DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

MISCELLANEOUS FIELD STUDIES
MAP MF-1855

EXPLANATION

- BOUNDARY OF DESERT TRAINING CENTER (DTC) MANEUVER AREA A
- BOUNDARY OF OPERATION DESERT STRIKE IN VICINITY OF DTC MANEUVER AREA A
- AREAS EXHIBITING DISTURBANCE FEATURES
- DISTURBANCE FEATURES CONTINUE
- DESERT TRAINING CENTER BASE CAMP

SUMMARY

This map shows areas that retain visible land disturbances produced during two military armored-vehicle training operations in the Mojave Desert, California. The map documents the lasting visual effects these operations have on this arid region and provides a data base for monitoring changes in the extent of visual disturbances in the future.

The first training operation was initiated in April 1942, by General George S. Patton, Jr., to ready armored-vehicle divisions for desert warfare in North Africa (Meller, 1946). The Desert Training Center (DTC) encompassed 17,500 mi² of arid lands in California, Nevada, and Arizona, and for two years, more than one million soldiers trained under simulated battle conditions. Troops were stationed at 12 main base camps, each housing as many as 15,000 soldiers in canvas tents. From these camps, armored units would radiate into the broad valleys of the Mojave and Sonoran Deserts. Thousands of tanks, trucks, jeeps, and aircraft were used in the war games. When the DTC was inactivated in May 1944, most man-made structures were removed or buried by the U.S. Army.

The second operation, called Operation Desert Strike, was held for two weeks in May 1964 (Moenk, 1964) in the same general area as the DTC. However, no temporary camps were established, and the tanks used were much larger than their World War II counterparts. Over 89,000 troops participated in this exercise.

Land disturbances caused by these training exercises are still evident today throughout the designated training areas (Lathrop, 1983; Prose, 1985; Prose and Metzger, 1985). The World War II base-camp locations are easily identified because the networks of dirt roads are still used by campers, hunters, artifact seekers, and other visitors. Vehicle trails and single tracks remain on many relatively stable surfaces and are most conspicuous on surfaces composed of a veneer of stones (desert pavement).

METHOD OF MAP PREPARATION

Disturbances were mapped from aerial photographs, then field-checked by airplane and ground search. Photographs from four major projects (table 1) were individually examined with a 10.2-cm-diameter, 4x-power magnifying lens. Disturbance features appear on high-altitude (scale 1:20,000 to 30,000) photographs as concentrations of continuous linear trails on bare-ground surfaces, or as linear patterns in vegetation cover. Individual tracks cannot be discerned, so it is probable that disturbance features in some lightly used training areas were not detected. A World War II base camp appears as a rectangular network of roads, much like a housing tract in the beginning stages of construction. The percentage of each photograph exhibiting disturbance features was recorded, and the corresponding area on a topographic map was shaded accordingly. Low-altitude photographs (scale 1:1,000) clearly revealed individual tracks and thus served as excellent checks of the high-altitude photographs. Questionable areas on photographs were field checked by airplane and ground search, but a ground search did not always produce additional evidence of disturbance because the low relief of valley floors in the region often prevented opportunities to see over vegetation stands. Local residents and(or) participants in the training exercises were then consulted to verify that maneuvers were actually held in the area. If eyewitness accounts were unavailable, the questionable area was not mapped.

This map shows only those areas within the boundary of the Desert Training Center maneuver area A that currently exhibit visual disturbance features remaining from the military training exercises. Many areas that were used for training no longer retain disturbance features because ground surfaces are in a state of relatively rapid erosion or deposition or have high rates of vegetation growth. These areas include playas (intermittently dry lakes), active sand dunes, and heavily vegetated wash channels and river flood plains. Also, a relatively minor amount of land has been developed for agriculture and urban uses. Recreational off-road vehicles (ORV) create land disturbances that are similar to those of military vehicles. However, in the area covered by this map, ORV disturbance is primarily superimposed over disturbances caused by military exercises. No military training exercises have been held in this area since Operation Desert Strike.

Table 1. U.S. Bureau of Land Management aerial photograph projects used in preparing this map.

Project	Year	Scale	Color	Quality	Coverage of DTC maneuver area A
CA-81-DC	1981	1:30,000	yes	excellent	northern part
ICP	1979	1:1,000	yes	good	scattered areas
C-M000	1973-74	1:20,000	yes	fair	northern part and Turtle Mts.
CALD-77	1978	1:24,000	no	excellent	southern part

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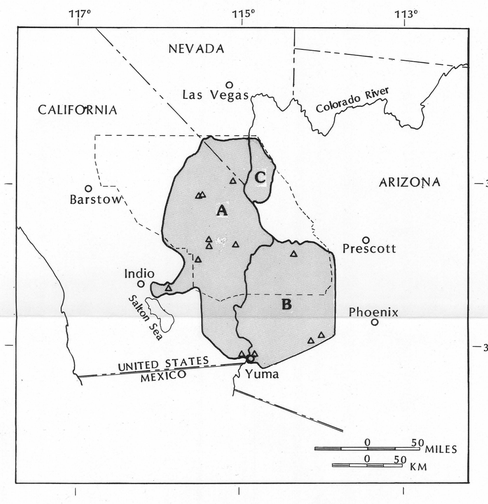

LOCATION OF AREA COVERED BY MAP

Shaded area depicts the Desert Training Center, 1942-44, comprised of three maneuver areas; A, B, and C (U.S. Army, 1943); only maneuver area A shown on 1:175,000-scale map. Dashed line depicts boundary of Operation Desert Strike, May 1964 (U.S. Army, 1964). Small, isolated patches of land within boundaries of maneuver areas were off-limits to training participants. Triangle indicates base camp.

SCALE 1:175000

CONTOUR INTERVAL 200 FEET WITH SUPPLEMENTARY CONTOURS AT 100-FOOT INTERVALS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Base from U.S. Geological Survey, 1:250,000
Kingman, Needles, and Salton Sea, 1969;
El Centro, 1977

Aerial-photograph study in 1983-85;
field checked in 1985

MAP SHOWING AREAS OF VISIBLE LAND DISTURBANCES CAUSED BY TWO MILITARY TRAINING OPERATIONS IN THE MOJAVE DESERT, CALIFORNIA

By

Doug V. Prose

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