical air evacuation. Cargo Command also decided not to commit any special transport crews to air evacuation, but to brief all the crews of suitable transports on standard evacuation procedures. Since additional medical personnel would be required for the expanded system, FEAF directed the movement of the 801st Squadron and its two flights from Clark to Japan effective on 14 September, and the squadron was filled with locally available personnel and new flight nurses from the United States. As developed in the FEAF Combat Cargo Command, air evacuation was the responsibility of Lt. Col. Allen D. Smith, who served as Cargo Command surgeon and commanded the 801st Squadron. Each day at noon Army medical evacuation officers in Korea and Japan informed the Combat Cargo Command surgeon's office of the number of patients to be moved from one place to another at a particular time on the following day, and the surgeon's office submitted consolidated requests to the Transport Movement Control for the scheduling of the necessary airlift. Whenever possible, Cargo Command added apparatus, nurses, and medical technicians of the 801st Squadron to planes which delivered their cargo in Korea and then picked up aeromedical evacuation patients. When necessary, however, special aeromedical flights were always set up to take care of the Eighth Army's requests for aeromedical airlift.[99]

During September and October 1950 the FEAF Combat Cargo Command exploited centralized control, plus continuous field liaison, to make aeromedical evacuation the standard method of transporting sick and wounded personnel in the Far East. Early in September the Eighth Army continued to deliver most patients to Pusan by train. From the hospital in Pusan, patients requiring hospitalization in Japan were moved to Pusan Airfield (K-9) where they were loaded aboard waiting planes and moved either to Itazuke or directly to Tokyo. Some patients were flown to Itazuke direct from Taegu and Pusan.[100] Later in September, when Kimpo Airfield was secured, Cargo Command instituted an immediate evacuation plan in support of the U.S. X Corps, using a minimum of three C-54 flights spaced periodically

throughout the day to lift patients. This lift was supplemented as requirements dictated. Following the capture of the airfield at Wonsan, Cargo Command evacuated casualties directly to Itami Air Base, near Osaka in Japan. On 17 October, when the airstrip at Sinmak was opened, C-54's removed patients to Kimpo, where they were turned over to the 8055th Mobile Army Surgical Hospital. On 21 October Cargo Command began to evacuate patients from Pyongyang, and on 29 October C-47's began to lift wounded men from Sinanju Airfield to Kimpo. The air-evacuation program had its troubled moments. Some aircraft reported with insufficient numbers of litters or without heating arrangements. Loading patients required extra time and tended to hold up the dispatch of planes out of Kimpo and Pyongyang, and the traffic-control officers at these fields were reluctant to release planes for air evacuation until late in the day. But the aeromedical evacuation problem was generally well managed during the United Nations attack into North Korea. During October 1950 2,840 patients were moved by airlift within Korea, 3,025 were evacuated from Korea to Japan, and 2,590 were moved within Japan. From the outbreak of the Korean hostilities to 31 October 1950 a total of 24,496 patients was moved by airlift.[101]

Aeromedical evacuation achieved new dimensions in November 1950, for the Chinese Communist attack combined with frigid weather to take a heavy toll of United Nations soldiers. Early in December Kyushu Gypsy C-47's shuttled some 4,689 wounded or frost-bitten soldiers and Marines

Flight nurses take time out to warm their toes during evacuation activities, December 1950.

from the Communist-besieged airstrips at Hagaru-ri and Koto-ri. The 21st Squadron C-47's delivered their casualties to the airfield at Yonpo, whence Marine R5D's carried Marine casualties to Itami while Air Force C-54's lifted wounded Army soldiers to Fukuoka. Because of the dangers up front, 801st medical technicians cared for patients aboard the C-47's, but 801st flight nurses staffed the planes for the aeromedical lifts to Japan. In western Korea Combat Cargo nurses and technicians cared for patients lifted to the very last from the airfields given up to the Reds as the Eighth Army retreated from Sinanju, then Pyongyang, and finally from Seoul and Suwon. Early in December the Eighth Army feared that the Communists might overrun all of Korea and decided to empty its combat-zone hospitals. On 5 December Cargo Command accordingly used 131 flights for aeromedical work and lifted 3,925 patients, thus accomplishing the Korean war's largest day of aeromedical airlift. Continuing the procedures worked out by the FEAF Combat Cargo Command, the 315th Air Divison (Combat Cargo) took air-evacuation emergencies in stride. In January 1951, as the ground fighting centered around Wonju, only the C-47's could lift patients from the short combat strips there and at nearby Chungju. At 0945 hours on 13 February the Eighth Army reported that 600 patients at Wonju required evacuation, and before midnight C-47's diverted from tactical missions lifted 818 patients from the forward hospitals, including 401 from Wonju. The report of the number of patients at Wonju had been somewhat exaggerated, and Eighth Army operations formally objected to the diversion of the C-47 aircraft from tactical airlift to medical evacuation. The Far East Command, however, ruled that the diversion was justified. Two days later the hospitals at Pusan were overloaded with casualties, and the 315th moved 1,325 patients for another one of its busiest air-evacuation days. When the fighting shifted toward the Seoul area, C-54's were able to lift casualties first from Suwon and then from Kimpo and Seoul Airfields. With the completion of a better airfield at Hoengsong later in the spring, the C-54's could also lift eastern-front casualties directly to hospitals in Taegu and Pusan.[102]

During the autumn of 1950 and the spring of 1951 3d Air Rescue Squadron helicopter crews had continued to perform most front-line medical air-evacuation work. The helicopter elements which performed this work were usually based at a mobile army surgical hospital, and they were dispatched to the front lines by the surgeon-in-charge of the hospitals. Because of a shortage of the H-5's, the helicopters had to be used conservatively, but when a soldier received a head wound, a sucking chest wound, or a stomach wound, the speed with which he received medical treatment determined whether he would live or die. With helicopter evacuation, men wounded at the front were often in surgery within an hour. As of 20 February 1951, Air Rescue Service helicopters had evacuated 750 critically wounded soldiers, and the Eighth Army surgeon said that fully half of these men would have died if they had been moved by surface transport.[103] General Stratemeyer had nothing but praise for the work of the Air Rescue helicopter pilots, but he still insisted that air evacuation ought to be divorced from air rescue. When General Vandenberg was in Tokyo on 16 January 1951, General Stratemeyer gave him a requirement for 31 helicop-

ters, most of them to be used to form a provisional evacuation squadron. Back in Washington USAF was unwilling to strip the Air Rescue Service of any more H-5's and new H-19's and H-21's would not be available from production until early 1952.[104] On 11 March 1951 General Stratemeyer nevertheless asked Vandenberg to provide the Fifth Air Force with a liaison squadron and to authorize it 12 H-5's and 12 L-5's. The squadron would handle air-evacuation missions. On 14 July USAF authorized the Fifth Air Force to activate a liaison squadron with 12 L-5 liaison aircraft, but it reminded FEAF that the Air Rescue Service would have first claims on all helicopters received from production.[105] For a third time, on 24 July 1951, FEAF insisted that it required a squadron of H-19 helicopters which it would assign to the 315th Air Division for front-line medical air-evacuation work. This time USAF bluntly stated that no liaison or helicopter units were available or even programmed for deployment to FEAF.[106] Effective on 25 July 1951, the Fifth Air Force activated the 10th Liaison Squadron at Seoul Airfield (K-16), but without helicopters this squadron was generally limited to courier and light-transport services performed for the Air Force and could not effectively perform air-evacuation missions for the Eighth Army.[107] Although the Air Rescue Service helicopters were going to continue to evacuate some front-line casualties, the Army and Air Force agreements concerning Army aviation reached on 2 October 1951 and 4 November 1952 made the Army responsible for "battlefield pickup of casualties, their air transport to initial point of treatment, and any subsequent move to hospital facilities within the combat zone."[108]

Eighth Army casualties declined after July 1951 when the beginning of the truce talks marked a lull in ground fighting, but the 315th Air Division still continued to airlift from three to six thousand sick and wounded soldiers each month. Taking advantage of the reduced emergency, the 315th worked to effect more regular aeromedical procedures than had been possible in the days of active ground fighting. Since most C-46 aircraft still lacked litter straps and sanitary facilities, the 315th decided not to use them any longer for aeromedical evacuation. Only C-47's, which could handle 26 patients, or C-54's, which could accommodate 36 patients, were to be used for aeromedical lift. Whenever possible, the C-54's would handle the patient lift, but if front-line airfields were too small for the four-engine planes, the C-47's would shuttle patients to Korean hospitals.[109] Long before then, medical air evacuation had fairly well put Navy hospital ships out of business, but in December 1951 and January 1952 the Far East Command sought to learn whether the hospital ships could serve as floating mobile surgical hospitals. To test the proposition, Marine ground casualties sustained in the Inje area of eastern Korea were brought to a forward airstrip at Pupyong-ni by Marine helicopters. At Pupyong-ni C-47's picked up the wounded Marines and flew them over some of Korea's highest mountains to a seaside airstrip at Sokcho-ri. From this strip two 3d Rescue helicopters shuttled the casualties to the hospital ship *Consolation*, anchored about two miles off shore. After surgical care aboard ship, patients were helicoptered back to Sokcho-ri, where C-54's picked them up and flew them to Tokyo hospitals. Before the termination of the experiment on 24 January 1952, 315 patients were treated on the *Consolation*. The

The USS *Consolation (Courtesy U.S. Navy)*

procedure worked fairly well, but all concerned agreed that it was inadvisable to move wounded men so many times.[110]

The conversion of the 315th Air Division's wings to more modern aircraft in the autumn of 1952 had an effect upon medical air evacuation, for the 315th was giving up four squadrons of C-54's, the planes most favored for aeromedical work. This change brought problems which demanded the especial attention of Lt. Col. Jesse K. Grace, who took over as 315th surgeon and 801st Squadron commander on 19 January 1952. The huge Globemaster C-124's that the 315th received in exchange for its C-54's proved to have certain advantages and disadvantages for lifting medical patients. As a practicable maximum, each C-124 could accommodate 127 litter patients or 200 ambulatory patients, and the loading of such numbers on a single C-124 took less time than to load equivalent numbers on several planes. The C-124 also required fewer flight nurses and medical technicians, proportionate to the patient load it carried. Under the situation in Korea, however, the Globemasters had aeromedical disadvantages. In a test mission in 1951, a C-124 lifted a record load of 167 patients from Pusan to Itami, but in the routine airlift evacuations in 1952 and 1953 the C-124's never carried this many patients again, chiefly because they could never secure so many

casualties at one time. The Fifth Air Force, moreover, would not allow the C-124's to land at Pusan East Airfield, where the 315th Air Division had always loaded patients being evacuated from the hospitals in Pusan City.[111] The 315th Air Division had anticipated these problems, and it had equipped its C-46's for air evacuation. Beginning in September 1952, the C-46's carried maximum loads of 26 patients in the intra-Korea, Korea to Japan, and intra-Japan aeromedical airlift. The C-54 aircraft retained by the 21st Troop Carrier Squadron also provided aeromedical lift from Korea to central Japan.[112]

At any time during the Korean hostilities the 315th Air Division was able to provide far more aeromedical lift than the Eighth Army required, but the small size of the 801st Medical Air Evacuation Squadron continued to be a limiting factor in the care and handling of airlifted patients. Within the means permitted to it by austerity in the medical services, USAF provided the 801st with flight nurses and enlisted technicians in excess of the squadron's authorized strength, but in the critical days of 1950 and 1951 the nurses and technicians often flew as many as three round trips a day and literally worked themselves to exhaustion. On maximum aeromedical evacuation days, moreover, the 801st simply did not have enough nurses and technicians to accompany all aircraft, and the aircrews cared for the sick and wounded men they carried. In addition to the in-flight medical care it provided, the 801st always kept a medical service corps officer or a senior noncommissioned officer in charge of the "operating location" at each airfield where patients embarked or debarked. These officers served as liaison with local medical units and supervised the loading and unloading of patients.[113] The 801st Squadron recognized that it should also have been able to man and operate casualty staging and holding facilities where patients could await airlift.[114] This informal assumption of what should have been a definitely established responsibility did not work too well. In the spring of 1951 the usual holding facility in Korea was a row of sagging tents in a sea of mud, and patients often complained of shortages of food and blankets. In many instances the holding detachments did not have patients ready when planes came, and sometimes they canceled airlift requests after flights were dispatched. Either occurrence wasted the time and effort of flight nurses and medical technicians.[115]

Based upon combat reports from Korea and upon maneuver experience in the United States, the USAF Surgeon General on 26 May 1952 completed a table of organization for an aeromedical group which was more capable of performing theater functions than was the old aeromedical evacuation squadron. Among other features, the group's table of organization included cellular casualty staging flights which could be manned, as needed, to serve staging and holding activities.[116] For more than a year the USAF medical service could not obtain the trained personnel it needed to activate overseas aeromedical evacuation groups, but in the spring of 1953 USAF was finally able to authorize FEAF to replace the 801st Squadron with the 6481st Medical Air Evacuation Group, effective on 18 June. In deference to the unusual aspects of the aeromedical problem in the Far East, the 6481st was organized as a table of distribution organization which absorbed the functions, personnel, and equipment of the 801st Squadron and was authorized

the additional strength and equipment it needed to take over the processing, temporary care, and staging of military casualties for air movements.[117] At this time, however, the Army Forces Far East was reluctant to release control of the aeromedical staging facilities and presented arguments in favor of maintaining the *status quo*. Pending a resolution of the problem by the U.S. Department of Defense, the Army medical service continued to operate the aeromedical staging facilities in the Far East. After the end of the Korean war, on 8 December 1953, an Army-Air Force agreement finally recognized that the Air Force was responsible for providing the aeromedical evacuation system for both Army and Air Force.[118]

During the three years of the Korean hostilities the 315th Air Division and its predecessors (including the 374th Wing) provided aeromedical evacuation for 311,673 sick and wounded patients, a total which exceeded the number of troop casualties, since it often included multiple movements of the same patients within Korea, between Korea and Japan, and within Japan.[119] The story of aeromedical evacuation established certain facts without doubt. Aeromedical evacuation proved so dependable that hospital ships could be used as floating hospitals rather than for transporting patients. Air evacuation was safe. Only six patients were lost in a single fatal accident, this on 22 December 1952 when the pilot of a Royal Hellenic Air Force C-47 evidently mistook instructions and collided with a jet fighter-bomber at Suwon Airfield.[120] Air evacuation was humanitarian. Knowing that an airplane would carry them speedily and comfortably to a well-equipped hospital, patients usually assumed a "worst is over" outlook, which lifted their spirits at the very time they needed to take heart. The same speed brought patients to medical centers where specialists had access to the best possible equipment. Air travel caused far less trauma than travel over rough roads or jolting railways. Other factors contributed—such as blood therapy and antibiotic drugs—but aeromedical evacuation also had a large part in reducing the Korean war's death rate of the wounded to one-half the rate in World War II and to one-quarter the rate in World War I. Air evacuation was also economical. Patients generally occupied backload space on transport planes which otherwise would not have been utilized. The system was also economical of scarce medical-service personnel. Working with a centrally controlled air fleet, a single medical air-evacuation squadron accomplished far more than had been customary for several evacuation squadrons working under decentralized controls in World War II.[121]

In Korea medical air evacuation had made tremendous strides, but many Air Force officers doubted that this phase of air activity had yet attained its maximum effectiveness. In Korea, for example, air evacuation had been fitted into the traditional Letterman organization of Army medical services—a system which had been designed in terms of walking litter-bearers, horse-drawn ambulances, and surface transport. The Army system, moreover, required the evacuation of casualties through successive hospitals in order to keep a wounded soldier as close to the front as possible. Understanding the capabilities of air transport to move the wounded and to return the recuperated to duty rapidly, Air Force medical officers doubted the validity of the Army's philosophy of medical evacuation. "The farther and faster the wounded are removed from the combat area," stated Colonel Allen D. Smith,

"the better, more efficient, and more economical will be the medical care." The advantages which might be attained by relating medical operations to air-transport capabilities were well revealed during August 1951 in a zone of interior maneuver called "Southern Pine." Employing an integrated system of aeromedical evacuation and using two helicopters for front-line pickups and a transport aircraft for evacuation to rear-area hospitals, the 1st Aeromedical Group worked so successfully that the 43d Infantry Division's surgeon was able to suspend all but the most forward echelon of ground medical activity, thus idling 600 persons and 100 vehicles of the Army medical service. In this maneuver all simulated combat casualties were sufficiently screened in advanced areas as to prevent "over evacuation," but all legitimate casualties were immediately removed from the combat area to communications zone hospitals. This procedure lessened medical manpower and logistical burdens up front, relieved patients of the stress of the battle area and got them more adequate medical care, and freed ground combat troops of responsibilities of caring for casualties. No such integrated medical evacuation system was employed in the Far East during the Korean war, and for this reason aeromedical evacuation doubtless did not make its maximum contribution to the United Nations Command war effort.[122]

### *5. Air Weather and Airways Communications Services*

In recognition of the global air-transport responsibilities assigned at its creation in 1948, the Military Air Transport Service was charged to provide an Air Weather Service and an Airways and Air Communications Service (AACS) which would girdle the globe. At the outset of the Korean war Air Weather Service and Airways and Air Communications Service units were under FEAF's control for the performance of their assigned functions in the Far East. As the war progressed, both functions were increasingly vital to the accomplishment of the United Nations Command's mission.

When the war began in June 1950, the 2143d Air Weather Wing was responsible for weather services in the Pacific theaters of operations. From his headquarters in Tokyo Colonel Thomas S. Moorman, Jr., commander of the 2143d Wing, commanded three ground weather squadrons—the 20th Weather Squadron in Japan, the 15th Weather Squadron serving the Philippines, Okinawa, and Guam, and the 31st Weather Squadron in Hawaii and the Marshall Islands. He also commanded two weather reconnaissance squadrons—the 512th at Yokota in Japan and the 514th on Guam. In addition to the meteorological reports obtained by its own units, the 2143d Wing received weather data from stations of the Japanese national weather service and from the Ryukyuan weather service. The wing also monitored the international meteorological broadcasts emanating from Russian weather stations, which would continue during the Korean war. The wing

received no weather reports from Communist China, for even before the beginning of the war the Red Chinese government had ceased to share its weather with the remainder of the world.[123]

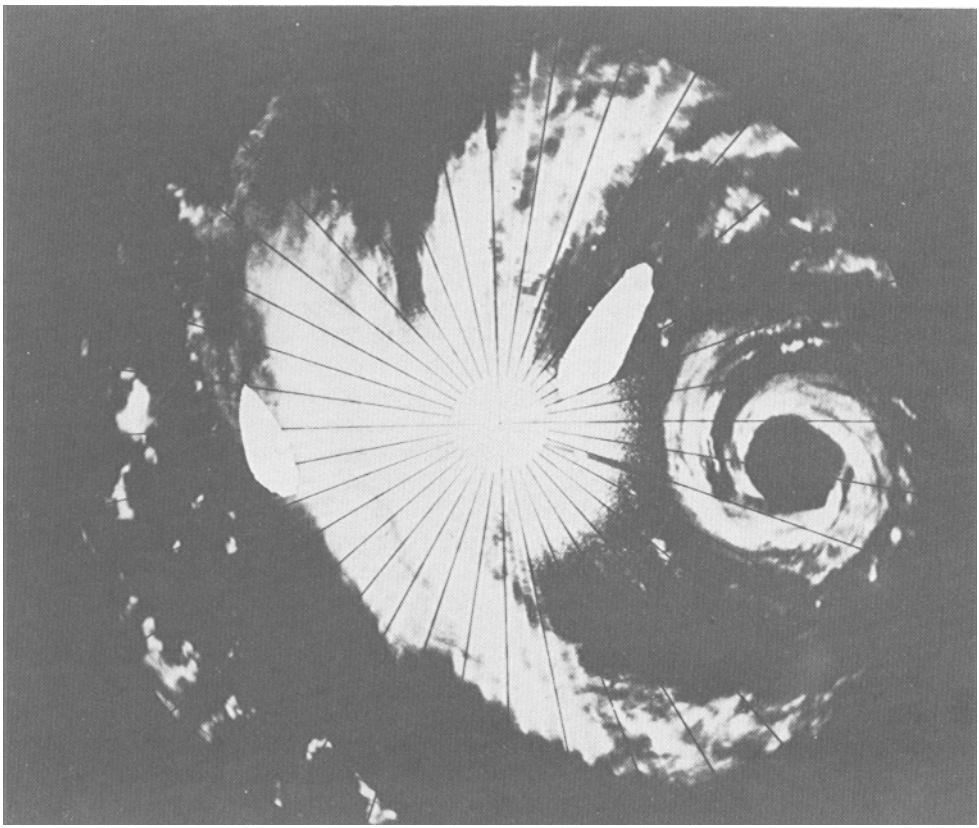
In the years since 1945 the United States armed forces had striven to develop all-weather capabilities, but air, ground, and naval forces were still vulnerable to the influence of the natural elements. As the North Koreans used weather to cover their treacherous attack, the 2143d Air Weather Wing galvanized into action. The 512th Reconnaissance Squadron Weather, flew its first "Buzzard Special" WB-29 weather-reconnaissance mission over Korea on 26 June 1950, and within the next few days the weather crews of this squadron not only provided in-flight meteorological readings but they also flew zigzag courses over Korea and reported tactical observations to the 8th Fighter-Bomber Wing at Itazuke. On 27 June the 20th Weather Squadron airlifted its first station weather detachment with portable weather equipment to the airfield at Taegu. After this weather detachments were among the first organizations to move into new Korean airfields and among the last to move out. Because of the demands in Korea, the 20th Squadron expanded the number of its regular detachments from 13 at the war's start to 32 in November 1950. On 14 November 1950 a special two-man weather-observation team began operations at Sinanju. The reports of this two-man team were so valuable that the Eighth Army agreed to attach one of them to each of its corps headquarters. Similar teams were also established at small Korean airfields, where traffic was too light to justify a weather detachment, and at isolated locations including the islands of Cheju-do and Sochong-do and later Paengnyong-do, Cho-do, and Yo-do. By the end of September 1950 the 512th Squadron was flying two weather reconnaissance missions over Korea each day: "Buzzard King" over North Korea and the Yellow Sea and either "Buzzard Dog" or "Buzzard Easy" over adjacent areas. In an effort further to expand its weather collections on 28 July 1950, the 2143d Wing had inaugurated a program whereby a weather forecaster was placed aboard combat aircraft to observe weather in areas from which such data were not otherwise available. Beginning in October 1950, moreover, two F-82's of the 68th Fighter-All Weather Squadron flew predawn weather-reconnaissance missions over North Korea.[124]

Although the 2143d Air Weather Wing expanded to accomplish the added tasks posed by the war in Korea, the improvised weather structure in the Far East ultimately required a more permanent organization. Since the general organizational concept of the Air Weather Service was to align its units with major commands wherever possible, the 2143d Wing activated the 30th Weather Squadron effective on 16 November 1950 and charged it to provide specialized services for the Fifth Air Force and to control the weather detachments in Korea. Months earlier the 2143d Wing had pleaded the need for a tactical weather-reconnaissance unit, and on 25 December 1950 the Fifth Air Force organized the 6166th Air Weather Reconnaissance Flight, which was first attached to the 543d Tactical Support Group and finally to the 67th Tactical Reconnaissance Wing. Authorized six WB-26's, the flight commenced operations on the night of 7 February 1951 and thereafter commonly flew several prebriefed routes over North Korea and such other special coverage as the Joint

Operations Center directed. In a service-wide reorganization of weather-reconnaissance squadrons, the 512th and 514th Squadrons were replaced by the 56th and 54th Strategic Reconnaissance Squadrons, Medium, Weather, on 21 February 1951. Flying synoptic weather and typhoon warning missions from Guam continued to be the business of the 54th Squadron, but the 56th Squadron had already standardized its weather reconnaissance to include a "Buzzard King" flight which departed Yokota early each morning, dropped southward down through the East China Sea, then turned northward up through the Yellow Sea, and finally headed home across Korea. "Buzzard King," or "Buzzard Kilo," as it was called after July 1952, observed the weather as it was making up along the coast of China and in the Yellow Sea. In another general reorganization of 20 May 1952 the Air Weather Service discontinued the 31st Weather Squadron and assigned its detachments to a zone of interior weather group. At this same time the 57th Strategic Reconnaissance Squadron at Hickam Air Force Base was assigned to the 2143d Wing, and the Tokyo Weather Central was discontinued as a 20th Squadron detachment and organized as a staff section of the 2143d Wing. In addition to its own weather-observation capabilities, the 30th Weather Squadron placed increasing importance upon the accumulation of pilot reports of weather observations, which were consolidated at the combat airfields and normally reported to the Fifth Air Force weather station at three-hour intervals.[125]

To observe and to report weather data were major functions of the 2143d Air Weather Wing, but United Nations Command forces also needed to know what the weather was likely to be in the future. The task of forecasting Korea's weather was not easy, for Korea's predominantly seasonal weather was complicated by the warm ocean currents which surrounded the mountainous peninsula. Local weather in Korea was quite variable, especially in the transitional spring and autumnal seasons. Nor could forecasters always exactly predict the movements of weather fronts. They could plot frontal weather as it made up over Siberia, but they received no reports as the fronts passed over Communist China.[126] Despite the complexity of the problem, both Colonel Moorman and Colonel James W. Twaddell, Jr., who commanded the 2143d Wing after the summer of 1951, attempted to provide the accurate and timely weather forecasts which using services required. The weather forecasting process in the Far East ultimately involved a consensus of many forecasting agencies. The nerve center of the weather service in the Far East was the Tokyo Weather Central, which supported FEAF and provided field weather detachments with analyses and forecasts transmitted to them by facsimile, teletype, and blind radio broadcasts.* Based in part upon a three-way evening telephone conference between the Fifth Air Force weather station, the FEAF Bomber Command staff weather officer, and its own people, the Tokyo Weather Central prepared and broadcasted each midnight a "Korean Operational Forecast" which was expected to be valid during the daylight hours of the following day. At about 1100 hours each day the Fifth Air Force weather station held another

*The Naval Forces Far East also depended upon the 2143d Wing for some meteorological support and maintained its aerological office adjacent to the Tokyo Weather Central.



A radar set scope catches the antics of a typhoon.

telephone conversation with the Tokyo Weather Central, preliminary to preparing the twenty-four-hour weather forecast which it presented to the Joint Operations Center at 1300 hours each day. At each of the Fifth Air Force's combat airfields the tactical staff weather officers who were eventually attached to the combat groups visited the station weather detachments in the predawn hours, developed independent forecasts, and discussed them with station duty forecasters. Following this, each tactical staff weather officer discussed his proposed forecast by telephone with the Fifth Air Force weather station before briefing the combat group commander and the aircrews.[127] These coordinated operational procedures, which reached fruition in May 1952, effectively terminated an earlier situation wherein as many as three different forecasts (covering the same time and area) had sometimes been placed before using commanders.[128]

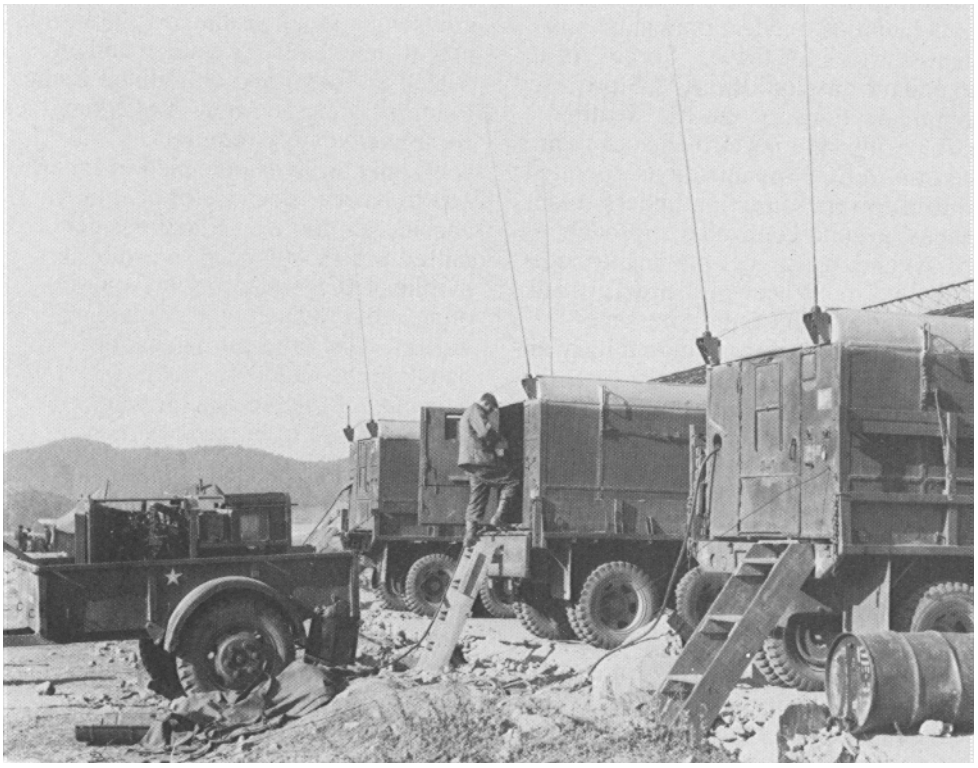
During the spring of 1953 an interplay of several factors compelled the 30th Weather Squadron to enforce an even greater centralization of weather-forecast responsibilities in the Fifth Air Force weather station in Seoul. As the

war progressed the experience and rank of weather forecasters progressively declined, with the result that tactical staff weather officers were more and more dependent upon the better forecasters who were concentrated at the weather forecast center in Seoul. The spring weather of 1953 often varied greatly within an hour's time over Korea, and the Fifth Air Force's tactical responsibilities required it to get off as many missions against scattered targets as terminal weather at the airfields and target weather permitted. The Joint Operations Center could not afford to depend upon periodic weather reports which were usually more than thirty minutes old by the time they reached Seoul. In order to handle the situation, the 30th Squadron organized a present weather section, whose members were divided between the Joint Operations Center and the Tactical Air Control Center. By this time the old WB-26's were no longer able to penetrate deeply into hostile territory, and the 30th Squadron recommended that eight jet fighter weather aircraft ought to be assigned to the 6166th Flight. When nothing came of this request, the present weather section had to depend upon weather reports received from tactical aircrews. When necessary, the senior weather-duty officer in the Joint Operations Center requested the combat wings to fly special weather-reconnaissance missions, and the tactical staff weather officers at South Korean airfields telephoned special terminal weather forecasts and pilot reports of target weather to the junior weather-duty officer in the Tactical Air Control Center. In June and July 1953, when the Reds timed ground assaults to coincide with bad flying weather, the present weather section provided invaluable support to the Joint Operations Center.[129]

At the same time in which it was working out an organization and procedure to provide weather support to the jet air operations of the Fifth Air Force, the 30th Weather Squadron was also building a new program of weather services for the Eighth Army. In November 1950 the weather observer teams at the corps headquarters began to disseminate some 12 specialized daily forecasts, which the 30th Squadron prepared for the Army. Although the 30th Squadron was far from satisfied with the limited services it was providing, the Eighth Army had no complaints. In October 1951, however, the Department of Army sought to determine the weather requirements of its troops and accordingly sent a winter environment team to Korea, headed by its cold-weather expert, Dr. Paul A. Siple. In May 1952 the Siple team issued a report which established the fact that even low-echelon Army commanders had a need for weather-forecast services. Such factors as the time at which valley fogs would lift, what local snowfalls would be, or how much cloud cover could be expected were matters of consequence in planning local military operations. The Siple report commended the 30th Weather Squadron for attempting to provide better services than the Eighth Army wanted, but it noted that most of the general area forecasts provided by the squadron were not greatly useful below corps level. If weather forecasts were to be of maximum value at lower echelons, more weather data would have to be gathered at front-line observer posts.[130]

In negotiations with the Eighth Army staff meteorologist, the 30th Weather Squadron's liaison officer worked out the details of expanded front-line

weather services which would be employed in a ninety-day test period. Since the Eighth Army did not wish to station USAF weather observers at front-line positions, it arranged to secure specially trained Signal Corps weather observers on temporary duty from Fort Monmouth, New Jersey. These observers reached Korea late in November 1952 and dispersed to forward area sites to start the surface-observation net. In December 1952 the 30th Weather Squadron sent corps forecast teams to the United States and South Korean corps headquarters. Additional forecasters were assigned to the weather station in Seoul to meet added Eighth Army requirements. The Eighth Army had agreed to provide radio facsimile equipment to connect the corps forecast teams with the weather station in Seoul, but this equipment proved difficult to secure and was erratic in performance when it was finally put into operation. As a result, the corps teams routinely depended upon the Army's administrative teletype and telephone channels, neither of which permitted the dissemination of more than a minimum of weather information. The test was nevertheless generally successful, and in a change in policy the Eighth Army asked the 30th Squadron to take over the front-line weather observer posts when the Signal Corps men completed their temporary duty. After 1 May 1953 the Eighth Army weather program

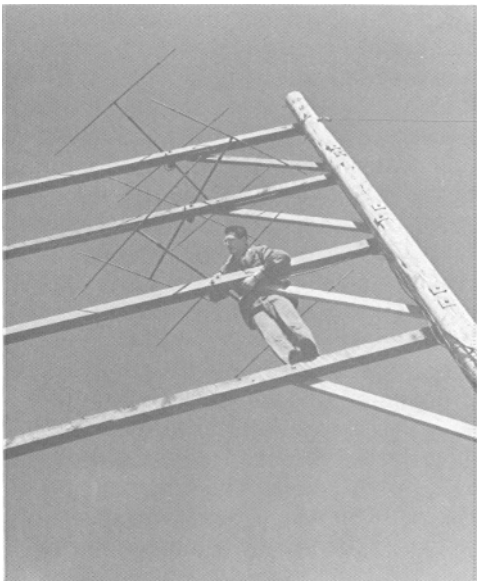


Airways & Air Communications Service trucks at an 18th Air Base Group airfield.

therefore became the sole responsibility of the 30th Weather Squadron, and, except for continuing communicating problems, the program gave increasingly better weather services to Eighth Army units. Back in the United States some Signal Corps officers continued to insist that the Army ought to develop its own organic weather services, but the 30th Weather Squadron's support of the Eighth Army was counted so satisfactory that in January 1954 the Department of Army elected not to develop its own competing weather service and to depend upon the USAF Air Weather Service.[131]

Like the other members of the Military Air Transport Service family, the Airways and Air Communications Service (AACS) was a global command which provided airways-communications facilities, navigational aids, and flight services for the Air Force. As a secondary mission, the AACS provided communications for the Air Weather Service. For the performance of their mission, AACS organizations operated control towers, direction finders, radio ranges, ground-controlled approach (GCA) and instrument-landing systems, radio and radar beacons, air-to-ground and point-to-point radio, message centers, cryptocenters, and military air-traffic control (MATCon) centers. Like the air-route traffic-control center, which was its civilian counterpart in the United States, the MATCon established routes and altitudes for all aircraft flying over a given control area, kept record of the flights of such aircraft, and generally ensured against air collisions in the control area. When the Communist invaders struck in June 1950, Colonel Charles B. Overacker's 1808th AACS Wing, which had its headquarters in Tokyo's Meiji building, was responsible for airways and air-communications services in the Far East and Pacific. Under the 1808th Wing were the 1809th AACS Group at Nagoya, the 1810th Group at Hickam Air Force Base in Hawaii, and the 1811th Group at Kadena Air Base on Okinawa. Each of these groups was divided into squadrons, which were subdivided into detachments at various airfields. In June 1950 the undermanned 1809th AACS Group was operating ten control towers, three direction-finder stations, and two MATCon centers at Tokyo and Fukuoka in Japan. The only navigational aid in Korea was a low-power homing beacon at Kimpo Airfield. The system was capable of handling slow-flying conventional aircraft in the moderate number of flights usual during the occupation, but FEAF was beginning to be concerned about the system's inadequacy for controlling jet air traffic. At the beginning of hostilities air traffic suddenly tripled at Tokyo and quintupled in the Fukuoka area, and new AACS facilities were immediately required for the additional airfields occupied in Japan and in Korea. Because of economy considerations, USAF had not permitted the 1808th Wing to establish a mobile AACS squadron in 1948, an organization which would have provided a most efficient means for handling the suddenly increased demands of the Korean air war.[132]

In response to immediate requirements, the 1809th AACS Group drew upon men and equipment in Japan to establish AACS detachments at Pusan, Taegu, and Pohang early in July 1950. Meanwhile, the AACS rushed ten air-transportable AACS detachments to the Far East from the United States. At first the AACS detachments in Korea operated under the 1955th AACS Squadron at Itazuke, but on 1 August 1950 the 1973d AACS Squadron was organized at Taegu. Within a few days



A3C Nick Psairas of the 502d Tactical Control Group adjusts a hilltop radio relay directional antenna to the proper channel.

the force of North Korean ground assault compelled the AACS detachment to fight its way out of Pohang, but the 1973d Squadron held its position at Taegu.[133] As the United Nations Command forces moved northward in September and October 1950, the 1973d Squadron moved detachments first to Kimpo Airfield and then to Wonsan, Pyongyang, Yonpo, Hamhung, and Anju airfields, north of the 38th parallel. In addition to operating terminal air-control facilities at the airfields, the 1809th AACS Group also established airways between Japan and Korea. These airways facilitated a closely scheduled flow of combat cargo aircraft to the foward airfields, but over Japan and Korea a combination of mountainous terrain and frequently adverse flying weather nevertheless made air-traffic control extremely complex. To reduce the possibility of collisions between aircraft following the airways under instrument flight rules, FEAF assigned permanent altitude blocks to the Combat Cargo Command and to the tactical air wings. In order to provide enough altitude blocks, FEAF reduced the vertical separation of aircraft on airways to 500 feet during periods of military necessity. This permanent assignment of numerous altitude blocks to individual air units naturally reduced the amount of traffic which could be handled along the airways in any given period, and the reduction of the vertical separation of aircraft on airways carried an element of danger. Another problem arose when tactical air-direction centers were established in Korea. The tactical air-direction centers were charged to control the movements of tactical aircraft, but the dividing line between the control of the tactical air-direction centers and the AACS system was quite indefinite. These problems were already apparent in November 1950, when Chinese Communist attack forced a withdrawal from North Korea. During the retreat the 1973d Squadron's detachments displayed extraordinary heroism and fidelity as they defied enemy attack and remained at their stations to the very last directing the takeoffs and landings of cargo planes which evacuated United Nations forces. For its actions in the emergency, the 1973d AACS Squadron was awarded a distinguished unit citation.[134]

In an effort to find some solutions to its control problems early in 1951, FEAF secured specialists from the Civil Aeronautics Administration and instituted an extensive air-traffic control survey. As a direct result of the facts brought out by the survey, FEAF organized an Air Traffic Control Committee, which began to function in February 1951. This committee deter-

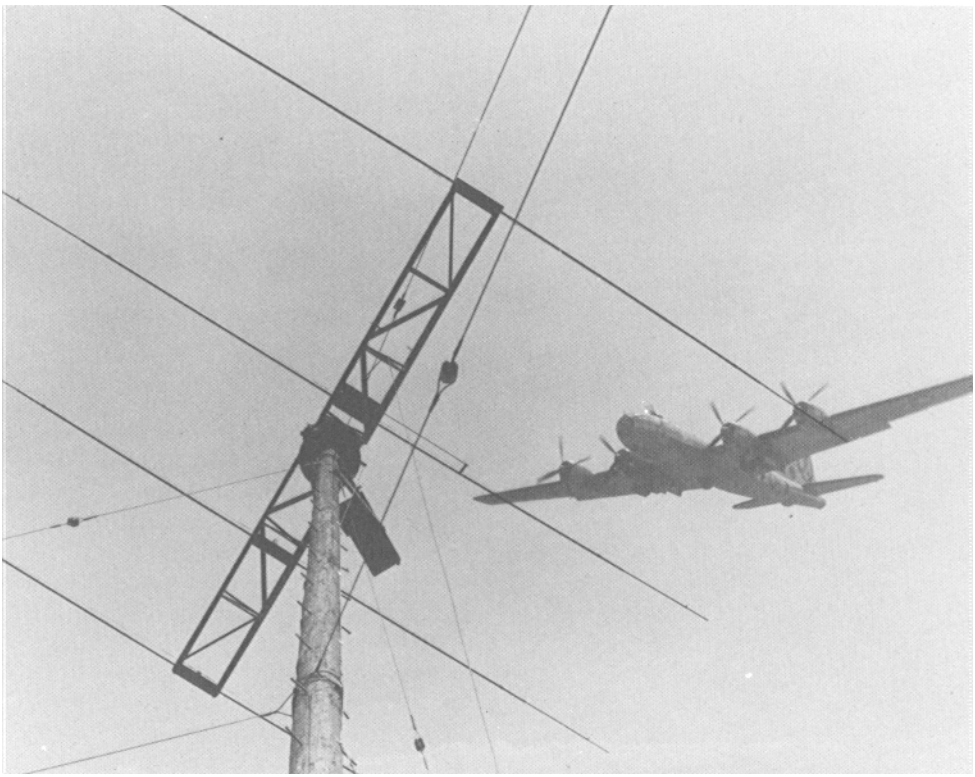
mined requirements and priorities for the use of available air space and handled procedural conflicts. Smaller area air-traffic control committees were also established. The works of these committees permitted the adoption of realistic air-traffic control procedures which expedited movement of all types of air traffic. In order to provide expanded services and closer supervision of AACS functions in Korea, the 1808th AACS Wing secured approval for a reorganization effective on 1 July 1951. At this time the 1818th AACS Group was organized at Pusan to control the 1973d and 1993d AACS Squadrons. From Pusan the 1818th Group soon went forward to Seoul, but it was sent back to Taegu in the spring of 1953. From locations at Taegu and Kimpo the 1973d and 1993d AACS Squadrons operated MATCon centers and controlled the operating locations at the airfields in their respective sectors. To assure it a potential for meeting requirements which could not be programmed in advance, the 1808th Wing was permitted to activate the long-needed 1859th AACS Mobile Communications Squadron at Tokyo on 20 July 1951.[135]

Except for a few minor organizational changes and adjustments which were desirable for more efficient operations, the 1808th AACS Wing attained the organizational status which it required for effective operations by mid-1951. The successive commanders of the 1808th Wing—Colonel Frederick L. Moore (September 1951) and Colonel Donald P. Graul (May 1953)—nevertheless faced serious difficulties. Although Japan and Korea were ultimately covered with airways, ten-minute lateral aircraft spacings and 500-foot-altitude separations were necessary to handle the large volume of air traffic. Under these crowded conditions the potentially dangerous condition in a number of congested air-traffic areas was a matter of continuing concern. Within Korea a procedure was adopted whereby all traffic below 12,000 feet was controlled by the MATCon's and all traffic above 12,000 feet operated under tactical flight plans filed with the Tactical Air Control Center. This provided free air space for jet operations, except when these aircraft arrived and departed from their home bases. Since the B-26's did not operate at high altitudes north of the bombline, however, it was illogical to require these planes to climb to such altitudes over South Korea. The only solution to this problem was to assign altitude blocks to the two light bombardment wings at the expense of regular air-route traffic. In the closing days of the war arrangements were made which allowed the MATCon's to use all altitudes until they received a tactical flight plan and then to reserve airspace only for the minimum time to permit completion of the tactical mission.[136]

The heavy air traffic that followed the crowded airways was a major cause for concern, but the control of approaches and departures from terminal airfields was actually the weakest point in the traffic-control system in Korea. The volume of air traffic at several South Korean airfields frequently surpassed that at Tempehof Airdrome during the Berlin Airlift, and the Korean traffic consisted of mixed-type aircraft—anything from F-86's to C-124's. Even in good weather, approaches and departures often could not be controlled quickly enough to prevent incoming aircraft from saturating the area while waiting their turns to land. The decreasing endurance of jet aircraft made any landing delay a serious safety problem. The heavy air

traffic demanded the utmost skill from AACS control-tower operators, and these men often distinguished themselves. In May 1952, for example, General McCarty commended the control-tower operators and the air-traffic control personnel at Brady, Ashiya, and Pusan East (K-9) airfields for their expeditious handling of combat cargo aircraft during the emergency airlift of the 187th Regimental Combat Team to Korea. In this movement control-tower personnel at Pusan East Airfield handled a takeoff and landing every three minutes. In view of the prevalent bad weather in the theater, FEAF frankly admitted that it could not have operated without the ground-controlled approach services provided by AACS detachments. In a splendid example of duty, the GCA unit at Itazuke, without previous warning, landed 26 C-46 aircraft at three-minute intervals during minimum weather conditions on the night of 21 June 1953. On this night the Itazuke ground-control intercept radar assisted the GCA by spacing the aircraft on their final approach headings before the GCA controller took over.[137]

Despite unique problems of topography and weather, the 1808th AACS Wing successfully performed its air-traffic control functions in the Far East during the Korean hostilities, but the experience of this war nevertheless



This radio tower of the 6161st Communications Section throws out the radio beam linking the plane and crew with their home base.

indicated that the jet air age was rapidly outrunning the existing air-control techniques and equipment. As a matter of policy, the AACS normally attempted to train its personnel on the job, but FEAF strongly insisted that air-traffic personnel ought to be well trained prior to detail to an overseas assignment. Looking toward future methods of controlling large volumes of air traffic, FEAF suggested that terminal radar would be the most likely solution. The use of traffic-control radar in the Far East permitted closer spacing of aircraft in the terminal areas, thus expediting climb-outs and letdowns during periods of instrument weather. In order to conserve radar equipment and to simplify identification of aircraft in flight, FEAF further suggested that some thought should be given to a possible combination of aircraft control and warning and air-traffic control functions in a combat theater.[138] Other than these suggestions, FEAF had no possible solutions for the ever-increasing problems of air-traffic control.

# 18. *Sustained Air-Pressure Operations*

## *1. General Assembly Debates Clarify Political Issues*

When the truce negotiations were indefinitely recessed at Panmunjom on 8 October 1952, the arena of armistice discussions almost immediately shifted to the General Assembly of the United Nations, which convened at its seventh session in New York late in the same month. For more than a month the U.S. Department of State had known of an inclination among uncommitted nations to sponsor some possible solution for the fighting in Korea which would bring about a cessation of hostilities on the terms already agreed upon and leave the question of the prisoners who did not want to be repatriated to be disposed of by subsequent political negotiations. The U.S. Department of Defense opposed such a solution, reasoning that "if the Communists did not accept our proposal on the POW's under military pressure, they undoubtedly would never do so without military pressure."[1] On the eve of the General Assembly meeting the U.S. Joint Chiefs of Staff reiterated this position. "It would be undesirable from the military point of view," they said, "to conclude an armistice in which the disposition of nonrepatriates would be left for subsequent settlement."[2] At the opening of the General Assembly the United States accordingly introduced a draft resolution approving the manner in which the United Nations Command had conducted the armistice negotiations and calling upon Communist China and North Korea to avoid further bloodshed and accept nonforcible repatriation of prisoners. Soviet Foreign Minister A. Y. Vyshinsky countered with a resolution providing for an immediate cease-fire and the establishment of a commission to take up a political solution of the Korean question. In the opening days of the General Assembly the United States and Russia thus stated strongly opposite positions.[3]

Early in the autumn of 1952, in New Delhi, Ambassador Chester Bowles had expressed in conversations with India's diplomats the forceful proposition that an extension of the Korean hostilities was inevitable unless a satisfactory solution was soon reached. Ambassador Bowles had unofficially suggested that India should take the initiative, and, after exhaustive consultations with Arab-Asian delegations and other interested parties, India introduced a compromise proposal in the United Nations on 17 November. The proposal adopted the American position that there must be no forcible repatriation of prisoners, and it advocated the establishment of a neutral nations repatriation commission which would take charge of prisoners and return those who desired it to their homelands. The status of prisoners who did not return home at the end of ninety days would be referred to the post-armistice political conference. It was common knowledge both in New York and in New Delhi that the Chinese had been shown a draft of the Indian plan. Apparently, Chou En-lai had not formally approved it, but he had given indications that a truce could be arranged on terms such as these.[4]

Although the Indian resolution was immediately acceptable to many members of the United Nations—including Great Britain and France—

the United States did not like it. Secretary of State Dean Acheson urged that the Indian resolution accepted the words of the principle of nonforcible repatriation but left prisoners of war no escape from the custody of the neutral nations repatriation commission but to accept eventual repatriation.[5] The Joint Chiefs of Staff continued to oppose any plan that declared an immediate armistice before resolving the disposition of prisoners of war. "The principal factor favorable to the United Nations Command in the present military situation in Korea," explained General Bradley, "is the air superiority which United Nations Command forces hold over North Korea.... In view of the refusal by the Communists in the face of military pressure to agree to the principle of no forced repatriation, it can hardly be expected that they would agree to that principle in the post-armistice negotiations."[6] At a conference with President Truman on 18 November, President-elect Dwight D. Eisenhower heard the problem discussed and subsequently issued a statement of emphatic agreement opposing forcible repatriations of prisoners of war in Korea.[7] In the United Nations General Assembly India's delegate, V. K. Krishna Menon, denied that his country's compromise resolution would mean indefinite retention for prisoners of war. Menon allowed the resolution to be amended to meet American objections. If, after a total period of 120 days, the repatriation commission and the political conference had made no agreeable disposition of those prisoners who resisted repatriation, the responsibility for their subsequent disposition should be transferred to the United Nations. With the support of the United States, India's plan was adopted by the General Assembly on 3 December 1952 by a vote of 54 to 5 with 1 abstention.[8]

Despite some unfavorable comments from the Russian press, the United Nations at first believed that India's plan might be acceptable to Russia and China. On 24 November, however, Vyshinsky not only refused to endorse the Indian proposal but attacked it as a "camouflage for horrible American policy." Soviet propaganda broadcasts called the Indian resolution "nothing but a slightly veiled American draft." In a milder broadcast from Peking, Chou En-lai declared his country could not accept any solution which did not include repatriation of all prisoners of war. Following its adoption by the General Assembly, the resolution was nevertheless formally cabled to Peking and Pyongyang. On 14 December Chou En-lai replied with a formal refusal to accept the United Nations solution for the Korean fighting. Communist China, he said, adhered to the principle of complete repatriation, and he called the General Assembly's action "illegal," since Communist China had no representative on that body. A few days later North Korea made a similar reply.[9] While Red China had rejected the General Assembly's solution for ending the Korean war, many observers believed that the decision had been made in Moscow and not in Peking. The Indians believed that China had wanted to get out of the war for a long time but that Russia insisted on a continuation of the hostilities. If China had really opposed the solution, Indian diplomats argued, she would have turned it down when the first overtures were made by the Indian ambassador in Peking.[10] Although the United Nations' debates failed to provide a compromise solution for the Korean fighting, the negotiations strongly indicated that Communist China wanted to terminate the war.

## 2. *United Nations Airmen Maintain Control of the Air*

"I have become greatly concerned about the possible effect of an enemy air offensive on the operational capability of this command," General Barcus stated on 5 January 1953. "Our position had become more sensitive in recent months due to the continued enemy buildup and conversion to jet aircraft, particularly in such types as the IL-28 jet bomber."[11] In the winter of 1952–53, FEAF estimated that the Communists attained a strength in Manchuria of 1,485 aircraft, including 950 jet fighters, 165 conventional fighters, 100 IL-28 jet bombers, 65 conventional light bombers, 115 ground-attack planes, and 90 transports.[12] After November 1952 the chief potential hazard to United Nations Command ground installations was no longer the MIG-15, which had a dubious ground-attack capability at distances so close to its range limits, but the force of modern IL-28 light jet bombers which the Communists established in Manchuria. These bombers were at once recognized as the "greatest possible threat to FEAF," for the IL-28 could fly a normal-flight profile to a maximum radius of 690 miles with a two-ton bomb load. Its speed of 400 knots promised to make the IL-28 vulnerable if employed in daylight attacks, even with MIG escort, but the IL-28 had a formidable night-attack potential. The presence of these bombers in Manchuria enhanced the possibility of a major night attack against United Nations installations in Korea.[13] Evidently designing to "show off" their newest air weapon, the Reds flew two IL-28's along the Yalu on 17 December 1952 at the very moment that Sabres were patrolling on the other side of the river.[14] The Reds probably wanted to temper any offensive plans that the United Nations Command might be making.

The Communist air order of battle in Manchuria represented a serious offensive threat to the United Nations Command. Yet, except for more frequent night-heckler raids, the Reds preferred to limit their air war to an active air defense of northwestern Korea. In the winter months of 1952–53, the Red air activities continued to indicate the existence of a far-reaching plan to use Korea as a training and testing ground. Quite unlike World War II, when Soviet air units had been chiefly concerned with ground support, the Reds were now using their aircraft in an air-superiority mission. In the winter of 1952–53 Communist air commanders were probably attempting to devise air-superiority tactics and to develop fighter-interceptor cadres—sacrificing quality for quantity.[15] In January 1953 the Reds again experimented with line-abreast passes against Sabres, obviously using the Sabres to simulate bombers. In February 1953 the Seoul tactical air-control center frequently plotted MIG's who penetrated south of the Chongchon and immediately withdrew when Sabres were sent out. Everyone supposed that the Reds were probing United Nations radar defenses and testing the scramble time of the Sabres. Such experiences as these indicated that the Communists were continuing to work out the mechanics—command, staff, maintenance, supply, and related problems—of sizable counter-air efforts against the best of United Nations airpower.[16] What the Reds would do when they completed their training was anyone's guess.

To the Sabre pilots of Col. James K. Johnson's 4th Fighter-Interceptor Wing and of Col. John W. Mitchell's 51st

Fighter-Interceptor Wing, the MIG-15 airmen sighted in the air over northwestern Korea in the winter of 1952–53 were best described as "wily." Adverse weather hindered all flying to some extent, but the Communist pilots generally followed their already familiar training cycle. During November and December 1952 Communist pilots generally flew at altitudes above 35,000 feet and rarely initiated attacks unless they had the advantage of the Yalu River or of superior numbers. In November the MIG's made a few unsuccessful attacks against United Nations fighter-bombers, but in December the Red pilots made no effort to attack the fighter-bombers or reconnaisance planes.[17] Most of the MIG's sighted flew high and evidently were engaged in training, but the Reds who were willing to fight often displayed good coordination and handled their aircraft skillfully. In the slack month of air fighting during November 1952 the Sabre wings lost four planes but claimed 28 MIG's destroyed. In aerial combat at the middle of the month, the 4th Wing enrolled two new jet aces. On 17 November Colonel Royal N. Baker, commander of the 4th Group, shot down his fifth plane to become the Korean war's 21st jet ace. Colonel Baker's score was four MIG-15's and one LA-9 destroyed on 17 November, but by 17 March 1953, when he would rotate, he would have 12 MIG's and one LA-9 to his credit. On 18 November Captain Leonard W. Lilley, of the 334th Squadron, shot down his fifth MIG and became the 22d jet air ace. A few days later, on 22 November, Captain Cecil G. Foster of the 51st Wing became the world's 23d jet air ace.[18] The Fifth Air Force pilots were not too sure of the nationality of the Red airmen they engaged, but on 18 November, when Task Force 77 attacked the North Korean border town of Hoeryong,

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unmarked but obviously Russian MIG-15's swarmed down from Vladivostok. A flight of three Pantherjets from the *Oriskany* engaged several MIG's which were heading toward the fleet and shot one of them down. At General Clark's recommendation, the Joint Chiefs of Staff agreed to make no public disclosure of the Navy's clash with the Russians.[19]

According to the normal course of affairs in a typical Communist training cycle, MIG-15 operations in December 1952 were better coordinated. In many instances the Red pilots covered each other so efficiently that the Sabre men were unable to stay around long enough to confirm victories and had to claim planes "probably destroyed." The Reds worked out a "box-in" tactic which was hard to oppose. About twenty minutes before the Sabre patrols were given a signal to withdraw because of approaching fuel exhaustion, MIG flights crossed at the Sui-ho reservoir and headed down to the Chongchon River. When the Yalu patrol leader gave the code call "Bingo," signaling that all Sabres were to withdraw, flights of MIG's immediately

Capt. Cecil G. Foster

crossed the Yalu and pursued the Sabres southward while the MIG's posted to the Chongchon turned northward to make head-on passes against the retiring American planes. If the Sabres had not been able to get radar warnings of the MIG ambushes, they could have been severely hurt by the superior numbers of Red planes. Even as it was, a number of Sabre pilots caught in the traps had to bail out over Cho-do because of fuel exhaustion and others landed at their home bases critically short of fuel. Already in November the Fifth Air Force had begun to post a number of Sabre flights at points south of the Yalu for ground-controlled interceptions of MIG's who evaded the main Sabre screen, and these flights helped break up the Red "box-in" traps. The main Sabre patrol also began to return homeward over the Yellow Sea whenever possible, thus avoiding combat while low on fuel. The Reds were improving, but they still lacked an ability to tangle with the Sabres. At a cost of two Sabres lost in aerial combat during December, the Sabres destroyed 28 MIG's.[20]

The "class" of Communist pilots who had apparently begun training in November 1952 evidently reached its peak of proficiency and aggressiveness during January 1953. A large proportion of the 2,248 MIG sorties observed still flew in large training formations above 35,000 feet, but many of the 648 MIG's who engaged in combat used almost every maneuver in the book and often refused to break off combat even when they could have easily escaped across the Yalu. Beginning on 22 January, moreover, both the 4th and 51st Wings reported combat with a unit of MIG's which were camouflaged blue underneath and copper top sides. These MIG's maintained excellent flight integrity and demonstrated a skillful tenacity far above that of the average enemy pilot. As a predominant tactic, the Reds sent large formations of high- and fast-flying MIG's across the Yalu at Sui-ho, made wide right turns, and recrossed the river at Sinuiju. Flights of four to eight MIG's often broke away from the high-flying formation and attacked elements of Sabres. The Reds also attempted to use the "box-in" trap tactic which they had originated the month before.[21] Sabre pilots always welcomed the months when the Reds turned aggressive for they got highest kills then. A majority of the engagements between the Sabres and MIG's were fought at altitudes above 40,000 feet and many of the Sabre kills were chalked up by pilots who flew the new F-86F's. By withdrawing from the Yalu prematurely, moreover, the Sabres saved enough fuel to turn and fight the MIG's who tried to box them in. In the goodly number of air battles in January Sabre pilots lost a single plane and shot down 37 MIG's and a single TU-2 bomber. On 24 January Captain Dolphin D. Overton III and Captain Harold E. Fischer, Jr., both of the 51st

Wing, became the 24th and 25th jet air aces. Both of these pilots had flown full combat tours with fighter-bomber wings in Korea before volunteering to fly additional tours with Sabrejets. On his last four Sabre missions in his combat tour, Captain Overton downed five MIG's to set a record for becoming a jet ace in the shortest period of time. Lt. Raymond J. Kinsey, of the 4th Wing, shot down the errant twin-engine TU-2 bomber on 30 January—the first Red bomber to be destroyed in more than a year.[22]

Earlier in the Korean war, noting that the Communist air forces customarily reduced their combat sorties following a month of heavier-than-normal losses, FEAF intelligence officers speculated that the Red commanders must be holding down their effort while they assessed their operational tactics. By January 1953, however, Sabre pilots explained the seemingly erratic and unorthodox MIG tactic as one more manifestation of the Communist training cycle. The Sabres got their peak kills in months when a Red pilot "class" attained its peak proficiency and became aggressive. Following such a month, the Red "class" rotated and new Communist airmen entered combat. In these interim periods Red "Honcho" pilots carried on the war while the "trainee" pilots generally avoided combat.[23] Communist air activities in the three months following January 1953 bore out this "cycle" theory. The Sabre pilots spotted few Chinese insignia but mostly plain red stars on the MIG's they engaged in these months. While sighted in fewer numbers, the Red pilots were noticeably aggressive, and the old F-86E's had trouble closing on the Red jets. Pilots who flew F-86F's continued to score victories, but on one occasion Colonel Baker chased a MIG almost all the way across North Korea without being able to overtake him, even though he was flying an F-86F.[24]

Knowing that the Reds continued to have all the advantages of altitude, air speed, and position, and that they could be expected to initiate combat on most favorable terms, the Sabre wings relied upon their superior pilot skill for attaining victories and modified their tactics to fit the changing patterns of Red operations. In order to provide mutual cover, the Sabre wings adopted a "train" type of squadron formation. Each "train" usually consisted of six flights, each of four aircraft. In this refinement of the jet stream, the flights flew the usual "fluid-four" formation, but they remained in a loose trail formation, each flight following another within an easy supporting distance of about one mile. The "train" formation permitted the Sabre wings to get a maximum number of fighters into contact with enemy formations, and it appreciably reduced the susceptibility of individual Sabre flights to enemy attack. At the same time the individual Sabre flights retained their maneuverability and offensive flexibilty. To counter MIG's who penetrated over North Korea between the times of the main Sabre patrols, flights of four F-86's began to perform intermediate airborne patrols north of Cho-do.[25]

Even the best of Communist pilots made mistakes, and in mid-February 1953 the Sabre airmen effected good kills on MIG pilots who attempted to penetrate as far south as Chinnampo. The courage of the Sabre pilots also stood them in good stead, for on 18 February a flight of four F-86's attacked 48 MIG's near the Sui-ho reservoir. The Sabres shot down two of the enemy planes and caused two others to spin out and crash while attempting to follow through violent evasive maneuvers.[26] At a cost of

Maj. James Jabara

two Sabres lost in air combat, the Sabre wings destroyed 25 MIG's during February 1953. The month's claims of enemy planes destroyed were not too high, but a spectacular race to determine who would be the top American jet air ace in Korea was beginning. On 12 January Major James Jabara had returned for a second combat tour with the 4th Wing, and the world's first jet air ace had begun to add new victories to his score of six MIG's destroyed.

On 16 February Captain Joseph McConnell, Jr., a flight-leader of the 51st Wing's 16th Squadron, destroyed his fifth MIG, but because of a delayed confirmation he was recognized as the 27th jet air ace. Captain Manuel J. Fernandez, Jr., of the 4th Wing's 334th Squadron, was listed as the 26th jet ace of the Korean war when he destroyed his fifth and sixth MIG on 18 February.[27] As yet these officers were not seriously challenging the combat scores of Colonel Baker and Captain Fischer, but they were starting a three-way rivalry for the honor of top jet air ace.

In the heat of combat in the latter part of February 1953 some Sabre pilots possibly pursued fleeing MIG's across the Yalu for short distances. General Clark admitted as much to the Joint Chiefs of Staff on 9 March, when the latter cautioned him that there must be no border violations.[28] In March the Sabre pilots found many of their victories closer to their own bases, for the Red MIG's, while slow to give combat early in the month, turned aggressive in the last ten days. Possibly in an effort to boost the morale of Communist ground forces by making a show of force over the battlelines, MIG airmen carried external fuel tanks to tangle with Sabres over Sariwon on 21 March, with Marine fighter-bombers in the Chinnampo area on 26 March, and with two RF-80's and two Meteors between Sariwon and Sinmak on 27 March. The last engagement was only 38 miles north of the ground front. In each case the MIG's were too poor in gunnery to score on the slower United Nations planes.[29] Finding the Communist pilots willing to fight at altitudes as low as 17,000 feet, the Sabre wings destroyed 34 MIG's and sustained only two combat losses. In preparation for fighter-bomber work the 18th Fighter-Bomber Wing had begun to fly F-86F counterair missions on 25 February, and on 27 March one of its officers, Major James P. Hagerstrom, destroyed his fifth MIG to become the 18th Wing's only jet ace and the 28th jet air ace. In additional aerial fights on 28 and 29 March Colonel James K. Johnson and Lt. Col. George L. Jones, both of the 4th Wing, each ran their scores up to 5½ MIG's destroyed and became the 29th and 30th jet air aces. During March Captain Fernandez downed four more MIG's to become a double jet air ace.[30] As the closing days of March 1953 brought the end of another winter of air-to-air warfare over

Col. James K. Johnson

North Korea, the Fifth Air Force Sabre wings could take pride in the fact that they had again beaten the Communist air forces.

In the winter months of 1952–53 the Communist air forces did not seriously challenge the daytime air superiority which the United Nations Command exercised over North Korea. In the nighttime skies, where the old B-29 Superfortresses were seeking to attack their targets by shoran, the Communists waged a much more effective air defense. "The air war," wrote Brig. Gen. William P. Fisher, "is getting tougher all the time.... We are using every bit of ingenuity and changes in tactics we can think of to get by without losses, but it is getting pretty tight."[31] In night flights at lower altitudes, the Fifth Air Force's B-26's were able to escape most of the hazards of the Red night air defenses, but the Superforts proved extremely vulnerable to the Communist air-defense system. In the months after the loss of B-29's over Kwaksan on the night of 10/11 June 1952, Bomber Command had avoided losses by employing its bombers so as to take advantage of weaknesses in the Red air defenses. In diagnosing these Red defenses General Fisher recognized that the enemy had "an extremely well-developed" ground-control radar-interception capability over northwestern Korea, particularly within a 90-mile radius of Antung. Anywhere north of the Chongchon River the Reds had enough searchlights to pick up and illuminate night-flying B-29's. Antiaircraft artillery guns provided the Reds with defenses of more important targets, but they were not too dangerous provided the Superforts kept higher than 18,000 feet. "As a matter of fact," noted General Fisher, "we can fly anywhere in North Korea under any weather conditions with little concern for flak except on the Yalu River." As night interceptors, the Reds employed a miscellany of jet and propeller-driven day-fighter aircraft, and beginning in December 1952 Bomber Command received fairly positive reports that two Russian night-fighter squadrons were actively engaged in combat over northwestern Korea. The Communist air-defense system had one serious defect: the Red night fighters did not have airborne intercept radar. The Antung ground-control intercept radar could place a Red fighter within two to five miles of an American bomber, but to make the kill the Red pilot had to get close enough to see his target.[32]

Understanding the vulnerabilty of the old Superforts to air attack, FEAF made studious efforts to afford them as much protection as was possible. Beginning in June 1952, when they established their ground-control intercept capability, the Communists worked hard to counter the Superfortress raids. Between 18 November and 30 January 1953 Red air defenses were in the

Capt. Manuel J. Fernandez

ascendancy, costing Bomber Command five B-29's destroyed and damaging three others so badly that they required depot reclamation. On the night of 18/19 November 1952 the Reds revealed new tactics when they shot down a 98th Wing B-29 coming off its supply-center target at Sonchon. Riding above the B-29, a Red spotter dropped flares each time the bomber changed direction. The flares allowed searchlights to lock on the bomber, and four Red fighter passes riddled the bomber, forcing its crew to abandon ship over Cho-do.[33] On the night of 30/31 December, when a full moon was at its zenith and contrails were streaming at bombing altitudes, Red searchlights coned three 19th Group B-29's which were attacking an ore-processing plant near the Yalu at Choak-tong. A conventional airplane called signals from above the bombers, and Red fighters shot down one B-29 and damaged two others so badly that their crews were forced down at Suwon.[34] Bomber Command blamed the moonlight and the contrails for the losses, but in the dark of the moon on the night of 10/11 January 1953 a 307th Wing B-29 was coned by searchlights, hit by flak, and shot down by fighters over Anju's marshaling yard. The position of this bomber was apparently betrayed by light contrails.[35] On the night of 12 January Red fighters intercepted and shot down a lone 91st Reconnaissance Squadron RB-29 which was distributing leaflets along the Yalu. On 28/29 January enemy fighters apparently silhouetted a 19th Group B-29 against a full moon over Kimpodong and needed no other illumination to shoot it down. Moonlight again betrayed 307th Wing B-29's, when they bombed the Unjong-ni supply area on the night of 30/31 January. Some ten Red fighters prosecuted attacks which so badly damaged a B-29 that it barely made an emergency landing in South Korea. The total number of Red interceptions was not great. Bomber Command reported only 20 nonfiring and 23 firing passes made against its aircraft in January 1953.[36] But the Red night interceptions were becoming extremely effective.

Darkness was no longer affording the old B-29's the protection they needed to attack targets in North Korea. Under General Fisher's direction, however, Bomber Command was giving close attention to all factors which affected the success of its missions, and this attention to mission-planning factors was beginning to overcome the Red air defenses. First of all, Bomber Command well recognized that the shoran-bombing system made its crews extremely vulnerable to Red defenses. The Reds had learned how the system worked and usually concentrated their defensive efforts along the shoran arcs or else hit the bombers over their targets. Seeking to make the best of a bad situation, General Fisher ordered his B-29 commanders to cut the time

required to attack a target by shoran to the absolute minimum. On 30 September 1952, for example, the B-29 stream had been over Namsan-ni for two hours, and the Reds had been able to give undivided attention to each individual bomber. As a matter of highest precedence after October 1952, Bomber Command emphasized the compression of its bomber streams so that individual bomber crews would attack at one-minute instead of three-minute intervals. Whenever possible, the bombers were assigned as many as four separate shoran aiming points, so that the crews could attack as nearly simultaneously as possible. By such procedures as many as nine strike aircraft could be in a space 1,000 feet wide and eight miles long, each giving mutual support to the other.[37] Bomber Command's compression tactics received continuous emphasis, and FEAF reported that "maximum compression of the bomber force was the outstanding device for reducing over-all risk."[38]

The compression of the bomber stream not only reduced the time in which the B-29's were vulnerable to enemy air defenses, but it also increased the effectiveness of Bomber Command's electronic countermeasures. After June 1952 FEAF actively pushed electronic countermeasures. The 548th Reconnaissance Technical Squadron added a section which collated, evaluated, and disseminated electronic data obtained by 91st Squadron "ferret" aircraft. Bomber Command secured qualified electronic countermeasures officers for assignment to its intelligence and operations functions and added an enlisted electronic countermeasures operator to its bomber crews. Despite the use of old equipment and partly trained operators, Bomber Command's electronic countermeasures program demonstrated substantial achievements in 1953, particularly against enemy searchlights. Between 1 January and 27 July 1953, 534 B-29 sorties sighted searchlights and 114 aircraft were illuminated. In at least 87 of the latter cases electronic countermeasures caused the searchlights to lose contact with the bombers. Had Bomber Command not utilized electronic countermeasures, FEAF thought that its losses after November 1952 would have been triple what they were. Aside from keeping Bomber Command's losses low, concluded FEAF, one of the most beneficial aspects of the employment of electronic countermeasures in Korea was the education of commanders and crews in techniques which had been largely neglected after World War II.[39]

Following the Superfortress losses over Kwaksan in June 1952, the Fifth Air Force showed interest in providing night-fighter combat support for light- and medium-bomber strike forces. The 319th Fighter-Interceptor Squadron at Suwon Airfield was capable of deep penetration into enemy territory, but the squadron's F-94B Starfire aircraft were equipped with the latest model fire-control systems and USAF had directed that the F-94's should be used only for local air-defense scrambles.[40] The Fifth Air Force also controlled Marine Squadron VMF(N)-513, whose conventional F7F's were equipped with older airborne-intercept radar and could be sent over enemy territory. After July 1952 the Marine squadron made four F7F's available for bomber support each night. In support of the B-29's, the F7F's customarily preceded the bomber stream by about five minutes between the initial point and

A radar observer makes final navigational computations before a mission with the 19th Bomb Group.

the target. The conventional F7F's, however, were said to be "completely ineffective" for battling Red jet aircraft at night.[41] Early in November 1952 the Marine squadron received 12 F3D-2 Skynight all-weather jets, whose older airborne intercept radar could still be used for deep penetrations. The Skynight jets initially supported the B-29's by flying "barrier cover," or patrols 20 to 50 miles north of the attacking bomber stream. On the night of 3 November a Skynight pilot got Korea's first jet-versus-jet night kill, when ground-control radar vectored him to shoot down a Yak-15 jet near Sinuiju. Another F3D pilot shot down an aircraft believed to have been a MIG-15 northwest of Sonchon on the night of 8 November.[42] Informed of the problem concerning the F-94's while he was visiting the theater in November, General Vandenberg personally authorized the Fifth Air Force to remove restrictions on the employment of the Starfire fighters. The 319th Squadron began to use a part of its night fighters to maintain screens between the Yalu and Chongchon rivers.[43]

General Fisher credited the night-fighter patrols with "some small degree of success" in protecting his medium bombers, for the friendly fighters turned back some enemy interceptors and shot down others. But the Reds still continued to shoot down B-29's, and in many instances they were not detected by friendly ground-control intercept radars until they were attacking the bombers. Toward the end of January 1953 the Fifth Air Force suggested that the Reds might be using two forces of night fighters. One force decoyed friendly fighters away from the bombers, while another force, which orbited too high over the bombers to be detected by friendly ground radar, came down to make kills. On the basis of such a diagnosis, Bomber Command asked that the F3D Skynights should fly "overhead cover" for the Superforts between the initial point and the breakaway from the target. Flights of F3D's began to maintain positions 2,000 to 3,000 feet above the bombers. If the bomber was coned by searchlights, the Skynights covered the bomber's tail. Using the new tactics, the Skynights soon got two new kills, one each on the moonlit nights of 28 and 31 January. At this same time the 319th Squadron began to employ four to six F-94's in a barrier patrol about 30 miles in advance of medium-bomber targets. The Starfire squadron's commander, Lt. Col. Jack C. West, complained that Red interceptors usually retreated rather than come up against the F-94 barrier patrols, but this protected the bombers. On the

night of 30 January Captain Ben L. Fithian and Lt. Sam R. Lyons successfully destroyed a conventional LA-9 for the first Starfire kill in Korea. The victory was achieved completely by radar. The Starfire pilot and observer never saw the enemy plane until it burst into flames.[44] In the months that followed the Skynights scored more victories, and the Starfires shot down enemy jets on the nights of 10 May and 12 June. The friendly fighters also turned back a number of Red fighters which would otherwise have attempted to attack the bombers. In its final evaluation of night-fighter support Bomber Command recorded that "numerous unidentified aircraft approaching the bomber stream were turned back by the escort or barrier fighters, and although fighter escort did not prevent attacks, it was a great morale boost for the aircrews to know that there were friends out there in the dark as well as enemies."[45]

During the autumn of 1952 Bomber Command sought to attack targets in enemy-defended areas only when adverse target weather blanketed the hostile defenses, but the policy failed because of imperfect weather conditions. The phase of the moon and the atmospheric conditions producing condensation trails were predictable, and after January's losses were attributed to these causes, General Fisher took the problem to General Weyland. As the result of their agreement, Bomber Command launched no attacks in the area between the Chongchon and the Yalu in periods of bright moonlight or at flight altitudes where contrails would form. General Fisher disliked the policy because it represented a reduction in his force capability, but he recognized that discretion was the better part of valor. The contrail level began to lift in March, and it soon was no longer a problem at medium-bomber attack altitudes. Weather conditions also began to worsen, and Bomber Command crews entered the heavily defended zones with more liberty. The phase of the moon continued to be a matter of consideration in planning medium-bomber missions into the sensitive area.[46]

At the end of January 1953 the fate of Bomber Command's old Superfortresses seemed in doubt, but after this time Bomber Command would lose no more B-29's to enemy action. Through careful adherence to an amalgamation of tactical safeguards, Bomber Command successfully thwarted the Red air defenses. Attacks were scheduled as irregularly as possible; altitudes were varied as much as shoran allowed; the bomber stream was compressed to the utmost. Contrail-forming altitudes were avoided, and heavily defended targets were attacked where possible in the dark of the moon. Planes were camouflaged, and crew defenses were strengthened. Friendly night fighters provided combat support. Electronic countermeasures were constantly employed with great success against hostile gun-laying and searchlight-director radars. These tactics hampered hostile fighter attacks and reduced the effectiveness of the hostile interceptors whose pilots had to sight the bombers before they could attack them. While the tactics were successful, General Fisher recognized that the controlling circumstance was the fact that the Reds either did not possess airborne-intercept radar or else did not want to use it in Korea. Because of this providential unreality the weary old B-29's could weather their last crisis in Korea, but General Fisher realized that the Superforts were living on borrowed time. "If the Communists ever crack that last link and get an all-weather

capability of pressing an accurate firing attack," General Fisher warned, "the B-29 business is really going to get rough."[47]

### *3. Communist Armies Become Destruction Targets*

After the intensified air operations flown in support of the Kojo amphibious demonstration off eastern Korea in mid-October 1952, General Weyland reduced all operational schedules to the rate of effort which the Fifth Air Force and FEAF Bomber Command could sustain indefinitely in daily operations. Intelligence and operations planners at all echelons redoubled their efforts to develop profitable targets for destruction operations. "Special" targets, which were of some intrinsic importance to the Reds, were getting scarce, but FEAF would attack them as they were discovered. More and more, however, FEAF gave its attention to the destruction of Communist armed forces and of hostile logistics, for these were the chief items of value which still remained in North Korea.

Learning from a covert source that the North Koreans had established the "Kumgang Political School" at Odong-ni, the Fifth Air Force confirmed the report by photography and targeted the installation where 1,000 men were undergoing six months' training for subversive activities in the Republic of Korea. FEAF ordered the attack, and on 25 October the Fifth Air Force laid it on. In the first stage of the attack, a formation of day-flying B-26's dropped general-purpose and fragmentation bombs, and 84 fighter-bombers of the 49th, 58th, and 474th Wings finished off the target with bombs and napalm. The installation was almost completely destroyed.[48] In November the Fifth Air Force continued its relentless strikes against varied targets. Two waves of fighter-bombers—179 sorties—attacked a large troop concentration and supply area near Kanggye on November, marking a deep penetration into enemy territory which emphasized an ability to strike targets at will. On 21 November the three Thunderjet wings sent 117 sorties to plaster the Oryong-dong target complex northeast of Chongju. In December 1952 the Fifth Air Force's primary targets were Red troop concentrations, and large strikes hit enemy cantonments around Wonsan and Haeju on nine separate days.[49]

In October 1952 General Weyland had asked the FEAF Bomber Command to attack military targets at Sinuiju and Uiju, "mainly for the purpose of displaying our air strength in the sector."[50] Aside from their psychological significance, these Yalu River targets represented important military values to the Reds. Sinuiju and Uiju airfields served Red air garrisons, and troop headquarters, factories, and vehicle and locomotive repair shops were located in the towns of Uiju and Sinuiju. General Fisher secured permission to delay attacks until bad target weather was predicted.[51] In late October and early November Bomber Command launched numerous strikes against the Sopo supply complex, situated a few miles north of Pyongyang. In the villages of this area photo interpreters had plotted 106 supply targets. Fighter-bombers could not safely attack the area because of numerous automatic weapons, but the medium bombers met no difficulty. In addition to these attacks, the medium

bombers mounted strikes against the Okung Lead and Zinc Mill, the Hokusen Cement Plant, and several mines. These attacks finished off such Red industrial plants as remained in North Korea.[52]

After the middle of November 1952 weather experts predicted cloud cover over northwestern Korea, and the FEAF Bomber Command moved promptly against "sensitive" targets. On 17 November the medium bombers attacked the remaining portion of the mine at Choak-tong, east of Sinuiju and within sight of the Yalu. On 18 November B-29's went within 35 miles of the Yalu to attack the Sonchon supply center. On this night target weather was clear and the B-29's lost one of their number to Red interceptors. On the night of 28/29 November Bomber Command sent 44 B-29's, in three forces at forty-five-minute intervals, to attack the long-assigned targets at Sinuiju and Uiju. Once again the bombers met clear weather instead of predicted clouds, but they emphasized other protective measures and escaped injury. A sudden snowfall prevented exact determination of the damages inflicted by this attack, but the B-29's apparently had not destroyed the supply and communications targets in Uiju to the desired degree. Accordingly, on the night of 12/13 December, the 307th Wing sent 14 B-29's back to Uiju to effect the 50 percent destruction which was wanted. On other nights in December the medium bombers bearded the Reds with attacks north of the Chongchon and thrice hit targets near the Yalu.[53] The Communists did not like these Yalu River attacks. Their increasing efforts to shoot down Superfortresses indicated as much. On 10 December, moreover, India's delegate to the United Nations voiced the Communist line and charged that the United States had sabotaged the prospects for an armistice in Korea by bombing along the Yalu.[54]

Although FEAF was continuing to mount air attacks into the "sensitive" area along the Yalu, the Communist armies and their men, supplies, and equipment increasingly became the main objective of United Nations air attack. There were two reasons for this. Back of the front lines, out of range of United Nations artillery, the Communists had not yet managed to get all of their forces, supplies, and equipment underground. According to intelligence reports, moreover, the Communists had evacuated most civilians from towns and villages south of the 39th parallel and were using the buildings to shelter supplies and equipment. From the air planners' viewpoint trained Communist troops and scarce military equipment were valuable to the Reds, and these targets were available in sufficient quantity to keep the United Nations air forces gainfully employed.[55] The second reason for increased United Nations air attacks against Communist armies sprang from reports that the Reds were beginning to augment their ground forces in North Korea. Beginning in December 1952, increased sightings of Communist vehicles caused General Clark to see the threat of a Red ground offensive as a distinct possibility for early 1953.[56]

When they commenced a new course of sustained air pressure operations in the latter part of October 1952, the United Nations air forces had devoted some part of their capabilities to enemy personnel and supply targets close to the front lines. The Navy airmen of Task Force 77 emphasized massed fighter-bomber attacks against troop and supply positions near the main line of resistance—attacks which they liked

to call "Cherokee" strikes. In these strikes the Navy customarily employed eight F4U's, eight AD's, and eight to twelve F9F's. Such a massed force had good expectations of inflicting maximum damage with minimum losses. The Fifth Air Force also attempted to find one "special" target worthy of 100 fighter-bomber sorties each day, and it devoted the remainder of its efforts to attacks against enemy supply points and personnel areas in the zone south of the line between Pyongyang and Wonsan. Almost at once the Fifth Air Force and the Navy met the same problem. For purposes of safety, the Eighth Army designated a bombline, within which aircrews could not launch attacks unless under positive control of a tactical air-control party or an airborne coordinator. The Eighth Army's bombline was spread as far as 10,000 meters out in front of friendly ground positions. Air attacks far out in front of friendly troops were thus required to observe close-air-support procedures, even though there was no danger that friendly forces would be inadvertently bombed. If they complied with the close-support formalities, neither Task Force 77 nor the Fifth Air Force could place large air strikes on a target fast enough to profit from the shock effect of the massed strike.[57]

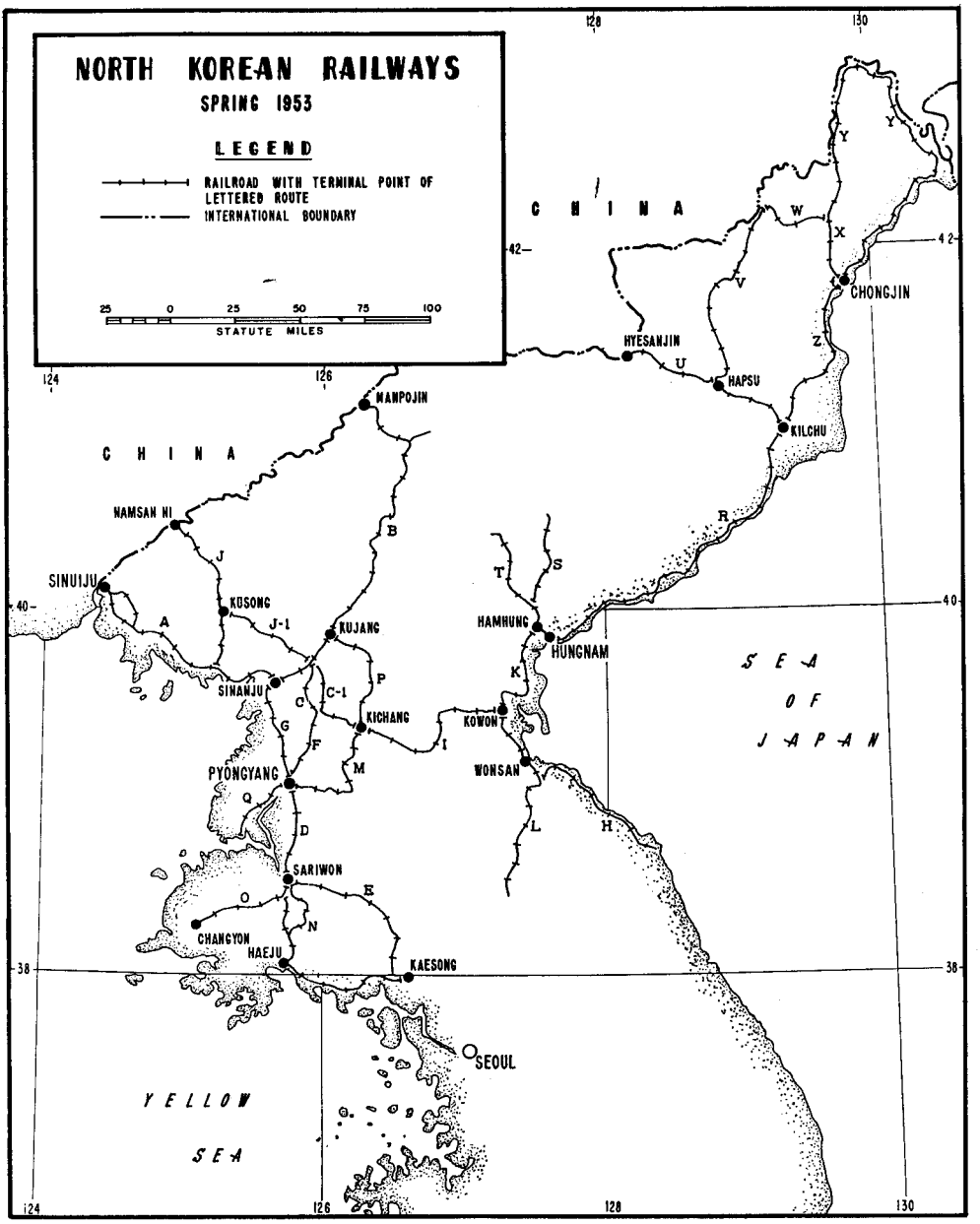
Early in December 1952, at the Fifth Air Force's suggestion, the Eighth Army agreed to move its bombline to a position approximately 3,000 meters beyond its outposts. At this same time a line was drawn approximately 25 miles beyond the bombline separating "general support" from "interdiction." Now, with greater facility, Task Force 77 and Fifth Air Force units launched forces of 24 to 36 aircraft against hostile personnel and supply areas lying outside the 3,000-meter line but generally within 20,000 meters of the ground front. Almost all of Task Force 77's planes flew Cherokee strikes, and in December the Fifth Air Force used 1,891 sorties in general-support strikes. The Fifth Air Force found that the massed attacks, accomplished in a minimum time with little loss of aircraft, appeared to be highly demoralizing to the enemy. Eighth Army officers praised the Cherokee effort and called it "airpower's most potent contribution to the Korean war in its present static-front condition."[58]

The FEAF Bomber Command would continue to employ its forces against "special" targets, but in October 1952 the Superforts began methodically to attack and destroy several hostile supply and communications targets each night from a list of more than 200 such objectives. At first General Fisher felt that this target list left "something to be desired." Many of the targets seemed to be nothing more than villages and towns, but the medium-bomber attacks set off so many secondary fires and explosions that it was soon evident that these villages and towns were Communist arsenals. "We have possibly found," wrote General Fisher, after a few months, "the last currently vulnerable link in the supply and distribution system of the Communist armies."[59] In making these attacks against small objectives, the shoran-bombing B-29 crews almost always employed 500-pound general-purpose bombs. Early in November General Weyland suggested that both the Fifth Air Force and Bomber Command ought to try incendiary munitions against hostile supply concentrations. Weyland reasoned that in the dry weather before the first snowfalls the incendiaries would start fires which would feed on grass and brush and spread to dispersed dumps. On 13 November five B-29's used incendiary clusters against

a supply area at Sopo. The results were not good enough, for only 4.1 percent instead of a desired 60 percent of the target was destroyed. After two more tests yielded similar results, Bomber Command returned to a standard loading of general-purpose bombs.[60] Relentlessly, hitting 30 to 40 of the targets each month, Bomber Command destroyed Red supply, personnel, and communications centers, which General Fisher began to think were the "backbone and support of the Communist armies." By April 1953 Bomber Command had attacked 168 of these centers and had substantially destroyed 132 of them. At this time General Fisher reported that he was "firmly convinced that this program has made the support of the Communist armies so difficult and so costly in men, materiel, and required dispersion, that the Chinese want no more of it."[61]

Early in the winter of 1952–53 General Barcus began to give some serious thoughts to air interdiction of Communist supply lines—not the old delay-and-disruption interdiction attacks but a new type of destructive interdiction. At the times when United Nations air forces had severed the enemy's rail lines the Reds had employed trucks recklessly to supply their military forces. General Barcus believed that properly managed interdiction attacks could set the Reds up for significant destruction. The thing to do was to hit a bottleneck in the enemy's railway lines and then destroy accumulations of rail equipment and motor transport. One of the major potential bottlenecks in the enemy's rail-transportation network was evidently in the Chongchon estuary northwest of Sinanju where the "Able" rail line crossed the Chongchon and Taeryong rivers. The Reds were evidently aware that this was a bad bottleneck, for at Yongmi-dong, where "Able" crossed the Taeryong, they were building a fourth rail bridge to supplement the three bridges that they already possessed there.[62] Proposing to keep the bridges out of action for a month, General Barcus sent 114 fighter-bombers to Yongmi-dong on 1 November. On 6 November 100 fighter-bombers returned to renew the attack, only to find that the Reds had already repaired their three operational bridges and had moved in enough antiaircraft artillery to shoot down a plane and negate bombing results of the second attack. The Reds also began to build a fifth bypass bridge at the Yongmi-dong crossing.[63] General Fisher declined to send his B-29's against the Yongmi-dong bridges because there were too many of them and the area was too dangerous for repeated B-29 strikes. On 12 November, however, six shoran-directed B-29's chopped four spans out of Pyongyang's restored railway bridges. During November and December the Fifth Air Force employed moderate numbers of fighter-bombers to keep "Dog" and "Item" rail lines out of action.[64]

The FEAF railway attacks interdicted Communist rail traffic for nothing more than short periods of time, but even this small dislocation contributed to the success of concomitant attacks against vehicles and trains. In November the Fifth Air Force obtained good results from a main supply-route interdiction plan called "Choke." At last light fighter-bombers attacked selected road bridges, shortly after dark roadblock B-26's hit similar objectives, and during the night other night-intruder B-26's reconnoitered and bombed vehicles stalled behind the blown-out bridges. Even though hampered by unfavorable weather, "Choke" was described as "highly


NORTH KOREAN RAILWAYS
SPRING 1953
LEGEND
RAILROAD WITH TERMINAL POINT OF LETTERED ROUTE
INTERNATIONAL BOUNDARY
25 0 25 50 75 100
STATUTE MILES
CHINA
CHINA
SEA OF JAPAN
YELLOW SEA
HYESANJIN
HAPSU
CHONGJIN
KILCHU
HUNGNAM
HAMHUNG
WONSAN
KOWON
KICHANG
KUJANG
SINANJU
KOSONG
SINUIJU
NAMSAN NI
MANPOJIN
PYONGYANG
SARIWON
HAEJU
CHANGYON
KAESONG
SEOUL
124
126
128
130
42
40
38

satisfactory," and during November the Fifth Air Force claimed to have destroyed 3,139 Red vehicles.[65] In December the Fifth Air Force put into action a "Truck Killer" plan whereby fighter-bombers made road cuts at dusk, light bombers attacked vehicle concentrations during the night, and fighter-bomber sweeps at dawn sought out vehicles which had not gotten under cover. Poor flying weather in the early morning hours prevented the fighter sweeps from contributing much, but the Fifth Air Force nevertheless claimed destruction of 2,321 vehicles.[66] In the last week of December RB-26's and B-26 intruders began to cooperate against enemy rail traffic in a project called "Spotlight." The RB-26 crew located trains, called in a B-26 intruder, and then illuminated the target with flares while the B-26 attacked. This procedure paid off almost at once. On the night of 30 December an RB-26 located five locomotives in one marshaling yard, and two night intruders destroyed four of them and damaged the other one.[67]

Despite their lack of success in such effort early in the Korean war, General Barcus also decided to make additional tests to determine whether day-fighter aircraft could perform night-intruder functions. General Barcus directed each fighter-bomber wing to train two flights for night interdiction work. On the night of 9/10 November the 8th Fighter-Bomber Wing flew the first such interdiction mission. On suitable moonlight nights during November and December the Fifth Air Force customarily employed eight fighter-bombers on the route from Sariwon to Pyongyang and eight on the route from Pyongyang to Chongju. The night-flying day-fighters left their airfields at ten-minute intervals, and a tactical air-direction center positioned them over their main supply routes. The pilot cruised with reduced power at about 15,000 feet until he spotted a string of truck lights. He then entered a shallow glide and released his bombs from 6,000 to 4,000 feet. Because the jets approached suddenly and quietly, Red convoys usually did not have time to extinguish their lights before the fighter laid his bombs on them. For these same reasons the fighter seldom drew any ground fire. As a night-intruder, the fighter-bomber was no substitute for a bomber-type intruder,* nor could it work as effectively against point targets by night as it could by day, but the night-flying fighter-bombers were one more hazard to Communist vehicular traffic in North Korea.[68]

Beginning in December 1952 and continuing into January 1953, United Nations sightings of Communist vehicular traffic were higher than at any time in more than a year. Much of the traffic was proceeding south of Pyongyang toward Haeju and Kaesong. "Such unusual enemy activity," reported FEAF intelligence, "might normally be associated with a pending offensive."[69] In order to combat the Communist build-up, General Barcus on 2 January 1953 asked General

*Because of the successful employment of day-fighter aircraft in night attacks, FEAF suggested in January 1953 that it might be possible to train and equip a fourth squadron in each fighter-bomber wing to serve as night intruders. The Fifth Air Force agreed that such a solution for night-intruder organizational problems would be very desirable, but it believed that "an all-weather aircraft capable of detecting and attacking vehicular and rail traffic" would still be needed. Operational experience bore out the Fifth's contention. Fifth Air Force operations analysts calculated that a night-flying fighter-bomber had an expected claim per sortie rate of only 0.262 vehicles. In night attacks against bridges, the fighter-bombers had an expectation of scoring hits with only four bombs out of 100, less than half the rate that could be expected in daylight fighter-bomber attacks.

Weyland to approve a short series of intensive rail attacks to be made by the Fifth Air Force and Bomber Command. General Barcus called for the destruction of all rail bridges at Sinanju and Yongmi-dong and the interdiction of other rail bridges on the main north-south rail lines. General Weyland approved the operation, and Bomber Command agreed to bomb marshaling yards in the vicinity of Sinanju in order to destroy rail equipment which was backed up as a result of the bridge attacks.[70] According to plan, the Fifth Air Force began to attack the key bridges in the Chongchon estuary on 10 January. Missing the next day because of weather, the fighter-bombers concluded the bridge assault on 15 January. In the six days the fighter-bombers flew 1,166 sorties, 713 which suppressed flak and 453 which attacked the bridges. On the nights of 9 through 14 January formations of from four to six B-29's bombed marshaling yards near Sinanju. Light bombers and fighter-bombers harassed enemy repair work at night. In all, the operation consumed approximately 54 percent of FEAF's combat effort in the period of its execution. The principal positive achievement was the interdiction of the main rail line "Able" for eleven days and the equally important "Baker" line for five days. As General Barcus had predicted, the Reds hurriedly increased their antiaircraft artillery defenses in the Chongchon estuary and shot down seven fighter-bombers. Chiefly because of defective coordination, the marshaling-yard attacks made by the B-29's were not very effective. Bomber Command concluded its attacks before accumulations of enemy rolling stock became really lucrative. Over the Anju marshaling yard on the night of 10/11 January, moreover, Bomber Command lost a B-29 to Red fighters.[71]

While FEAF airmen were attacking North Korea's railroads, General Clark moved to cut down on Communist traffic to Kaesong and Panmunjom. From the beginning of truce negotiations the United Nations Command had permitted the Communists to run nine-vehicle convoys both ways from Pyongyang to Kaesong each day without molestation from air attack. General Clark believed that these daily convoys provided resupply to a major Red military headquarters near Kaesong. In fact, the whole Kaesong area—whose "Holy Land" status protected it from air attacks, even though the truce negotiations had not met there very long—was probably a Communist military concentration point. Since truce negotiations were suspended, General Clark saw no reason to permit daily convoys into Kaesong. After obtaining approval from the Joint Chiefs of Staff, General Clark had his liaison officers inform the Communists on 15 January that, beginning ten days later, they would be permitted to run only two nine-vehicle convoys to and from Pyongyang and Kaesong, only on Sundays, between 0700 and 2000 hours.[72] The Communists loudly protested these restrictions, but the action probably cut down an otherwise free flow of supply to Red military forces at the western end of the battleline.

Aided by a cover of snow, which enabled them to pick out well-traveled roads, especially on moonlight nights, the Fifth Air Force's night-intruders varied their tactics in January and February 1953. Since heavy enemy vehicular traffic was sighted well south toward the battleline, "Firefly" C-46's and C-47's assigned to the 6167th Air Base Group frequently searched out and lighted targets for B-26 intruders. These paraflare operations continued in

February, but the intruder squadrons placed greater reliance on cooperative roadblock and attack tactics. One B-26 blocked a road and then diverted succeeding B-26's to attack backed-up traffic. Since the heavy flow of enemy vehicles provided good opportunities for attack, the Fifth Air Force claimed 2,582 vehicles destroyed in January and 2,850 in February.[73] In these months the Reds also permitted many sightings of trains on the west-coast routes, and "Spotlight" cooperation between RB-26's and B-26's allowed locomotive hunters to claim 33 locomotives destroyed in January and 29 in February.[74]

Although FEAF gave more than a usual amount of attention to the Communist's rail lines in January 1953, it did not neglect special targets. In view of its fine bombing record, Bomber Command selected the 98th Wing for an attack against the installations of Radio Pyongyang on 17 January. The target was a difficult one: except for dispersed antennae, Radio Pyongyang was completely underground and was only a thousand feet from a prisoner-of-war camp. Employing 11 aircraft which reached the target, the 98th Wing scored eight to ten hits with 2,000-pound general-purpose bombs, but these weapons apparently did not penetrate deeply enough to destroy the radio station.[75] Since neither General Barcus nor General Fisher was prepared to sustain excessive losses, FEAF railway-interdiction activities continued on a much reduced scale during February, and both commands gave most of their attention to accumulations of Communist supplies and personnel. For the Fifth Air Force, February's "strike of the month" was against the Sui-ho hydroelectric power plant, where photo interpreters believed two generators

Locomotive ace, Capt. William A. Jessup, knocked out five Communist trains during night intruder missions.

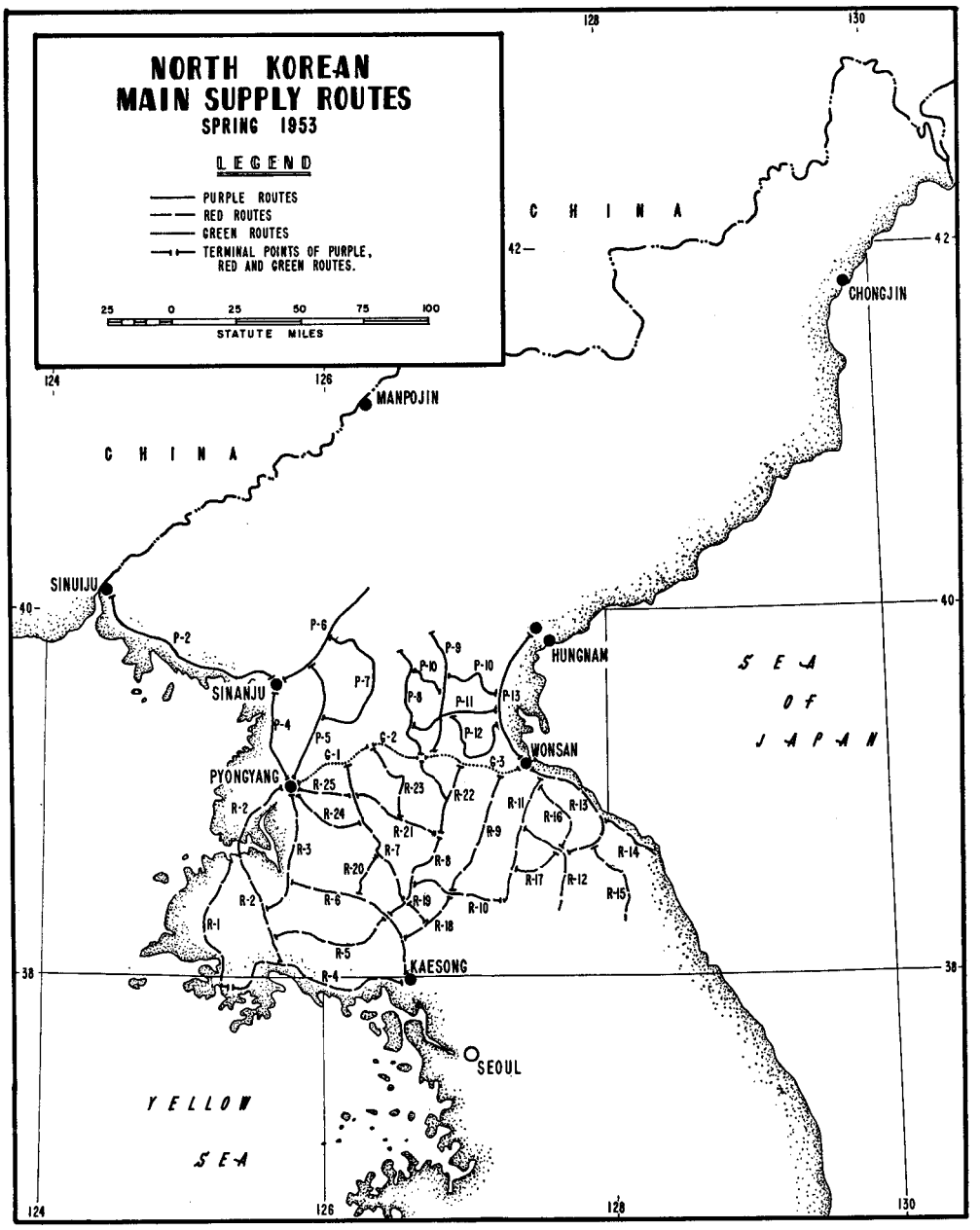
were again operating. The Reds evidently expected another B-29 attack, for they were defending Sui-ho with 141 heavy guns and only 26 automatic weapons. Exploiting the Communist mistake on the afternoon of 15 February, the 474th Fighter-Bomber Wing sent 22 Thunderjets to Sui-ho, each armed with two 1,000-pound semi-armor-piercing bombs. While 82 escorting and covering Sabres drew off 30 MIG's, the Thunderjets drove into Sui-ho at low level and put their bombs into the long, concrete generator house. The fighter-bombers suffered no damage, and their bomb hits halted power production at Sui-ho for several more months.[76] In a notable two-day effort againt the North Korean tank and infantry school at Kangso, on 18 and 19 February, the 8th, 49th, 58th, and 474th Wings and Marine Air Group 33 made 379 sorties to destroy at least 243 buildings. The commander of Marine Air Group 33 led the attack, which was one of the largest all-jet fighter-bomber strikes of the war and

the largest number of aircraft ever led by a Marine.[77]

Early in March both the Fifth Air Force and Bomber Command struck targets deep within enemy territory. In a very long fighter-bomber mission on 5 March the Fifth Air Force sent 16 Thunderjets to attack an industrial area at Chongjin, just 63 miles from the Siberian border in northeastern Korea.[78] On the night of 13 March 12 B-29's returned to the Choak-tong ore-processing plant to destroy a cantonment area which had not been attacked in two previous raids. On the night of 17 March, after four B-29's suppressed flak, 21 B-29's attacked the several small factories and many buildings in an industrial area at Punghwa-dong, only three miles south of Sinuiju. Other than a few flak holes, the B-29's sustained no damage.[79] The Superforts were serving notice on the Reds that they would be back in business in MIG Alley for the duration of the war.

Although FEAF had not emphasized rail-interdiction attacks during February, Fifth Air Force reconnaissance planes had kept a sharp watch behind the Communist lines to make sure that the Reds did not gather their forces for a major attack. As the month passed without any significant Communist ground action, Far East Command intelligence stated that the Reds had missed their best opportunity for several months to come. Any Communist ground offensive between mid-March and mid-May would be greatly hampered by spring thaws. For this reason the Reds would probably wait until May before they opened a ground campaign.[80] Learning these intelligence predictions, FEAF planners outlined a short but intensive aerial interdiction attack—named "Spring Thaw"—which was expected to disrupt the enemy's supply lines, destroy some of his transportation, and force him to consume supplies which were stored in the forward areas. The combined damages of the aerial attack and the seasonal deterioration of the supply routes would complicate any plans which the Reds might make for a general ground offensive.[81]

All elements of FEAF were committed to "Spring Thaw," and on the night of 21 March Bomber Command started the attack with 18 Superfortresses, which knocked spans out of two of the three principal bridges at Yongmi-dong and made a third unserviceable. On the next night eight B-29's continued the attack, but they noted that the Reds had already repaired one of the bridges which had been severed the night before. After these two strikes Bomber Command suspended attacks against Yongmi-dong because it feared that "another attack might have been costly in...aircraft losses."[82] In order to provide prompt sightings of rolling stock which might be stagnated by the rail bridge attacks, Sabres returning from the first and third Yalu patrols reconnoitered the main rail lines and reported sightings to the Joint Operations Center. Thunderjet strikes, coinciding with the second and fourth Sabre patrols, were supposed to attack fleeting traffic concentrations, but poor flying weather allowed the fighter-bombers to make only one effective follow-up strike.[83] The rail attacks were only one part of "Spring Thaw," and most of the Fifth Air Force's fighter-bombers and light bombers worked together against the enemy's main supply routes. The fighter-bombers attacked selected road bridges at dusk, the intruders bombed resultant vehicle concentrations during the night, and before dawn the intruders bombed other bridges to stagnate vehicles for fighter-bomber sweeps. The combined


NORTH KOREAN
MAIN SUPPLY ROUTES
SPRING 1953
LEGEND
PURPLE ROUTES
RED ROUTES
GREEN ROUTES
TERMINAL POINTS OF PURPLE, RED AND GREEN ROUTES.
25 0 25 50 75 100
STATUTE MILES
128
130
42
40
38
124
126
CHINA
CHONGJIN
MANPOJIN
SINUIJU
SINANJU
PYONGYANG
HUNGNAM
WONSAN
KAESONG
SEOUL
SEA of JAPAN
YELLOW SEA
P-2
P-4
P-5
P-6
P-7
P-8
P-9
P-10
P-11
P-12
P-13
C-1
C-2
C-3
R-1
R-2
R-3
R-4
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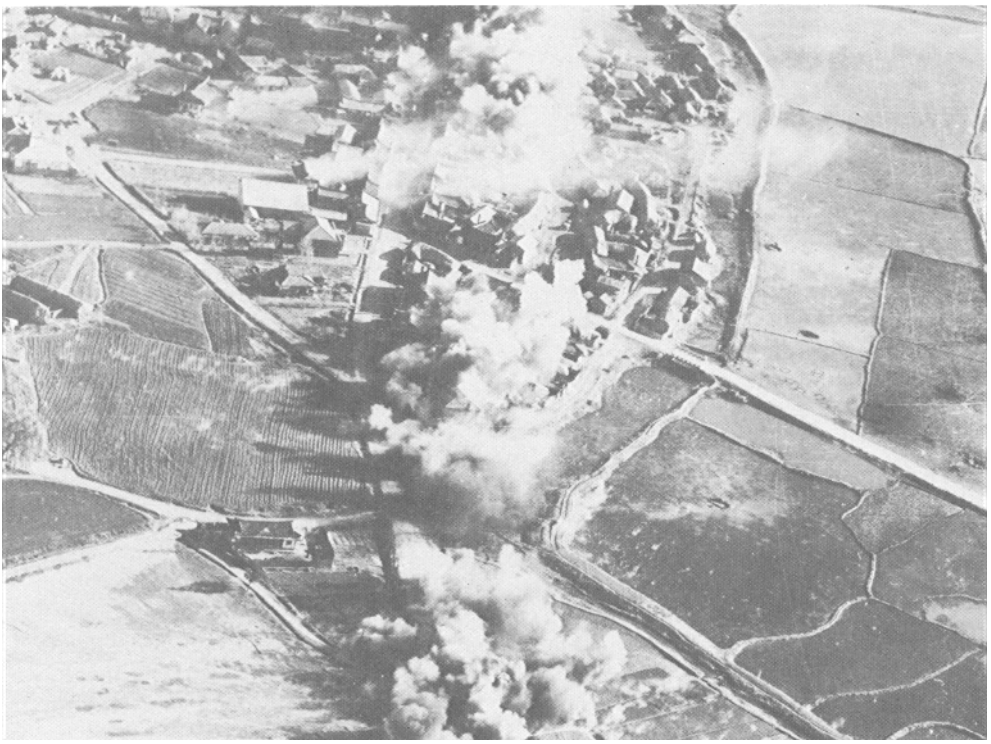
attack destroyed 50 road bridges, damaged 56 others, and made 134 road cuts, but the planned cooperation between the fighters and the intruders required close timing which was frequently impossible in the marginal weather of late March. During March the Fifth Air Force nevertheless claimed destruction of 2,005 enemy vehicles, and sightings of enemy traffic showed that the Communists were using their boggy secondary roads more frequently than usual. From this evidence the Fifth Air Force concluded that "Spring Thaw" had "caused...a slowdown of vehicular traffic."[84]

With better flying weather and more precise timing, FEAF believed that an operation similar to "Spring Thaw" could achieve better results. During the dark of the moon, early in April, Bomber Command and the Fifth Air Force accordingly repeated the operation with a few changes in target areas. On the nights of 6, 7, and 11 April forces of 15 B-29's attacked the three serviceable rail bridges across the Chongchon at Sinanju. On each of these nights the B-29's cut spans from the three bridges, but, as Bomber Command reported, the "ability of the enemy to repair bridges was just short of miraculous," and none of the structures were out of operation for more than twenty-four hours at a time.[85] Since the thawing zone was moving northward and the Reds had also augmented their flak along the roads to the south, the Fifth Air Force moved its fighter-bombers and light bombers beyond a line between Sinanju and Wonsan to attack the enemy's main supply routes. During the first half of April Fifth Air Force crews destroyed 18 road bridges, damaged 38, and made 86 road cuts. During the month the Fifth Air Force also claimed the destruction of 2,732 enemy vehicles, a larger than normal total which was attributed to an increasing level of skill among B-26 crews.[86] During these interdiction operations of March and April the Fifth Air Force required its rail-reconnaissance crews to make roadblocks with internally carried para-demolition bombs before going on to reconnoiter rail routes. This policy hampered locomotive destruction, and the Fifth Air Force could claim only 11 locomotives destroyed in March and eight in April.[87]

From December 1952 through April 1953 the United Nations air forces gave more attention to the interdiction of Communist ground armies in North Korea, but the interdiction had a different purpose than earlier air-interdiction campaigns for it was intended to destroy the Red armies rather than to delay and disrupt their plans. Communist actions and announcements gave reason to believe that the new destructive interdiction was hurting them. In order to bypass the whole Chongchon estuary, the Reds began one of their most remarkable construction projects ever attempted in Korea. Beginning work in January 1953, they built an entirely new 70-mile-long railroad connecting Kusong, Kunu-ri, and Sinpyong-ni. Completed on 15 April, the new railroad connected the Namsan-ni to Chongju ("Jig") line with the Sinanju to Manpojin ("Baker") line. This costly project allowed the Reds to bypass the bottleneck in Chongchon estuary.[88] In March 1953 Radio Peking quite suddenly changed its propaganda line regarding railway attacks. Until this time Red propagandists had played up the mass destruction of the "terrorist" air attacks, but they suddenly began to claim that United Nations air attacks were not very effective. These propaganda broadcasts

assured listeners that the "hands" of the North Koreans were superior to the "machines" of the Americans and that "spirit" would triumph over "material." The broadcasts were very similar to the propaganda line advanced by the Third Reich during the winter of 1945, when German soldiers were "reassured" that Allied superiority in weapons were valueless compared with German will power and *esprit*. The propaganda about-face suggested that their morale was so impaired that the Communists were forced to deprecate the effectiveness of United Nations air attacks.[89]

What North Korea looked like after almost a year of air pressure attacks was well described by General William F. Dean, whose Communist captors moved him about to various places of imprisonment in the spring of 1953. "The town of Huichon amazed me," wrote General Dean. "The city I'd seen before—two-storied buildings, a prominent main street—wasn't there any more.... I think no important bridge between Pyongyang and Kanggye had been missed," remembered General Dean, "and most of the towns were just rubble or snowy open spaces where buildings had been.... The little towns, once full of people, were unoccupied shells. The villagers lived in entirely new temporary villages, hidden in canyons or in such positions that only a major bombing effort could reach them." General Dean was also impressed with Communist countermeasures to air attack. Duplicate



"...and most of the towns were just rubble..."

bypass bridges had been built, and bridge spans were stored ready to be slipped into place when needed. Sacks and boxes of military supplies were stored in the remnants of villages. General Dean thought that the enemy's countermeasures were improving faster than the United Nations Command's means of destruction, but he failed to recognize that the Reds could have no really effective countermeasures to positive aerial destruction which was making their cause both hopeless and extremely costly.[90] Each day the war continued the Reds lost more and more economic wealth.

### *4. All Elements of FEAF Grew Stronger*

During the year following July 1952 FEAF was promised increased support from productive and training establishments in the United States. After two years to get ready, USAF was finally taking delivery of new planes and was turning out new crews which FEAF needed. Despite these promises of additional support, FEAF would have to continue to husband its resources if it were to maintain continuous air pressure upon the Communists. To ensure that tasks were accomplished with the least expenditure of scarce men and equipment, FEAF would have to examine and modify its organizational concepts. To ensure that each scarce air sortie would hurt the enemy, FEAF had to emphasize combat training. In order to achieve maximum results and conserve againt operational losses and deterioration, the tactical air wings in Korea needed better air facilities. While it would benefit from better support from the United States, FEAF would have to gain much of its increased combat effectiveness from the employment of sound management principles. Everyone knew that the Communists respected nothing so much as strength. If the combat commands in the Far East could wage continuous air pressure and simultaneously increase their strength, the Communists would likely be forced to recalculate their prospects for continuing the war in Korea.

At the beginning of the third year of the Korean hostilities the FEAF Bomber Command was laboring to employ its old conventional B-29 Superfortresses as gainfully as possible in what had become a jet air war. As its striking force, Bomber Command possessed operational control over the Strategic Air Command's 98th and 307th Bombardment Wings and the Twentieth Air Force's 19th Bombardment Group. Each of these organizations would continue to be authorized 31 B-29's and to accept two additional B-29's as a maintenance-acceptable overage, giving Bomber Command a total authorized strength of 99 B-29's. Counting replacement aircraft en route from the United States, Bomber Command would possess an average of 105.6 B-29's in the year following July 1952. Although Bomber Command's organization was but little changed and its strength remained virtually the same, Brigadier Generals Wiley D. Ganey, William P. Fisher, and Richard H. Carmichael, who took command on

B-29 night duty.

15 June 1953, employed principles of management analysis so effectively that they virtually doubled the combat effectiveness of Bomber Command.[91]

In order to attain operational effectiveness, the FEAF Bomber Command sought to effect organizational homogeneity and efficiency in the medium-bomber units under its operational control. The Strategic Air Command wings gave little trouble, but this was not true of the anomalous organization of the 19th Bombardment Group. At the beginning of the Korean war the 19th Bombardment Wing had remained on Guam, and the 19th Bombardment Group was supported at Kadena Air Base on Okinawa by a table of distribution air-base wing organized by the Twentieth Air Force. The 19th Group was not organized according to Strategic Air Command principles and, as a matter of fact, still used the old crew-chief maintenance system whereby a single assigned crew maintained a single B-29 aircraft. Other factors were partly to blame, but after August 1952 the 19th Group's aircraft-in-commission rate declined and dragged Bomber Command's rate below the 70 percent of aircraft-in-commission which was desirable. "Our experience," stated General Ganey on 3 October 1952, "has clearly established that the combat and direct support units of a wing are mutually dependent and that sustained effective bombardment operations cannot be conducted unless these elements are combined in a single self-sufficient organization under centralized control." General Ganey accordingly recommended that the 19th Group should be rebuilt as the 19th Wing, under the tables of organization

for a Strategic Air Command medium-bombardment wing.[92] Both FEAF and USAF agreed with General Ganey's proposal, but they could not program the change for several months. Anticipating the reorganization, however, Col. H. C. Dorney, the 19th Group's commander, abandoned the crew-chief system on 12 January 1953 and organized a provisional periodic maintenance squadron to perform specialized dock maintenance on his aircraft according to Strategic Air Command procedures. The 19th Group's aircraft-in-commission rate increased so rapidly that Bomber Command's rate soon exceeded the desired 70 percent. Effective on 1 June 1953, the 19th Bombardment Wing (M) and its support units were moved to Kadena, less personnel and equipment, and the wing was simultaneously reorganized according to Strategic Air Command standards.[93] The reorganization of the 19th Group, together with other factors such as the rotation of combat-weary B-29's to the United States for depot overhaul, helped Bomber Command keep a maximum number of Superfortresses ready for combat at all times.

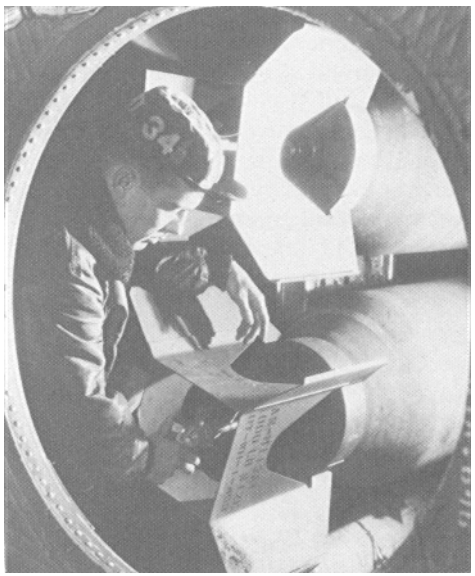
One other rather simple organizational change had a substantial impact upon the operational effectiveness of the medium-bomber units based on Okinawa. Because of the length of their missions, Kadena-based B-29's not infrequently developed mechanical trouble or sustained combat damages which forced them to make emergency landings either in Korea or in southern Japan. When their planes were forced down, the Okinawa units had to transport maintenance crews and equipment to the site of the forced landing. The time lost in such a procedure necessarily reduced the combat capabilities of the Okinawa units. Recognizing this problem, Bomber Command in February 1953 organized Detachment No. 1 at Itazuke Air Base. Manned by personnel of Bomber Command, the 19th Group and the 307th Wing, this detachment provided servicing and maintenance for the B-29's which were unable to return to their home base after a combat mission. This detachment accomplished its duties in a commendable manner, and made a good contribution to the combat capabilities of the 19th Group and the 307th Wing.[94]

The rate of combat operations which Bomber Command could fly depended not only on its own maintenance effort but also upon the logistical support which it received from the United States. Improving logistical support after August 1952 allowed Bomber Command to program each of its three medium-bomber organizations to fly 1,800 hours each month, thus giving Bomber Command a maximum sustained operational capability of approximately 20 combat sorties a day. In the third year of the Korean war, however, the medium-bomber organizations actually averaged 1,307 combat hours a month, and Bomber Command accordingly flew an average of 16 combat sorties per day.[95] During 1953 Bomber Command usually scheduled the 19th Group and the 307th Wing for sorties on two nights straight running and the 98th Wing for sorties every third night. In January 1953, when moonlight became a factor in operational planning, Bomber Command ceased to employ a given number of aircraft each night and scheduled more combat sorties at irregular intervals. This permitted Bomber Command to fly at minimum effort in full-moon periods, and permitted the bomber units to gain experience in mounting larger combat forces.[96]

With a full understanding that it was

diverting combat effort, Bomber Command had long been compelled to use a substantial portion of its flying hours for shoran training. For nearly a year after October 1951 all medium-bomber crews had to receive all of their shoran training in the Far East. According to Bomber Command's experience, every shoran crew needed at least 35 practice drops to establish its proficiency with the bombing technique, but the best that Bomber Command had been able to do was to give most replacement crews 20 practice drops. The new crews had to get the other 15 releases which they needed to establish proficiency while on combat missions over North Korea. While the proficiency of its crews had not been uniformly good, Bomber Command had still been able to secure the destruction of assigned targets by committing relatively large numbers of aircraft to attack them. During 1952 at Forbes Air Force Base in Topeka, Kansas, the 90th Strategic Reconnaissance Wing began to provide FEAF replacement crews with 20 shoran practice drops, and the replacement crews who arrived in the Far East in July and August 1952 were said to have had "a shoran bombing capability equal to that of previous crews after three weeks' training with their Bomber Command units."[97]

The arrival of the better-trained replacement crews increased the accuracy of Bomber Command's bombing attacks, but at about this same time the requirements of the air pressure operations increased the difficulty of the bombing problem. When attacking area targets under the destruction strategy, Bomber Command announced in August 1952 that it would normally commit sufficient force to secure destruction of 60 percent of the target. By scheduling a large enough



A1C Ray K. Richert inserts tail fuses into 1000-pound bombs destined for an enemy supply build-up in North Korea.

force against a single target, Bomber Command was able to attain this desired amount of destruction. In October 1952, however, General Weyland asked Bomber Command to attack two or more targets each night with smaller forces of B-29's. As it splits its force against numerous targets, Bomber Command soon discovered that approximately half of its crews were responsible for most of the accurate bombing in the command. In small-scale attacks Bomber Command was not attaining the desired 60 percent destruction of area targets.[98] If it was to attain the results it desired, Bomber Command would have to improve the skills of its shoran crews and to remedy defects in the shoran system.

As Bomber Command sought increased combat effectiveness, improvements in the shoran-bombing system and in shoran-bombing skills went hand

in hand. It was often difficult to determine why shoran-bombing missions failed; sometimes the system was at fault and sometimes the bomber crew made mistakes. Recognizing that successful operations were dependent upon a thorough study of operational factors affecting the course of a bomber mission, General Ganey had already organized a mission analysis program in the summer of 1952. After each bomber mission representatives of Bomber Command's targets intelligence and combat operations directorates studied the data accumulated by the strike crews and reported the results of their critique to the commander of Bomber Command. Vigorously supported by General Fisher, the mission analysis function provided evaluated data which allowed Bomber Command to overcome Communist night air defenses and also to increase the effectiveness of its shoran-bombing attacks.[99]

An early problem in the shoran-bombing system had been the inexact location of many objectives in North Korea on existing maps. Such target-location errors decreased materially after November 1952, when the 548th Reconnaissance Technical Squadron began to provide Bomber Command with multiplexed target coordinates.* "We are almost eliminating target-location errors," General Fisher stated in February 1953.[100] In November 1952 the 1st Shoran Beacon Squadron established a detachment at Yokota which was able to provide Bomber Command with the shoran computations it needed much more rapidly and accurately than had been the case when shoran coordinates were computed in Korea.[101] As the shoran skills of its crews increased, Bomber Command was able to identify many malfunctions in the shoran beacon stations operated by the Fifth Air Force's 1st Shoran Beacon Squadron. After an exploratory conference at Yokota on 7 March 1953, a team of shoran experts from Bomber Command and FEALogFor visited the shoran stations in Korea. The Bomber Command representatives impressed shoran operators with the importance of their work, and the FEALogFor technicians suggested improved operating procedures. Effective coordination transcended the command barrier, but General Fisher nevertheless believed that the primary using command should have controlled the shoran ground stations. "If the Strategic Air Command has any plans to do shoran bombing anywhere else," he worte, "it is most desirable that the shoran squadrons which operate the ground stations and do the target computations be under Strategic Air Command command and control."[102]

The arrival of better-trained and more-willing replacement crews from the United States after July 1952 did not eliminate the requirement for crew training within the medium-bomber wings. The replacement crews from Forbes Air Force Base still needed about 15 more shoran practice drops before they were proficient. After graduating at Forbes, moreover, the replacement crews underwent additional survival training, were given leaves, and spent a number of days en route to the theater. Each of these delays detracted from their shoran proficiency and caused the new crews to need refresher training. Because of all these requirements, Bomber Command continued to allocate about 500 hours of flying time each month to each

**See* Chapter 15, p. 503.

bomber wing for training. Except for general supervision, General Fisher preferred to leave the details of this training to his wing commanders.[103] By personnel actions Bomber Command undertook to reward meritorious crews and to penalize the laggards. On 15 December 1952 General Fisher authorized wing commanders to rotate deserving crews after five months in combat and to retain less effective crews to a maximum of seven months.[104] As was the case throughout the Air Force, Bomber Command's reserve officers were given an opportunity to accept or decline a permanent reserve commission in the spring of 1953, and those who declined were relieved from duty in February and March 1953. After 1 April Bomber Command's crews contained none but career officers or voluntary reservists. "Their attitude, interest and incentive seem much better," said General Fisher. "They are more anxious to do a job and are not so much in a big hurry to get back home."[105]

Month by month, in the last year of the Korean war, the FEAF Bomber Command increased its combat effectiveness. Bombing accuracy sharpened, gross errors dwindled, abort rates on combat missions dropped from 6.7 percent in September 1952 and averaged only 2.5 percent for the last year of the war. Starting in January 1953, the medium bombers effected a steadily growing percentage of destruction upon the area targets which they attacked. In December 1952 forces of seven to nine B-29's attacked 50 area targets and effected an average of 35.5 percent destruction. In May 1953 similar-sized B-29 forces attacked 44 similar-sized area targets and effected an average of 69.3 percent destruction at each of them. Reckoned in these terms, Bomber Command virtually doubled the combat effectiveness of its medium-bomber force. Vigorous mission analysis study, intensive training and competition between bomber wings, precise target location by multiplex methods, better reception of the shoran beacon signals, improved attitudes of voluntary aircrews, and the personal interest of unit commanders were the factors which enabled Bomber Command to attain increased combat effectiveness.[106] Bomber Command's experience was an outstanding example of the value of sound management practices.

According to USAF forecasts, the Fifth Air Force was scheduled to receive new fighter-bombers in the year following 1 July 1952. During the spring of 1952 the Fifth Air Force had already received the additional engineer aviation forces which were needed to build modern air facilities in Korea. USAF training programs would begin to provide the tactical air wings with a steady flow of replacement air crews, most of whom would be younger officers who had not known aerial combat. Each of these developments promised to reinforce the Fifth Air Force, but most of them carried some element of hazard to operational capabilities. The receipt of new jet aircraft in the winter of 1951–52 had caused a period of near logistical chaos in the spring of 1952. If the construction of new air facilities did not properly anticipate wing transition schedules, the new jet fighter-bombers would not be able to operate efficiently. Without combat training the new aircrews might well reduce the Fifth Air Force's operational capabilities. Planning was never more important. Unless these several programs were carefully coordinated, the Fifth Air Force might run into operational difficulties which would weaken the

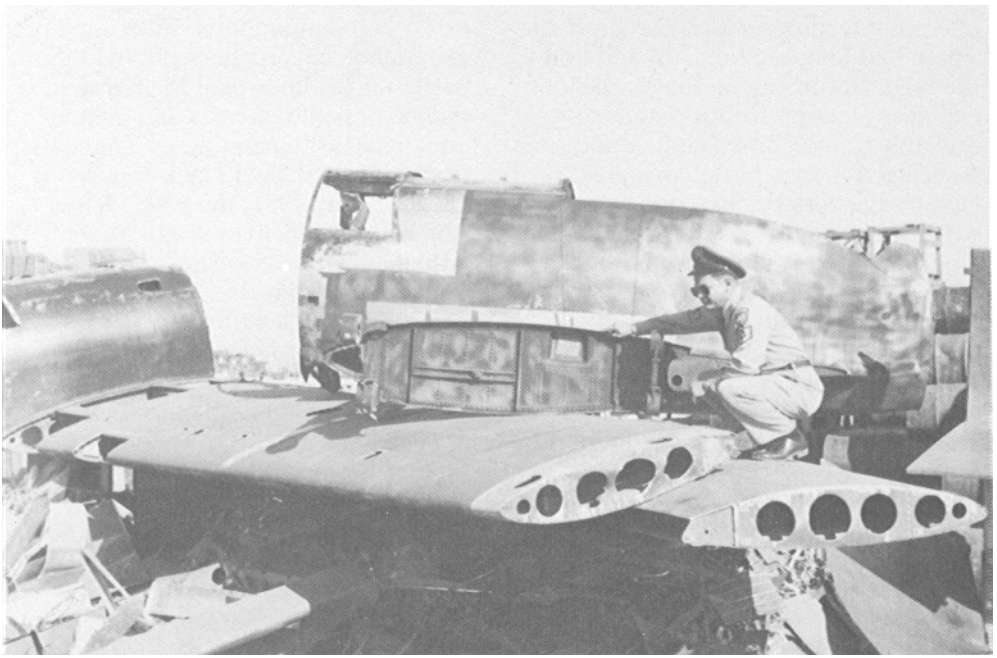
pressure of the sustained air attack it was waging against the Communists. Through adherence to sound management practices, however, the Fifth Air Force—under the command of Lt. Gen. Glenn O. Barcus and of Lt. Gen. Samuel E. Anderson, who took the post on 31 May 1953—was going to be able to manage a year of smashing air attacks against the Communists and still emerge as a stronger force than it had been twelve months earlier.

Anyone who toured Korea in June 1952 could not help noting that most of the Fifth Air Force's airfields were of mixed construction, representing old Japanese-built installations which had been patched up and expanded. The only exception was a new 9,000-foot cement-concrete runway at Taegu. The 417th Engineer Aviation Brigade, however, was mustering its ten aviation engineer battalions for a construction program which would provide the operating facilities which the Fifth Air Force had long required. In addition to the modern runway at Taegu, the engineer aviation troops extended Suwon's runway to 9,000 feet and resurfaced it with hot-mix asphalt. Other engineers began work on another 9,000-foot cement-concrete runway at Kunsan Airfield, which would be completed in the autumn of 1953. The engineers resurfaced and slightly lengthened Kimpo Airfield's runways. They built a heavy-duty runway to accommodate Globemaster transports at Seoul Airfield. They worked hard to keep the two airfields at Pusan in repair. To serve Marine Air Group 12, one engineer aviation battalion built a new runway at Pyongtaek Airfield. The engineers also began to rehabilitate a war-torn army compound at Yongsan, which, after the war ended, would house Fifth Air Force headquarters. In the valley of the Chinwi-chon, at the village of Osan-ni, about 40 miles south of Seoul, the aviation engineers began the largest single-construction project and the only airfield which was to be built from the ground up. Three aviation engineer battalions raced against time at Osan-ni to build a 9,000-foot cement-concrete runway and other facilities to serve a wing of new Sabre fighter-bombers. Heavy rains and floods on the Chinwi-chon delayed earthwork in July and August 1952, but the battalions displayed an unbeatable willingness to overcome adversity with hard work, and Osan-ni Airfield (K-55) was ready to receive its fighter-bomber wing in December 1952.[107]

Building the 9,000-foot semipermanent runways which the Fifth Air Force required for its fighter-bombers in Korea required approximately 4.5 battalion months of effort, whereas aviation engineer forces during World War II had built 4,000-foot fighter strips in 1.5 battalion months. Fifth Air Force experience nevertheless proved that the better air facilities paid their way in reduced operating costs and greater effectiveness. Operating its Thunderjets from a pierced-steel plank runway at Taegu in July 1951, the 49th Fighter-Bomber Wing delivered 310 tons of ordnance with 625 sorties. Operating its Thunderjets from the concrete runway in July 1952, the 49th Wing delivered 1,595 tons of ordnance with 1,713 sorties. In July 1951 the jet-assisted takeoff (JATO) units required to get heavily loaded fighters airborne off the short runway had cost $2,976 per ton of ordnance; in July 1952 the jet-assisted takeoff unit cost was only $649 per ton of ordnance lifted. The longer, hard-surfaced runway also saved tires and lessened structural damages to aircraft.[108] Despite the lengthened runways, FEAF's cost-conscious materiel officers noticed that jet aircraft

were still being lost when they overran the runways on takeoffs and landings. Beginning work in September 1952, a FEALogFor project drew upon aircraft-carrier experience and devised a successful aircraft-arresting barrier. Given operational tests at Kimpo in April 1953, the aircraft-arresting gear installed at the ends of the runway proved so successful that it was soon placed in use at Taegu, Suwon, and Osan-ni. The inexpensive barriers saved so many expensive aircraft that USAF adopted them for use at its world-wide fighter bases.[109]

Although the 417th Engineer Aviation Brigade ably accomplished its construction programs in Korea, it continued to be plagued by the old engineer problems of shortages of adequately qualified personnel and of deadlined construction equipment. The engineer replacement troops provided to the 417th Brigade were generally inexperienced, forcing the brigade to emphasize special training courses and on-the-job training. By the time new men were becoming skilled and proficient, they had completed their year's combat tour in Korea and were ready for rotation. Since trained mechanics needed to keep engineer equipment in repair were hard to obtain through normal replacement channels, USAF on 21 November 1952 allowed FEAF to assign air-installations personnel to engineer aviation units. Equipment difficulties became exceedingly acute in the winter of 1952–53. Expedited purchase programs had provided the aviation engineers with prime earth-moving equipment such as D-8 Caterpillar tractors and LeTourneau Tournadozers, but early in February 1953 more than



TSgt. Forrest Herron, Jr. inspects aircraft parts at an Air Force salvage yard at Tachikawa Air Depot, Japan.

65 percent of the Caterpillars and Tournadozers were deadlined for want of replacement parts. Since the shortage of parts—which had not reached Korean through normal resupply and requisitions—threatened to cause the failure of airfield construction work programmed for the spring of 1953, the Fifth Air Force sent representatives to Ohio to make emergency requisitions at the Columbus General Depot. In April "Project Crash" brought many of the needed spare parts to Korea. By emergency procedures such as this, the 417th Brigade kept its machines operating, but it never found a solution for inexperienced personnel. After the war ended FEAF stated that shortages of properly qualified engineer aviation personnel had been the principal cause of engineer aviation ineffectiveness in Korea.[110]

At the same time that its construction program was beginning to provide the airfields which would permit modern aircraft to operate effectively, the Fifth Air Force was taking delivery of a full complement of modern fighter-bombers. According to USAF projections, the F-84G Thunderjet was to become the Fifth Air Force's standard fighter-bomber. This new plane was not a radical change from the F-84E escort fighter which had given such good service in Korea, but the F-84G had many improvements which especially fitted it for fighter-bomber work. In its phase-out plan for the older Thunderjets, the Fifth Air Force ruled that the 49th Wing would first equip itself with the new F-84G's, the 58th Wing would continue temporarily with F-84E's and F-84G's, and the 474th Wing would build up its strength with the F-84E's released by the other wings. In the autumn of 1952, beginning in August and completing in October, the 49th Wing secured its full complement of F-84G's, but slower than anticipated deliveries of the new aircraft after October delayed the planned one-for-one phase out of F-84E's from the 58th Wing, so that it was not completely converted to F-84G's until December 1952. In this same month FEAF withdrew the 49th Wing's 9th Fighter-Bomber Squadron to Japan for training and equipment for a delivery of tactical atomic weapons. This squadron would not return to Korea. Since the F-84E's released by the 49th and 58th Wings proved to need substantial depot overhaul, the 474th Wing's complement of these older Thunderjets shrank through attrition in the winter of 1952–53. In the spring of 1953, however, the 474th Wing was able slowly to begin to convert to F-84G's.[111]

The new-model Thunderjets increased the Fifth Air Force's combat capability, but the biggest fighter-bomber news was the proposed equipment of the 8th and 18th Fighter-Bomber Wings with F-86F Sabre air-ground attack planes. Except for bomb shackles, a modification of its gun-bomb-rocket sight, and special 200-gallon external fuel tanks, the F-86F Sabre-bomber would not be greatly different from the F-86F Sabre-interceptor. Many pilots were not completely convinced that the Sabre would be satisfactory as a fighter-bomber. "It's much too fast," some said. "It's bound to be unstable," thought others. Despite such pessimism, the Fifth Air Force planned to convert the 18th Fighter-Bomber Wing at the new Osanni Airfield, squadron by squadron, beginning in November 1952. Sometime in January 1953, after the 18th Wing had obtained its full complement of Sabres, the 8th Wing was to begin to convert its squadrons at Suwon Airfield.[112] Conversion of air wings to a radically different type of aircraft is

never an easy task, and a number of unforeseen developments made the Sabre fighter-bomber conversion program even more difficult. Slippages in deliveries of Sabres to the Far East delayed the 18th Wing's conversion and put both wings into transition at the same time. Concerned with the growth of Red air capabilities, General Barcus ordered the new Sabre wings to make their pilots proficient in fighter-interceptor tactics before beginning fighter-bombing training.[113]

The task facing Colonel Frank S. Perego's 18th Fighter-Bomber Wing was tremendous. It was expected to keep its old F-51 Mustangs in operation as long as possible while it moved to an unfinished airfield in the dead of winter and began to transition conventional fighter pilots to the "hottest" USAF jets. The conversion program was already lagging when the 18th Wing moved from Chinhae Airfield to Osan-ni on 26 December 1952. No Sabres had yet been received, but the Mustangs were so worn out that the 18th Group moved such of these as it still possessed from Hoengsong to Osan-ni on 11 January 1953. After arriving at the new base, the 12th Squadron and the attached 2d South African Air Force Squadron stood down for transition, but the 67th Squadron continued to fly Mustangs until 23 January. On this day the old F-51's—once the pride of the Air Force but now sadly obsolete old planes—were withdrawn from combat. Eight hours a day, seven days a week, a mobile training detachment trained pilots and maintenance men in the operation and care of Sabres. Following the arrival of the first three Sabres on 28 January, the 18th Wing's pilots began transition flying on 3 February, and on 25 February the 18th Wing flew its first combat mission with Sabres—a four-plane flight which tacked on to a Yalu sweep. The 18th Wing was in action, but Colonel Perego was dissatisfied with the progress that many of his conventional pilots were making. Believing that enough time had been wasted in an effort to qualify men who lacked aptitude, Colonel Perego reassigned 30 pilots to other duties in the Fifth Air Force on 4 March. With many new replacement pilots from the United States and eventual arrival of more Sabres, the 12th Squadron reached unit strength on 31 March and the 67th Squadron attained a similar status on 7 April 1953.[114]

At Suwon Airfield the 8th Fighter-Bomber Wing met fewer difficulties transitioning from the old F-80C jets to the new F-86F fighter-bombers. No change of station was required, and the 8th Wing's pilots were qualified in jets. By keeping the Shooting Stars in operation to the last, moreover, the 8th Wing was able to allow many of its pilots to complete their tours in the older planes. Sabre training began at Suwon on 22 February, when the 36th Squadron stood down from combat. On 14 March the 35th Squadron also quit combat and began to train with the new planes. The 80th Squadron, whose F-86F's arrived in the theater with ultra-high-frequency radio sets and had to be retrofitted with usable communications, continued to fly combat with the old F-80's. In a daylong tribute to its old F-80 Shooting Stars, the 80th Squadron, using 20 aircraft and 29 pilots, flew 120 effective sorties tc drop 114 tons of bombs on the enemy on 24 April. Four pilots flew four missions, ten flew five missions, and two had six missions, the latter two tying the Korean record for the most sorties flown by a single pilot on a single day. This was the swan song for the rugged Shooting Stars, and the last sortie of

these faithful old planes was flown on 30 April. The 80th Squadron stood down on 1 May, and within two weeks it was operational with Sabres. On 7 April four 8th Wing Sabre pilots had already joined a Yalu sweep for the wing's first F-86 combat mission, and the 35th and 36th Squadrons were in combat with Sabres before the 80th Squadron surrendered its old Shooting Stars. The 80th Squadron continued to meet some delays in getting its full quota of Sabres, but on 4 June 1953 the 8th Wing was up to strength with the new planes.[115]

Because the Sabre transition program was running behind schedule, General Barcus amended his instruction that the wings would qualify all of their pilots in fighter-interceptor tactics before beginning fighter-bomber training. On 1 April the 18th Wing began bombing practice and the 8th Wing integrated bombing tactics with its interceptor training. On 13 April 8th Wing pilots flew the first F-86 fighter-bomber mission, and on 14 April the 18th Wing made its debut with F-86 fighter-bombers. On 27 April the 18th Wing flew the first Sabre close-support mission.[116] After a month's combat operations, General Weyland predicted that the F-86F would be an excellent fighter-bomber. "I consider it a particularly desirable improvement in our tactical force," he said, "because of its versatility in accomplishing the three phases of the tactical air-force mission: that of gaining and maintaining air superiority, interdiction, and close air support."[117] After four months in combat the Fifth Air Force described the Sabre as the most suitable fighter-bomber employed in Korea. It displayed a superior ability to survive, was a stable gun and bomb platform, had no airfield or operating problems not peculiar to other jets, and possessed satisfactory stability when carrying external ordnance at high altitudes. When fitted with 200-gallon external tanks, the Sabre could carry two 1,000-pound bombs to a radius of action of 360 nautical miles. "It is concluded," stated General Anderson, in a final evaluation, "that the ability of the F-86F to destroy tactical targets is equal to that of any other USAF aircraft employed in the role of a fighter-bomber in Korea."[118]

The arrival of additional Thunderjets and Sabres in Korea had provoked a logistical crisis earlier in the war, but the reinforcement of the Fifth Air Force with new planes in the third year of the war caused no diminution in aircraft-in-commission rates. There were at least three reasons for this. USAF was better prepared to provide supply support for the new jets than it had been in the winter of 1951–52. General Barcus also demanded that the Fifth Air Force pitch its operations at a level at which it could keep 75 percent of its aircraft contantly ready for combat. The Fifth Air Force accordingly adhered quite closely to the planning factors which dictated the number of missions which could be flown each day without exceeding the logistical support which was arriving for each type of aircraft. The diversification of targets attacked under the air-pressure strategy and the 3,000-foot minimum-recovery altitude for fighter-bomber attacks resulted in a substantial reduction of Fifth Air Force losses and damages. In the period between 1 September 1952 and 30 April 1953 the Fifth Air Force suffered 771 aircraft lost or damaged by hostile ground fire for the rate of 11.1 per thousand sorties. A 19 percent decrease in the number of hits on aircraft per sortie was attributable directly to the minimum-attack altitudes. A further de-

crease of 32 percent in the number of hits on aircraft per sortie was probably attributable to the diverse target program which confused enemy defenses.[119] By adhering to planning factors and reducing its loss and damage rates, the Fifth Air Force substantially simplified its logistical problems.

Required to wage continuous air pressure and yet keep 75 percent of their aircraft constantly ready for combat, Fifth Air Force wing commanders were compelled vigorously to prosecute aircraft maintenance and to make certain deviations from the Air Force wing-base organizational plan. In August 1951 the Fifth Air Force had directed its wings to establish rear-echelon maintenance detachments at airfields in Japan. These separate detachments made for better maintenance, but they caused a duplication of supply accounts, motor pools, shops, maintenance equipment, and personnel.* Believing that better control and efficiency could be had if one rear-area commander was made responsible for a consolidated organization, the 49th and 136th (58th) Wings on 4 April 1952 decided to try complete integration in the form of rear-echelon maintenance combined operations. The 136th (58th) Wing assumed command of the resultant rear-echelon maintenance combined operations—or REMCO—for Thunderjet fighters at Itazuke. In June the 17th Wing assumed responsibility for a B-26 REMCO at Miho. The 8th Wing managed another REMCO at Itazuke, which served F-80, F-94, and T-33 aircraft, and when the 8th Wing converted to Sabres the 67th Wing took over this organization. The 4th and 51st Wings maintained separate maintenance establishments at Tsuiki until the 51st Wing assumed controlling responsibilities in November 1952. In February 1953 the REMCO for Sabres at Tsuiki was expanded to serve all four Sabre wings. The detailed structure of each REMCO varied, but the basic functions were similar. Under the REMCO concept, all maintenance personnel, over and above those required to perform preflight and postflight inspections, emergency engine changes, one-time repair of battle damages, and simple replacements of components at Korean bases, were concentrated at the REMCO, where they comprised a periodic maintenance section. Beginning in July 1952, the Fifth Air Force also centralized its spare-parts stocks at the REMCO establishments. These REMCO bases stocked a forty-five-day supply of aircraft parts peculiar to their operations. The K-site organizational service stock accounts were limited to a fifteen-day stock level.[120]

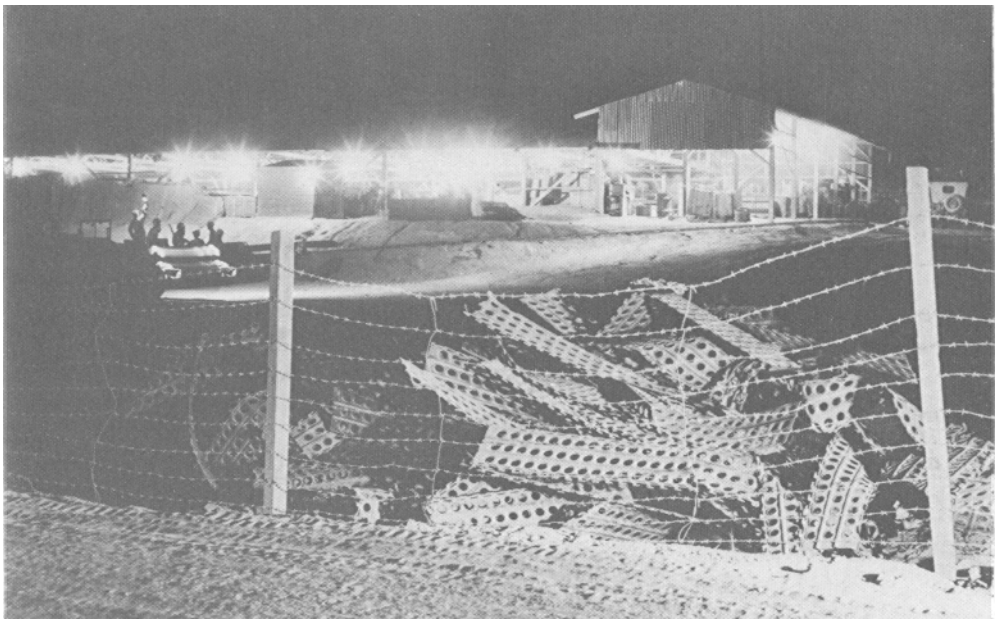
As it was eventually perfected, the REMCO system possesssed both advantages and disadvantages. To some combat commanders the whole REMCO system was repugnant since it denied them control over their maintenance. Time lost in ferrying planes to and from Japan detracted from the availability of pilots and planes. Personnel assigned to the REMCO detachments failed to identify themselves with a combat mission and had little unit pride. The concentration of maintenance and supply organizations at three airfields offered lucrative targets to enemy air attack. Since the K-sites stocked a limited level of supplies, reliable air transportation to and from REMCO base-supply offices was essential. When the 315th Air

**See* Chapter 12, pp. 397-400.

Japanese students are instructed in propeller assembly and repair during a course sponsored by the 374th Troop Carrier Wing.

Division's transports were unable to move air supplies, the Fifth Air Force's tactical units soon suffered from a shortage of support. The advantages of the REMCO system nevertheless outweighed its disadvantages. Mobility of the units at the forward "staging" bases was increased. Had the combat wings been forced to move, they would have been burdened only by a small level of spares and a limited amount of maintenance equipment. Although the REMCO establishments presented potentially lucrative targets, security was actually enhanced because heavy equipment, base supply stocks, and aircraft under repair were at some distance from the active combat area in Korea. The mechanical condition of combat aircraft improved, and at the same time maintenance work was done more quickly, more thoroughly, and more consistently. Consolidation of the technicians supporting the same type aircraft allowed closer supervision of the supply of critical parts. Finally, the rear-area establishments made good use of mechanically qualified Japanese personnel. "Under the combat conditions existing in Korea," FEAF ultimately reported, "the REMCO system of support of tactical operations resulted in a more effective method of maintaining combat aircraft." Whether such a system would prove applicable in other overseas theaters would depend upon the local situation.[121]

In the course of the Korean operations the Fifth Air Force came to believe that the USAF wing-base organizational plan created an organization which contained too much command structure for the amount of tactical air effort in the wing. The tactical situation in Korea required wings to operate from forward bases in



The pierced steel planking area of FEAMCOM's ammunition supply unit in Korea.

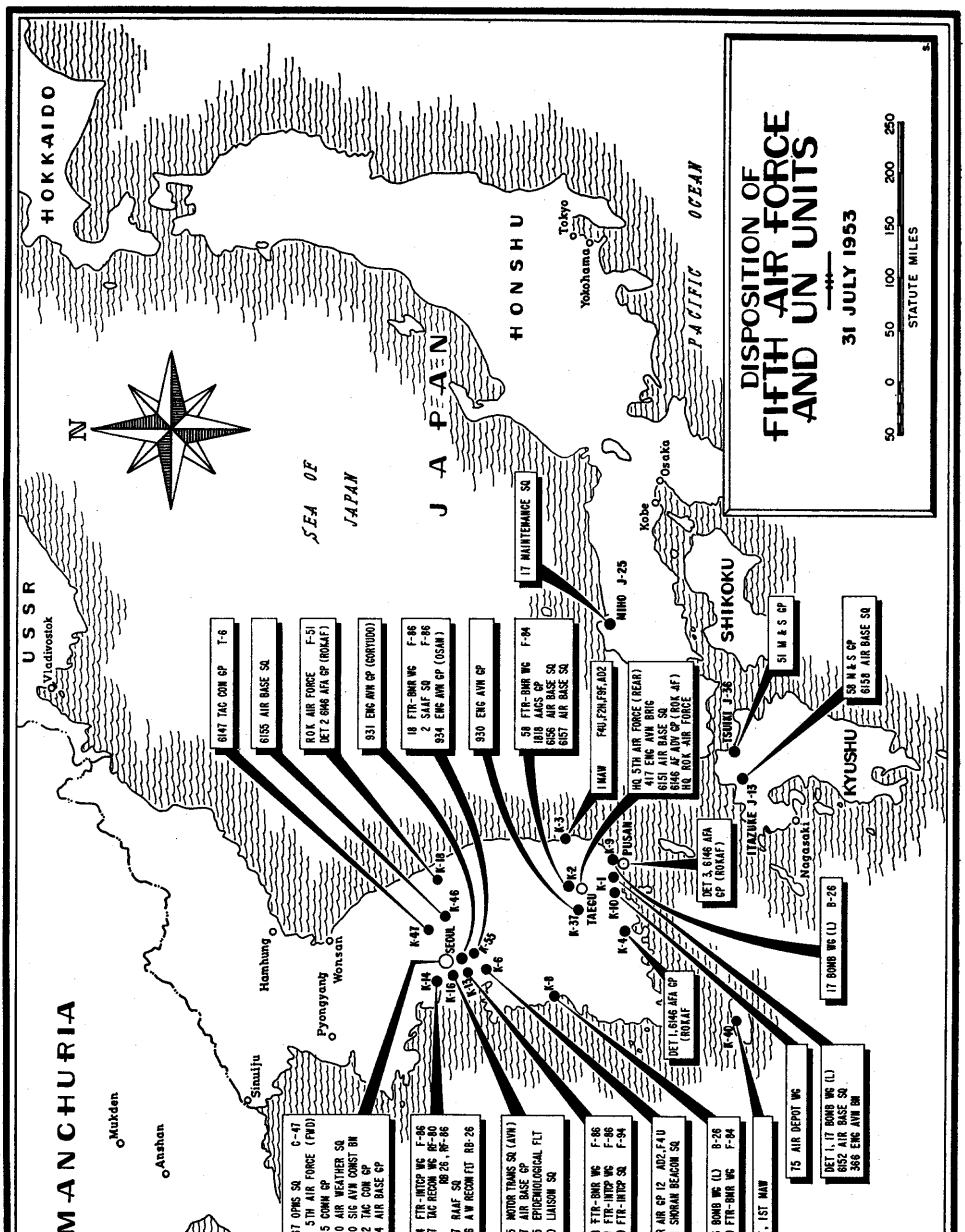
the combat area and rear bases in Japan, but one wing did not have a capability by itself to operate two bases. On 22 June 1952 Brig. Gen. Ernest K. Warburton, deputy commander of the Fifth Air Force, accordingly recommended that a reinforced wing with two tactical air groups should be service tested.[122] After much study and amendment, General Warburton's idea was finally ready for test in the spring of 1953. At this time the Fifth Air Force decided to use the two Thunderjet wings at Taegu as the subjects of the test. In brief, the plan was to keep a wing headquarters and two combat groups at Taegu, each with a supporting squadron, and to send the maintenance and supply group back to Itazuke with another supporting squadron. There was one complication to the plan, for FEAF had announced an intention to send the 49th Wing from Taegu back to Japan at some uncertain date in the future. When the plan went into effect on 15 March, the 58th Fighter-Bomber Wing (Reinforced) took command at Taegu. After remaining on a standby status for two weeks, the 49th Wing and its subordinate units were transferred on paper to Kunsan vice the 474th Fighter-Bomber Wing which came to Taegu. This was principally a paper transaction, wherein the 49th and 474th Wings exchanged stations, personnel, and equipment, but the 430th Squadron was physically transferred from Kunsan to Taegu on 16 April. The designation changes were made effective on 1 April 1953.[123]

As established in March and April 1953, the 58th Fighter-Bomber Wing (Reinforced), the 49th Fighter-Bomber Group with its 6157th Air Base Squadron, and the 58th Fighter-Bomber Group with its 6157th Air Base Squadron were located at Taegu. The 58th Maintenance and Supply Group and its

6158th Air Base Squadron were situated at Itazuke. All other table-of-organization units were put on a standby status, but the 58th Medical Group was later made active to operate the base dispensary at Taegu. The reinforced wing organization represented substantial personnel savings. Instead of the 4,650 officers and airmen of the former two wings, the reinforced wing was manned by 3,754 officers and airmen. In February 1953 the two separate wings flew 1,986 effective combat sorties, and the reinforced wing flew 2,165 effective combat sorties in March 1953. In the three months April–June 1953 the reinforced wing flew 10,422 effective combat sorties, and on 15 and 16 June it twice mounted over 400 effective sorties. These figures indicated that a reinforced wing could deliver more firepower than two separate wings. The mobility of the 58th Fighter-Bomber Wing (Reinforced) was never tested, but it was quite apparent that the movement of one of the combat groups and its air-base squadron to a separate airfield would have been impossible. At Taegu, for example, the two air-base squadrons divided air-base functions between themselves. This arrangement fractured unified command of base services, and it would have prevented the movement of one of the combat groups to a separate airfield. The Fifth Air Force test had supplied some answers for problems arising when two wings occupied the same airfield, but it had not come up with an organization which possessed the mobility requisite to a tactical air war.[124]

In the summer of 1952, when he geared the Fifth Air Force for sustained air pressure operations, General Barcus placed great emphasis upon aircrew proficiency training. Barcus not only programmed flying hours for training, but he instructed his wing commanders to increase training whenever their combat flying fell below its programmed level. During the third year of the war the Fifth Air Force used nearly 20 percent of its available flying time for training. Training in the Fifth Air Force was of two kinds: individual proficiency training for newly arrived replacement pilots and continuation training for tactical aircrews. During 1952 the Fifth Air Force received an ever-larger proportion of newly commissioned pilots from the USAF Air Training Command's combat crew training schools in the United States. By the winter of 1952–53 most replacement pilots reaching Korea were young second lieutenants, and the air wings had difficulty getting enough experienced officers to man key flying positions in their squadrons. Fortunately, many flight and element leaders volunteered to extend their combat tours until they could be suitably replaced. In order to prepare their replacements for combat, each tactical air wing utilized a provisional training flight under an experienced flight commander. Under broad directives, each wing commander was responsible for the training given in the provisional training flights. Each replacement pilot received theater indoctrination, but he received only as much proficiency flying as the flight commander considered he needed to be certified "combat ready." This training was undoubtedly necessary, but it became very burdensome toward the end of the Korean hostilities when most replacements were newly graduated flying officers.[125]

Even after they were certified "combat ready," Fifth Air Force pilots periodically underwent continuation training in their squadrons. In the course of such training new men


DISPOSITION OF
FIFTH AIR FORCE
AND UN UNITS
31 JULY 1953
STATUTE MILES
50 0 50 100 150 200 250
N
USSR
Vladivostok
HOKKAIDO
MANCHURIA
Mukden
Anshan
Sinuiju
Hamhung
Pyongyang
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HONSHU
PACIFIC OCEAN
Tokyo
Yokohama
Kobe
Osaka
Nagasaki
SHIKOKU
KYUSHU
SEOUL
TAEGU
PUSAN
MIHO J-25
ITAZUKE J-15
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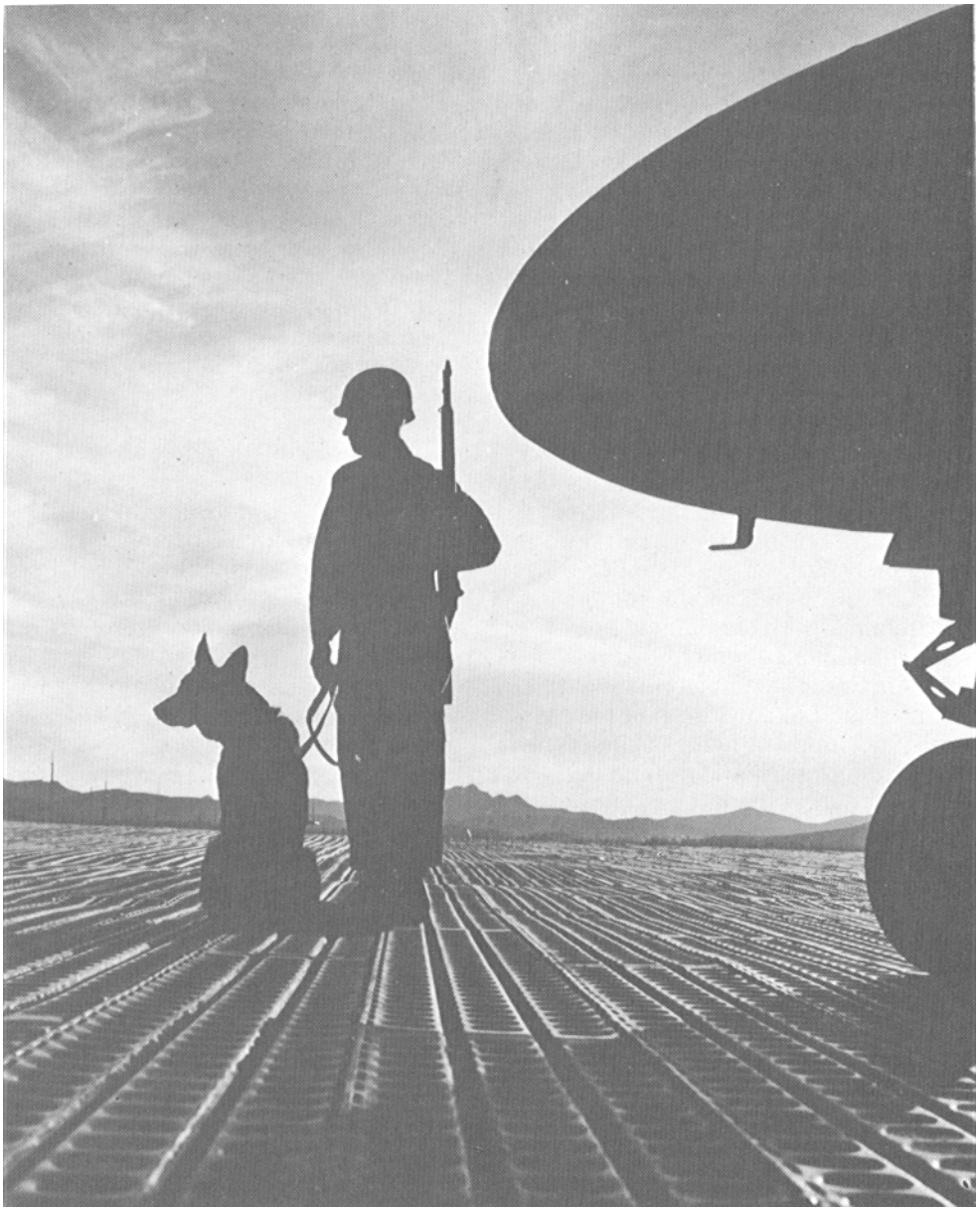
K-37
K-46
K-47
6147 TAC CON GP T-6
6155 AIR BASE SQ
ROK AIR FORCE F-51
DET 2 6146 AFA GP (ROKAF)
931 ENG AVN GP (CONTUDO)
18 FTR-BMR WG F-86
2 SAAF SQ F-86
934 ENG AVN GP (OSAM)
930 ENG AVN GP
17 MAINTENANCE SQ
58 FTR-BMR WG F-94
1810 AAGS GP
6156 AIR BASE SQ
6157 AIR BASE SQ
1 MAW F4U,F2H,F9F,AD2
HQ, 5TH AIR FORCE (REAR)
417 ENG AVN BRIG
6151 AIR BASE SQ
6146 AF AOV GP (ROK AF)
HQ ROK AIR FORCE
DET 3, 6146 AFA GP (ROKAF)
51 M & S GP
35 M & S GP
6158 AIR BASE SQ
17 BOMB WG (L) B-26
DET 1, 6146 AFA GP (ROKAF)
15 AIR DEPOT WG
DET. 1ST MAW
DET 1, 17 BOMB WG (L)
8052 AIR BASE SQ
366 ENG AVN BN
3 BOMB WG (L) B-26
49 FTR-BMR WG F-94
MAR AIR GP 12 AD2,F4U
1 SHORAN BEACON SQ
8 FTR-BMR WG F-86
51 FTR-INTCP WG F-86
319 FTR-INTCP SQ F-94
5 MOTOR TRANS SQ (AVN)
6167 AIR BASE GP
5 EPIDEMIOLOGICAL FLT
10 LIAISON SQ
4 FTR-INTCP WG F-86
67 TAC RECON WG RF-80
RB-45, RF-86
77 RAAF SQ
6166 AW RECON FIT RB-26
6167 OPNS SQ C-47
HQ 5TH AIR FORCE (FWD)
5 COMM GP
30 AIR WEATHER SQ
440 SIG AVN CONST BN
502 TAC CON GP
6154 AIR BASE GP

established proficiency for flying close-support missions, night-combat missions, or day-combat missions north of the Chongchon River. Shortly after he took command of the Fifth Air Force, moreover, General Barcus noted that the accuracy of the fighter-bomber crews against the North Korean hydroelectric plants had not been up to standard. Recognizing also that the higher recovery altitudes that he prescribed for fighter-bomber attack would cause a further reduction of accuracy, General Barcus directed the fighter-bomber wings to withdraw flights from combat in rotation and put them through a dive-bombing continuation-training program at the Naktong and Kunsan bombing ranges. In the spring of 1953 the fighter-bomber wings repeated this dive-bombing continuation training.[126] This continuation training undoubtedly increased the Fifth Air Force's combat effectiveness, but for some unknown reason the combat accuracy of fighter-bombers, measured against pinpoint targets, worsened during the last year of the war. The circular probable error for fighter-bombers attacking point targets increased from 340 feet in December 1952 to 514 feet in July 1953. Operations analysts suggested that the decline in bombing accuracy might be attributed to "the scarcity of good pinpoint targets and the general character of a static war."[127]

During the third year of the Korean war the Fifth Air Force waged continuous air pressure and yet became a more modern and a more versatile tactical air force. The receipt of new resources from the United States helped, but the Fifth Air Force also profited from its adherence to good-management practices. Just as no pilot really enjoys slow-timing an airplane, many Fifth Air Force fliers found the measured pace of the air-destruction operations a little distasteful. "This is indeed a strange war," commented one fighter-bomber-group commander in August 1952, "where patience and planning are as important as courage and ability."[128] Yet this "patience and planning" allowed the Fifth Air Force to strike harder blows and still retain its capability for meeting any all-out military action which the Communists might devise. In the year ending 30 June 1953 adherence to planning factors and vigorously prosecuted maintenance enabled the Fifth Air Force successfully to maintain 76 percent of its combat aircraft always in commission. The figure would have been higher except for supply difficulties met when the Mustangs and Shooting Stars were being phased out. An average of 76 percent of possessed B-26's, 79 percent of possessed F-84's, and 77 percent of possessed Sabres were kept in a combat-ready status during the year. Good supply and maintenance, plus new fighter-bombers, made the Fifth Air Force a stronger power. On 31 July 1953 Fifth Air Force wings possessed 128 B-26's, 218 F-84's, 132 F-86 fighter-bombers, and 165 F-86 fighter-interceptors. In terms of the official planning factors, the Fifth Air Force in July 1953 had a sustained daily capability of 85 B-26 sorties, 181 F-84 fighter-bomber sorties, 171 F-86 fighter-bomber sorties, and 143 F-86 fighter-interceptor sorties. Better air facilities at each tactical airfield enabled wing commanders to launch maximum effort with a minimum of difficulty.[129] As the Communists undoubtedly learned when they sought to attack in June and July 1953, the Fifth Air Force was a far stronger air force than it had been a year earlier.



Twilight at the 8th Fighter Bomber Wing airfield.

# 19. *Airpower Achieves United Nations Military Objectives*

## *1. Communist China Seeks an Armistice*

Even though Peking had refused to approve the United Nations resolution offering a solution to the prisoner-of-war question in December 1952, Communist China gave many indications that she wanted and needed a truce in Korea. Apparently Russia had been unwilling to agree to a settlement of the war on United Nations terms. In the months that followed the United Nations Command did not relax its air pressure attacks on the Reds. In Washington President Dwight D. Eisenhower's administration strongly suggested that the patience of the United States was wearing thin and that stronger measures might be employed in the Far East. In his state of the union message on 2 February 1953 President Eisenhower announced that the Seventh Fleet would no longer shield Communist China from attacks by Chinese Nationalist forces on Formosa.[1] As a challenge to Eisenhower, on 4 February, however, Red China's Chou En-lai stated that China was ready for an immediate cease fire on the basis of agreements already reached and was willing to leave the disposition of prisoners of war to a postarmistice political conference.[2]

The Red Chinese "challenge" was nothing more than a restatement of Soviet proposals to end the fighting in Korea on terms favorable to the Reds, but the U.S. Joint Chiefs of Staff nevertheless proposed to take the initiative in truce discussions. At Geneva in December 1952 the League of Red Cross Societies had recommended that sick and wounded prisoners of war should be exchanged in advance of an armistice, and on 19 February 1953 the Joint Chiefs instructed General Clark to make such a proposal to the Communists. In a letter addressed to Kim Il Sung and Peng Te-huai on 22 February, General Clark stated that the United Nations Command was ready to repatriate sick and wounded prisoners of war and inquired whether the Communists were prepared to do the same.[3] The Reds made no immediate reply to General Clark's proposal.

President Eisenhower

While the Communists were doubtless considering Clark's proposition, the death of Joseph Stalin on 5 March 1953 shook Soviet Russia and her satellites, and when they attended Stalin's funeral Communism's leaders must have reviewed their policies toward Korea. In his oration at Stalin's

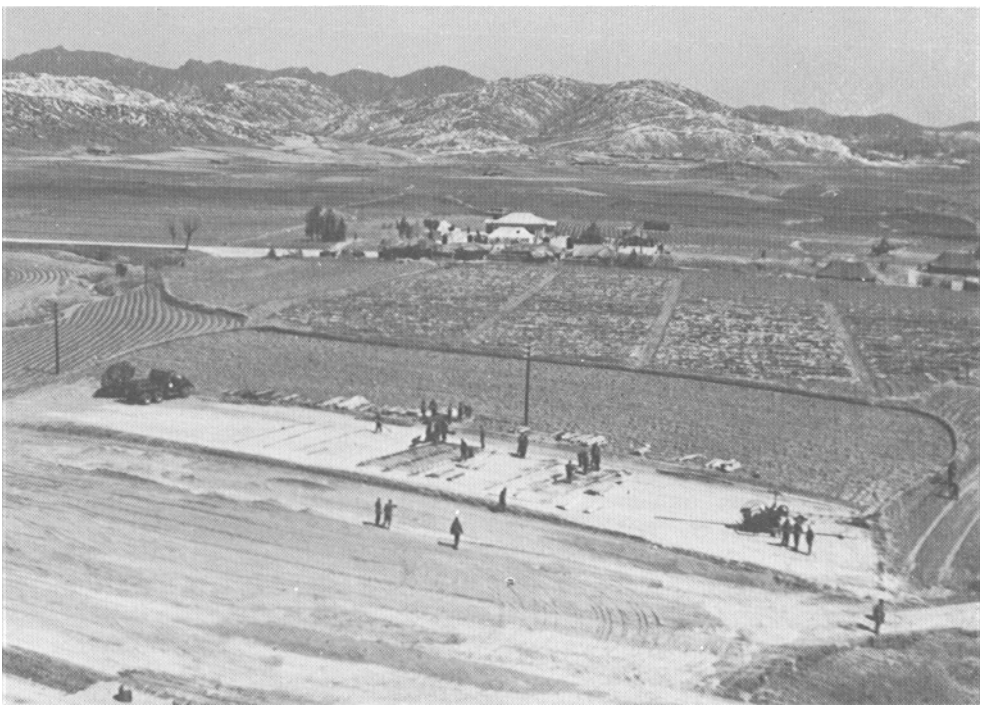
bier, the new Soviet Premier Georgi Malenkov spoke in favor of peaceful "coexistence and competition" between Communist and capitalist nations.[4] Having returned from Moscow, Communist China's leaders held a view that the Korean war should be settled. On 28 March Kim Il Sung and Peng Teh-huai fully agreed to Clark's proposal for an immediate exchange of sick and wounded prisoners, and they expressed the hope that this exchange could be made to lead to a "smooth settlement" of the entire prisoner-of-war question.[5] In a public statement issued on 30 March, Chou En-lai approved the sick and wounded exchange and additionally proposed a solution to the disposition of other war prisoners. Immediately after the cessation of hostilities, Chou recommended, both sides should repatriate all prisoners who insisted on repatriation and should hand over other prisoners to a neutral state so as to ensure a just solution to the question of their repatriation. Chou expressed confidence that a period of "explanations" would allay the apprehension of all prisoners who did not want to return home. On 31 March Kim Il Sung expressed North Korea's agreement with the Chinese proposal.[6]

Premier Chou En-lai's proposal for settling the prisoner-of-war issue was remarkably similar to the India peace plan which China had rejected in December 1952. The feeling in Tokyo was that Chou had worked out the details of the compromise at Stalin's funeral.[7] At a liaison officers' meeting at Panmunjom on 2 April the Communists asked for a speedy arrangement to exchange the sick and wounded men and also handed over copies of the statements made by Chou and Kim as an official bid for reopening armistice negotiations. In daily sessions between 6 and 11 April the liaison officers easily worked out arrangements for the beginning of the repatriation of the sick and wounded on 20 April. Since the Communists had offered a proposal for solving the prisoner-of-war deadlock which was in some degree constructive, General Clark felt that the United Nations Command should resume full delegation meetings at Panmunjom. After elaborate coordination between Tokyo and Washington as to future policy, United Nations Command representatives met the Reds on 23 April and agreed to reopen plenary armistice sessions on 26 April.[8]

The apparent capitulation of the Communists caused some hopeful optimism in the Far East. "I believe we have the Communists on the run," wrote General Fisher. "Now that 'Uncle Joe' is out of the way and Mao Tse-tung has a much larger voice in international Soviet affairs," he said, "I personally have very high hopes that this truce will go through very rapidly."[9] Meeting on 7 April, the FEAF Formal Target Committee discussed whether air pressure operations ought to be continued during the truce negotiations. The committee decided that FEAF should continue to execute its air pressure operational policy directive. The committee believed that "the damage inflicted upon the enemy as a result of this application has been the only military pressure placed on the enemy during the past months and...is probably the force which has caused the Communists to...put forth new peace overtures."[10] General Weyland agreed with the committee's recommendations, but he cautioned that FEAF must "lean over backward" and "accept temporary loss of effectiveness" in order to assure the safety of the sick and wounded prisoners whom the Reds were trans-

porting southward. In order to continue air pressure attacks, General Weyland asked for authority to mount a major Superfortress assault against a complex of buildings, barracks, and warehouses at Yangsi, 12 miles southeast of Sinuiju, on the night of 15 April. General Clark approved this attack against a "sensitive" target, but the Joint Chiefs of Staff pointed out that the Yangsi complex was too close to the route to be followed by one of the prisoner-of-war convoys. Desiring to give the Reds no excuse for reneging on the prisoner exchange, General Clark asked Weyland to defer the attack.[11]

It was well that General Clark and General Weyland had resolved against any major relaxation of the air pressure campaign, for the Communists soon showed that they were almost as intractable as ever. When the exchange of sick and wounded prisoners of war—"Operation Little Switch"—got under way on 20 April, the Reds were so reluctant to disclose the locations of their prisoner convoys that Weyland protested that they were attempting to curtail FEAF's operations.[12] Communist returnees, moreover, seized every opportunity to create nuisances and express defiance. When the truce negotiations began on 26 April, the Red delegation attached impossible conditions to its proposal for handling the general repatriation of prisoners. The Reds demanded that they be given unlimited access to prisoners who were unwilling to be repatriated for at least six months in order to carry on a reindoctrination program. After six



Prisoner-of-war exchange site at Panmunjom, Korea, 15 April 1953.

months, according to Red proposals, prisoners who still rejected repatriation would be retained in neutral custody pending final disposition by a political conference. Coercion was inherent in the Communist plan, since prisoners would be forced to choose between repatriation and indefinite retention.[13]

The Communists were evidently not yet ready to accept the United Nations armistice terms, and intensified air pressure operations were required. When the exchange of 6,679 Red prisoners for 648 United Nations prisoners completed "Operation Little Switch" on 3 May, General Clark signaled the Joint Chiefs of Staff that FEAF was going to step up its air attack against "sensitive" targets. "Continuing such attacks during present armistice negotiations," Clark told the Joint Chiefs on 1 May, "is strong indication to the enemy that the United Nations Command operations have not been slowed down." Air attacks against "sensitive" targets, General Clark repeated several days later, would strengthen the United Nations Command's position. "This is military pressure," he said, "which we should use to convince the Communists that the United Nations Command will continue, without letup, its military operations until an honorable armistice is obtained."[14]

### *2. General Barcus Turns the Sabres Loose*

Throughout the months of the Korean war the Fifth Air Force Sabrejet wings had battled effectively against superior numbers of Communist MIG-15's. Thanks to the Sabre defenses, General Barcus could state that the United Nations Command possessed "unquestioned air supremacy over the North Korean homeland between the main line of resistance and the Chongchon River and complete air superiority between the Chongchon and Yalu rivers."[15] Seen from the viewpoint of the United Nations Command, the air superiority attained by the Sabres was primarily a defensive measure which permitted other aircraft to attack targets in North Korea with minimum losses. Seen from the viewpoint of oriental Communists, however, the inability of the Chinese Communist air force to protect North Korea undoubtedly represented a severe loss of face which was probably greater than a Caucasian mind could imagine. The Chinese had always scorned a "Paper Tiger."[16]

Although the Sabres had successfully maintained air superiority, FEAF had never been inclined to underrate the menace of the Communist air forces. There were too few Sabres to be comfortable, and the MIG-15 was a superior aircraft in the situation in which it was employed. In the spring of 1953 the Fifth Air Force was building up to a strength of four Sabre wings. The 18th Fighter-Bomber Wing flew its first interceptor sorties on 25 February and the 8th Fighter-Bomber Wing joined a Yalu sweep on 7 April. These two wings were fighter-bomber units, but their F-86's were equally versatile as fighter-interceptors.[17] The two new

Sabre wings greatly increased the Fifth Air Force's counterair capabilities and permitted the Royal Australian Air Force No. 77 Squadron to convert to fighter-bomber work. The straight-wing Meteor-8 jet fighters flown by the Australians had powerful engines, but they had never measured up against the swept-wing MIG's.[18]

With some of the best brains of the Air Force and of the aviation industry working on the problem, the USAF Air Research and Development Command had been improving the performance and lethal power of the Sabre. Some of the developments did not work, some showed promise for future use, and one was an outstanding success. In the autumn of 1952 the Fifth Air Force tested and rejected externally attached solid-fuel rockets which were supposed to give a Sabre an extra burst for overtaking a MIG.[19] In the spring of 1953 the 4th Wing played host to a "Gun Val" project which brought eight F-86F's, equipped with 20-mm. cannon, to combat tests in Korea. The cannon showed promise for the future, but the installation was not yet ready for combat.[20] As has been seen,* the Air Research and Development Command also sought to improve the flight performance of the Sabre, and when the F-86F with its higher-thrust engine was equipped with solid leading-edge wings, the Sabre series finally reached performance capabilities which made it a highly effective MIG killer. In June and September 1952 the 51st and 4th Wings equipped two of their squadrons with the new-model F-86F's. Segregation of the planes into separate squadrons simplified logistics, but it hurt the morale of the pilots in other squadrons. In the first four months that it flew the F-86F's, the 335th Squadron scored 81 kills while the other two 4th Wing squadrons had a total of only 54 kills. In order to permit all pilots to share the victories, the 4th and 51st Wings divided their F-86F's among all their squadrons in March 1953.[21] Each month the two interceptor wings received more F-86F's as replacements for attrition, and USAF directed its Air Defense Command to ship the Fifth Air Force all its F-86F's on a one-for-one exchange for F-86E's.[22] FEAF wanted still more thrust augmentation for the Sabre, which would enable it to "obtain complete air superiority," but, thanks to the F-86F with solid leading-edge wings, Colonel James K. Johnson could tell his 4th Wing in March 1953 that the performance of the Sabre and the MIG was "practically equal" provided the Sabre was maintained in peak condition.[23] That the solid leading-edge F-86F's were in combat was one of the best-kept USAF secrets, and the modification was mysteriously mentioned in American newspapers as the "new secret device" and the "new combat device" which was giving increased MIG kills.

Assured by the larger numbers of Sabres possessed by his air force and the improving performance of these planes, General Barcus was ready for his pilots to fight it out with the men who flew the Communist interceptors. Their airplanes were costly items to the Reds, and the more destroyed the sooner the Communists would be willing to end the war. In the air over North Korea, however, the MIG's were generally safe enough, provided they flew high and picked their opportunity for fighting. As a general rule, the MIG's nearly always got the first pass,

**See* Chapter 16, pp. 509, 512.

and if the enemy did not want to fight the Sabre pilots secured few kills. In order to score peak kills, the Fifth Air Force had to make the Communist airmen mad enough to come out and fight. In cooperation with the Eighth Army, the Fifth Air Force accordingly drew up a special leaflet which asked: "Where is the Communist Air Force?" Beginning on 14 March 1953, Fifth Air Force crews dropped these leaflets on each hostile ground-troop concentration they attacked. Radio Seoul hammered the same theme in broadcasts beamed northward.[24]

Relatively favorable flying weather allowed the Fifth Air Force's Sabre wings to fly on most days in April, but the MIG's were not yet willing to fight. Only 1,622 MIG sorties were sighted, and the MIG pilots who were willing to give combat apparently knew their business. In sporadic combat the Sabres destroyed 27 MIG's and lost four of their own number. On 7 April, moreover, MIG interceptors shot down Capt. Harold E. Fischer, the double jet ace of the 51st Wing. In the heat of aerial combat Captain Fischer became separated from his wingman and apparently crossed into Chinese territory before he was shot down and captured. On 12 April the 51st Wing almost lost another of its leading aces when Captain McConnell bailed out of his crippled plane over the Yellow Sea. A 3d Air Rescue Group helicopter picked up McConnell almost immediately, and the dunking apparently sharpened his combat senses, for on 24 April he downed his tenth MIG to become a double ace. During the month Captain Fernandez of the 4th Wing destroyed another MIG to stay ahead of the field in the race to become the world's leading jet air ace.[25]

In order ot make the MIG's fight, the United Nations Command had to employ stronger medicine. On the night of 26 April two B-29's dropped more than a million leaflets along the Yalu, offering monetary rewards in Russian, Chinese, and Korean to pilots who would deliver their jet aircraft to Kimpo Airfield. All who came would receive $50,000 and political asylum, and the first man who delivered his plane would receive an additional $50,000. Thus was initiated "Project Moolah," which General Clark said was first conceived by a war correspondent in Seoul. According to another report, "Moolah" was the product of the Harvard University Russian Research Center. Whatever its origin, the project was cleared by the Joint Chiefs of Staff on 20 March and was approved in final form by the Far East Command's Joint Psychological Committee on 1 April. Following the first leaflet drop, another half million "reward" leaflets were dropped over Sinuiju and Uiju airfields on the nights of 10 and 18 May, and United Nations Command radio stations beamed the same offers in Russian, Chinese, and Korean language broadcasts.[26] If "Moolah" worked, the USAF hoped to get a flyable MIG-15 for testing and General Clark hoped to make the Red air commanders suspicious of the loyalty of their pilots.

Although the United Nations Command was seeking to ground the Communist air forces, FEAF had been planning a May Day attack to rile the Reds into fighting. In January B-29's had been unable to knock out the underground facilities of Radio Pyongyang, but the propaganda station had wavered and gone off the air on 15 February when B-29's had attacked a nearby communications center. Evidently the B-29's had cut the power lines to the station, and General Barcus had planned a repeat fighter-bomber

attack against the power lines to take Radio Pyongyang off the air on May Day. Unknown to higher command, General Barcus had been flying combat missions with the 51st Wing for a couple of months, and on 1 May he served as airborne commander for the Radio Pyongyang attack. While the 4th and 51st Wings screened and covered, the 8th and 18th Fighter-Bomber Wings passed over Pyongyang as if heading toward a Yalu patrol and then suddenly let down to bomb the radio station and its power supply. Surprised Red flak batteries managed to damage one Sabre, but its pilot brought it home. Circling above Pyongyang and using a radio frequency which the Reds monitored, General Barcus identified himself and promised: "We will be back every time you broadcast filthy lies about the Fifth Air Force."[27] The audacity of the Fifth Air Force attack and the insult offered by General Barcus represented an utmost loss of face to the Red air forces.

What effect "Operation Moolah" and the May Day attack had upon the Communist air forces could only be conjectured. No Red airman delivered his plane to Kimpo as a result of "Moolah," and the North Korean pilot, Lt. Ro Kum Suk, who defected with his MIG-15BIS on 21 September 1953, said that he had never heard of the $100,000 windfall he was to receive.[28] Contrary to popular report, the Red air forces did not stand down for a number of days following the "Moolah" offer. Unfavorable flying weather between 28 April and 7 May hampered the operations of both MIG's and Sabres, but on 30 April the Sabres sighted 166 MIG's and shot down three of them.[29] It is quite possible, however, that Russians may have withdrawn her pilots from combat following the "Moolah" offer. An unlocated radio transmitter quickly began to jam Russian-language broadcasts of the reward offer but did not interfere with broadcasts in Chinese or Korean. In an unusual message to North Korea's "air heroes," Kim Il Sung promised that the North Korean Air Force would have a greater responsibility for air defense and exhorted Korean airmen to strengthen their military discipline and protect their equipment.[30] During the early months of 1953 most MIG's engaged by Sabres had borne the plain red stars of Soviet Russia, but after 8 May most MIG's sighted bore Chinese Communist and North Korean insignia. The pilots who now flew the MIG's, moreover, were definitely not "Honchos." They were willing to engage in combat, but they had far more enthusiasm than ability. General Clark thought it significant that "the Communist MIG pilots who were permitted to fly after the [reward] offer was made were the worst—on their record—of the whole Korean war."[31]

For the Sabre pilots the months of May and June 1953 were reminiscent of the famed "Marianas Turkey Shoot" of World War II, when Japan's naval airmen had been blasted from the skies in phenomenal numbers. At the same time in which the MIG airmen were eager but unskilled, the Sabre pilots were always "tigers" and were displaying superior tactical and gunnery skills. Ever since the early days of combat the Sabres had emphasized high-speed cruising in the target area, but now they began to employ up to 98 percent of their power while awaiting combat. The higher speeds reduced the time the Sabres could stay on patrols, but they had important offensive and defensive benefits. If a MIG were sighted, the Sabre's rate of closure was higher, and if a MIG attacked, the MIG's rate of closure was slower. In combat between 8 and 31 May the Sabres sighted 1,507

MIG's, engaged 537 of them, and destroyed 56 of the Red planes, at a combat loss of only one Sabre.[32] In the first half of May the Sabre airmen began to appreciate how unstable a MIG could be in the hands of an inexperienced pilot. In seven instances MIG's went into inadvertent spins from maneuvers at or above 35,000 feet, and in most instances the Red pilots ejected. In still other engagements MIG pilots simply bailed out when a Sabre fired at them. "A new, inexpensive, highly efficient 'MIG Killer' technique has been found!" stated FEAF intelligence. "If the MIG pilot sees you, he bails out; if he doesn't see you, you shoot him down. What could be more effective?"[33]

As the Sabres stalked their prey in MIG Alley during May, old aces added to their strings of victories and a new ace was made. While escorting fighter-bombers on 10 May, Captain Fernandez shot down one MIG and shared credit for the destruction of another. Captain Fernandez was now leading the race for top ace with 14½ MIG kills, and his record seemed secure. In a remarkable blaze of glory, however, Captain McConnell destroyed three MIG's early in May and shot down three more on 18 May to forge ahead with 16 MIG kills. By this time McConnell had flown 106 missions and Fernandez had 125 missions to his credit, and the Fifth Air Force relieved both of them from combat on 19 May. In the continuing air combat during the month Lt. Col. George I. Ruddell, commander of the 51st Wing's 39th Squadron, destroyed his fifth MIG to become the 31st jet ace on 18 May. Several days later, on 26 May, Major Jabara was leading a flight of four Sabres when he sighted 16 MIG's crossing the Yalu near Uiju. Jabara led his flight through the center of the MIG's, causing them to scurry homeward. The battle was not over, for a few minutes later Jabara's element pounced upon two MIG's. In rapid order Jabara forced one MIG into a fatal spin and shot down another. The original jet air ace thus scored his eighth and ninth victories, and he still had more missions to fly before he completed his second combat tour in Korea.[34]

Almost always over MIG Alley the Sabre pilots had been compelled to yield the initiative to the MIG airmen, who usually possessed altitude advantages. To secure kills, the Sabre pilots had compensated for their deficiencies by outsmarting the enemy and forcing him to make mistakes once contact was initiated. In June 1953, however, this situation was reversed and Sabres were able to begin 70 out of 92 engagemets with the MIG's. What caused this reversal of circumstances was not known. On many days heavy, multilayered clouds hung over MIG Alley, and the Red pilots may have believed that they could sneak southward and assault United Nations fighter-bombers. Whatever the cause, an unusually high proportion of Sabre-MIG encounters occurred below 40,000 feet, where the Sabres were most lethal. In a month of fighting which shattered all Korean victory records the Sabres sighted 1,268 MIG's, engaged 501, destroyed 77, probably destroyed 11, and damaged 41. On one day—30 June—the Sabres destroyed 16 MIG's for a new record day of victory which exceeded previous records of 13 kills scored on 13 December 1951 and on 4 July and 4 September 1952. In this peak month of Sabre kills not a single friendly plane was lost in air-to-air combat. Most enemy pilots were pitifully incompetent. On one occasion two of them rammed together and perished while attempting to turn inside a pursuing

Sabre. Four other MIG's spun out and crashed. In other instances, as Sabres closed from behind, MIG pilots crouched in their cockpits and refused to break in any direction. Apparently the MIG airmen figured that a break would expose the cockpit to fire. In this circumstance the Sabres usually destroyed the enemy aircraft, but most of the enemy airmen ejected and saved their lives.[35]

In the air battles ranging over MIG Alley during June five Sabre pilots—more than in any other month in the war—became jet aces. From the 4th Wing, Lt. Col. Vermont Garrison became the 32d jet air ace on 5 June and Captain Lonnie R. Moore and Captain Ralph S. Parr enrolled as the 33d and 34th jet air aces on 18 June. On 22 June Colonel Robert P. Baldwin, commander of the 51st Group, won distinction as the 35th jet air ace, and on 30 June Lt. Henry Buttelmann downed his fifth MIG to become the 36th jet air ace. As if to illustrate that physical age had little to do with acedom, the June "class" of aces contained both the oldest and the youngest of the Korean aces. At the venerable age (for fighter pilots) of thirty-seven, Colonel Garrison was the oldest of the aces. In air-to-air combat in World War II, however, Garrison had already destroyed 11 German planes. Lieutenant Buttelmann, who had been a teenager during World War II, became the Korean war's youngest jet ace a few days after his twenty-fourth birthday. Buttelmann's record was unique in another respect, for he attained acedom in the twelve short days from 19 June, when he made his first kill, to 30 June, when he scored his fifth victory. As these other Sabre pilots distinguished themselves, Major Jabara was forging still more victories. In a single mission over Uiju on 10 June Jabara drove one MIG down to a fatal crash landing and blasted a second out of the air. On 18 June Jabara destroyed a single MIG. A few miles south of Sinuiju, on 30 June, Jabara shot down one MIG and hit another MIG hard in the tail section, forcing the enemy pilot to eject. Major Jabara was now within one-half kill of Captain Fernandez' record as second highest scoring jet air ace.[36]

Col. Vermont Garrison

The smashing air victories of May and June 1953 represented a marked triumph for the United Nations cause in Korea. The Sabre pilots recognized that they were maintaining friendly control of the air, effecting costly losses on the enemy, and were possibly preventing the Reds from launching an air offensive which would allow their propagandists to claim that their side was winning the war as the truce went into effect. To the Sabre men war was also personal. Everyone wanted to be an ace, aces wanted to be double aces, and even Captain McConnell's record of 16 kills might yet be surpassed.

After a Mission—Korea—1953. (Art by David S. Hall, *Courtesy Air Force Art Collection)*

Early in June, however, air-to-air combat stood still as the dank weather of Korea's monsoon season kept both MIG's and Sabres on the ground. Fifth Air Force intelligence officers now viewed the southward-moving weather with concern. The Reds had customarily timed their ground offensives to coincide with periods of bad flying weather. Now, the Reds might possibly launch a face-saving air offensive along the battlelines at a time when the Sabre bases were still socked in.[37]

Impatient Sabre pilots were at last able to fly when weather conditions became marginal on the afternoon of 10 July. Generally clearing weather after 16 July allowed United Nations fighter-bombers to carry destruction to targets along the Yalu, and the Sabres got the combat they had been wanting. "Hon-cho" pilots were again in evidence, and six aggressive MIG's, each armed with what appeared to be six rapid-firing cannon, ganged two Sabres at the mouth of the Yalu on 20 July and shot both of the F-86's down. Throughout July, however, the median altitude of air combat was 20,000 feet, and the Sabres were particularly effective in the encounters they initiated. In the marginal weather during the first half of the month the Sabres sighted 232 MIG's, encountered 84, and destroyed 12 of the Red planes. Between 16 and 22 July the Sabres sighted 581 MIG's, engaged 118, and shot down 20 MIG's. At a cost of two F-86's lost, the Sabres destroyed 32 MIG's in July 1953.[38]

When the Sabre pilots pushed their

Maj. John F. Bolt

luck in marginal weather on 11 July, Major John F. Bolt, a Marine Corps pilot flying with the 51st Wing, blasted down his fifth and sixth MIG to become the 37th ace and the only Marine ace of the Korean war. Late on the afternoon of 15 July Major James Jabara was finally able to score his 15th aerial victory, which made him the world's second triple jet ace and the runner-up to Captain McConnell as the ranking jet air ace of Korea. Two other 4th Wing pilots, Captain Clyde A. Curtin and Major Stephen L. Bettinger, won distinction as the 38th and 39th jet air aces by victories scored on 19 and 20 July.* Shortly before dusk on the afternoon of 22 July Lt. Sam P. Young and two other 51st Wing Sabre pilots were sweeping MIG Alley. In 34 combat missions over Korea the young officer had never engaged an enemy plane, but four MIG's cut across below his formation and he got his chance. Diving down with guns flaming, Young shot down his first MIG and destroyed the last MIG of the Korean war. On the last day of hostilities† Captain Parr would shoot down a conventional Communist aircraft, but the combat between Sabres and MIG's ended on 22 July. On the next three days nonoperational weather kept both MIG's and Sabres grounded. On 27 July Sabre patrols caught a few glimpses of MIG's at the Yalu, but the Red airmen apparently had no fight left and flew homeward.[39]

*Because of an unusual circumstance, Major Bettinger could not be confirmed as the 39th and last jet air ace of the Korean war until 2 October 1953. After shooting down a MIG on 20 July, Bettinger was himself shot down and was taken prisoner. Bettinger's wingman reported the victory, but two witnesses were required to confirm a claim, and Bettinger's victory could not be officially recorded until he was released from captivity and could appear before a claims board as his own second witness. While Bettinger was in prison camp, his secret was closely kept for fear of some Communist reprisal against him.

†*See* Chapter 19, pp. 684-685.

### *3. Air Defense Became Everybody's Business*

United Nations air superiority and the potential air striking power of the United Nations air forces were the principal air defenses of South Korea. In context with this estimate of the situation and with its responsibility for maintaining an air defense for South Korea the Fifth Air Force recognized that its best defense was the perpetuation of air superiority, the maintenance of its striking power, and the continuing neutralization of North Korea's airfields. The Fifth Air Force nevertheless needed fixed defenses for installations in South Korea which would be capable of resisting an all-out Red air offensive and of defending against Red harassing attacks launched at night by light planes from partially operational airfields in North Korea. Recognizing that the growing Communist air strength in the Far East might tempt the Reds to risk retaliation and to try an all-out air offensive, General Everest had organized an air-defense system in South Korea and had integrated radar control and warning, fighter-interceptors, and antiaircraft artillery defenses into the system.* In the spring of 1952, however, the Fifth Air Force's formal air defenses were still marginal, and General Barcus recognized that they must be augmented as much as possible.

Except for some changes in terminology which kept pace with similar changes in the United States, General Barcus made no substantial changes in the air-defense system for the Republic of Korea. The Korean Air Defense Region, an air-defense subdivision of the Far East Command, was divided at 36° 30′ into a Northern Air Defense Area and a Southern Air Defense Area. Each area was further divided into two air-defense sectors, the northeast and northwest and the southeast and southwest. The commander of the Fifth Air Force commanded the Korean Air Defense Region and the Northern Air Defense Area, employing the senior-duty controller in the tactical air-control center at Seoul as his working representative for the area command. The commander of the 1st Marine Air Wing, working through the Marine tactical air-control center at Togudong (near Pohang), was in command of the Southern Air Defense Area. The tactical air-direction centers located at Kimpo Airfield (northwest sector), Hyangbyong-san (northeast sector), Kunsan Airfield (southwest sector), and Pochon (southeast sector) were directly responsible for sector air defenses.[40]

For the performance of aircraft warning and control functions in the Northern Air Defense Area the Fifth Air Force depended upon the electronic capabilities of the 502d Tactical Control Group. In June 1952 the 606th AC&W Squadron operated a tactical air-direction center atop a small mountain near Kimpo Airfield. The 607th AC&W Squadron operated another tactical air-direction center on Kuksa-bong, a mountain some 20 miles northeast of Seoul. The 608th AC&W Squadron operated a third tactical air-direction center on Hyangbyong-san, a mountain some 30 miles northeast of Kangnung, in eastern Korea. In order to round out their surveillance capabilities, each squadron possessed lightweight radars,

**See* Chapter 13, pp. 425-431.

Thus in February 1952 a detachment of the 606th Squadron began operating a surveillance radar at Cho-do, the small island off Korea's western coast. A detachment of the 607th Squadron already manned a lightweight radar on Paengnyong-do, another island south of Cho-do. The Fifth Air Force would have liked to move the Kimpo tactical air-direction center to Paengnyong-do, but it could not secure logistical support for a full-scale tactical air-direction center on this off-shore island.[41]

Fifth Air Force electronic officers already knew the defects of their aircraft-warning establishment, but on 21 August 1952 the unannounced arrival of four high-flying MIG's over Kimpo provided a dramatic demonstration that the radar-detection network was weak. Both because of this demonstration and of the need for ground-control interception capabilities over MIG Alley, the Fifth Air Force decided to establish limited ground-control intercept capabilities at both Cho-do and Paengnyong-do. Failing to get the additional aircraft control and warning squadron which it needed to man these two new stations, the 502d Tactical Control Group reshuffled its units. In October 1952 the 608th Squadron organized a detachment to operate the tactical air-direction center at Hwangbyong-san and moved its command post to Seoul Airfield, from which focal point it took over the management of the detachments at Cho-do and Paengnyong-do. At this time limited ground-control interception capabilities were established at both of these islands. To provide high-altitude surveillance over Seoul and Inchon, the 608th Squadron established a search radar detachment at a site on the coast southwest of Inchon near Songgum-ri. This station was integrated into the radar net on 16 November 1952.[42]

As it achieved its final deployment in November 1952, the Fifth Air Force's aircraft control and warning network was better suited to the control of friendly planes in flight than the location of hostile aircraft. In order to get best reception of the identification beacons carried by most friendly aircraft, the tactical air-direction centers located their heavy radars on high terrain. From these sites the old electronics equipment did not adequately pick up hostile aircraft, especially if the hostile planes were jets flying at altitudes above 40,000 feet. Located on high terrain, the heavy radars were equally unable to spot low-flying Red planes as they came down through Korea's valleys. In view of the speed of hostile jet aircraft, the 502d Group's radars were all too short ranged. If an enemy attack force came southward at 35,000 to 40,000 feet, the 502d Group figured it would be able to provide the Fifth Air Force with fifteen minutes' advanced warning. If the enemy planes came at altitudes above 40,000 feet, or below 1,000 feet, it was possible that the raid would not be detected by the radars at all. Pending the development of new equipment, the Fifth Air Force was admittedly vulnerable to air attack. "The deployment of radar equipment," noted the 502d Group at the war's end, "would not have been adequate...if the United Nations had not had definite air superiority."[43]

Because its radars could give only a limited amount of warning, the Korean Air Defense Region urgently needed antiaircraft artillery gun battalions for defense against high-flying planes and antiaircraft artillery automatic-weapons battalions for defense against low-flying aircraft. According to the command

arrangement in Korea, the Fifth Air Force possessed limited operational control over all nondivisional antiaircraft artillery units assigned to the Eighth Army and further assigned to the 10th Antiaircraft Artillery Group. The antiaircraft artillery units were deployed as agreed upon by the Fifth Air Force and Eighth Army and as approved by the Far East Command. These control arrangements did not define the headquarters which would issue orders if units had to be moved in some sudden emergency, but the Fifth Air Force chose to let the system work without precise definition. The tactical air-control centers and the sector tactical air-direction centers issued necessary fire-control orders to antiaircraft artillery units.[44]

Although the Far East Command frequently reminded the Joint Chiefs of Staff that antiaircraft artillery units were too few for an adequate defense, the Department of Army was never able to meet stated requirements. In October 1951 the Fifth Air Force had placed a requirement for five 90-mm. gun battalions and nine 40-mm. automatic-weapons battalions, but in June 1952 only four gun battalions and four automatic-weapons battalions were in Korea. Seeking a realistic deployment of the scarce units which would comply with the doctrine that objectives defended by flak should be well defended, a Fifth Air Force and Eighth Army conference met on 25 June 1952. The conference listed 16 installations that needed defense but resolved that only the top five—Kimpo Airfield, Suwon Airfield, the port of Pusan, Inchon harbor, and Kunsan Airfield—could be adequately defended with available units. While well down on the priority list, Cho-do and Paengnyong-do were so frequently harassed by Red aircraft that the conference agreed that the single platoons of automatic weapons already posted to these islands should be left there. After General Clark approved, the antiaircraft artillery battalions assumed the new deployment: a gun and an automatic-weapons battalion at Kimpo, a gun and an automatic-weapons battalion Suwon, two gun battalions at Pusan, an automatic-weapons battalion (less the battery split between Cho-do and Paengnyong-do) at Inchon, and an automatic-weapons battalion at Kunsan.[45] On its arrival from the United States, a new automatic-weapons battalion was assigned to Pusan. These arrangements held until October 1952, when the Fifth Air Force secured agreement from the Eighth Army to accord the new airfield at Osan-ni the third defense priority and to assign a newly arriving gun battalion and a new automatic-weapons battalion there. When General Clark approved the deployment, the gun battalion took station at Osan-ni in October 1952 and the automatic-weapons battalion moved there in January 1953.[46] Because of the intensity of Red air attacks against Cho-do, the Fifth Air Force moved the platoon of automatic weapons from Paengnyong-do to Cho-do, thus concentrating the entire battery of detached automatic weapons on this exposed island position in December 1952.[47]

When they were finally deployed in January 1953, the antiaircraft artillery battalions in Korea offered minimal defenses to the six highest-priority installations out of 17 installations requiring defense. The deployment did not actually provide adequate defenses, even for the top-priority installations. In February 1953 General Weyland told General Clark that additional automatic-weapons battalions were needed at Kimpo, Suwon, and Osan. In

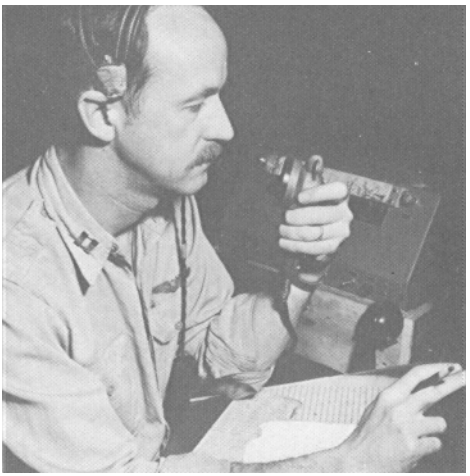
All aircraft entering the Japan air defense zone are radar monitored and if not positively identified they are intercepted by one of these F-94's.

an effort to provide some protection for airfields where there were no antiaircraft artillery defenses, the Fifth Air Force procured quadruple mounts for .50-caliber machine guns and trained Air Force personnel to operate these batteries. By December 1952 two or more "quad-50" batteries were installed at Pusan East, Taegu, Seoul Municipal, and Chunchon airfields and at the tactical air-direction centers in central and eastern Korea. Since the antiaircraft artillery automatic-weapons batteries were hampered by obsolete weapons, which required gunners visually to sight enemy aircraft, the Fifth Air Force also obtained and established searchlights at Cho-do, Kimpo, and Suwon in December 1952. In May 1953 the Fifth Air Force asked that all the automatic-weapons battalions be equipped with the new radar-directed, automatic-firing 75-mm. "Skysweeper" guns which were replacing old automatic weapons in battalions in the United States. These new Skysweeper weapons would have been very useful against the Red night hecklers, but they were not made available to units in the Far East before the end of the Korean war.[48]

Despite the improvements which had been made in the air-defense capabilities by November 1952, General Barcus was still gravely concerned about the danger of Communist air attack. After reviewing the limited capabilities of warning radar, Colonel John V. Hearn, Jr., the Fifth Air Force's director of intelligence, warned that "an initial, uninterrupted strike on the crowded airdromes at Kimpo and Suwon could destroy more than half of the F-86's ...in Korea."[49] Because the Fifth Air Force's vulnerability to air attack, General Barcus first issued a plan on 28 November calling for a permanent deployment of two Sabre squadrons to Pusan Airfield (K-1) within a month. This would reduce the combat effectiveness of the Sabre wings but it would be preferable to losing the Sabre force to a possible surprise air attack.[50] Before the aviation engineers could ready Pusan Airfield for Sabre tenancy General Barcus stayed the actual movement of the squadrons but ordered the Sabre wings to prepare plans for making such dispersals on shortest notice. On 23 January 1953 General Barcus announced an even more comprehensive dispersal plan for Sabres, which was called "Doorstop." The Fifth Air Force would provide emergency servicing and replenishment stocks for Sabres at Pusan, Taegu, Pohang, Pyongtaek, Kusan, and Osanni airfields—which would be alternate Sabre bases. The Sabre wings would

keep half their combat-ready aircraft constantly on various degrees of alert, and all pilots would become qualified to supervise the servicing and arming of their planes at the alternate bases. With the completion of the stocks at the alternate bases, "Doorstop" was formally implemented in an operations order on 5 February. On 12 April "Doorstop" was replaced with a similar operational plan called "Fast Shuffle," which directed all four Sabre wings to deploy to alternate bases on short notice. These Sabre dispersal plans fortunately never had to be employed in actual combat, but the Sabre wing periodically diverted their squadrons on practice "bug-outs" to the alternate airfields.[51]

Dispersal of the all-important Sabres got top priority in Fifth Air Force planning, but General Barcus demanded that all personnel prepare for the possibility of Communist air or ground attack. Plans were made to evacuate all Fifth Air Force troops from Seoul on short notice, and in February 1953 a number of Air Force units were moved from Seoul to bases farther south. In a command letter on 5 January General Barcus enjoined all base commanders to "implement every measure both active and passive, consistent with efficient conduct of operations, which will tend to minimize the adverse effects of enemy air activity." He ordered each base commander personally to ensure that his defense program was current, realistic, and the best that could be had within operational limitations. The fighter wings subsequently emphasized fast scrambles and maintained special alerts during dawn and dusk hours. Most base commanders did not allow passive defense measures to interfere with their combat capabilities, but they built revetments for at least a part of their planes, camouflaged their fuel tanks, provided personnel shelters, and held their men in preparation for a possible air attack.[52]



Capt. Robert A. Miller directs U.N. fighters by radio to intercept unidentified planes over Korea.

The real effectiveness of the Korean Air Defense Region was never tested against the all-out Communist air attack which it was designed to counter. At sporadic intervals, however, the air defenses were employed against night air attacks made by North Korean airmen in light aircraft. Such "Bed-check Charlie" raids had been hard to oppose during 1951,* and they proved equally annoying after October 1952, when, following a respite of almost a year, the Reds began again to heckle Cho-do and the Seoul area. In the early morning hours of 13 October four Red PO-2 trainer aircraft dropped small bombs and then strafed the radar

*See* Chapter 9, pp. 610-612 and Chapter 13, p. 431.

A1C Edward L. Johnson, radio operator with the 19th Bomb Group, is charged with all airborne radio traffic during night air strikes over Korea.

installations on the island, wounding two Americans and killing five Korean civilians. The little fabric-covered biplanes were too elusive for United Nations night-fighters. An F-94 established radar contact with the planes on six occasions but each time the little Red planes broke the contact with violent evasive maneuvers. A Marine F4U also made a brief contact but lost it at low altitude.[53] On the night of 12 November several small Red aircraft attacked Paengnyong-do, without causing damage.[54] The Red raiders attacked Cho-do repeatedly on the nights of 26 November, 5 December, and 10 December, but the luck of one of the Red raiders ran out on the latter night when a Skynight caught the plane in its radar sight and blasted it into the sea.[55] On the night of 30 December Fifth Air Force radars tracked two slow-flying "Bedcheck Charlie" planes as they flew leisurely down over Seoul, Kimpo, and Suwon, dropping North Korean propaganda leaflets. At Suwon antiaircraft artillery fire sent all personnel to their shelters for safety against falling flak fragments but did not harm the little Red raiders.[56]

After the surprise visit to Seoul and Suwon on the night of 30 December, the North Korean hecklers were inactive over United Nations installations for several months. In this respite the Fifth Air Force attempted to bulwark its defense against the low-flying planes. The automatic-weapons platoon moved from Paengnyong-do to Cho-do, giving the latter place a full battery. Searchlights were procured and installed at Cho-do, Kimpo, and Suwon. Since Eighth Army liaison planes often flew at night and had no identification beacons, the corps fire-support coordination centers were required to establish direct communications with the tactical air-direction centers so that Army pilots could file flight plans. Antiaircraft artillery acquisition radars and ground-control approach radars at Seoul, Kimpo, and Suwon were integrated into the radar reporting net. After receiving the sets in February, the 502d Tactical Control Group deployed ten additional lightweight gap-filler radars at such locations as Munsan, Inchon, and Sokcho-ri to cover the valley approaches to vital targets against low-flying aircraft.[57]

When the North Korean night-fliers resumed their attack on the night of 15 April 1953, the Fifth Air Force had still not found a solution to these stinging air attacks. For nearly two hours before midnight on 15 April several Red aircraft attacked Cho-do, killing two antiaircraft artillerymen and destroying a weapon. Four F-94's went to the area, but the Reds kept too low to show up in the ground clutter on the airborne radar scopes. Selecting

different targets almost every night for the next two weeks, the Communist airmen employed PO-2's, LA-11's, and Yak-18's in attacks against Chunchon, Kimpo, and Eighth Army front-line troops. One of the attacks, on 23 April, caused minor damages to five parked RF-80's at Kimpo, and the front-line attacks wounded a few soldiers and killed a number of Korean civilians. Antiaircraft artillery and all-weather fighters were equally unable to engage the low-flying planes. In the early-morning hours of 3 May Lt. Stanton G. Wilcox and Lt. Irwin L. Goldberg throttled their F-94 down to 110 miles an hour to destroy a PO-2, but the Starfire crew evidently crashed after making the low-level kill. Before midnight on 6 May antiaircraft gunners at Cho-do may have downed another slow-moving plane, but the wreckage could not be found the next morning.[58]

Making still another effort to cope with Red raiders, the Fifth Air Force decentralized its defense system on 24 April. Kimpo, Suwon, and Chunchon were declared to be "gun-defended areas," and the base commanders were authorized to declare air-raid alerts and to give local automatic weapons "gun-free" orders. During hours of darkness each of these airfields was restricted to all aircraft not cleared by the local control towers. At Kimpo the base commander secured several Marine AD aircraft, a B-26 with 14 forward-firing machine guns, and armed T-6 trainer which would attempt interceptions under the direction of a controller in the ground-control approach station. Because of the loss of the Starfire, the Fifth Air Force restricted these planes from attempting to engage enemy planes flying below 2,000 feet or slower than 160 miles per hour.[59] These new gun defenses and special interception plans proved generally unsuccessful. On the night of 26/27 May some five to eight PO-2's strewed small bombs and artillery shells over the Seoul area. Except for breaking an oil line between Inchon and Yongdungpo, the enemy air attack did no damage, but the Red hecklers got away unscathed. Most of the miscellaneous interceptor aircraft were caught on the ground by the Red alert at Kimpo. A flare-dropping transport and an armed T-6 attempted an interception, but the flares merely blinded the Mosquito pilot. The antiaircraft guns at Kimpo were cleared to fire but did not report any hits.[60]

As the Red light planes continued to attack Seoul, Kimpo, or Cho-do almost every night early in June, the Fifth Air Force's defenses continued to be vulnerable. On the night of 8 June a stream of low-flying planes bombed Seoul while F-94's searched for them fruitlessly. Near Cho-do on the night of 12 June the commander of the 319th Squadron, Lt. Col. Robert V. McHale, and his observer, Capt. Samuel Hoster, were cleared to fire on a Red light plane at 5,000 feet, but they evidently crashed into the Red plane and were lost. On the night of 15/16 June nine aircraft raided Seoul and shook President Rhee's mansion with bombs. The Reds evidently planned a second raid that same night, but an AD crew destroyed a PO-2 northeast of Kimpo and broke up this second attack. On the night of 16/17 June some 15 PO-2, LA-11, and Yak-18 prop planes made the most damaging attack of the season, when they started several fires in Seoul and touched off a blaze which destroyed five million gallons of fuel at Inchon. During this attack the Kimpo tactical air-direction center was swamped with unidentified plots forwarded to it by the many early warning, antiaircraft artillery, and ground-control approach radars in its

net, and it lost control of the sector alert. At the height of the raid the tactical air-direction center's controller scrambled an AD interceptor, but the Marine crew was fired at everywhere it went by friendly antiaircraft guns, despite repeated assurances from the ground controller that all flak guns were "tight."[61]

Before another period of bright moonlight brought a resumption of the "Bedcheck Charlie" attacks the Fifth Air Force had to find some solutions to the night-heckler raids. On 17 June the Fifth Air Force relieved base commanders at Suwon and Kimpo of their authority to declare Red alerts and control the fire status of local flak guns and returned these duties to the Kimpo tactical air-direction center. To reduce the number of unfiltered plots which had swamped the Kimpo direction center, the antiaircraft artillery acquisition radars were removed from the surveillance net and the ground-control approach radars were permitted to report only such planes as were entering their restricted areas without a proper clearance. The Fifth Air Force borrowed four old Corsair F4U-5N planes and crews from Task Force 77. The Fifth Air Force also sought to learn which North Korean airfields the Reds were using to stage their hecklers forward, and toward the end of the month photo interpreters located several carefully dispersed Red aircraft hidden at Pyongyang Main Airfield. When the Reds renewed their probing raids at the end of June, the Fifth Air Force was ready. In the early morning hours of 30 June Lt. Guy Bordelon, a Corsair pilot from the carrier *Princeton,* intercepted and destroyed two bogies which he identified as Yak-18's. Shortly before midnight on 1 July Bordelon destroyed two more enemy light planes, which were either LA-9's or LA-11's. The old Corsair which Bordelon flew was just the plane for engaging the Red hecklers for it could throttle down slow enough to maneuver with them. On the night of 3/4 July a B-29 strike all but obliterated the flight surfaces at Pyongyang Main Airfield with 500-pound bombs. After the Superfortress attack, no more Red hecklers came to Seoul. In a low-level attack on 16 July Sabrejets of the 8th Fighter-Bomber Wing permanently bedded down two potential "Charlies" and damaged another which had been unable to leave Pyongyang Main Airfield. Lieutenant Bordelon still continued to fly patrols, and on the night of 16 July, near Pyongyang, he destroyed his fifth hostile aircraft, said to have been a Yak-18. Bordelon thus became the first "Bedcheck Charlie" ace and the only Navy ace of the Korean war.[62] As a result of the air attacks against their staging airfields and the interceptions of their airborne planes, the Communists were unable to attack United Nations positions in South Korea during the last month of the war.

Throughout the course of the Korean war the Communist heckling raids were always more of a nuisance than anything else, but they could be damaging. The "Bedcheck Charlie" crews nevertheless demonstrated that an air-defense system could seldom be perfect, and they showed a need for dispersed air facilities and passive air defense. Since the standard jet interceptors were not able to cope with the prop-driven planes, FEAF thought that antiaircraft artillery should have been the principal defense against low- and slow-flying hostile aircraft, at least until all-weather interceptors received moving target interceptor radar. The employment of lightweight radars and the integration of ground-control approach radars into the surveillance

system had proven worthwhile against low-flying planes. Aircraft identification had been a problem: the air-defense centers required flight plans from all Army planes, antiaircraft artillery radars needed an ability to recognize aircraft identification beacons, and the tactical air-direction centers needed systematized liaison with air-route traffic control centers to reduce identification problems. In order that automatic-weapons batteries might be given "guns free" as soon as possible, only a few friendly aircraft should be allowed in an alerted area.[63] FEAF had learned some of these lessons rather late in the Korean war, but they would undoubtedly be of value in some future conflict.

### *4. Irrigation Dam Attacks Speed Truce Negotiations*

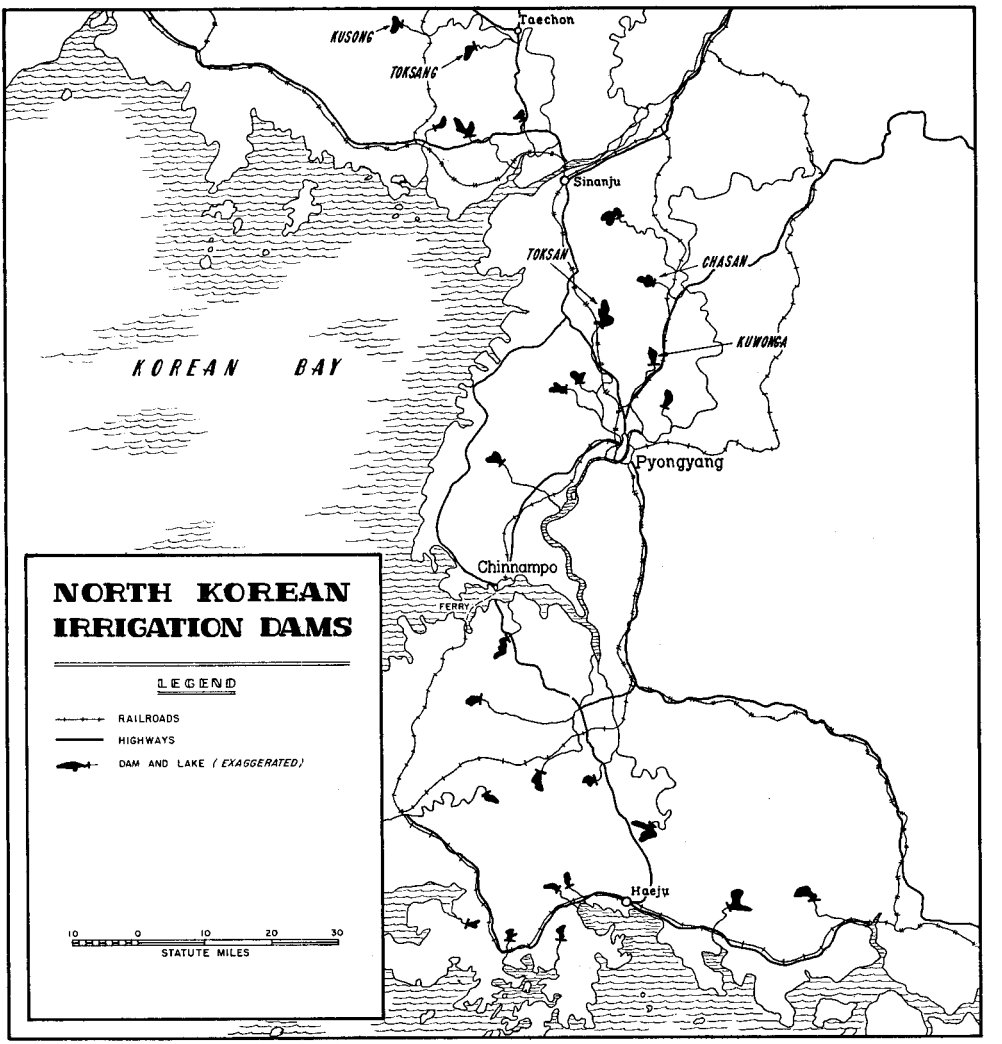
When the armistice negotiations began again at Panmunjom on 26 April 1953, the Communists revealed that they were not prepared to accept United Nations terms for ending the war. Both sides made some concessions early in May. The Communists agreed to neutral custody of prisoners of war in Korea pending repatriation, and the United Nations Command agreed to accept a neutral nations repatriation commission as the custodial agency rather than a single state. The two sides could come to no agreement on the length of the "explanation" period or the final disposition of nonrepatriates.[64] As the truce negotiations faltered, General Clark informed the Joint Chiefs that FEAF would attack the hydroelectric generating facilities at Sui-ho and a target complex at Yangsi—both being legitimate military targets in the "sensitive" area along the Yalu.[65] Because of its flak defenses, the powerhouse at Sui-ho was a difficult target, but on 10 May Colonel Victor E. Warford, commander of the 58th Wing, led a formation of eight 474th Group Thunderjets in low at Sui-ho and put at least three delayed-action bombs through the roof of the target. Pilots said that the flak was the "most intense in all of North Korea," but the Thunderjets escaped damage. Tailrace activity at Sui-ho dam nevertheless indicated that two generators still continued to work.[66] Without great difficulty on the night of 10/11 May 39 Superfortresses attacked the Yangsi target complex outside Sinuiju City and effected 63 percent destruction. On the night of 18/19 May 18 B-29's returned to complete the destruction of "one of the last large lucrative targets remaining in North Korea."[67]

At Panmunjom on 13 May the United Nations Command presented suggested terms of reference for the neutral nations repatriation commission which defined the functions of the body in such a way as to ensure that prisoners of war could accept or reject repatriation. The Communists bitterly rejected these proposals and launched into tirades of propaganda. Having failed to make progress, the United Nations delegation temporarily recessed the truce talks on 16 May.[68] Fearing the possibility of another indefinite recess in truce negotiations on 14 May, General Clark pointed out to the Joint Chiefs of Staff the military pressure which he could wage against the Reds without a change in his current direc-

tives. He could continue air attacks against sensitive targets along the Yalu, breach about 20 previously unattacked irrigation dams in North Korea, launch all-out air attacks against Kaesong after advising the Reds that they had violated the neutral status of the town by using it as a military concentration point, release North Korean prisoners of war who did not wish repatriation, and, in the autumn of 1953, United Nations Command forces could conduct a limited land and amphibious attack in the Kumsong area of east-central Korea.[69] General Clark mentioned that air operations might be launched against Manchuria and North China, but he made no recommendations on this delicate subject. Back in Washington President Eisenhower was willing to threaten the Red Chinese with extended hostilities. In conversations with Prime Minister Nehru during a visit to India beginning on 22 May, Secretary of State John Foster Dulles emphasized that the United States wanted an honorable peace in Korea. If the stalemate continued, Dulles told Nehru, the United States had decided to attack the Communist sanctuary bases in Manchuria. Secretary Dulles hoped that his warning would reach Peking, and it doubtless did.[70]

When he mentioned the North Korean irrigation dams on 14 May, General Clark revealed that he had heard about a target system which FEAF had been studying for nearly three months. If the FEAF air targets officers had not been seeking targets in context with an air pressure strategy they probably would never have noted the importance of North Korea's rice production. The first clue as to the importance of the rice crop came from the movements of Red security troops into Hwanghae and South Pyongan provinces on the western coast of Korea during the spring and summer months. These security troops were guarding the region's rice production and securing the harvested grain for the Red military effort. Further research indicated that these two provinces annually planted 422,000 acres and produced 283,162 tons of rice. Most of the rice went to feed Communist soldiers. FEAF intelligence officers reasoned that food was war materiel and they thought that it was just as legitimate to destroy a growing crop as to seek to destroy rice once it was harvested. Target researchers soon determined how air attacks could destroy the rich rice crops of the Haeju provinces. Rice production in this area depended upon impounded irrigation water from some 20 large reservoirs. By destroying the impounding dams, air attacks could release floods which would destroy a year's rice planting.[71]

The North Korean agricultural irrigation dams were an excellent target system, but many FEAF officers were troubled by the implications connected with the destruction of the irrigation dams. On 7 April several members of the FEAF Formal Target Committee doubted the wisdom of such a drastic operation, and General Weyland was reported to be "skeptical of the feasibility and desirability of destroying the North Korean rice-irrigation system." The Target committee consequently refused to accept the operation, but it recommended that FEAF intelligence prepare a detailed study of the matter for General Weyland.[72] The intelligence study developed convincing arguments to prove that air attacks against the agricultural reservoir system were suitable, feasible, and acceptable, but neither General Clark nor General Weyland thought that the time was opportune for such a severe operation as the destruction of the enemy's rice




crop. Both believed that such an operation would be an ultimate in air pressure, to be used if the Reds broke off armistice negotiations. Even though he was unwilling to authorize attacks against the enemy's rice crop as such, General Weyland was willing to approve irrigation-dam attacks where resultant floodwaters would interdict the enemy's lines of communications.[73]

In order to test the feasibility of the endeavor and develop attack techniques, General Weyland directed the Fifth Air Force to breach the Toksan dam, which was about 20 miles north of Pyongyang and backed up the waters of the Potong River. On 13 May four waves of 59 Thunderjets of the 58th Wing attacked the 2,300-foot earth-and-stone dam. At last light the dam seemed to have withstood the 1,000-pound bombs directed against it.

Sometime that night, however, impounded waters broke through the weakened dam, and fighter-bombers found the reservoir empty the next morning.[74] "The damage done by the deluge," reported the Fifth Air Force, "far exceeded the hopes of everyone."[75] The swirling floodwaters washed out or damaged approximately six miles of embankment and five bridges on the important "George" railway and also destroyed two miles of the main north-south highway which paralleled the railroad. Down the river valley the floodwaters destroyed 700 buildings and inundated Sunan Airfield. The floodwaters also scoured five square miles of prime rice crops.[76] "The breaching of the Toksan dam," General Clark jubilantly informed the Joint Chiefs, "has been as effective as weeks of rail interdiction."[77]

With one of the two main railway lines into Pyongyang unserviceable, General Weyland immediately scheduled two more dams for destruction in order to interdict the "Fox" rail line. He assigned the Chasan dam to the Fifth Air Force and the Kuwonga dam to Bomber Command. The Fifth Air Force commenced work promptly. Late on the afternoon of 15 May 36 Thunderjets of the 58th Wing dive-bombed Chasan with 1,000-pound ordnance but inflicted no significant damage. On 16 May 90 sorties in three waves of 58th Wing Thunderjets continued the dive-bombing attack. The last wave of the fighter-bombers scored a cluster of five direct hits and the hydraulic pressure of other bombs bursting in the water broke the weakened dam. Impounded waters surged southward to wash away 2,050 feet of embankment and three bridges on the "Fox" rail line. The parallel highway suffered slight damage, but secondary roads were washed out. The onrushing waters surged over field after field of young rice.[78] Bomber Command was tardy in beginning its attacks at Kuwonga and waited too long between strikes. Seven B-29's aimed 56 x 2,000-pound bombs against Kuwonga by shoran on the night of 21/22 May and scored four direct hits on the crest of the dam. The dam did not break, and the Reds had learned an effective countermeasure. They reduced the reservoir's water level by 12 feet, thus taking strain off the weakened dam and widening the thickness of the earth which the B-29's would have to breach. On the night of 29 May 14 B-29's scored five direct hits with 2,000-pound bombs. Had the water level of the reservoir been at its customary stage, this attack would have destroyed the dam. The Superfort attacks failed because the Reds had rapidly devised effective countermeasures, but the enemy had to drain Kuwonga's reservoir before repairing the dam. The Reds prevented flood damages, but they deprived adjacent rice fields of necessary irrigation water.[79]

At the end of the Korean fighting General Weyland remarked that two particular fighter-bomber strikes stood out "as spectacular on their own merit." One was the hydroelectric attack of June 1952, and the other—"perhaps the most spectacular of the war"—was the destruction on the Toksan and Chasan irrigation dams in May 1953.[80] Although they displayed their usual fantastic rapidity in restoring rail lines, the Communists did not get the "Fox" and "George" lines back into service until 26 May.[81] To the average Oriental, moreover, an empty rice bowl symbolizes starvation, and vitriolic Red propaganda broadcasts which followed the destruction of the irrigation dams showed that the enemy was deeply impressed. In an effort to

repair the damage, the Reds immediately mobilized 4,000 laborers at Toksan, but by their own admission the rebuilding of this dam required 200,000 man-days of labor. A United Nations Command covert agent who had been at Toksan said that the local population felt that the destruction of this dam caused more damage than any other United Nations air attack.[82]

During these same weeks FEAF aircraft also hammered targets in far northwestern Korea. Intensive photographic surveillance of the main supply route between Sinanju and Sinuiju turned up many worthwhile B-29 targets. On the night of 19/20 May 14 B-29's destroyed 117 buildings in the Unsan-dong complex, about eight miles due west of Sinanju and probably used for billeting coastal defense troops and as a stopover point for motor transports. On the night of 7/8 June 14 B-29's destroyed 250 buildings, or more than half of the Unhyang-po supply area, located about 20 miles southeast of Sinuiju.[83] On 30 May General Weyland asked General Clark for a blanket clearance to attack Sui-ho as often as the Reds got its hydroelectric generators working. General Clark would not give such a general clearance for repeated attacks against a "sensitive" target, but he authorized another strike. In deference to the Red fighter and flak defenses, the Fifth Air Force used its Sabre bombers in a surprise attack. The 4th and 51st Wings provided heavy covering patrols, and eight F-86F fighter-bombers of the 8th Wing flew formation with 12 F-86's of the 51st Wing to a proper point over Sui-ho and then rolled into their bomb run. Since the Sabres customarily used Sui-ho as a check point, Red flak gunners were completely surprised. The Sabres scored a number of 1,000-pound bomb hits on the northern end of Sui-ho's powerhouse and then swept away southward at low level. For several days Sui-ho was idle, but then tailrace activity again indicated that the two generators must be turning over. Until intelligence experts could establish the exact locations of these two generators in the long-reinforced-concrete powerhouse, the Fifth Air Force was unwilling to risk any more fighter-bomber attacks. As the war ended, the Fifth Air Force was trying to get some information on the subject from covert agents in the vicinity.[84]

Faced with extremely damaging air pressure attacks in North Korea and with the possibility that the Korean hostilities might be expanded, the Communist delegates at Panmunjom yielded to United Nations terms for a settlement of the prisoner-of-war question. On 25 May the United Nations Command delegates presented their final terms of reference for the neutral nations repatriation commission and then declared a week's recess, which was later extended until 4 June at the Communists' request. On 27 May General Clark sent a letter to the Communist military leaders which gave added weight to the finality of the United Nations Command's terms. When the truce meetings resumed on 4 June the Communists announced that they basically agreed with the United Nations Command terms of reference proposed on 25 May. Following some changes in wording, the United Nations Command and Communist delegates signed the approved terms of reference for the neutral nations repatriation commission on 8 June 1953. These terms marked a complete Communist capitulation and achieved the United Nations Command objective of voluntary repatriation of prisoners of war. After a ninety-day "explanation" period and an additional thirty-day

The last POW's in the U.N. exchange board a C-54 at Haneda Airfield, Japan, which will take them to the U.S., 5 May 1953.

period in which a political conference would seek to settle their disposition, prisoners who did not desire repatriation would be released as civilians. The Communists capitulation on the prisoner-of-war issue resolved the last major obstacle to an armistice, and Communist and United Nations Command military liaison officers were already discussing the exact location of the military line of demarcation which would divide United Nations and Communist forces for the duration of the armistice.[85]

Although the United Nations Command had almost achieved its objectives in Korea, the Republic of Korea's President Syngman Rhee was showing signs that he meant to balk at accepting any armistice which failed to achieve Korea's unification. Refusing the United States offer to build a ROK army of 20 combat divisions and to provide a billion-dollar economic rehabilitation fund made on 25 May, Rhee ordered the South Korean delegate to boycott the truce discussions and informed President Eisenhower that he could no longer assure his cooperation. On 4 June, when Communist acceptance of the prisoner-of-war settlement became known, Rhee told General Clark that he would feel free to take any action he deemed appropriate.[86] In the truce negotiations of early June the Communist delegates paced themselves according to a delaying schedule which puzzled the United Nations Command. At the end of May United Nations commanders guessed that the Reds would launch a last-minute ground offensive before the truce became effective. Quite probably Communist propaganda organs wanted to claim that the Reds signed the truce while they were winning, and the Reds also probably wanted to grab some additional territory before the demarcation line was officially fixed. It was possible that the Communists may have wished to aim a blow against South Korean troops which would be hard enough to show President Rhee that he could not expect to unify Korea by force. Even though the Reds had conceded on the prisoner-of-war issue, more last-gasp ground battles were in prospect before the Korean truce went into effect.

### *5. Defeating Communist Ground Offensives*

Ever since January 1953 the United Nations Command had been awaiting renewed Communist ground attacks, and FEAF's destructive interdiction operations had been designed to weaken the Red armies before they could strike southward. Despite a conscious emphasis on general support strikes—which sought to destroy personnel and supplies—and on interdiction—which interfered with logistical resupply and made the Reds use accumulated stocks—FEAF had not slighted close support in the early months of 1953. In support of generally desultory ground fighting which flared up in battalion-sized battles for "Old Baldy" and "Outpost Vegas" between

23 and 29 March, FEAF and its attached units flew 7,665 close-support sorties in the months of January through March 1953.[87]

As spring came to Korea, the United Nations air forces gave more attention to the ground situation. During April's "Little Switch" convoys and routinely thereafter, the Fifth Air Force maintained a continuing reconnaissance surveillance over the area from the bombline north to the main supply route between Pyongyang and Wonsan.[88] As cloudy skies obscured the front lines, the Fifth Air Force gave increased emphasis to MSQ-1 and MPQ-2 radar-directed bombing. In April the Eighth Army stated that the radar-directed strikes were for destruction rather than for harassment, and the Fifth Air Force accordingly assumed responsibility for targeting the radar-directed fighter-bomber and light-bomber strikes.[89] In April 21 percent of the 3d Wing's sorties and 33 percent of the 17th Wing's sorties were flown in close or general support of ground troops. Action on the ground front was limited to routine patrolling, but FEAF and its attached units still flew 3,965 close-support sorties in April.[90] Carrier pilots of Task Force 77 continued to emphasize Cherokee attacks, and in a tactical innovation they commonly attacked aggregations of hostile troops and supplies up to three days hand running. The Navy fliers discovered that Red flak defenses generally ran out of shells in less than two days.[91]

In spite of the cloudy skies, which cloaked Communist movements in May, Fifth Air Force reconnaissance revealed that the Reds were regrouping their front-line troops and were shifting forces from the northern coasts to forward positions. To combat these movements, FEAF pilots maintained steady pressure against enemy personnel, supply dumps, and transportation routes. The fighter-bombers released impounded irrigation waters at Toksan and Chasan to flood the rail arteries to Pyongyang, and they cut rail bridges in northwestern Korea. The B-26's flew 15 bomber-stream attacks against airfields and troop concentrations, while intruder B-26's claimed destruction of 2,239 enemy vehicles. The B-29's flew 35 strikes against supply areas and troop billets.[92] At the same time that it was checking enemy movements, FEAF and its attached units devoted 5,824 sorties—25 percent of its combat effort—to the close support of friendly ground troops. Finding their Cherokee targets shrouded by weather, Task Force 77 airmen began to employ the assistance of Fifth Air Force tactical air-direction post radar on 23 May.[93]

As early as 27 May aerial reconnaissance showed that the Communists were ready to mount a ground offensive, and the United Nations air forces were ready. Starting on the night of 28 May, the Reds launched a feinting attack against U.S. I Corps outposts in western Korea, but the main Red assault was directed against the ROK II Corps on 10 June. This attack centered in central Korea, where the ROK II Corps held a bulge in the United Nations lines around Kumsong. Beginning on the night of 3 June and for three nights thereafter, Bomber Command devoted its entire effort—19 B-29's each night—to ground radar-directed support of friendly ground troops. Fifth Air Force and Navy pilots also employed ground radar guidance to attack Communist troops by day and night. When the ground situation worsened on the ROK II Corps front on 12 June, the Fifth Air Force's new

commander, Lt. Gen. Samuel E. Anderson, waived the minimum-altitude restrictions on his fighter-bombers and ordered his wings to give all-out support to the Eight Army. Keeping the carriers *Princeton, Boxer, Philippine Sea,* and *Lake Champlain* on the line for seven days, Admiral Clark ordered his pilots to team with Marine and Fifth Air Force airmen for a close-support effort exceeding anything up to that time.[94]

Once again the Communists evidently expected frontal weather to cover their ground offensives, but ground radar control allowed United Nations pilots to attack targets they could not see. On 15 June, the day that ROK II Corps defenses cracked, a temporary break in the weather allowed General Anderson and Admiral Clark to hit the Reds with everything they had. FEAF planes flew a total of 2,143 sorties of all kinds for the largest single day's effort of the war. Task Force 77 broke all records by flying 532 combat sorties; and Marine fliers and west-coast carrier pilots topped their records with 478 sorties. On this day 859 of 1,148 Fifth Air Force combat sorties hit the advancing Red ground troops. In a rare daytime support mission the 17th Wing sent four six-ship elements for a formation attack against front-line troop concentrations. "The front-line troops of the Eighth Army," said General Taylor, "join in praise of the magnificent support they received today from the planes of the Fifth Air Force."[95]

The Fifth Air Force and Task Force 77 continued to give all-out support to friendly ground troops until the Eighth Army got its lines stabilized on 19 June. Directed by day by Mosquito airborne controllers and by tactical air-control parties, or at night or in bad weather by tactical air-direction post radars, the United Nations close-support effort was at a high level all during June and was large enough to swamp all of the control facilities on 15, 16, 26, and 30 June. On these days some pilots could not remain on station long enough for air controllers to direct them to targets and had to make "free drops" against targets of opportunity behind enemy lines. During June the tactical air-direction posts of the 502d Tactical Control Group controlled 66 percent of the sorties flown by B-26's, and on the three nights following 28 June they again directed all Superfort attacks. Counting nocturnal bomber and fighter-bomber sorties as well as fighter-bomber strikes in bad weather, the tactical air-direction posts successfully controlled 2,124 bomb runs. In this month of maximum close support FEAF aircraft flew 7,023 such sorties, the Marine air wing flew 1,348 sorties, and friendly foreign aircraft provided an additional 537 sorties. In all, 49 percent of FEAF's combat effort provided close support to friendly ground troops.[96] As was routine at times of Red ground attacks, the Fifth Air Force kept a sharp watch of enemy vehicle movements during daylight hours, but it sighted very few Red convoys. Bad weather undoubtedly sheltered some enemy movements, but the Reds were also executing only a limited attack. Most Red soldiers carried three or four days' rations and ammunition with them and did not need resupply in the field. The diversion of most of the light-bomber effort to close support reduced nocturnal armed reconnaissance, and low clouds and a concentration of Red flak in the area of ground attack reduced the effectiveness of fighter-bomber armed reconnaissance missions. After losing 18 aircraft, including 12 new F-86F fighter-bombers, to hostile flak on low-level armed-

reconnaissance missions, General Anderson reinstated the 3,000-foot minimum-attack altitude on 26 June. During June the Fifth Air Force claimed the destruction of only 1,029 hostile vehicles.[97]

The Communist ground offensive of mid-June 1953 was a face-saving and terrain-grabbing expedition which cost the Reds the lives of many of their foot soldiers. While the Reds were attacking, Communist and United Nations Command military liaison officers were already drawing a new line of military demarcation for the truce, and a plenary meeting of the armistice delegates ratified this line on 17 June. Except for cleaning up the terminology of the draft armistice agreement, the work at Panmunjom was completed and everything pointed to an early signing of the completed agreement, possibly in three or four days. But President Rhee did not want a truce on United Nations terms, and in a move calculated to disrupt the armistice Rhee's government allowed about 27,000 anti-Communist North Korean war prisoners to "escape" from prison compounds during the early morning

Prisoners tatooed anti-Communist slogans on themselves to protest being returned to Communist China.

hours of 18 June. At the next plenary session at Panmunjom on 20 June Red delegates angrily demanded to know whether the armistice terms would bind the "Syngman Rhee clique," and they insisted that the United Nations Command must recapture all of the North Korean prisoners.[98] The Communist delegates were careful not to terminate the truce talks, but it was all too evident that the Reds were going to launch another ground offensive of powerful proportions.

In the camps of the United Nations Command all commanders began to prepare for the worst eventualities. To withstand the expected Red ground offensive, the Eighth Army needed more forces, and General Clark relied on air transport to get them there in a hurry. On 21 June Clark ordered the 315th Air Division to move the 187th Airborne Regimental Combat Team from southern Japan to central Korea. Unable to employ his grounded C-124 Globemasters, General McCarty nevertheless accomplished the task with 53 C-46 and 249 C-119 sorties. Daytime flights landed at Chunchon and night landings used the ground-control-approach equipment at Seoul Airfield. Just before dawn on 23 June the 315th Air Division completed airlifting the 187th Regiment to Korea. This lift moved 1,770.6 tons, including 3,252 paratroopers. Further to bolster the Eighth Army's reserves, General Clark now ordered the 315th Air Division to move the 19th and 34th Regimental Combat Teams of the 24th Infantry Division from central Japan to southern Korea. Amid very bad weather General McCarty used his C-46's, C-54's, and C-119's in a giant circle lift which loaded troops at Misawa and Tachikawa, flew them to Pusan or Taegu airfields, refueled and rotated crews at Ashiya, and then returned to reload at Misawa and Tachikawa. Begun on 28 June and completed on 2 July, this airlift transported 898 soldiers and 284.2 tons of cargo from Misawa and 3,039 troops and 943.27 tons of cargo from Tachikawa. Since this airlift used all of the 315th capabilities for a movement which could just as well have been made by water transport, General McCarty privately doubted that it should have been flown. Early in July, when General Clark's staff directed that the remainder of the 24th Division should be flown to a reserve position at Pusan, General Weyland got General Clark to cancel the airlift requirement and to send the troops to Korea by ship.[99]

Throughout the long months of the Korean war the Naval Forces Far East had not given the Joint Operations Center in Korea any positive control over Seventh Fleet aircraft-carrier strike forces. A naval liaison officer in the Joint Operations Center had been able to request carrier air strikes, but he had never been able to give any positive assurance that the strikes would be flown. Late in June General Anderson and Admiral Clark agreed that this situation should be changed. To effect this change in policy, the Seventh Fleet established a naval member in the Joint Operations Center whose powers were similar to those of the Fifth Air Force's director of operations. The naval member was specifically charged to select targets for naval aircraft in support of the Eighth Army, and he was directed to ensure an effective coordination of naval air with the operations of the Fifth Air Force. Each day Task Force 77's commander provided the naval member of the Joint Operations Center with his next day's intentions, and the naval member notified the task force commander of

the assignment of the aircraft to immediate and preplanned missions in the enemy's forward areas. Before this time the Joint Operations Center had never possessed adequate communications with Task Force 77, but effective on 12 July 1953 a radioteletype circuit with on-line cryptographic facilities was opened between the Fifth Air Force and Task Force 77. FEAF hailed the action whereby the Navy accepted an integral role in the Joint Operations Center as "the final step in creating the centralized control so necessary to successful tactical air operations." The joint board on air-ground operations in Korea which met at the end of the war stated that future conflicts would find a definite requirement for "the integration of all services in a manner similar to that accomplished in the last month of the Korean war."[100]

In order to blunt the force of the expected Communist ground offensive, the Fifth Air Force and Bomber Command agreed to mount cooperative attacks against railway bridges spanning the rivers in the Chongchon estuary. Task Force 77 agreed to launch attacks against rail bridges on the lines supporting the enemy's eastern front.[101] The Fifth Air Force had expected to begin these interdiction strikes early in July, and Bomber Command was going to wait until later, when the moon was dark. Marginal flying weather allowed the Fifth Air Force to get off a few rail bridge attacks on 1 July, but for eight days after this a weather front over South Korea kept the Fifth Air Force grounded. Finally, on 10 July, Fifth Air Force fighter-bombers began to carry the attack to the rail bridges at Sinanju and Yongmi-dong. On the night of 10 July 16 B-29's of the 98th Wing attacked the Sinanju bridges, and on the night of 11 July 16 B-29's of the 307th Wing hit the rail bridges at Yongmi-dong. After losing a day because of weather, Fifth Air Force fighter-bombers cleaned up the Chongchon estuary bridges on 12 July and also attacked road bridges spanning the Chongchon all the way up to Huichon. After more days of bad weather the Fifth Air Force renewed the attack on the Chongchon's bridges between 16 and 20 July. Night-flying day-fighters and night-intruder B-26's harassed bridge repairs, and some fighter-bombers hit bridge-span assembly points in Huichon and Sunchon. Floodwaters on the Chongchon helped the destruction effort and prevented the Reds from repairing bridge damages. On 27 July aerial reconnaissance revealed that the Reds still were unable to use the Chongchon's bridges. In eastern Korea, on 10 July, Task Force 77 planes commenced rail bridge attacks, but the Navy reported unimpressive results in poor flying weather. With help from floodwaters, however, FEAF airmen had placed a zone of interdiction along the Chongchon River which must have hindered any plans which the Reds may have had for an all-out ground offensive.[102]

The same heavy rains and low clouds over South Korea which prevented interdiction attacks permitted the Communists to prepare for another all-out ground offensive in the Kumhwa River valley of central Korea, where the U.S. IX Corps and the ROK II Corps joined flanks. With reconnaissance planes grounded, the United Nations Command was unsure where the Reds would attack, but it received a tip-off when the RF-80's brought home front-line photography on 12 July. The Reds had concentrated nearly all of their front-line flak in the sectors opposite those held by the U.S. IX Corps and the ROK II Corps.[103] On the night of 13/14 July Chinese divisions

Crash Teams! Stand-by! (Art by Jon Balsey, *Courtesy Air Force Art Collection)*

crashed against the right flank of the U.S. IX Corps and began an assault which forced the ROK II Corps to retreat. All United Nations air commanders reacted swiftly. From the night of 13 July the full power of Bomber Command, the Fifth Air Force, and Task Force 77 was at the disposition of the Joint Operations Center in Seoul. Weather was still marginal for flying, but all air units mustered all their strength when it was needed to oppose the advancing Chinese. The 6147th Tactical Control Group kept up to 28 Mosquito aircraft on station over the front lines, and, since land communications were disrupted, the airborne controllers were the best source of current battle information which the Joint Operations Center possessed. The tactical air-direction posts received more planes than they could handle on 14 and 15 July, but they directed 2,247 successful blind-bombing runs during the month. To lighten the load on the radar direction posts, Fifth Air Force targets men scanned aerial photography for objectives which would be bombed by shoran. The B-29's hit 85 of these shoran targets, and the 17th Wing employed such of its crews who had become qualified for shoran against 35 other supporting targets. In the night-bombing effort many B-29's dropped 4,000-pound air-bursting bombs, and some B-26's distributed M-83 butterfly antidisturbance bombs. Prisoners later stated that they had been highly demoralized by the butterfly bombs, which they stumbled on in the dark.[104]

The curtain of fire laid down by FEAF planes on the Communist aggressors during July 1953 utilized 43 percent of the month's combat effort in close support of ground troops. The Fifth Air Force's fighter-bombers flew 3,385 close-support sorties, while the light bombers contributed an additional 1,331 close-support sorties. The 1st Marine Air Wing and friendly foreign forces provided an additional 1,462 such sorties, and the B-29's, mostly on the nights of 13 through 19 July, flew 100 ground-support sorties. Task Force 77 aircraft swelled the volume of close support still more. Back of the enemy's lines the 3d and 17th Wings were able to fly only 453 night-intruder sorties during the month, but these sorties were highly effective and destroyed 1,379 enemy vehicles.[105] Assisted by the tremendous air-support effort, the ROK II Corps fell back to the Kumsong River in fighting order, while the U.S. 2d Division, reinforced by the 187th Regimental Combat Team and backed up by the 34th Infantry Regiment, moved to covering positions. By 20 July the United Nations lines were firm and the crisis was over. In order to take a few miles of territory, the Reds had lost more than 72,000 men—the equivalent of nine divisions from the five armies which had made the attack.[106]

While the Communist ground armies were attacking, Communist functionaries at Panmunjom continued to haggle about the escape of the North Korean prisoners. At his capital in Seoul President Syngman Rhee received world-wide criticism for his action which had held up the truce. On 11 July Rhee agreed to go along with a cease-fire in return for Washington's promises of a mutual security pact, economic aid, and augmentation of the ROK army. As soon as their ground offensive came to a halt, the Communist delegates appeared at the truce table on 19 July with an obvious determination to end the fighting as quickly as possible. When this meeting adjourned, General Clark alerted all commanders that only administrative details remained to be ironed out before the armistice would be signed.[107] According to the plan which Generals Clark and Weyland had made in May, the United Nations air forces were now expected to neutralize North Korea's airfields so completely that the Reds would be unable to reconstitute an air order of battle on Korean soil before the armistice went into effect.

### *6. Neutralizing North Korea's Airfields*

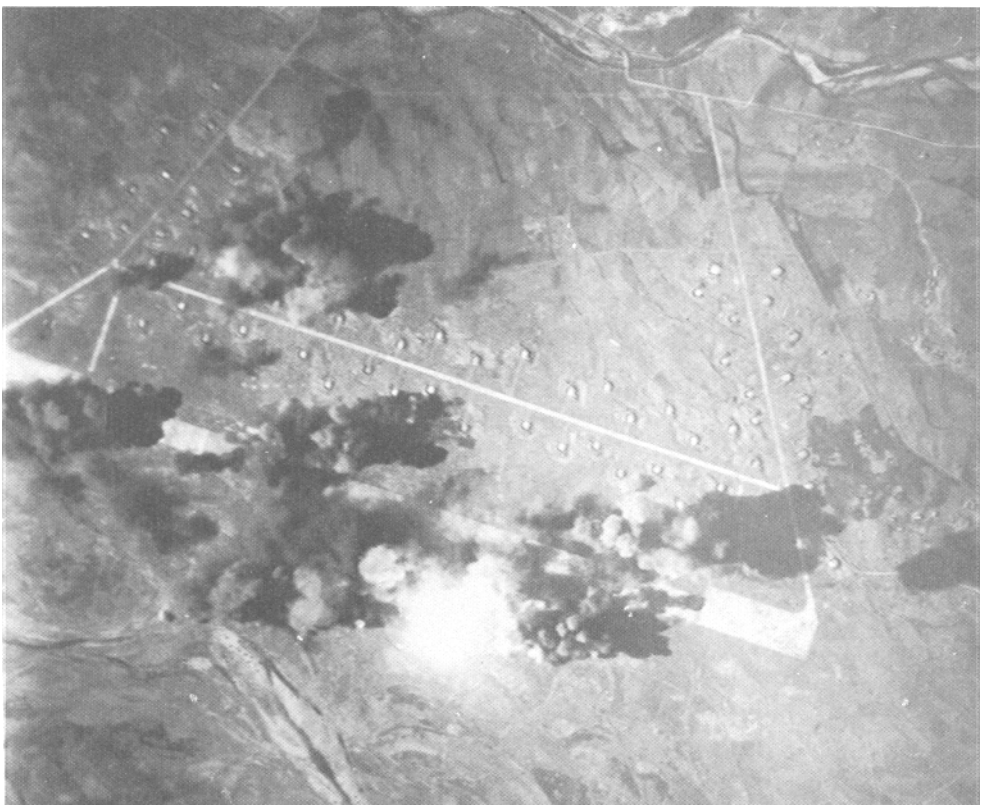
In the first weeks of the Korean war the Communists had lost control of the air over North Korea, and in the months that followed the Reds came to appreciate the fact that they could not repair airfields and reconstitute an air force in an area dominated by United Nations air forces. Unless the terms of the military armistice provided otherwise, however, the United Nations Command would automatically surrender air superiority over North Korea

when the truce went into effect. While the truce prevailed the Reds would be able to repair their airfields and reconstitute an air force on them. Then, if they wished, the Reds could break the armistice and renew the war on more favorable terms. In order to prevent the Communists from reinforcing during an armistice, United Nations Command truce negotiators long argued that both sides must agree not to build or repair airfields or bring additional forces to Korea during the military armistice. As a compromise on 28 April 1952, however, the United Nations Command had agreed that the armistice terms would make no reference to the reconstruction of airfields, but the terms continued to ban the introduction of any additional troops or equipment into Korea during the armistice.

Except for routine repairs of bomb damage at Sinuiju, Uiju, and Pyongyang Main airfields, the Communists recognized the hopelessness of their situation and made no effort to keep North Korea's airfields operational after November 1951. In April 1953, however, Fifth Air Force reconnaissance crews noted a striking increase in repair work at Sinmak, Haeju, Pyongyang East, and Hamhung West airfields, all of which had been heavily cratered and long out of use. Other repairs started at Namsi, Taechon, and Pyongyang Main. The airfield rehabilitation was evidently keyed to armistice negotiations. The Reds undoubtedly assumed that the truce negotiations were going to succeed, and, to get ready for the cease-fire, the Communists intended to repair as many airfields as possible and then, in the last hours before the truce went into effect, to rush in a maximum number of aircraft, thus establishing an air order of battle in North Korea when the armistice took effect.[108] Correctly diagnosing the Communist plan on 3 May, General Weyland listed 35 North Korean airfields which had to be kept unserviceable. The list of fields was subdivided among the Fifth Air Force, Bomber Command, and the Naval Forces Far East for continuing surveillance and neutralization. The objective was to keep runway surfaces shorter than the 3,000 feet required to land a MIG-15. Since the Reds could repair airfields very rapidly, the success of the joint airfield attack program would depend upon an accurate forecast of when the armistice would be signed. General Weyland was particularly concerned because six of the airfields—Sinuiju's two fields, Uiju, Hoeryong, Chunggangjin, and Hyesanjin—were "sensitive" targets and General Clark normally had to give the Joint Chiefs of Staff forty-eight-hours' notice before an attack against such targets could be made. On 21 May General Clark assured Weyland that he would waive the forty-eight-hour rule at such time as he gave notice that an armistice was imminent.[109]

Acting on an assumption that an armistice might be imminent and wanting to take no chances that the bad flying weather would disrupt the work, General Weyland on 8 June secured permission to attack Sinuiju and Uiju airfields two days later. On 10 June General Clark gave Weyland blanket authority to attack the sensitive airfields at the Yalu. In view of the very bad flying weather prevailing, General Weyland also secured permission to destroy two more irrigation dams at Toksan and Kusong, in order to flood the two important airfields at Namsi and Taechon. Starting with shoran attacks against Sinuiju and Uiju on the night of 10 June, Bomber Command made nightly attacks against

its assigned airfields. Hamstrung by bad weather, Task Force 77 could not deliver its airfield attacks until 13 and 14 June. Fighter-bombers and shoran-bombing B-26's policed the list of airfields assigned to the Fifth Air Force, but the attacks against the irrigation dams at Kusong and Toksan failed. The Reds were clever adversaries, and May's attacks had shown them effective countermeasurers to the destruction of their irrigation dams. Between 13 and 18 June F-84's, F-86's, Corsairs, and B-29's attacked the dams at Kusong and Toksan, but the Reds released enough impounded water to compensate for each bomb hit and when the dams became too badly battered they opened the floodgates and drained both reservoirs. Because of delays caused by weather, the joint airfield neutralization program was running behind schedule on 16 June, when it seemed that the armistice might be signed in three or four days. At this point the prospects for a speedy armistice foundered. By 23 June all North Korean airfields with the possible exception of Hoeryong were neutralized. Since the war was going to continue, General Weyland advised all commands to return to normal opera-



The high-explosive bombs of the 98th Bomb Wing Superforts slam into the Communist airfield at Namsi, 18 April 1953.

MANCHURIA
KOREA
SEA OF JAPAN
KOREAN BAY
HOERYONG
CHONGJIN
HOEMUN
KILCHU
HYESANJIN
CHUNGGANGJIN
KANGGYE
UIJU
SINUIJU NE
SINUIJU
NAMSI
TAECHON
SAAMCHAM
SINANJU
PYONG-NI
YONGDANG-DONG
YONGYU WEST
SUNAN
KANGDONG
PYONGYANG MAIN
PYONGYANG EAST
PYONGYANG DOWNTOWN
ONJONG-NI
HWANGJU NO.2
ANAK
SARIWON SE
SINMAK
HAEJU
ONGJIN
HAMHUNG W
YONPO
SONDOK
WONSAN
PYONGGANG
125
126
127
128
129
130
42
41
40
39
38
STATUS OF
MAJOR NORTH
KOREAN AIRFIELDS
27 JULY 1953
LEGEND
SERVICEABLE
UNSERVICEABLE
NOTE : AIRFIELDS ARE CONSIDERED UNSERVICEABLE WHEN LESS THAN 3000 FEET OF LANDING AREA IS SERVICEABLE.
0 10 20 30 40 50 60 70
STATUTE MILES

tions but to continue to fly enough follow-up attacks against the airfields so as to keep them in a state where they could be neutralized in four to five days.[110]

During the first weeks of July the southwardly drifting weather front not only kept United Nations air units from making follow-up airfield attacks but prevented FEAF from knowing what progress the Reds were making in their airfield rehabilitation efforts. Only Bomber command could fly in foul weather, and on the nights of 4 and 9 July B-29's pounded Pyongyang Main, Namsi, and Taechon with 500-pound bombs. Until this time Bomber Command had used 100-pound bombs as its standard ordnance against airfields, but the Fifth Air Force had urged that heavier bombs would penetrate deeper into soggy earth and explode a crater which the Reds would find hard to repair. Earlier in the year the Reds had thrice repaired 100-pound bomb craters at Pyongyang Main without much trouble, but the 500-pounders which the B-29's dropped on 4 July put it out of action.[111] When clearing weather permitted reconnaissance photography, the Reds had made an alarming amount of progress at their North Korean airfields. At Uiju the Reds were using a sod surface for a landing field, and they had flown in approximately 43 MIG's which were dispersed in revetments. Sinuiju Airfield was operational, and 21 conventional aircraft were parked in its dispersal area. The concrete runway at Namsi had been repaired, and the smaller airfields at Pyong-ni and Hoeryong had more than 3,000 feet of serviceable runway. Chunggangjin was possibly serviceable although the Reds had given it little attention.[112]

As soon as he received General Clark's warning that the armistice was imminent on 19 July, General Weyland called on all air commands to reinstate the joint airfield neutralization program. Getting under way on the night of 20 July, Bomber Command closed out the war in what Brig. Gen. Richard H. Carmichael called a "blaze of glory." Employing 500-pound bombs, the medium bombers attacked the runways at Uiju, Sinuiju, Namsi, Taechon, Pyong-ni, Pyongyang, and Saamcham. On the night of 21 July 18 B-29's blanketed Uiju's dispersal areas with fragmentation bombs and incendiary clusters.[113] In the final five days Task Force 77 conducted three of its largest strikes against Sondok, Wonsan, Hoeryong, Hoemun, Yonpo, Hyesanjin, and Hamhung.[114] The Fifth Air Force's 8th and 18th Fighter-Bomber Wings began to attack the dispersed aircraft at Sinuiju and Uiju airfields on 18 July, and they continued to make raids against these objectives until 23 July. The attacks at Sinuiju destroyed at least six conventional aircraft, and the other planes were removed from the field. The combination of the B-29 fragmentation attacks and the Sabre fighter-bomber strikes against Uiju destroyed at least 21 MIG's. More of these planes were probably destroyed, but clouds obscured parts of the dispersal areas on the final reconnaissance photographs. On 22 July 58th Wing Thunderjets smothered runway repairs at Pyong-ni. After losing several days because of bad weather, the Fifth Air Force's fighter-bombers attacked the enemy's remaining airfields on 27 July. Thunderjets penetrated deep into enemy territory to neutralize the runways at Kanggye and at Chunggangjin, and other Thunderjets centered their bombs on the runway at Sunan Airfield.[115]

Photography flown by the 67th Tactical Reconnaissance Wing on 27 July 1953 revealed that every airfield in

North Korea was unserviceable for jet aircraft landings. Only at Uiju was the situation a little doubtful, for the Reds might have been able to land a few planes on a taxiway after dark on 27 July. The United Nations Command joint airfield neutralization program was a technical success, but even as General Weyland recorded a successful accomplishment of the air mission he recognized that the Reds would probably reconstitute an air force in North Korea. Considering the moral fiber of the Reds, they would not likely be bound by the terms of the armistice agreement. Everyone had suspected that the Reds might use a "crate and cave" order of air battle to establish airpower on Korean soil before the truce went into effect. The Reds had done this. Under cover of inclement weather they had flown some 200 aircraft to Uiju Airfield early in July and had towed most of the planes out to dispersal points in the fields and hills adjoining the hard-surfaced highway between Uiju and Sinuiju. Most of the planes had been damaged, but they constituted an air order of battle for the North Korean Air Force. Considering the speed with which the Reds could repair airfields, it is also probable that the Communists moved some additional planes to North Korea in the few days before neutral nations inspection teams reached their assigned stations.[116]

## *7. The Day the War Ended*

Following some realignment of the military line of demarcation to conform with the few miles of territory the Reds had purchased with wasted blood, Generals Harrison and Nam Il met at Panmunjom at 1000 hours on 27 July and promptly fixed their signatures upon the armistice agreement. Later that afternoon, at Munsan-ni, flanked by Generals Taylor, Weyland, and Anderson, and by Admirals Briscoe and Clark, General Clark signed the truce as the chief representative of the United Nations. The Communist leaders, Kim Il Sung and Peng Te-huai, who had refused to meet General Clark unless representatives of the Republic of Korea were barred, signed at their own headquarters. According to agreement, the armistice would become effective twelve hours after it was signed, or at 2201 hours on 27 July.[117]

With a full day of work ahead of them, Far East Air Forces' airmen were abroad early on 27 July. Mindful of the importance of "face" to the Communists, General Anderson used all Sabres for counterair patrols and escorts during the day. At midmorning one Sabre patrol sighted 12 dark green MIG's near the Yalu, but the Red pilots high-tailed for the river before the Sabres could engage them. This was the only sighting of MIG's during the day, but the veteran 4th Wing was not going to be denied one last victory. Shortly after noon, while flying escort to Chunggangjin, Captain Ralph S. Parr and his wingman sighted an IL-12 transport, marked with red stars, heading east. Captain Parr made two

General Clark signs the truce agreement while Vice Admirals Briscoe and Clark look on, 27 July 1953 (Orlando S. Lagmar, *Courtesy U.S. Navy).*

passes to be sure that he was making no mistake and then exploded the unfamiliar Red transport with a long burst of fire. This was the victory Captain Parr needed to become a double ace, and it was the last air-to-air victory of the Korean war.[118]

Covered and escorted by the Sabres, other FEAF crews raced against time to accomplish needful tasks before the cease fire. Flying a maximum effort, the 67th Tactical Reconnaissance Wing secured photographs of all but four of the North Korean airfields. The four fields that the wing missed were covered by clouds.[119] The Fifth Air Force's Thunderjet fighter-bombers acted swiftly to neutralize the few airfields which the enemy might possibly use to receive aircraft in the last hours after the truce was signed. Expecting the armistice to be signed at 1400 hours, the Fifth Air Force had carefully scheduled its attacks to take advantage of the remaining hours of daylight. When the Panmunjom negotiators signed at 1000 hours, it had more time than it had expected. As soon as the truce was signed, the 58th Wing roared into action. Colonel Joseph Davis, Jr., the 58th Wing's commander, led 23 Thunderjets of the 474th Group to posthole Chunggangjin Airfield on the banks of the Yalu. At the same time 24 Thunderjets of the 58th Group attacked the runway at Kanggye. Later that afternoon 24 Thunderjets of the 49th Fighter-Bomber Wing, augmented by 12 other Thunderjets of the 58th and 474th Groups, bombed Sunan Airfield. During these attacks the 2157th Air Rescue Squadron held its helicopters

on alert and orbited SA-16 amphibians over Cho-do and Yo-do, but FEAF would lose no planes on the last day of the war.[120]

As night fell on 27 July the 4th, 8th, and 51st Wings executed a "Fast Shuffle" deployment of half of their Sabres to alternate bases. Although the Reds would not attack, General Anderson had wanted to be sure that no last-minute Communist night air attacks reduced the effectiveness of his interceptor force.[121] After dark the 319th Fighter-Interceptor Squadron and VMF(N)-513 dispatched all-weather interceptors for uneventful counterair patrols. The medium bombers of the 19th Bombardment Wing had been scheduled to make a shoran attack against Sinuiju Airfield, but this mission had to be scratched when the cease-fire hour was set at 2201 hours. Bomber Command would drop no bombs on this last night, but General Carmichael sent two 98th Wing B-29's and two 91st Squadron RB-29's over from Japan to deliver a parting volley of psychological warfare leaflets. One of these RB-29 sorties, flown by Lt. Denver S. Cook, was Bomber Command's last mission over North Korea.[122] On the last evening of combat the 3d and 17th Wings launched their night-flying B-26's according to usual schedules. Weather conditions permitted limited visibility, and not many Communist vehicles were stirring, but a 17th Wing B-26 crew was credited with the destruction of the last enemy vehicle of the Korean war. A few minutes before the cease-fire—at 2136 hours—a B-26 of the 3d Wing's 8th Squadron dropped the last bombs of the Korean hostilities in a ground-radar-directed close-support mission. This mission was doubly appropriate. As the end to a war in which airpower had provided ground troops with more support than ever before, it was fitting that the last attack should be a close-support mission. And it was also appropriate than an 8th Bombardment Squadron crew should have flown the last attack because this same squadron had flown the first combat strike into North Korea three years earlier. A few minutes before 2201 hours an RB-26 of the 67th Tactical Reconnaissance Wing hurried southward from the last combat sortie over North Korea.[123]

At 2201 hours, on 27 July 1953, all of FEAF's aircraft were either south of the bombline or more than three miles from North Korea's coast. The armistice marked the end of the shooting war in Korea, but the Far East Air Forces' duty was not yet completed. As the battles were ending in Korea on 27 July, the United States and the other 15 nations that had fought with the United Nations Command in Korea subscribed to a joint-policy declaration concerning the Korean armistice. These nations affirmed that if the Communists renewed armed attack they would be prompt in resisting aggression. "The consequence of such a breach of the armistice," warned the United Nations supporters, "would be so grave that, in all probability, it would not be possible to confine hostilities within the frontiers of Korea."[124] From Washington the new USAF chief of staff, General Nathan F. Twining, cautioned the men of FEAF about their new mission. "Yours is now the role of watchfulness and preparedness," he said, "for you must continue to be the most vigilant and best prepared of all the forces that guard the safety of Americans and the security of the free world."[125]

To the American people, who remembered the "unconditional-surrender" slogans of earlier wars, the Korean hostilities ended on a vaguely

disquieting note of neither victory nor defeat. Political commentators and some military leaders would later recall the Korean hostilities in terms of what might have been and not in context with their nature as a limited war. From the winter of 1950 onward the United Nations and the United States had held to the military objective which required no more than the restoration of the Republic of Korea, the resistance of aggression, and the cessation of hostilities on acceptable terms. "Korea," President Eisenhower reminded Syngman Rhee on 6 June 1953, "is unhappily not the only country that remains divided after World War II. We remain determined to play our part in achieving the political union of all countries so divided. But we do not intend to employ war as an instrument to accomplish the world-wide political settlements to which we are dedicated and which we believe to be just."[126]

The Korean armistice agreement signed on 27 July 1953 marked the attainment of United Nations and United States military objectives in Korea. The truce terms established the authority of the Republic of Korea south of a northern border so located as to facilitate administration and military defense. Because of the latter consideration, the United Nations yielded the indefensible terrain of the Ongjin peninsula on the west but ran the new border far enough north of the 38th parallel in central Korea to interrupt the lateral communications lines which the Communists would require for renewed aggression. The demilitarized zone on each side of the new border and prohibitions against reinforcements of either side during the armistice were guarantees against renewed agression, although the latter provisions would ultimately be violated by the Reds and would therefore be eventually denounced by the United States. And, finally, the Communists accepted what they had said they would never accept: the principle of voluntary repatriation of prisoners of war. At one minute after midnight, on 23 January 1954, some 22,000 Chinese and Korean prisoners who were unwilling to return to their Communist-dominated homelands would be released to the Chinese Nationalist government and to the Republic of Korea. Political conferences at Panmunjom in the autumn of 1953 and at Geneva in the spring of 1954 would fail to secure Korean unity, but the United Nations' effort in Korea had not been in vain. The Republic of Korea was spared the Communist yoke, and the United Nations' courage in opposing naked aggression gave heart to all free countries of the world.

Why the Communists finally accepted the United Nations Command's terms for ending the Korean hostilities was a secret which would remain locked in the archives of Moscow and Peking. Secretary of State John Foster Dulles would declare in January 1954 that the hostilities ended "because the aggressor, already thrown back to and behind his place of beginning, was faced with the possibility that the fighting might, to his own great peril, soon spread beyond the limits and methods he had selected."[127] Although recognizing that the threat of air assaults and naval blockades against the Chinese mainland may have helped, United Nations commanders believed that the pressure of air attack within Korea had forced the Reds to accept the armistice terms. General Clark noted that the Communists yielded "only because the military pressure on them was so great that they had to yield...In the end we got the cease-fire

Anti-Communist Chinese pass through arch to freedom.

only because the enemy had been hurt so badly on the field of battle."[128] The FEAF deputy for intelligence, General Zimmerman, explained in January 1954: "We established a pattern of destruction by air which was unacceptable to the enemy. The degree of destruction suffered by North Korea, in relation to its resources, was greater than that which the Japanese islands suffered in World War II. These pressures brought the enemy to terms."[129] General Weyland summed up his own view rather briefly in February 1954. "We are pretty sure now," he said, "that the Communists wanted peace, not because of a two-year stalemate on the ground, but to get airpower off their back."[130] Whether the Reds yielded because they feared an expanding air war, or whether they quit because of the pounding pressure of air attacks against their forces in North Korea, one thing was certain: airpower was triumphant in the Korean war.

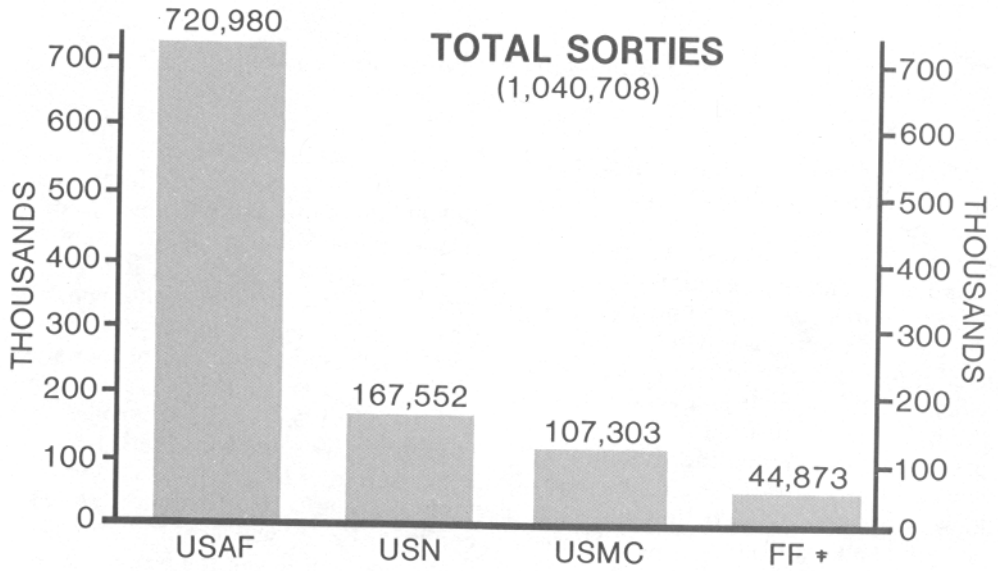
# 20. *Air Mission Accomplished*

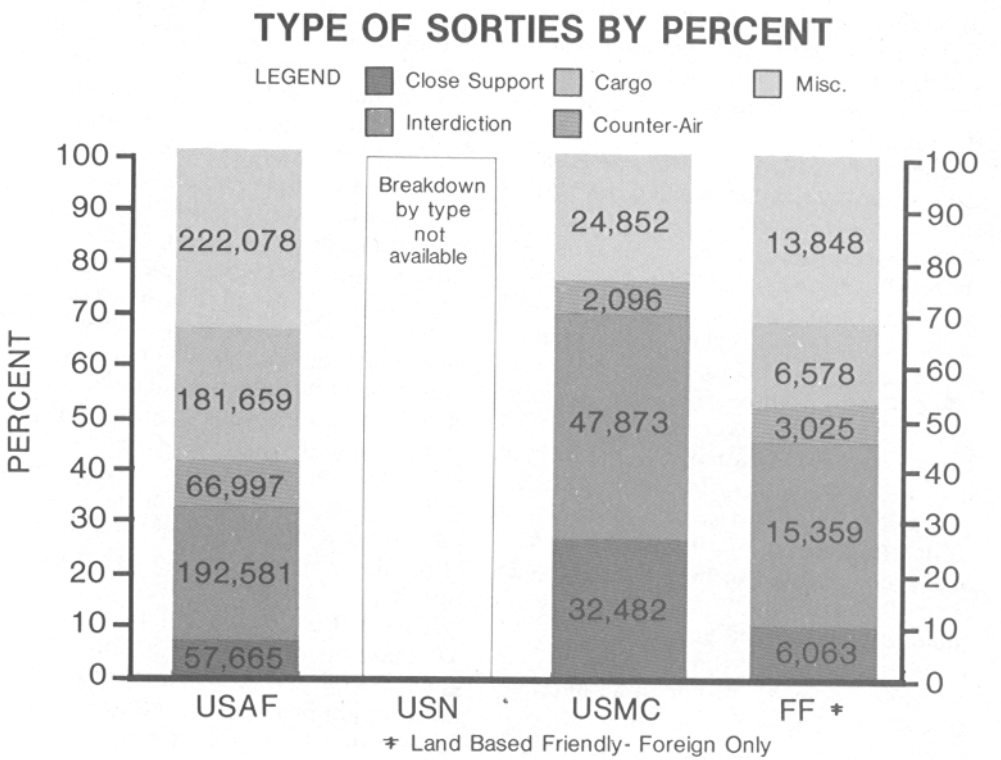
## *1. The Far East Air Forces Record*

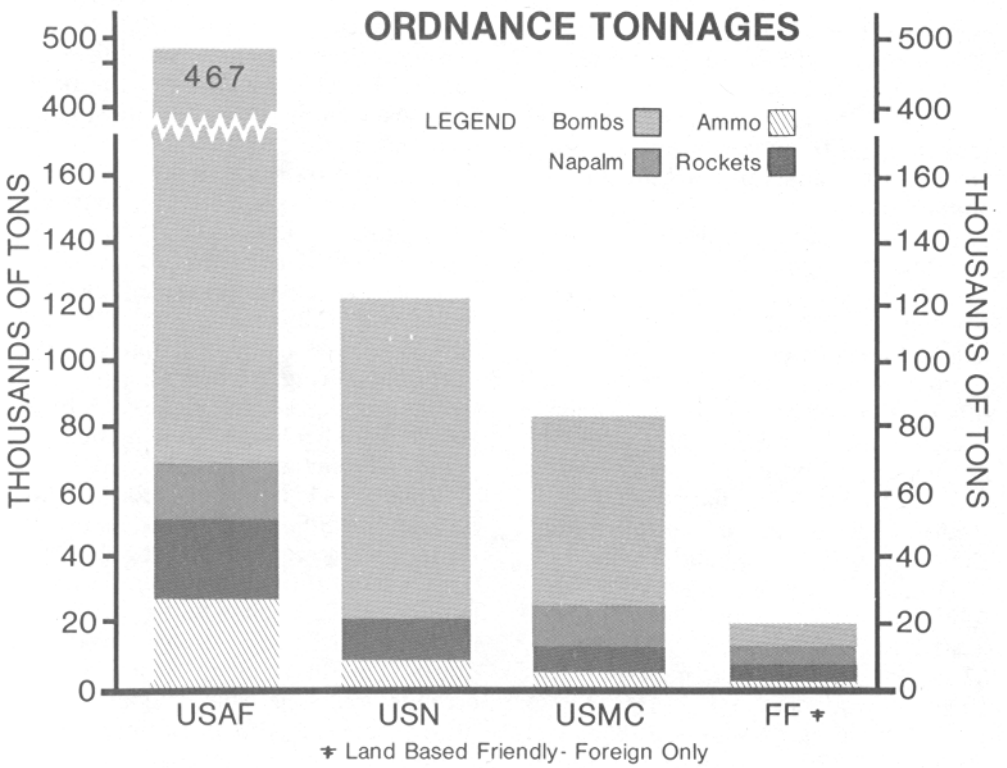
"The Air Force is on trial in Korea," stated General Vandenberg, as the Korean war was beginning.[1] The conflict was going to test the men, equipment, and organization of the United States Air Force under fire. At the start of the fighting USAF and FEAF had much to learn in a conflict which would be a strange mixture of the last conventional air war and the first jet air war. When the shooting stopped on 27 July 1953 FEAF could look backward at an outstanding accomplishment of its mission. There was much to be learned from the experiences of combat, but nearly every lesson of the Korean conflict had to be qualified by the fact that the Korean war had been a peculiar war, which was unlike wars in the past and was not necessarily typical of the future.

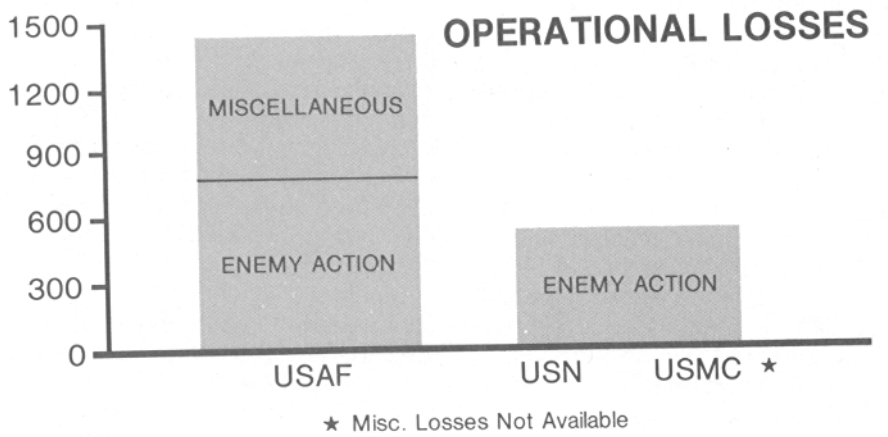
The combat record of the Far East Air Forces in Korea revealed a magnitude of effort which was unequaled by similar-sized forces in previous conflicts. During the war FEAF's personnel strength more than tripled as it grew from 33,625 officers and airmen assigned on 30 June 1950 to 112,188 officers and airmen assigned on 31 July 1953. Counting an average of two groups and seven squadrons of Marines and three squadrons of friendly foreign air forces, FEAF possessed or controlled an average of 19 groups and 62 squadrons during the period between 25 June 1950 and 27 July 1953. These squadrons possessed an average of 1,248 aircraft in the thirty-seven months of combat, of which an average of 839 were kept combat ready. These wartime averages lumped together the lowest strength of FEAF and its controlled units, which was 16 groups and 44 squadrons and 657 possessed aircraft in the summer (July-September) of 1950, and the highest strength of FEAF and its controlled units, which was 20 groups and 70 squadrons and 1,441 possessed aircraft in the summer (July-September) of 1952. At the war's end, in July 1953, FEAF controlled 19 groups and 69 squadrons, with 1,536 possessed aircraft.[2]

By the standards of previous global conflicts, FEAF was never a large air force, and yet during the Korean war FEAF's units flew a total of 720,980 sorties, which included 66,997 counterair, 192,581 interdiction, 57,665 close-support, 181,659 cargo, and 222,078 miscellaneous sorties. The Marine units flew an additional total of 107,303 sorties, including 2,096 counterair, 47,873 interdiction, 32,482 close-support, and 24,852 miscellaneous sorties. Land-based friendly-foreign air units flew another total of 44,873 sorties, which included 3,025 counterair, 15,359 interdiction, 6,063 close support, 6,578 cargo, and 13,848 miscellaneous sorties. The category of "miscellaneous" sorties included such effort as reconnaissance, air control, and training. During the Korean war U.S. Navy air forces flew an additional total of 167,552 sorties, which caused the sum of United Nations air forces effort flown during the Korean war to total 1,040,708 sorties. During the hostilities FEAF planes delivered 476,000 tons of ordnance against the enemy, while the U.S. Navy forces delivered approximately 120,000 tons, the Marines approximately 82,000 tons,


TOTAL SORTIES
(1,040,708)
THOUSANDS
720,980
167,552
107,303
44,873
USAF
USN
USMC
FF *


TYPE OF SORTIES BY PERCENT
LEGEND
Close Support
Cargo
Misc.
Interdiction
Counter-Air
PERCENT
Breakdown by type not available
222,078
181,659
66,997
192,581
57,665
24,852
2,096
47,873
32,482
13,848
6,578
3,025
15,359
6,063
USAF
USN
USMC
FF *
* Land Based Friendly- Foreign Only


ORDNANCE TONNAGES
LEGEND
Bombs
Ammo
Napalm
Rockets
467
THOUSANDS OF TONS
500
400
160
140
120
100
80
60
40
20
0
USAF
USN
USMC
FF *
* Land Based Friendly- Foreign Only


OPERATIONAL LOSSES
1500
1200
900
600
300
0
MISCELLANEOUS
ENEMY ACTION
ENEMY ACTION
USAF
USN
USMC ★
★ Misc. Losses Not Available

and the friendly-foreign forces about 20,000.[3] The ordnance expenditures of FEAF units totaled 386,037 tons of bombs, 32,357 tons of napalm, 313,600 rockets, 55,797 smoke rockets, and 166,853,100 rounds of machine-gun ammunition.[4]

The circumstance under which the communists fought the Korean war in the face of an accomplished United Nations Command air superiority allowed the United Nations air forces to operate at a greater rate than would otherwise have been possible. Their disadvantageous lack of air superiority also cost the Communists dearly, as attested by the total combat claims of FEAF's possessed and controlled units. Between 26 June 1950 and 27 July 1953, USAF, Marine, and friendly-foreign aircrews claimed to have destroyed 976 aircraft, 1,327 tanks, 82,920 vehicles, 963 locomotives, 10,407 railway cars, 1,153 bridges, 118,231 buildings, 65 tunnels, 8663 gun positions, 8,839 bunkers, 16 oil-storage tanks, and 593 barges and boats. The aircrews claimed to have killed 184,808 enemy troops and to have made 28,621 cuts on the enemy's railroads. In most of these categories the aircrews claimed many more items as damaged.[5]

In the course of its operations against the enemy FEAF lost 1,466 aircraft, the Marines lost 368 aircraft, and friendly-foreign units lost 152 aircraft. Of the total of 1,986 aircraft lost, 945 were lost to nonenemy causes and 1,041 to enemy action, including 147 in air-to-air combat, 816 to hostile ground fire, and 78 to unknown enemy action.[6] In air operations FEAF sustained 1,729 officer and airmen casualties, including 1,144 dead, 306 wounded, 30 missing men who returned to military control, 214 prisoners of war who were repatriated under the armistice agreement, and 35 men whom the Reds continued to hold in captivity in June 1954. During ground actions of one kind or another FEAF sustained an additional 112 officer and airmen casualties, including 36 dead, 62 wounded, 8 missing who returned to duty, and 6 who were repatriated from prisoner-of-war status. As a result of air and ground operations FEAF suffered a total of 1,841 casualties during the Korea war.[7] All losses are regrettable, and FEAF lost many of its finest men, but, considering the destruction wrought upon the Red aggressors by air attack, FEAF's losses of men and planes were amazingly light.

While FEAF's combat record in the Korean hostilities was highly meritorious, such a record was not likely to be typical of future hostilities. In the autumn of 1950, when victory seemed imminent, General Stratemeyer pointed out to General Vandenberg several erroneous lessons which might be drawn from the Korean conflict. Thirty-three months of additional fighting further validated this early thinking. While FEAF gained immediate air superiority in Korea and successfully retained it, no one could assume that such a feat could be duplicated in the future. While propeller-driven aircraft were successfully employed for a time in Korea, such equipment was not suitable for global conflict in a jet air age. Although B-29 strategic bombers were freely diverted to the support of ground fighting in Korea, it could not be assumed that such a diversion superseded the real purpose of such aircraft. The Superfort bombers were used tactically because they soon destroyed their strategic targets, because they were available, and because the tactical emergency was most threatening. Because FEAF provided United Nations ground forces

with lavish close support in Korea was no reason to assume that this could be done in future wars. In the initial stages of future conflicts all air units would probably be engaged in the winning of the battle for air superiority. Although airlift was provided on a luxurious scale in Korea, the same concentration of airlift effort would be unavailable to any one theater during a global war. Because FEAF was able to win and maintain air superiority, many novel improvisations were permitted. In an all-out war, however, strategic air units would not likely be available for tactical support operations, tactical air units would be heavily engaged in a battle for air superiority, and Navy forces would have far less freedom of the seas than they had in Korea. Certainly any attempt to build an air force from the model of Korean requirements could be fatal to the United States.[8]

## *2. A Note on Organization and Command*

The Korean hostilities indicated that costly delays might be anticipated in reaching multilateral agreements for the conduct of military operations under the auspices of the United Nations. Even though Soviet representatives were not present to impede the action of the United Nations Security Council in June 1950, initial delays in the first hours and days of the war allowed the North Korean army's attack to gain momentum and witnessed the loss of much of the manpower and practically all of the equipment of the Republic of Korea's army. Later on, when the Chinese Communists intervened in Korea, the United Nations Command required some immediate decisions which, necessitating intergovernmental discussions, could not be provided in an acceptably short time. In a jet air age moments lost in making decisions allow inordinate advantages to aggressor nations.

The Korean war was the first conflict to test the unified military forces of the United States. Although the U.S. Joint Chiefs of Staff had directed the Far East Command to provide itself with a joint command staff adequate to ensure that the joint commander was fully cognizant of the capabilities, limitations, and most effective utilization of all the forces under his command, the United Nations Command/Far East Command operated for the first two and one-half years of the Korean war without a joint headquarters. Practically all of the interservice problems which arose during the Korean war could be traced to misunderstandings which, in all likelihood, would never have arisen from the deliberations of a joint staff. In the absence of the joint headquarters staff, the full force of United Nations airpower was seldom effectively applied against hostile target systems in Korea. That the failure of the United Nations Command/Far East Command to organize a joint headquarters staff had no tragic bearing on the outcome of the Korean conflict could be attributed only to the absence of large-scale, resourceful enemy air opposition.

*3. Air Superiority Was the Trump Card*

"There is little doubt in my mind," wrote General Weyland, "that the outcome of the conflict would have been vastly different had enemy domination of the air reversed the military positions of the Communists and the United Nations Command."[9] Air-superiority operations under the limited conditions of the Korean hostilities did not resemble similar air operations of the past, nor were they likely to be typical of the future. The story of how the Far East Air Forces controlled the air in Korea nevertheless provided one more historical justification for the overriding priority which USAF doctrine accords to the air-superiority mission.

During the first few weeks of the Korean war FEAF airmen easily destroyed the small North Korean Air Force. This early accomplishment of United Nations Command air superiority paid large dividends. Without hazard of hostile air attack United Nations surfaces forces could maneuver freely by day to resist the more-powerful Communist surface forces, who were able to move and to fight only at night. But the very fact that FEAF initially seized and continuously maintained air superiority over North Korea with a minimum commitment of forces could lead to a mischievous conception that the feat could be duplicated at will in some future conflict. In a war with a major power the aerial superiority which FEAF so easily attained in Korea would be dearly purchased at a heavy cost of airmen, aircraft, and an all-consuming air effort. Following the defeat of the North Korean Air Force, FEAF "owned" the air to the Yalu, but here air superiority ended because United Nations airmen could under no circumstances violate the sanctity of the Manchurian borders. From time to time the United Nations Command prescribed other restrictions designed to prevent inadvertent air violations of Communist territory and eventually erected an "artificial foul line" three miles south of the Yalu River beyond which United Nations airmen could not fly without special authority.

As they were free to do because of the United Nations Command politico-military restriction which confined air hostilities to Korea, the Communists rebuilt an air order of battle on Manchurian soil which became powerful enough to threaten the survival of United Nations forces in Korea. The U.S. Joint Chiefs of Staff indicated that they would consider air attacks against enemy air bases outside Korea at such a time as the United Nations commander could state that Communists air operations imperiled the security of his forces in Korea,[10] but this situation never arose. What intelligence there was of enemy motives indicates that the Communists did not employ their Manchurian-based aircraft against United Nations installations in South Korea primarily because they feared reprisal attacks. Recognizing that their ground campaigns could not succeed without air support, the Communists reasoned that if they could rehabilitate or build air facilities south of the Yalu they could base air squadrons there which could attack United Nations positions in South Korea.

After November 1950 Communist MIG-15 jet interceptors attacked United Nations aircraft over North Korea, and within a year these speedy fighters hazarded slower models of

United Nations aircraft and prohibited daytime medium-bomber operations over northwestern Korea. Under the cover of MIG's flying from Manchuria, the Reds attempted periodically to build or reconstruct air facilities on North Korean soil. On occasions the Reds used North Korean fields for staging light-plane sneak attacks against United Nations positions, always at night. Mounted from partially operational North Korean airfields, these heckling attacks demanded that the Fifth Air Force devote constant attention to the air defenses of South Korea, but the "Bedcheck Charlie" raids did not constitute really effective air attacks. The Far East Air Forces recognized the significance of the Communist efforts to build North Korean airfields and periodically taught the Reds that they could not reconstitute an air force in an area over which they had lost air superiority. "The airfield neutralization program in North Korea," stated a FEAF intelligence report, "was like shooting sitting ducks."[11] While this description was a fair presentation of fact, FEAF's airfield neutralization program enjoyed certain exceptional advantages. By making shoran attacks at night, the old Superfortress bombers were able to continue to be the primary agents for airfield neutralization. The coordinated air-defense system of ground-control intercept radar, antiaircraft artillery guns, searchlights, and day-fighter aircraft, which the Reds built over northwestern Korea in 1952, seriously hampered B-29 attacks. If the Reds had possessed—or had been willing to employ—electronics-equipped all-weather fighters, they could doubtless have driven the old Superforts from the nighttime skies over North Korea. FEAF's fighter-bombers could probably have still continued the neutralization of North Korea's airfields, but FEAF would have missed the large bomb-carrying capacity of the Superfortress bombers.

Early in the Korean war FEAF airmen were able to destroy most of the North Korean Air Force on the ground at its airfields, where counterair efforts are always most effective. During the war, chiefly in the early months, FEAF crews destroyed 53, probably destroyed 25, and damaged 36 enemy aircraft on the ground. During July 1950 Navy airmen also reported destruction of 36 aircraft on the ground. Beginning in November 1950, with the entry of Chinese Communist Air Force units into combat, the air superiority task was that of air-to-air combat in a continuing battle between the swept-wing Sabres and MIG-15 jets. In aerial fights during the war FEAF airmen claimed to have destroyed 900, to have probably destroyed 168, and to have damaged 973 enemy aircraft. Land-based and carrier-based Marine pilots claimed the destruction in the air of 35 enemy aircraft, including 15 MIG's destroyed by pilots who were flying exchange tours in Sabres. U.S. Navy pilots claimed the destruction of 16 enemy aircraft in the air, including four MIG's destroyed by carrier airmen who were flying exchange duty in Sabres. Friendly-foreign pilots claimed to have destroyed three airborne enemy aircraft. Crews of almost all types of FEAF combat aircraft turned in claims of enemy aircraft destroyed, but the Sabres were the principal death-dealers and Communist MIG-15 jets were the hostile planes most frequently destroyed. In aerial combat Sabre pilots claimed to have destroyed 810 enemy planes, including 792 MIG-15 fighters. In air-to-air combat FEAF lost a total of 139 aircraft, including 78 Sabres.[12]

The Sabre pilots thus maintained a ten-to-one margin of victory over the MIG-15 jet fighters—the best planes which the Communists displayed in action in Korea.

Since the Sabrejet fighters proved to be the chief agents for maintaining United Nations Command air superiority in Korea, the peculiar nature of the combat between the Sabres and the MIG's deserves scrutiny. Victories in the highest form of air warfare—air-to-air fighting—usually go to the finest weapon system—an amalgamation of aircraft performance, aerial weapons, and pilot skills—and such was the case in Korea. "I have often been asked how the F-86 compares to the MIG-15," commented General Weyland, who then answered: "In my opinion, when all variables are balanced out, I believe the F-86 is the better airplane—at least for our purposes."[13] Judging Sabre performance in combat was complicated by the fact that three models of Sabres—F-86A's, F-86E's, and F-86F's—fought against at least two models of MIG's—the basic MIG-15 and the MIG-15BIS. In given tactical situations in Korea, however, performance comparisons involved a fundamental equation that the MIG-15 was a light airplane with a powerful engine and the F-86 was a heavy airplane with a powerful engine. Sabre pilots would have liked to have had a small, lightweight, highly maneuverable, day-fighting air-superiority fighter,[14] but since no such aircraft would be available in Korea the Sabre pilots observed the characteristics of the MIG's and adapted their tactics to compensate for their disadvantages.

In combat in Korea the MIG-15 consistently outclimbed the F-86 at all altitudes, with this characteristic becoming more apparent at the higher altitudes. As a general rule, the MIG-15 had a greater rate of initial acceleration than an F-86 in a dive, but the F-86 had a higher terminal velocity at all altitudes and consequently the advantage in a sustained steep dive. The ability of the MIG to convert speed into a high-angle "zoom" was outstanding. The F-86 appeared to enjoy a very slight speed advantage at all altitudes, and it had a slight advantage in very high-speed turning duels. Interestingly enough, neither the MIG nor the Sabre had an armament system which was suitable for air-to-air combat between jet fighters. The standard MIG armament system consisted of 23-mm. and 37-mm. cannon, combined with a gyroscopic gunsight which had mechanical range controls. This system was lethal against slow-flying bomber targets, but it was not flexible enough for combat with the Sabres. Six .50-caliber machine guns were the standard armament of the Sabres, and the various model F-86's were equipped with Mark 18, A-1CM, and A-4 sighting systems. The Mark 18 was a gyroscopic gunsight, but the other two systems were electronic sights whose functioning was not always reliable. Some Sabre aces urged that the heavy electronic sights, which were often out of order, ought to be abandoned, but later Sabre aces changed their minds and advised that the electronic sights would be necessary when counterair fighters were equipped with longer ranging weapons, which would permit more deflection shooting.[15]

Although ventures of Air Force and Navy intelligence agents behind the Communist lines in April and July 1951 salvaged parts of crashed MIG's for study, the characteristics of the MIG-15 were largely learned from aerial fights. In many respects Sabre pilots thought that the MIG was a better plane than it

actually was. At 0924 hours on 21 September 1953 Lt. Ro Kum Suk defected from North Korea and landed his MIG-15BIS at Kimpo. In subsequent flight tests of this latest model MIG at Kadena Air Base USAF evaluators determined these desirable features of the Red plane: ability to operate at altitudes above 50,000 feet; high rate of climb; rapid horizontal acceleration from relatively slow speeds; a short turning radius which was complicated by poor accelerated-stall characteristics; and short takeoff and landing-field requirements. The undesirable features of the MIG were: loss of aircraft control at high mach number; inadequate defrosting of its canopy and windshield which obscured pilot vision; poor lateral-directional stability at high altitudes; a low rate of roll; and poor aircraft control at high indicated airspeeds. The general conclusion of the USAF flight tests of the MIG-15BIS was that "the undesirable features of the aircraft heavily outweigh its good points." Lt. Col. E. M. Sommerich, a 4th Wing pilot who helped test the MIG, stated: "Although the F-86 is heavier than the MIG—and will not go as high as, nor accelerate as fast as, the MIG—it is definitely a far superior airplane."[16]

Recognizing the tactical advantages allowed to the MIG pilots by the combat situation over MIG Alley and the relative performance characteristics of the MIG and Sabre, the Fifth Air Force's Sabre wings developed tactics which enabled them to perform their air-superiority mission. Perceiving their inability to provide maximum protection to friendly aircraft by flying escort, the Sabres emphasized fighter-interceptor "screens" or "sweeps" in conjunction with small escort forces which accompanied the friendly aircraft. Since the MIG airfields were concentrated in a small geographical area in Manchuria, the Sabre sweeps and screens represented an optimum employment of interceptor aircraft. Under a different arrangement of hostile fighter bases and target complexes, as would be likely in Europe, FEAF questioned whether the screen or sweep would be an effective method of protecting friendly air operations. In Korea—the fighter screen—consisting of high-speed cruising, fluid-four flights, in mutually-supporting formations—gave the Sabre pilots the greatest chance for scoring aerial victories. On the other hand, probably because they lacked experience in air warfare, the Communist air leaders never adequately or consistently exploited the advantageous characteristics of their aircraft. The Reds consistently misused their available power by failing to exploit their numerical advantages and the superior high-altitude performance of their equipment. By a skilled application of sound and aggressive tactics the Communists might have enjoyed a certain degree of air superiority over North Korea.[17]

In the air superiority battles over northwestern Korea the personal equation ranked high in the ten-to-one victory which the Sabres scored. Knowledge of air warfare allowed the Sabre leaders to adopt tactics which enabled them to take advantage of the peculiarities of the Korean situation. Lack of knowledge of air warfare prevented the Reds from making the most of their capabilities. What was true of air leadership was also true of the caliber of the men who flew the MIG's. As a group, the Communist pilots ranged in skill from the very few "Honcho" pilots down to a predominant mass of "recruit" pilots. FEAF intelligence officers always insisted that the Sabre pilots did not need to know

the nationality of the men they fought, but Sabre pilots believed that most of the "Honcho" pilots were Russians and that the "recruits" were Chinese and North Koreans. When the Communist "trainee" pilots could be brought under attack they were apt to display utter confusion. Some forgot to drop their external tanks, others fired their guns wildly, and many ejected from their aircraft without particular provocation. Flight testing of the "Kimpo MIG" would reveal that the Red fighter was not very stable at high altitudes or high airspeeds, and this instability was apparently aggravated when panic-stricken trainee pilots threw their planes into uncontrollable spins. In the last months of the war—when the "Honchos" had apparently gone home—many MIG pilots refused to break into an attacking Sabre. The North Korean defector, Lt. Ro Kum Suk, later explained that the Red airmen knew that a break in any direction would expose their cockpit to fire and that they could escape with their lives if they absorbed a Sabre's fire in the engine and armor plate behind them. By acting the coward, these MIG pilots lost their aircraft, but the Fifth Air Force estimated that more than two-thirds of the MIG pilots whose planes were shot down successfully escaped by ejecting.[18] During the course of the Korean hostilities Communist airmen undoubtedly learned much about air war and air combat, but they never developed a first-rate pilot-plane combination capable of taking command of the air over North Korea.

Unlike the Communists, whose pilots were seldom able to exploit the outstanding characteristics of their planes, the experience of the Fifth Air Force's Sabre pilots was generally high even by USAF standards and very high when projected against the probable proficiency of average fighter pilots who would be available in any large-scale war. Many Sabre pilots were "old men" by usual youthful standards for fighter pilots, but jet combat in Korea demonstrated that a pilot's physical age was much less important than his experience and sound judgment. A FEAF statistical study made in March 1953 demonstrated that air victories were usually scored by more experienced pilots. At this time some 68 per cent of pilots who had destroyed MIG's were over twenty-eight years old, while 67 per cent of the pilots who had scored no kills were less than twenty-five years old. Pilots with MIG kills had flown an average of 18 missions in World War II, while pilots with no kills had flown an average of four missions in World War II.[19] Out of the total of 810 enemy planes claimed destroyed by Sabres, moreover, the 38 Sabre pilots who became jet air aces destroyed 305.5 planes. Whether or not a pilot was flying as an element leader and the conditions under which he sighted MIG's affected his chances for scoring victories, but the more experienced pilots apparently had the best chance for shooting down the enemy. Whether he was a wingman or an element leader, the successful fighter pilot in Korea had an aggressive desire to succeed, had the visual acuity which permitted him to see the enemy first, was capable of precision team flying within known characteristics of his aircraft, and could shoot accurately in the few split seconds of jet air combat.[20] These were the same old characteristics of successful fighter pilots in earlier wars, but jet air combat made them all the more important.

"The Fifth Air Force" stated General Anderson, "maintained air supremacy through an adequate combination of the technical capabilities of its fighter

aircraft with superior individual pilot proficiency, flight integrity, and air tactics."[21] This statement well expressed the accomplishment of air superiority in Korea, but to attribute the United Nations Command's control of the air in Korea solely to a superiority of American pilots and equipment could create a false sense of security for the future. When compared to enemy resources in Manchuria, air superiority in Korea was gained and maintained by a relatively small force. The phenomenon of a smaller Sabre force, flying planes with performance not markedly better than the enemy force, winning and maintaining air superiority must recognize that the enemy consistently misused his capabilities and lacked skilled pilots. Such an ineffective employment of enemy forces could not be used as a valid planning factor for future air operations. In its presentation of counterair lessons learned in Korea, FEAF believed that the abandonment of large fighter formations in favor of small flights which maintained high cruising speed and employed an offense in depth had validity for future jet air combat. On the other hand, the employment of fighter screens and sweeps met a peculiar combat situation in Korea which might not be duplicated in future conflicts. In generalizing on any air tactics employed in Korea, FEAF also emphasized that one must recognize that the Communists possessed a "sanctuary" in Manchuria and that they did not employ their full potential seriously to contest United Nations air superiority or the United Nations "sanctuary" in South Korea.[22]

The first shipment of Korea repatriates arrives at San Francisco, 23 August 1953 *(Courtesy U.S. Army).*

### *4. Interdiction Assumed New Meaning*

Always facing numerically superior Communist ground forces in Korea, the United Nations Command ground forces required every assistance which the United Nations air forces could give them to prevent the enemy from massing the full potential of his men, supplies, and equipment on the battlefield. During World War II USAF officers had learned that airpower could most effectively destroy an enemy's capacity to fight by strategic air attacks against his sources of production. The Communist ground forces in Korea, however, drew most of their logistical support from sources outside Korea which could not be attacked. In view of this appreciation of the situation, General Stratemeyer ordered the Fifth Air Force and the FEAF Bomber Command to interdict the lines of communication supporting the North Korean People's Army. To the men of the Air Force, "interdiction" was a familiar employment of airpower which sought to prevent, delay, or destroy enemy men, supplies, and equipment before they reached the battlefield. To the Air Force such attacks made double sense: the enemy was easier to attack while he was concentrated en route to the front, and the more men and materiel destroyed behind the front lines the less powerful the enemy's battle effort would be. The Air Force had learned that interdiction worked best when enemy and friendly troops were locked in ground battle, and the enemy would be simultaneously drained of strength both at the front and to the rear. To achieve the best results, any interdiction campaign had to be well planned as to objectives and persistently sustained in its execution. For a time in World War II the Air Force had called this phase of air effort "isolation of the battlefield," but this term had been dropped as an unfortunate one, since the interdiction's results were seldom so completely positive as to "isolate" the battle zone, and severance of enemy supply routes far from the combat zone had also proven necessary for the accomplishment of the task.[23]

While USAF officers knew no doubt that interdiction was an extremely worthwhile employment of airpower, they were surprised to learn in Korea that many ground officers did not appreciate interdiction. Largely as a result of General Weyland's heated arguments with General MacArthur's staff, FEAF was finally permitted to effect a comprehensive interdiction program on 2 August 1950, more than a month after the war's beginning. Even though it was belatedly undertaken, the comprehensive interdiction campaign together with the heavy ground fighting on the Pusan perimeter rapidly drained the strength and effectiveness of the North Korean People's Army. During the fighting in South Korea North Korean prisoners of war estimated that air action destroyed more than 70 percent of their tanks, trucks, and artillery pieces and inflicted 47 percent of the casualties which North Korean troops sustained. That decisive air attacks against the enemy's rear and strong Eighth Army defensive actions had already destroyed the effectiveness of the North Korean army was generally overlooked, and the U.S. X Corps encircling maneuver was credited with breaking the back of the North Korean forces in South Korea. Men indoctrinated in surface strategies did not easily credit the decisiveness of air

actions in areas too remote for them to see the damages. General MacArthur himself stated: "The air alone has certain limitations as compared with ground troops....The air covers an enormous area of ground. The casualties that it imposes on the enemy are heavy and accumulative, but they are scattered. An airplane hits here, another airplane would hit here, another airplane would hit over here. So the accumulative casualties are heavy, but they do not hit in any concentrated area....It is quite evident to anybody that is acquainted with war that determined ground troops cannot be stopped alone by air."[24]

Failing to appreciate the fact that FEAF air attacks against the North Korean rear had enabled the relatively weak United Nations ground forces to advance to the 38th parallel, General MacArthur made a fateful decision in October 1950 to press forward to the Yalu. As United Nations supply lines grew longer and longer, those of the Communists would get shorter and shorter. Because of the United Nations ground advance and the politico-military restriction preventing air attacks north of the Yalu, United Nations air forces would have less and less opportunity for interdictory attacks against the rear of the Communist armies. The United Nations Command's strategy not only failed to consider the lesson that decisive air action had opened the way for ground advances in South Korea, but there were intimations as the campaign progressed—most markedly manifest in the assignments of service priorities for surface transportation to Korea—that little would be expected of United Nations airpower during the exploitative ground operations in North Korea. Because General MacArthur's strategy did not allow sufficient opportunity for air attack, it met defeat in North Korea when inferior numbers of United Nations ground troops were surprised by the sudden appearance of fresh Chinese Communist Forces. In the short time and narrow zone along the Yalu, and now additionally hazarded by MIG fighters, FEAF airmen could not manage decisive air attacks.

When United Nations ground troops retreated from North Korea and bared the "middle miles" of Korea's transportation routes to relentless air attacks, the FEAF aircrews were again able to make interdiction effective. Using conventional weapons, FEAF airmen not only greatly delayed the southward movement of the Chinese Fourth Field Army and gave the Eighth Army time to prepare defenses, but they also estimated that they inflicted nearly 40,000 casualties on the Chinese—thus decimating a force equivalent to five Chinese divisions. If FEAF had been able effectively to employ nuclear weapons against the Chinese Reds at this critical juncture an Army research study indicated that FEAF could have taken a terrible toll of enemy troops. One 40-kiloton air-burst weapon exploded over the dense enemy concentration at Taechon on the night of 24/25 November 1950 would have destroyed some 15,000 of 22,000 troops. The casualties which might have resulted from six 40-kiloton air-bursting bombs over the Communist assembly in the Pyonggang-Chorwon-Kumhwa triangle between 27 and 29 December 1950 might have destroyed half of an estimated 95,000 Reds. Had six 30-kiloton bursts been laid along enemy lines north of the Imjin River on the night of 31 December 1950, an estimated 28,000 to 40,000 of a total enemy force of 70,000 to 100,000 men, preparing for a jump-off assault against the Eighth Army, would probably have

been destroyed. On 7 and 8 January 1951 two 40-kiloton bursts against North Korean concentrations opposite the Wonju salient would have killed 6,000 to 9,000 of a total force of 18,000. Even in these critical junctures, the United States did not approve the employment of nuclear weapons in Korea. Had permission been granted to employ the special weapons, there was some reason to believe that the United Nations Command forces would not have been well enough prepared to use such weapons effectively. Intelligence did not establish the existence of the hostile concentrations at Taechon and in the Iron Triangle until they were breaking up. Nuclear attacks against the Imjin and Wonju concentrations, moreover, would have been sufficiently close to friendly positions as to inflict substantial casualties on Eighth Army troops.[25]

During the early months of 1951 United Nations air-interdiction attacks applied in the rear of the Communist armies were a decisive factor which enabled the Eighth Army to hold its positions against Red assaults and finally to force the enemy back north of the 38th parallel. With diligence and long enough periods of time, the Chinese were periodically able to concentrate stocks of supplies in widely dispersed dumps near the front lines, and with these supplies they were able to support short and intensive periods of all-out ground combat. In each case, when they mounted ground offensives, however, the Communists took heavy losses of manpower and materiel, losses inflicted by coordinated air and ground firepower. Each Red offensive dwindled for want of support before it could bring superior manpower to bear for a lasting ground decision. Having no hope for victory, nor prospect except to continue to incur enormous losses of men and materiel, the Communists requested an armistice in June 1951. Airpower had been the decisive factor in the outcome of the ground battle. It had caused the collapse of the Communist logistical system and had inflicted tremendous casualties upon the enemy's massed offensives.

At the beginning of the truce negotiations, on 10 July 1951, the United Nations air forces possessed an opportunity to demonstrate the innumerable advantages of airpower as a predominant weapon. Unlike ground forces, which are always bound to action along a narrow, one-dimensional, surface plane, and in July 1951 were limited by directive to an active defense of currently held positions, the Air Force could range far and wide over hostile North Korea and by selective destruction could cause the Reds to accept United Nations terms for ending the conflict. Unfortunately, FEAF was not to be permitted to exercise the decisive attributes of airpower for some while. Thinking in terms of a surface strategy although no land campaigns were under way, General Ridgway feared that the Communists might take advantage of the respite of truce negotiations to rejuvenate their ground armies and accumulate forward logistical stocks large enough to enable them to mount an invincible ground offensive. Since interdiction attacks at the rear of the Communist armies had prevented the Reds from overwhelming United Nations ground forces during the major campaigns of 1950 and 1951, General Ridgway wanted the United Nations air forces to continue to interdict the enemy's lines of communications.

Although General Vandenberg and General Weyland both warned that aerial interdiction of North Korea's lines of communications could hardly

prove decisive so long as the Communist ground armies had the initiative of fighting or refraining from combat—and thus of expending or saving their supplies—the United Nations air forces commenced comprehensive railway-interdiction attacks on 18 August 1951. Perceiving the limitations of the tactical situation, FEAF officially stated the purpose of the comprehensive railway-interdiction campaign as being "to interfere with and disrupt the enemy's lines of communications to such an extent that he will be unable to contain a determined offensive by friendly forces or be unable to mount a sustained major offensive himself." A few overenthusiastic air force officers in Korea believed that the all-out interdiction operations might so seriously deplete the enemy's logistics as to force the Reds to withdraw their front lines northward, and some of these same zealots called the rail-interdiction campaign "Strangle." If the Fifth Air Force's night-intruder aircraft had possessed electronic equipment which could have permitted their crews effectively to identify and attack hostile moving vehicular targets at night and in all weather, or if FEAF had possessed a "family" of denial weapons which would have lain in wait to explode at the approach of trains, troops, or vehicles, the interdiction campaign might have forced the Communists to withdraw northward. Lacking these capabilities for round-the-clock interdiction and confronting an industrious and resourceful enemy who kept his supply requirements low by controlled expenditures, United Nations airmen achieved the stated purposes of the railway-interdiction campaign but did not measure up to the idea inherent in the code name "Strangle." Judging the success of the operation by a popular appellation and not by its stated purposes, many critics of airpower stated that the railway-interdiction program in Korea had failed.

Ten months of comprehensive railway interdiction so badly shattered the North Korean railway system that it would not be able to support a sustained Communist ground offensive, but the railway-interdiction attacks—which delayed and disrupted enemy logistical support—did not place enough military pressure upon the Reds to force them to accept United Nations armistice terms. With the advent of General Clark as United Nations commander in May 1952, General Weyland was able to secure authority for an air pressure campaign which sought to make the war too costly for the Reds to continue. Some of these air pressure attacks were aimed at strategic or quasi-strategic targets which had been overlooked or had recuperated from earlier bombings, but the majority of the air pressure strikes were destructive interdiction attacks. Supply centers, concentrated transportation targets, and aggregations of hostile personnel were hit repeatedly. After a year of air pressure attacks the communists acceded to United Nations armistice terms. The air pressure attacks against their rear areas had evidently made the war too expensive for the Communists to continue.

During the three years of the Korean war United Nations air-interdiction attacks against the rear of the Communist ground armies undoubtedly had a decisive significance which was secondary in importance only to air-superiority operations. The tactical situation in Korea and the frugal supply requirements of the Reds nevertheless made for some pecularities which caused interdiction in Korea to vary somewhat from similar activities in earlier wars. Korea's peninsular

conformation and its scarcity of good transportation arteries simplified interdiction, but the relatively short distance from the front lines to the Yalu and the modest supply requirements of Red troops hindered the effort. As was the case in World War II, the best time for an interdiction campaign was when the ground situation was fluid, the fighting intense, and the enemy's logistical needs were greatest. Medium and light bombers were more effective against communications arteries in the rear than against transportation capillaries near the front. To be effective, interdiction campaigns needed to be well planned and persistently sustained. In the course of its operations FEAF found a great need for all-weather and round-the-clock interdiction capabilities. During the fluid fighting in Korea rear-area air attacks proved to be extremely destructive of the enemy's personnel and materiel. With its effectiveness magnified by the employment of nuclear weapons, airpower would likely be a primary and most economical means for resisting massed enemy ground attacks in the future.[26]

### *5. Air Support for Ground Forces*

On the day the shooting started in Korea the Far East Air Forces faced a difficult task of converting from a defensive mission to a tactical air mission. Of the three classical missions of tactical airpower—air superiority, interdiction, and close support of friendly ground troops—the close support of friendly ground forces was the most complex since it involved an intimate cooperation of ground and air forces and an intricate system of communications. During World War II no one system for controlling close air support had been common in all theaters of war. The approved USAF-Army doctrine relating to close air support had originated in North Africa, and the techniques developed there had been elaborated in Italy and had been used as the foundation for modified procedures employed in the battles on the European continent, the most extensive air-ground battles of World War II. In the Pacific theaters other air systems had been developed. One system was common to the Southwest Pacific theater, while another had been devised to provide the heavy close air support demanded in the amphibious invasions of island objectives in the South and Central Pacific theaters. At the end of World War II officers of the Army and the Army Air Forces had jointly prepared a doctrinal manual representing the best that had been learned in the world-wide conflict. This manual was Field Manual 31-35, *Air-Ground Operations,* published in August 1946. The teachings of this manual were elaborated in detail by the *Joint Training Directive for Air-Ground Operations,* jointly prepared by the Army Field Forces and the USAF Tactical Air Command and issued on 1 September 1950. These documents represented the best knowledge regarding the cooperation of air and ground forces in a land campaign.

The doctrine and organization for air

support practiced by the U.S. Marine Corps had originated in the South and Central Pacific during World War II. The fighting in these theaters was marked by a series of short but intensive amphibious attacks against enemy strongholds which had to be subdued in a matter of days. Landing in small boats, Marine infantry forces were lightly gunned, and Marine aviation was generously provided to compensate for deficiencies in artillery. At the close of World War II Marine Corps air and ground forces had been organized for an amphibious mission. Each Marine infantry division could normally expect the support of a Marine air wing, which was actually a miniature tactical air force with its own ground-control intercept and tactical air-control squadrons as well as combat aviation. Each Marine battalion was accompanied by a forward air observer, who could call down supporting aircraft from a flight which the air wing normally orbited over the battle area. Navy high-performance aircraft normally maintained air superiority in an amphibious objective area, and Marine airmen therefore practiced air support of ground troops as a primary mission.

One of the fundamental philosophical differences between the USAF-Army and the Marine systems of air-ground operations was the degree of reliance placed by the Army and the Marine ground troops upon the supporting fire of their own artillery. Army commanders preferred to rely upon their own artillery for support within the first 1,000 yards of their fronts, for they realized that half a basic load of division artillery and mortar fire was equivalent to 900 air sorties with 500-pound bombs. When critical situations or defiladed targets demanded, the Army wanted air strikes within 1,000 yards of the friendly front lines. On the other hand, Marine ground units possessed limited amounts of integral artillery and insisted on routine close air support in the first 1,000 yards ahead of their lines. Since the Marines used air support as a substitute for artillery, they had to have forward air observers in each of their battalions. To assure an air strike within five to ten minutes, they had to have combat aircraft on "air-alert" stations over the front lines almost continually. The Army, on the other hand, preferred to employ air strikes against targets which were normally outside the range of its artillery. Even if these remote targets were moving, they could not normally be expected to reach friendly positions for some time. These more remote targets were usually too far from the front to be visible to observers on the ground. In a normal situation, the Army would have adequate time to employ the "call-type" air-support missions which were more conservative of scarce air capabilities than were "air-alert" missions. In the USAF-Army system there was also a place for an airborne tactical air coordinator, who could locate and direct air strikes against enemy targets outside the visual range of a forward air controller on the ground.[27]

Often compelled to improvise in the early months of the Korean war as it moved unexpectedly from an air-defense mission to tactical air war tasks, the Fifth Air Force speedily organized a Joint Operations Center, dispatched tactical air-control parties to Eighth Army regiments, and even provided men and equipment to operate an Eighth Army tactical air-request net. When jet aircraft, flying from Japanese bases, had difficulty remaining over the front lines long enough to attack close-support targets effectively, the Fifth Air Force organized a Mosquito airborne

control function whose tactical air coordinators flew unarmed T-6 trainer aircraft to locate air-support objectives and direct attacks against them. In October 1950 arrival of the 502d Tactical Control Group and the 20th Signal Company, Air-Ground Liaison, allowed the Fifth Air Force to effect a regular tactical air-control system and permitted the Eighth Army to operate its own tactical air-request communications between divisions and the Joint Operations Center. In the spring of 1951 the Fifth Air Force also established tactical air-direction posts to support each American corps in Korea. Equipped with MPQ-2 and MSQ-1 radars, these tactical air-direction posts could control aircraft in support of friendly ground troops at night or in bad weather. Before the war's end three full-scale tactical air-direction centers and a fourth tactical air-direction center of limited proportions at Cho-do were providing local air-control and warning services in Korea.

During the Korean war the favorable results achieved with it justified the wisdom and practicability of the USAF-Army system for managing air-ground operations. Early in the war, however, demonstrations of the Marine system of close support in cooperation with the 1st Provisional Marine Brigade in the Pusan perimeter and with the U.S. X Corps at Inchon and Wonsan caused some Army officers to assert requirements for their own organic air support. General Almond, commander of the U.S. X Corps, prepared studies on 25 December 1950 and 15 July 1951 recommending that each corps commander should have operational control over a force of fighter-bombers equivalent to one group per division. General Almond also recommended that each infantry battalion should have a tactical air-control party and that a battalion commander should be permitted to send air-support requests directly to a tactical air-direction center at corps headquarters, which would order the mission flown.[28] As a test, General Van Fleet officially proposed on 20 December 1951 to take three squadrons of the 1st Marine Air Wing under the operational control of the Eighth Army and further to decentralize the system by placing one of these squadrons under each of his three corps commanders.[29] Under the situation wherein United Nations air forces exercised complete air supremacy over the battlelines, no one denied that the Marine system had worked wonderfully well in Korea, but World War II had adequately demonstrated the fallacy of attaching "penny packets" of airpower to ground units. Pointing out that comparisons of the USAF-Army and Marine systems were faulty on their premise because they were designed for different purposes, and demonstrating the terrific expense of the Marine system for supporting anything on the order of 60 to 100 divisions, General Clark on 11 August 1952 squelched demands for changes in the USAF-Army system based on the unusual combat conditions in Korea.[30]

At the same time that some Army officers were advocating far-reaching changes in it, the USAF-Army system proved able to meet requirements laid upon it in Korea. The system was flexible enough to accommodate the speeds of modern jet fighter-bombers. The chief value of the system, however, was its ability to concentrate all available firepower—of the FEAF Bomber Command, the Fifth Air Force, the Seventh Fleet, and the 1st Marine Air Wing—on the sectors of the front lines where the enemy was attacking. At the conclusion of its independent operations on 25 December 1950 the 1st Marine Air Wing

located on airfields in South Korea and placed its air-support capabilities under the operational control of the Joint Operations Center. In recognition of the fact that the 1st Marine Air Wing needed to retain its capabilities for independent action, the Fifth Air Force exercised coordination control over other activities of the Marine wing only through its commander. After some initial confusion the U.S. Seventh Fleet established a Navy liaison section at the Joint Operations Center in August 1950, and late in June 1953 the Seventh Fleet finally agreed to assume an integral role in the work of the Joint Operations Center. At the end of the Korean war a joint air-ground operations conference representing Army, Navy, Air Force, and Marines met in Seoul and recommended that in future operations integration of all services should be secured by an organization and system similar to that finally developed in the last month of the Korean hostilities. The conference also pointed out the need for a joint air-ground doctrine which would encompass all services.[31]

Even though the Korean war demonstrated the validity of the USAF-Army joint air-ground operations system in the jet air age, the Korean hostilities allowed a number of peculiar developments in air-ground cooperation which would probably not be applicable to future hostilities. Absence of hostile air activities over the battle area allowed the United Nations air forces to provide far more close support than was normal. At this same time the United Nations ground forces were at first badly short of supporting artillery and were later hindered by a scarcity of ammunition, and airpower had to compensate for deficient ground firepower. Since it cost far more to deliver aerial bombs than to fire artillery shells, the routine use of airpower as flying artillery constituted a severe expense to American taxpayers. In times of emergency, working in cooperation with friendly artillery, close-support aircraft nevertheless proved very effective for breaking up the Communist human-wave ground attacks. As a result of study in Korea, the Fifth Air Force and the Eighth Army worked out techniques worthy of future emulation whereby friendly artillery could continue to fire upon the enemy during air strikes without hazarding close-support aircraft. In future wars, however, the Army would doubtless have more supporting artillery and would require less close support than was provided in Korea. At the same time the Air Force would probably be compelled to fight a battle for air superiority and would be able to provide the Army with less close-support effort than was the case in Korea.

Without reducing the luster of the achievements of the Mosquito tactical airborne coordinators, who contributed so valiantly to the accomplishment of close air support in Korea, most persons recognized the anomaly of the employment of these slow, unarmed, trainer aircraft under future front-line battle conditions. In the future airborne controllers flying high-performance aircraft would have to operate from the fighter-bomber bases. By employing "pathfinder" techniques, these more-experienced fighter-bomber pilots could lead jet fighter-bombers to close-support targets. During the course of the Korean hostilities neither the Army nor the Air Force found an acceptable solution to the problem of providing tactical air-control parties for front-line control of air strikes. Under the conditions in Korea, where rugged terrain forced the Mosquitoes to direct

most close-support strikes against objectives which a forward air controller on the ground could not observe, many forward air controllers spent their three-month tours without controlling an air strike, and the Fifth Air Force ultimately stipulated that the forward air controllers would have to control at least one strike a month to maintain their proficiency. Despite the fact that the forward air controllers on the ground could not effectively direct close-support strikes, the Eighth Army posed a requirement for a tactical air-control party with each infantry and tank battalion, regiment, and division, during periods of training as well as combat. In a change designed to simplify the support of the front-line parties the USAF and U.S. Army on 2 July 1953 agreed that the Army would provide the equipment and enlisted personnel of tactical air-control parties but that the Air Force would continue to furnish the forward air controller. Since both the Air Force and the Marines agreed that a forward air controller had to be a pilot of flight-leader proficiency, the Army requirement for fifteen forward air controllers per division would have required the Fifth Air Force to provide 364 pilots for forward air-control duty in Korea. Such a requirement—even for pilots who were not of flight-leader caliber—would have been extremely expensive in Korea.[32]

As the war closed in Korea Fifth Air Force officers were inclined to believe that close-support control in future conflicts would have to be managed by some sort of electronic equipment which had not been developed. In future conflict Mosquito controllers would not be able to hover over the front lines. In Korea, however, forward air controllers on the ground had not been able to direct air strikes against targets which they could not see. By the use of tactical air-direction post radars, the Fifth Air Force had been able to direct a blind-bombing close-support effort, and in future conflicts Eighth Army representatives said that they would like to have two tactical air-direction posts in support of each corps. In the spring of 1953 Fifth Air Force officers posed a requirement that tactical air-control parties should also be equipped with some type of highly mobile radar which would be able to provide a forward air controller with simultaneous reference to the ground and to the airborne planes.[33] The development and testing of such electronic equipment was a matter for future study and development.

## *6. Korea's Impact on the United States Air Force*

Communist military aggression in Korea in 1950 marked the beginning of a new military policy for the United States. In the years since 1945 the United States had come to recognize a state of cold war with Communism, but the Korean aggression was positive proof that Russia and her satellites were willing to risk a general war by "brush-fire" aggressions all over the world. The limited military strength of the United States had not been a cause

for peace but had tempted the Communists to exploit war as an instrument of national policy. "The final recognition of this fact by the American people," stated Secretary of Defense George C. Marshall, "made it possible to start the rebuilding of the armed forces to the minimum strength required for the security of the United States...."[34]

Spurred on by the requirements of a shooting war in Korea and by Russia's growing nuclear airpower, the United States Air Force began to rebuild a strength which had been torn down since 1945. The USAF program had twin objectives: to increase the over-all dimensions of the Air Force in accordance with the growing Communist threat to the national security of the United States, and to procure the forces required to support FEAF's operations in Korea.[35] At the start of the Korean war USAF was attempting to maintain 48 air wings and an authorized military personnel strength of 416,314 officers and men with annual appropriations which were sufficient for only 42 combat-effective wings. In a series of decisions between July 1950 and January 1951 the U.S. Joint Chiefs of Staff approved an Air Force expansion to a total of 95 wings and 1,061,000 military personnel. Within a few months after the war's beginning the Air Force mobilized 22 wings of the Air National Guard and 10 wings of the Air Force Reserve and more than 100,000 individual Air Force reservists. The continuing deterioration of the world situation led the Joint Chiefs of Staff in November 1951 to authorize the Air Force to expand to 143 wings with 1,210,000 military personnel and to reach this strength by mid-1955. As of 30 June 1953, when the Korean war was ending, the USAF possessed 106 active wings, of which some 93 were considered operational. The personnel strength of the USAF at this time mustered 977,583 officers and airmen.[36] The Department of Defense's decision to expand the Air Force to 143 wings marked its departure from older policies of distributing funds equally among the three services and its acceptance of the principle of allocating military funds in accordance with the priorities assigned to the missions of the services.

The end of the Korean war caused President Eisenhower to take a "new look" at military strategy and requirements. While the Joint Chiefs of Staff and the National Security Council made studies, the Air Force goal of 143 wings was temporarily replaced by an "interim" goal of 120 wings to be attained by the end of June 1956. In December 1953 President Eisenhower approved a USAF goal of 137 wings to be reached by the end of June 1957. In his state of the union message delivered on 7 January 1954, President Eisenhower explained that the new military policies were taking account of a growing stock of nuclear weapons and of the more effective means of using them against any aggressor. The new weapons systems emphasized airpower and permitted economies in manpower. President Eisenhower called for increased armed-force mobility, larger numbers of every-ready professional officers and men, an industrial base capable of swift mobilization, and increased emphasis upon continental defense. In context with President Eisenhower's considerations, the National Defense budget presented to Congress stressed the development of airpower for the Air Force and the Navy and continued modernization of land and sea forces, which would be maintained at levels somewhat lower than during the Korean conflict.[37] In a speech delivered in New York City on

12 January 1954 Secretary of State Dulles suggested that a military policy of "massive retaliation" would deter local aggression and global conflict. "Local defenses must be reinforced by the further deterrent of massive retaliatory power," Dulles said. "A potential aggressor must know that he cannot always prescribe battle conditions that suit him...."[38] The United States had fought a war in Korea limited in bounds and in weapons, but President Eisenhower and Secretary Dulles suggested that such artificial ground rules might be unacceptable for combating future Communist aggressions.

As the years of the Korean war marked acceptance of the predominance of airpower among America's armed-force capabilities, the United States Air Force was able to move toward the establishment of a more modern organization and the procurement of new jet equipment. Because of the lag time in production, few of the new aircraft ordered beginning in 1950 saw combat in Korea, but the new planes entered USAF's inventory in the immediate postwar years. In the expansion programs between 1950 and 1957 the Strategic Air Command's combat wings grew from 19 to 51, but the loss of the command's superfluous fighter-escort wings during the latter year reduced the total to 45 combat wings. Beginning in 1951 and increasingly in 1953, B-47 Stratojet bombers replaced the old B-29's and B-50's. By the end of 1954 all B-29's were gone, and by mid-1955 all B-50's were retired from medium-bomber wings. During 1955 B-52 Stratofortress jet bombers began to replace the conventional B-36's in heavy bombardment wings. In these same years the Strategic Air Command increased its mobility through the development of new overseas bases, by emphasis on in-flight refueling, and by the procurement of additional tankers, including KC-135 jet fuel carriers which could replenish bombers at speeds of 500 miles per hour and at altitudes above 35,000 feet. The Strategic Air Command planes which had gone to the Far East in 1950 had possessed only a limited ability to drop atomic bombs, but by 1957 the Strategic Air Command's bombers were able to employ both atomic and thermonuclear weapons.[39]

Under the economy programs of the pre-Korean years the USAF Continental Air Command had found itself responsible for managing the Eastern and Western Air Defense Forces and the Tactical Air Command as well as for other duties. These multifarious responsibilities of the Continental Air Command were resolved into major component parts on 1 December 1950 when the Tactical Air Command re-emerged as a major command and on 1 January 1951 when the Air Defense command again became a major command. After more than a year's study of joint-force requirements a new Continental Air Defense Command was established on 1 September 1954 under the Joint Chiefs of Staff, with the Air Force as executive agent. At its peak strength in 1951, the Tactical Air Command had 25 wings, but transfers to the Far East and to Europe reduced it to 21 combat wings by the end of 1953. In a realignment of strength, the Tactical Air Command lost two wings and a group of C-124 troop-carrier aircraft to the Military Air Transport Service in 1957 but gained four of the former Strategic Air Command fighter-escort wings. Even before the end of 1953 FEAF retired its old Mustangs and Shooting Stars, and the Tactical Air Command made major changes in its aircraft inventories in the years

following Korea. In 1954 supersonic F-100A fighters began to replace F-86 Sabres and swept-wing F-84F's began to retire straight-wing F-84G's. During 1955 the Tactical Air Command received the F-100C for use as a day-fighter and fighter-bomber, and in 1956 it got the more-advanced F-100D fighter-bomber. In the tactical bomber force the B-57 replaced the old obsolete B-26 beginning in June 1954, and new B-66 and RB-66 all-weather bombers joined the tactical bomber fleet in 1956. Needed to operate into unprepared airstrips where C-119's and C-124's could not land, C-123 Avitrucs and turbo-powered C-130 Hercules transports entered the Tactical Air Command inventory in July 1955 and December 1956. Most of these aircraft had been authorized for USAF procurement during the Korean hostilities. A new "family" of nuclear weapons permitted fighter-bombers to drop weapons of tremendous destructiveness, and the Tactical Air Command developed a mobility which would enable it to deploy forces on short notice to oppose local aggression anywhere in the world.[40]

Everywhere throughout the USAF the twin objectives of mobilization for resistance to the global threat of Communism and to the local aggression in Korea brought new life. To provide the trained aircrews and technicians needed by the expanding Air Force, the Air Training Command in 1951 established a Flying Training Air Force and a Technical Training Air Force, and in 1952 it set up a Crew Training Air Force. Recognizing that research and development had to be divorced from procurement and production, the USAF had already established the Air Research and Development Command in January 1950, and the new command formally took over these functions from the Air Materiel Command in April 1951. Both of these commands distinguished themselves by their support to the Korean war, and they provided the developmental and logistical support potential which USAF so vitally needed for its expanding responsibilities in the years following Korea.[41]

In retrospect, the Korean war was one more tragic example of the failure of the existing patterns of international organization to maintain harmonious relationships in a world where predatory nations were eager to plunder their weaker neighbors. Like any other resort to armed force, Korea was a world tragedy, but some good resulted from the tragic experience. The staunch United Nations' support for the Republic of Korea must have given pause to the aggressor nations. For the United States, the sudden shock of naked Communist aggression in Korea may have been providential. The American people could now clearly see that world peace would come through strength and not through weakness. To other Americans the Korean war emphasized the age-old lesson that the price of peace is eternal vigilance—vigilance to detect and halt aggression wherever it appears. From its growth and experience during the Korean hostilities the fledgling United States Air Force emerged as a power better able to maintain peace through preparedness.

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Since no history on any subject can be stronger than its sources, a word about reference materials used in the preparation of this record of United States Air Force experience in Korea is in order. Perusal of footnote citations will reveal that the narrative is principally based upon official manuscript records but that free use has been made of such published materials as have become available. Unhappily, many of the books and articles published concerning the Korean war have had some partisan leanings, for Korea was one of the most controversial of wars.

## *Official Records*

As a history of United States Air Force experience in Korea, this volume is chiefly dependent upon the semiannual histories and historical data submitted in compliance with Air Force Regulation 210-3, as amended, by the Far East Air Forces, the Fifth Air Force, the FEAF Bomber Command (Provisional), the Far East Air Materiel Command and its successor Far East Air Logistics Force, and the FEAF Combat Cargo Command (Provisional) and its successor 315th Air Division (Combat Cargo). These histories are accompanied by selected collections of documents, which are generally of equal historical significance to the histories themselves. Great use has been made of wing, group, and squadron histories, which, prior to 1 July 1952, were submitted on a monthly basis. At this time a change in the Air Force historical regulation permitted tactical wings to prepare and submit a single consolidated semiannual history. Written some six months after the events described, often by an officer or an airman who was new in the theater, these consolidated semiannual wing histories generally lack the authenticity and operational detail found in the current reporting of the formerly monthly historical reports. Some of the semiannual wing histories were good sources, but none of them provided the rich lode of operating-level information which could be obtained from the monthly wing, group, and squadron histories.

In addition to Air Force histories, the sources of this history include many other official documents found in the files of the USAF Deputy Chief of Staff for Operations, the USAF Korean Evaluation Group, the Evaluation Staff of the Air War College, the Air University Library, the USAF Historical Archives, and of the Far East Air Forces in Tokyo, where the Air Force historian and the author conducted research in the early winter of 1950. At least two document collections and reports warrant special mention. Of great value as a source of information about early air operations in Korea was the voluminous report called *An Evaluation of the Effectiveness of United States Air Force in Korea,* prepared by the USAF Evaluation Group headed by Maj. Glenn O. Barcus and submitted to USAF in January 1951. The definitive *FEAF Report on the Korean War,* printed in two classified volumes on 26 March 1954, was an important source of fact and of evaluation of air operations.

Certain official documents published by the U.S. Printing Office, Washington, D.C., are valuable and extremely informative historical sources. The 81st Congress, 1st Session, *The Natonal Defense Program—Unification and Strategy* (1949), is important for background information on roles and missions and viewpoints on strategic bombing. The 82d Congress, 1st Session, *Hearings on the Military Situation in the Far East* (1951) and kindred documents such as *Compila-*

*tion of Certain Published Information on the Military Situation in the Far East* (1951) are voluminous collections of testimony and other information concerning General MacArthur's relief from command as well as United Nations strategy and objectives in Korea. The 83d Congress, 1st Session, *Ammunition Shortages in the Armed Services* (1953), and the 84th Congress, 1st Session, *The Korean War and Related Matters* (1955), contain various statements by high-level commanders relative to the Korean war. The U.S. Department of Defense, *Semiannual Report of the Secretary of Defense . . .* issued during the Korean war years (1951–54) reveals the impact of the war on America's armed services. The U.S. Department of State's publications including *Foreign Relations of the United States, Diplomatic Papers, The Conferences at Malta and Yalta, 1945* (1955); *United States Policy in the Korean Conflict, July 1950–February 1951* (1951); and *United Nations Action in Korea under Unified Command; Report[s] to the Security Council* (1950– ) furnish much official information.

Drawing upon official information, the present author prepared three USAF Historical Studies that were printed by the Government Printing Office as classified Air Force documents. These studies were: USAFHS No. 71, United States Air Force Operations in the Korean Conflict, 25 June –1 November 1950 (1 July 1952); No. 72, United States Air Force Operations in the Korean Conflict, 1 November 1950–30 June 1952 (1 July 1955) and No. 127, United States Air Force Operations in the Korean Conflict, 1 July 1952–27 July 1953 (1 July 1956). These classified monographs contain much more detail upon subjects of particular interest to the Air Force than does the present history.

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## CHAPTER 17

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# Appendix

# Major Air Commanders of the Korean War

FAR EAST FORCES

Lt. Gen. George E. Stratemeyer
–21 May 1951.
Lt. Gen. Earle E. Partridge
21 May 1951–10 June 1951
Gen. Otto P. Weyland
10 June 1951–

FIFTH AIR FORCE
*Commanders*

Lt. Gen. Earle E. Partridge
–21 May 1951
Maj. Gen. Edward J. Timberlake, Jr.
21 May 1951–1 June 1951
Lt. Gen. Frank F. Everest
1 June 1951–30 May 1952
Lt. Gen. Glenn O. Barcus
30 May 1952–31 May 1953
Lt. Gen. Samuel E. Anderson
31 May 1953–

*Vice-Commanders*

Maj. Gen. Edward J. Timberlake, Jr.
–18 June 1951
Brig. Gen. Delmar T. Spivey
6 Aug. 1950–1 Dec. 1950
Brig. Gen. James Ferguson
18 June 1951–26 Jan. 1952
Brig. Gen. Dudley D. Hale
26 Jan. 1952–23 Sept. 1952
Brig. Gen. Edward H. Underhill
23 Sept. 1952–

THIRTEENTH AIR FORCE

Maj. Gen. Howard M. Turner
–15 Oct. 1951
Maj. Gen. Ernest Moore
16 Oct. 1951–9 Oct. 1952
Brig. Gen. John W. Sessums, Jr.
10 Oct. 1952–

TWENTIETH AIR FORCE

Maj. Gen. Alvan C. Kincaid,
–31 July 1950
Maj. Gen. Ralph F. Stearley
31 July 1950–13 Jan. 1953
Brig. Gen. Robert W. C. Wimsatt
14 Jan. 1953–7 Feb. 1953
Brig. Gen. Fay R. Upthegrove
8 Feb. 1953–

FEAMCOM AND FEALOGFOR

Brig. Gen. John P. Doyle
–10 June 1952
Maj. Gen. Paul E. Ruestow
10 June 1952–

314TH AIR DIVISION AND JAPAN AIR DEFENSE FORCE

Maj. Gen. Delmar T. Spivey
1 Dec. 1950–20 Jan. 1953
Maj. Gen. Roy H. Lynn
20 Jan. 1953–

FEAF BOMBER COMMAND (PROVISIONAL)

Maj. Gen. Emmett O'Donnell, Jr.
8 July 1950–10 Jan. 1951
Brig. Gen. James E. Briggs
10 Jan. 1951–23 May 1951
Brig. Gen. Robert H. Terrill
23 May 1951–30 Sept. 1951
Brig. Gen. Joe W. Kelly
30 Sept. 1951–15 Mar. 1952
Brig. Gen. Wiley D. Ganey
15 Mar. 1952–5 Oct. 1952
Brig. Gen. William P. Fisher
5 Oct. 1952–15 June 1953
Brig. Gen. Richard H. Carmichael
15 June 1953–

FEAF COMBAT CARGO COMMAND (PROVISIONAL) AND 315th AIR DIVISION (COMBAT CARGO)

Maj. Gen. William H. Tunner
26 Aug. 1950–8 Feb. 1951
Brig. Gen. John P. Henebry
8 Feb. 1951–26 Feb. 1952
Col. Cecil H. Childre
26 Feb. 1952–10 Apr. 1952
Maj. Gen. Chester E. McCarty
10 Apr. 1952–

*Tactical Air Wing Commanders*
*3d Bombardment Wing (Light)*

Col. Thomas B. Hall
–14 Aug. 1950
Col. Virgil L. Zoller
14 Aug. 1950–23 Aug. 1950
Col. Donald L. Clark
23 Aug. 1950–1 Dec. 1950
Col. Virgil L. Zoller
1 Dec. 1950–24 July 1951
Col. Nils O. Ohman
24 July 1951–4 Mar. 1952
Col. Marshall R. Gray
4 Mar. 1952–14 Aug. 1952
Col. Eugene B. LeBailly
14 Aug. 1952–

*4th Fighter-Interceptor Wing*

Brig. Gen. George F. Smith
–31 May 1951
Col. Herman A. Schmid
31 May 1951–1 Nov. 1951
Col. Harrison R. Thyng
1 Nov. 1951–2 Oct. 1952
Col. Charles W. King
2 Oct. 1952–11 Nov. 1952
Col. James K. Johnson
11 Nov. 1952–

*8th Fighter-Bomber Wing*

Col. John M. Price
–9 Dec. 1950
Col. Charles W. Stark
9 Dec. 1950–7 Apr. 1951
Col. James B. Tipton
7 Apr. 1951–Mar. 1952
Col. Raymond K. Gallagher
Mar. 1952–23 Jan. 1953
Col. James J. Stone, Jr.
24 Jan. 1953–29 May 1953
Col. William E. Elder
29 May 1953–

*17th Bombardment Wing (Light)*

Col. Albert W. Fletcher
10 May 1952–3 June 1952
Col. Glenn C. Nye
3 June 1952–7 Oct. 1952
Col. William C. Lindley, Jr.
7 Oct. 1952–10 Oct. 1952
Col. Clinton C. Wasem
10 Oct. 1952–

*18th Fighter-Bomber Wing*

Col. Curtis R. Low
30 Nov. 1950–1 Feb. 1951
Brig. Gen. Turner C. Rogers
1 Feb. 1951–2 Feb. 1952
Col. Ernest G. Ford
2 Feb. 1952–7 Mar. 1952
Col. William H. Clark
7 Mar. 1952–1 Jan. 1953
Col Frank S. Perego
1 Jan. 1953–15 June 1953
Col. John C. Edwards
15 June 1953–5 July 1953
Col. Maurice L. Martin
5 July 1953–

*27th Fighter-Escort Wing*

Col. Ashley B. Packard
–1 May 1951
Col. Raymond F. Rudell
1 May 1951–

*35th Fighter-Interceptor Wing*

Col. Virgil L. Zoller
–14 Aug. 1950
Col. Thomas B. Hall
14 Aug. 1950–1 Dec. 1950
Col. Frederic C. Gray
1 Dec. 1950–17 Feb. 1951
Col. Brooks A. Lawhon
18 Feb. 1951–12 May 1951
(Transferred to Japan Air Defense Force)

*49th Fighter-Bomber Wing*

Col. Jack S. Jenkins
–1 Dec. 1950
Col. Aaron W. Tyer
1 Dec. 1950–31 Aug. 1951
Col. Joe L. Mason
1 Sept. 1951–31 Jan. 1952
Col. David T. McKnight
1 Feb. 1952–Aug. 1952
Col. Robert J. Rogers
Aug. 1952–1 Apr. 1953
Col. William W. Ingenhutt
1 Apr. 1953–Apr. 1953
Col. Edwin A. Doss
Apr. 1953–

*51st Fighter-Interceptor Wing*

Col. John W. Weltman
–23 Apr. 1951
Col. Oliver G. Cellini
24 Apr. 1951–Oct. 1951
Col. George R. Stanley
Oct. 1951–6 Nov. 1951
Col. Francis S. Gabreski
6 Nov. 1951–13 June 1952
Col. John W. Mitchell
13 June 1952–31 May 1953
Col. William C. Clark
31 May 1953–

*58th Fighter-Bomber Wing*

Col. Victor E. Warford
10 July 1952–1 July 1953
Col. Joseph Davis, Jr.
1 July 1953–

*67th Tactical Reconnaissance Wing*

Col. Karl L. Polifka
25 Feb. 1951–1 July 1951
Col. Bert N. Smiley
2 July 1951–4 July 1951
Col. Vincent W. Howard
4 July 1951–
Col. Edwin S. Chickering
31 Oct. 1951–13 Aug. 1952

Col. Russell A. Berg
13 Aug. 1952–July 1953
Col. Charles F. Knierim
July 1953–

*136th Fighter-Bomber Wing*

Col. Albert C. Prendergast
–5 Nov. 1951
Col. Alfred G. Lambert, Jr.
5 Nov. 1951–10 Nov. 1951
Col. James B. Buck
10 Nov. 1951–9 July 1952

*452d Bombardment Wing (Light)*

Brig. Gen. Luther W. Sweetser, Jr.
–10 May 1951
Col. Brooks A. Lawhon
12 May 1951–Sept. 1951
Col. Reginald J. Clizbe
Sept. 1951–Feb. 1952
Col. Albert W. Fletcher
Feb. 1952–10 May 1952

*474th Fighter-Bomber Wing*

Col. William W. Ingenhutt
10 July 1952–1 Apr. 1953

6002d Tactical Support Wing

Col. Curtis R. Low
1 Aug. 1950–1 Dec. 1950

*6131st Tactical Support Wing*

Col. Robert W. Witty
8 Aug. 1950–16 Aug. 1950
Col. Charles W. Stark
16 Aug. 1950–1 Dec. 1950

*6133d Tactical Support Wing*

Col. Virgil L. Zoller
1 Sept. 1950–1 Dec. 1950

*6149th Tactical Support Wing*

Col. Aaron W. Tyer
5 Sept. 1950–1 Dec. 1950

*6150th Tactical Support Wing*

Col. Frederic C. Gray
5 Sept. 1950–1 Dec. 1950

*Medium Bomber Commanders*
*19th Bombardment Group (Medium)*

Col. Theodore Q. Graff
–26 Sept. 1950
Col. Payne Jennings, Jr.
26 Sept. 1950–29 Mar. 1951
Col. Donald O. Tower
29 Mar. 1951–26 July 1951
Col. Adam K. Breckenridge
26 July 1951–6 Feb. 1952
Col. Julian M. Bleyer
6 Feb. 1952–8 July 1952
Col. Willard W. Smith
8 July 1952–24 Dec. 1952
Col. Harvey C. Dorney
24 Dec. 1952–1 June 1953

*19th Bombardment Wing (Medium)*

Col. Harvey C. Dorney
1 June 1953–

*22d Bombardment Group (Medium)*

Col. James V. Edmundson
(TDY Kadena Air Base, July 1950–
Oct. 1950)

*92d Bombardment Group (Medium)*

Col. Claude E. Putnam, Jr.
(TDY Yokota Air Base, July 1950–
Oct. 1950)

*98th Bombardment Group (Medium)*
*and 98th Bombardment Wing (Medium)*
*(Advon)*

Col. Richard H. Carmichael
–31 Mar. 1951
Col. David Wade
31 Mar. 1951–Sept. 1951
Col. Edwin F. Harding, Jr.
Sept 1951–Nov. 1951
Col. Lewis A. Curtis
Nov. 1951–May 1952
Col. Winton R. Close
May 1952–16 June 1952

*98th Bombardment Wing (Medium)*

Col. Winton R. Close
16 June 1952–26 Oct. 1952
Col. Charles B. Westover
26 Oct. 1952–17 June 1953
Col. Edgar S. Davis
17 June 1953–

*307th Bombardment Group (Medium)*
*and 307th Bombardment Wing (Medium)*
*(Combat Echelon)*

Col. John A. Hilger
–15 Mar. 1951
Col. John M. Reynolds
15 Mar. 1951–20 Aug. 1951
Col. William H. Hanson
20 Aug. 1951–4 Feb. 1952

Col. John C. Jennison, Jr.
4 Feb. 1952–8 May 1952
Col. Raymond L. Winn
8 May 1952–16 June 1952

*307th Bombardment Wing (Medium)*

Col. Raymond L. Winn
16 June 1952–Sept. 1952
Col. C. S. Overstreet, Jr.
Sept. 1952–29 Dec. 1952
Col. Austin J. Russell
29 Dec. 1952–

*Troop Carrier Commanders*
*1st Troop Carrier Group (Medium) (Provisional)*

Col. Cecil H. Childre
26 Aug. 1950–21 Oct. 1950
Lt. Col. Edward H. Nigro
21 Oct. 1950–10 Jan. 1951

*61st Troop Carrier Group (Heavy)*

Col. Frank Norwood
–14 Feb. 1952
Lt. Col. Hal E. Ercanbrack
14 Feb. 1952–

*314th Troop Carrier Group (Medium)*

Col. Richard W. Henderson
–27 Aug. 1951
Col. William H. Delacey
27 Aug. 1951–29 Sept. 1951
Col. David E. Daniel
29 Sept. 1951–1 May 1952

*315th Troop Carrier Group (Medium)*

Col. Kenneth W. Northamer
10 June 1952–26 July 1953
Col. Robert O. Good
26 July 1953–

*374th Troop Carrier Wing (Heavy)*

Col. Troy W. Crawford
–Sept. 1951
Col. Charles W. Howe
Sept. 1951–9 Aug. 1952
Col. James W. Chapman, Jr.
9 Aug. 1952–

*403d Troop Carrier Wing (Medium)*

Brig. Gen. Chester E. McCarty
–10 Apr. 1952
Col. Philip H. Best
14 Apr. 1952–15 May 1952
Col. Maurice F. Casey, Jr.
15 May 1952–1 Jan. 1953

*437th Troop Carrier Wing (Medium)*

Brig. Gen. John P. Henebry
–25 Jan. 1952
Col. John R. Roche
25 Jan. 1951–May 1952
Col. Kenneth W. Northamer
May 1952–9 June 1952

*483d Troop Carrier Wing (Medium)*

Col. Maurice F. Casey, Jr.
1 Jan. 1953–

NOTE: As far as possible, the status of command shown above has been determined from general orders submitted as supporting documentation to the histories of the organizations. Some organizations did not submit this necessary documentation, with the result that the exact dates on which their commanders assumed command and were relieved from command are not stated.

# Glossary

| | |
|---|---|
| AAA | Antiaircraft artillery |
| AACS | Airways and Air Communications Service |
| AAF | Army Air Forces |
| AC&W | Aircraft Control and Warning |
| ADC | Air Defense Command |
| ADCOM | Advance Command and Liaison Group in Korea |
| ADVON | Advance echelon |
| AF | Air Force |
| AFB | Air Force Base |
| AFFE | Army Forces Far East |
| AFOOP | Director of Operations, USAF |
| AFPMP | Director of Military Personnel, USAF |
| AFR | Air Force regulation |
| AG | Adjutant General |
| AHS | Air Historical Study |
| ALO | Air Liaison officer |
| AMC | Air Materiel Command |
| APGC | Air Proving Ground Command |
| ARDC | Air Research and Development Command |
| ARS | Air Rescue Service |
| ATRC | Air Training Command |
| A/W | All-Weather |
| AWS | Air Weather Service |
| BDA | Bomb damage assessment |
| BomCom | Bomber Command |
| C/ | Chief |
| CAP | Combat Air Patrol |
| CAT | Civil Air Transport |
| CCAF | Chinese Communist Air Force |
| CCF | Chinese Communist Forces |
| CCRAK | Covert, Clandestine, and Related Activities in Korea |
| CCTS | Combat crew training school |
| CEP | Circular error probable |
| CG | Commanding general |
| CIA | Central Intelligence Agency |
| CINCAFPAC | Commander-in-Chief Army Forces Pacific |
| CINCFE | Commander-in-Chief Far East |
| CINCUNC | Commander-in-Chief United Nations Command |
| CofS | Chief of Staff |
| ComCarCom | Combat Cargo Command |
| ComNavFE | Commander Naval Forces Far East |
| ConAC | Continental Air Command |
| CSGPO | Chief of Staff, G-3, Plans & Operations Div., U.S. Army |
| CTU | Commander Task Unit |
| D/ | Director |
| DA | Department of Army |
| DAF | Department of Air Force |
| DEPTAR | Department of Army |
| DOD | Department of Defense |
| DZ | Drop zone |
| EA | Engineer aviation |
| EADF | Eastern Air Defense Force |
| ECM | Electronic countermeasures |
| EUSAK | Eighth United States Army In Korea |
| FAC | Forward air controller |
| FAF | Fifth Air Force |
| FAFIK | Fifth Air Force in Korea |
| FEAF | Far East Air Forces |
| FEALogFor | Far East Air Logistics Force |
| FEAMCom | Far East Air Materiel Command |
| FEC | Far East Command |
| FM | Frequency modulation |
| FSCC | Fire-support coordination center |
| GCA | Ground-controlled approach |
| GCI | Ground-controlled interception |
| GHQ | General Headquarters |
| GLO | Ground liaison officer |
| HVAR | High-velocity aircraft rocket |
| IFF | Identification, friend or foe |
| IG | Inspector General |
| INTSUM | Intelligence summary |
| JADF | Japan Air Defense Force |
| JALCO | Joint Airlift Control Organization |
| JATO | Jet assisted takeoff |
| JCS | Joint Chiefs of Staff |
| JOC | Joint Operations Center |
| JSPOG | Joint Strategic Plans and Operations Group |
| KComZ | Korean Communications Zone |
| KMAG | Korean Military Advisory Group |

| | |
|---|---|
| LST | Landing ship, tank |
| LW | Lightweight |
| M&S | Maintenance and Supply |
| MATS | Military Air Transport Service |
| MAW | Marine Air Wing |
| MLR | Main line of resistance |
| MSR | Main supply route |
| MTO | Mediterranean Theater of Operations |
| NavFE | Naval Forces Far East |
| NKAF | North Korean Air Force |
| NKPA | North Korean People's Army |
| NMJ | Naval Member, Joint Operations Center |
| OCMH | Office of the Chief of Military History, Department of Army |
| OPI | Office of Public Information |
| ORO | Operations Research Office |
| OSI | Office of Special Investigation |
| OSRD | Office of Scientific Research and Development |
| POE | Port of embarkation |
| POL | Petroleum, oil, and lubricants |
| POW | Prisoner of war |
| PSP | Pierced-steel plank |
| RAAF | Royal Australian Air Force |
| RAF | Royal Air Force |
| R&R | Rest and recreation |
| RCC | Rescue Control Center |
| RCT | Regimental combat team |
| REMCO | Rear Echelon Maintenance Combined Operations |
| ResCAP | Rescue Combat Air Patrol |
| RHAF | Royal Hellenic Air Force |
| ROK | Republic of Korea |
| ROKAF | Republic of Korea Air Force |
| RTAF | Royal Thai Air Force |
| SAAF | South African Air Force |
| SAC | Strategic Air Command |
| SAR | Search and rescue |
| SCAP | Supreme Commander Allied Powers |
| SCARWAF | Special Category Army Personnel with Air Force |
| SOP | Standing operating procedure |
| TAC | Tactical Air Command |
| TACC | Tactical air-control center |
| TACP | Tactical air-control party |
| TADC | Tactical air-direction center |
| TADP | Tactical air-direction post |
| TAPE | Tactical Air Power Evaluation |
| TARS | Tactical Air Research Section |
| TC | Troop carrier |
| TIG | The Inspector General |
| TIS | Translator and Interpreter Service |
| TMC | Transport Movement Control |
| UNC | United Nations Command |
| UNCOK | United Nations Commission on Korea |
| UNCURK | United Nations Commission for the Unification and Rehabilitation of Korea |
| USAF | United States Air Force |
| USAFIK | United States Army Forces in Korea |
| USAR | United States Army |
| V/ | Vice |
| VHF | Very high frequency |
| VT | Proximity fuse |
| WADC | Wright Air Development Center |

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