

# School of Sand: Desert Lessons

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Military experts call it a "target-rich environment." Battles fought across its barren, trackless terrain have been characterized by their speed and lethality. It has no friend, no conqueror, no equal. It is unforgiving and allows for no mistakes. It recognizes no middle ground — only complete victory or complete defeat.

It is "The Desert," and if the American Army is to be successful in the deserts of the Persian Gulf, its leaders must learn the lessons of the desert and learn them well.

Fortunately for NCOs in the Gulf region and for those awaiting deployment, there are thousands of desert war lessons learned — from the time of the battle of Carrhae in 54 B.C. to those from Desert Storm.

Hundreds of simulated battles at the National Training Center and other desert training areas point clearly to areas where NCOs need to place training emphasis.

Lack of vegetation and prominent terrain features in the desert make pinpointing one's position extremely difficult, even during daylight hours. NCOs must train their soldiers to use their compasses, to accurately measure distances traveled, and to navigate in a land nearly void of man-made and natural terrain features.

Experience gained at the NTC has



An M60/A1 kicks up a swirl of sand as it closes on its target. Dust clouds can obliterate a target or reveal its location. The sand is also an enemy to movement — clogging filters and stopping engines.

shown that, although their map reading skills are adequate for the training areas near their home bases, soldiers in the desert may either become disoriented or be forced to hug the roads and dry streambeds for fear of getting lost.

Many units now have more sophisticated land navigation or location determination equipment than the standard compass and map can provide.

Unfortunately, the soldiers of such units sometimes become too reliant on these means and allow their map reading skills to slip. Satellite links, electronic or other equipment can be lost in battle or unavailable, and overdependence on any one method of land navigation or location identification system can lead to disaster. The best-led soldiers are those who can use available systems, such as the Position Azimuth Determining System (PADS), yet fall back on sound map reading skills when necessary.

If land navigation in daylight is difficult, it's worse at night. There are dozens of stories out of the NTC of units stumbling through the night, missing rallying points or objectives, and finding themselves with tired, demoralized, and lost soldiers at daylight.

Night is when most units move. NCOs, therefore, must know that their soldiers can operate in near or total darkness.

Newcomers to the desert often say it seems that they can "see forever." More

experienced soldiers might describe it as seeing the world through a full goldfish bowl. Objects seem closer than they are, shapes distort, and important terrain features disappear entirely.

The shimmer of heat on sand creates mirages of water or hills in the distance. There are accounts from World War II of lost soldiers walking for days toward mountains that did not exist.

Dust also impacts on observation. It can, at the same time, obscure movements and give them away.

Crew-served weapons, especially field artillery and tank main guns, tend to kick up huge clouds of dust, blinding the crews and equipment trying to put follow-on rounds on target.

Taking a page from the German Afrika Korps or the British Desert Rats in World War II, some NCOs operating in Desert Storm have their troops limit the dust clouds by laying down wet mats or oil in the sand in front of their big guns.

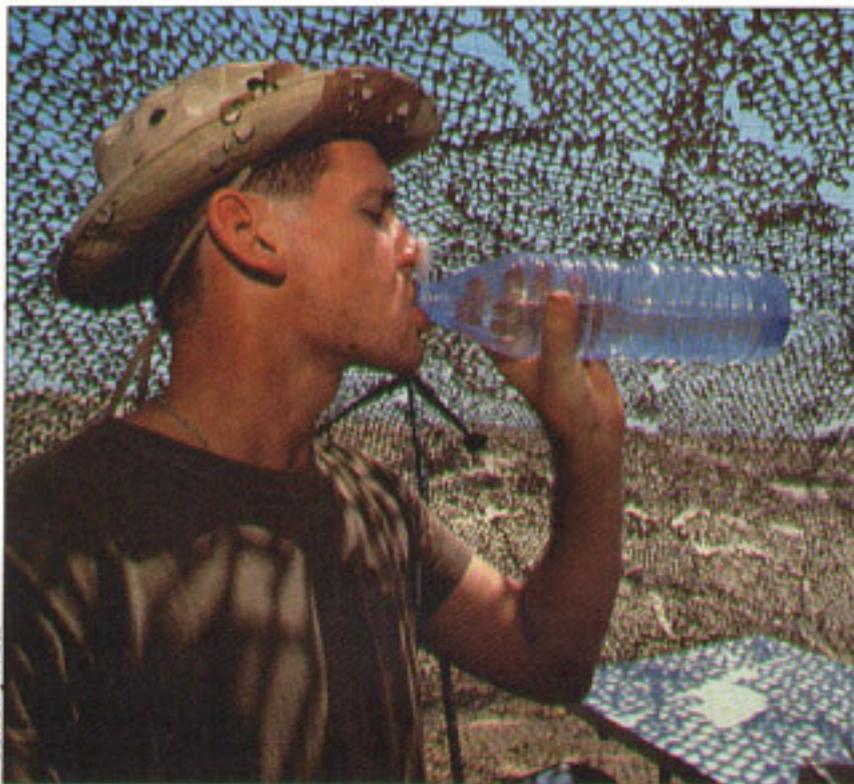
Another way crews are overcoming the siting problem is to have one vehicle fire and another sense where rounds are impacting.

The Kuwaiti and Saudi sands effect far more than siting, however. With sand temperatures reaching 165 degrees, rubber weakens, wood shrinks, and metal softens and bends. To those units slow to adapt to their new environment, the desert soon becomes a maintenance nightmare.

Sand mixed with lubricating oil forms

U.S. Army Photo

## School of sand



Soldiers who drink only when thirsty are setting themselves up for dehydration and heat stroke. Careful supervision can prevent combat losses due to heat injury.

a thick, gritty paste that fouls weapons. A little sand inside radio cable connectors causes operators to force and break them. Filters clog and engines stop. Tires weaken and puncture easily in rough terrain.

Proper maintenance of equipment is an NCO's responsibility, and breakdowns of vehicles, weapons, radios and other electronic equipment in the desert are often more a function of inadequate soldier training than poor equipment.

Whether it's in the Saudi desert or in the rugged terrain of the NTC, smart NCOs devote a good portion of each day training and supervising maintenance. And the wisest of leaders are calling in the experts — the armorer, motor maintenance and communications NCOs, etc. — to doubly ensure that training and maintenance are by the book.

Breakdowns will occur, however, so there have been times when soldiers have become stranded. To minimize problems NCOs have learned to expand the buddy system so there are extra safety checks before and during movements. And to limit injuries soldiers are receiving reinforcement training in survival and rescue techniques.

Heat is the most obvious and immediate physical danger in a desert environment. During World War II, air temperatures in the Sahara Desert often reached 136 degrees Fahrenheit. Inside

their tanks crews recorded temperatures of 160 degrees.

Soldiers in all desert wars have gone without hats and shirts in the mid-day sun, thus losing valuable cooling perspiration and becoming heat stroke victims. Others have fallen victim to dehydration when they didn't force themselves to drink at regular intervals. Both are problems that can be attributed to lack of NCO supervision.

Another problem identified by the study of past desert wars is the effect of poor hygiene and sanitation. Diarrhea from fungus infections and debilitating rashes have severely limited the capabilities of numerous desert armies. Yet, both are easily controllable through leader supervision and awareness. For example, even when water is unavailable soldiers can diminish the chances of infections by wiping away perspiration and dirt with clean dry cloths.

The war in the desert is often described as a "war of water," with victory going to the side that conserves and uses its available water wisely. The British Desert Rats of World War II became masters of water conservation. As standard practice, water used to heat rations was then used to wash clothes and finally poured into vehicle cooling systems or used for vehicle decontamination.

Lack of water threatens the life of every living thing in the desert, but the dangers there are not all physical.

"An oppressive feeling of immense loneliness overcomes everyone more or less frequently in the desert, a feeling that one is cut off from everything one holds dear," wrote World War II veteran, German Generalmajor Alfred Toppe. Leaders, according to Toppe, "must recognize such moods and depressions and offer sincere encourage-

ment so that pressure will disappear."

Experience has shown that NCOs who keep their soldiers informed about what is happening or what is about to happen, and show genuine concern, have far fewer soldier morale problems and can keep their troops motivated.

Training, always important, can serve the double purpose of filling empty hours while honing soldier skills.

The greatest fear of any soldier is the fear of the unknown. NCOs can help soldiers face and overcome those fears through training and counseling.

The "encouragement" Toppe mentions is especially important. The 101st Airborne Division (Air Assault) recognized this early in its deployment to the Gulf and instructed leaders to "continue to counsel soldiers. Everybody is somewhat new to this (desert warfare). Let them know how well they are doing, what they could improve, etc."

American soldiers historically fight longer and harder when they know why they're fighting and what is happening around them. The more battle information they have, the more informed choices they make and the more initiative they take. In the desert "keeping soldiers informed" ranks as one of the most critical principles of NCO leadership.

Long before hostilities erupted in the Gulf, Army NCOs were finding that they had more than the Iraqi Armed Forces to contend with. They learned that the desert, with its temperature extremes, barren wastes and desolate loneliness is a formidable adversary, as well.

The Nafud, Ad Dahna and Rub Al Khali deserts of Saudi Arabia will continue to teach that preparedness is the key to survival. NCOs new to the desert environment must become adept students, learning from the experiences of others to avoid making fatal mistakes.

But those NCOs who've become graduates of the "desert school of hard knocks," either through prior training or during the Desert Shield phase of Operation Desert Storm have an advantage they must share — by evaluating their experiences then training and informing others of the lessons learned. ■

*Information for this article comes from the Center for Army Lessons Learned, the NTC and from historical sources.*