

Defense Environmental Restoration Program
for
Formerly Used Defense Sites
Ordnance and Explosive

Archives Search Report

FINDINGS
for the former

CAMP IBIS (Proper)

Needles, California
Project Number J09CA028301

April 1996



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for
FORMERLY USED DEFENSE SITES

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ARCHIVES SEARCH REPORT
FOR
FORMER CAMP IBIS
SAN BERNARDINO COUNTY
NEEDLES, CALIFORNIA

PROJECT NUMBER J09CA028301

April 1996

Prepared For

U.S. Army Engineering and Support Center
Huntsville Division
ATTN: CEHNC-OE
P.O. Box 1600
Huntsville, Alabama 35807-4301

Prepared By

U.S. Army Corps of Engineers
Rock Island District
ATTN: CENCR-ED-DO
P.O. Box 2004
Rock Island, Illinois 61204-2004

and

U.S. Army Defense Ammunition
Center and School
ATTN: SIOAC-ESL
Savanna, Illinois 61074-9639

ORDNANCE AND EXPLOSIVE
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 FOR
 FORMER CAMP IBIS (PROPER)
 SAN BERNARDINO COUNTY
 NEEDLES, CALIFORNIA
 PROJECT NUMBER J09CA028301

ACKNOWLEDGMENTS				
The following persons provided support as indicated.				
Function	Name	Title	Organization	Telephone
On-Site Assessment	Greg W. Olson*	Q.A. Spec., Ammunition (QASAS)	CENCR-ED-DO	(309) 794-6016
	Jerry Russell	UXO Safety Specialists	CENCR-ED-DO	(309) 794-6038
Engineering Support	Daniel J. Holmes	Professional Engineer	CENCR-ED-DO	(815) 794-6080
Historical Research	Larry Dauphin	QASAS	SIOAC-ESL	(815) 273-8716
Geographic District	Greg Boghossian	District Poc	CESPL-ED-MI	(213) 894-3760
Industrial Hygiene	Robert Platt	Industrial Hygienist	MCXP-RIA	(309) 782-0806
CADD Support	Larry Bauernauer	Technician	CENCR-ED-DO	(309) 794-6070
*Team Leader				

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FINDINGS

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1. INTRODUCTION

a. Subject and Purpose

(1) This report presents the findings of an historical records search and site inspection for ordnance and explosive (OE) presence located at the former Camp Ibis (Proper) near Needles, California. See plate 1 for general location map. The investigation was performed under the authority of the Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP FUDS).

(2) The purpose of this investigation was to characterize the site for potential OE contamination, to include conventional ammunition and chemical warfare material (CWM). This was achieved by a thorough evaluation of historical records, interviews, and an on-site visual inspection.

b. Scope

(1) The investigation focused on 10,215.5 acres that is today partially owned by the Department of Interior (DOI), Bureau of Land Management (BLM), State of California and SF Pacific Properties Incorporated. The War Department acquired these lands for Camp Ibis (proper) through implied transfer, revocable permit, comprehensive permissive use permit and a no-area license. However, today's real estate acreage does not match that of the Corps of Engineers map dated August 1948 (see documents G-4, L-1 and L-2). This will be discussed later on in section 5, part a. of this report.

(2) This report presents the site history, site description, real estate ownership information, and confirmed ordnance presence, based on available records, interviews, and the site inspection. It further provides a complete evaluation of all information to assess potential ordnance contamination where actual ordnance presence has not been confirmed.

(3) For the purpose of this report, OE contamination consists of live ammunition, live ammunition components, CWM or explosives which have been lost, abandoned, discarded, buried, fired, or thrown from demolition pits or burning pads. These items were either manufactured, purchased, stored, used, and/or disposed of by the War Department/Department of Defense. Such ammunition/components are no longer under accountable record control of any DOD organization or activity.

(4) Expended small arms ammunition (caliber .50 or smaller) is not considered OE contamination. OE further includes 'explosive soil' which refers to any mixture in soil, sands, clays, etc., such that the mixture itself is explosive. Generally, 10 percent or more by weight of secondary explosives in a soil mixture is considered explosive soil.

2. PREVIOUS INVESTIGATIONS

a. 1994 Preliminary Assessment

(1) A Preliminary Assessment (PA) of the former Camp Ibis (proper) was conducted under the Defense Environmental Restoration Program, Formerly Used Defense Sites (DERP FUDS) by the U.S. Army Corps of Engineers, Los Angeles District (CESPL) in February 1994 (site number JO9CA028300). At that time, it was determined that the site was formerly used by the U.S. Army Ground Forces (see document E-1).

(2) The signed FDE concluded that the site consisted of 10,215.5 acres, was used from March 1943 to March 1944 and was eligible for restoration under the purview of DERP FUDS (see table 2-1 and document E-2). Further research and documentation has concluded this area to be only 9595.87 acres. This is discussed in detail in Section 5, part a. of this report.

TABLE 2-1 DERP-FUDS PRELIMINARY ASSESSMENT PROJECT				
Project Number	DERP Category	Present Phase	Comments	Location
JO9CA028301	OE	SI	Ordnance & Explosives	Camp Ibis (proper) (see plates 1 & 2)
	HTRW	--	None Recommended	
	BD/DR	--	None Recommended	

b. Other Investigations

To the team's knowledge no other investigations pertinent to this site have been conducted or are being conducted at this time.

3. SITE DESCRIPTION

a. Existing Land Usage

(1) The former Camp Ibis (proper) was located approximately 21 miles northwest of the City of Needles, in San Bernardino County, California. State Highway 95 passes through the western edge of the campsite. The campsite is situated between the Homer Mountains on the west and the Dead Mountains on the East. Camp Ibis is relatively flat with some slow rolling hills on each side of Piute Wash, which runs the entire length of the camp on the eastern edge. The ground consists of a sandy content, which is sparsely covered with vegetation (see photos J-1 and J-2).

(2) Today, ownership is shared with the Department of Interior, Bureau of Land Management, State of California and the SF Pacific Properties Incorporated (previous name Southern Pacific Company). Plus, within these ownership's there are railroad right-of-ways and mineral rights by Santa Fe Pacific Gold formerly called SFP Minerals Corporation (see documents G-4, G-10 and L-2). At this time no 'active' ranch leases, no 'active' mining claims and no developments occur on Camp Ibis (proper) (see documents I-3, I-6, I-18 and I-20). DOI, which now owns the majority of the property was at one time considering purchasing the rest of the lands from the aforementioned owners (see document F-15). Currently, the State of California is in the process of selling their land back to the Department of Interior under the California Desert Protection Act (see document I-21 and plate 4).

(3) An historical document lists various shower buildings, latrine buildings, wood tent frames and water supply installations were constructed on Camp Ibis (proper) (see document F-14). Today the only construction that was visible is the 50,000 gallon water reservoir (see photo J-3).

(4) Table 3-1 lists the current owners, acreage's and OE areas that are appropriate to this site. Note that the areas/acres addressed is consistent with the revised calculation of 9595.87 acres.

**TABLE 3-1
CURRENT LAND USAGE**

AREA	FORMER USAGE	PRESENT OWNER	PRESENT USAGE	SIZE/ *ACRES	COMMENTS
A	Training Area	Department of Interior	Tourist/ Wilderness Area	5164.66	See plate 3 & 4
		State of California	Wilderness Area	640.00	See plate 3 & 4
		SF Pacific Properties Incorporated	Wilderness Area & Idle	1916.45	See plate 3 & 4
B	Other Lands	Department of Interior	Tourists Area	1234.76	See plate 3 & 4
		SF Pacific Properties Incorporated	Idle	640.00	See plate 3 & 4
C	Additional Acreage	Department of Interior	Wilderness Area	**3269.17	See plate 3 & 4
		SF Pacific Properties Incorporated	Wilderness Area	**532.47	See plate 3 & 4
*Approximate acreage			Revised	9595.87	original FDE 10,215.5
**Additional acreage			Additional	3801.64	
			Total	13,397.51	

b. Climatic Data

(1) The desert area of southern California east of the mountains lie within the Great Basin. The Great Basin has a diverse effect on the climate of Southern California's deserts. It is an area of climatological extremes. The deserts of the Southern California are Death Valley and the Mojave Desert, which are biggest of the Southern California deserts. These areas are the hottest and driest parts of the State (reference B-18).

(2) The summertime in the Needles area is one of unforgiving heat without shade. The intense summer temperatures general run from May to September with average daily maximums exceeding 95 degrees Fahrenheit, with highs sometimes reaching 120 degree plus. The summer months average 140 days of 90 degree plus temperatures. Nightfall within the desert community is one of complete opposite contrast. The daily minimums for nighttime temperatures in the desert is generally 40 to 60 degrees cooler. With extremes being between the upper 30's and lower 40's. As for rainfall during the summer months, the months of July and August normally get the most precipitation averaging between 0.5 to 0.75 inches of rainfall. The greatest

monthly totals have occurred within these two months, with maximum monthly rainfalls over four inches and a daily maximum that exceeded two and one-half inches.

(3) Fall phase in the Needles area has somewhat less oppressive heat, with temperatures between the middle 80's and middle 70's. The average number of days with temperatures over 90 degrees during the fall is 15, with the nightly temperatures a little less than the summer nights. Rainfall for fall's monthly average is less than 0.5 inch, with the greatest daily maximum being a little over 1 inch.

(4) In the winter months night temperatures slightly above freezing are tempered considerably by warming during the daytime. The daily maximum temperatures range from middle 60's to the upper 70's with the daily minimums ranging from the middle 40's to the upper 50's. The average number of days during this period when temperatures fall below freezing is six days. Rainfall picks up a little from the fall phase and generally averages over 0.5 inches per month. The greatest monthly total of rainfall that did occur for the winter season happened in December 1965 when the rain gauge exceeded two inches.

(5) Springtime temperatures range from the lower 70's to the middle 80's. During this season the temperature exceeds 90 degrees, (on an average of 10 days). Precipitation falls off somewhat compared to previous five months, with the driest month around the April-May time frame.

c. Topography

The eastern area of the San Bernardino County is located within the Great Basin with various mountain ranges separated by valleys. The subject site sits in the Piute Valley with two medium (in height) mountain ranges on each side. To the west are the Homer Mountains and to the east are the Dead Mountains (see photos J-1 and J-2). The Dead Mountains are slightly higher and longer than the Homer Mountains. Between the mountain ranges is a large alluvial plain with both east and west areas gradually sloping up to the respective mountains ranges. Within this large alluvial plain are various washes. The major wash is called Piute Wash which runs the entire length of Piute Valley. Piute Wash runs throughout the entire length of the eastern side of the subject site. All the other minor washes drain into Piute Wash. Because of these minor washes the eastern part of the site has rolling hills formed from these various

small washes. The west half of the camp is more flat as State Highway 95 crosses through.

d. Geology and Soils

The soils around the subject site are of a dissected piedmont alluvial plain that has been formed over millions of years. These alluvial plains (valleys) were formed when great land masses were uplifted due to tectonic plate shifting and volcanic action which formed the various mountain chains. The rocky layers near the surface are mainly basalt, which are porous rocks formed from volcanic activities. The bed rock is made up of granite due to extreme pressures of tectonic shifting and volcanic activity. Due to both wind and water erosion, the volcanic formations slowly began chipping away, forming immature sandy soil. This immature sandy soil makes up the majority of the site's terrain.

e. Hydrology

Camp Ibis (proper) is located in the Mojave Valley in the Needles Hydrologic subunit of the Needles Hydrologic Unit. The immature sandy soil has a high rate of hydraulic conductivity, but does not have a water table close to the surface do to limited rainfall. When rainfall does occur, the eastern areas of the site, which contain the smaller washes leading into Piute Wash. Becomes an area of raging water that travels at high speeds, washing away anything that gets in it's path. The erosion process cuts deeper and sharper on the eastern side of the camp do to it's close location to the Dead Mountain range.

f. Natural Resources

(1) The subject site is in the general area that contains various state and federal endangered/threatened species. Camp Ibis may support Howe's hedgehog cactus, which is a category 2 candidate for Federal listing (see document E-3). Table 3-2 has been prepared to list the effected species known to be within the area.

(2) For additional species in the state of California that may occur on this list after this report has been published, please contact the California Fish and Wildlife Service, Ventura Field Office, Ventura California, (805) 644-1766.

(3) Also, an area protected by the Department of Interior is the Dead Mountain Wilderness Area, which

envelops the east half of Camp Ibis (proper) (see documents I-4 and L-5).

g. Historical/Cultural Resources

There are archeological sites located on the subject camp (proper). Township 10 north, Range 21 east, Sections 4-9, 16-19 and 21 have three historic sites and Township 11 north, Range 20 east, Sections 32 and 33 have two historic sites (see document E-4). Plus, there are other historic sites around the Camp Ibis (proper) boundaries. For an up-to-date listing, please contact the California Archaeological Information Center Redlands, California; (909) 792-1497/fax (909) 798-8585.

TABLE 3-2 NATURAL/CULTURAL RESOURCES		
Resource Classification	Type	Comment
Wildlife	Desert Tortoise	Threatened (Fed & State)
	Pallid Bat	Threatened (Fed & State)
	California Leaf-nosed Bat	Threatened (Fed & State)
	Occult Little Brown Bat	Threatened (Fed & State)
	Southwestern Cave Myotis	Threatened (Fed & State)
	Spotted Bat	Threatened (Fed & State)
	Pacific Western Big-eared Bat	Threatened (Fed & State)
	Greater Western Mastiff-bat	Threatened (Fed & State)
Vegetation	Howe's Hedgehog Cactus	Threatened (Fed & State)
Archeological	Five Historic Sites	Map areas CHL-985 (document E-4)

4. HISTORICAL ORDNANCE PRESENCE

a. **Chronological Site Summary**

(1) The War Department in March 1942 tasked General George S. Patton Jr. to find a desert training site that met all the criteria of North Africa. After three days of surveying the area by plane and on foot, General Patton decided on the Southern California area as the site for the new Desert Training Center. Construction began immediately on some camps, plus land acquisitions had to be made both public and private. When all land was acquired by General Patton and the Commanders following Patton, the total Desert Training Center encompassed approximately 11 million acres covering three states (see document L-3).

(2) Camp Ibis was one of ten major camps in the Desert Training Center. This particular camp was started in the winter of 1942 and was completed in the March 1943 time frame (see documents F-7 and F-16). The War Department acquired the lands by 1) Implied Transfer for 5,760 acres from the Department of Interior; 2) Revocable Permit No. 12 for 640 acres from the State of California and 3) a Permissive Use Agreement for 3,815.5 acres from the Southern Pacific Company (now SF Pacific Properties Incorporated). The final acquisition took place in August 1943 with a no-area License (W04-193-eng-3213). This license was granted from the Atchison, Topeka and Santa Fe Railway Company for a communication line right-of-way (see documents G-1 thru G-3 and G-5 thru G-7).

(3) The main mission of Camp Ibis and the others was to train troops for desert warfare. But there was another high priority; that was the testing of equipment, ammunition, weapon systems and supplies. The commanders of the Desert Training Center also wanted realism in the training and maneuvers. Besides using practice ammunition, they would use 'live' ammunition to give the troops a sense of what combat was really like.

(4) In October 1943, DTC's name was changed to the California-Arizona Maneuver Area (CAMA). This change was made to reflect the alterations of size and purpose, plus the desert war in North Africa was winding down. Even at the time of the name being changed, CAMA's mission was already scaling down. One of the major reason for the scale down was CAMA was critically short of service personnel, particularly transport and communication specialists, who were rapidly being shipped overseas in 1943. Because of this shortage in service personnel, which was interfering

too severely with the proper operation of the camps, the current commander, General McNair, recommended the closing of the CAMA.

(5) On March 30, 1944, CAMA was declared surplus by the War Department (see document G-8). All of the major commands had to close the facilities down and clean up each camp.

(6) Shortly after the close of CAMA, the U. S. Government tried to attain releases from the agencies of the property that Camp Ibis (proper) encompassed. Only two of the four agencies released the government. The State of California and the Southern Pacific Company did not sign the release, because there was no charge for the use of these lands by the government (see documents G-7 and G-9).

b. Ordnance Related Records Review

(1) Research efforts for the former Camp Ibis (proper) began with a thorough review of all reports, historical documents and reference material gathered during the archives search. During this review, an effort was made to focus on areas of confirmed and/or potential OE contamination.

(2) A good collection of documents including drawings, maps, technical ordnance data, real estate documentation, correspondence, and various other records appropriate to Camp Ibis (proper) and/or that era have been located. The information from these documents was very useful in terms of assessing potential contamination at the former Camp Ibis (proper).

(3) Camp Ibis was home to various armor divisions (4th, 7th, 9th, 11th) of which used the M3 Stewart, M3 Grant and M4 Sherman tanks (see document D-2). The early World War II tanks used 37mm, 75mm and 76mm high velocity projectiles for their main guns, respectively. For infantry purposes, the tanks had .30 and .50 caliber machine guns mounted within and on top of the tank. Also included with these armor units were Tank Destroyer units, Anti-aircraft Units and Artillery Units (see document D-2). The Tank Destroyers Units used 105mm howitzers, Anti-Aircraft Units used 3 inch, 40mm and 90mm projectiles and the Artillery Units used 75mm, 105mm and 155mm projectiles (see document D-6). To protect themselves from close in hostile forces, these troops were armed with .45 caliber pistols/submachine guns, .30 caliber carbines and rifles and Mark II fragmentation grenades (see document D-7).

(4) Camp Ibis (proper) had numerous ranges, 23 to be exact. Of the 23 ranges associated with Ibis, only four (Nos. 13, 14, 15 and 21) originated within Camp Ibis (proper). However, their safety zones continued off camp proper (see documents F-1 and plate 2). The remaining 19 ranges associated with Ibis, will be addressed in Section 5, part b. of this report as potential DERP-FUDS Sites.

(5) The entire DTC/CAMA, including the Camp Ibis area, was to train not only troops, but to test newly developed ammunition, weapon systems, vehicles, equipment, supplies and chemical warfare material (see documents F-2 thru F-4). The exact location where this testing took place is unknown at this time. Also, when the troops were on maneuvers, mainly staying within the DTC/CAMA valleys, various kinds of materials and equipment were tested in accordance with the maneuvers.

(6) The training and tactics of the Army Ground Forces (AGF) again encompassed the entire DTC/CAMA area, approximately 11 million acres. Camp Ibis (proper) and the surrounding areas did not escape from practice and 'live' fire training. The commanders of the DTC/CAMA wanted realism to help the troops understand and see what combat was like (see document F-5). Vast open spaces that the desert offered and the lack of civilian population brought the full force of the AGF upon this area. Because of the vastness, the precise limits of the DTC/CAMA are unknown and only approximated since no record was filed. To further complicate this situation, the impact areas and mine field locations also were not recorded (see documents F-5 and F-6).

(7) Chemical filled ordnance was also used on the troops in maneuvers. Documents talk about tear gas being sprayed from airplanes passing over troops (see documents F-8). At this time, the team cannot determine if toxic chemical materials (CWM) was part of the regimen (see documents D-10 and F-11). In another document, it states Chemical Warfare Units performing tactical training and a review of special technical training. The document goes on with use of special equipment and chemical depots and maintenance companies establishing and operating chemical warfare depots and maintenance facilities in the field (see document F-9). There was a Chemical Depot near Camp Ibis located in Needles approximately 20 miles to the southeast (see document F-10).

(8) Rumors abound with equipment, ammunition and supplies being buried in the desert theater. In one

document, an individual claims that a friend of his dug up a buried case of Thompson submachine guns on Camp Ibis (see document F-12). Other stories include entire tanks being buried. In the same aforementioned document, there is talk about a camp dump located at the north end of Ibis. According to Mr. Butch Gates of the former Search and Rescue Team, San Bernardino County Sheriff, there are dump sites located all over Camp Ibis (proper). Also, Mr. Gates told the team about other possible impact areas and burial sites located off Camp Ibis (proper) (see document I-14 and plate 6).

(9) When DTC/CAMA was declared surplus and the camps began to close, the commanders of major units were charged with the responsibility for closing target ranges and removal of salvageable material, supplies and equipment (see document F-13). From the understanding of this document, the units should have marked the ranges on maps, but where the ranges placed in the correct locations.

(10) When closing the camps, especially the ranges and known maneuver areas, prisoners of war (POWs) along with U. S. troops, made an attempt to deduce the areas and salvage equipment/items when possible (see documents F-5 and F-12). In the majority of the cases, no records were available detailing areas in which firing had actually been conducted. Plus, what also complicated the situation was training requirements and preparations for movement that prevented any extensive use of troops to search for duds. When all the troops were finally evacuated and the land disposal responsibility given to the Army Corps of Engineers, the Corps discovered more ordnance contamination not only on Camp Ibis (proper), but the surrounding areas. The Corps took back all the property, both public and private, in and out of Camp Ibis (proper) and proceeded to do a surface sweep in the area. Finally, when the job was completed, the Corps of Engineers Los Angeles District, had a map drawn up (number 2277) that showed where the restricted areas were and where it was safe (see documents F-6 and L-4).

(11) In other related ordnance matters not dealing with the World War II era, a military exercise was conducted in the former DTC/CAMA area during May 1964. This military exercise was code named Desert Strike. The main purpose of this exercise was to train the major combat organizations, as well as combat support/service units, in the conduct of joint operations employing tactical nuclear and conventional weapons (see document F-23). Real nuclear weapons were not used in the exercise only simulators with *no radioactive components*. However, approximately 850 short tons of

ordnance and chemical class V ammunition was used (see document F-24). Unfortunately, the small amount of documentation obtained on Desert Strike does not clarify what ordnance and chemical class V ammunition was used in this exercise. However, the team retrieved maps from Mr. Butch Gates which shows the areas of contamination by the Desert Strike exercise (see document I-14 and plate 8).

c. Interviews with Site Related Personnel

(1) Several persons were interviewed that were able to give some general information of the Former Camp Ibis (proper).

(2) Mr. William T. Wiley has been with the Bureau of Land Management at the Needles Office for 10 years as a Hazardous Materials Specialist. In the past 10 years, Mr. Wiley does not remember any Ordnance Explosives (OE) or Chemical Warfare Material (CWM) being discovered at Camp Ibis (proper). He repeated that Camp Ibis (proper) has been picked over pretty clean by the scavengers that passed through. Mr. Wiley told the team he believes that during the early 1960's, a military exercise, code name Desert Strike, took place in the old CAMA and Camp Ibis (proper) area. In a final note, the team questioned Mr. Wiley about one of the range lines that appears on the Corps of Engineers Map dated 1948 (see document L-1). The Corps lists Township 11 north, Range 21 east as being the northern portion of the camp (proper). Mr. Wiley agreed with the team that the Corps' map was mislabeled. It should read Township 11 north, Range 20 east versus the Range 21 east.

(3) Mr. Mick Joplin has been a Bureau of Land Management Ranger in the Needles area for five years, which includes his total employment with the BLM. Mr. Joplin stated Camp Ibis (proper) and the surrounding areas are in his sector. He stated in the November time frame of 1995, he was informed by an individual of a large caliber round discovered on Camp Ibis (proper), Piute Wash area (see document L-7 and plate 6). Mr. Joplin said he could not locate this round and notified this individual that he could not. He went on to say this same individual went back out and could not find the round himself. Mr. Joplin said maybe a hunter/other individual already picked it up. The team asked for this individual's name and Mr. Joplin said he could not remember who he was. Mr. Joplin said he has seen pieces of shell fragments in areas on the eastside of Camp Ibis (proper) between the Piute Wash and the Dead Mountains. The team pointed out the .50 Caliber range that originated on Ibis (proper) and he said that he has found pieces of

shell fragments in the supposed target and down range areas (see document L-7 and plate 6). He also stated that during hunting season, hunters come up through Piute Wash and they will pick up anything (see document I-2).

(4) Mr. Kevin Madison, who has been working for the Bureau of Land Management at the Needles Office for seven years as the Range Land Management Specialist, helped the team look for range allotments (range leases). To the best of Mr. Madison's knowledge, there are no range leases on the BLM owned land in Camp Ibis (proper) (see document I-3).

(5) Ms. Jill Miller-Alert, who is a Wilderness Specialists for the BLM Needles Office, outlined the Wilderness Area that is part of the eastern side of Camp Ibis (proper). She also stated some years back she discovered a spent .30 caliber cartridge and a mess kit south of Camp Ibis (proper) (see documents I-4, L-5 and plate 6).

(6) Mr. McGill has been with BLM for a total of five years, three of those in the Needle's Office. Mr. McGill also confirmed that the BLM owned land in Camp Ibis (proper) does not have any leases. He said this area is only used for recreational vehicles and upland game hunting. Mr. McGill continued the conversation by stating since 1972 he has been an active historical researcher. He said since the aforementioned time he has walked on foot and driven in vehicle all over Camp Ibis (proper). During this time he has only discovered an intact .50 caliber cartridge. When asked about chemical warfare material, Mr. McGill said he has not found anything like that on Camp Ibis (proper), however, he did mention to the team about glass ampoules being discovered in an area one mile north of the town of Goffs. The team asked Mr. McGill if these glass ampoules were heat sealed. He stated that a plastic plug was inserted in the end and it looked as if some of them were in a fire (see document I-5 and plate 5).

(7) Mr. Ken Downing is a Geologists who is from the BLM Office in Sacramento on loan to the Needles Office for a short period. Mr. Downing stated that the BLM Office in Needles has not had a geologists for a couple of years and the files are behind on the latest claim information. The last update was August 30, 1995. With this information and to Mr. Downing's knowledge, there are no 'active' mining claims or 'active' oil/gas claims on Camp Ibis (proper). In areas off Ibis (proper) in Township 10 north, Range 21 east, Sections 10, 11, 14, 15 and Township 11 north, Range 20

east, Sections 22, 23 and 24 there are no 'active' claims per Mr. Downings knowledge (see document I-6).

(8) Mr. Ron Morrison, who is a former BLM Real Estate Specialists with the Needle's Office for 12 years, was visiting the office at the time of the team's visit. The team asked Mr. Morrison about the acreage differences between a U. S. Army Corps of Engineers map dated 24 August 1948 and current plat maps. Sections 4, 5 and 6 of Township 10 north, Range 21 east are the areas in question. Mr. Morrison believes the individuals who surveyed this area made a mistake on the acreage's. He stated after World War II this area probably was resurveyed and the acreage's found to be incorrect. Mr. Morrison thinks the total acreage of Camp Ibis (proper) should be smaller than the 10,215.5 original acres stated on the 1948 map (see document I-7).

(9) Mr. Bob Lyons has worked for the San Bernardino County Sheriff's Department for the pass 12 years as a search and rescue team member. Mr. Lyons said the only items he has discovered on Camp Ibis (proper) were spent .50 and .30 caliber cartridge cases located south of the headquarters circle in the cantonment area. He also stated he has heard of rumors of equipment burials i.e. jeeps, tanks and rifles, in and around the Camp Ibis area. But so far nothing has been discovered in these areas. Mr. Lyons related an ordnance incident report that is not associated with Camp Ibis, which happened two weeks ago prior to this interview. An intact mortar was discovered on the eastern slopes of the Dead Mountains. EOD from Fort Irwin was called out to dispose of the item. At this time the team has not received the EOD/County Sheriff's incident report (see document I-8 and plate 5).

(10) The team interviewed Mr. Jerry Lyons who is the father of Bob Lyons. Mr. Lyons is also on the San Bernardino County Sheriff's Search and Rescue Team. Mr. Lyons said he has been with the Sheriff's Office for 37 years and has lived in the Needles Community for 53 years. Years ago, Mr. Lyons was informed by a Mr. Butch Gates, who was another team member at the time, about a .45 caliber submachine gun range east of Piute Wash on Camp Ibis (proper). Mr. Lyons stated he has not seen or heard of any live military ordnance or chemical warfare material being discovered on Camp Ibis (proper). Mr. Lyons did mention that he discovered shrapnel on a range far north of Camp Ibis (proper), in the Dead Mountain area (see documents I-8 and L-9).

(11) Mr. Derichsweiler has lived in Needles for 32 years. When the team visited his home, he showed the team a variety of (empty/spent) practice ordnance items that he has collected throughout the years in the Desert Training Center. The only piece of practice ordnance that he had in his possession from Camp Ibis (proper) was a 2.36 inch M7 practice rocket (see photo J-32 and plate 6). He said he discovered this item in an area east of the water reservoir across the Piute Wash. Mr. Derichsweiler stated that he has not seen any live ordnance items in Ibis (proper). He mentioned that in the Piute Wash area, Township 11 north, Range 20 east, Section 28 on the west bank, could be a possible burial area (see plate 6). From what he knew, there was no ordnance, just general garbage. He told the team about an area east of Ibis (proper) in the Dead Mountains (Red Hills area) where he discovered a range. The way he described this range to the team, it seemed to be an infiltration course (see documents D-1, I-9 and L-7).

(12) Mr. Walter Acuna was born and has lived in Needles all of his life. After years of service in the Marine Corps, he started his employment with the Needles Police Department. After nine and one-half years with the Needles Police, he joined the San Bernardino County Sheriff's Department for 22 years, reaching the rank of Captain. Mr. Acuna stated he has no knowledge of any live ordnance or chemical warfare material being discovered on Camp Ibis (proper). He went on to say he believes that Ibis has been picked over by individuals in the past. When asked about any burial sites on Ibis (proper), he said he has no knowledge of any burial sites (see document I-10).

(13) Mr. Bill Claypool has lived in Needles for 73 years. He said he has no knowledge of anyone finding live ordnance or chemical warfare material on Camp Ibis (proper). He also stated that he has not heard of any burial sites on Camp Ibis (proper) either. He said the only ordnance items discovered that he's aware of were empty cartridge cases (see document I-11).

(14) Mr. Mark Wetmore has lived in the Needles Community since 1936. He said he has found numerous pieces of shrapnel on Ibis (proper) and east towards the Dead Mountains. He believes that the fragments were from anti-aircraft ordnance. There could have been a unit of anti-aircraft stationed there, but the team doubts if any firing exercises took place on or anywhere near Ibis because Camp Ibis was located in a main air traffic passage way (see document L-10). Mr. Wetmore stated that he has not seen any live ordnance or heard of any live ordnance being discovered

on Camp Ibis (proper). He said he has heard stories about jeeps and tanks being buried, but nothing about buried ordnance or chemical warfare material (see document I-12).

(15) Mr. Glenn Hill who is a local business owner said he has seen scrap pieces of metal all over Camp Ibis (proper), but no live ordnance. He went on to tell the team about two medical waste burial sites near Camp Ibis (proper). One of these sites was east of the camp proper and the other west towards Goffs. When the team showed him a topographical map for location, Mr. Hill was confused by the map and pointed out two locations instead of one (see plate 6). Mr Hill did state that if anyone was interested in seeing this area, he could take them right to it. He told the team while doing some prospecting in the Homer Mountains, west of Camp Ibis (proper), he discovered some exploded shells. There is a tank combat range just west of Camp Ibis (proper), which looks as if it's impact area is in the Homer Mountains (see document I-13 and plate 6).

(16) Mr. Butch Gates, who is an excellant source of information for the entire Desert Training Area worked for the San Bernardino County Sheriff's Office as Search and Rescue since 1972. Not only is he very familiar with Camp Ibis (proper), but he is very familiar with all areas of DTC/CAMA. During the years with the Search and Rescue, he has compiled maps, photos and first hand knowledge of ordnance areas. Mr. Gates told the team areas in and along Piute Wash were used for burial areas. He said the entire Piute Wash, both east and west banks and extending out approximately 300 to 400 yards from the banks, could be contaminated with anything, including ordnance. Mr. Gates did say that he has no knowledge of any chemical warfare material being buried on Camp Ibis (proper). He told the team that he has not heard of any live ordnance or chemical warfare material being discovered at Camp Ibis (proper). But, he continued by stating that with these burial areas in the Piute Wash and other areas, it's just a matter of time before water and wind erosion uncover these items. As for one other burial area, he said there is a burial site south of the runway that served Ibis. Mr. Gates said shortly after World War II, Italian POWS and American GIs picked up everything they could find and buried the items in the Piute Wash area and ravines inside and outside Camp Ibis (proper). Again, he repeated it could have been anything including live ordnance. Mr. Gates stated that in the soft areas, projectiles would bury in approximately one to one and one-half feet, which will eventually be washed out by the rains. He also stated that a large majority of tank training took place east of Piute Wash and the Dead Mountains, using the

mountains as a impact area, too. A place in the Dead Mountains called (Red Hills) seems to be a large contaminated area. Mr. Gates also told the team about the Desert Strike exercise which took place in May 1964. He said they used the majority of the DTC/CAMA area including all of Camp Ibis (proper). Mr. Gates said there also could be contamination from this exercise. Mr. Gates did send the team maps of the contaminated areas from Desert Strike (see documents I-14, L-8 and plate 6).

(17) Mr. Dennis Casebier is retired from civil service and is a local historian of the DTC/CAMA. He stated he has written and published two books on the training area. He stated he has no knowledge of anyone discovering live ordnance or chemical warfare material on Camp Ibis (proper). He also said he has no knowledge of any burial sites on Ibis (proper) either (see document I-15).

(18) Mr. John Bezzant is the Director of Diverse Holdings for the SF Pacific Properties Incorporated, which is a subsidiary of Catellus. Mr. Bezzant stated his company owns other lands in the Southern California Desert, which includes land in and around Camp Ibis (proper). The team asked Mr. Bezzant if any future developments are in the plans for land in and around Camp Ibis (proper). He said there is an on going study about possible agriculture development of land in the Ibis area. He stated that within the next five years, depending on the water situation, there could be an agriculture development in the Ibis area. At this time the team told Mr. Bezzant that the possibility of military ordnance items still remaining on Camp Ibis (proper) and the areas around Ibis is a real concern. If he has any questions or before any development starts, he should contact Mr. Greg Boghossian of the COE Office, Los Angeles District. In a final note, the team asked Mr. Bezzant if the Southern Pacific Company, (see U. S. COE Map dated 24 August 1948), and the SF Pacific Properties, Inc. were the same company, he said yes (see documents I-18 and L-1).

(19) Mr. George Wagner works for Santa Fe Pacific Gold, which has a mineral rights claim on one of the lands owned by SF Pacific Properties Inc. The team asked Mr. Wagner about the mineral rights in Section 21, Township 10 north, Range 21 east containing 47.5 acres. He stated there is no active mining on the property and as for any future mining, Mr. Wagner did not know at this time. The team informed Mr. Wagner that the possibility of military ordnance on their property and areas around the said property is a real concern. The team told Mr. Wagner if he

had any questions or concerns call Mr. Greg Boghossian who is the POC for the COE Office in the Los Angeles District. In a final note, Mr. Wagner said the former SF Mineral Corporation is now Santa Fe Pacific Gold (see document I-20).

(20) Mr. Fred Sledd, who is a Public Land Management Specialist for the California State Lands Commission is knowledgeable about land in Section 16, Township 10 North, Range 21 East. He stated this section of land, which the State of California owns, is in the process of being purchased by the Federal Government (Department of Interior). He said this land is being purchased under the California Desert Protection Act (CDPA). When asked about the date of the transaction taking place, Mr. Sledd stated he has no knowledge of this, but feels within the next one to two years (see document I-21).

5. SITE ELIGIBILITY

a. **Confirmed Formerly Used Defense Site**

(1) The former Camp Ibis (proper) land usage and ownership by the War Department/DOD was confirmed (see document E-1). This site was used by the Army Ground Forces from November 1942 to March 1944 (see document F-12). However, there is an acreage discrepancy between the U. S. Army Corps of Engineers map dated 24 August 1948 and the current San Bernardino County Assessor's plat map numbers (see documents L-1 and L-2). When you use the numbers on the current plat maps the acreage of Camp Ibis (proper) comes to 9,595.87 (see documents G-4 and L-2). The areas in question are Sections 4, 5 and 6 of Township 10 north and Range 21 east. When looking at the historical Corps' map these sections of land appear to be one-third of a section or approximately 250 acres each. The current real estate acreage numbers shown on the plat maps are 4.57, 13.64 and 14.61 respectively, hence, the reason for the acreage discrepancy (see document G-4).

(2) Mr. Ron Morrison, who was a former Real Estate Specialist with the BLM Needles Office, stated he believes the individuals who surveyed this area made a mistake. He also stated probably after World War II the area was resurveyed and the acreage was corrected (see document I-7). In addition, Maureen Swanson from the San Bernardino County Assessor's Office was asked the question about the purpose of tracts in the middle of sections. Ms. Swanson stated that tracts are put into sections to correct the past incorrect survey lines. The historical map does not have

any tracts inserted, the current plat maps for this area have tracts inserted (see documents L-1, and L-2).

(3) Therefore, the acreage of Camp Ibis (proper) appears to be a lesser acreage of 9,595.87 rather than the 10,215.5 acres.

(4) Range numbers in Township 11 north appear to be incorrect on the U. S. Army Corps of Engineers Map dated 24 August 1948. In accordance with historical real estate documents and using current real estate maps, the sections of land that were a part of Camp Ibis (proper) do not appear in Range 21 east of Township 11 north. They appear in Range 20 East of Township 11 north (see documents G-7, G-8, L-1 and L-2).

(5) Transfer of Camp Ibis (proper) from the War Department back to the Department of Interior and the cancellation of permits from Southern Pacific Company and the State of California occurred in February/March 1945.

b. Potential Formerly Used Defense Site

(1) Because of the vastness of DTC/CAMA, the entire area was used for maneuvers and target ranges. However, some of these maneuver areas and ranges were never mapped. When the U. S. Army Corps of Engineers finally acquired the approximate 11 million acres for surplus disposal, they found the deduding that occurred before the transfer was not thoroughly or extensively completed. The Corps found ordnance contamination on the camp sites and outside the camps boundaries. This was also the case with Camp Ibis (proper), so the Corps assumed rights over the public and private lands and conducted surface sweeps. A historical letter by the Corps of Engineers Los Angeles District, dated 21 September 1956, compiles all the known contaminated lands in the DTC/CAMA. Also, an Affidavit from the Corps of Engineers Los Angeles District dated 13 September 1954 lists other areas of concern (see document F-17 and plate 5 and 6).

(2) A historical U.S. Army Corps of Engineers Map, No. 2277, dated 24 August 1948, show areas outside of Camp Ibis' (proper) boundaries that are restricted (see documents F-18, L-4, plates 5 and 6).

(3) Camp Ibis' associated firing ranges (23) were scattered far and wide. Ranges 1 thru 12, 16 thru 20, 22 and 23 are potential FUDS areas (see document F-1, plate 5

and 6). The four other ranges, 13, 14, 15 and 21, are additional acreages to this report (see plates 3 and 4).

(4) Another potential FUDS area is around the Goffs, California area. Not only does a historical document state Goffs had an ordnance depot, but an EOD/BLM incident report sites about 80 tons of ordnance being uncovered in the area. In an excerpt from the BLM report, it said "most of them found to be safe." These ordnance items were trucked to another site located at Township 10 north, Range 20 east, Section 34 and buried according to the BLM report (see document F-22 and plate 5). In association with the Goffs area, an interview with Mike McGill of the Needles BLM Office told the team of glass ampoules being discovered one mile north of town (see document I-5 and plate 5).

(5) In an interview with Mr. Bob Lyons of the San Bernardino County Sheriff's Department, the team was told of an explosive incident that happened in late January 1996. He stated that an intact mortar round was discovered on the eastern slopes of the Dead Mountains, but he did not know the exact location. At this time, the team has not received the EOD/County Sheriff's incident report from Mr. Lyons (see document I-8). The team believes the entire Dead Mountain Range to be suspect because of contaminated lands on either side (see plate 5).

(6) Mr. Butch Gates, in a telephone interview, told the team the approximate location of potential FUDS sites outside of Camp Ibis (proper) that he has personally discovered (see plate 6). Mr. Gates sent the team a hand-drawn map of the cantonment area on a topographical map (see document L-10). According to his map, it appears the cantonment area extends into two other sections of land; Section 24, Township 10 north, Range 20 east and Section 20, Township 10 north, Range 21 east. Historical real estate documents do not mention these two sections of land as being part of Camp Ibis (proper). However, the possibility does exist when the camps (cantonment areas) were overfilled with incoming troops, the troops were cantoned in other areas. Mr. Gates stated during the closing of Camp Ibis, burial of equipment and (possibly ordnance), took place approximately six-tenths of a mile east along the railroad tracks from the junction of Hwy 95 and the railroad tracks. He elaborated that the site is 25 yards northwest from the fence near the railroad tracks (see plate 6).

(7) A 1982 aerial photograph shows what may be a range (see document L-9 and plate 6). This potential range is off Ibis (proper) and looks somewhat similar to ranges 16

thru 19 (see document F-1). However, this aerial photograph does not show any of the Ibis ranges that are east of Camp Ibis (proper).

(8) The air strip serving Camp Ibis (proper) was located west of the headquarters area outside of Ibis boundaries in Township 10 north, Range 20 east, Section 12 (see documents F-21, K-1, L-9 and plate 2). To the best of the team's knowledge, this air strip was used for commuting purposes only. Since the camps were miles apart the commanding officers would fly from DTC's Headquarters to each individual camp. Interestingly, Mr. Butch Gates states there was a burial area at the south end of the runway (see document I-14 and plate 6). The team searched for the airstrip and the burial area, but could not locate either.

(9) Historical maps received from the National Archives show other areas of contamination by the World War II DTC/CAMA that are east and west of the Dead Mountains. These areas could be potential FUDS sites (see documents L-6, L-12 and plate 5).

(10) EOD/BLM reports site discoveries of ordnance items in other areas of the former DTC/CAMA area, but not within the vicinity of Camp Ibis (proper) (see document F-20).

(11) In May 1964, another military exercise took place in the former DTC/CAMA area, code named Desert Strike. A document dated 23 July 1964 shows a map of the maneuver area, discusses land acquisitions and cites general information on ordnance used in the exercise (see document F-24). The team retrieved maps from Mr. Butch Gates showing the contaminated areas left by Desert Strike (see document I-14 and plate 8).

6. VISUAL SITE INSPECTION

a. **General Procedures and Safety**

(1) During the period of 5 February through 15 February 1996, members of the Assessment Team, Mr. Greg W. Olson and Mr. Jerry Russell, visited the former Camp Ibis (proper) San Bernardino County, California. The primary task of the team was to assess potential OE presence and usage of the site as a camp and training area. The site inspection was limited to non-intrusive methods; i.e. subsurface sampling was not authorized nor performed.

(2) Real estate rights-of-entry were not obtained by the team due to the willingness of the current owners to

allow the team to visit their property. Owners were briefed on the non-intrusive nature of the inspection and the safety measures used by the inspection team.

(3) A site safety plan was developed and utilized by the assesment team to assure safety from injury during the site inspection of the area (reference B-3). Prior to the inspection, a briefing was conducted which stressed that OE should only be handled by military EOD personnel.

(4) Prior to the site visit, a thorough review of all available reports, historical documents, texts, and technical ordnance reference materials gathered during the historical records search was made to ensure awareness of potential ordnance types and associated hazards.

(5) During the inspection of the following areas, the team did not find any signs of chemical warfare material storage or use.

b. AREA A: Training Area

(1) The Training Area encompasses 7,721.11 acres, which is approximately 80% of Camp Ibis (proper) (see plate 3). The area's topography consists of Piute Wash which runs through the entire eastern half of the camp. This major wash has numerous smaller washes feeding into it which help shape the landscape of the eastern portion. The land closest to State Highway 95 that passes through the western edge is generally flat and sandy with some rocky areas and small depressions (see photo J-2). Approaching Piute Wash from the west, the terrain becomes hilly with ravines (washouts) between each hill. After crossing Piute Wash (east side), the terrain is flat for approximately 200 to 400 feet depending on the location in the wash, then steeper/larger hills and deeper valleys are formed because of the close proximity of the Dead Mountains (see photos J-8 and J-9). The landscape on this side is more firm and rocky compared to the west side of Piute Wash. Further east at the boundaries of Camp Ibis (proper) and beyond, the terrain starts a gradual to moderate incline toward the base of the Dead Mountains.

(2) Just inside Area A on the west side is a 50,000 gallon water reservoir used by Camp Ibis (see photo J-3). Located on the south side of the reservoir, approximately 30 feet to the southeast is an area of debris (see photo J-4). This area of debris contained fragmentation pieces from 75mm, 105mm, 60mm/81mm mortar fragments and fin assemblies from 81mm mortars (see documents D-6 and D-8 and photos J-5 and J-6). Approximately 20 feet further to the south,

strands of barbed wire were partially buried (see photo J-7).

(3) Throughout the entire length of Piute Wash, west into the cantonment area and east to the camp boundaries, numerous OE items were discovered. Shrapnel was the most numerous items discovered on both sides of Piute Wash and within the wash area itself (see photos J-10 thru J-14). These pieces of shrapnel range from 60mm mortars to 155mm projectile. Also located in the fragment areas was a visible impact site (see photo J-15). Some of the items found were located on supposed small arms ranges within Camp Ibis (proper) (see plate 7). Three of the ranges located within Camp Ibis (proper) were two .30 caliber ranges of 100/300 yards, known distance, and a .30 caliber 1,000 inch rifle/BAR, known distance (see documents D-1, D-7, F-1 and plate 6). The other range which originated within Ibis's boundaries is the .50 caliber machine gun moving target range (see documents D-1, D-7, F-1 and plate 7).

(4) Projectile and grenade fuzes were also discovered within Camp Ibis (proper) on both sides of Piute Wash within supposed small arms ranges (see photos J-16 thru J-19 and plate 6). M204 grenade fuzes (M204) from HE fragmentation grenades and M201 fuzes from either M18, M34 or AN-M8 smoke grenades (see document D-3). The projectile fuzes (M557) can either be assembled to a 75mm, 76mm, or 105mm high explosive shell (see document D-4).

(5) Numerous burial sites were discovered in this area. Some of the sites did have exposed items but no ordnance items were noticed. Others did not have anything exposed, so the contents are unknown (see photos J-20 thru J-23).

(6) An area on the west side of State Highway 95, in the northern part of the camp is where the team discovered a large number of M1 practice mine pieces such as safety forks, pressure bars (spiders), and pieces of fuzes bodies. A large number of M1 practice mine pieces were in close proximity of each other. It looked as if a large number of M1 practice mines were destroyed at this location by burning. The team did not see any intact M1 practice mines within the area (see document D-9, photo J-24 and plate 7).

(7) During a site related interview, Mr. Robert Derichsweiler showed the team various (empty) ordnance items he found in the DTC/CAMA area. Of all the items he had in his possession, he said the 2.36 inch M7 practice rocket was

found near the eastern boundary of Camp Ibis (proper) (see documents I-9, D-5, photo J-32 and plate 6). The team walked through the location but did not discover any like items or possible targets.

(8) Small arms cartridge cases and projectiles were discovered on either side of State Highway 95 and Piute Wash. The items were expended .30, .45 and .50 caliber ammunition (see document D-7, photos J- 25 thru J-28 and plate 6). In one particular area east of Piute Wash and in the southern portion of Camp Ibis (proper), the team located a possible .45 caliber pistol/submachine gun range. Pieces of .45 caliber slugs were discovered on the side of a hill and a possible firing point approximately 200 feet southwest from this area. This possible firing point had empty .45 cartridge cases scattered around in close proximity (see photos J-8, J-9, J-26 and plate 2).

(9) A possible target, made of plaster board with pulley, was discovered in a ravine on the .50 caliber moving target range. However, .50 caliber expended ammunition was not discovered in the vicinity (see document D-1, photo J-29 and plate 7).

(10) Some evidence of the Desert Strike military exercise passing through Camp Ibis (proper) was discovered. Empty blank 7.62mm cartridge cases were scattered in several places throughout the camp (see photos J-30, J-31 and plate 7). As for other ordnance items used in the exercise, a historical document states approximately 850 short tons of ordnance and chemical class V ammunition was used (see document F-24). Maps retrieved from Mr. Butch Gates shows the areas of Desert Strike contamination (see documents F-23, I-14 and plate 8).

(11) Tank tracks were located throughout the camp, more in some areas than others. A number of them were probably made during World War II training, but some could have been made during Desert Strike.

c. AREA B: Other Lands

(1) This area is located around State Highway 95, and has relatively flat sandy soil with small washout areas (see photo J-1 and plate 3).

(2) When the team walked through this land, areas of ground were fenced off by rocks that formed large squares, rectangles and outlines of roads (see photo J-35). No historical photos for Camp Ibis (proper) show these rock

formations, but other historical photos of other DTC/CAMA camps do show similiar rock alignments (see document K-3). The team believes this area contained the troop's tent quarters, command tents and administrative tents. Also, during the inspection parts of broken, weathered tent poles were discovered. After the team passed through these rock alignment areas, the team noticed a numerous amount of tank tracks. However, no OE was observed in this area.

(3) A .50 caliber projectile with tracer hole was discovered near a camp fire within this area (see photo J-28 and plate 7). The team looked in the vicinity, but did not find any other signs of OE.

(4) A burial site was discovered within Area B, but the team did not know the origin of this or the purpose (see photo J-34 and plate 7). This could be one of several burial sites scattered throughout the camp. The team did not find any OE debris within this area.

d. AREA C: Additional Acreage

(1) Area C is not included as a part of the original site, but should be considered because of ranges originating within Camp Ibis (proper) then extending over the boundaries (see document F-1, plates 2 and 3). Three ranges have firing points and target areas within Ibis' boundaries, but the safety zones extend over. The other, a .50 caliber moving target range, has the firing point within the boundaries, but the target area and safety zone are outside of the boundary (see documents D-1 and D-7). When the team traversed these areas, pieces of shrapnel were found, but no small arms ammunition items discovered. Within the middle/northern part of the .50 caliber range, a possible target made of plaster board with a pulley system was discovered in a ravine (see document D-1 and photo J-29). However, no expended small arms ammunition was discovered within this area. In an interview with BLM Ranger Mick Joplin, he stated he has discovered projectile fragments in the .50 caliber moving target area, too (see document I-2).

(2) Desert Strike maps showing contaminated areas in the former DTC/CAMA show the northern part of this area being included in the contaminated area (see plate 8).

(3) The terrain for the additional acreage has typically large hills and deep ravines (washouts) throughout the entire area (see photo J-9). The soil content consists mostly rock, except for the washout areas which is sandy

with some rocky areas. As you proceed east towards the Dead Mountains the soil becomes very firm and 100% rock covered of various sizes.

7. EVALUATION OF ORDNANCE HAZARDS

a. **General Procedures**

(1) The site was evaluated to determine confirmed, potential, or uncontaminated ordnance presence. Confirmed ordnance contamination is based on verifiable historical evidence or direct witness of ordnance items. Verifiable historical record evidence consists of ordnance items located on site since site closure and documented by local bomb squads, military Explosive Ordnance Demolition (EOD) Teams, newspaper articles, correspondence, and current findings. Direct witness of ordnance items consists of the site inspection team directly locating ordnance items by visual inspection. Additional field data is not needed to identify a confirmed site.

(2) Potential ordnance contamination is based on a lack of confirmed ordnance presence. Potential ordnance contamination is inferred from records or indirect witness. Inference from historical records would include common practice in production, storage, or disposal at that time, which could have allowed present day ordnance contamination. Potential ordnance contamination could also be based on indirect witness or from present day site features. Additional field data is needed to confirm potential ordnance subsites.

(3) Uncontaminated ordnance subsites are based on a lack of confirmed or potential ordnance evidence. There is no reasonable evidence, either direct or inferred, to suggest present day ordnance contamination. Additional field data is not needed to assess uncontaminated ordnance subsites.

b. **AREA A: Training Area**

(1) During the site visit the team discovered numerous OE fragmentation pieces; some located in supposed small arms range areas and other fragments outside of the ranges in various locations of Area A (see document F-1, photos J-10 thru J-14 and plate 6). The fragmentation pieces were from 75mm/76mm, 105mm, 155mm HE shells and 60mm/81mm mortars (see documents D-6 and D-8). Grenade fuzes and projectile fuzes were also discovered within and outside of the small arms ranges, too (see documents D-3 and D-4,

photos J-16 thru J-19 and plate 7). Because of a discrepancy between document F-1 and what was actually discovered during the site investigation, the actual existence of the ranges on document F-1 is questioned. The team did discover what looked like a plaster board target with a pulley system in a ravine within the .50 caliber moving target range (see photo J-29 and plate 7). This could have been some crude moving target system to support the .50 caliber range (see document D-1). However, the team did not find any expended .50 caliber ammunition within the vicinity. Usually earthen berms are associated with small arms ranges for back stops, but none were noticed. Also, three of the four ranges were known distance ranges (see document F-1). This means more development went into these particular ranges than any other ranges (see document D-1). If these ranges did exist, more than likely the large hills east of the Piute Wash were the primary back stop, with the Dead Mountain Range in the immediate vicinity being the catch all for the safety zones. An aerial photo from BLM dated 1982 shows ranges far to the northeast of Camp Ibis (proper), but none within Ibis' boundaries (see document L-9). The ranges appear to be ranges 16 thru 19 in document F-1. At this time the team feels if these ranges did actually exist, they were used for other ordnance items besides small arms ammunition.

(2) Also within Area A and one of the small arms range, the team discovered an impact site with pieces of HE fragmentation (see photo 15 and plate 7). This further makes this Area A suspect for being used other than for small arms ammunition.

(3) Outside of the small arms ranges, a MK II HE grenade fragment was discovered in Piute Wash (see document D-3, photo J-11 and plate 7). This area could have been a grenade court with Piute Wash being the target area. When the team searched the Piute Wash area and the west side of the wash, no other fragments were discovered.

(4) The team did discover what could possibly be an undocumented .45 caliber pistol/submachine gun range (see document F-1, photos J-8 and J-9 and plate 7). Empty .45 caliber cartridge cases were discovered approximately 200 feet from a hill where .45 caliber slugs were discovered (see photo J-26). This probable range east of Piute Wash is in one of the areas where the team believes tank training occurred due to the presence of numerous tank tracks. In document F-1, range number 9 is a Vehicle Combat Range (small caliber). Possibly, this was a similar area where the tanks and tank destroyer personnel dismounted or

remained in their vehicles and fired their .45 caliber pistols/submachine guns into these hills. In an interview with a Mr. Jerry Lyons, he heard there was a .45 caliber submachine gun range east of Piute Wash and within Ibis' boundaries, but he did not know the exact location (see document I-8).

(5) Numerous burial sites were discovered within Area A on either side of Piute Wash (see photos J-20 thru J-23). Even though no OE items were noticed on the surface of some exposed burial sites, it is possible OE exists below the surface. Mr. Butch Gates stated that ordnance items could be buried within these sites (see document I-14). There is a possibility additional unknown burial sites still exist in Area A.

(6) Pieces of M1 practice mines were discovered in Area A, west of State Highway 95 (see document D-9, photo J-24 and plate 6). The team could not find any signs of this being a mine field area or a possible storage area. The team searched the vicinity looking for intact M1 practice mines, but none were discovered. The team feels because of the numerous mine pieces located within a close proximity of each other may indicate some form of destruction may have occurred here. It is not believed that open detonation occurred, but burning of the practice mines was the choice because of the highway nearby.

(7) According to a site related interview, a 2.36 inch M7 practice rocket was discovered near the eastern boundary of Ibis (proper) (see documents D-5, I-9, L-7 and photo J-32). The team walked through this area, but nothing was found in relation to the 2.36 inch rocket.

(8) An abundance of mortar shrapnel and fin assemblies were discovered approximately 30 feet south of the water reservoir (see photos J-3, J-5, J-6 and plate 7). Because of the close proximity to the water reservoir and the pattern of debris, the team believes the debris was deposited there by souvenir hunters or by the result of pass clearing operations by civilians or military.

(9) In a site related interview, Mr. Mick Joplin a BLM Ranger, received information about a large caliber round being discovered in Piute Wash within Area A (see documents I-2 and L-7). The team was escorted by Mr. Joplin to the approximate location but nothing was discovered.

(10) In a site related interview, Mr. Butch Gates stated there is contamination, including ordnance,

throughout the entire Piute Wash and 300 to 400 yards on either side of the wash (see document I-14).

(11) A Certificate of Clearance dated 15 July 1950 along with Corps of Engineers Map No. 2277 show the areas within Camp Ibis (proper) that are still restricted (see documents F-18 and L-4). Parts of Area A fall within this restriction. When the team walked through this restricted area, pieces of OE fragments, M1 practice mines and numerous burial sites were discovered. The possibility of subsurface unexploded ordnance is a concern within this restricted part of Area A.

(12) Historical maps retrieved from Mr. Butch Gates mark the contaminated areas that the Desert Strike military exercise produced. The maps show parts of this area contaminated (see document L-11 and plate 8). At this time, the little documentation that the team has in their possession does not state what kind of ordnance items were used. In an historical document the team does have in hand, states approximately 850 short tons of ordnance and chemical class V ammunition was used (see document F-24). At this time, research teams are stilling seeking information.

(13) The use of toxic chemical training at the site cannot be determined, but chemical training did exist in the DTC/CAMA (see document F-11). There was a chemical depot located in Needles approximately 20 miles away (see document F-10). Additionally, a historical document states chemical warfare depots operated in the field (see document F-9). At this time, the team cannot locate any documents or maps stating where these field depots and exercises occurred. Another historical document states tear gas was sprayed on the troops during maneuvers, but this does not answer where individual gas mask training took place (see document F-8). The possibility exists that gas mask training was conducted within large tents on Camp Ibis (proper). Also, the burial sites within Ibis (proper) could contain chemicals that were not shipped out when the camps closed. Therefore, the entire camp (proper) could be suspect. Caution should be used when investigating the burial sites not only for OE, but for chemicals and chemical warfare material also.

(14) Excluding the spent small arms ammunition, Area A should be considered to have **confirmed** ordnance contamination because of the numerous ordnance fragments discovered and the numerous burial sites. The possibility of intact OE being in this area is a concern. A U. S. Army Corps of Engineers Map dated 24 August 1948 shows part of Area A cleared of any OE and any kind of land development

could be authorized (see document L-4 and plate 3). However, the team questions the completeness of this clearance because of the numerous OE fragments, fuzes and buried sites found in the area.

c. Area B: Other Lands

(1) The only piece of OE discovered was a .50 caliber slug, but expended small arms ammunition is not considered OE (see photo J-28 and plate 7). The team looked in the vicinity of this area and could not find any other OE or OE debris. There were numerous tank tracks within these areas, especially in Section 13, Township 10 north, Range 20 east. These tank tracks were probably headed towards a large caliber tank range No. 23 (see document F-1). This range was supposedly located west of Camp Ibis (proper).

(2) Also within this Area, the team discovered what appears to be a burial site (see photo J-34 and plate 7). There were rumors of buried bunkers and other items in and around Camp Ibis (proper). The team did not notice any OE in the general vicinity. Because of the strong framework that appears in the opening, it looks as if something large may have been buried here. Mr. Butch Gates mentioned there are probably more unknown burial sites throughout the entire camp. This includes both sides of Hwy 95. Area B is located between two known burial sites, one site south of the airstrip and the other near the railroad tracks (see plate 6). So, it seems highly unlikely for this area to be spared of any burial sites. There is a strong possibility due to the vast quantities of ordnance, supplies and equipment associated with these camps, items could have been left behind and buried, which was the accepted practice during that time frame. This burial practice also included ordnance items.

(3) Because of the numerous (known and unknown) burial sites found throughout parts of the camp, including this area and the unknown contents within the majority of these burial sites, a *credible effort* is needed to seek out these burial sites and survey the contents to ensure no OE hazard is present. The same *caution* should be followed for chemicals and chemical warfare material when investigating these burial sites as stated in Area A. Therefore, the hazard in Area B can be considered **potential**.

d. Area C: Additional Acreage

(1) Again, Area C like Area A, has some parcels within the restricted area designated by a clearance

certificate and Corps of Engineers Map No. 2277 (see documents F-18 and L-4). The team does not question the northern part of Area C being restricted, but does not agree with the southern part of Area C being unrestricted. The team discovered OE fragments within this area and the possibility of unexploded ordnance remaining in this area is a concern.

(2) These lands start at the eastern boundaries of Area A and proceed toward the Dead Mountains (see plate 3). When the team walked through these areas where supposed small arms ranges were once located, the team discovered HE shrapnel and parts of projectile fuzes. The only evidence of a target was discovered within the .50 caliber moving target range (see document D-1 and photo J-29). Because of the existence of the crude target pulley system, perhaps the .50 caliber machine gun range did exist. But, like the other small arms ranges, no spent small arms ammunition was discovered in these vicinities. Also, Mr. Joplin said he has discovered HE shrapnel in the .50 caliber moving target range (see documents I-2 and L-9). Also, a 1982 aerial photo does not show any ranges in or near Camp Ibis (proper), but it does show a range far to the northeast. However, if in fact these four ranges did exist, they were possibly used for other purposes. Because of the OE shrapnel discovered and the possibility of intact ordnance being within this area, the area is considered to have **confirmed** OE contamination.

(3) Also, historical maps retrieved from Mr. Butch Gates regarding the Desert Strike military exercise, show parts of this area to be contaminated (see document L-11 and plate 8). At this time, the team has little documentation of the ordnance items used in this exercise. A historical document states approximately 850 short tons of ordnance and chemical class V ammunition was used (see document F-24). Unless further documentation can be located, the worst case scenario should be considered. Therefore, this area is also suspect for CWM. In conclusion with this area, burial sites discovered should be addressed with *caution* as stated in Area A.

8. SITE ORDNANCE TECHNICAL DATA

a. End item technical Data.

(1) Numerous types of ammunition items were used at the DTC/CAMA for testing purposes and combat exercises. Table 8-1 tries to encompass this numerous listings of ammunition and explosive fillers used in the desert for

training purposes. Inclusion, in Table 8-1 does not insinuate OE presence at Camp Ibis.

(2) Technical data and drawings relative to the end items and component parts listed in table 8-1 can be found in Appendix D.

TABLE 8-1 AMMUNITION USED/FOUND AND EXPLOSIVES/CHEMICAL FILLER		
Item	Type/Model	Filler Weight
Cartridge, Ball .22 Cal, Long Rifle	None	40 gr lead bullet Brass or gilding metal cartridge case
Propellant powder		2.86 gr smokeless
Small Arms Ammo .30 Cal	M2 Ball M2 AP	Lead Antimony Tungsten Chrome Steel with gilding metal jacket
	M1 Tracer T10 Tracer M1 Incendiary	Tracer Composition Incendiary
Composition Propellant		Single base or Double-base (DB) powder
Small Arms Ammo .45 Cal M1911 Ball		230 gr lead core hardened with antimony covered by gilding metal jacket
Primer Composition Propellant	F.A. 70	0.37 gr 5 gr smokeless powder
Small Arms Ammo .50 Cal	M2 Ball M2 AP	Soft Steel Tungsten Chrome Steel with gilding metal jacket
	M1 Tracer M10 Tracer M17 Tracer M21 Tracer M1 Incendiary M23 Incendiary	Tracer Composition Tracer Composition Incendiary Mixture
Propelling Charge		Single base or Double- base (DB) powder

TABLE 8-1 (continued)
AMMUNITION USED/FOUND AND EXPLOSIVES/CHEMICAL FILLER

Item	Type/Model	Filler Weight
Shell, Fixed, H.E. 37mm	M54	Lead azide 0.10# Tetryl
Fuze, P.D. Detonator	M56	Primer mixture Tetryl
Booster		Tetryl
Tracer, S.D.		Tracer mixture
Relay Pellet		Black powder
Propelling Charge		0.38# FNH powder, M1
Primer, percussion	M38A2	Primer mixture 55 gr black powder
Shell, Fixed, H.E. 37mm	M63	0.085# TNT
Fuze, B.D. Detonator	M58	Priming mixture Lead azide Tetryl
Booster		Tetryl
Tracer, S.D.		Tracer mixture
Relay Pellet		Black powder
Propelling Charge		0.44# FNH powder, M1
Primer, percussion	M38A2	Primer mixture 55 gr black powder
Shot, Fixed, A.P.C. 37mm	M51	Hard steel core
Tracer		Tracer composition
Propelling Charge		0.15# FNH powder, M1 or M5
Primer, percussion	M38A2	See above
Shot, Fixed, A.P.C. 37mm	M59 or M59A1	Hard steel core
Tracer		Tracer composition
Propelling Charge		0.31# FNH powder, M1 or M5
Primer, percussion	M38A2	0.52# FNH powder See above
Shot, Fixed, A.P. 37mm	M74	Solid steel slug
Tracer		Tracer composition
Propelling Charge		0.44# FNH powder, M1
Primer, percussion	M38A2	See above

TABLE 8-1 (continued)		
AMMUNITION USED/FOUND AND EXPLOSIVES/CHEMICAL FILLER		
Item	Type/Model	Filler Weight
Shot, Fixed, A.P. 37mm Tracer Propelling Charge Primer, percussion	M80 M38A2	Solid steel slug Tracer composition 0.56# FNH powder See above
Cartridge, AP-T 57mm Tracer Propelling Charge Primer, percussion	M70 M1B1A2	Hardened steel solid shot 73 gr red tracer composition 20 gr igniter charge 2.25# FNH powder, M1 Primer composition 100 gr black powder
Cartridge, APC-T 57mm Tracer Propelling Charge Primer, percussion	M86 M1B1A2	Hardened steel solid shot 73 gr red tracer composition 20 gr igniter charge 2.25# FNH powder, M1 See above
Cartridge, APC-T 57mm Bursting Charge Fuze, B.D. Primer Detonator Charge Tracer Propelling Charge Primer, percussion	M86 M72 M1B1A2	0.094# Explosive D Tetryl pellet Primer mixture No. 26 Black powder delay pellet Lead azide Tetryl 73 gr red tracer composition 20 gr igniter charge 2.25# FNH powder, M1 See above
Shell, H.E. 60mm Fuze, P.D. Detonator	M49A2 M52	0.34# TNT Priming Mixture (Mercury Fulminate) Lead Azide

TABLE 8-1 (continued)
AMMUNITION USED/FOUND AND EXPLOSIVES/CHEMICAL FILLER

Item	Type/Model	Filler Weight
Booster		Tetryl
Percussion Primer primer mixture	M32	0.37 gr No. 70
		1.65 gr black powder pellet
Ignition Cartridge	M5A1	40 gr DB powder
Propellant Increments	M3	140 gr DB powder
Shell, Practice 60mm	M50A2	0.05# Black Powder
Fuze, P.D.	M52	See above
Percussion Primer	M32	See above
Ignition Cartridge	M5A1	See above
Propellant Increments	M3	See above
Shell, Illuminating 60mm	M83	Illuminant Charge 52.1% Barium Nitrate 10.4% Sodium Nitrate 26.0% Aluminum 5.2% Sodium Oxalate 4.1% Sulfur 1.1% Castor Oil 1.1% Linseed Oil Quick Match First Fire Charge 0.74oz Pellet 25% black powder Priming Charge 0.055oz black powder
Ignition Cartridge	M5A1	See above
Percussion Primer	M32	See above
Propellant Increments	M4	112 gr DB powder
Shell, Smoke, WP 60mm	M302	White Phosphorus
Fuze, P.D.	M82	UNKNOWN
Ignition Cartridge	UNKNOWN	
Percussion Primer	UNKNOWN	
Propellant Increments	UNKNOWN	

TABLE 8-1 (continued)
AMMUNITION FOUND/USED AND EXPLOSIVES/CHEMICAL FILLER

Item	Type/Model	Filler Weight
Shell, Training 60mm	M69	INERT
Ignition Cartridge	M4	47 gr DB powder
Shell, Training 81mm	M68	INERT
Ignition Cartridge	M3	120 gr DB powder
Shell, H.E. 81mm	M43A1	1.22# TNT
Fuze, P.D. Detonator	M52	Priming Mixture (Mercury Fulminate) Lead Azide Tetryl
Booster Percussion Primer	M33	0.37 gr No. 70 primer mixture 1.65 gr black powder pellet
Ignition Cartridge	M6	120 gr DB powder
Propellant Increments	M1	700 gr DB powder
Shell, WP Smoke Phosphorus 81mm	M57	4.04# White
Fuze, P.D.	M52	See above
Ignition Cartridge	M3 (old) M6 (new)	See above See above
Percussion Primer	M34	See above
Propellant Increments	M2	820 gr DB powder
Shell, H.E. 81mm	M56	4.31# TNT
Fuze, P.D. Primer Delay Pellet Relay Detonator	M53	UNKNOWN Black Powder Lead Azide Tetryl Lead Azide Tetryl Tetryl
Lead Charge Booster		Tetryl Tetryl
Fuze, TSQ Primer Time-train pellet Relay pellets Detonator Booster	M77	UNKNOWN Black powder Black powder UNKNOWN Tetryl

TABLE 8-1 (continued)
AMMUNITION USED/FOUND AND EXPLOSIVES/CHEMICAL FILLER

Item	Type/Model	Filler Weight
Percussion Primer	M34	0.37 gr No. 70 primer mixture 1.65 gr black powder pellet
Ignition Cartridge	M3 (old) M6 (new)	See above See above
Propellant Increments	M2	820 gr DB powder
Shell, H.E., 75mm, semi-fixed	M48	1.49# TNT
Fuze, P.D. Detonator	M48A2	
Superquick Delay		Lead azide Compressed black powder pellet
Relay		Lead azide pellet
Booster Detonator	M20A1	Lead azide over tetryl
Closing cup Booster pellet		Tetryl Tetryl
Propelling Charge Primer	M1B1A2	1.06# FNH powder, M1 See above
Shell, H.E., A.T. 75mm, fixed	M66	1.00# Pentolite
Fuze, B.D. Detonator	M62	
Slider charge Booster Booster		Priming mixture Lead Azide Tetryl Tetryl Tetryl Tetryl
Propelling Charge Primer, percussion	M1B1A2	1.04# FNH powder, M2 See above
Shell, Smoke, WP Phosphorus	M64	1.35# White
75mm, semi-fixed Fuze, P.D. Detonator	M57	
Superquick		Lead azide
Burster Detonator relay	M6	Lead azide over tetryl

TABLE 8-1 (continued)
AMMUNITION USED/FOUND AND EXPLOSIVES/CHEMICAL FILLER

Item	Type/Model	Filler Weight
Burster charge	M8	1 oz. tetryl
Propelling Charge		1.04# FNH powder, M1
Primer, percussion	M1B1A2	See above
Shell, H.E., 76mm, fixed	M42A1	0.86# TNT
Fuze, P.D.	M48A2	
Detonator		
Superquick		Lead azide
Delay		Compressed black powder pellet
Relay		Lead azide pellet
Booster	M20A1	
Detonator		Lead azide over tetryl
Closing cup		Tetryl
Booster pellet		Tetryl
Propelling Charge		3.75# FNH powder, M1
Primer	M28A2	Primer composition 300 gr black powder
Shell, A.P.C. 76mm, fixed	M62A1	0.144# Explosive D
Fuze, B.D.	M66A1	
Detonator-booster assembly		Tetryl booster pellet
Intermediate detonating charge		Lead Azide and tetryl
Primer		Primer mixture No. 26
Delay pellet		Black powder
Tracer		Red tracer composition
Propelling Charge		3.75# FNH powder, M1
Primer	M28A2	Primer composition 300 gr black powder
Shell, H.E., 90mm, fixed	M71	2.04# TNT
Fuze, P.D.	M48A2	
Detonator		
Superquick		Lead azide
Delay		Compressed black powder pellet
Relay		Lead azide pellet

TABLE 8-1 (continued)		
AMMUNITION USED/FOUND AND EXPLOSIVES/CHEMICAL FILLER		
Item	Type/Model	Filler Weight
Booster	M20A1	
Detonator		Lead azide over tetryl
Closing cup		Tetryl
Booster pellet		Tetryl
		300 gr black powder
Propelling Charge		7.31# FNH powder, M1
Primer	M28A2	Primer composition
Shell, A.P.C.	M82	0.44# Explosive D
90mm, fixed		
Fuze, B.D.	M68	
Detonator-booster assembly		Tetryl booster pellet
Intermediate detonating charge		Lead Azide and tetryl
Primer		Primer mixture No. 26
Delay pellet		Black powder
Tracer		Red tracer composition
Propelling Charge		7.31# FNH powder, M1
Primer	M28A2	Primer composition
		300 gr black powder
Shell, H.E.,	M1	4.8# TNT
105mm, semi-fixed		
Fuze, P.D.	M48A2	
Detonator		Lead azide
Superquick		Compressed black powder pellet
Delay		
Relay		Lead azide pellet
Booster	M20A1	
Detonator		Lead azide over tetryl
Closing cup		Tetryl
Booster pellet		Tetryl
Propelling Charge		3.04# FNH powder, M1
Primer	M1B1A2	See above
Shell, H.E.,	M38A1	3.63# TNT or
105mm, fixed		50-50 amatol
Fuze, M.T.	M43	

TABLE 8-1 (continued)
AMMUNITION USED/FOUND AND EXPLOSIVES/CHEMICAL FILLER

Item	Type/Model	Filler Weight
Primer, percussion Pellet		UNKNOWN Compressed black powder
Magazine charge Booster Detonator	M20A1	Black powder Lead azide over tetryl
Closing cup Booster pellet Propelling Charge Primer, percussion	M28A1	Tetryl Tetryl 11# FNH powder, M1 Primer composition 300 gr black powder
Shell, Practice 105mm, fixed Fuze, M.T.	M38A1 M43	8 oz. black powder
Primer, percussion Pellet		UNKNOWN Compressed black powder
Magazine charge Booster Detonator	M20A1	Black powder Lead azide over tetryl
Closing cup Booster pellet Propelling Charge Primer, percussion	M28A1	Tetryl Tetryl 11# FNH powder, M1 Primer composition 300 gr black powder
Shell, H.E., A.T. Pentolite 105mm, semi-fixed Fuze, B.D.	M67 M62	2.93# 50/50
Detonator		Priming mixture Lead Azide Tetryl
Slider charge Booster Booster Propelling Charge Primer, percussion	M28A2	Tetryl Tetryl Tetryl 1.60# FNH powder, M1 Primer composition 300 gr black powder

TABLE 8-1 (continued)
AMMUNITION USED/FOUND AND EXPLOSIVES/CHEMICAL FILLER

Item	Type/Model	Filler Weight
Shell, H.E. 155mm	M107	15.13# TNT
Fuze, P.D. Detonator Superquick Delay	M51A4	Lead azide Compressed black powder pellet
Relay Booster Detonator	M21A4	Lead azide pellet Lead azide over
tetryl Closing cup Booster pellet Propelling Charges	M3	Tetryl Tetryl 5.94# FNH powder, M1
Primer, percussion	Mk. IIA4	Priming composition 17 gr black powder
Rocket, HEAT 2.36-inch Fuze Detonator	M6, M6A1, M6A3 None	0.5# 50/50 Pentolite Priming Mixture Lead Azide Tetryl Tetryl Sticks of DB powder Black powder
Booster Propellant Squib		
Rocket, HEAT 2.36-inch Fuze Propellant	M6A3D None	0.5# 50/50 Pentolite See above T1E1 salted powder
Rocket, HEAT 2.36-inch Fuze Propellant	M6A3F None	0.5# 50/50 Pentolite See above M7 (T4) powder
Rocket, HEAT 2.36-inch Fuze, BD Propellant	M6A4 M400	0.5# 50/50 Pentolite M7 (T4) powder

TABLE 8-1 (continued)
AMMUNITION USED/FOUND AND EXPLOSIVES/CHEMICAL FILLER

Item	Type/Model	Filler Weight
Rocket, HEAT 2.36-inch Fuze, BD Propellant	M6A5 M401	0.5# 50/50 Pentolite M7 (T4) powder INERT
Rocket, Practice 2.36-inch Propellant Squib	M7, M7A1, M7A3, M7A4	Sticks of DB powder Black powder
Rocket, Practice 2.36-inch Propellant	M7A5	INERT T1E1 salted powder
Rocket, Practice 2.36-inch Propellant	M7A6	INERT M7 (T4) powder
Rocket, WP Smoke Phosphorus 2.36-inch Fuze Detonator Detonator-Burster Propellant Squib	M10 None	0.9# White Priming Mixture Lead Azide Tetryl UNKNOWN Sticks of DB powder Black powder
Rocket, WP Smoke Phosphorus 2.36-inch Fuze, BD Propellant	M10A3 M401	0.9# White M7 powder
Rocket, HC Smoke 2.36-inch Fuze Detonator Igniter Propellant Squib	T27E1 None	1# HC Priming Mixture Lead Azide Tetryl UNKNOWN Sticks of DB powder Black powder

TABLE 8-1 (continued)
AMMUNITION USED/FOUND AND EXPLOSIVES/CHEMICAL FILLER

Item	Type/Model	Filler Weight
Rocket, Incendiary 2.36-inch Fuze Detonator	T31 None	1.1# Thermate Priming Mixture Lead Azide Tetryl UNKNOWN
Igniter Propellant Squib		Sticks of DB powder Black powder
Grenade, Hand, Fragmentation Powder	MK II	Bursting Charge 0.74oz E.C. Blank
Fuze, detonating Primer	M10 MK V	0.4 gr Primer
Mixture Delay - Time Fuse		2" Black Powder train
Detonator		7 gr loose Black Powder
Grenade, Hand, Offensive Fuze, detonating	MK IIIA2 M6A2	Bursting Charge .5# Pressed TNT UNKNOWN UNKNOWN UNKNOWN UNKNOWN
Primer Delay Detonator		
Grenade, Hand, CN Tear Fuze, igniting	M7 M200A1	CN Similar to M10 above
Grenade, HC Smoke Fuze, igniting	M8 M200A1	HC See above
Grenade, Colored Smoke Fuze	M16 None	UNKNOWN See above
Grenade, Colored Smoke Fuze, igniting	M18 M200A1	.72# Smoke Mixture See above
Grenade, Red Smoke Fuze, igniting	AN-M3 M200A1	Red Smoke Mixture See above

TABLE 8-1 (continued) AMMUNITION USED/FOUND AND EXPLOSIVES/CHEMICAL FILLER		
Item	Type/Model	Filler Weight
Grenade, White Phosphorus	M15	0.9# White
Phosphorus, Smoke Fuze, detonating	M6A3	See above
Grenade, Rifle, Phosphorus WP Smoke	M19	8.5 oz. White
Detonator	None	UNKNOWN
Grenade, Rifle, colored	M22	6.5 oz. standard
Colored Smoke Detonator	None	smoke fillings UNKNOWN
Grenade, Rifle, Pentolite	M9A1	4 oz. 50/50
Antitank Fuze	None	Priming Mixture Lead Azide Tetryl
Booster		Tetryl
Grenade, Rifle, HC	None	10.75 oz. HC
Grenade, Rifle, Practice	M11A3	INERT

b. Data of Ordnance weight and fillers.

Table 8-2 has been developed to provide information on the explosive/chemical compounds used in the ordnance cited in table 8-1.

TABLE 8-2 CHEMICAL DATA OF ORDNANCE FILLERS		
Filler Formula	Synonym(s)	Chemical
Amatol (50-50) or (80-20)		
Ammonium Nitrate		NH ₄ NO ₃
TNT	2,4,6-trinitrotoluene	CH ₃ C ₆ H ₂ (NO ₂) ₃
Ammonium Nitrate		NH ₄ NO ₃
Antimony Sulfide		Sb ₂ S ₃
Ballistite	(see DB powder)	
Barium Nitrate		Ba(NO ₃) ₂

TABLE 8-2
CHEMICAL DATA OF ORDNANCE FILLERS

Filler	Synonym(s)	Chemical Formula
Black Powder		
74% Potassium Nitrate	Saltpeter; Niter	KNO_3
11% Sulfur		S
16% Charcoal		C
Charcoal		C
CN	Chloroacetophenone	$C_6H_5CO-CH_2Cl$
Dibutylphthalate	Gelling agent	$C_6H_4(CO_2C_4H_9)_2$
Dinitrotoluene	DNT	$C_6H_3CH_3(NO_2)_2$
Diphenylamine	stabilizer DPA	$(C_6H_5)_2NH$
Double-base Powder	Ballistite	
60% Nitrocellulose	Guncotton; Pyroxylin	$[C_6H_8O_5(NO_2)_3]_n$
39% Nitroglycerin		$CH_2NO_3CHNO_3CH_2NO_3$
0.75% Diphenylamine	Stabilizer DPA	$(C_6H_5)_2NH$
E. C. Blank Powder	(single-based compound)	
80.4% Nitrocellulose	Guncotton; Pyroxylin	$[C_6H_8O_5(NO_2)_3]_n$
8% Potassium Nitrate	Saltpeter	KNO_3
8% Barium Nitrate		$Ba(NO_3)_2$
3% Starch		
0.6% Diphenylamine	Stabilizer DPA	$(C_6H_5)_2NH$
Explosive D	Ammonium Picrate; Ammonium Carbazoate; Ammonium Picronitrate	$C_6H_2(NO_2)_3ONH_4$
FNH Powder, Type II		
Nitrocellulose	Guncotton; Pyroxylin	$[C_6H_8O_5(NO_2)_3]_n$
Dibutylphthalate	Gelling agent	$C_6H_4(CO_2C_4H_9)_2$
Dinitrotoluene	DNT	$C_6H_3CH_3(NO_2)_2$
Diphenylamine	Stabilizer DPA	$(C_6H_5)_2NH$
Guncotton	(see nitrocellulose)	
13% nitrogen		N_2
Hexachlorethane-Zinc	HC	$Zn+C_2Cl_6$

TABLE 8-2 (continued)
CHEMICAL DATA OF ORDNANCE FILLERS

Filler	Synonym(s)	Chemical Formula
Igniter Compositions *		
I-136 & I-136A		
10%	Calcium Resinate	Ca
90%	Strontium Peroxide	SrO ₂
I-194		
94%	Igniter Composition I-136	
6%	Magnesium Powder	Mg
I-276		
84%	Barium Peroxide	BaO ₂
16%	Magnesium Powder	Mg
I-280		
85%	Igniter Composition I-136A	
15%	Magnesium Powder	Mg
I-508		
79%	Barium Peroxide	BaO ₂
14%	Magnesium Powder	Mg
Incendiary Compositions *		
IM-11		
50%	Barium Nitrate	Ba(NO ₃) ₂
50%	Magnesium Aluminum Alloy	Mg & Al
IM-23		
50%	Potassium Perchlorate	KClO ₄
50%	Magnesium Aluminum Alloy	Mg & Al
IM-28		
40%	Barium Nitrate	Ba(NO ₃) ₂
50%	Magnesium Aluminum Alloy	Mg & Al
10%	Potassium Perchlorate	KClO ₄
Incendiary Compositions (continued)		
IM-68		
24%	Barium Nitrate	Ba(NO ₃) ₂
50%	Magnesium Aluminum Alloy	Mg & Al
25%	Ammonium Nitrate	NH ₄ NO ₃
IM-69		
40%	Barium Nitrate	Ba(NO ₃) ₂
50%	Magnesium Aluminum Alloy	Mg & Al
10%	Iron Oxide, Ferric	Fe ₂ O ₃
IM-136		
49%	Potassium Perchlorate	KClO ₄
49%	Magnesium Aluminum Alloy	Mg & Al
IM-142		
48%	Barium Nitrate	Ba(NO ₃) ₂
46%	Magnesium Aluminum Alloy	Mg & Al
IM-144		
50%	Barium Nitrate	Ba(NO ₃) ₂
50%	Red Phosphorus	P

TABLE 8-2 (continued)
CHEMICAL DATA OF ORDNANCE FILLERS

Filler	Synonym(s)	Chemical Formula
IM-162		
25% Incendiary Composition		IM-23
75% Zirconium		Zr
IM-163		
50% Incendiary Composition		IM-23
50% Zirconium		Zr
Incendiary Mixture	(see incendiary compositions)	
Lead Azide	Azide	$Pb(N_3)_2$
Mercury Fulminate	Mercuric Cyanate	$Hg(CNO)_2$
Nitrocellulose	Guncotton; Pyroxylin[$C_6H_8O_5(NO_2)_3$] _n Nitrocotton; Cellulose Nitrate	
Nitroglycerin		$CH_2NO_3CHNO_3CH_2NO_3$
Pentolite (50/50)		
TNT	2,4,6-trinitrotoluene	
$CH_3C_6H_2(NO_2)_3$		
PETN		$C(CH_2ONO_2)_4$
PETN	Pentaerythrite Tetranitrate; Pentaerythritol Tetranitrate	$C(CH_2ONO_2)_4$
Potassium Chlorate		$KClO_3$
Potassium Nitrate	Saltpeter; Niter	KNO_3
Primer Composition		
FA-90A (for percussion primers)		
25% Lead Thiocyanate		$Pb(SCN)_2$
12% Antimony Sulfide		Sb_2S_3
10% PETN		
53% Potassium Chlorate		$KClO_3$
FA-70		
25% Lead Thiocyanate		$Pb(SCN)_2$
17% Antimony Sulfide		Sb_2S_3
5% TNT		
53% Potassium Chlorate		$KClO_3$

TABLE 8-2 (continued)
CHEMICAL DATA OF ORDNANCE FILLERS

Filler Formula	Synonym(s)	Chemical
Primer Mixture *		
Mercury Fulminate	Mercuric Cyanate	Hg(CNO) ₂
Potassium Chlorate		KClO ₃
Antimony Sulfide		Sb ₂ S ₃
Pyrotechnic Composition (for Aircraft Flare)		
75% Barium Nitrate		Ba(NO ₃) ₂
4.5% Sulphur		S
18.5% Aluminum		Al
1.5% Castor Oil		
RDX	Cyclonite, Hexagen	C ₃ H ₆ N ₆ O ₆
Red Phosphorus		P
Smokeless Powder	(see nitrocellulose)	
Flashless-nonhygroscopic (FNH)		
Nonhygroscopic (NH)		
Sodium Nitrate		NaNO ₃
Sodium Oxalate		Na ₂ C ₂ O ₄
Sulfur		S
Tetryl (NO ₂) ₃ C ₆ H ₂ N(NO ₂)CH ₃	Trinitrophenyl- methylnitramine	
Thermate		
Thermite		2Al-3FeO
Barium Nitrate		Ba(NO ₃) ₂
Thermite	TH, TH3, Iron Oxide & Aluminum	2Al-3FeO
TNT	2,4,6-trinitrotoluene; triton; trotyl; trilite; trinol; tritolo	CH ₃ C ₆ H ₂ (NO ₂) ₃
Tracer Compositions *		
R-256		
8.3% Calcium Resinate		
26.7% Strontium Peroxide		SrO ₂
26.7% Magnesium Powder		Mg
33.3% Strontium Nitrate		Sr(NO ₃) ₂

TABLE 8-2 (continued)
CHEMICAL DATA OF ORDNANCE FILLERS

Filler Formula	Synonym(s)	Chemical
R-284		
17% Polyvinyl Chloride		
28% Magnesium Powder		Mg
55% Strontium Nitrate		Sr(NO ₃) ₂
R-321		
16% Polyvinyl Chloride		
26% Magnesium Powder		Mg
52% Strontium Nitrate		Sr(NO ₃) ₂
White Phosphorus		P
* Most frequently used chemical compositions and their major ingredients		

9. OTHER ENVIRONMENTAL HAZARDS

a. **Hazardous, Toxic, and Radiological Waste**

(1) During the site visit the team came across rusted out drums that were empty (see photo J-33). The team could not determine where these items originated. Also, numerous burial sites were found throughout Camp Ibis (proper). Some items were on the surface, the majority buried and not visible. Contents ranged from equipment parts, five gallon to quart size cans and there is the possibility of ordnance items within these burial sites (see photos J-20 thru J-23).

(2) In a site related interview with a Mr. Glenn Hill, he stated he knew the location of medical waste that was buried near Camp Ibis (proper). When the team showed Mr. Hill the topographical map to pin point the location, Mr. Hill became confused. He pointed to two areas on the map and said it is in one of these areas. But, he also stated he could take anyone who is interested directly to this area (see documents I-13 and plate 6). Mr. Hill said he did not know the source of the medical waste and either did the team. The aforementioned drums, burial sites and medical waste site is brought to the attention of the Los Angeles District for recommended further investigation.

b. **Building Demolition/Debris Removal**

(1) Of all the improvements on Camp Ibis (proper), document F-14, only the 50,000 gallon reservoir remains (see photo J-3). This reservoir has an elongated pit located in

the bottom. This pit measures approximately 30 feet in length, 3 feet in width and 4 feet in depth. Because of frequent visitors to this area, this pit should be filled in to prevent falling hazard.

(2) Barbed wire used by the Army to fence off the water reservoir at one time, now lies south of the reservoir creating an entanglement hazard (see photo J-7).

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APPENDIX A

REFERENCE SOURCES

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

GOVERNMENT SOURCES**FEDERAL AGENCIES****DOD**

(DLOD) Defense Library Disk Pentagon Library, Room 1A518 Washington, DC 20301-6000	Info Data Base/Svc	(703) 697-4658	No Information
(DDESB) Historical Accident Data Base USATCES, SIOAC-ESM Savanna, Il 61074-9639	Computer Search	(815) 273-8730	No Information
(DLSIE) Defense Logistic Studies Information Exchange US Army Logistics Management College, Ft. Lee, VA 23801	Computer Search	(804) 734-4007	No Information
(DTIC) Defense Technical Information Center Cameron Station Alexandria, VA 22304-6145	Computer Search	(202) 274-7633	No Information
U.S. Military History Institute Library Carlisle Barracks, Bldg. 22 Carlisle, PA 17013-5008	Mr. John Slonakern Mr. Dennis Vetock	(717) 245-3611	General Information
Center of Military History Attn: DAMH-RAS 1099 14th St. NW Washington, DC 20536	Contractor	(202) 504-5416	See Appendix B Section II Parts A & B

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

GOVERNMENT SOURCES**FEDERAL AGENCIES****DOD**

U.S. Military History Institute Photo Archives Carlisle Barracks, Bldg. Carlisle, PA 17013	Mr. Mike Winey	(717) 245-3434	No Information
U.S. Military History Institute Textual Archives Carlisle Barracks, Bldg. Carlisle, PA 17013	Mr. Richard Sommers	(717) 245-3601	General Information
DMACSC, Philadelphia Depot 5801 Tabor Ave. Philadelphia, PA 19120-5095	Staff	(800) 826-0342 (301) 227-2495	Aeronautical Charts
U.S. AIR FORCE Environmental Technical Applications Center 151 Patton Ave, Rm 210 Ashville, NC 28801	Ms. Janet Wall	(704) 271-4404	Climatological Data
U.S. ARMY Army Safety Management Information System Ft. Rucker, AL 36322	Computer Search	(205) 255-6485	No Information
AMCCOM Historical Office AMSIO-EAH, Bldg. 390 Rock Island Arsenal, R.I., IL	Mr. Tom Slattery	(309) 794-1450	No Information

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

GOVERNMENT SOURCES**FEDERAL AGENCIES****DOD****U.S. ARMY**

Explosive Ordnance Disposal 259th EOD Fort Irwin Barstow, CA	SPC Knoelesard CPT Tooler	(619) 380-4092	Information
Rock Island Arsenal Museum Rock Island Arsenal Rock Island, IL	Mr. Chris Leinicke	(309) 794-3518	Technical Manuals
Pattons Museum of Calvary and Armor P.O. Box 208, 4554 Fayette Ft. Knox, KY 40121-0208	Ms. Katie Talbot	(502) 624-3812	Information
Publications	FUDS Reference Library	(815) 273-8867	Information
U.S. Army Technical Center for Explosive Safety ATTN: SIOAC-ESM Savanna, IL 61074	Ms. Judy Skupien	(815) 273-8772	Reference Sources
U.S. Army Chemical and Biological Defense Command Aberdeen Proving Ground, MD	Ms. Kathleen Ciolfi	(410) 679-4430	No Information
USACE, Los Angeles District 300 North Los Angeles St. Room 6003 Los Angeles, CA 90024	Ms. Bebrah Castens	(213) 894-2865/2866	Information

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

GOVERNMENT SOURCES**FEDERAL AGENCIES****DOD****ARMY**

USACE, Los Angeles District 300 North Los Angeles St. Los Angeles, CA 90024	Mr. Greg Boghossian	(213) 894-3760	POC for this site
USACE, Los Angeles District 360 East 2nd St. RM 501 Los Angeles, CA 90012	Mr. Richard Nagle	(213) 894-2951	Real Estate Drawings
USACE, Los Angeles District Real Estate Division 360 East 2nd St. Rm 508 Los Angeles, CA 90012	Mr. Delores Henderson	(213) 793-1450	Real Estate Document
USACE, Office of History 7701 Telegraph Road Alexandria, VA 22310-3865	Contractor	(703) 355-3558	See App B, Section II Parts A and B
USACE, Sacramento District 1325 J Street Sacramento, CA 95814-2922	Mr. Marvin Fisher	(916) 557-6800	No Information
USACE, Sacramento District 1325 J Street Sacramento, CA 95814-2922	Mr. Dan Fodrini	(916) 557-6857	No Information
USACE, St. Louis District ATTN: CELMS-PD 1222 Spruce St. St. Louis, MO 63103	Mr. Jim Lubbert Mr. Hank Counts	(314) 331-8840 (314) 331-8762	Historical Documents See Interview I-17

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

GOVERNMENT SOURCES**FEDERAL AGENCIES****DOD****NAVY/MARINE CORPS**

Naval Construction BN Center NAVFAC Historian 621 Pleasant Valley Road Port Hueneme, CA 93043	Dr. Vincent Transano	(805) 982-5913	Information
Navy Historical Center Bldg. 57 Washington Naval Yd Washington, DC 20374	Contractor	(202) 433-3171	See App. B Section II, Parts A and B
Marine Corps Historical Center, Bldg. 58 Washington Naval Yard Washington, DC 20374	Contractor	(202) 433-3483	See App. B Section II, Parts A and B
Explosive Ordnance Disposal EOD Unit MCAGCC 29 Palms, CA	GYSGT Wheeler	(619) 830-7215	Information

FEDERAL AGENCIES**DEPARTMENT OF AGRICULTURE**

Natural Resources Conservation Service 200 East Murphy St. Blythe, CA 92226	Mr. Raul Alvarado	(619) 922-3446	No Information
Natural Resources Conservation Service 2121 C 2nd St. Davis, CA 95616	Mr. Donald Storm	(916) 757-8270	No Information

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

GOVERNMENT SOURCES

FEDERAL AGENCIES

DEPARTMENT OF AGRICULTURE

Natural Resources
Conservation Service
P.O. Box 788115
Twenty-Nine Palms, CA 92278

Mr. John Rule

(619) 830-7011

No Information

Aerial Photo Field Office
P.O. Box 30010
Salt Lake City, UT

Ms. Sherrie Holyoak

(801) 975-3503

Source Aerial Photos

Natural Resources
Conservation Service
18484 HWY 18, Suite 195
Apple Valley, CA 92307

Ms. Jackie Lindgren

(619) 242-2906

Soil Survey

Natural Resources
Conservation Service
25809-B Business Center Drive
Redland, CA 92374

Mr. Jim Earson

(909) 799-7407

No Information

DEPARTMENT OF INTERIOR

Bureau of Land Management
101 West Spikes Road
Needles, CA 92363

Mr. Bill Wiley

(619) 326-3896

See Interview I-1

Ms. Jill Miller-Allert

See Interview I-4

Mr. Kevin Madison

See Interview I-3

Mr. Mike McGill

See Interview I-5

Mr. Ken Downing

See Interview I-6

Mr. Mick Joplin

See Interview I-2

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

GOVERNMENT SOURCES**FEDERAL****DEPARTMENT OF INTERIOR**

Bureau of Land Management CA Desert District 6221 Box Springs Blvd. Riverside, CA 92507-0714	Mr. Larry Foreman Mr. Manuela Johnson Ms. Rolla Queen Mr. John Keyes	(909) 697-5221 (909) 697-5220 (909) 697-5386 (909) 697-5383	Endangered Species Maps Archeological Info. Information
Bureau of Land Management Palm Springs Resource Center 63500 Garnet Ave. North Palm Springs, CA	Mr. Mike Mitchell	(619) 251-4800	Archeological Info.
US Geological Survey Branch of Distribution Box 25286, Bldg 810 Denver Federal Center Denver, Co. 8022	Customer Service	(303) 203-4700	Topographical Maps
U.S. Fish and Wildlife 2493 Portola Road Ventura, CA 93003	Mr. Kirk Waln	(805) 644-1766	Endangered Plants & Animals
U.S. Fish and Wildlife 2730 Loker Ave. West Carlsbad, CA 92008	Mr. John Hanlon	(619) 431-9440	Endangered Plants & Animals
DEPARTMENT OF COMMERCE NOAA National Climatic Data Cntr. Federal Bldg. Ashville, NC 28801	Ms. Yolanda Goosch Mr. Sam McCowan	(704) 271-4272	Climatological Data

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

GOVERNMENT SOURCES**FEDERAL****FEDERAL AGENCIES**

National Personnel Records Center, 9700 Page Ave. St. Louis, MO	Mr. Bill Siebert	(314) 538-4085	See Appendix B Section III, Parts A and B
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Library of Congress Washington, DC 20536	Contractor	(202) 707-5522	See Appendix B Section II, Parts A and B
---	------------	----------------	--

Smithsonian Institution Historical Research Division Washington, DC 20560	Contractor	(202) 357-3133	See Appendix B Section II, Parts A and B
---	------------	----------------	--

STATE OF CALIFORNIA

California State Archives 1020 East O Street Sacramento, CA 92415-0795	Melody	(916) 653-2246	Reference Leads
--	--------	----------------	-----------------

California State Library 914 Capital Mall Library & Courts Bldg. Sacramento, CA 94237-0001	Mr. John Gonzales Mr. Brent Murphy	(916) 654-0176 (916) 654-0069	Information Information
---	---------------------------------------	----------------------------------	----------------------------

California State University, San Bernardino Library 5500 University PKWY San Bernardino, CA	Reference Librarian	(909) 880-5084	No Information
--	---------------------	----------------	----------------

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

GOVERNMENT SOURCES

STATE AGENCIES

SHPO, San Bernardino Ms. Robin Laska (909) 792-1497 Archeological Info.
Archeological Info Center
2024 Orange Tree Lane
Redland, CA 92374

University of California Ms. Gladys Murphy (909) 792-3221 Reference Leads
Riverside Library
900 University Drive
Riverside, CA 92521

CITY OF LOS ANGELES

LA Police Department Mr. Jerry N. Theaker (818) 756-8822 See Interview I-19
North Hollywood Division
Hollywood, California

NATIONAL ARCHIVES REGIONAL

NARA, Federal Records Center Ms. Barbara Bepler (415) 876-9001 See App. B, Section
1000 Commodore Drive III, Parts A & B
San Bruno, CA 94066

NARA, Federal Records Center Mr. Greg Pearman (714) 643-4220 See App. B, Section
2400 Alvia Road III, Parts A & B
Laguna Niguel, CA 92607

NARA, Pacific Sierra Region Ms. Lisa Miller (415) 876-9009 See App. B, Section
1000 Commodore Drive III, Parts A & B
San Bruno, CA 94066

NARA, Pacific Southwest Ms. Suzanne Dewberry (714) 643-4241 See App. B, Section
Region III, Parts A & B
2400 Alvia Road
Laguna Niguel, CA 92656

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

GOVERNMENT SOURCES**FEDERAL****NATIONAL ARCHIVES****REFERENCE ADMINISTRATION**

Archives I (Old Military) Pennsylvania Ave & 7th Washington, DC 20408	Contractor	(202) 501-5390	See Appendix B Section II Parts A&B
Suitland Branch (Civil/Military) 4205 Suitland Road Suitland, Md 20409	Contractor	(301) 457-7190	See Appendix B Section II Parts A & B
Archives I (Modern Military) Pennsylvania Ave & 7th Washington, DC 20408	Contractor	(202) 501-5385	See Appendix B Section II Parts A&B
Archives I (Navy) Pennsylvania Ave & 7th Washington, DC 20408	Contractor	(202) 501-5671	See Appendix B Section II Parts A&B
Archives II (Cartographic/Architectural) 8601 Adelphi Road College Park, Md 20740	Contractor	(301) 713-7040	See Appendix B Section II Parts A&B
Archives II (Civil Reference Branch) 8601 Adelphi Road College Park, Md 20740	Contractor	(301) 713-7250	See Appendix B Section II Parts A&B

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GOVERNMENT SOURCES**FEDERAL****NATIONAL ARCHIVES****REFERENCE ADMINISTRATION**

Archives II
(Motion Picture Branch)
8601 Adelphi Road
College Park, Md 20740

Contractor

(301) 713-7060

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Archives II
(Still Picture Branch)
8601 Adelphi Road
College Park, Md 20740

Contractor

(301) 713-6660

See Appendix B
Section II Parts A&B

Archives II
(Textual Branch)
8601 Adelphi Road
College Park, Md 20740

Contractor

(301) 713-7250

See Appendix B
Section II Parts A&B

COUNTY AGENCIES

San Bernardino County
Archives
777 East Railto Ave
San Bernardino, CA 92415

Mr. Jim Hoffer

(909) 387-2232/8018

Information

Metropolitan Water District
of Southern California
P.O. Box 38
Parker Dam, CA 92267

Mr. Allen Prestion

(619) 663-3521

No Information

San Bernardino County
Assessor's Office
172 West 3rd St.
San Bernardino, CA 92415

Ms. Maureen Swanson

(909) 387-8307

Plat maps/owners

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

GOVERNMENT SOURCES

COUNTY AGENCIES

San Bernardino County
Bomb Squad
655 East 3rd Street
San Bernardino, CA 92415

Mr. Bill Abernathy
Mr. Harry Hatch

(909) 387-3607

See Interview I-16
See Interview I-16

San Bernardino County
Library
104 West 4th Street
San Bernardino, CA 92415

Phil

(909) 387-5718

Information

San Bernardino County
Museum
2024 Orange Tree Lane
Redlands, CA 92374

Ms. Robin Laska
Ms. Noella Benvenuti

(909) 798-8570

Photos

San Bernardino County
Recorder
222 W Hospitality Lane
San Bernardino, CA 92415

Sharon

(909) 387-8306

Owners

San Bernardino County
Sheriff's Department
Colorado River Station
1111 Bailey Ave.
Needles, CA 92363

Mr. Bob Lyons
Mr. Jerry Lyons

(619) 326-9200

See Interview I-8
See Interview I-8

NON-GOVERNMENT SOURCES

CITY OF SAN BERNARDINO

San Bernardino Public
Library
555 West 6th Street
San Bernardino, CA

Mr. Chris Shovey

(909) 381-8208

New Articles

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

NON-GOVERNMENT SOURCES**OTHER SOURCES**

Northern Illinois Library System 4034 East State Street Rockford, Il 61108	Computer Search	(815) 229-0330	No Information
Knight-Ridder Information Inc. (DIALOG) 2440 El Camino Real Mountain View, CA 94040	Computer Search	(800) 334-2564	No Information
SIRSI Corporation 689 Discovery Dr. Huntsville, Al 35806	Computer Search	(205) 922-9820	No Information
Council on America's Past 518 Why Worry Lane Phoenix, AZ 85021	Heliogram Publication	(800) 396-4693	Information
On-line Computer Library Center 6565 Franz Road Dublin, Oh 43017-3395	Computer Search	(800) 848-5873	No Information
Needles Public Library 111 Bailey Needles, CA 92363	Ms. Barbara Guhin	(619) 326-9255	Information/photos
Patton Museum No. 2 Chiriaco Summit, CA 92201	Mr. John Hoffman	(619) 227-3483	Information/photos

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

NON-GOVERNMENT SOURCES

OTHER SOURCES

11th Armored Division Association 2328 Admiral Street Aliquippa, PA 15001			No Response at this time
3rd Armored Division Association P.O. Box 776 Lynn, MA 01903			Letter returned undeliverable
3rd Armored Division University Archives, Rm 19 1408 West Gregory Drive Urbana, IL 61081	Mr. Chris Pron	(217) 333-0798	Information
6th Armored Division P.O. Box 5011 Louisville, KY 40205			No Response at this time
SITE RELATED PERSONNEL Arda Hanszal 809 Standish Way Redlands, CA 92373	Local Historian	(909) 798-0550	No Information
Dennis G. Casebier P.O. Box 7 Exxex, CA 92332-0007	Author/Historian	(619) 733-4482	See Interview I-15

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

NON-GOVERNMENT SOURCES**SITE RELATED****PERSONNEL**

Francis Blaker 658 Lemon Hill Terrace Fullerton, CA 92632	Historian	(714) 871-7738	No response at this time
Fred Croziern 250 Paseo De Granda Redondo Beach, CA 90277	Historian	(310) 378-8875	No Information
Gary Holcomb 1450 St. John Ct. Yuba City, CA 95993	Father stationed at DTC	(916) 673-5185	No New Information
Herb Bender 1609 Washington Street Needles, CA 92363	Local Resident		Passed Away Dec. 95
John Lynch 518 Why Worry Lane Phoenix, AZ 85012	Historian/Author	(602) 249-3974	General Information
Justin Ruhge P.O. Box 2216 Goleta, CA 93118	Author/Historian	(805) 737-9536	No New Information
Mark Wetmore Rt. 4 Box 318 Needles, CA 92363	Local Military Historian	(619) 326-2546	See Interview I-12
4th Armored Division Ass. Inc Rt. 2 Box 418-A Lithia, FL 33547			Letter Returned Undeliverable

REFERENCE SOURCES

The following organizations and personnel are acknowledged for their support

NON-GOVERNMENT SOURCES**SITE RELATED****PERSONNEL**

Ron Morrison	Former BLM Real Estate Specialists	(520) 763-5851	See Interview I-7
Robert Derichsweller Needles, CA	Plant Inspector	(619) 326-2037	See Interview I-9
Walter 'Pony' Acuna Needles, CA	Retired San Bernardino County Sheriff	(619) 326-1255	See Interview I-10
Bill Claypool Needles, CA	Hardware Store owner	(619) 326-2109	See Interview I-11
John Bezzant	SF Pacific Properties Incorporated	(714) 237-7306	See Interview I-18
Glenn Hill Needles, CA	Business owner	(619) 326-4655/2687	See Interview I-13
Butch Gates Idaho Falls, ID	Former Search/Rescue San Bernardino Co. Sheriff	(208) 529-5313	See Interview I-14
Dennis Casebier Goffs, CA	Retired/Local Historian	(619) 733-4482	See Interview I-15
George Wagner	Santa Fe Pacific Gold	(505) 880-5300	See Interview I-20

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APPENDIX B

REFERENCES AND ABSTRACTS

BIBLIOGRAPHIES

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Part A: Positive Findings

Part B: Negative Findings

SECTION III: Regional National Archive Findings

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Part B: Negative Findings

APPENDIX B

BIBLIOGRAPHIES

SECTION I

- B-1 U.S. Army Corps of Engineers, Huntsville Division, "Management Plan for Ordnance and Explosive (OE) Mandatory Center of Expertise (MCX) and Design Center", CEHND 1105-3-9, 10 August 1992.
- B-2 U.S. Army Corps of Engineers, Los Angeles District, "Preliminary Assessment of Camp Ibis (proper). , site Number J09CA028301, 1994, (E-1 and E-2).
- B-3 Site Safety Plan for Ordnance and Explosive Waste Investigations, U.S. Army Corps of Engineers, Rock Island, 25 June 1992, with Appendix A-120, December 1995.
- B-4 War Department, TM 9-855, Targets, Target Material, and Training Course Lay-outs, 17 August 1944, (D-1).
- B-5 Department of the Army, AR 200-1, Environmental Protection and Enhancement, 23 April 1990.
- B-6 Standard Guide to U. S. World War II Tanks and Artillery by Konrad F. Schreier, Jr., 1994 (D-2).
- B-7 Department of Army, TM 43-0001-29, Army Ammunition Data Sheets for Grenades, 15 December 1992, (D-3).
- B-8 War Department, TM 9-1904, Ammunition Inspection Guide, 2 March 1944, D-3, D-6, D-7, D-8, D-9).
- B-9 Department of the Army, TM 43-0001-28, Artillery Ammunition Guns, Howitzers, Mortars, Recoilless Rifles, Grenade Launchers and Artillery Fuzes, April 1977, (D-4).
- B-10 Ordnance Department, Complete Round Charts, Number 5981, August 9, 1941.
- B-11 Department of Army, TM 9-1900, Ammunition General, June 1956, (D-5, D-6, D-7, D-8, D-11).
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B-47 U.S. Army Corps of Engineers, Los Angeles District, Real Estate Files, "Acquisition and Release of Land owned by South Pacific Company", February 1942 (G-7).

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B-62 DOI, Bureau of Land Management, Needles' Office, aerial photos (L-8).

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B-64 U.S. Military History Institute, Historical Reference Branch Carlisle Barracks, excerpts from a Desert Strike Report, July 29, 1964 (F-24).

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SECTION II
NATIONAL CAPITOL REGION ARCHIVES FINDINGS
PART A
POSITIVE FINDINGS

CAMP IBIS, CA

***CENTER OF MILITARY HISTORY
WASHINGTON, DC***

Historical Research Branch

228.01 HRC 331, Posts - Desert Training Center
Background Data and Map, Desert Training Center, California - Arizona
Maneuver Area, 1942-1944

228.01 HRC 331, Posts - Ibis, Camp, CA
Historical Data, Camp Ibis, 1943-1944

Historical Data Card - Post, Camp, Station, or Airfield
California - Arizona Maneuver Area, Desert Training Center

Posts, Camps, and Stations - WWII, Vol. V (E-G)
Data Sheet, Camp Ibis, 1943

***NARA - ARCHIVES I
WASHINGTON, DC***

RG 337 (Records of the Headquarters, Army Ground Forces)

Entry 29C: General Staff, G-3 Section, Training Group, Troop Training Division,
Maneuvers, Special Projects & Ammo Branch, Desert Training Center, 1942-1947
Box 112

Short History and Description, California - Arizona Maneuver Area, 1942-1943

Entry 29C: General Staff, G-3 Section, Training Group, Troop Training Division,
Maneuvers, Special Projects and Ammo Branch, Desert Training Center, 1942-1947
Box 112

Rolled Map, Desert Training Center, 14 June 1943

Entry 55A: Project Decimal Files, 1942-1947

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Map and Description, Camp Ibis Target and Firing Range

Entry 55A: Project Decimal Files, 1942-1947

Box 1272

Map, Camp Ibis, Desert Training Center

Entry 55A: Project Decimal Files, 1942-1947

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Photographs, Camp Ibis Facilities

Entry 55A: Project Decimal Files, 1942-1947

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Rolled Map, California - Arizona Maneuver Area Firing and Bombing Ranges,
1942-1943

Entry 55A: Project Decimal Files, 1942-1947

Box 1275

Correspondence Relative to Training and Test Ammunition, Desert Training
Center, May 1944

Entry 55A: Project Decimal Files, 1942-1947

Box 1277

Memorandum Relative to Discontinuation of California - Arizona Maneuver
Area, 24 February 1944

***NARA - ARCHIVES II
COLLEGE PARK, MD***

RG 77 (Records of the Office of the Chief of Engineers)

Entry 1011: Security Classified Subject Files, 1940-1945

Memorandum Relative to Establishment of Camp Ibis, 30 August 1943

Entry 1011: Security Classified Subject Files, 1940-1945

Box 218

Memorandum Relative to Status of Construction, California - Arizona Maneuver
Area, October 1943

Entry 1011: Security Classified Subject Files, 1940-1945

Box 218

Memorandum Relative to Evacuation of California - Arizona Maneuver Area,
17 February 1944

Entry 1011: Security Classified Subject Files, 1940-1945

Box 218

Memorandum Relative to Evacuation of California - Arizona Maneuver Area,
7 March 1944

Entry 1011: Security Classified Subject Files, 1940-1945

Box 218

Memorandum Relative to Surplus Installations, California - Arizona Maneuver
Area, April 1944

Entry 1011: Security Classified Subject Files, 1940-1945

Box 219

Memorandum Relative to Use of Portion of California - Arizona Maneuver Area
for Bombing and Gunnery Range, 20 May 1944

RG 112 (Records of the Office of the Surgeon General)

Entry: Historical Unit, Medical Detachment - Records Used for Preparing World War II
Era Medical Histories

Box 365

Plan for Chemical Warfare Service Evacuation, California - Arizona Maneuver
Area, 7 February 1944

Entry: Historical Unit, Medical Detachment - Records Used for Preparing World War II
Era Medical Histories

Box 365

Memorandum Relative to Closure of Target Ranges, Camp Ibis, 8 February 1944

Entry: Historical Unit, Medical Detachment - Records Used for Preparing World War II
Era Medical Histories

Box 365

Ordnance Material Evacuation Plan, California - Arizona Maneuver Area,
9 February 1944

RG 160 (Records of the Army Service Forces)

Entry 25: Director of Plans and Operations, Liaison and Control Branch, Subject File,
1942-1944

Box 4

Letter Relative to Land Acquisition, California - Arizona Maneuver Area,
9 March 1942

***NARA - CARTOGRAPHIC BRANCH
COLLEGE PARK, MD***

AMS

V-V95-M

Map - Desert Training Center Maneuver Area

***NARA - MOTION PICTURE BRANCH
COLLEGE PARK, MD***

RG 111

ADC/111LC

Box 177, Desert

Catalog Cards, Films, "Desert Training Center, IX Corps Maneuvers"

ADC/111LC

Box 259, Maneuvers

Catalog Cards, Films, "Desert Training Center, IX Corps Maneuvers"

***NARA - STILL PICTURES BRANCH
COLLEGE PARK, MD***

RG 111-SC

Box 22

Signal Corps (6) Photos, Desert Training Center, Including Training Facilities,
Roads, and Utilities, 1942

***NARA - SUITLAND REFERENCE BRANCH
SUITLAND, MD***

RG 175 (Records of the Chemical Warfare Service)

Entry 1: Central Correspondence, 1936-1942
Box 274

Memorandum Relative to Chemical Ammunition Requirements, Desert Training
Center, August 1, 1942

RG 407 (Records of the Adjutant General's Office)

Entry 427: World War II Operations Reports
Box 15175

Training Operations, 4th Armored Division, Camp Ibis, California - Arizona
Maneuver Area, November 1942-June 1943

Entry 427: World War II Operations Reports
Box 15773

Training Operations, 9th Armored Division, Camp Ibis, California - Arizona
Maneuver Area, 1943

***USACE OFFICE OF HISTORY
ALEXANDRIA, VA***

HQ Heliogram, Council on Abandoned Military Posts, No. 92, September 1977

Article
Camp Ibis, 1977

HQ Heliogram, Council on Abandoned Military Posts, No. 93, October 1977

Article
Camp Ibis, 1977

HQ Heliogram, Council on Abandoned Military Posts, No. 166, Nov-Dec 1984

Article
California - Arizona Maneuver Area, 1984

Military Files

I-10A-8

Newspaper Articles, Desert Training Center - California - Arizona Maneuver Area, 1984-1985

I-10A-8

Bureau of Land Management Interpretive Plan, Including Site History, for the Former Desert Training Center - California - Arizona Maneuver Area, 1985

I-10A-8

Bureau of Land Management Interpretive Plan, Including Site History, for the Former Desert Training Center - California - Arizona Maneuver Area, 1986

Real Estate Records

Realty Control File Summary
Camp Ibis

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PART B
NEGATIVE FINDINGS

CAMP IBIS, CA

***LIBRARY OF CONGRESS
WASHINGTON, DC***

Geography and Map Division

***NARA - ARCHIVES I
WASHINGTON, DC***

RG 49 (Records of the Bureau of Land Management)

Entry 1515: Central Files (Division of Technical Programs - Range Staff), 1937-1955

Entry 1519: Records Relating to District Grazing Boundaries, 1935-1961

RG 69 (Records of the Work Progress Administration)

Entry: Central Files, 1935-1944

Entry: Civil Works Administration Central Files, 1931-1954

Entry: FERA, New General Subject Series

Entry: General Subject Series, National Defense Program, 1940-1946

Entry: WPA General Series, National Defense, 1940-1942

RG 135 (Records of the Public Works Administration)

Entry: Project Files

RG 153 (Records of the Office of the Judge Advocate General)

Entry: Reservations File, 1800-1950

RG 162 (Records of the Federal Works Agency)

Entry 7: Central Decimal Files, 1941-1949

Entry 21: Records of the War Public Works Program, 1941-1949

RG 407 (Records of the Adjutant General's Office, 1917-)

Entry: Army - AG Decimal File, 1940-1945

***NARA - ARCHIVES II
COLLEGE PARK, MD***

RG 22 (Records of the Bureau of Fish and Wildlife)

Entry 243: Cooperative Agreements with the Corps of Engineers, 1943-1962

RG 30 (Records of the Bureau of Public Roads)

Entry 54: Correspondence, 1941-1945

RG 48 (Records of the Department of the Interior)

Entry 749B: Central Classified Files, 1937-1953

RG 57 (Records of US Geological Survey)

Entry 27: Correspondence and Related Records, 1906-1948

RG 70 (Records of the Bureau of Mines)

Entry 66: General Classified Files: General Correspondence, 1926-1952

RG 77 (Records of the Office of the Chief of Engineers)

Accession 51A-277: District Files, 1945

Accession 52A-40: Division Files, 1945

Accession 53A-132: Miscellaneous Files, 1945

Accession 58A-1076: Real Estate Files

Entry 18: Correspondence, 1789-1942

Entry 106B: General Correspondence, 1918-1945

Entry 1019: General Correspondence with Service Commands, 1918-1949

RG 92 (Records of the Office of the Quartermaster General)

Entry 1890: General Correspondence (Subject File), 1936-1961

Entry 1890AA: Formerly Classified General Correspondence (Subject Files), 1936-1954

Entry 1892: Classified Geographic File, 1936-1945

Entry 1892A: General Correspondence (Geographic File), 1936-1945

RG 107 (Records of the Office of the Secretary of War)

Entry 102: Office, Administrative Assistant to the Secretary of War, Project Decimal File, 1943-January 1947

Entry 158: Special Assistant for Construction - MJ Madigan, General Correspondence, 1940-1945

Entry 159: Special Assistant for Construction - MJ Madigan, Projects, 1940-1945

RG 111 (Records of the Office of the Chief Signal Officer)

Entry: Unclassified Central Decimal Files, 1941-1957

- RG 112 (Records of the Office of the Surgeon General)
Entry 31: Geographic Series, 1938-1946
Entry 32: Geographic Series (Formerly Security Classified), 1938-1946
- RG 160 (Records of the Army Service Forces)
Entry 27: Mobilization Division, Command Installation Branch, Correspondence File, 1942-1946
Entry 138: Readjustment Division, Central Decimal Files, 1943-1944
Entry 139: Readjustment Division, Central Decimal Files, 1943-1946
- RG 165 (Records of War Department General and Special Staffs)
Entry 258: Installations Branch, Reports and Correspondence Relating to Construction, Utilization, and Disposal of Army Installations, 1944-1947
Entry 484D: Federal Works Agency Project Files, 1940-1946
- RG 168 (Records of the Bureau of the National Guard)
Entry 344: State Decimal Files, 1941-1947
Entry 348: State Guard State Files, 1941-1949
- RG 175 (Records of the Chemical Warfare Service)
Entry 2A: General Correspondence (Subject Series), 1942-1945
Entry 2B: Correspondence with the War Department and Other Government Agencies, Army Commands and Units, and Schools (Miscellaneous Series), 1942-1945
- RG 207 (Records of the Housing and Home Finance Agency)
Entry 24: General National Housing Records, War Housing Program, 1942-1947
- RG 218 (Records of the U.S. Joint Chiefs of Staff)
Entry: Series, 1942-1959, Geographic File
- RG 269 (Records of the General Services Administration)
Entry 62: Real Property Disposal Case Files Transferred from the Farm Credit Administration, 1945-1953
- RG 270 (Records of the War Assets Administration)
Entry 3: Office of Information, Subject Files, 1946-1959
- RG 291 (Records of the Federal Property Resources Service)
Entry 5: Real Property Disposal Case Files, 1962
- RG 319 (Records of the Army Staff)
Entry 47: Army Intelligence Project Decimal File, 1941-1945

***NARA - SUITLAND REFERENCE BRANCH
SUITLAND, MD***

RG 77 (Records of the Office of the Chief of Engineers)

Entry 391: Construction Completion Reports, 1917-1943

Entry 393: Historical Records of Buildings at Active Army Posts, 1905-1942

RG 156 (Records of the Office of the Chief of Ordnance)

Entry 36: General Correspondence, 1917-1941

Entry 39: Confidential Correspondence, 1917-1940

RG 175 (Records of the Chemical Warfare Service)

Entry 4: Secret & Confidential Central Correspondence, 1918-1942

RG 336 (Records of the Office of the Chief of Transportation)

Entry: Historical Program Files, 1940-1950

RG 338 (Records of U.S. Army Commands, 1942-)

Entry: Records of Posts, Camps and Stations

9th Service Command

Western Defense Command

RG 394 (Records of U.S. Army Continental Commands, 1920-1942)

Entry 296: General Correspondence of the Construction Division, 1916-1945

Entry 298: Historical Reports Relating to Post Planning, 1899-1945

***SMITHSONIAN NATIONAL AIR AND SPACE MUSEUM
WASHINGTON, DC***

Collections Specified in Project Work Plan

***WASHINGTON NATIONAL RECORDS CENTER
SUITLAND, MD***

RG 77 (Records of the Office of the Chief of Engineers)

Accession A52-117

Accession A52-259

Accession A52-434

Accession 68A-1932

SECTION III
REGIONAL NATIONAL ARCHIVES FINDINGS
PART A
POSITIVE FINDINGS

CAMP IBIS

***NARA, PACIFIC SOUTHWEST REGION
LAGUNA NIGUEL, CA***

RG 49, Records of the Bureau of Land Management
Box #1029

Memo, Subj: Contamination of Land by the Defense Agencies,
Apr 27 1962

SECTION III
REGIONAL NATIONAL ARCHIVES FINDINGS
PART B
NEGATIVE FINDINGS

CAMP IBIS

***NARA, PACIFIC SOUTHWEST REGION
LAGUNA NIGUEL, CA***

RG 30, Records of the Bureau of Public Roads
All Entries
Nothing Found

RG 77, Records of the Office of the Chief of Engineers
All Entries
Nothing Found

RG 92, Records of the Quartermaster General
All Entries
Nothing Found

RG 111, Records of the Office of the Chief Signal Officer
Box #1
Nothing of Value to this ASR Found

RG 156, Records of the Chief of Ordnance
All Entries
Nothing Found

RG 270, Records of the War Assets Administration
All Entries
Nothing Found

RG 338, Records of U.S. Army Commands
All Entries
Nothing Found

**NARA, NATIONAL PERSONNEL RECORDS CENTER
ST LOUIS, MO**

Accession #338-59D3298
Box #08-48-07-61
Nothing Found

**NARA, FEDERAL RECORDS CENTER
SAN BRUNO, CA**

RG 77, Records of the Office of The Chief of Engineers
Accession #077-76L1483
Boxes #115-121,123-125,127-130,137-145
Nothing of Value to this ASR Found

RG 121, Records of the Public Building Service
Accession #121-77-0003
Boxes #1,3-8,10-17,1A-5A
Nothing of Value to this ASR Found

RG 269, General Records of the General Services Administration
All Entries
Nothing Found

RG 291, Records of the Federal Property Resources Service
All Entries
Nothing Found

**NARA, PACIFIC SIERRA REGION
SAN BRUNO, CA**

RG 30, Records of the Bureau of Public Roads
All Entries
Nothing Found

RG 49, Records of the Bureau of Land Management

Series #98

Box #1015

Nothing of Value to this ASR Found

Series #98A

Boxes #1098G-1098J (5 Boxes)

Nothing of Value to this ASR Found

RG 77, Records of the Office of the Chief of Engineers

All Entries

Nothing Found

RG 92, Records of the Office of the Quartermaster General

All Entries

Nothing Found

RG 121, Records of the Public Buildings Service

Accession #9NSS-121-85-009

Box #13

Nothing of Value to this ASR Found

RG 156, Records of the Office of the Chief of Ordnance

All Entries

Nothing Found

RG 219, Records of the Office of Defense Transportation

All Entries

Nothing Found

RG 269, General Records of the General Services Administration

All Entries

Nothing Found

RG 270, Records of the War Assets Administration

All Entries

Nothing Found

RG 291, Records of the Federal Property Resources Service

All Entries

Nothing Found

RG 338, Records of U.S. Army Commands

All Entries

Nothing Found

RG 406, Records of the Federal Highway Administration

Accession #72A1388

Box #9

Nothing of Value to this ASR Found

California FAP Route Reports 1920-1969

Boxes #3-6

Nothing of Value to this ASR Found

ORDNANCE AND EXPLOSIVE
ARCHIVES SEARCH REPORT
FOR
FORMER CAMP IBIS (PROPER)
SAN BERNARDINO COUNTY
NEEDLES, CALIFORNIA
PROJECT NUMBER J09CA028301

APPENDIX C

GLOSSARY

APPENDIX C

GLOSSARY

ASR	Archives Search Report
BAR	Browning Automatic Rifle (.30 Caliber)
BD/DR	Building Demolition/Debris Removal
BLM	Bureau of Land Management
CAMA	California-Arizona Maneuver Area
CEHNC	Corps of Engineers, Huntsville Center
CENCR	Corps of Engineers, North Central, Rock Island
CESPL	Corps of Engineers, Los Angeles District
CWM	Chemical Warfare Material
DA	Department of Army
DERP	Defense Environmental Restoration Program
DOD	Department of Defense
DOI	Department of Interior
DTC	Desert Training Center
EE/CA	Engineering Estimate and Cost Analysis
EPA	Environmental Protection Agency
EOD	Explosive Ordnance Disposal
ESI	Expanded Site Investigation
FDE	Findings and Determination of Eligibility
FUDS	Formerly Used Defense Site(s)
GSA	General Services Administration
HE	High Explosive
HTRW	Hazardous, Toxic and Radiological Waste
INPR	Inventory Project Report
IRA	Interim Removal Action
LT	Lieutenant
M	Model
MK/MOD	Mark/Model
MSG	Master Sergeant
NARA	National Archives Records Administration
NOAA	National Oceanic and Atmospheric Administration
OE	Ordnance and Explosives
PA	Preliminary Assessment
PN	Project Number
RAC	Risk Assessment Code
RG	Record Group
SCS	Soil Conservation Service
SGT	Sergeant
SI	Site Inspection
USACE	U.S. Army Corps of Engineers
USADACS	U.S. Army Defense Ammunition Center and School
USATCES	U.S. Army Technical Center for Explosives Safety
UXO	Unexploded Ordnance
WAA	War Assets Administration
WD	War Department

ORDNANCE AND EXPLOSIVE
ARCHIVES SEARCH REPORT
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APPENDIX D

TEXTS/MANUALS

APPENDIX D

TEXT/MANUALS

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- D-2 Pictures of World War II Tanks and other equipment (B-6).
- D-3 Grenades (B-7).
- D-4 Fuze, M557 (B-9).
- D-5 Rockets, 2.36 inch (B-11).
- D-6 Artillery Ammunition (B-8, B-11, B-12).
- D-7 Small Arms Ammunition (B-8, B-11).
- D-8 Mortars, 60MM/81MM (B-8, B-11, B-12).
- D-9 M1 Practice Mine (B-8).
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- D-11 Signals (B-11).

TARGETS, TARGET MATERIAL, AND TRAINING COURSE LAY-OUTS

post (Mobilization or Theater-of-Operations Type—five years' occupancy and use). The use of critical materials will be governed by current instructions of the Office of the Chief of Engineers. Clearing and grading will be limited to that necessary to provide serviceable training aids with essential protection from ricochets. Grading quantities will be held to a minimum through care in the selection and location of training aid areas. Requirements for compaction of embankment, for drainage, and for general clean-up, will conform to minimum standards. Seeding, sodding, or other erosion control measures will be undertaken only where essential. Seeding or spot sodding of firing points on known-distance ranges will be permitted as needed.

9. CONSTRUCTION DETAILS FOR RANGES.

a. Standard drawings cover typical, approved construction details. Comparable construction, established as satisfactory through prior usage, requiring no greater use of critical materials than shown on the typical plans, and requiring no increase in cost, may be substituted by contracting officers. All construction must provide required training facilities, utilizing standard targets and materials supplied by the Ordnance Department. In preparing construction details for ranges and estimates, the following points are to be noted:

(1) **KNOWN-DISTANCE RANGE** (figs. 3 to 8 incl.). The known-distance range receives greater usage and entails larger expenditure for construction than any of the other training aids. Survey of available areas and careful design offer opportunities for marked economies. The crib-type parapet (fig. 6) may be used, where logs are available for clearing, in areas reasonably free of termites and where rainfall is not excessive. Alternate No. 1 parapet (fig. 6) is suitable for construction under substantially all conditions; the type and extent of treatment (i.e., creosote, various salts, or pentochlorophenol applied as pressure treatment, dip treatment, or paint coat) should be predicated on local experience. Concrete parapets on temporary-type projects will be provided only under very adverse conditions. The following points should be noted in the design of known-distance ranges:

(a) Height of parapet is predicated on the present standard target frames as furnished by the Ordnance Department. Height of parapet necessary for protection of personnel is 7.5 to 8.0 feet. Accordingly, where definite information is available on the type of target frames to be furnished the individual project, an inspection of these frames in cooperation with the camp Ordnance officer is recommended in order to establish whether they are susceptible to ready modification to reduce frame height which will permit reduction in parapet height.

(b) Thickness of embankment shown at top of parapet is minimum and will be increased as required, based on type of soil and

TARGETS, TARGET MATERIAL, AND TRAINING COURSE LAY-OUTS

probable erosion. Appendix II in FM 5-15 includes table on page 17.

(c) The type and spacing of pedestals for target frames will be revised as required for target frames furnished.

(d) Where butts are to be located along a transverse slope, attention is directed to savings which may be accomplished by stepping elevation of parapet at intervals of not less than 5 targets. Study should be made to establish comparative cost of constructing groups of 25 targets with a 200-yard interval (300-yd adjacent to 500-yd range) between adjacent groups with cost of providing a protective embankment between adjacent groups for the portion not clear of the danger zone. Height of protective embankment must be sufficient to protect adjacent firing points from all firing positions. A wood bench may be provided to assist marking and posting of targets.

(e) Where local conditions will require excessive expenditure to place combined storage house and latrine facilities (figs. 9, 10, 11, and 12) adjacent to parapet extended, target storage house may be placed back of target frames. Latrines must be placed adjacent to parapets extended for protection of personnel, and target storage house *will not be entered or occupied while firing is in progress.*

(2) **PISTOL RANGE** (figs. 13, 14, and 15). Requirements for this range are such as to permit of extremely economical construction. Salvage embankment, designed to permit salvage of material in bullets as well as to reduce ricochets, may be provided along the rear of the targets when terrain conditions are particularly favorable; otherwise, value of material that can be recovered will not justify expenditure.

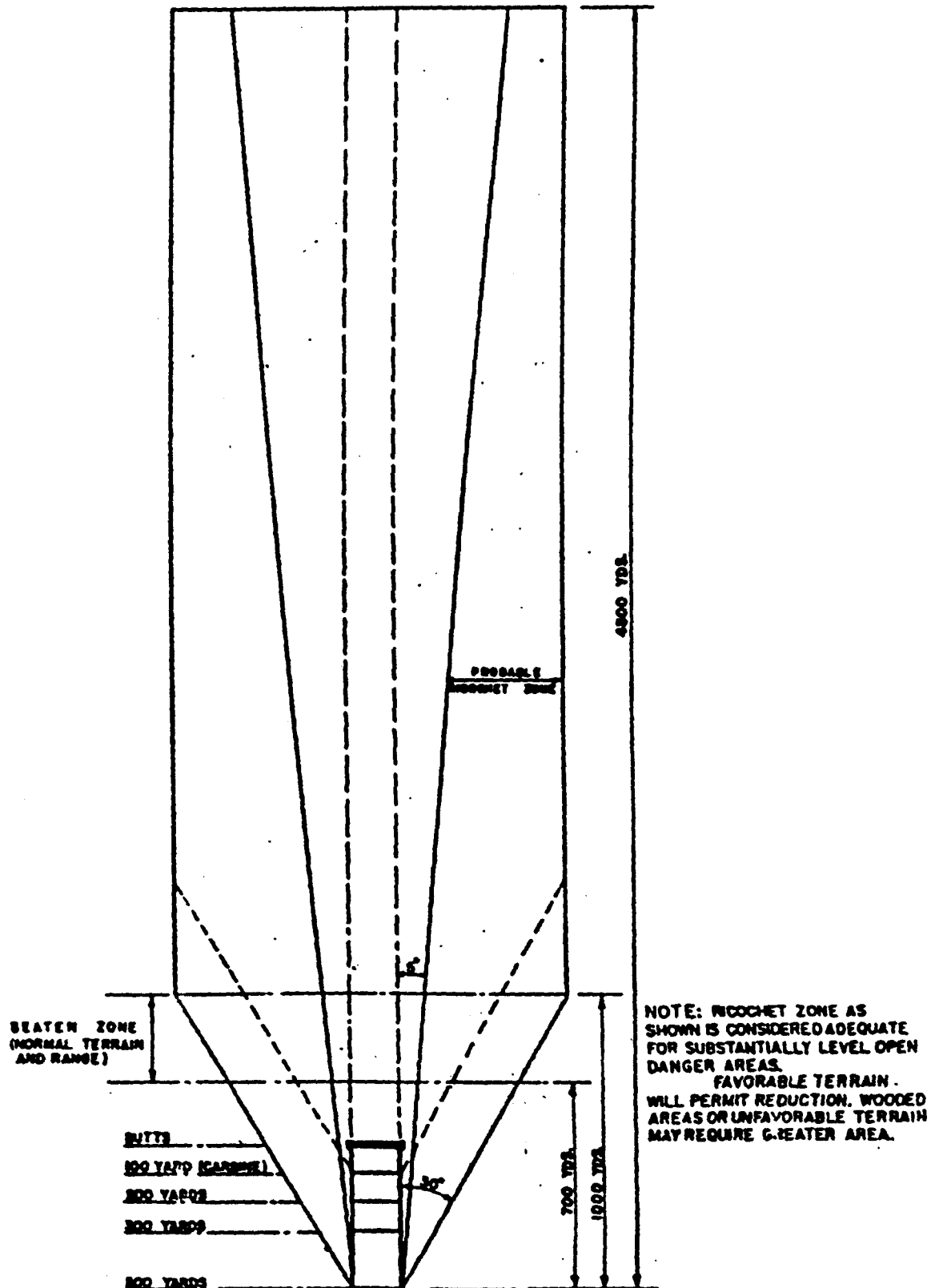
(3) **LANDSCAPE TARGET RANGE** (figs. 16 and 20). The necessity of providing safety space between adjacent targets to permit independent operation of each target will extend this range over a considerable lateral distance. Adjustment in distance between adjacent targets to take full advantage of topography will be reflected by savings in construction costs.

(4) **MACHINE GUN 1,000-INCH RANGE** (fig. 21). Total usage of this range is second only to the known-distance range. A location along cut slope or hillside will simplify construction of salvage wall (fig. 17).

(5) **SUBMACHINE GUN RANGE** (figs. 18, 19, and 22). Alternate methods shown for actuating targets fired upon from point "B" may be predicated upon local terrain or the desires of Range Officer. Effective use of this range is predicated on proper instructions and proper policing to control time and direction of fire.

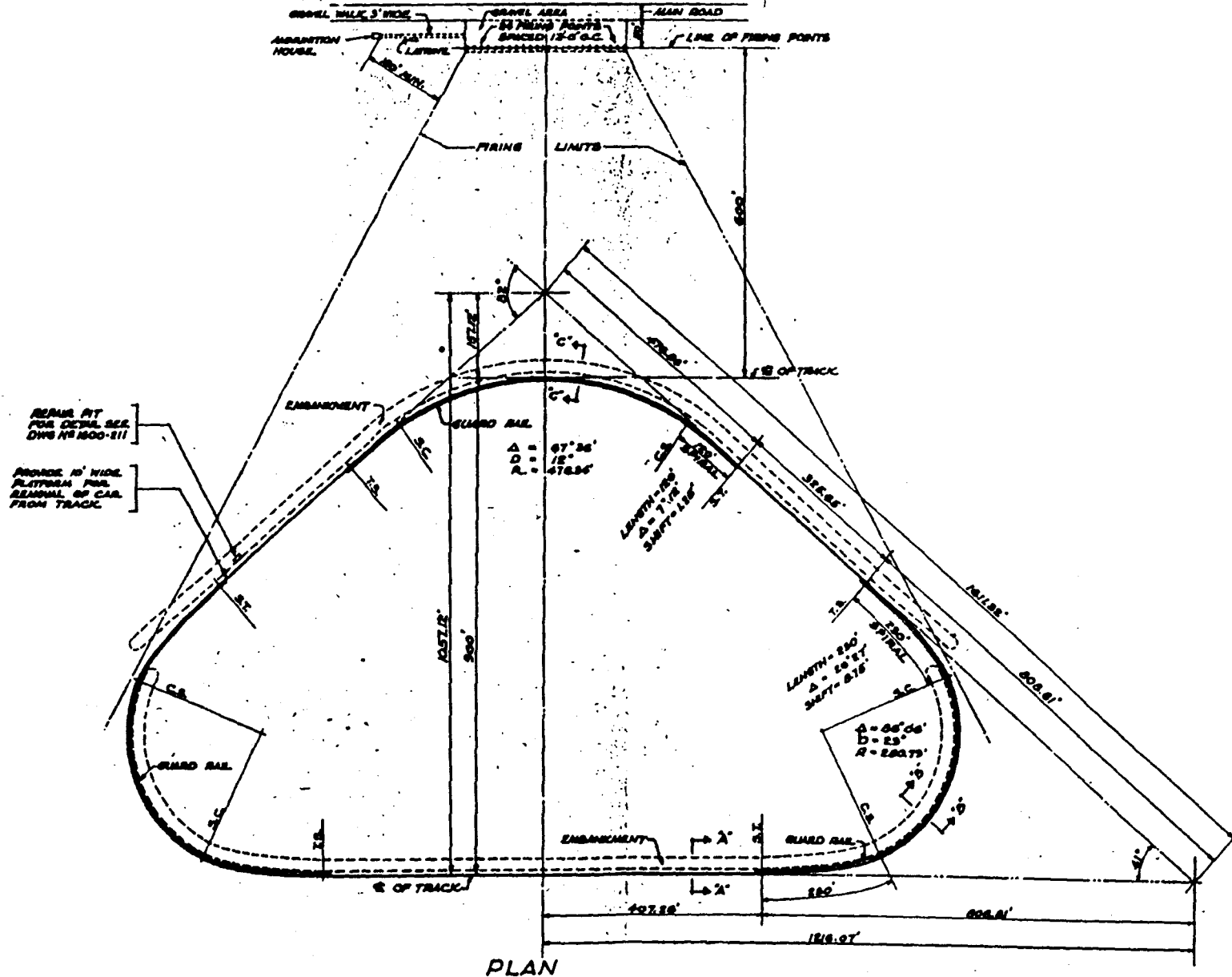
(6) **ANTI-AIRCRAFT RANGE, MINIATURE** (figs. 23 to 29 incl.). The wide angle of fire and limited range of cal. 22 weapons justify

CONSTRUCTION OF TARGET RANGES AND LAY-OUT OF VARIOUS OTHER RANGES AND COURSES



NOTE: WICOCHET ZONE AS SHOWN IS CONSIDERED ADEQUATE FOR SUBSTANTIALLY LEVEL OPEN DANGER AREAS. FAVORABLE TERRAIN WILL PERMIT REDUCTION. WOODED AREAS OR UNFAVORABLE TERRAIN MAY REQUIRE GREATER AREA.

CONSTRUCTION OF TARGET RANGES AND LAY-OUT OF VARIOUS OTHER RANGES AND COURSES



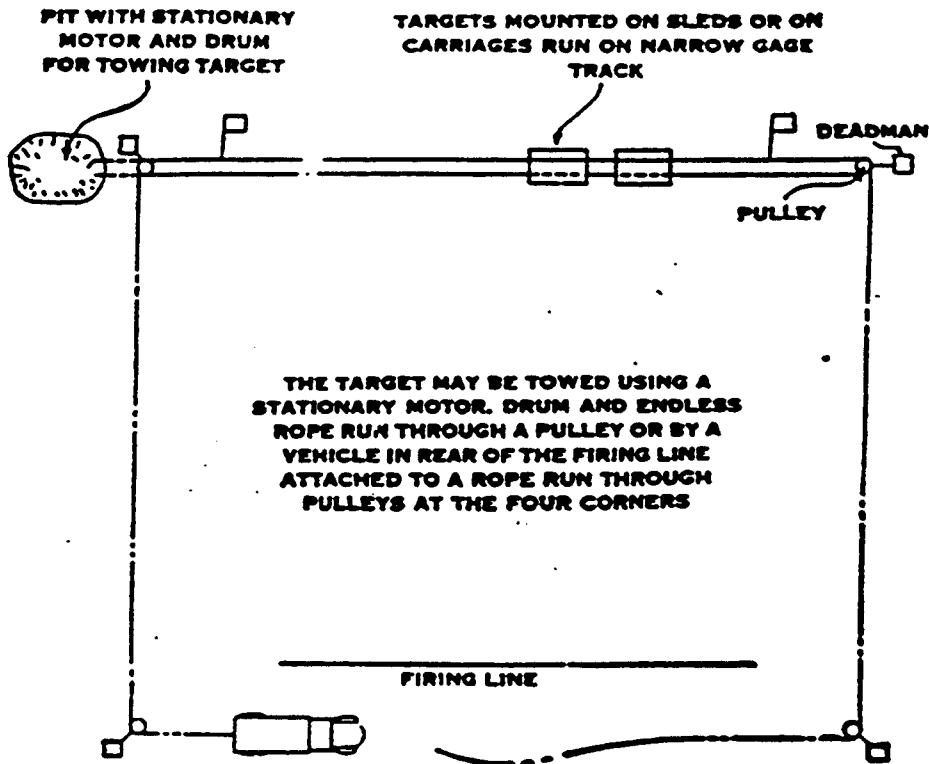
D-1

1600-210

Figure 45 - Cal. .30 and Cal. .50 Track Type Moving Target Range - Maximum Curve 250.79-foot Radius

RA PD 60968

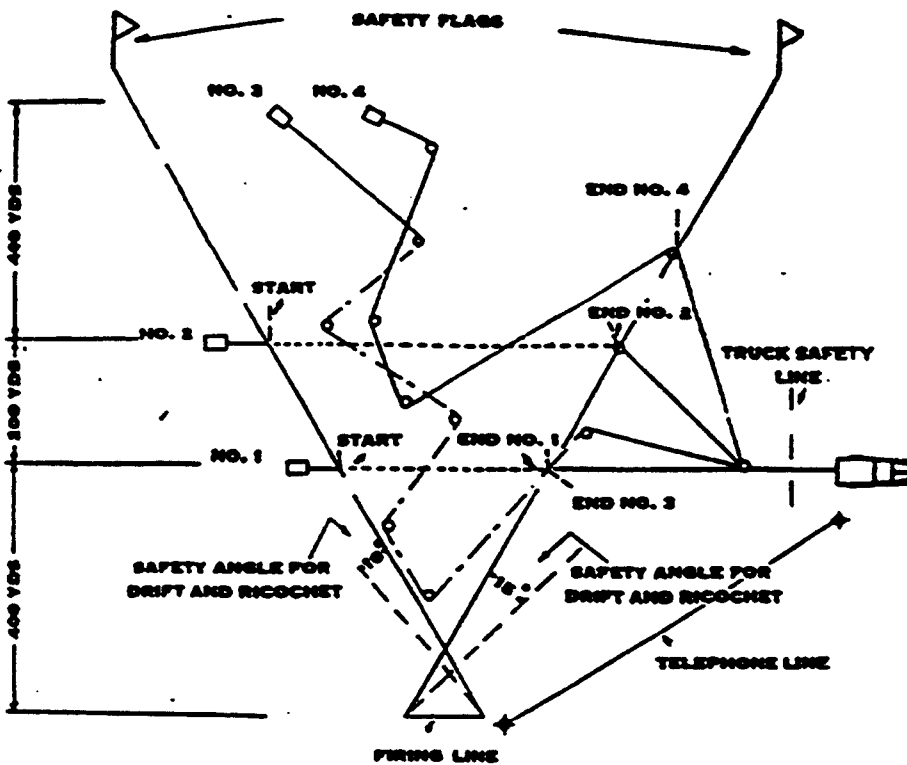
TARGETS, TARGET MATERIAL, AND TRAINING COURSE LAY-OUTS



RA PD 22670

Figure 72 - Range for Cal. .30 Moving Field Target

This could possible be used for .50 caliber moving target Range too.
Pulley system on following page.

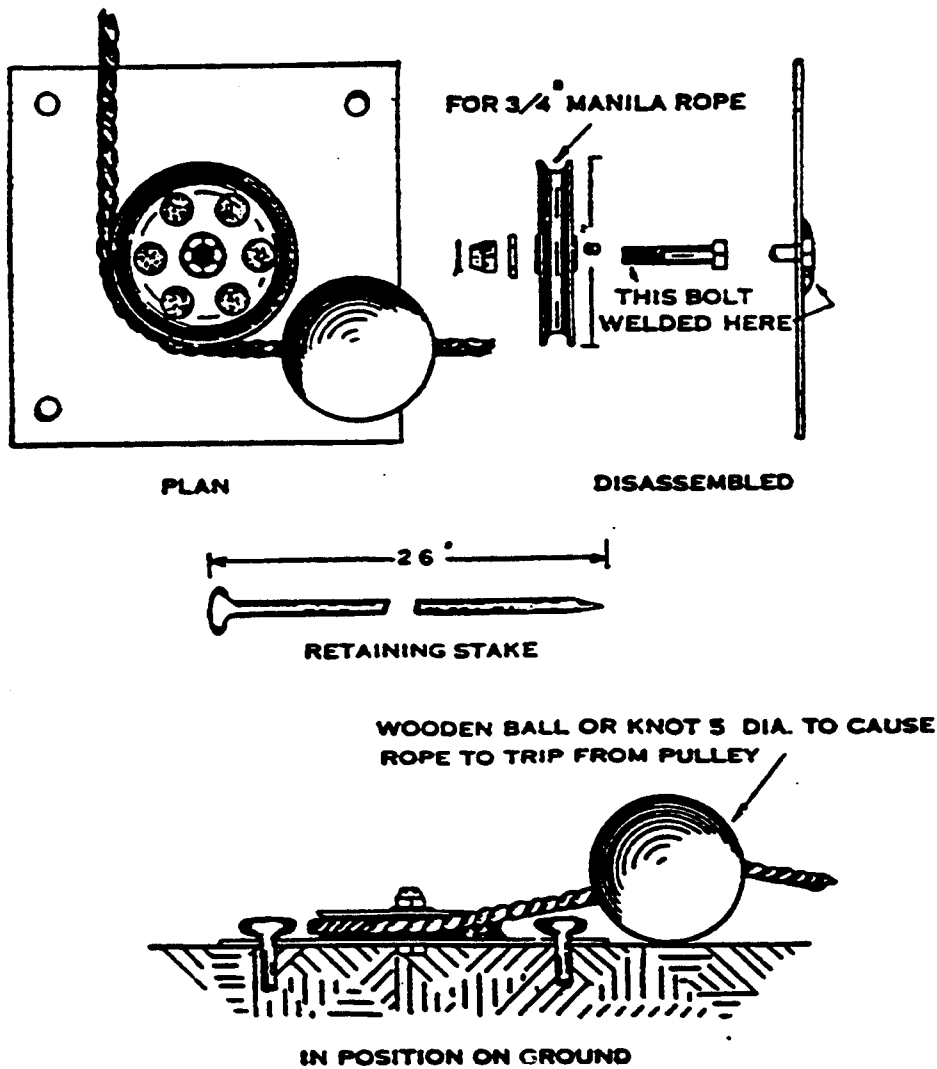


RA PD 22671

Figure 73 - Range for Firing 37-mm Ammunition at Towed Targets

CONSTRUCTION OF TARGET RANGES AND LAY-OUT OF VARIOUS OTHER RANGES AND COURSES

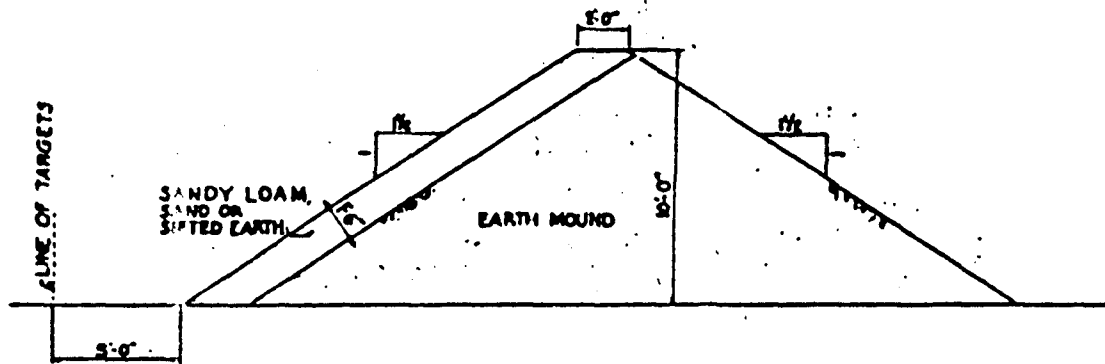
PULLEY LAYOUT. GROUND MOVING-TARGET RANGE



RA PD 22672

Figure 74 — Pulley Lay-out for Towed Target Range Shown in Figure 73

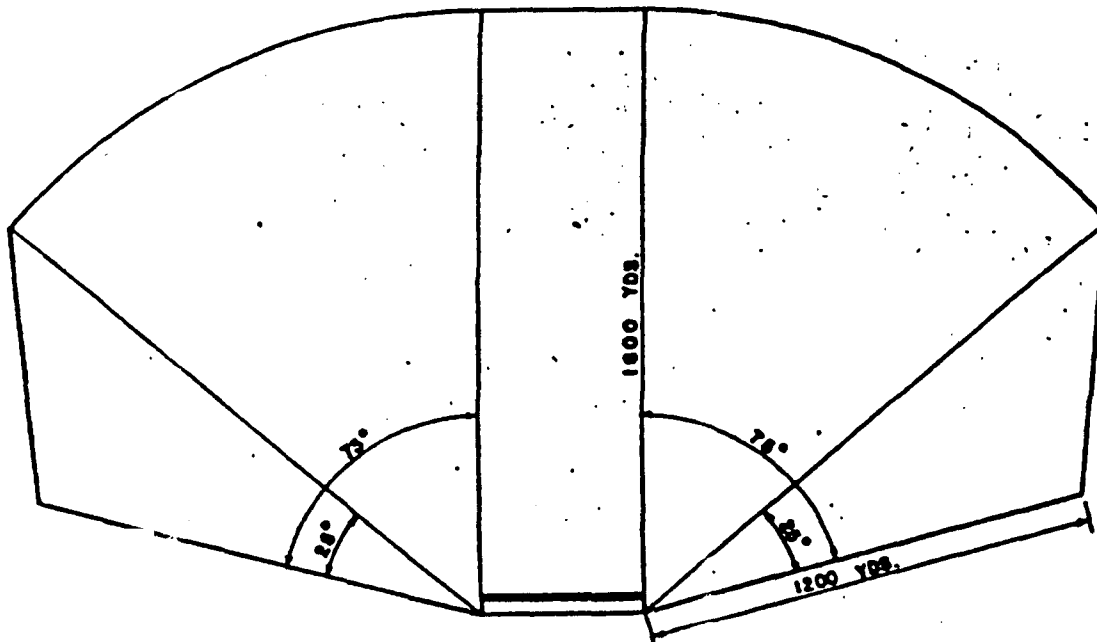
**CONSTRUCTION OF TARGET RANGES AND LAY-OUT
OF VARIOUS OTHER RANGES AND COURSES**



OCE 1600-125

RA PD 60945

Figure 17 — Salvage Wall for 1,000-inch Ranges When Required



OCE 1600-101

RA PD 60946

Figure 18 — Submachine Gun Range

enfilade fire into wire trench. Targets should not be visible when in a down position. Location of trenches and wires should be hidden or camouflaged as practicable.

(e) Wires leading off the main line to the unit should be placed so that the wire will not be noticed at a distance greater than 100 yards. This can be accomplished by:

1. Keeping wire on the ground and on the reverse side of any ridge or unevenness of the ground.
2. Placing all supports flush or just below the level of the ground and providing a small trench for the wire about 10 feet on each side of the recessed supports.

CONSTRUCTION OF TARGET RANGES AND LAY-OUT
OF VARIOUS OTHER RANGES AND COURSES

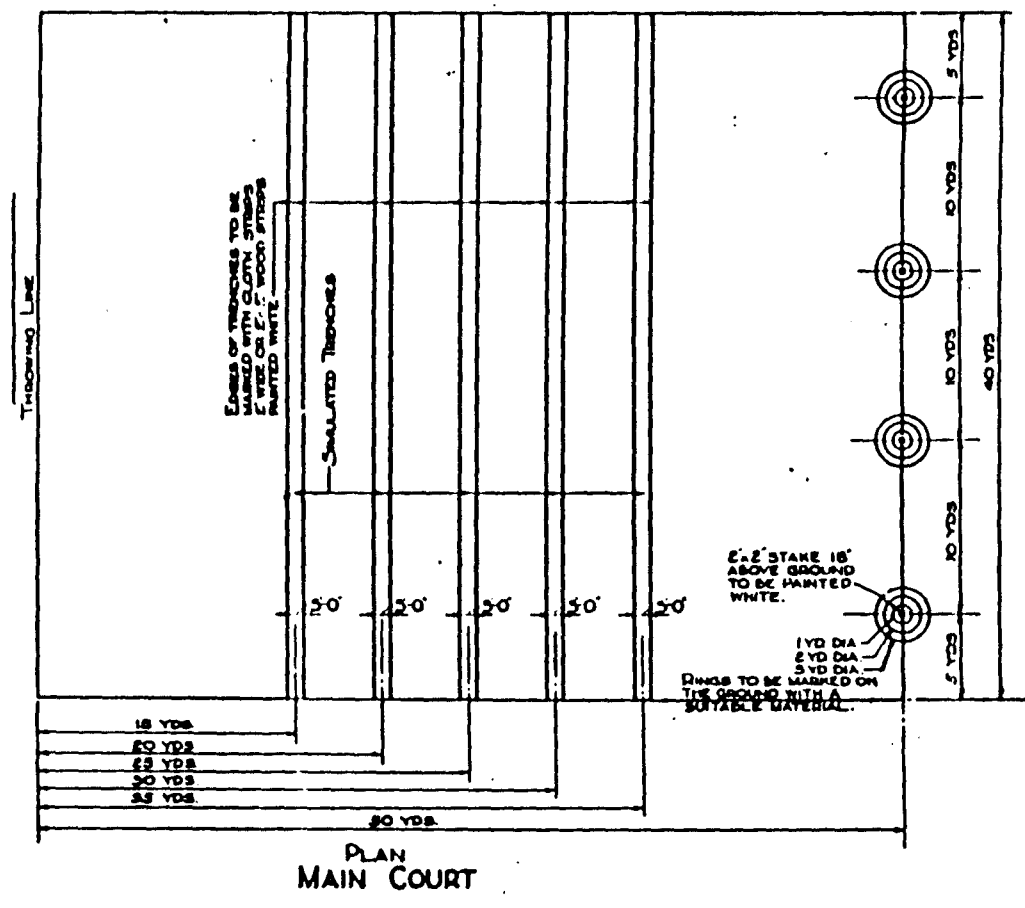
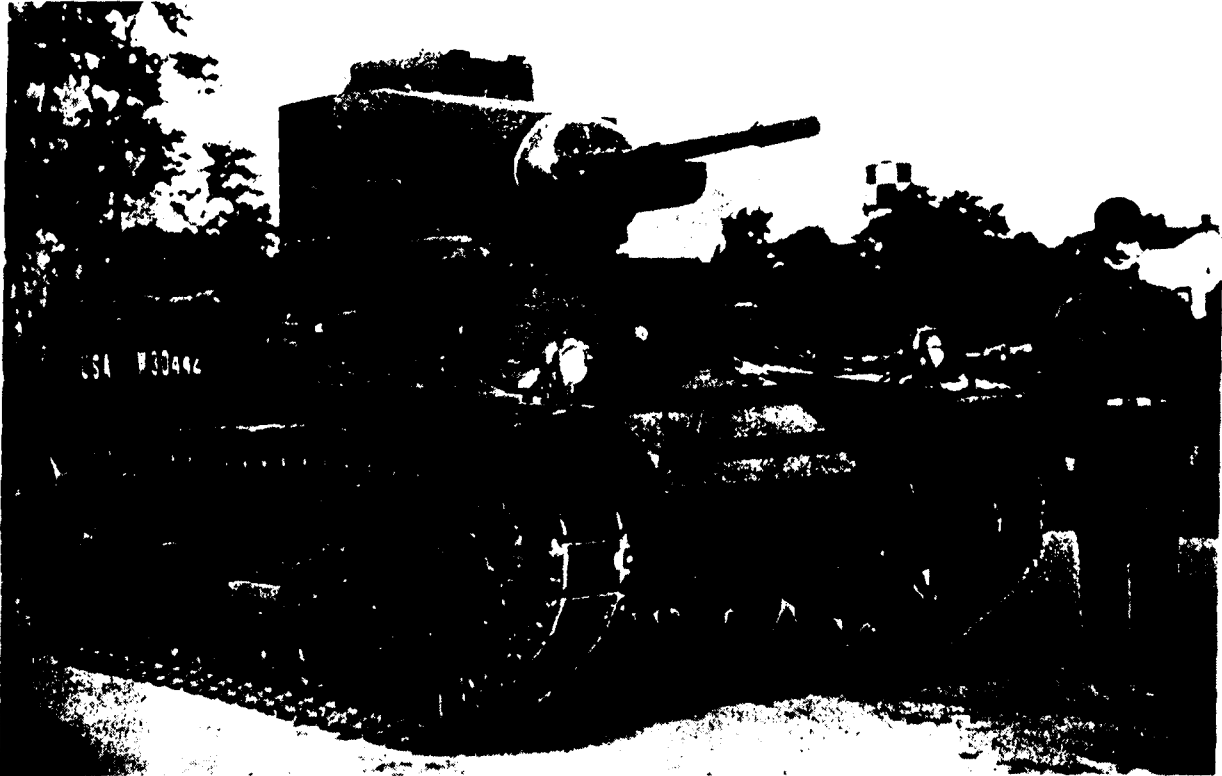


Figure 59 — Grenade Courts



The U.S. Army Light Tank M2A3. This is either a very early production unit or one of the prototypes.

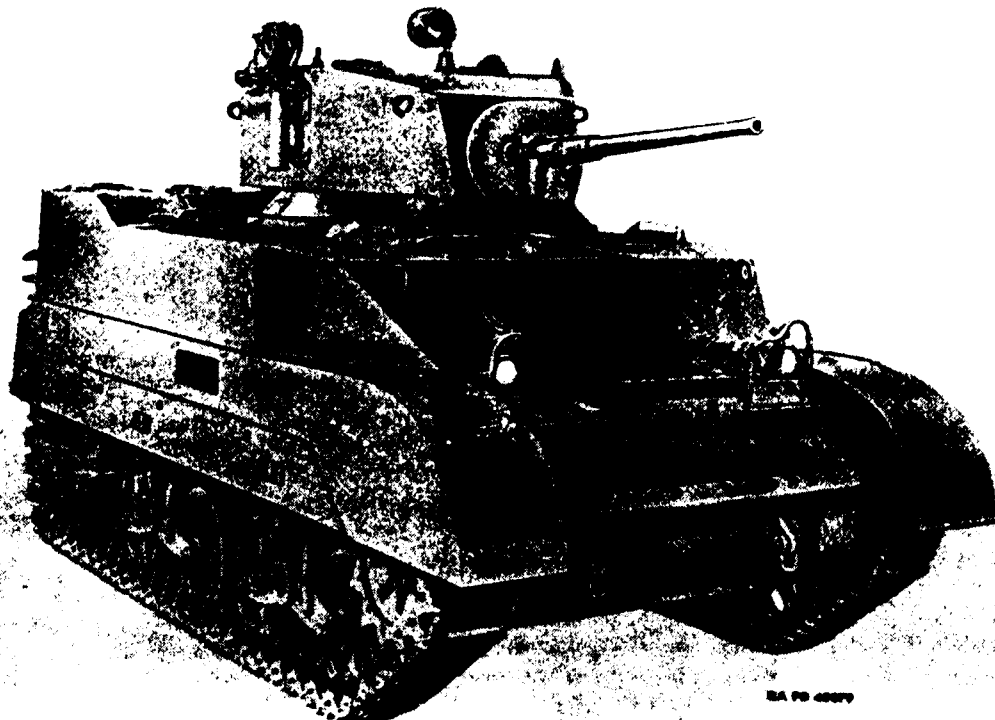


The U.S. Army Light Tank M3.



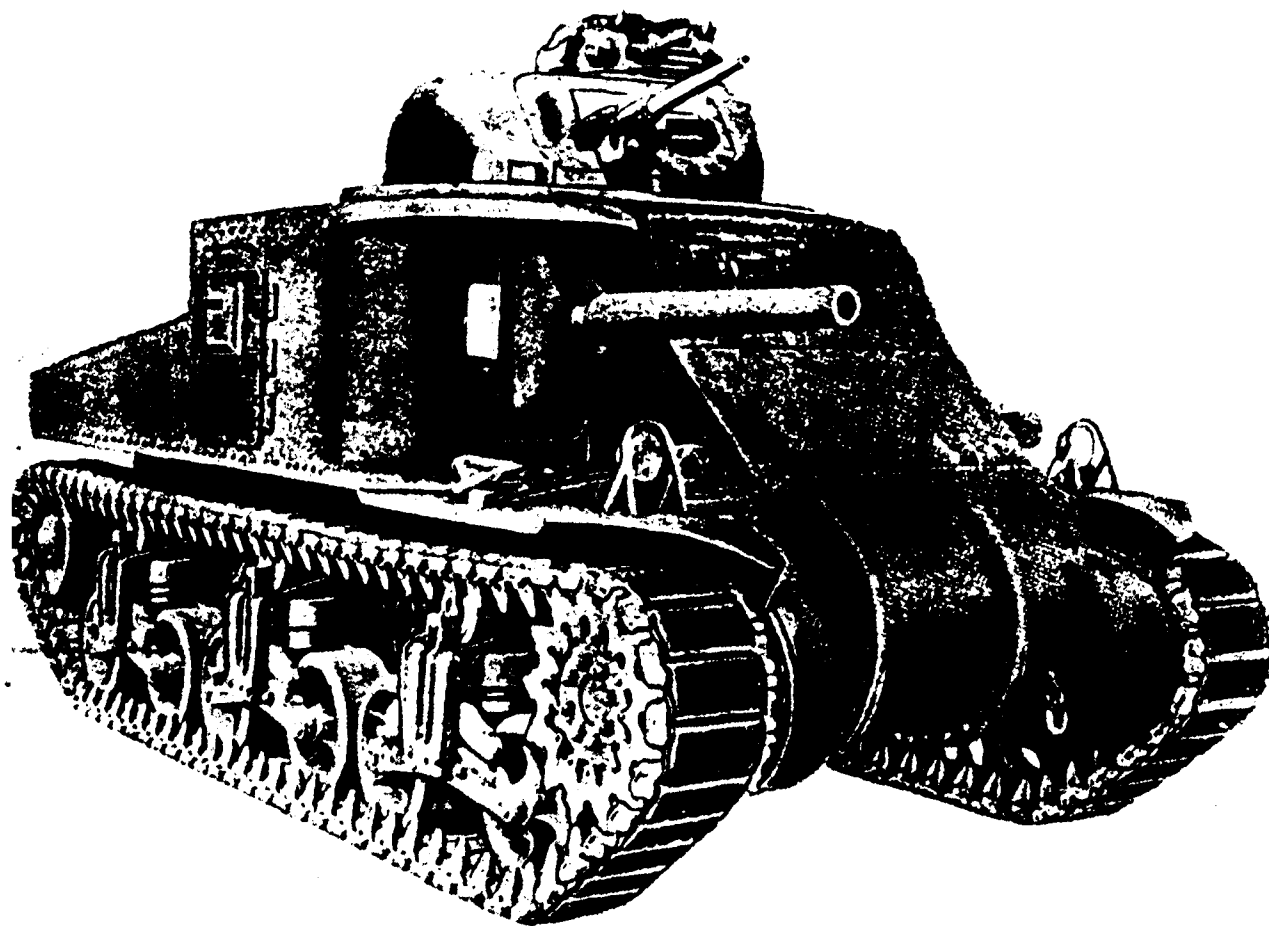
RA PD 43859

The U.S. Army Light Tank M3A3.



RA PD 43859

The U.S. Army Light Tank M5A1. Note the bump on the rear of its hull for the liquid-cooled Cadillac engines' radiators and the removable sand shields over the top of the suspension. These shields could be used on any M3 or M5 light tank in desert conditions.



A typical standard U.S. Army Medium Tank M3.

MODEL: Medium Tank M3

WEIGHT: Fighting: 60,000 lbs.

DIMENSIONS: Length: 18 ft., 6 in. Height: 10 ft., 3 in.
Width: 10 ft., 3 in.

ARMAMENT: 1-75mm Tank Gun M2 in sponson mount;
Traverse: 14 degree R&L; Elevation: +19.2 degrees, -7.8 degrees; 1-37mm tank gun M6 in turret in combination mount with cal. .30 Browning Machine Gun M1919A4; 3-cal. .30 Browning Machine Guns M1919A4, 1 in turret cupola turret and 2 fixed in hull front.

ENGINE: Wright Air Cooled 9-cylinder radial model R975, 973 cu. in. rated 340 hp at 2,400 rpm.

TRANSMISSION: Manual 5-speed and reverse.

NORMAL ROAD SPEED: 26 mph max.

CREW: 6.

NOTE: The 2-cal. .30 machine guns in hull front were removed prior to combat use, and their ports were plugged.

MODEL DIFFERENCES: The Medium Tank M3 was the standard production model used by the U.S. Army in combat. A total of 4,942 were built, including about 600

"Lees" with a special 37mm gun turret to meet British requirements. M3 production ended in December 1942.

In addition to the M3, there were five other models built. Their total production was 1,784. They are:

M3A1: A limited production test of a cast armor upper hull. Three hundred were built and used as test or training vehicles only.

M2A2: A production test built with an all-welded hull. Twelve were built and used as test vehicles only.

M2A3: A welded-hull limited production model powered with twin liquid-cooled GMC diesel motors, Model 6-71. A total of 322 were built with a small number going to the U.S. Marine Corps as training vehicles and the rest to Lend-Lease.

M3A4: A riveted-hull model powered by the Chrysler liquid-cooled 30-cylinder gasoline "multibank" engine. The 109 built were used as test and/or training vehicles and/or for Lend-Lease.

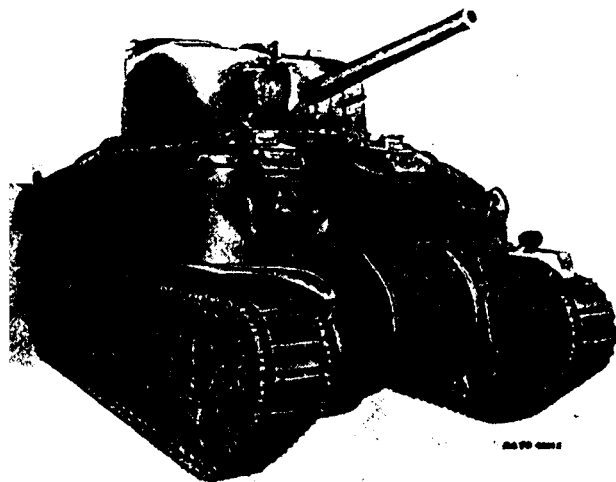
M3A5: A riveted-hull limited production powered by twin GMC liquid-cooled diesel engines. A total of 591 were built with a few going to the U.S. Marine Corps and the rest for Lend-Lease.

Other Production Vehicles Built On the Medium Tank M3 Chassis:

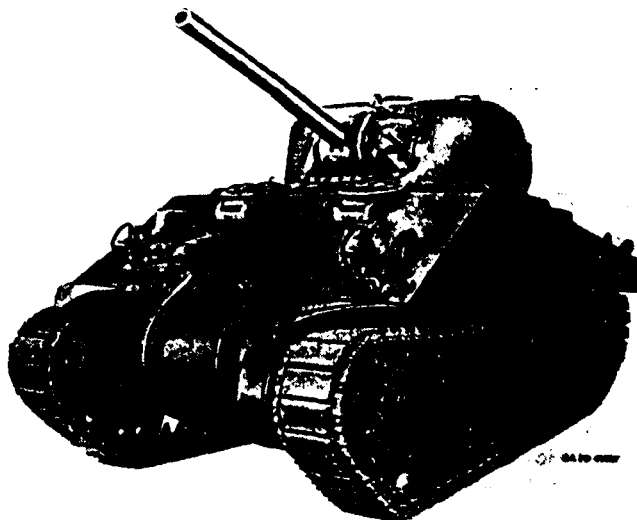
105mm Howitzer Motor Carriage M7 "Priest"

155mm Gun Motor Carriage M12 "King Kong"

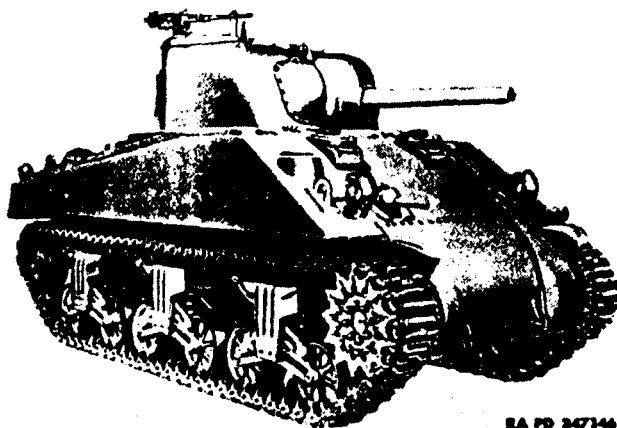
Cargo Carrier M30 (for the 155mm Gun Motor Carriage M12)



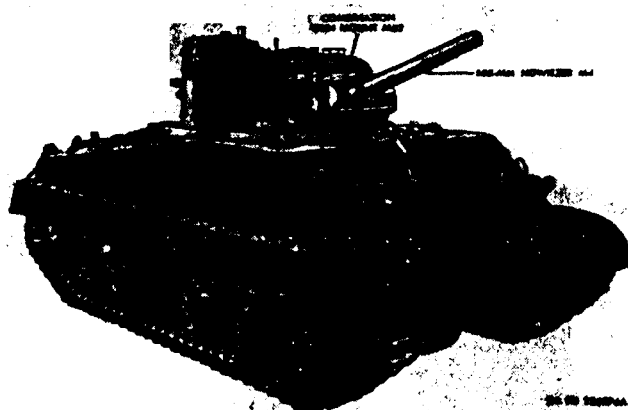
An early production cast hull U.S. Army Medium Tank M4 with the three-part cross drive housing.



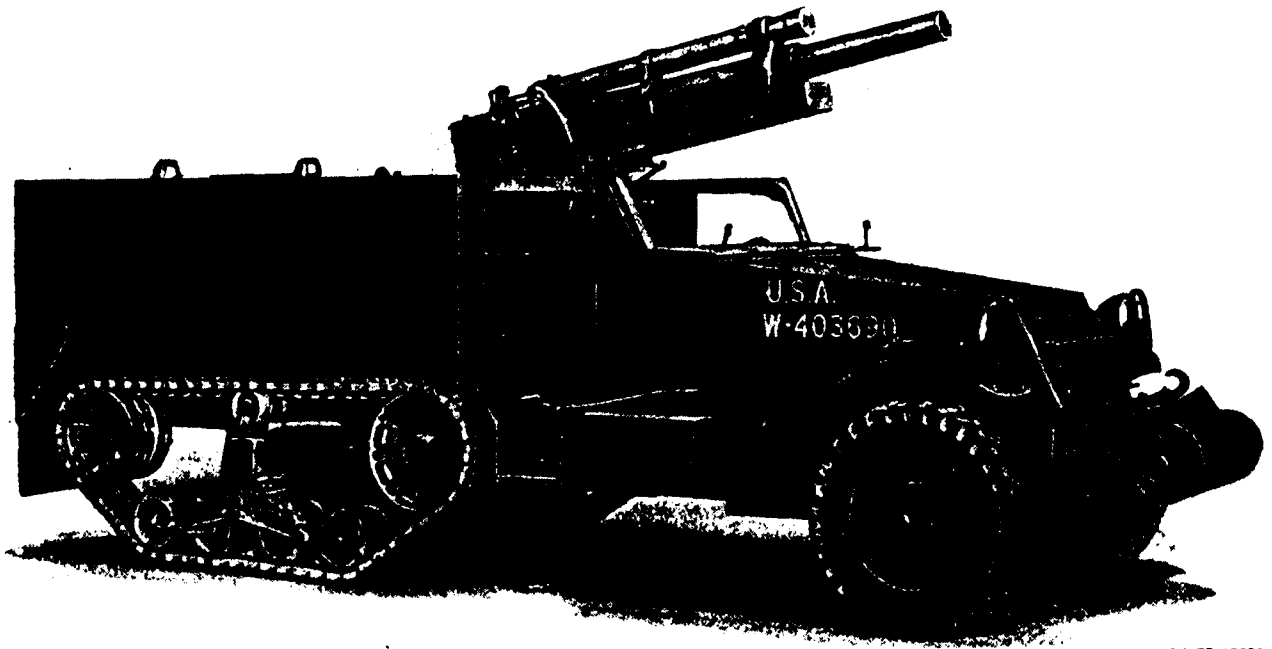
An early production U.S. Army welded-hull Medium Tank M4 series with the three-piece cross drive housing.



An intermediate production U.S. Army Medium Tank M4 series with a welded hull and one-piece cross drive housing.



A very late production welded-hull U.S. Army Medium Tank M4A3 with a 105mm howitzer and track assembly with track widening "duck bill" track connectors and semi-sand shield skirts.



EA PD 12884

The U.S. Army 105mm Howitzer Motor Carriage T19.

MODEL: 105mm Howitzer Motor Carriage T19

WEIGHT: Fighting: 20,000 lbs.

DIMENSIONS: Length: 19 ft., 9-1/2 in. Height: 7 ft., 8 in.
Width: 7 ft., 2-1/2 in.

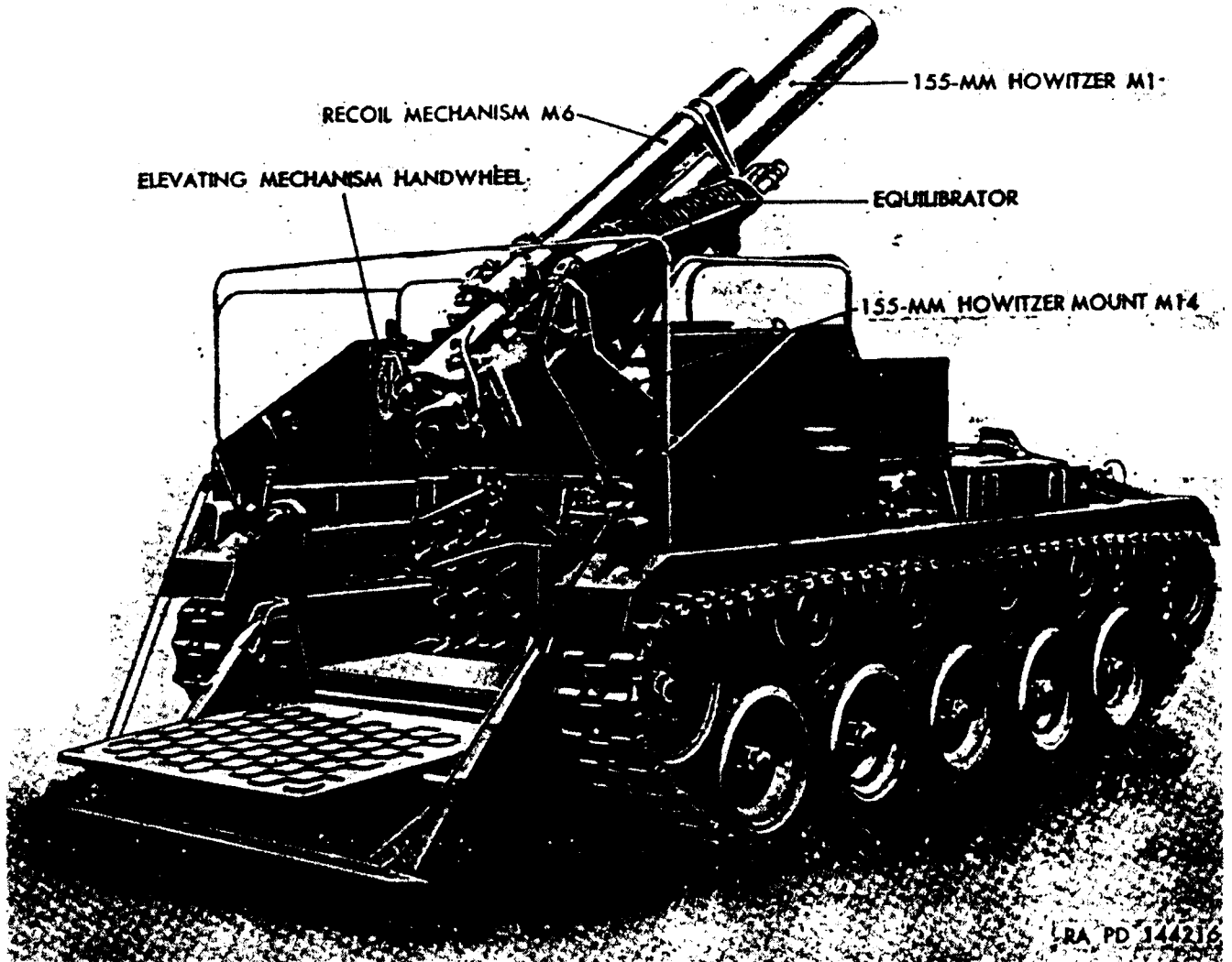
CANNON: Modified 105mm Howitzer M2. Range: 11,700 yards max. Ammunition: Semifixed HE, Heat, WP and chem. smoke, M2 Howitzer Series only. Projectile Weight: 28 to 33 lbs.

TRAVERSE: 20 degrees R&L. Elevation: +35 degrees, -5 degrees. Fires from tracks. Min. time to emplace: None, but firing while moving not recommended.

BASIC CHASSIS: Modified Half-Track Personnel Carrier M3.

NORMAL ROAD SPEED: 45 mph max.

CREW: 6



The U.S. Army 155mm Howitzer Motor Carriage M41.

MODEL: 155mm Howitzer Motor Carriage M41

WEIGHT: Fighting: 43,000 lbs.

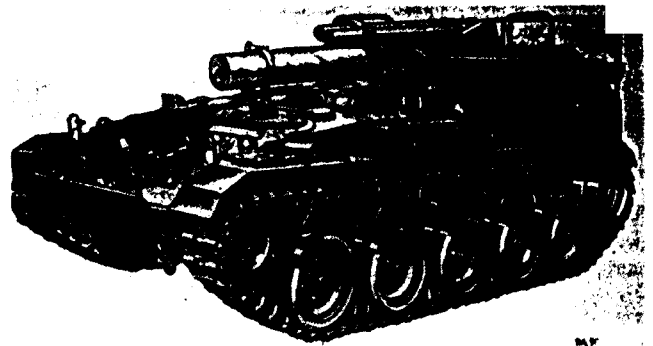
DIMENSIONS: Length: 19 ft., 4 in. Height: 8 ft., 0 in.
Width: 9 ft., 5 in.

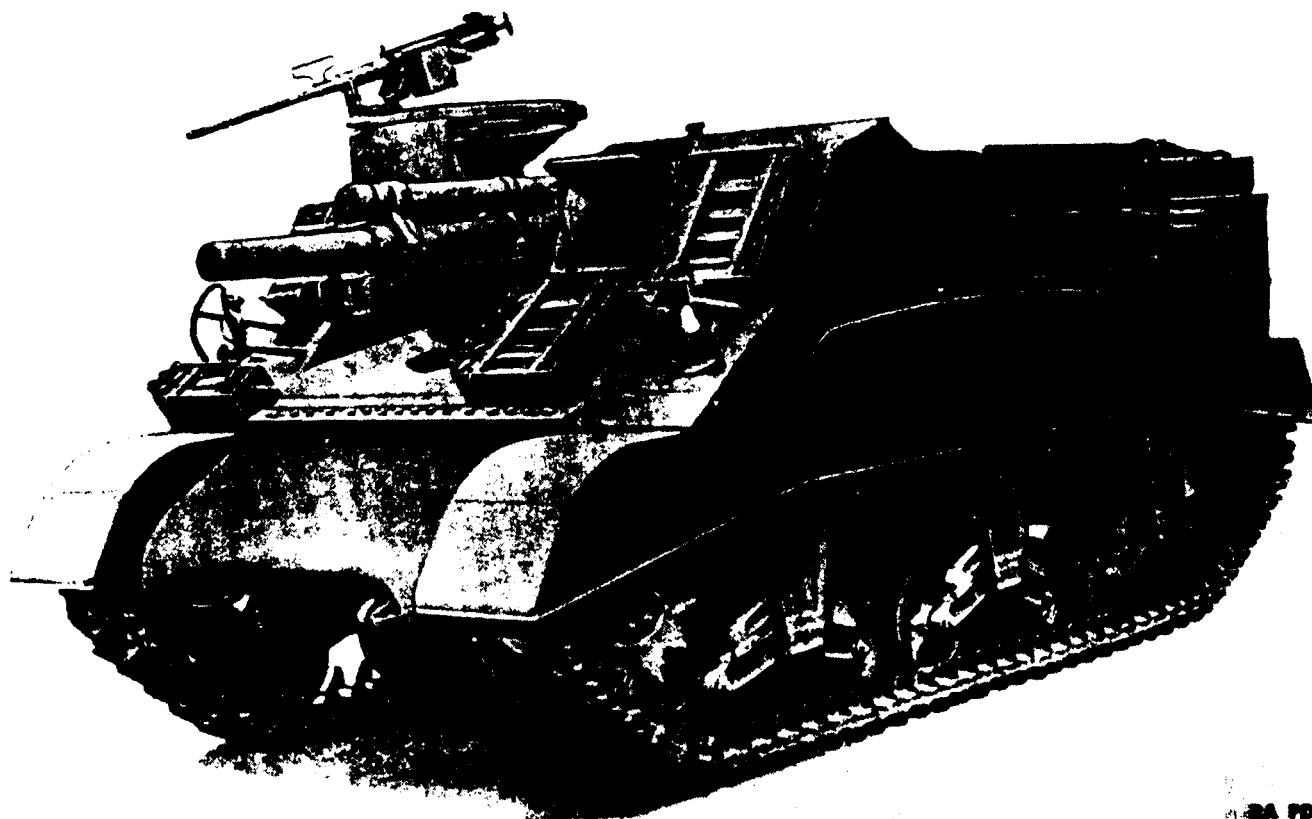
CANNON: Modified 155mm Howitzer M1. Range: 16,355 yards max. Ammunition: Separate loading HE, WP and chem. smoke, M1 Howitzer Series only. Projectile Weight: 95 lbs. Traverse: 17 degrees L, 20 degrees R. Elevation: +45 degrees, -5 degrees. Fires from tracks with firing trail spade emplaced. Min. time to emplace: 5 min.

BASIC CHASSIS: Modified Light Tank M24.

NORMAL ROAD SPEED: 35 mph max.

CREW: 12





DA PD 31

The U.S. Army 105mm Howitzer Motor Carriage M7.

MODEL: 105mm Howitzer Motor Carriage M7 and M7B1

WEIGHT: Fighting: M7: 50,634 lbs.; M7B1: 56,470 lbs.

DIMENSIONS: Length: 20 ft., 3-1/2 in. Height: 9 ft., 4-1/2 in. Width: 9 ft., 8 in.

CANNON: Modified 105mm Howitzer M2. Range: 11,400 yards max. Ammunition: Semifixed HE, Heat, WP and chem. smoke; M2 Howitzer Series only. Projectile Weight: 28 to 32 lbs.

TRAVERSE: 12-1/4 degrees L, 25-1/2 degrees R. Elevation: +32-1/2 degrees, -5 degrees. Fires from tracks. Min. time to emplace: None; can fire while moving.

ADDITIONAL ARMAMENT: 1 cal. .50 Browning Machine Gun 174-HB.

BASIC CHASSIS: Medium Tank M3 or M4.

NORMAL ROAD SPEED: 25 mph max

CREW: 7

MODIFICATIONS: M7: Medium Tank M3 chassis with air-cooled radial engine. M7B1: Medium Tank M4 chassis with air-cooled radial engine.

GRENADE, HAND: FRAGMENTATION, MK2



Type Classification:

Obs. AMCTC 6558

Use:

The MK2 fragmentation hand grenade is used to supplement small arms fire against the enemy in close combat. The grenade produces casualties by high velocity projections of fragments.

Description:

The MK2 grenade is pineapple shaped with deep serrations of its body. These serrations delineate fragmentation of the body when the grenade explodes. No safety clip is authorized for use with this grenade.

The grenade body is of cast iron and contains a high-explosive filler.

Grenade fuzes M204A1 and M204A2 are pyrotechnic delay-detonating fuzes. They differ only in body construction. The body contains a primer and a pyrotechnic delay column. Assembled to the body are a striker, striker spring, safety lever, safety pin with pull ring, and a detonator assembly. The split end of the safety pin has an angular spread or diamond crimp.

Tabulated Data:

Grenade (with fuze):	
Model(s) -----	MK2
Body -----	Cast iron
Weight -----	21 oz
Length (max) -----	4.5 in.
Diameter -----	2.25 in.
Color -----	Olive drab, or olive drab w/yellow band around top of fuze well
Explosive Filler:	
Type -----	TNT (flaked or granular)
Weight -----	2 oz
Fuze:	
Model(s) -----	M204A1, M204A2
Type -----	Pyro delay-detonating
Primer -----	M42
Detonator -----	Lead azide, lead Styphnate, and RDX
Delay time -----	4 - 5 sec
Weight -----	2.6 oz
Length -----	4 in.
Color, safety lever -----	Olive drab w/black markings
Packing -----	Not issued separately
Safety device -----	Pull ring and safety pin (Grenade MK2)

Federal Supply Code:

NSN ----- 1330-00-028-5841
 DODAC ----- 1330-G890

See DOD Consolidated Ammunition Catalog for additional information.

Unit of Issue:

Each Packed: ----- 1 per fiber container; 25 per packing box.

Packing Data:

Packing box:

Weight (with contents) ----- 57.6 lb.
 Dimensions ----- 17-3/4 in. x 16-1/4 in. x 11-5/8 in.
 Cube ----- 1.27 cu ft

Shipping and Storage Data:

Hazard class/division and storage compatibility group ----- (04) 1.1F
 UNO serial number ----- 0292
 DOT class ----- Class A explosive
 DOT marking ----- HAND GRENADES

Functioning:

Removal of the safety pin permits release of the safety lever. When the safety lever is released, it is forced away from the grenade body by a striker acting under the force of a striker spring. The striker rotates on its axis and strikes the percussion primer. The primer emits a small, intense spit of flame, igniting the delay element. The delay element burns for 4 to 5 seconds, then sets off the detonator. The detonator explodes, thus initiating the explosive charge. The explosive charge explodes, rupturing the body and projecting fragments.

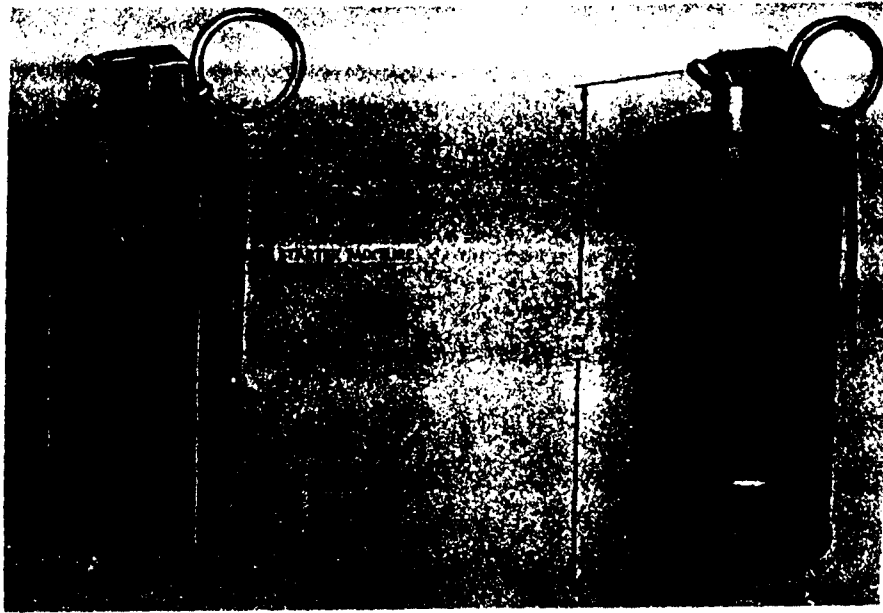
References:

TM 9-1330-200
 TM 9-1330-200-12
 TM 9-1330-200-34
 FM 23-30
 DOD Consolidated Ammo Catalog

Drawings:

Assembly ----- 82-0-143
 Fuzes:
 M204A1 ----- 82-1-87
 M204A2 ----- 7548570
 Packing (inner) ----- 76-1-1154
 Packing (outer) ----- 76-1-1266

GRENADE, HAND, SMOKE, HC, AN-M8



Type Classification:

Std. LCC-A, AMCTC 3408

Use:

The HC Smoke Hand Grenade AN-M8 is a burning type grenade used to generate white smoke for screening activities of small units. It is also used for ground-to-air signaling.

Description:

The grenade body is a cylinder of thin sheet metal. It is filled with HC smoke mixture topped with a starter mixture directly under the fuze opening. The duration of smoke screen or signal is 105 to 150 seconds.

Hand grenade fuze M201A1 is a pyrotechnic delay-igniting fuze. The body contains a primer, first-fire mixture, pyrotechnic delay column, and ignition mixture. Assembled to the body are a striker, striker spring, safety lever and safety pin with pull ring. The split end of the safety pin has an angular spread.

Safety clips are not required with these grenades.

Tabulated Data:

Grenade (with fuze):

Model(s) ----- AN-M8
 Body ----- Sheet metal
 Weight ----- 24 oz
 Length ----- 5.7 in.
 Diameter ----- 2.5 in.
 Color ----- Light green w/black markings

Packing ----- 1 per container; 16 per packing box

Filler:

Type ----- HC (type C)
 Weight ----- 19 oz

Fuze:

Model(s) ----- M201A1
 Type ----- Pyrotechnic delay-igniting
 Primer ----- M39A1
 Ignition mixture ----- Iron oxide, titanium, zirconium
 Delay time ----- 0.7-2 sec
 Weight ----- 1.5 oz
 Length ----- 3.9 in.
 Color (safety lever) -- Gray or olive drab w/ black markings
 Packing ----- Not separately issued
 Safety device ----- Pull ring and safety pin

Federal Supply Code:

NSN ----- 1330-00-219-8511
 DODAC ----- 1330-G930
 See DOD Consolidated Ammunition Catalog for additional information.

Unit of Issue:

Each Grenade Packed ----- 1 per container; 16 per packing box

Packing Data:

Packing box:

Weight (with contents)-- 41.0 lb
Dimensions ----- 14.0 in. x 14.0 in. x
8.0 in.
Cube -----0.90 cu ft

Shipping and Storage Data:

Hazard class/division

and storage compa-
tibility group ----- 1.3 G

UNO serial number ----- 0016

DOT class ----- Class C explosive

DOT marking ----- SMOKE GRENADES,
HANDLE CARE-
FULLY - KEEP FIRE
AWAY

Functioning:

Removal of the safety pin permits release of the safety lever. When the safety lever is released, it is forced away from the grenade body by a striker

acting under the force of a striker spring. The striker rotates on its own axis and strikes the percussion primer. The primer initiates the first fire mixture. The fuze delay element, ignition mixture, and grenade starter mixture and filler are initiated in turn by the preceding component. The pressure sensitive tape is blown off the emission holes and smoke is emitted for 105 to 150 seconds.

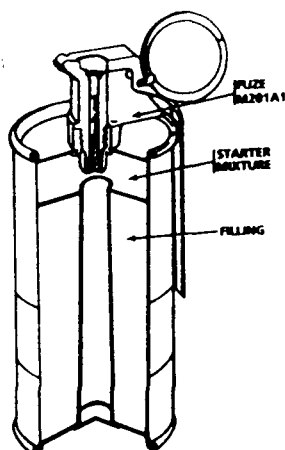
References:

TM 9-1330-200
TM 9-1330-200-12
TM 9-1330-200-34
FM 23-30
DOD Consolidated Ammo Catalog

Drawings:

Assembly ----- 13-19-32
Fuze ----- 13-10-22
Packing (inner) ----- 13-9-44
Packing (outer) ----- 13-19-83

GRENADe, HAND: SMOKE, M18



Type Classification:

Std. LCC-A, AMCTC 3450

Use:

Colored Smoke Hand Grenade M18 is used for ground-to-air or ground-to-ground signaling.

Description:

The grenades may be filled with any one of four smoke colors: red, green, yellow or violet. Each grenade will emit smoke for 50 to 90 seconds. The grenade body is of thin sheet metal and is filled with red, green, yellow or violet smoke composition. The filler is topped with a starter mixture.

The hand grenade fuze M201A1 is a pyrotechnic delay-igniting fuze. The body contains a primer, first-fire mixture, pyrotechnic delay column, and ignition mixture. Assembled to the body are a striker, striker spring, safety lever, and safety pin with pull ring. The split end of the safety pin has an angular spread.

Safety clips are not required with these grenades.

Tabulated Data:

Grenade (with fuze):	
Model(s) -----	M18
Body -----	Sheet metal
Weight -----	19 oz
Length -----	5.75 in.
Diameter -----	2.5 in.

Color -----	Light green w/black markings
Packing -----	1 per container; 16 per packing box.

<u>Filler:</u>	
Type -----	Smoke composition
Weight -----	11-1/2 oz

<u>Fuze:</u>	
Model(s) -----	M201A1
Type -----	Pyrotechnic delay-igniting
Primer -----	M39A1
Ignition mixture -----	Iron oxide, titanium, zirconium
Delay time -----	0.7 - 2 sec
Weight -----	1.5 oz
Length -----	3.9 in.
Color -----	Gray or olive drab w/ black markings
Packing -----	Not separately issued
Safety device -----	Pull ring and safety pin

Federal Supply Code:

<u>NSN's:</u>	
Red -----	1330-00-289-6852
Green -----	1330-00-289-6851
Yellow -----	1330-00-289-6854
Violet -----	1330-00-289-6853

<u>DODAC's:</u>	
Red -----	1330-G950
Green -----	1330-G940
Yellow -----	1330-G945
Violet -----	1330-G955

Unit of Issue:

Each
 Grenades packed ----- 1 per container; 16 per
 packing box.

Packing Data:

Packing box:
 Weight (with contents)- 34.0 lb
 Dimensions ----- 15.5 in. x 14.0 in. x 9.0
 in.
 Cube -----1.1 cu ft

Shipping and Storage Data:

Hazard class/division
 and storage com-
 patibility group ---- 1.4 G
 UNO serial number - 0303
 DOT Class ----- Class C explosive
 DOT marking ----- SMOKE GRENADES,
 HANDLE CARE-
 FULLY - KEEP
 FIRE AWAY

Functioning:

Removal of the safety pin permits release of the safety lever. When the safety lever is released, it is forced away from the grenade body by a striker acting under the force of a striker spring. The striker rotates on its own axis and strikes the percussion primer. The primer initiates the first fire mixture. The fuze delay element, ignition mixture, and grenade starter mixture and filler are initiated in turn by the preceding component. The pressure sensitive tape is blown off the emmission holes and the colored smoke emits from these holes.

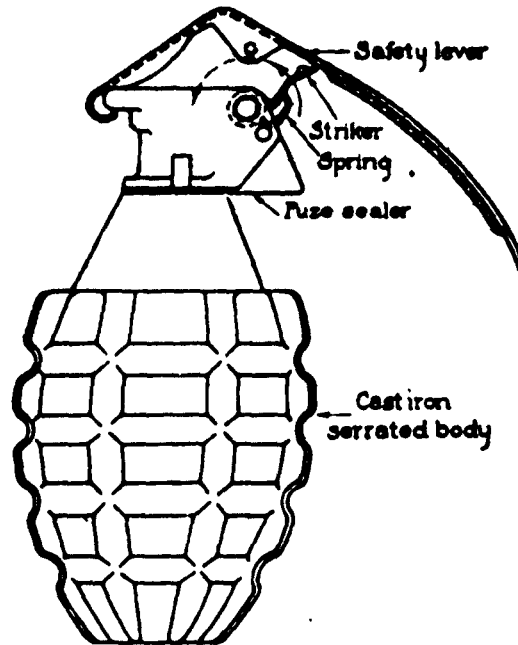
References:

TM 9-1330-200
 TM 9-1330-200-12
 TM 9-1330-200-34
 FM 23-30

Drawings:

Assembly ----- 13-19-37
 Fuze ----- 13-10-22
 Packing (inner) ----- 13-9-44
 Packing (outer) ----- 13-19-83

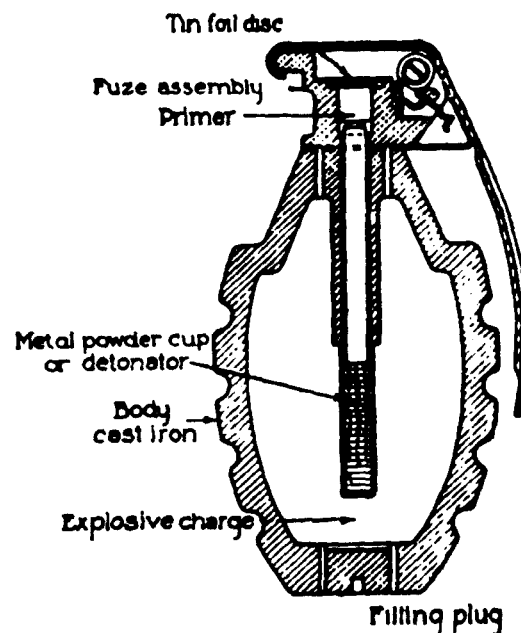
SMALL ARMS AND TRENCH WARFARE



RA PD 15194

Figure 91 — GRENADE, Hand, Fragmentation, Mk. II

The igniting charge consists of 7 grains of loose black powder contained in a copper case (4, fig. 90). The open end of the case extends inside the stem of the fuze body and is crimped in place, the joint being waterproofed by an application of green colored N.R.C. compound. The primer end of the fuze is protected against the entrance of moisture by a tin foil disc (14, fig. 90) which is sealed in place with shellac varnish. Other components of the fuze are the fuze sealer



RA PD 15195

Figure 92 — Grenade — Section View

SMALL ARMS AND TRENCH WARFARE

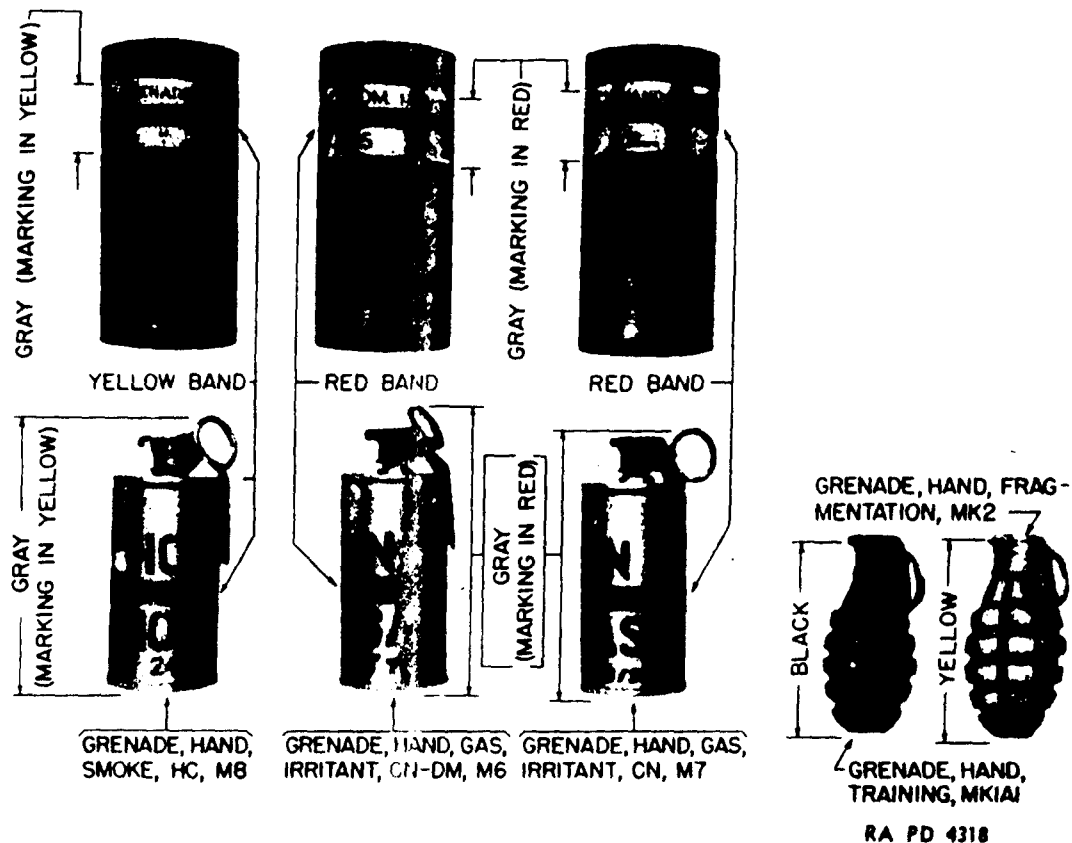


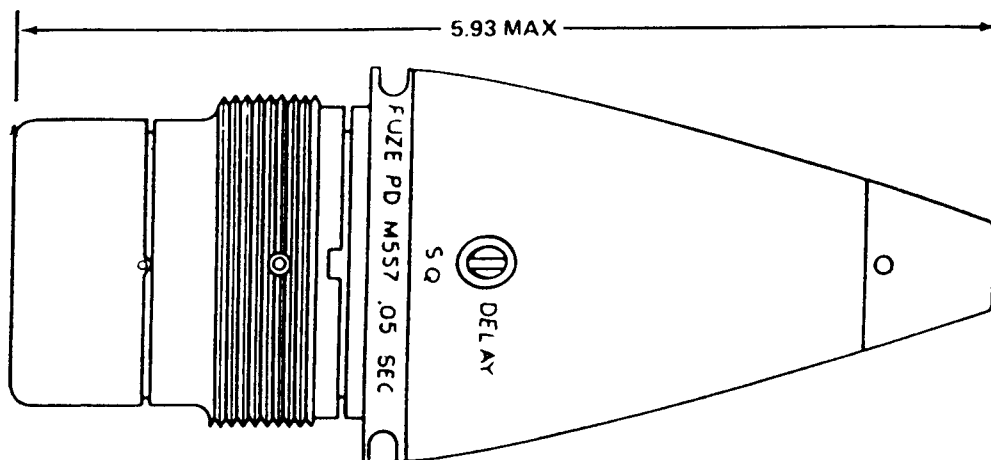
Figure 89 — Hand Grenades

Body. The Fragmentation Hand Grenade Body Mk. II, is made of cast iron. It is about the size and shape of a large lemon and is designed to fit comfortably in the hand. The outside surface is deeply serrated, horizontally and vertically, to assist in forming uniform fragments of effective size when the grenade explodes. The opening in the top is threaded for assembly of the fuze. The body weighs approximately 1 pound, empty.

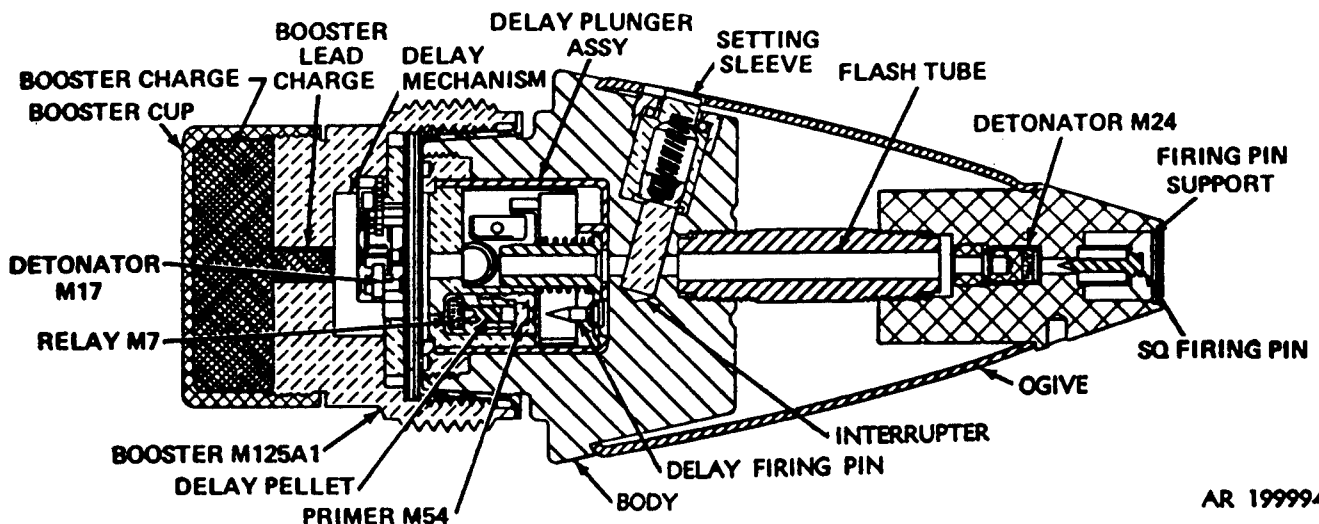
Bursting Charge. The explosive filler or bursting charge consists of 0.74 ounce of E. C. Blank smokeless powder. This is a commercial type of semicolloided nitrocellulose, granulated into small shot-like grains. It is generally pink or yellow in color and is associated with the words "blank fire" in that its principal use has been for loading blank ammunition for small arms.

FUZE, Igniting, Hand Grenade, M10. This is a mechanical device assembled to the grenade body which functions the grenade at the time and under the circumstances desired. (For details, see figure 90.) The fuze body (16, fig. 90) is threaded and screwed into the opening in the top of the grenade body. A lever (10, fig. 90) covers the top of the fuze body, one end being bent over to hook under a protruding lip. The other end of lever extends downward and is curved to follow the contour of the grenade body. A cotter pin (11, fig. 90) with a ring (20, fig. 90) in the eye extends through

FUZE, POINT DETONATING: M557



AR199995



AR 199994

Type Classification:

Std AMCTC 5726 dtd 1967.

Use:

Point Detonating Fuze M557 is a selective superquick or 0.05 second delay impact fuze designed for use in ammunition for guns of 75-mm through 155-mm, for rifles of 75-mm and 105-mm, for howitzers of 75-mm through 8-inch, and for 4.2-inch mortars.

Description:

The M557 fuze consists of Fuze M48A3 assembled with the M125A1 booster. The fuze PD head assembly contains a firing pin held

in position by a firing pin support which prevents initiation of Detonator M24 until impact. The fuze body contains an M1 delay plunger assembly and an interrupter assembly with a setting sleeve which provides a means of setting or selecting fuze PD (Super Quick Action) or delay functioning. The delay plunger assembly includes a firing pin and Delay Element M2. The delay element includes Primer M54, a black powder delay charge and Relay M7. The head assembly is attached to the body by means of the flash tube which also positions the fuze windshield or ogive. The ogive is a thin-walled steel stamping utilized to provide an aerodynamic shape to the fuze. The M125A1 booster consists of a brass booster body having external (male) threads to fit projectiles having 2-inch diameter, 12

threads per inch and internal (female) threads to receive fuzes having 1.7-inch diameter, 14 threads per inch. An aluminum booster cup containing a 340 grains tetryl booster pellet is threaded to the booster body. The M125A1 booster internal configuration is that of an eccentric rotor containing an M17 detonator held in an unarmed (out of line) position by centrifugal detents and a gear train mechanism which provides for delayed arming of the booster assembly for approximately 200 ft. depending upon the weapon and charge being fired.

Functioning:

Upon firing, centrifugal force is utilized to arm the fuze. Centrifugal force retracts the detents holding the rotor in the unarmed position allowing it to turn against the gear train mechanism which controls the turning speed of the rotor until the rotor is in the armed position. Once in the armed position the rotor is locked in position by a spring loaded pin and the Rotor M17 detonator is aligned with the detonation train of the fuze. Simultaneously, centrifugal force will arm the M1 delay plunger of the fuze and retract the flash tube interrupter unless the fuze is set delay, in which instance, the flash tube interrupter will not retract and the flash from the nose superquick element will be prevented from initiating the explosive train of the booster. The fuze is initiated upon impact with the target; the firing pin of the fuze head assembly is driven into the M24 detonator which flashes through to the M17 detonator activating the lead charge and booster pellet. If set delay, the flash tube is blocked and the M17 detonator is activated by the delay element. The delay mechanism of the booster provides an arming distance of approximately 200 feet, depending upon the weapon employed.

Tabulated Data:

Type----- PD
 Weight ----- 2.15 lbs.
 Length:
 Overall----- 5.93 in.
 Visible ----- 3.72 in.
 Assembly Dwg. No.----- 8863535

Temperature Limits:

Firing:
 Lower limit----- - 65°F
 Upper limit ----- + 160°F

Storage:

Lower limit----- - 80°F (for not more than 3 days)
 Upper limit ----- + 160°F (for not more than 4 hrs./day)

* Packing ----- 8 fuzes in metal container; 2 containers in wooden box

* Packing Box:

Weight ----- 55.8 lbs.
 Dimensions ----- 14-5/8 x 12-13/16 x 9-1/8 in.
 Cube ----- 1.04 cu. ft.

*NOTE: See SC for complete packing data including NSN's.

Shipping and Storage Data:

Quantity-distance class ----- 7
 Storage compatibility group ----- B
 DOT shipping class ----- A
 DOT designation ----- DETONATING FUZES-CLASS A EXPLOSIVES

DODAC ----- 1390- N335

Explosive Components:

SQ Action ----- Detonator M24, Detonator M17, tetryl booster lead charge, and tetryl booster charge.
 Delay Action----- Delay Plunger Assembly M1 (M54 primer, black powder delay charge, and Relay M7), Detonator M17, tetryl booster lead charge, and tetryl booster charge.

Limitations:

Premature functioning can occur when fuzes are fired in heavy rainfall. Duds may occur when set for delay in low zones of fire (155-mm and 8-inch Zones 1 and 2). When set SQ normal functioning can be expected. To prevent duds

in 4.2-inch cartridges, fire zones (increments) should not be fewer than seven.

References:

TM 9-1300-251-20
SC 1340/95-IL
SB 700-20
TM 9-1015-203-12
TM 9-1015-234-12
TM 9-1025-200-12
TM 9-2300-216-10
TM 9-2300-217-10
TM 9-2300-217-10N

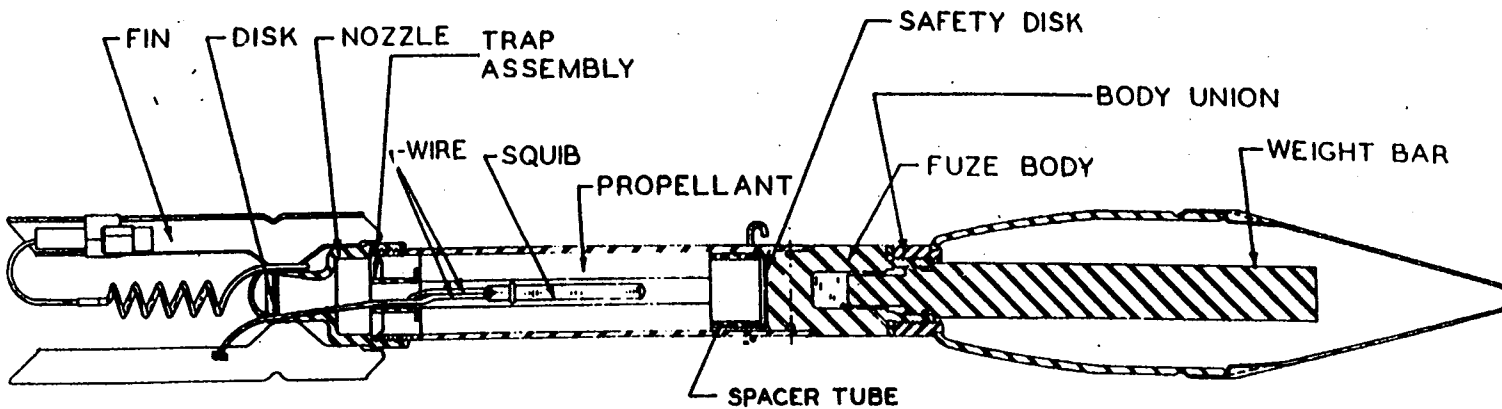
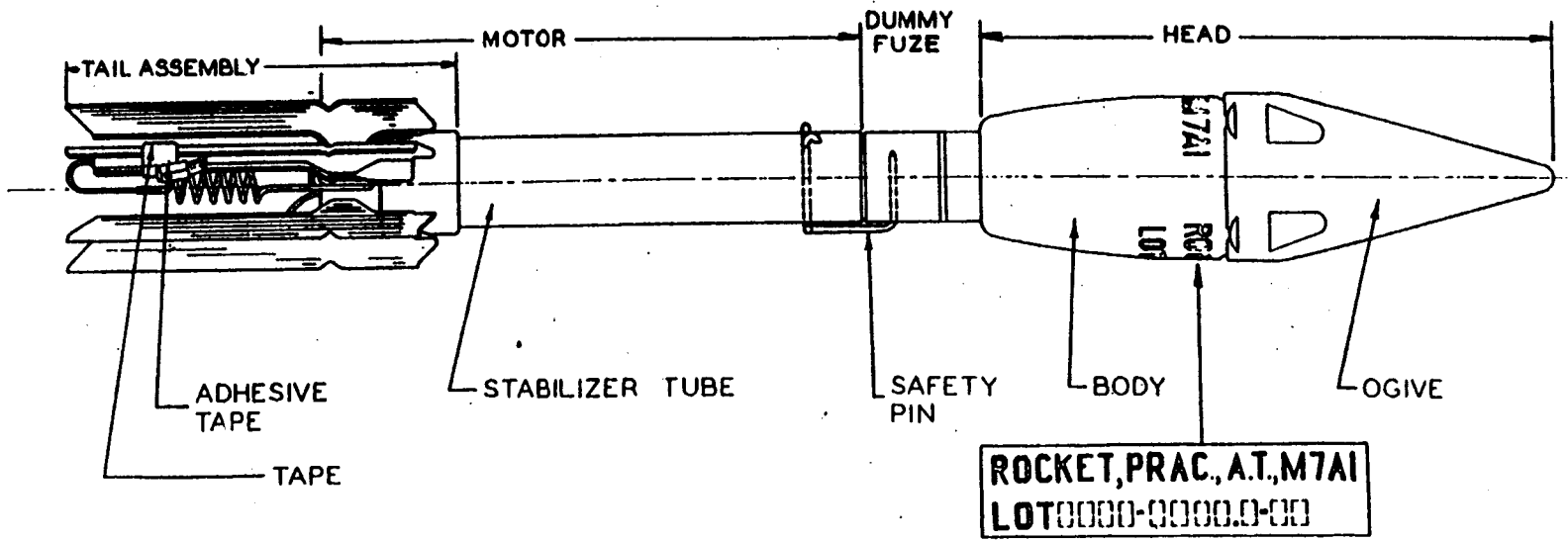
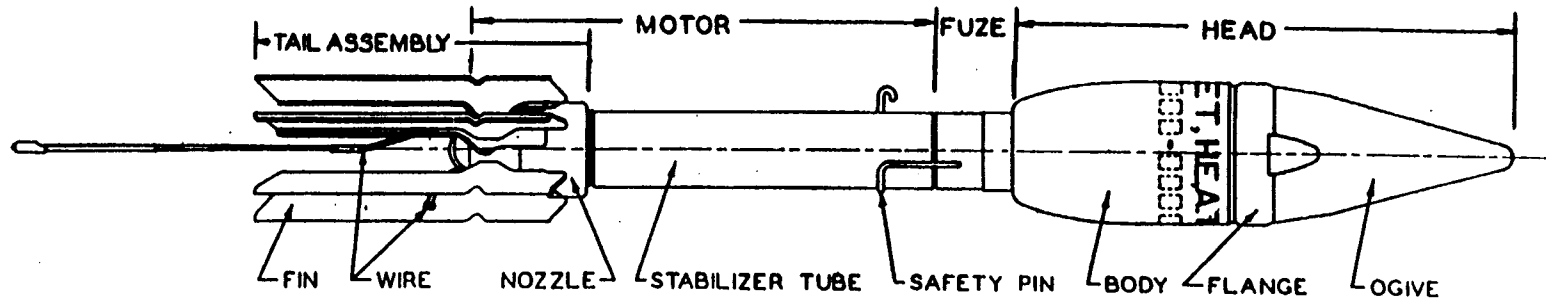
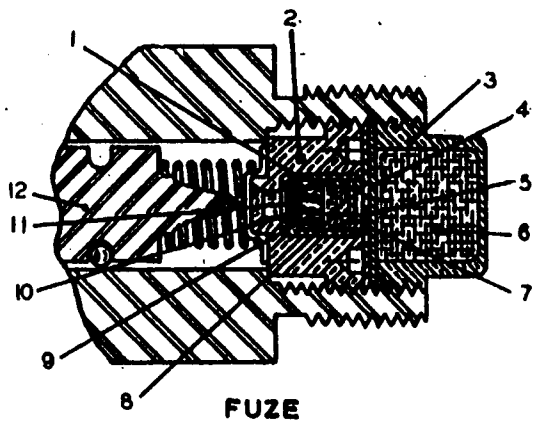


FIGURE 16. - ROCKET, PRACTICE, 2.36", M7A1



- 1-DETONATOR CUP
- 2-DETONATOR HOLDER
- 3-BOOSTER CUP
- 4-DISK
- 5-DETONATOR-HOLDER RETAINING DISK
- 6-BOOSTER CHARGE



- 7-COLORED DETONATOR CLOSING DISK
- 8-DETONATOR PELLET
- 9-INTERMEDIATE DETONATOR CHARGE
- 10-UPPER DETONATOR CHARGE
- 11-DETONATOR DISK
- 12-FIRING PIN

ROCKET, H.E., AT, M6A1
LOT 0000-0000.0-00

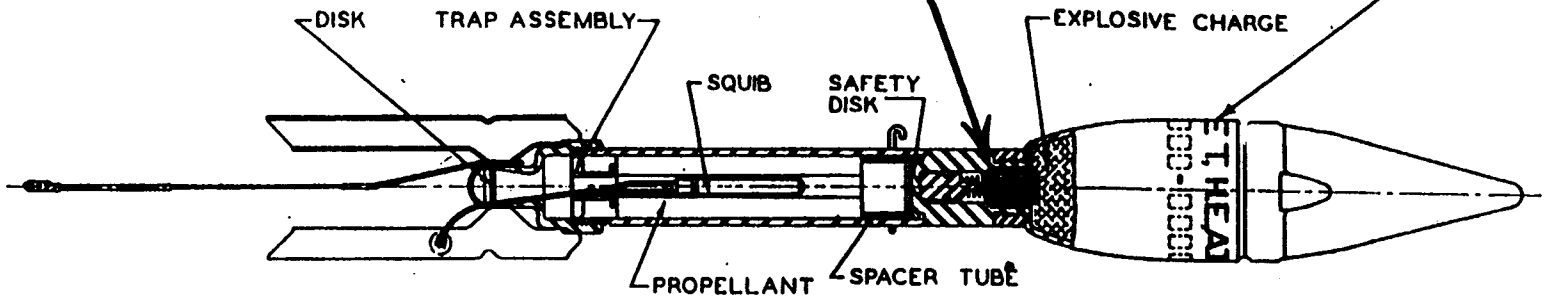


FIGURE 6. - ROCKET, H.E., AT, 2.36", M6A1

~~PROPRIETARY~~

M6A3
ROCKET

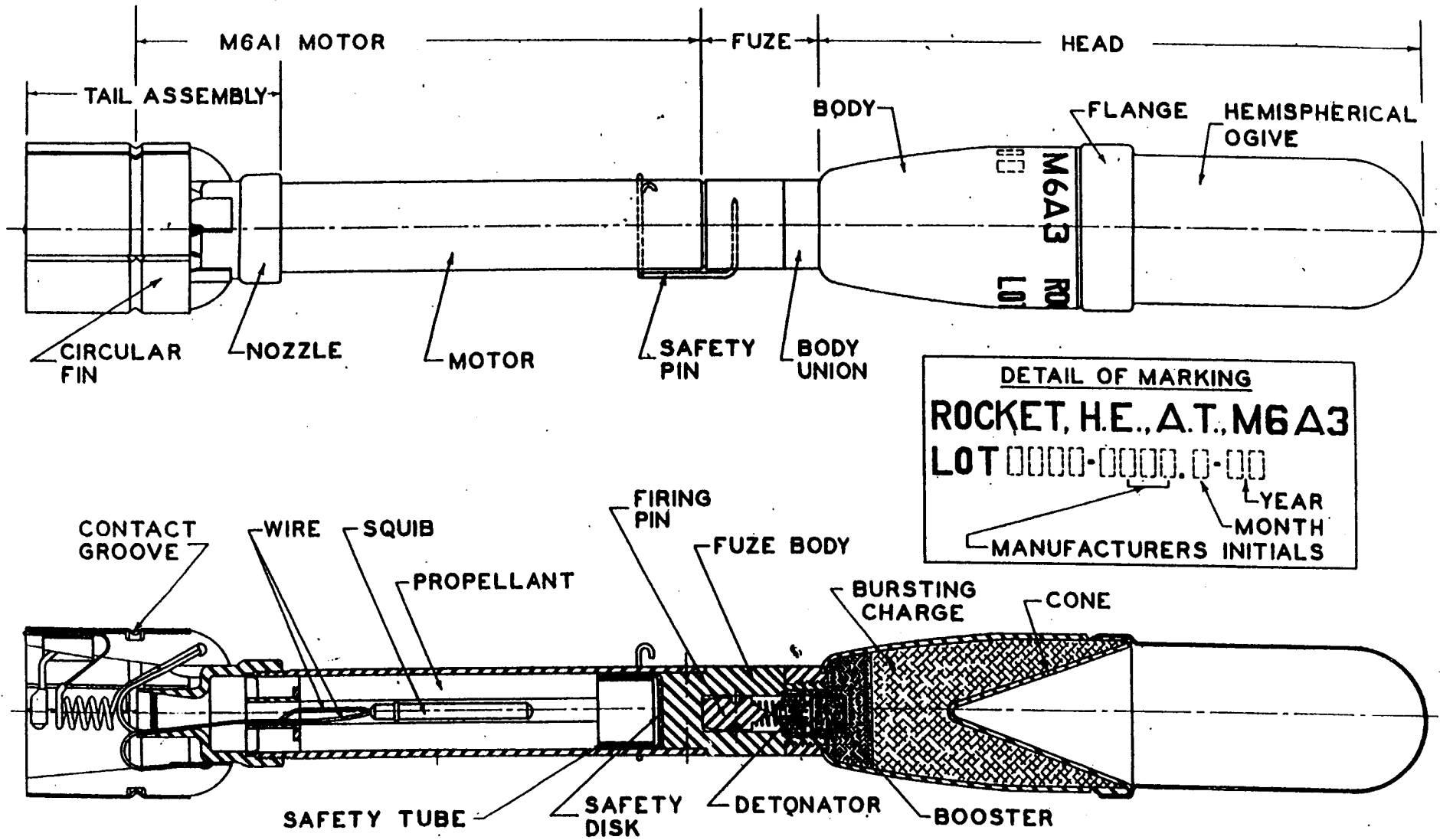


FIGURE 19. - ROCKET, H.E., AT, 2.36", M6A3

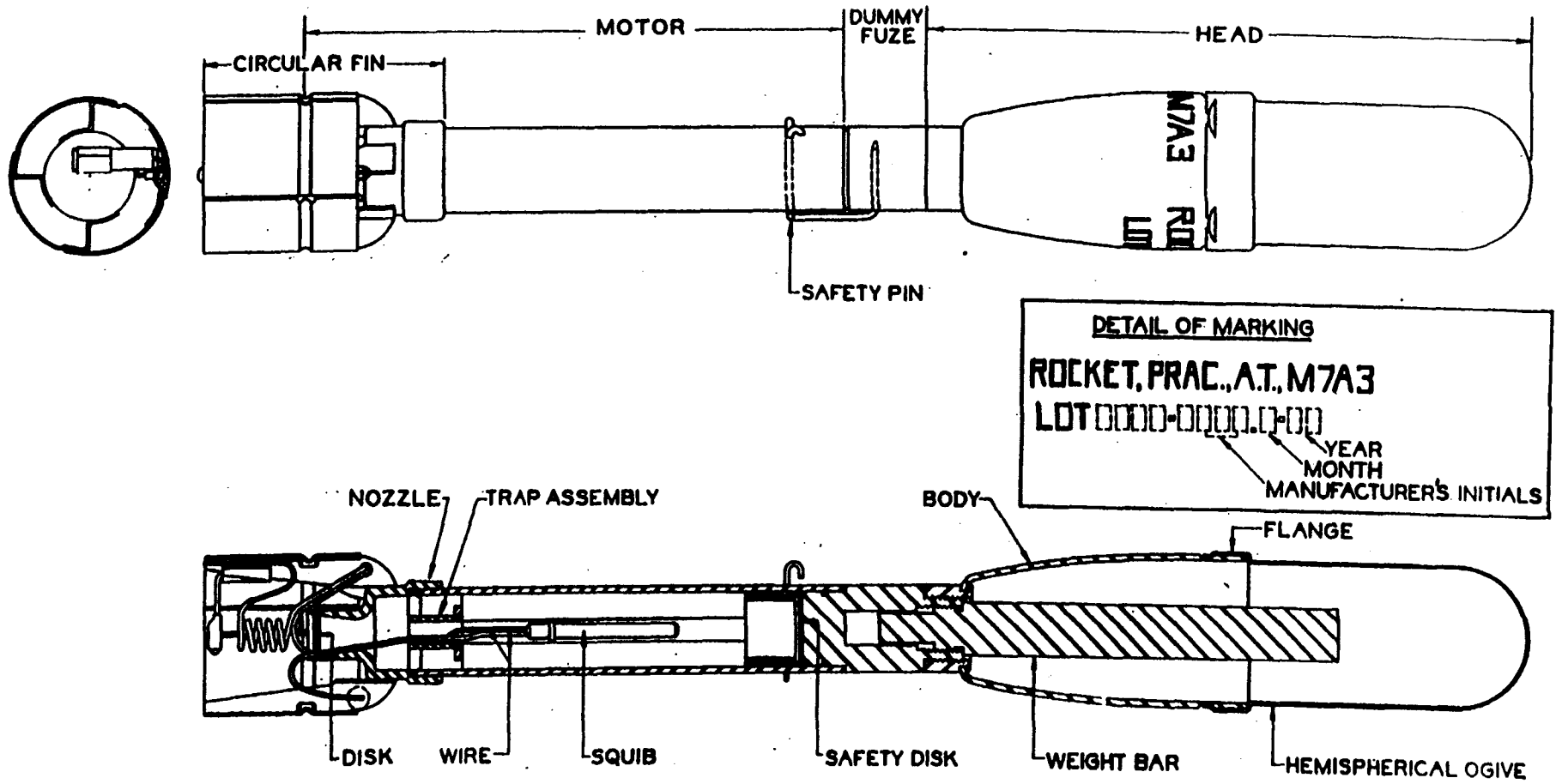
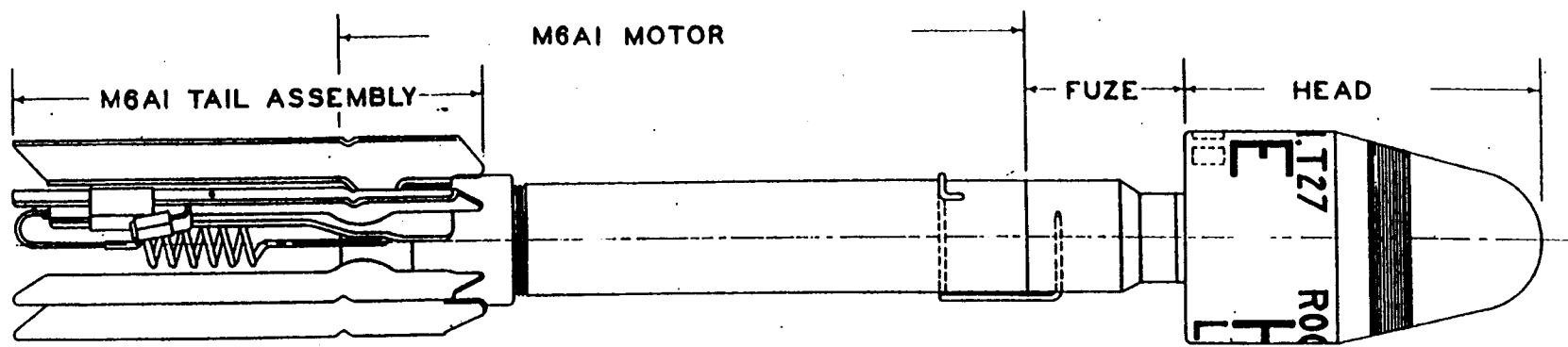


FIGURE 20. - ROCKET, PRACTICE, 2.36", M7A3



DETAIL OF MARKING
ROCKET, 2.36 INCH, T27
HC-SMOKE
LOT 0000-0.0-00

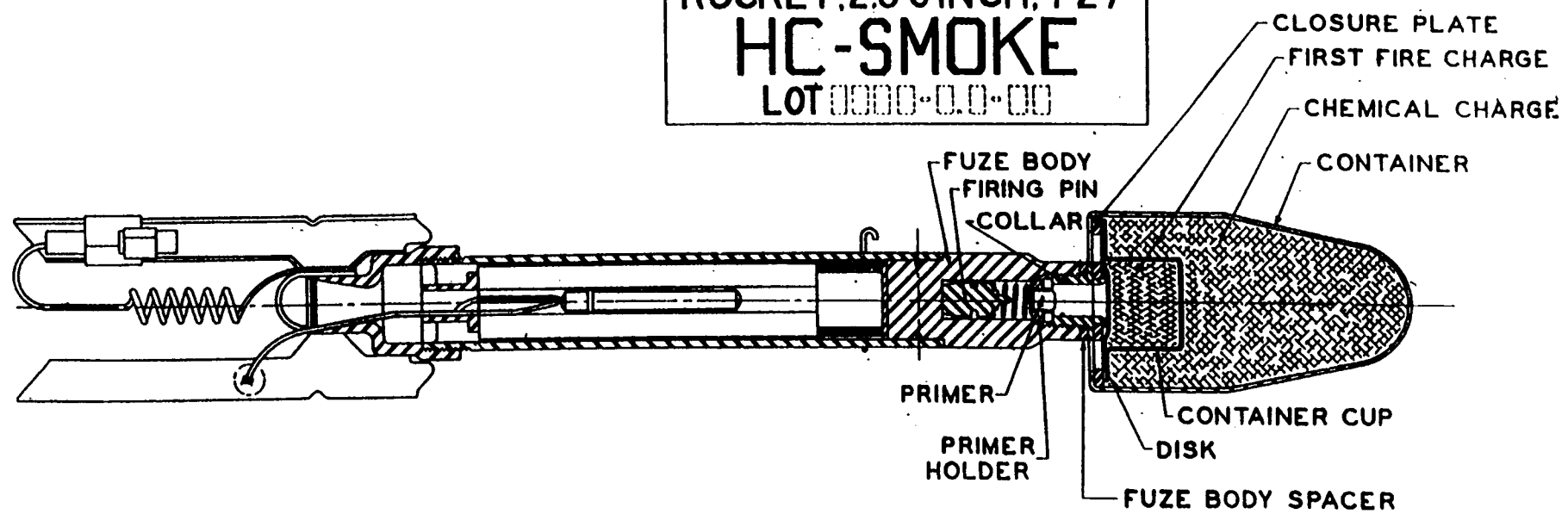


FIGURE 30. - ROCKET, SMOKE, HC, 2.36", T27

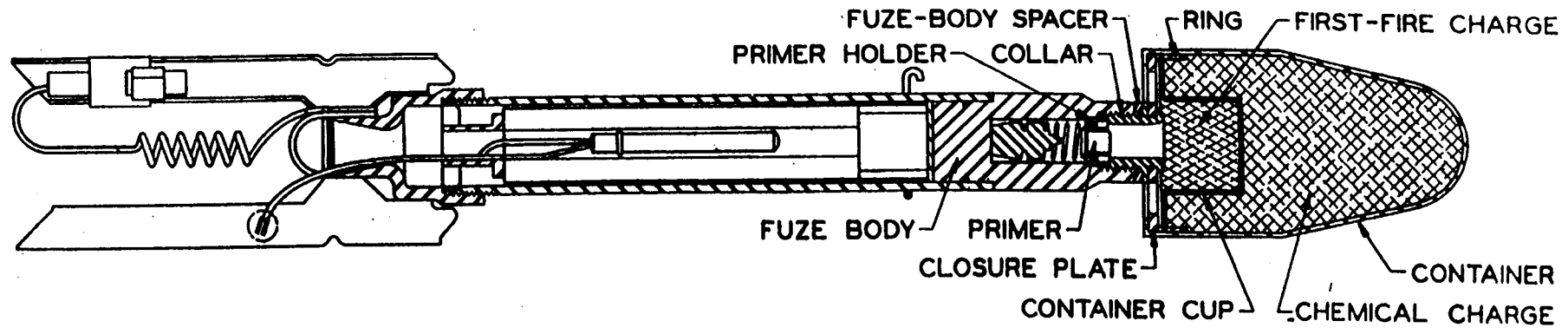
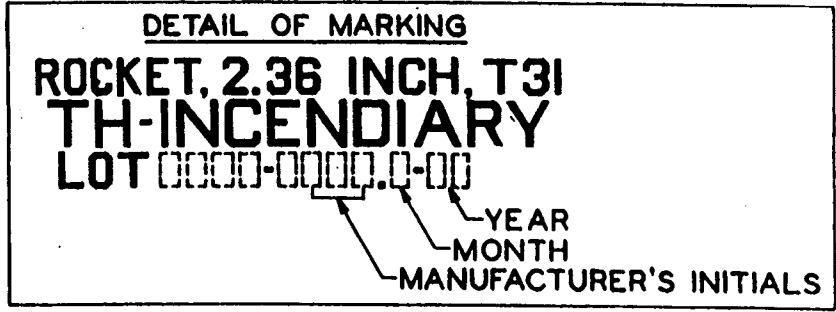
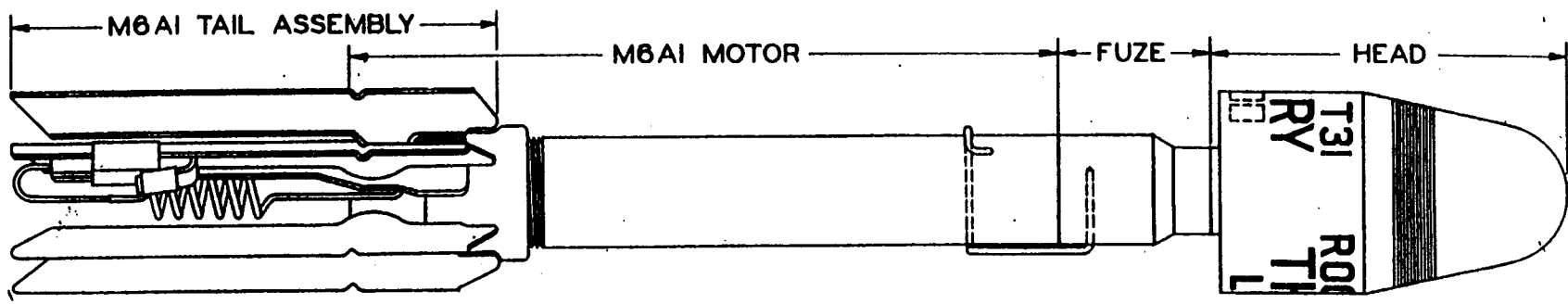


FIGURE 33. - ROCKET, INCENDIARY, 2.36", T31

ARTILLERY AMMUNITION



RA PD 80706

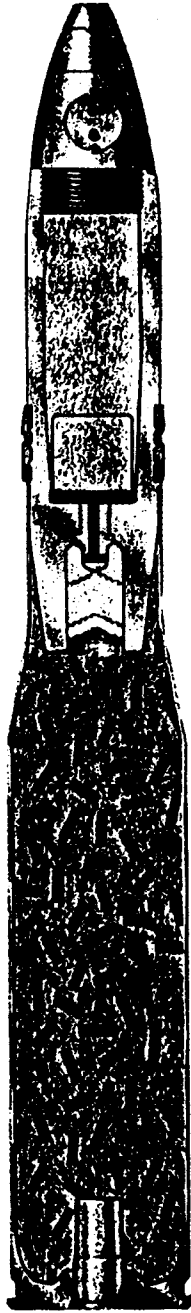


Figure 33 - SHELL, Fixed, H.E., M54, w/TRACER, SD, and FUZE, P.D., M56, 37-mm Auto. Guns, M1A2 and AN-M9

ARTILLERY AMMUNITION



RA PD 80707

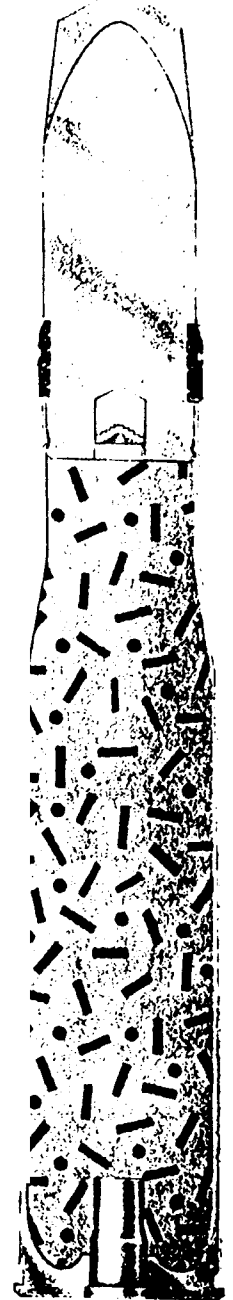
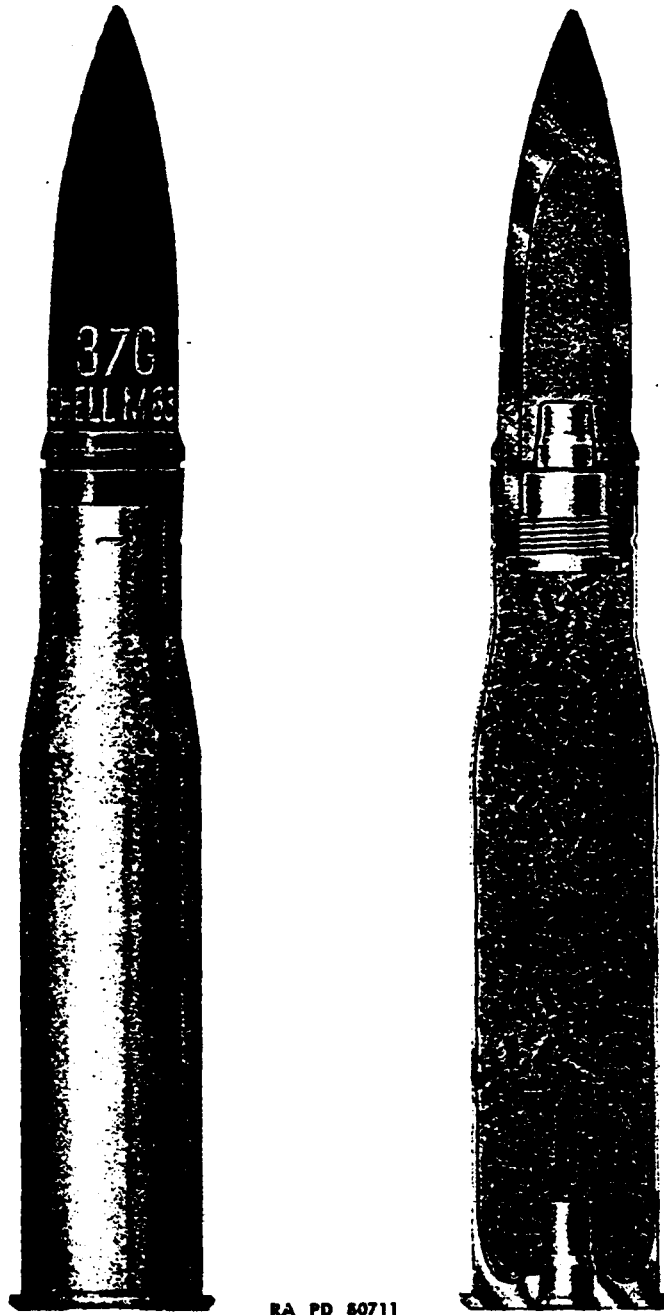


Figure 35 - SHOT, Fixed, A.P.C., M59, w/TRACER, 37-mm Auto. Gun, M1A2

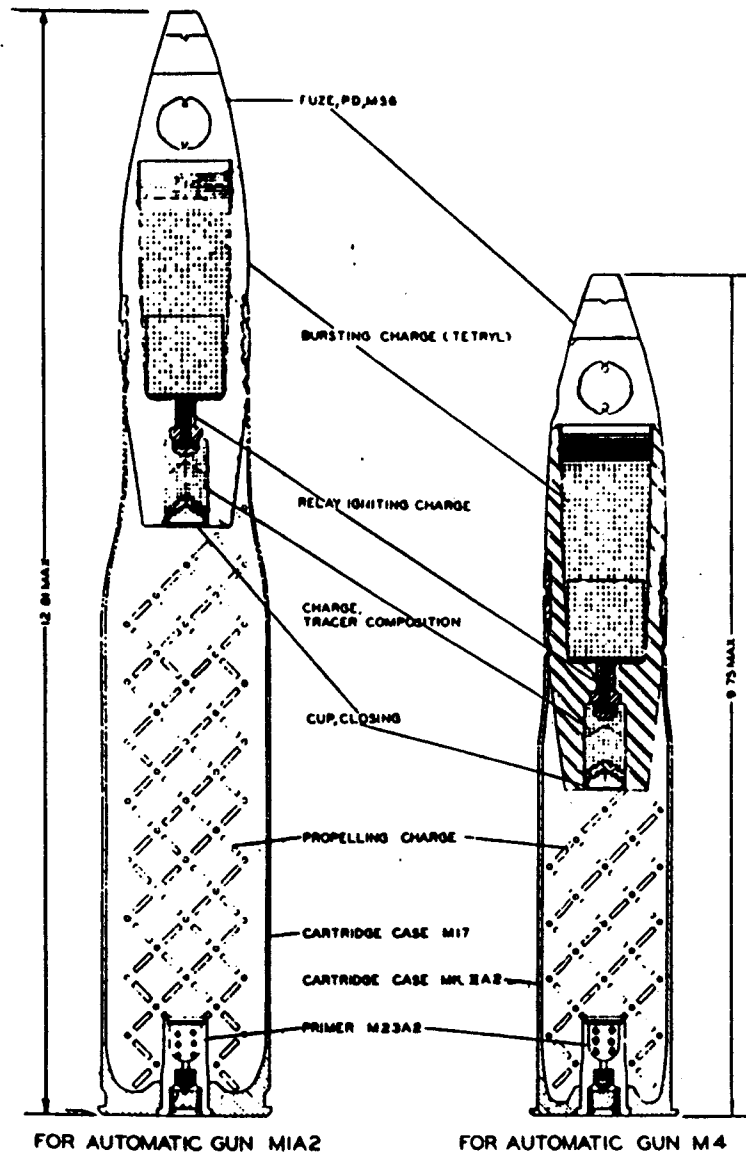
ARTILLERY AMMUNITION



RA PD 80711

Figure 38 — SHELL, Fixed, H.E., M63, w/FUZE, B.D., M58, 37-mm
Guns, M3, M3A1, M5, M5A1, and M6

TM 9-1904



RA PD 22924

AMMUNITION INSPECTION GUIDE

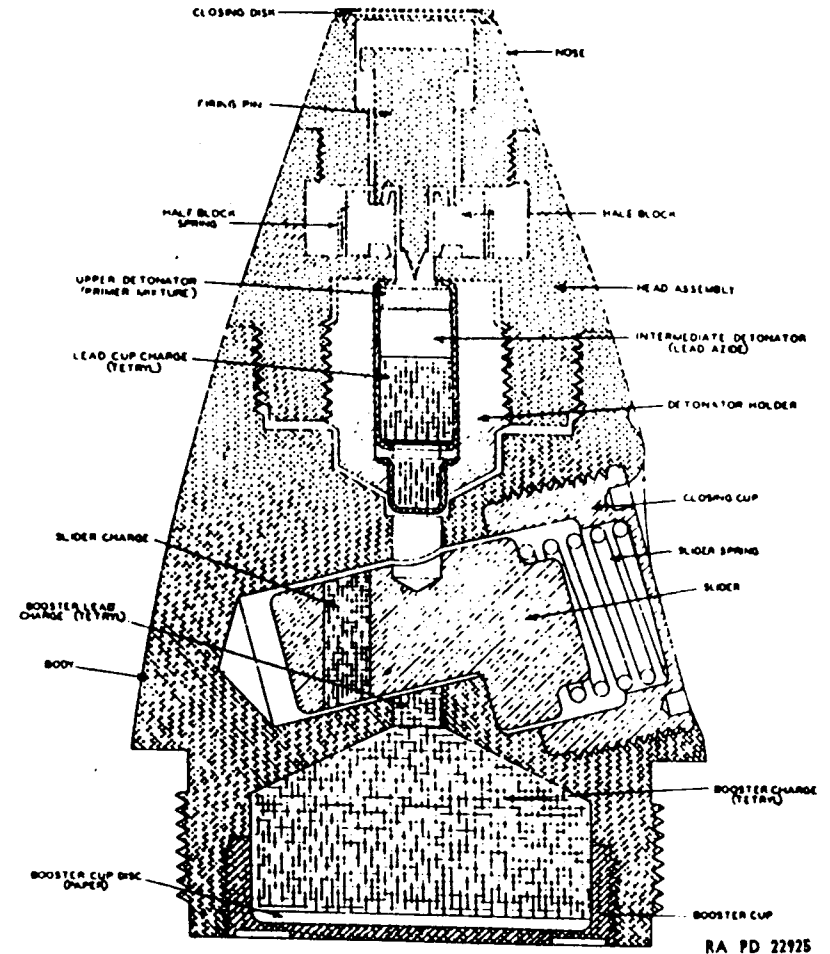


Figure 139 — FUZE, P.D., M56

Figure 138 — SHELL, H.E., M54, for 37-mm Guns M1A2 and M4
354

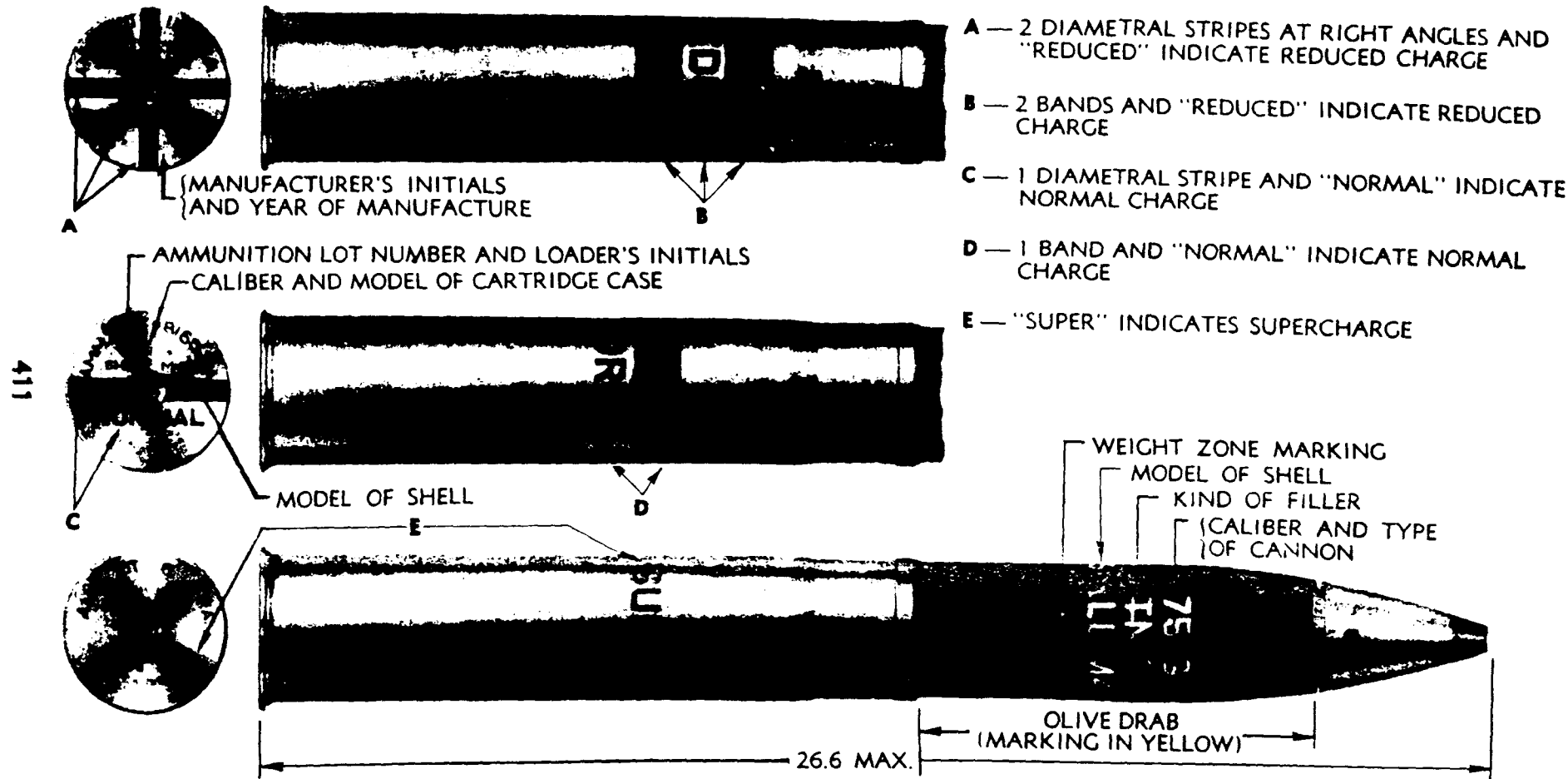
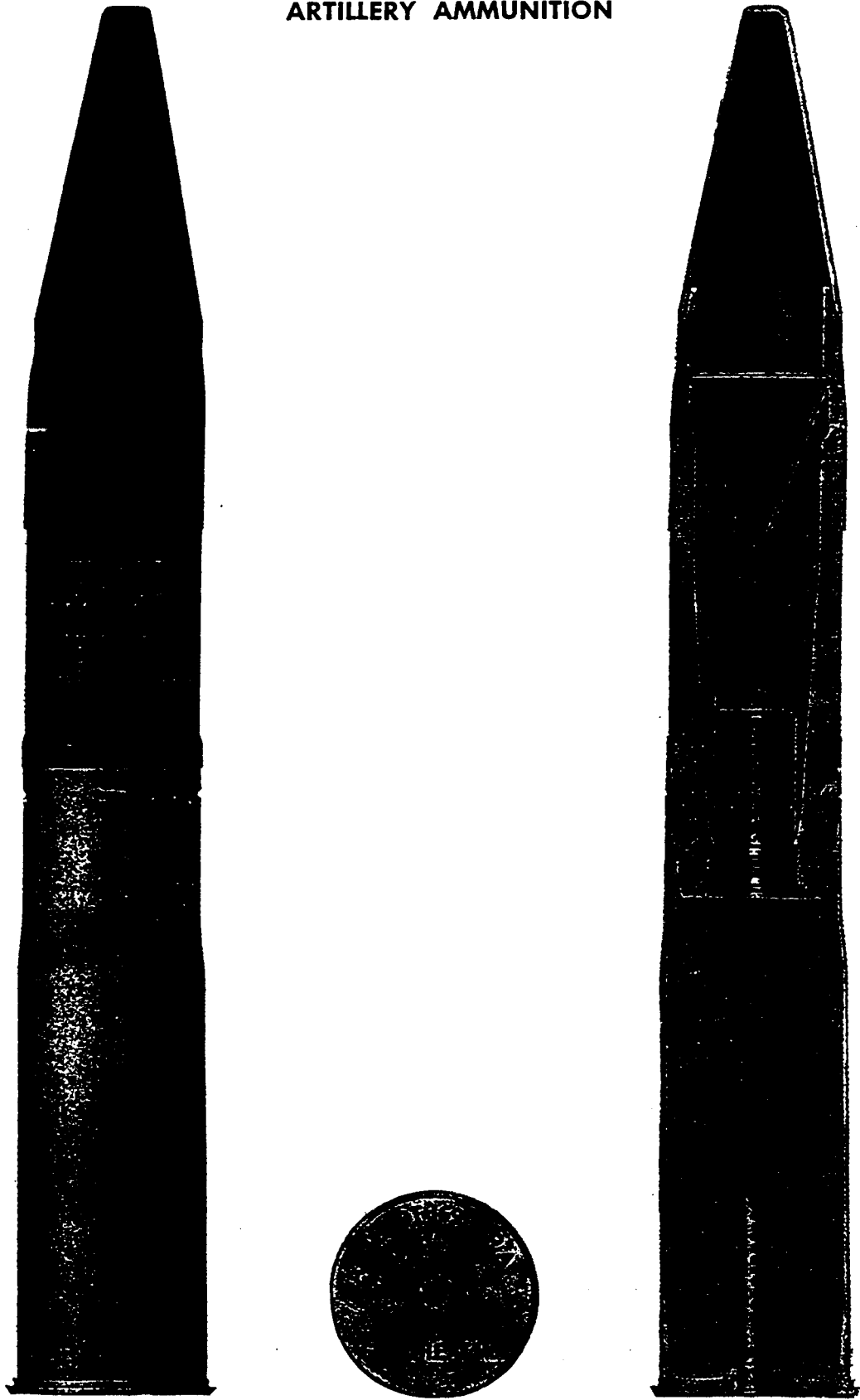


Figure 165 — SHELL, H.E., M48, for 75-mm Guns

RA PD 495898

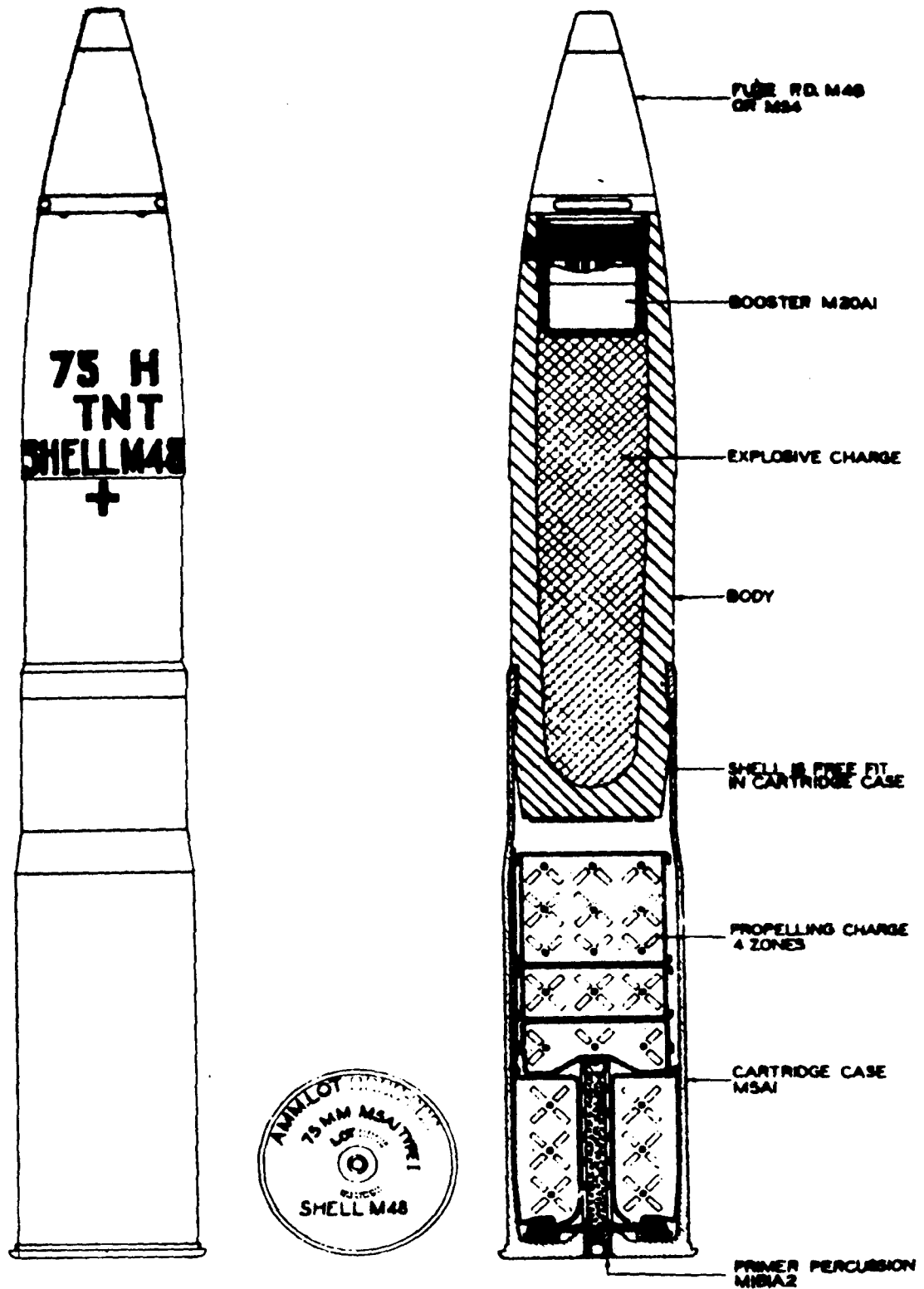
ARTILLERY AMMUNITION



RA PD 80743

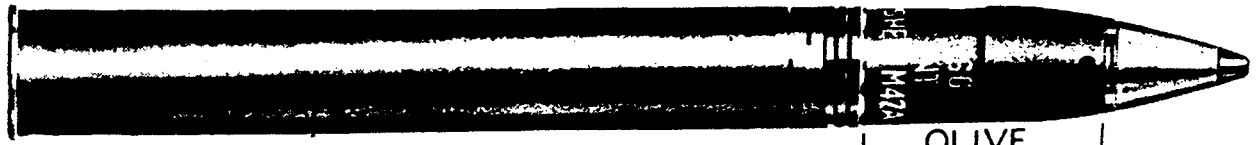
Figure 76 — SHELL, Fixed, H.E., A.T., M66, w/FUZE, B.D., M62 or M62A1, 75-mm How., M1, M1A1, M2, and M3

ARTILLERY AMMUNITION



RA .PD 22956

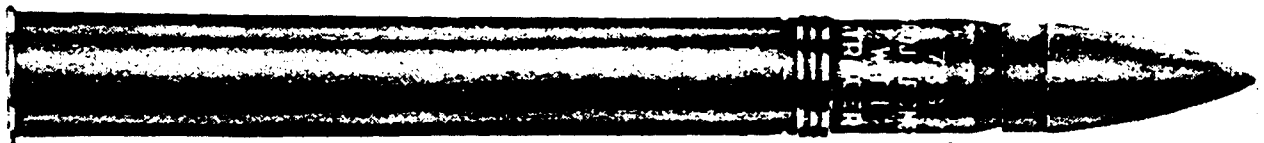
Figure 172 — SHELL, Semifixed, H.E., M48



OLIVE
DRAB
(MARKING IN YELLOW)

RA PD 80751

Figure 83 — SHELL, Fixed, H.E., M42A1, w/FUZE, P.D., M48A2, SQ & 0.05-sec. Delay, 76-mm Guns, M1, M1A1, and M1A2

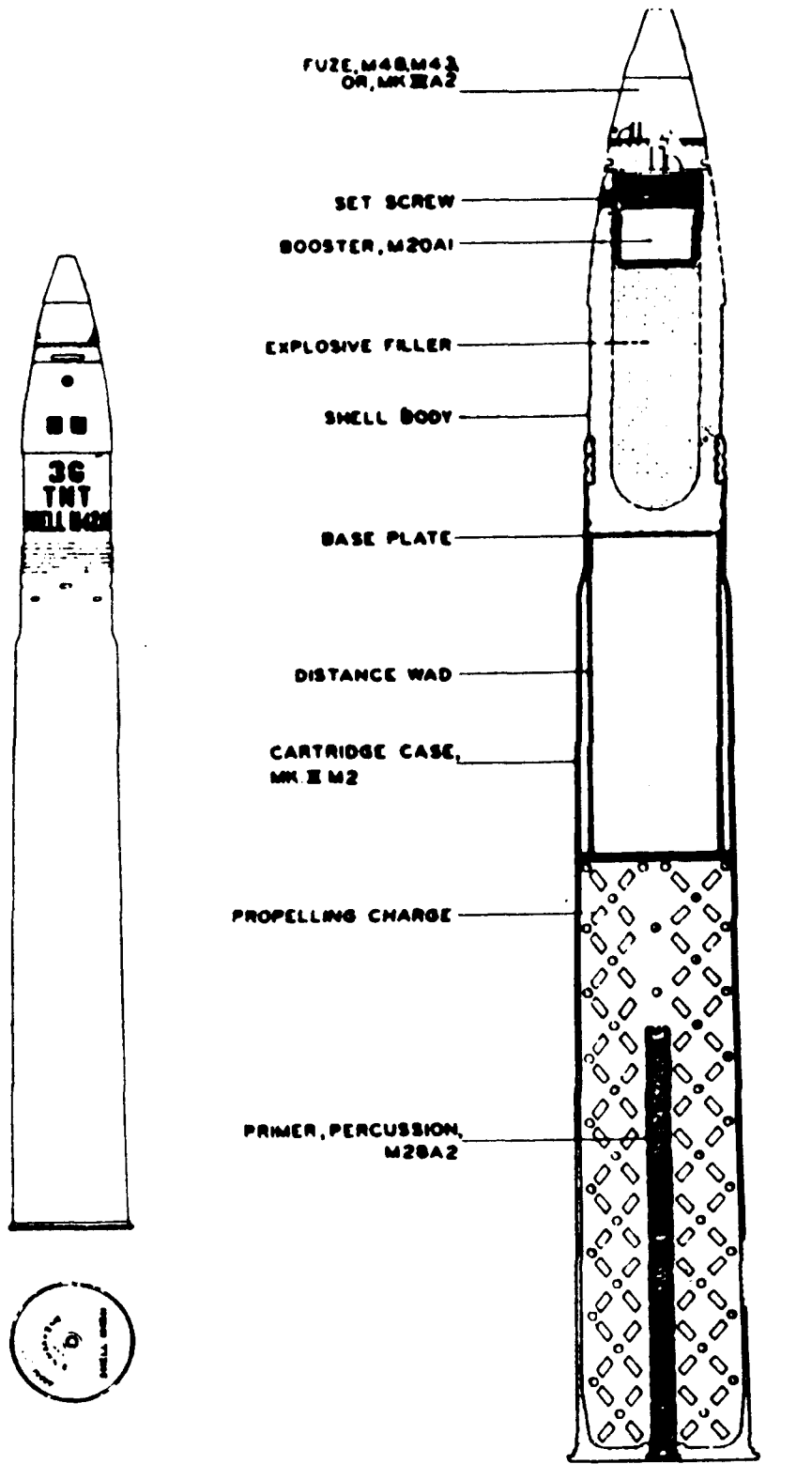


OLIVE DRAB
(MARKING IN YELLOW)

RA PD 80749

Figure 80 — PROJECTILE, Fixed, A.P.C., M62A1, w/FUZE, B.D., M66A1, and TRACER, 76-mm Guns, M1, M1A1, and M1A2

ARTILLERY AMMUNITION

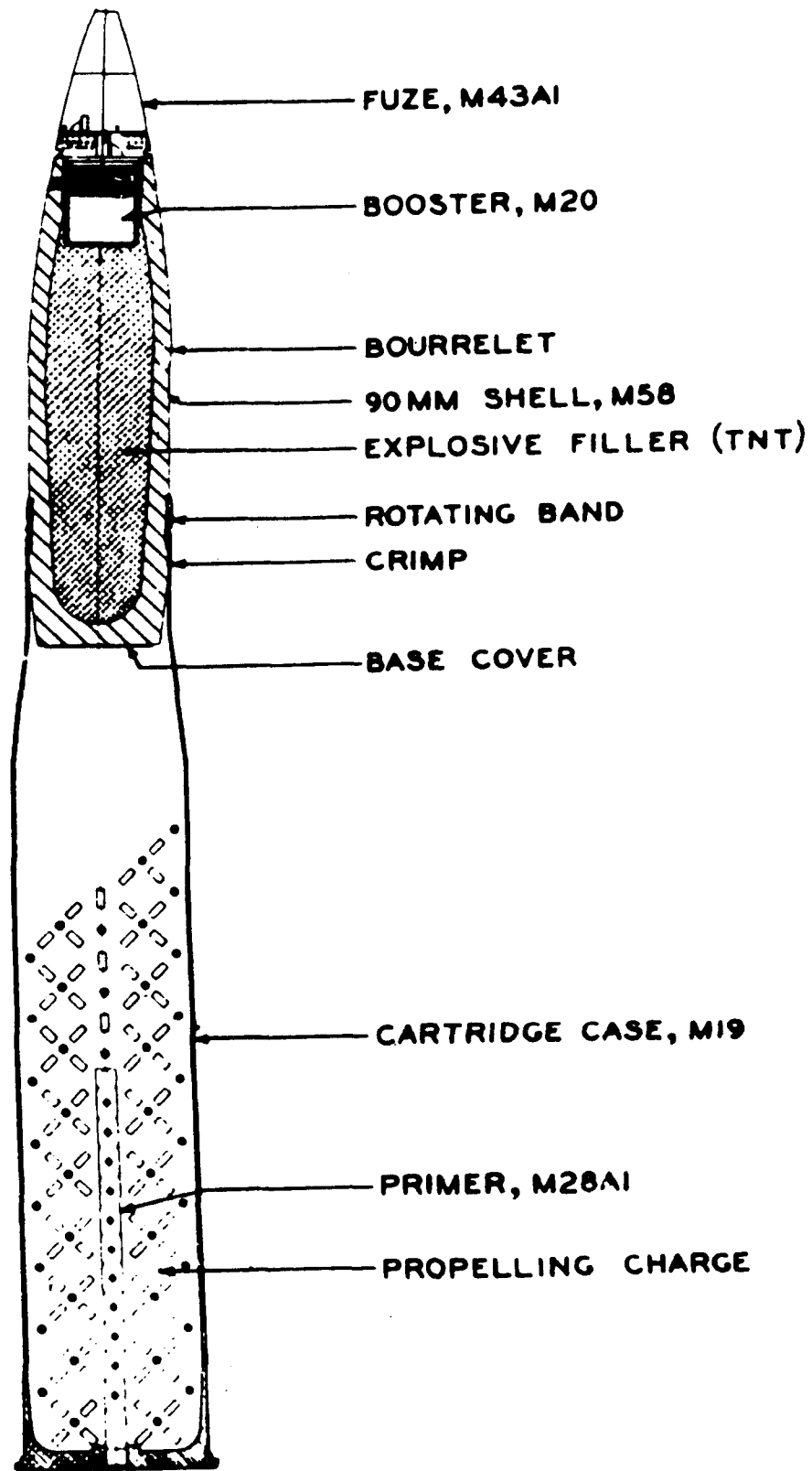


A A, ANTITANK, AND TANK GUNS.

RA PD 22962

Figure 179 — SHELL, H.E., 3-inch, M42A1

ARTILLERY AMMUNITION

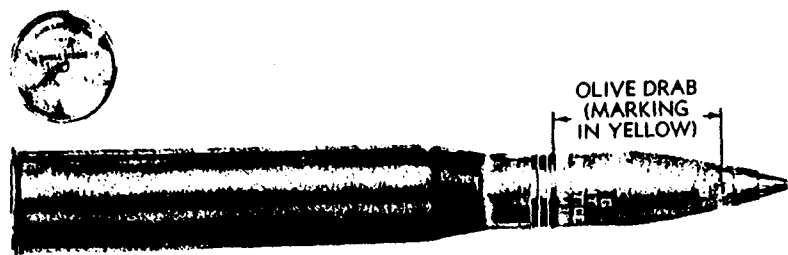


RA PD 22968

Figure 185 — SHELL, H.E., 90-mm, M58
465

FIXED AND SEMIFIXED ROUNDS AND SEPARATE-LOADING PROJECTILES

shell is loaded. **FUZE**, time, mechanical, M43 (all modifications), adapts the round for antiaircraft fire; it provides time setting up to 30 seconds but has no impact element, thereby minimizing danger to friendly personnel and materiel on ground impact in the event of time train failure.



RA PD 80792

Figure 119 — SHELL, Fixed, H.E., M38A1, w/FUZE, Time, Mechanical, M43 (All Modifications), 105-mm Gun, M3

227. SHELL, FIXED, H. E., M38A1, W/FUZE, TIME, MECHANICAL, M43 (ALL MODIFICATIONS), 105-MM GUN, M3 (fig. 119), is intended for fragmentation and blast effect against aircraft targets. Components consist of: the M6 Cartridge Case; the M28 type primer; a loosely loaded propelling charge held in position by a distance wad and igniter assembly; and a fuzeed M38A1 Projectile. The M38A1 Shell is similar to other modern high-explosive shell, the body being a thin-walled forged-steel casing with tapered (boat-tailed) base and a long ogival nose. Standard bursting charge is TNT but 50-50 amatol also may be used, as an alternative. Both charges are shaped at the front end to provide a booster well; when 50-50 amatol is loaded in the shell a booster surround of TNT is used. **BOOSTER**, M20A1, is a standard manufacturing component of the shell, being inserted and locked permanently in position by a set screw after the

DATA

Weight of complete round.....	63.73 lb	Degree of taper.....	7 deg 15 min
Length of complete round.....	45.31 in.	Radius of ogive.....	8.37 cal.
Length of fuzeed projectile.....	18.00 in.	Muzzle velocity.....	2,800 ft per sec
Length of cartridge case.....	30.37 in.	Maximum range (at 45 deg):	
Width of rotating band.....	1.42 in.	Horizontal range.....	20,000 yd*
Type of base.....	Boat-tailed	Vertical height.....	14,000 yd*

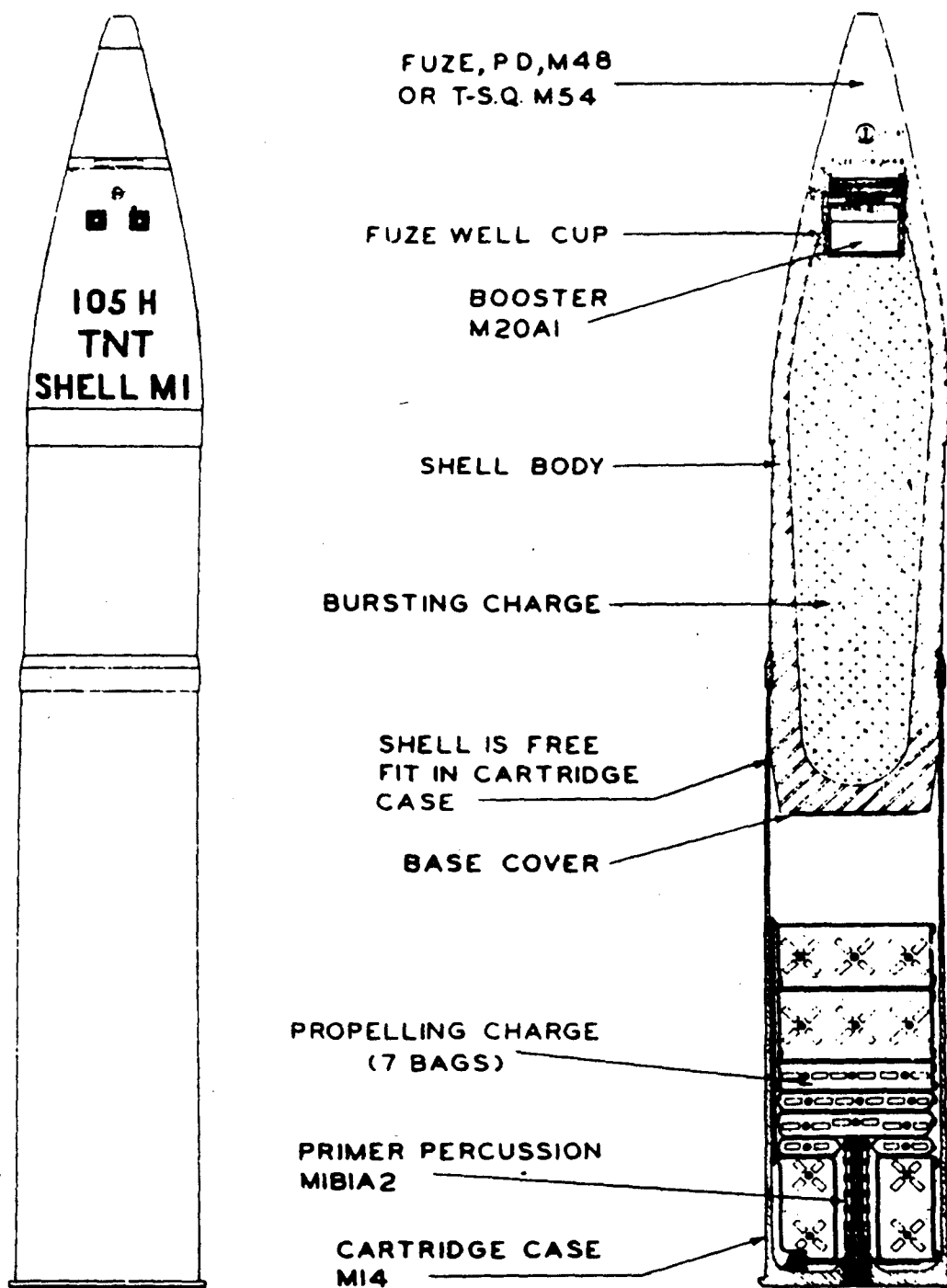
*—Actual maximum range as limited by time setting of fuze is: horizontal, 13,000 yards; vertical, 12,000 yards.

228. SHELL, FIXED, H. E., M38, FLASHLESS, W/FUZE, TIME, MECHANICAL, M2, 105-MM GUN, M3, is essentially the same as the M38A1 Round with M43 Fuze. The chief difference is in the shell loading which does not require a provision for the booster in the M38 Shell since the Mechanical Time Fuze M2 has the booster as an integral part. The round is limited standard for the M3 Gun, for the same purposes as the standard M38A1, and will be issued only to the extent of stocks on hand.

229. SHELL, FIXED, PRACTICE, M38A1, W/FUZE, TIME, MECHANICAL, M43 (ALL MODIFICATIONS), 105-MM GUN, M3 is provided for the 105-mm gun by adapting the service round for the purpose. Service components are used with the exception of the shell loading. For the practice ammunition, a small charge of black powder (0.80 lb) is loaded in the bursting charge cavity adjacent to the booster well cup. The remainder of the cavity is filled with an inert material (plaster of paris and stearic acid). The black powder charge is used in conjunction with the M20A1 Booster to provide a spotting charge for observation purposes when firing in target practice. Ballistic data are the same as that given for the service round in paragraph 227.

230. SHELL, FIXED, PRACTICE, M38, W/FUZE, TIME, MECHANICAL, M2, 105-MM GUN, M3, is an adaptation of the M38 Service Round for practice purposes. The loading is essentially the same as that for the practice M38A1 Round described in paragraph 229 except that the booster is an integral part of the M2 Fuze whereas in the M38A1, the booster is a manufacturing component of the shell. The round is limited standard, having been superseded for manufacture by the M38A1.

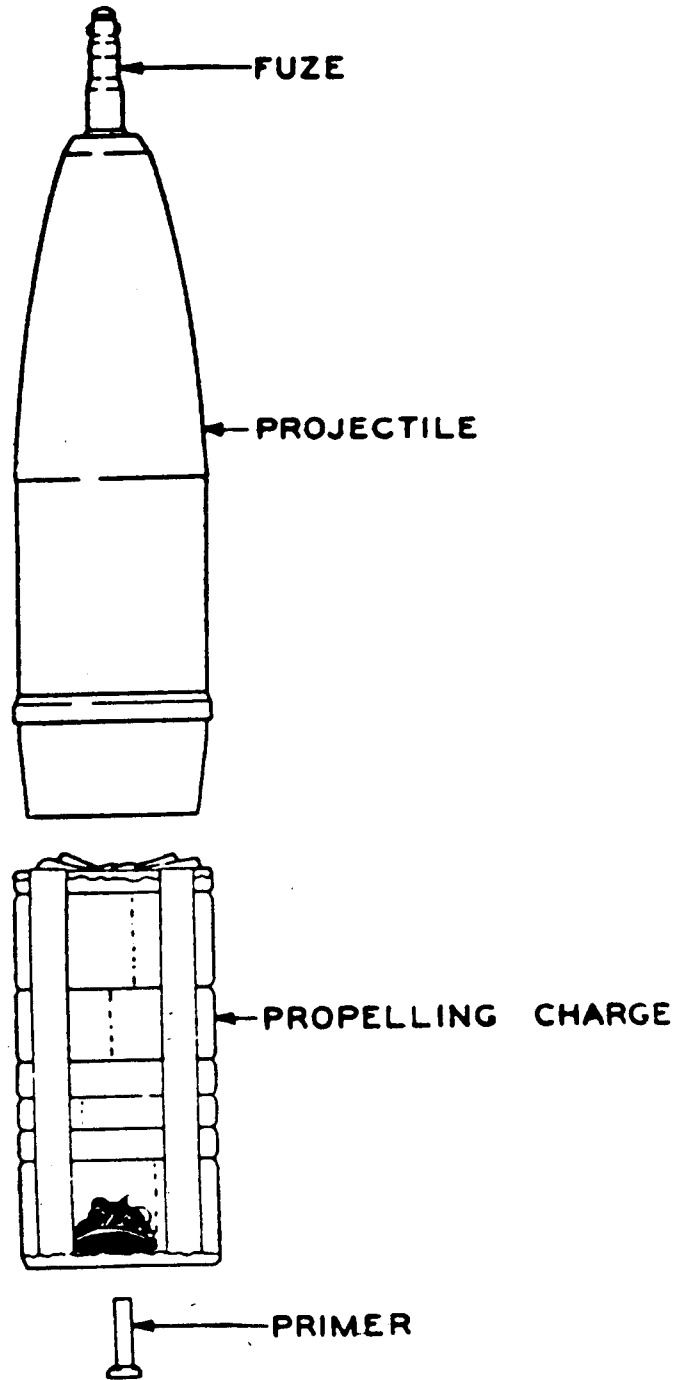
AMMUNITION INSPECTION GUIDE



RA PD 22971

Figure 188 — SHELL, H.E., 105-mm, M1

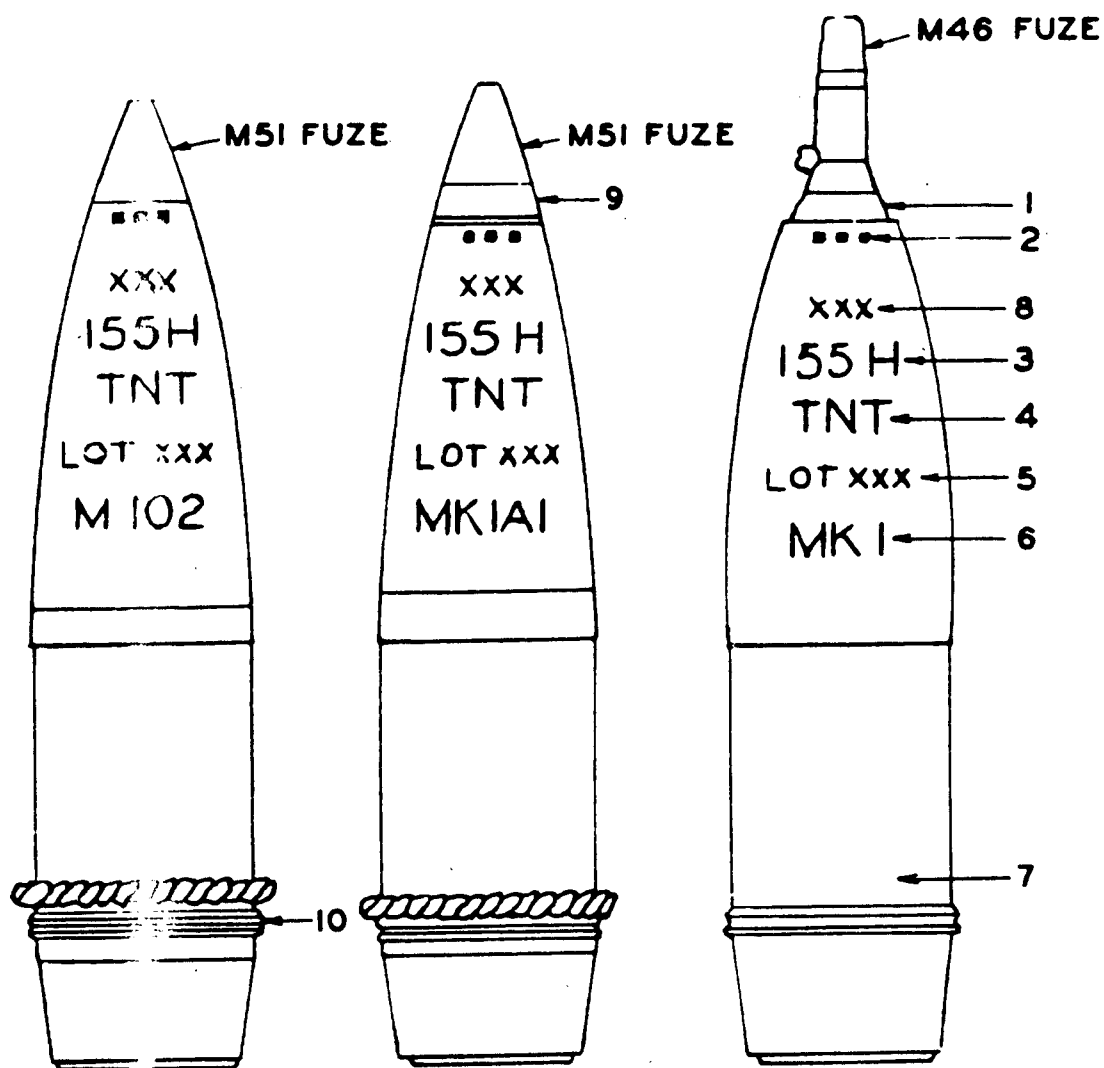
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RA PD 22976

**Figure 194 — Complete Round, Separate-loading Ammunition
(155-mm Howitzer Shell)**

AMMUNITION INSPECTION GUIDE.

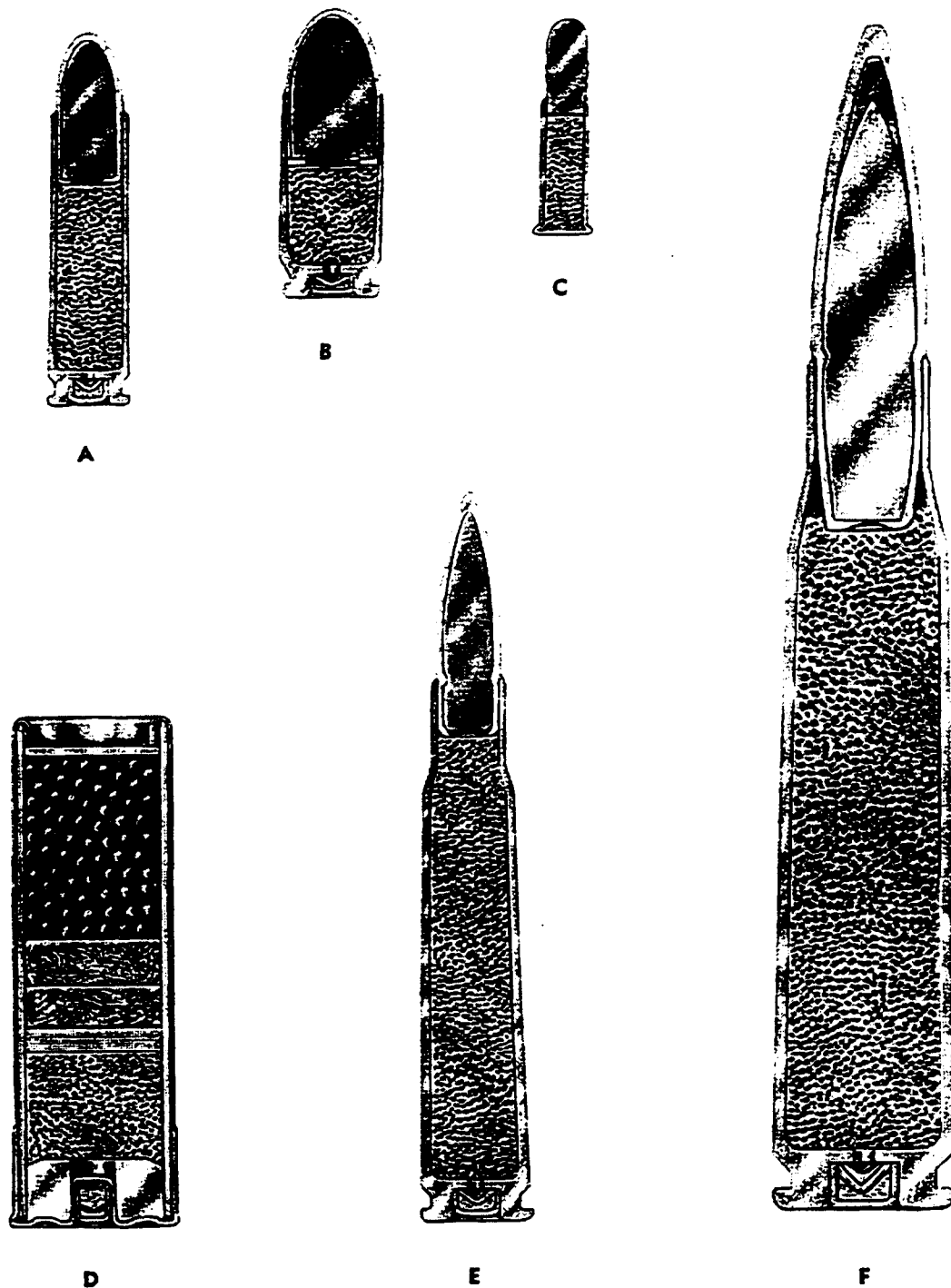


1. ADAPTER BOOSTER
2. WEIGHT ZONE MARKS
3. CALIBER AND TYPE OF CANNON
4. FILLER
5. LOT NUMBER OF FILLED SHELL
6. MK OR M NUMBER
7. MANUFACTURERS MARKINGS
(STAMPED UNDER PAINT)
8. MEAN OR NORMAL WEIGHT OF SHELL
(UNFUZED)
9. ADAPTER—TAKES NEW BOOSTERS
10. WIDER ROTATING BAND

RA PD 22977

Figure 195 — Marking and Comparison of Old and New 155-mm Explosive Shell

Classes of Ammunition

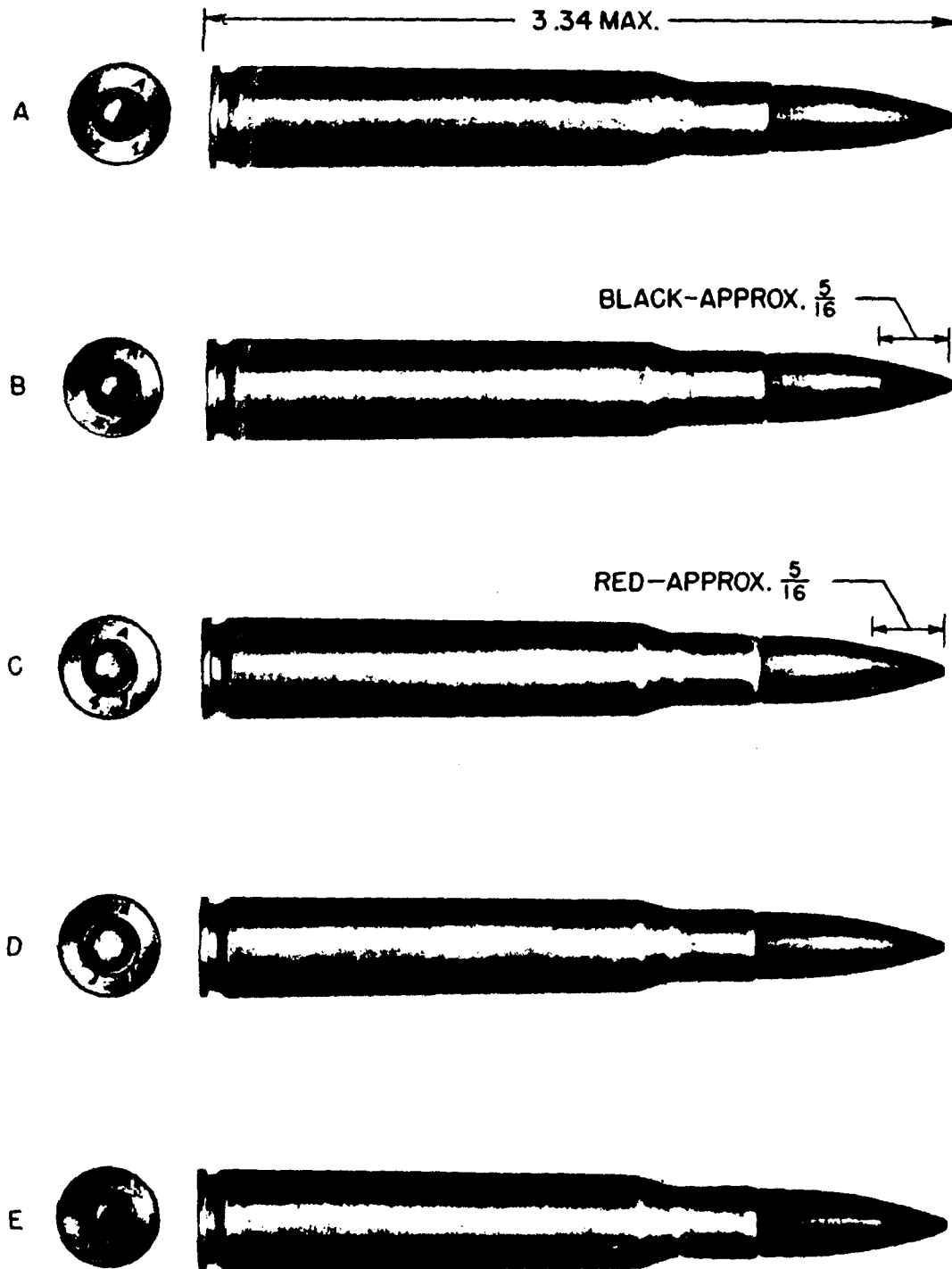


- A - CAL .30 CARBINE BALL CARTRIDGE, M1
- B - CAL .45 BALL CARTRIDGE, M1911
- C - CAL .22 LONG RIFLE BALL CARTRIDGE
- D - 12-GAGE SHOTGUN SHELL
- E - CAL .30 BALL CARTRIDGE, M2
- F - CAL .50 BALL CARTRIDGE, M2

RA PD 89561A

Fig .e 26 - Types of Small-arms Ammunition - Cross Section

SMALL ARMS AND TRENCH WARFARE

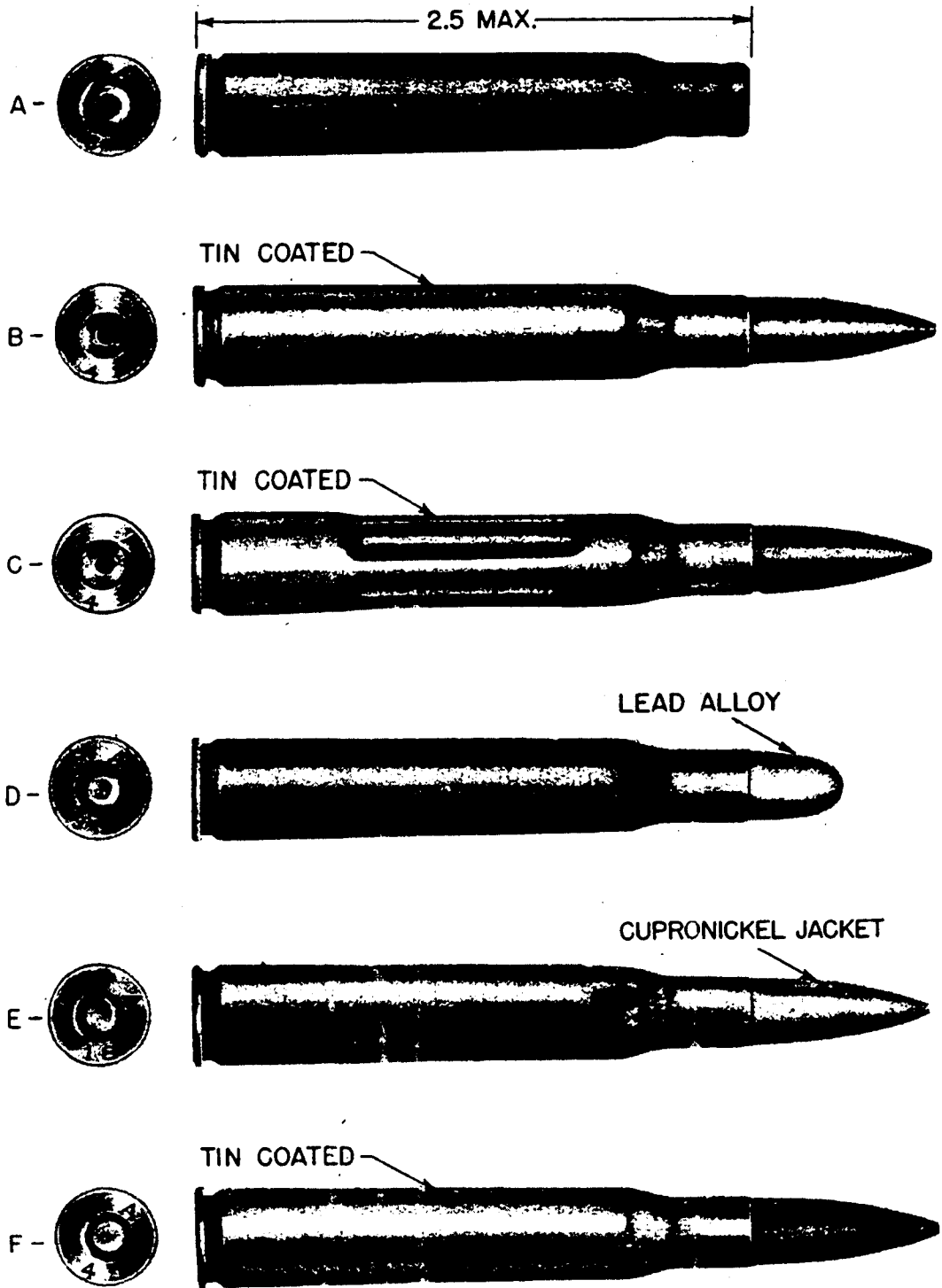


- A - CARTRIDGE, ARMOR-PIERCING, CAL..30, M2
- B - CARTRIDGE, BALL, CAL..30, M2
- C - CARTRIDGE, TRACER, CAL..30, M1
- D - CARTRIDGE, BALL, CAL..30, M1
- E - CARTRIDGE, BALL, CAL..30, M2, NATIONAL MATCH

RA PD 4522

Figure 79a — Cartridges, Cal. .30

AMMUNITION INSPECTION GUIDE

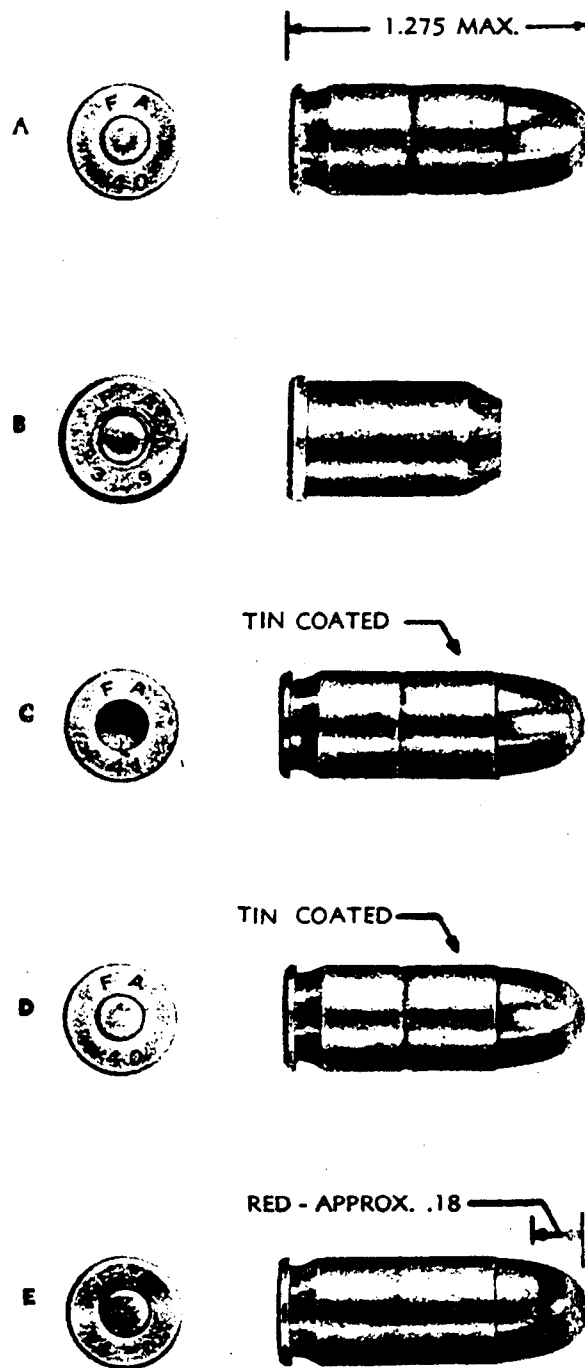


- A- CARTRIDGE, BLANK, CAL..30, MI909
- B- CARTRIDGE, DUMMY, CAL..30, M2
- C- CARTRIDGE, DUMMY, CAL..30, MI906
- D- CARTRIDGE, GUARD, CAL..30, MI
- E- CARTRIDGE, GUARD, CAL..30, MI906
- F- CARTRIDGE, HIGH PRESSURE TEST, CAL..30, MI

RA PD 4523

Figure 79b — Cartridges, Cal. .30 — Continued

AMMUNITION INSPECTION GUIDE

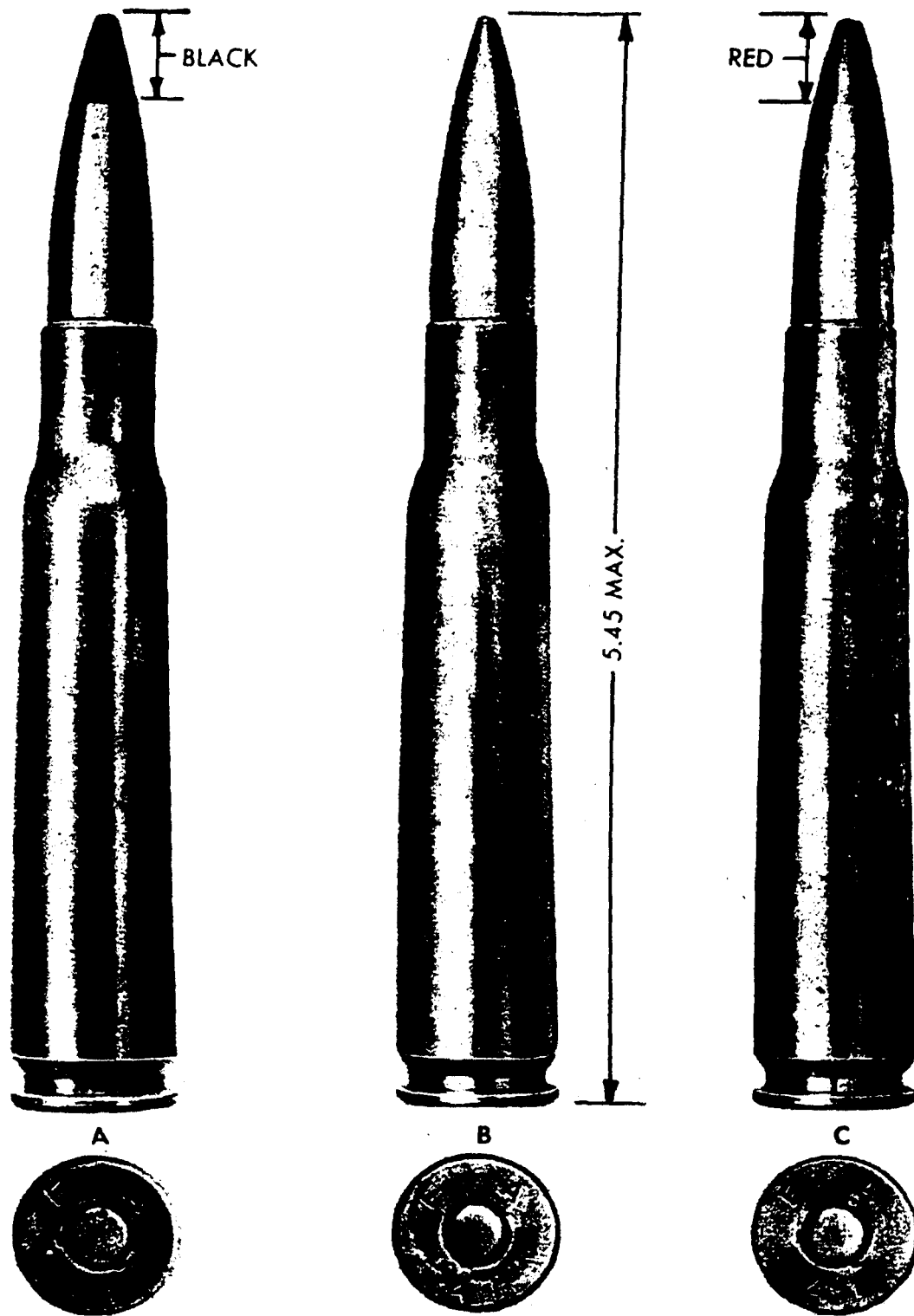


- A — CARTRIDGE, BALL, CAL. .45, M1911
- B — CARTRIDGE, BLANK, REVOLVER, CAL. .45, M1
- C — CARTRIDGE, DUMMY, CAL. .45, M1921
- D — CARTRIDGE, HIGH PRESSURE TEST, CAL. .45, M1
- E — CARTRIDGE, TRACER, CAL. .45, M1

RA PD 4525

Figure 81 — Cartridges, Cal. .45

AMMUNITION INSPECTION GUIDE

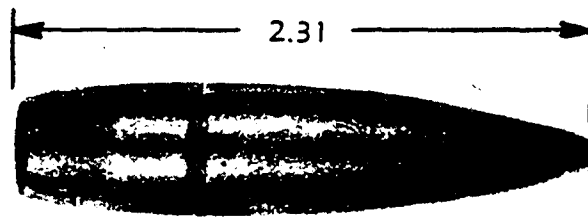


A — CARTRIDGE, ARMOR-PIERCING CAL. .50, M2
B — CARTRIDGE, BALL, CAL. .50, M2
C — CARTRIDGE, TRACER, CAL. .50, M1

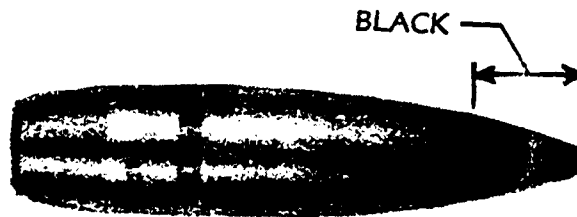
RA PD 2117

Figure 83 — Cartridges, Cal. .50
212

AMMUNITION INSPECTION GUIDE



BULLET, BALL, CAL. .50, M2



BULLET, ARMOR-PIERCING, CAL. .50, M2



BULLET, TRACER, CAL. .50, M1

RA PD 4526

Figure 82a — Bullets, Cal. .50

The bullet consists of three parts: a gilding metal jacket; a tungsten-chrome steel core; and a point filler of lead hardened with antimony. The over-all length of the bullet is 2.29 inches and the point is blackened for approximately $\frac{9}{16}$ inch. The base has a 9-degree taper beginning 0.386 inch from the base. The mouth of the case is crimped into the cannelure at assembly, and a minimum pull of 100 pounds is required to extract the bullet from the case.

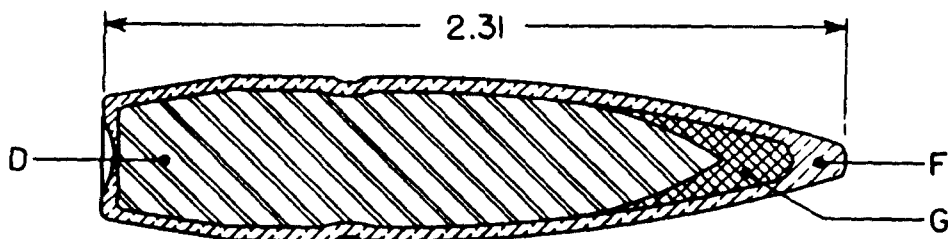
Exterior ballistics, maximum range (approx.)7,200 yd
 Maximum pressure52,000 lb per sq in.

Velocity:

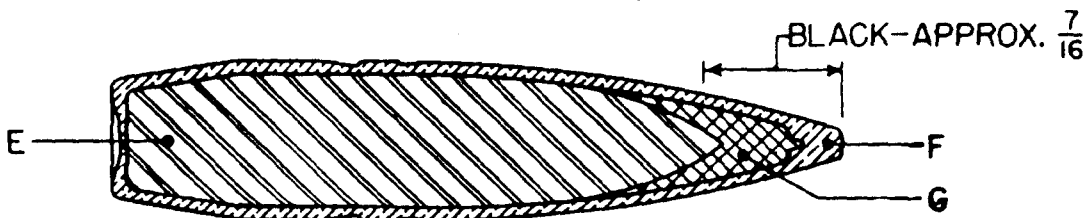
At 78 ft.2,900 ft per sec
 At muzzle2,935 ft per sec

SMALL ARMS AND TRENCH WARFARE

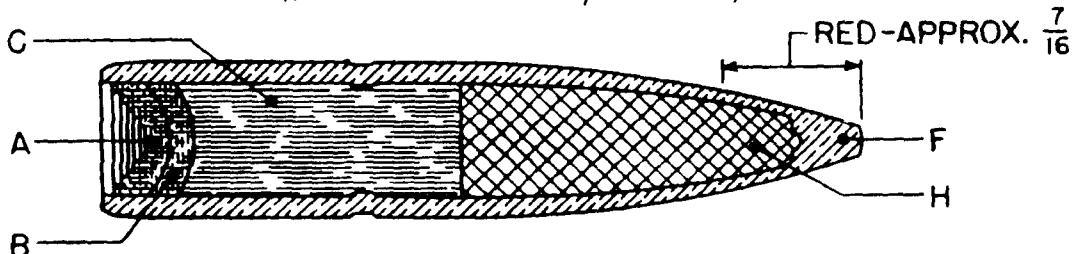
- A-COMPOSITION, IGNITER
- B-COMPOSITION, SUB-IGNITER
- C-COMPOSITION, TRACER
- D-CORE-STEEL
- E-CORE-TUNGSTEN CHROME STEEL
- F-JACKET-GILDING METAL
- G-POINT FILLER-LEAD WITH ANTIMONY
- H-SLUG-LEAD WITH ANTIMONY



BULLET, BALL, CAL. .50, M2



BULLET, ARMOR-PIERCING, CAL. .50, M2

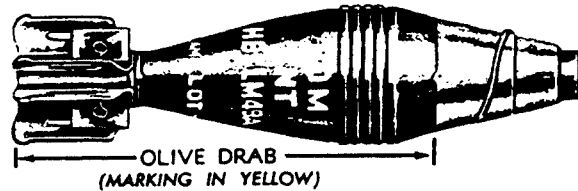


BULLET, TRACER, CAL. .50, M1

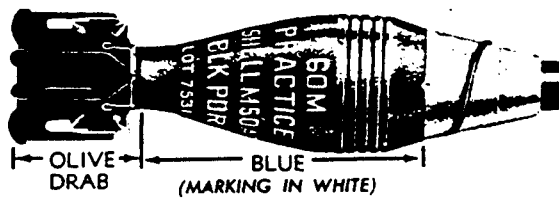
RA PD 4512

Figure 82b — Bullets, Cal. .50 — Sectioned

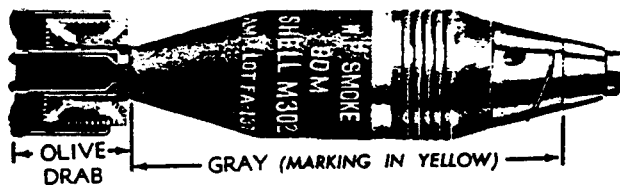
Classes of Ammunition



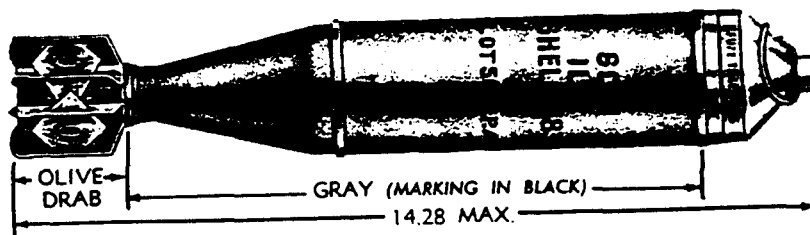
HE SHELL, M49A2, W PD FUZE, M52



PRACTICE SHELL, M50A2, W PD FUZE, M52



WP SMOKE SHELL, M302, W PD FUZE, M82



ILLUMINATING SHELL, M83A1, W TIME FUZE, M65

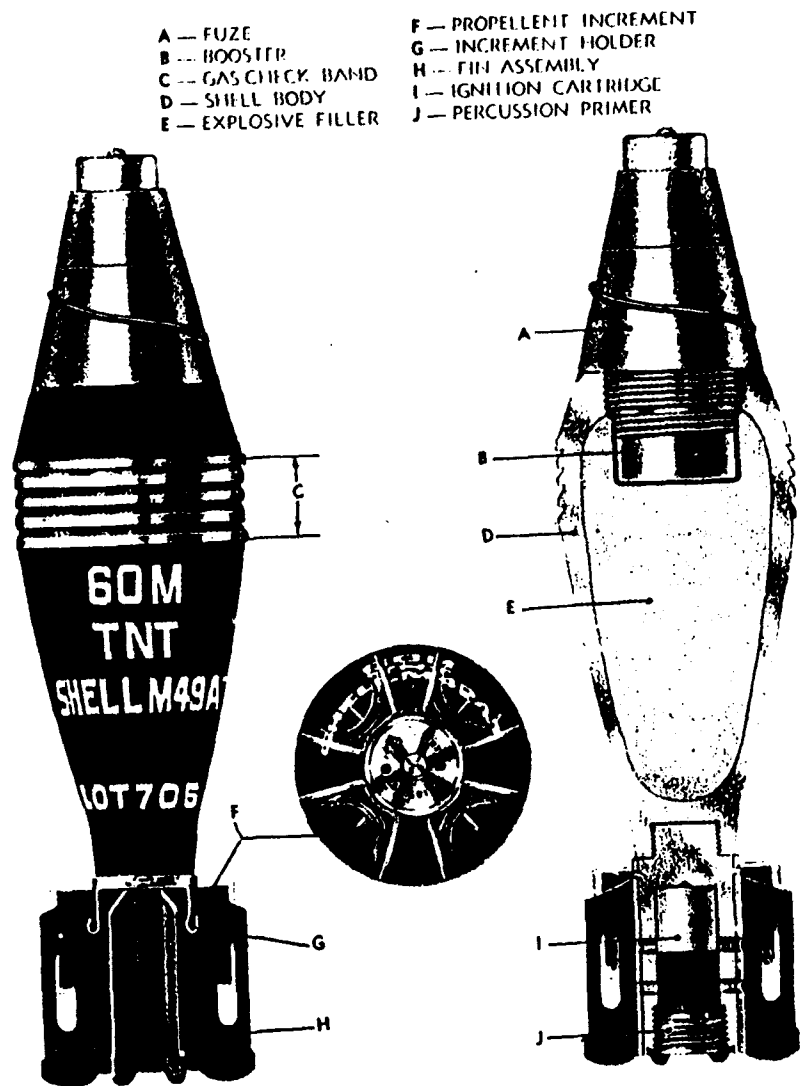


TRAINING SHELL, M69

RA PD 64448B

Figure 50 - 60-mm Mortar Ammunition

ARTILLERY AMMUNITION



- A — FUZE
- B — BOOSTER
- C — GAS CHECK BAND
- D — SHELL BODY
- E — EXPLOSIVE FILLER

- F — PROPELLENT INCREMENT
- G — INCREMENT HOLDER
- H — FIN ASSEMBLY
- I — IGNITION CARTRIDGE
- J — PERCUSSION PRIMER

FIXED AND SEMIFIXED ROUNDS AND SEPARATE-LOADING PROJECTILES

79. SHELL, H.E., M49A2, W/FUZE, P.D., M52, 60-MM MORTARS, M1 AND M2, COMPLETE ROUND (fig. 57), is the only high-explosive round provided for the 60-mm mortars. A complete round consists of six components—the M49A2 High-explosive Shell, an M52 Fuze, a fin assembly, an M3 or M3A1 (4-increment) Propelling Charge, an M5A1 Ignition Cartridge, and an M32 Primer. All are issued and shipped assembled in a complete round which is ready for firing except for adjustment of the propelling charge. The shell body consists of a thin-walled cast or forged steel casing formed in a pear or tear-drop shape and threaded at both ends, at the narrow base end to hold the fin assembly and at the nose end to hold the M52 Fuze with its booster. The TNT shell filler is shaped at the forward end to provide a suitable well for the booster. The fin assembly consists of a 2½-inch long steel cylinder to which is welded four double-bladed fins. The hollow shaft is threaded externally at the fore end to screw into the shell base, where it is staked in position. The rear is threaded internally to hold the M32 Primer. This primer, which consists of a threaded head containing the percussion element and a short housing holding the primer mixture, is screwed into the shaft after insertion of the ignition cartridge. The M5A1 Ignition Cartridge is a cartridge paper tube approximately 5/8 inch in diameter, closed at both ends by a chipboard disk, and holding 40 grains of propelling powder. This charge provides the propelling charge for the short ranges. For the longer ranges, the increments of the M3 or M3A1 (cellophane-wrapped), Propelling Charge are provided in addition to the ignition cartridge. As shipped, each increment is inserted in one of the four spaces within the fins and held in position there by the spring clip of the increment holder. Any or all of the increments may be removed as required.

DATA

	With M52 or M52B2 Fuze	With M52B1 (Plastic) Fuze
Weight of complete round	2.96 lb	2.80 lb
Length of complete round	9.54 in.	9.54 in.
Muzzle velocity	518 ft per sec*	535 ft per sec*
Maximum range (at 45 deg).....	1,984 yd*	2,017 yd*

*—For charge 4 (cartridge plus 4 increments). Corresponding data for other charges are:

Charge 0 (Ignition Cartridge M5A1 only)	Muzzle Velocity		Maximum Range	
	w/M52 or M52B2	w/M52B1	w/M52 or M52B2	w/M52B1
Charge 1 (Cartridge and 1 increment)....	189	195	332	373
Charge 2 (Cartridge plus 2 increments)..	292	301	784	816
Charge 3 (Cartridge plus 3 increments)..	377	389	1,204	1,244
Charge 4 (Cartridge plus 4 increments)..	449	463	1,594	1,630

RA PD 80729

Figure 57 — SHELL, H.E., M49A2, w/FUZE, P.D., M52, 60-mm Mortars, M1 and M2, Complete Round

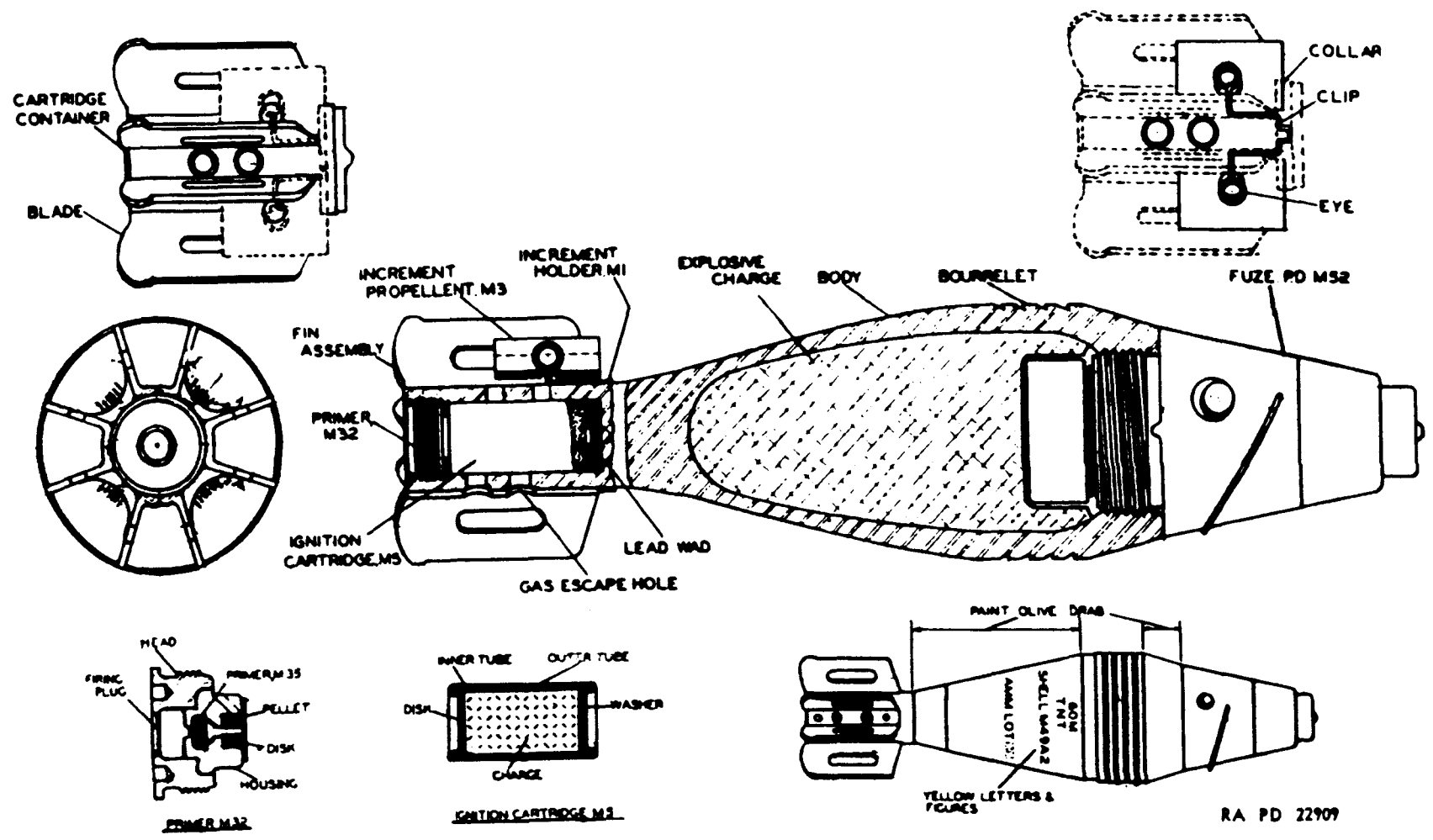
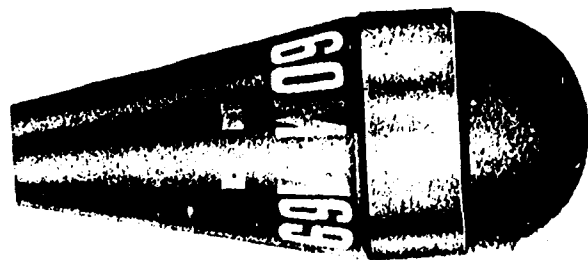
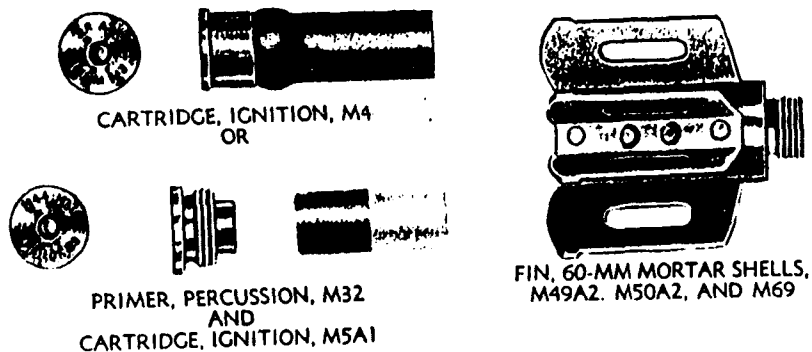


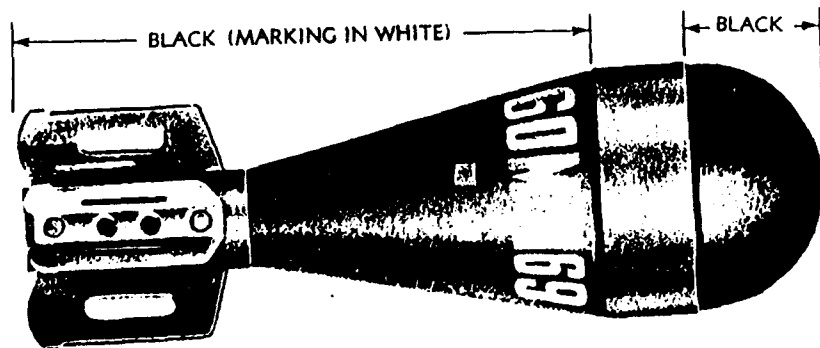
Figure 121 — SHELL, H.E., M49A2

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ARTILLERY AMMUNITION



SHELL, TRAINING, M69, 60-MM MORTARS,
M1 AND M2, W/O FIN, IGNITION CARTRIDGE
AND PRIMER
A — COMPONENTS



B — ASSEMBLED

RA PD 26817

FIXED AND SEMIFIXED ROUNDS AND SEPARATE-LOADING PROJECTILES

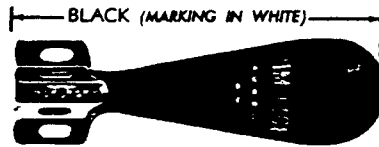
83. SHELL, TRAINING, M69, 60-MM MORTARS, W/O FIN, IGNITION CARTRIDGE, AND PRIMER (fig. 60), is a training round provided for drill in loading and firing the mortar. The projectile differs from that in the practice ammunition in that it is completely inert and has no fuze. It consists of a solid cast-iron body of pear or tear-drop shape, drilled at the base end to hold a service-type fin assembly. No propelling charge increments are provided for the round, but the M4 Ignition Cartridge, or if not available the combination of the M5A1 Ignition Cartridge and M32 Percussion Primer is issued for use in firing the projectile. Unlike the other ammunition for the mortar, the three components are issued and shipped separately, to facilitate replacement of damaged or worn out parts and the procurement of additional ignition cartridges. Ten training shells and accessories are packed in an equipment training kit for field use.

DATA

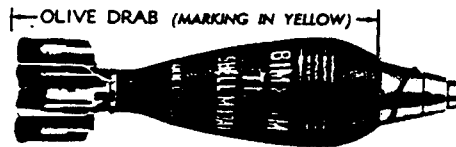
Weight of complete round.....	4.53 lb	Length of shell, w/o fin.....	5.54
Weight of shell, w/o fin.....	4.07	Muzzle velocity	152.5 ft per sec
Length of complete round....	7.70 in.	Maximum range (at 45 deg)....	235 yd

Figure 60 — SHELL, Training, M69, 60-mm Mortars, M1 and M2

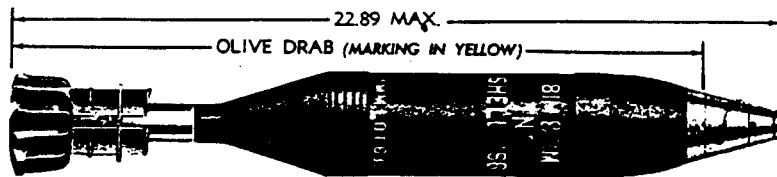
Classes of Ammunition



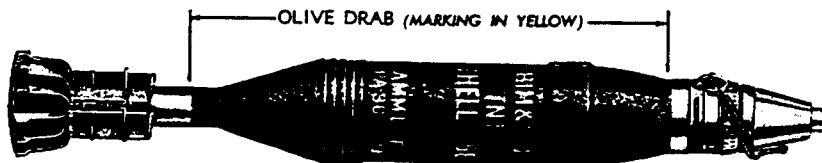
TRAINING SHELL, M68



HE SHELL, M43A1, W/PD FUZE, M52



HE SHELL, M56, W/PD FUZE, M53A1



HE SHELL, M56, W/TSQ FUZE, M77



WP SMOKE SHELL, M57, W/PD FUZE, M52

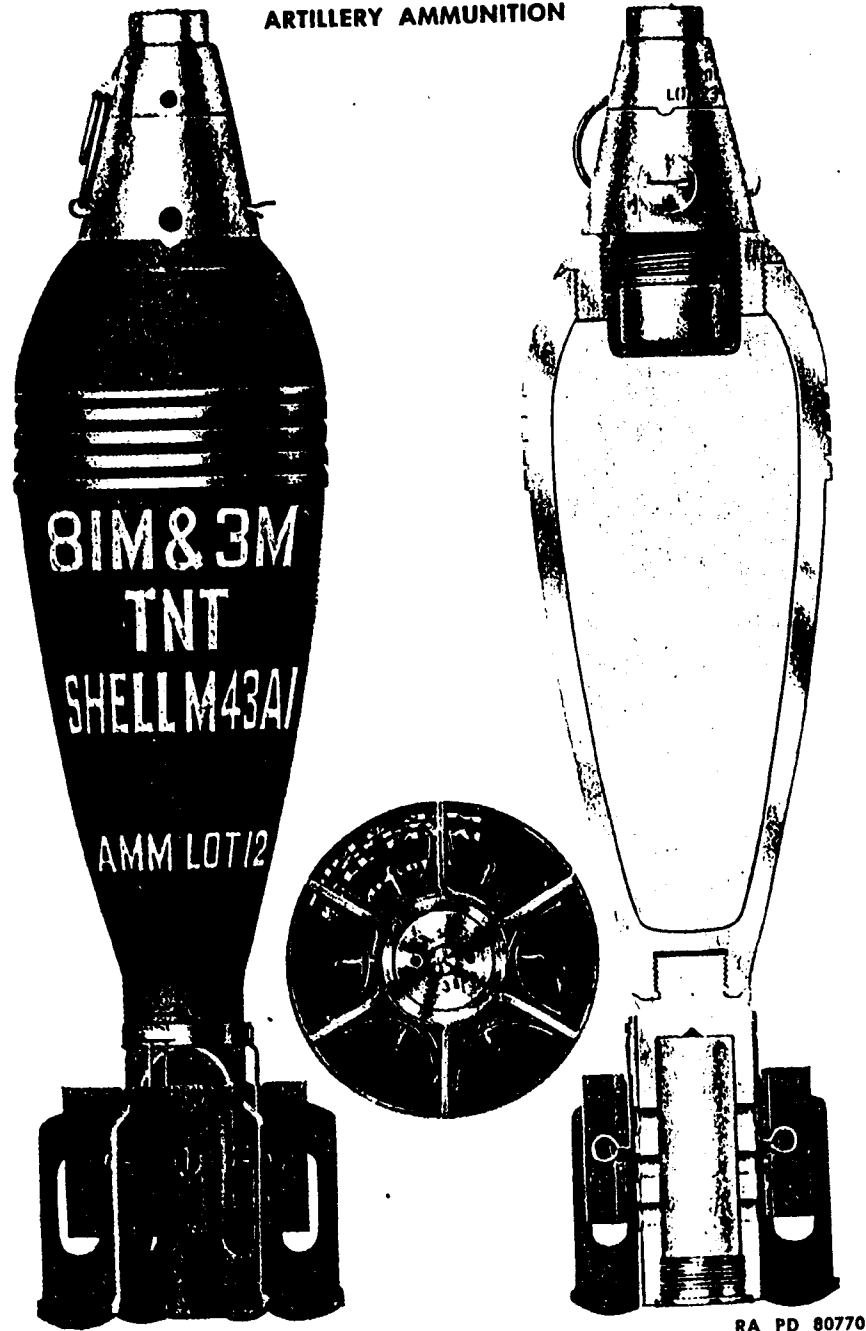
RA PD 64449A

Figure 51 – 81-mm Mortar Ammunition

ARTILLERY AMMUNITION

FIXED AND SEMIFIXED ROUNDS AND SEPARATE-LOADING PROJECTILES

180. SHELL, H.E., M43A1, W/FUZE, P.D., M52, 81-MM MORTAR, COMPLETE ROUND (fig. 99), is a light-weight round provided for fragmentation and blast effect. The complete round is made up of six components: the M43A1 Shell, an M52 Superquick Fuze, a fin assembly, an M1 Propellent Charge, an M6 Ignition Cartridge, and an M33 Percussion Primer. The shell consists of a thin-walled egg-shaped steel casing holding a 1.23-pound high-explosive charge. The shell casing is cut and threaded at the nose end to fit an adapter into which the M52 Fuze with its booster is screwed after the shell is loaded, the bursting charge being shaped at the free end to provide a suitable well for the booster. The base of the shell is drilled and threaded to hold the fin assembly. The fin assembly consists of three double-bladed fins welded to a cylindrical shaft. The shaft is drilled and threaded internally at the rear to hold the igniter cartridge and the primer, the latter holding the cartridge in position. The shaft is threaded at the front end to screw into the base of the shell. Vents in the shaft provide for transmission of the cartridge flash to the propellent increments and facilitate burning and disintegration of the cartridge and case. The propellent increments are pushed into the spaces between the fin blades and held there by a spring clip arrangement which permits easy removal as desired. The M43A1 Round may be adapted for the 3-inch trench mortar by reducing the outer zone propelling charge from six to four increments. With the M52 Fuze, the shell functions with superquick action and before any appreciable penetration of the target.



DATA

Weight of complete round.....	7.0 lb	Length of projectile, w/fin....	13.27 in.
Length of complete round.....	13.27 in.	Muzzle velocity	700 ft per sec*
		Maximum range	3,290 yd*

*—For six increments (full charge). Corresponding data for other charges are:

	Muzzle Velocity (ft per sec)	Maximum Range (yd)
Charge 0 (ignition cartridge only)	235	541
Charge 1 (ignition cartridge plus one increment).....	332	1,020
Charge 2 (ignition cartridge plus two increments).....	419	1,502
Charge 3 (ignition cartridge plus three increments).....	449	2,042
Charge 4 (ignition cartridge plus four increments).....	572	2,517
Charge 5 (ignition cartridge plus five increments).....	638	2,963

Figure 99 — SHELL, H.E., M43A1, w/FUZE, P.D., M52, 81-mm Mortar, Complete Round

SHELL, H.E., M43A1. This shell was designed to replace SHELL, H.E., M43; it is standard for issue and manufacture (S & M), whereas the SHELL, H.E., M43, is standard for issue (S).

Shell body. The body, filler, adapter, and bakelite fuze well cup are exactly the same as in the M43. The fuze used is the Point-detonating Fuze M52, which has a superquick action. Due to the light weight and blunt nose of this shell, very little penetration can be obtained. This shell, as the M43, is designed, therefore, to produce fragments as its primary function against personnel in the open and against barbed wire entanglements. Fragments to be effective must be above ground. The use of a superquick fuze to burst the shell above ground is therefore mandatory. For details in the functioning of the M52 P.D. Fuze, see page 298 to 300.

Fin assembly. The fin assembly is similar to that previously described. It differs in that the flanges on the fins for holding the propellant increments are omitted, as they are not necessary with the newer type increments. Later models, without any change in designation, have the hollow end threaded in the inside so as to receive the new percussion primer.

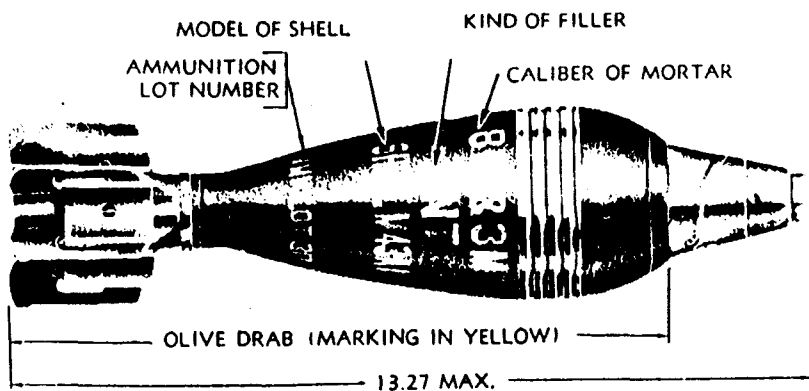


Figure 110a — SHELL, H.E., M43A1, 81-mm Mortar

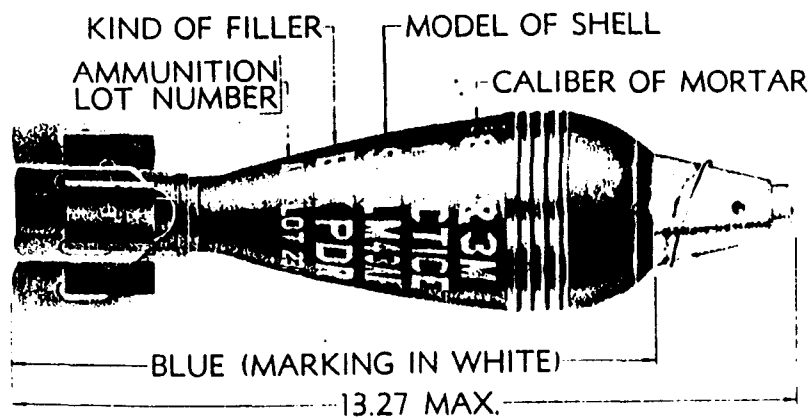


Figure 110b — SHELL, Practice, M43A1, 81-mm Mortar

SMALL ARMS AND TRENCH WARFARE

Ignition cartridge. The Ignition Cartridge M6, red, consists of a cardboard container having approximately 120 grains of double base powder. It supersedes the M3 red and differs from it in that the percussion primer is no longer part of the ignition cartridge but a separate component.

The percussion primer. The Percussion Primer M33 is a relatively new component. The percussion primer is contained in an aluminum head and is threaded so as to screw into the end of the cartridge container after the ignition cartridge has been inserted. The advantage of this type of percussion primer and ignition cartridge is that the whole assembly will leave the mortar with the shell whereas the older type ignition cartridge would, due to the force of setback, at times leave its brass head in the trench mortar weapon, fouling the firing pin and possibly causing a misfire in subsequent rounds.

Propellant increments. The Propellant Increment M1 consists of square strips of double base powder sewn together to form increments. Passing thru these increments will be found holes to increase the burning surface. These sheets are thin and flexible and will not crumple or break as did the old celluloid containers of double base powder used with the M43 Shell. Each increment has 117 grains of double base powder. Occasionally one corner edge of an increment will be cut away (notched) so as to bring the charge to the desired weight and specification. The increments are held in the stabilizer assembly by being placed diagonally in the holes of the fins.

The percussion primer, ignition cartridge and six increments make up the full propelling charge of a total of 822 grains of powder. The increments may be removed to adjust the propelling charge.

Zone of fire and range. This shell has the same number of zones of fire and approximately the same range as described for SHELL, H.E., M43.

Marking and packing. The shell body is painted olive drab with yellow stencil. It is packed one per individual fiber container, six fiber containers per bundle, one bundle per wooden chocolate-stained crate for overseas shipment. The rounds are completely assembled, ready to fire.

SHELL, Practice, M43A1. SHELL, practice, M43A1, is similar to SHELL, H.E., M43A1. The shell body, components used, and packing are identical to the shell previously described. It differs in that the filler consists of 0.16 pound of black powder to act as a spotting charge, and 1.06 pounds of inert filler such as wax, talcum, or rosin which will not crack up in handling. The body is painted blue with white stencil to indicate a practice shell.

AMMUNITION INSPECTION GUIDE

SHELL, Chemical, M57. This shell is used for the placing of smoke screens and gas clouds with a secondary incendiary effect when WP is used as its chemical filler.

Shell body. In general construction, this shell body has the same outer characteristics as the High-explosive Shell M56. The nose of the shell is threaded to receive the type of adapter peculiar to chemical shell. The adapter is threaded internally to receive the Point-detonating Fuze M52 which has a superquick action. All chemical shell to produce efficient dispersion of filler must burst above ground. A superquick action fuze is therefore used to produce such action. For details, in function of the M52 P.D., see pages 298 to 300.

The chemical filler is loaded into the shell body, and then the burster casing is pressed in place. The head of the Burster Casing M2 is wider than the body of the burster casing and has a slight taper; when pressed into place in the adapter sleeve it forms a gas-tight seal and acts as a seat for the burster charge. A recess is machined in the base of the shell body internally so as to receive the end of the casing, preventing it from becoming loose due to the shock and jars incident to shipment. During the loading of the chemical filler and the pressing of the burster casing in place, there is no explosive charge present in the casing.

The Burster Charge M1 consists of tetryl pellets or tetrytol in a thin aluminum or cardboard cylinder. It is placed in the burster casing prior to the assembly of the fuze to the shell. This construction burster as compared to the old booster found in the 3-inch smoke shell is much more efficient. The explosive charge runs through the entire length of the fuze and splits the shell from nose to tail upon function of the fuze, allowing for the dispersion of all the chemical filler in the shell. The old booster charge found in 3-inch smoke shell split the shell near the nose where the booster charge was located, and allowed a good deal of the chemical filler to remain in the base of the shell.

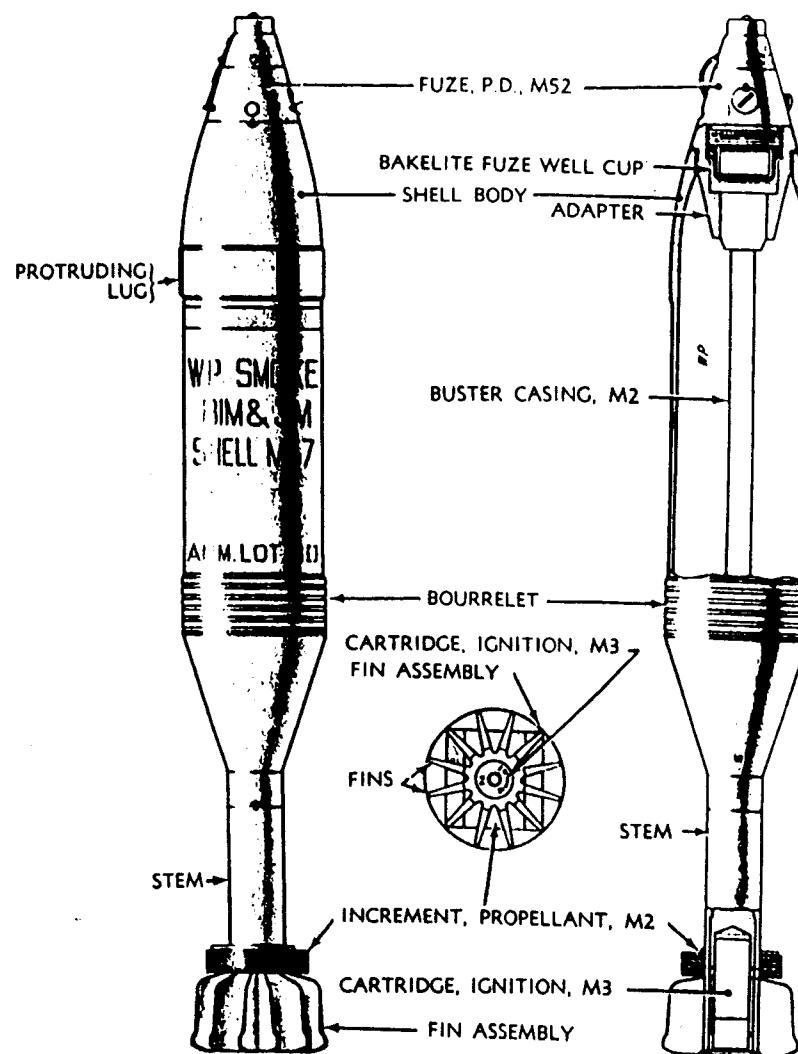
The fin assembly, ignition cartridge, propellant increments, and percussion primer are identical to those used with the High-explosive Shell M56.

The total length of the shell with the fuze assembled is 22.89 inches.

Marking and packing. Shell loaded with WP and FS are painted a blue-gray base color with yellow stencil and one yellow band to indicate a nonpersistent screening smoke filler. Shell loaded with H are painted a blue-gray base color with green stencil and two green bands indicate a persistent toxic filler.

Packing is same as for M56 High-explosive Shell.

SMALL ARMS AND TRENCH WARFARE



RA PD 22902

Figure 114 — SHELL, Chemical, M57, 81-mm Mortar
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RA PD 80772

Figure 101 — SHELL, Smoke, Phosphorus, WP, M57, w/FUZE, P.D., M52, 81-mm Mortar, Complete Round

FIXED AND SEMIFIXED ROUNDS AND SEPARATE-LOADING PROJECTILES

182. SHELL, SMOKE, PHOSPHORUS, WP, M57, W/FUZE, P.D., M52, 81-MM MORTAR, COMPLETE ROUND (fig. 101), is assembled from the same components as are used with the M56 High-explosive Round (par. 181) but is loaded with a phosphorus filler for screening purposes. To adapt the M57 Shell for this filler, the nose of the shell casing is fitted with a special adapter. This serves to provide the tight seal necessary with chemical loading and also acts as the seat for the burster assembly. The burster consists of a thin-walled tubing filled with a small charge of tetryl. This assembly extends from the nose longitudinally through the chemical filler for about three-quarters the length of the cavity. Its function is to burst the shell casing and scatter the chemical contents. The superquick type of fuze is fitted to the shell to provide for burst before penetration. White phosphorus burns with a dense smoke and has an incendiary effect. For firing the 3-inch trench mortar, the maximum charge is reduced from four to three increments.

DATA

Weight of complete round... 11.61 lb* Length of projectile, w/fin... 22.89 in.
Length of complete round... 22.89 in. Muzzle velocity 560 ft per sec
Maximum range..... 2,466 ydf

*—Weight with M52B2 Fuze (plastic head) is 11.57 pounds.
†—For four increments (full charge). Corresponding data for other charges are:

	Muzzle Velocity (ft per sec)	Maximum Range (ydf)
Charge 1	297	833
Charge 2	399	1,409
Charge 3	484	1,952

183. SHELL, SMOKE, FS, M57, W/FUZE, P.D., M52, 81-MM MORTAR, COMPLETE ROUND, is assembled from the same components as are used with the M56 High-explosive Round (par. 181), but is loaded with FS, a liquid smoke-producer which functions very much like white phosphorus, but lacks the incendiary effect. It differs from that described in paragraph 182 only with respect to the kind of chemical filler.

DATA

Weight of complete round... 12.11 lb* Length of projectile, w/fin... 22.89 in.
Length of complete round... 22.89 in. Muzzle velocity 544 ft per sec
Maximum range 2,431 ydf

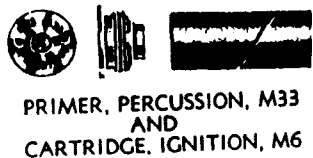
*—Weight with M52B2 Fuze (plastic head) is 12.07 pounds.
†—For four increments (full charge). Corresponding data for other charges are:

	Muzzle Velocity (ft per sec)	Maximum Range (ydf)
Charge 1	291	808
Charge 2	390	1,374
Charge 3	472	1,916

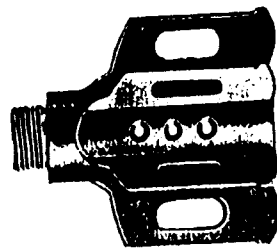
ARTILLERY AMMUNITION



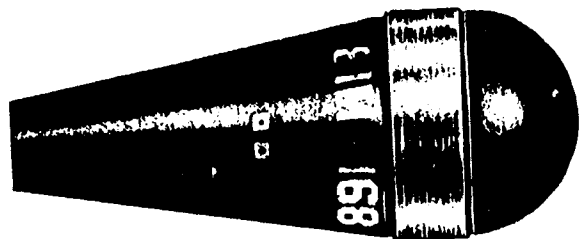
CARTRIDGE, IGNITION, M3
OR



PRIMER, PERCUSSION, M33
AND
CARTRIDGE, IGNITION, M6

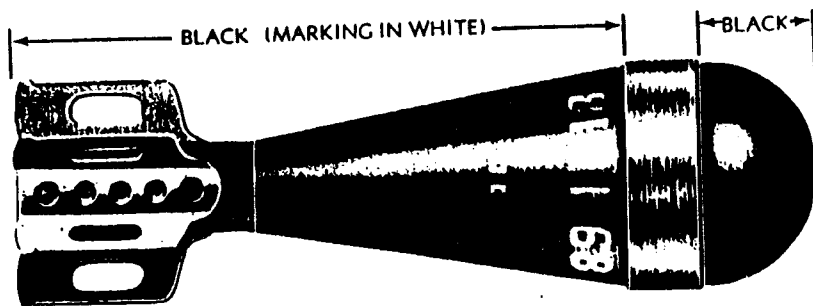


FIN, 81-MM MORTAR SHELLS
M43A1 AND M68



SHELL, TRAINING, M68, 81-MM MORTAR W/O FIN,
IGNITION CARTRIDGE AND PRIMER

A — COMPONENTS



B — ASSEMBLED

RA PD 26816

Figure 105 — SHELL, Training, M68, 81-mm Mortar

189. SHELL, TRAINING, M68, 81-MM MORTAR, W/O FIN, IGNITION CARTRIDGE, AND PRIMER (fig. 105), is provided for drill in loading and firing the mortar. The projectile is completely inert and has no fuze, consisting of a cast-iron body shaped to a pear or tear-drop contour, and drilled at the narrow base to hold a service-type fin assembly similar to that on the M43A1 Projectiles. No propellant increments are issued or used, but the M3 Ignition Cartridge, or if this is not available the combination of the M33 Ignition Cartridge and M6 Percussion Primer, is issued for use in firing the projectile. The four components are issued separately to facilitate replacement of damaged or worn-out parts and the procurement of extra ignition cartridges. A training kit used in the field holds 10 training shell and accessories, including a ground hook used in the recovery of fired training shell.

DATA

Weight of complete round.....	10.82 lb	Length of projectile	7.92 in.
Length of complete round.....	11.08 in.	Muzzle velocity	172.8 ft per sec
Weight of projectile	9.8 lb	Maximum range	306 yd

SHELL, Training, M68. The shell is designed to give the mortar crew training in loading the weapons and practice in firing under conditions which will not permit firing in more than the first zone.

Shell body. The body of the shell is cast iron. It is similar in shape to the light H.E. 81-mm shell which is tear-drop with a blunt nose and tapered tail. It has a bourrelet on the body near the nose to act as a forward bearing surface and gas check. At the tail end is a recess which is threaded to receive a stabilizer assembly. The nose end is closed and rounded with no provisions made to receive a fuze. Its weight varies depending on its weight zone. Nine weight zones are used with a minimum of 9.50 pounds for weight zone one, and a maximum of 10.10 pounds for weight zone nine, weighed without fin assembly and ignition cartridge.

The fin assembly and propelling charge. The fin assembly is of the same construction and shape as previously described. It receives the Ignition Cartridge M3. Several ignition cartridges are provided with each round so that the shell can be fired more than one time. There are no propellant increments used because the shell is designed to be fired in the first zone only. The maximum range is 350 yards.

Marking and packing. The shell is painted black with white stencil. On the shell body may be found a number of white squares (one to nine) with a prick punch mark in the center of each to indicate the zone weight.

Information as to the packing of the shell is not available at the present time. However the complete round comes in separate its consisting of shell body, ignition cartridge, and fin assembly.

The fuze, as well as the body, has no metal parts. It has a metal safety key which must be removed in order that the fuze can be inserted in the mine, and a metal safety ring which must be removed to arm the mine. The plastic fuze body contains a plastic firing pin which, under pressure, breaks an acid ampule. The acid sets off a priming mixture, which in turn causes detonation of a detonator, a tetryl booster, and the bursting charge of TNT.

This mine has two advantages over previous types:

1. It is nonmetallic and therefore not detectable by the detectors in use at the present time.
2. Due to its shock absorber ring, it is very insensitive to sympathetic detonation and therefore is resistant to attempts to clear paths through the mine fields with devices such as bangalore torpedoes.

→ **MINE, ANTITANK, PRACTICE, M1, WITH FUZE, MINE ANTITANK, PRACTICE, M1.**

The body of this mine is similar to that of the H.E. mine, differing only in that it is empty (no bursting charge). Also, it is provided with a cast iron former as a support to prevent crushing of the body. It has no filling hole. Five, equally spaced, 1-inch diameter holes may be found in the side of the mine body.

The FUZE, mine, antitank, practice, M1, is similar to the M1 H.E. Fuze except that a cal. .32 blank cartridge replaces the detonator and a smoke-puff charge of black powder and red phosphorus replaces the booster.

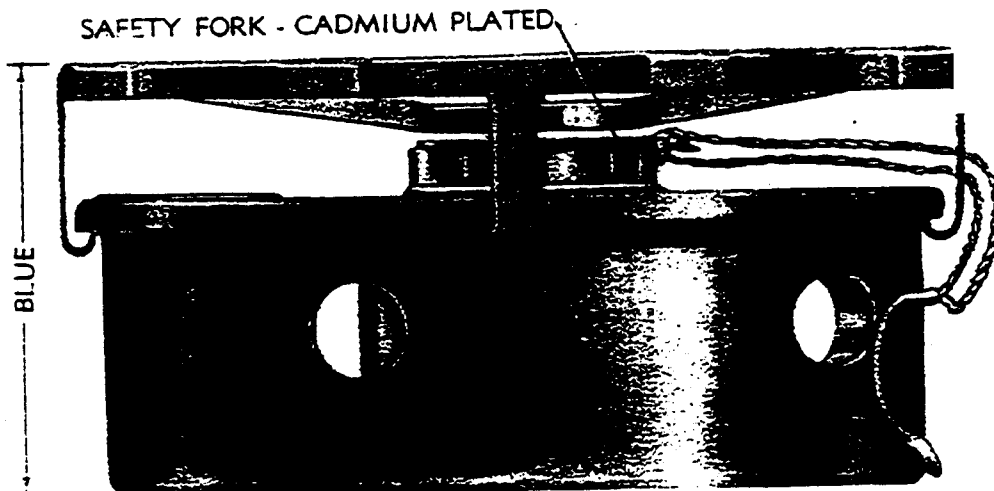
A FUZE, dummy (antitank mine), M1, is also provided. It is a plastic simulation of the service fuze and is provided with a removable safety fork. As its name indicates it is completely inert.

This mine can be used more than once by the provision of new fuzes and, when necessary, the replacement of bent or broken spiders.

MINE, ANTITANK, PRACTICE, M1B1.

This mine body differs from the previous mine body in that it may be sand-loaded to weight. A filling hole and filling hole cap are provided. Also, the body is without holes in the side. The cast iron former is of smaller diameter and is located centrally within the body. Four slotted openings are formed between it and the fuze cavity in the top of the mine body. The same fuzes as in the previous round are used with this practice mine.

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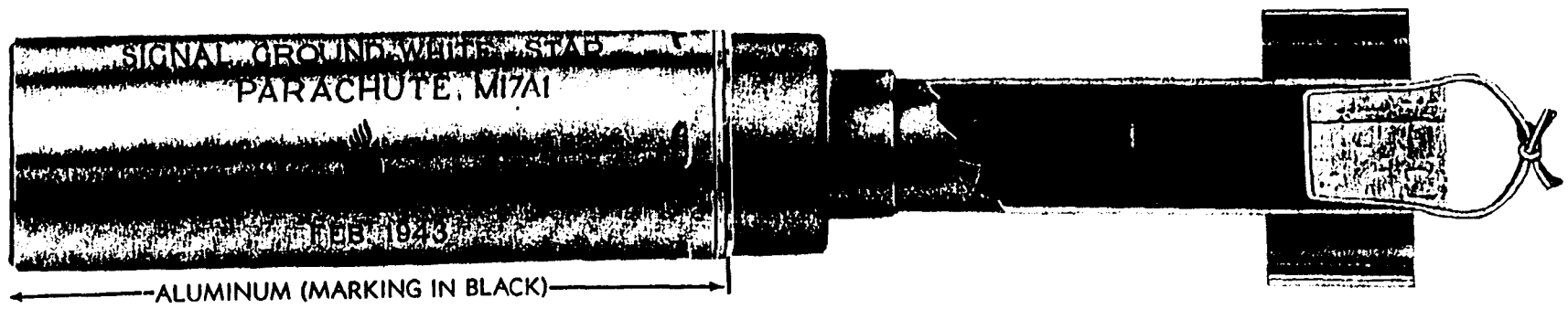
RA PD 53884A

Figure 105 — MINE, Antitank, Practice, M1








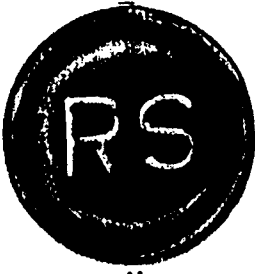
Table XX. Characteristics of Chemical Filled Munitions—Continued

Nomenclature	Status	Agent filling		Filled munition weight (lb)	Chem- ical effi- ciency (per cent)	Burn- ing time (minutes)	Radius of burst (yd)	Filling identification		Maximum distance munition projected (yd)	Stor- age group	Remarks
		Symbol	Weight (lb)					Band or stripe	Color			
→ Capsule, CN	LS	CN	-----	-----	-----	-----	-----	1	Red	-----	B	1 gm of CN in gelatin capsule; filling identification on shipping container, none on canister; for training use in gas chamber; burning time data not available; TM 3-300.
Cryptographic equipment destroyer, incendiary, TH1, M1A2.	S	TH1	28.00	34.00	82	1	-----	1	Purple	-----	D	For destruction of cryptographic equipment in safe; TM 3-300.
Cryptographic equipment destroyer, incendiary, TH1, M1A1.	LS	TH1	28.00	34.00	82	1	-----	1	Purple	-----	D	For destruction of cryptographic equipment in safe; TM 3-300.
Cryptographic equipment destroyer, incendiary, TH1, M2A1.	S	TH1	8.50	11.50	74	1	-----	1	Purple	-----	D	For destruction of specified cryptographic equipment; TM 3-300.
Document destroyer, emergency, incendiary, M3.	S	-----	-----	-----	-----	20	-----	1	Purple	-----	D	Burning-type munition; filling includes 95 lbs of sodium nitrate; 4¼-lb igniter charge includes charcoal,

C 6, FM 3-8
15 November 1957



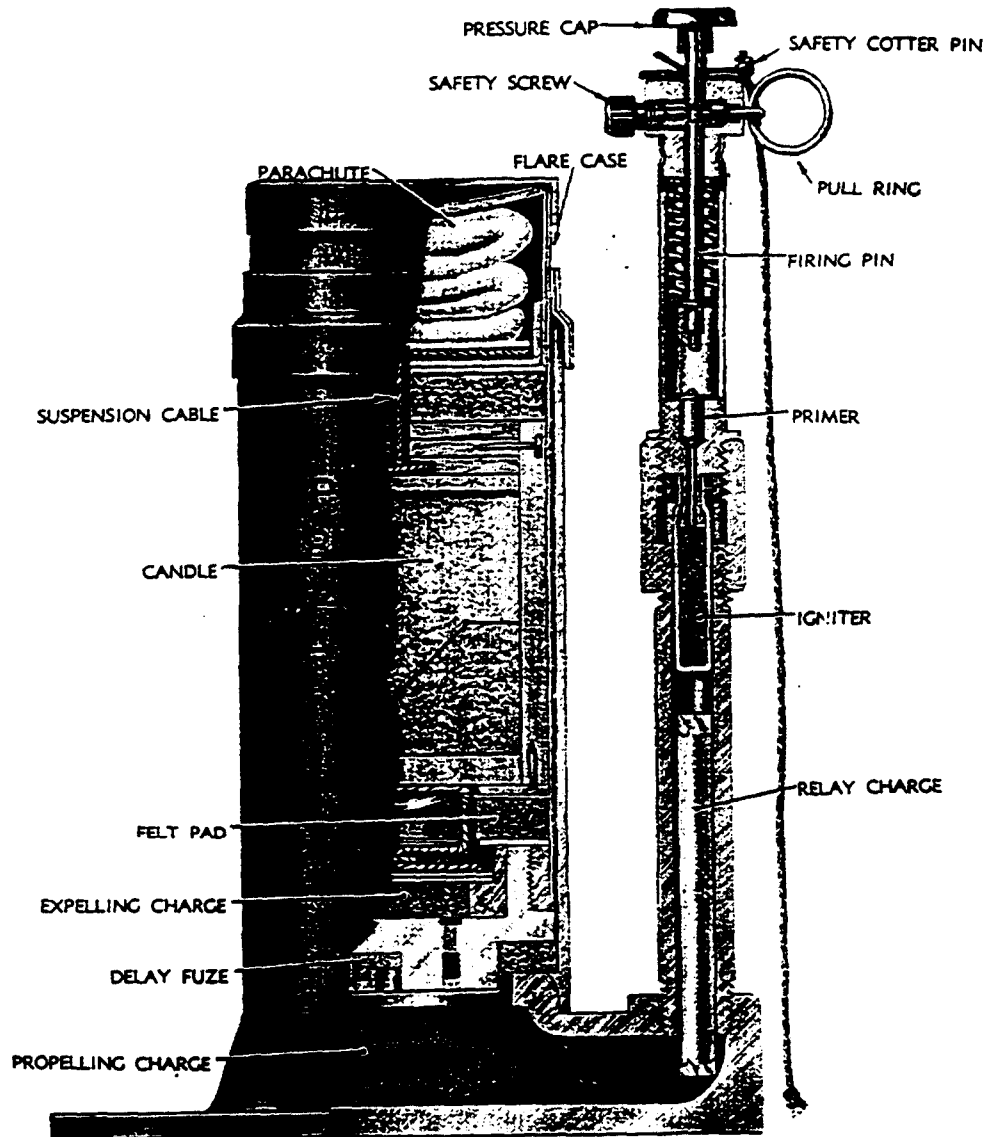
173

						
A	B	C	D	E	F	
<p>IDENTIFICATION TOP FOR:</p> <p>A - SIGNAL, GROUND, WHITE STAR, PARACHUTE, M17A1 -</p> <p>B - SIGNAL, GROUND, WHITE STAR, CLUSTER, M18A1 -</p> <p>C - SIGNAL, GROUND, GREEN STAR, PARACHUTE, M19A1 -</p> <p>D - SIGNAL, GROUND, GREEN STAR, CLUSTER, M20A1 -</p>			<p>COLOR</p> <p>WHITE</p> <p>WHITE</p> <p>WHITE</p> <p>GREEN</p>	<p>IDENTIFICATION TOP FOR:</p> <p>E - SIGNAL, GROUND, AMBER STAR, PARACHUTE, M21A1 -</p> <p>F - SIGNAL, GROUND, AMBER STAR, CLUSTER, M22A1 -</p> <p>G - SIGNAL, GROUND, RED STAR, PARACHUTE, M51A1 -</p> <p>H - SIGNAL, GROUND, RED STAR, CLUSTER, M52A1 -</p>		
				<p>COLOR</p> <p>YELLOW</p> <p>YELLOW</p> <p>RED</p> <p>RED</p>		
						
G	H					

RA PD 69038B

Figure 118 - Ground Signals - Launcher Type

Classes of Ammunition



RA PD 69071

Figure 116 – Parachute Trip Flare M48

ORDNANCE AND EXPLOSIVE
ARCHIVES SEARCH REPORT
FOR
FORMER CAMP IBIS (PROPER)
SAN BERNARDINO COUNTY
NEEDLES, CALIFORNIA
PROJECT NUMBER J09CA028301

APPENDIX E

REPORTS/STUDIES

APPENDIX E

REPORTS/STUDIES

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- E-2 Findings and Determination of Eligibility (B-2).
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- E-4 Archaeological Information Center (B-15).

SITE SURVEY SUMMARY SHEET
FOR
DERP-FUDS SITE NO. J09CA028300
CAMP IBIS
11 FEBRUARY 1994

SITE NAME: Camp Ibis

LOCATION: The Camp Ibis site is located in an undeveloped region of San Bernardino County, California approximately 21 miles northwest of Needles, California. Camp Ibis is located within T10N, R20E, Section 13c (San Bernardino Meridian); T10N, R2E - 21 Sections 4-9, 16-19, 21; T11N, R21E, Sections 20, 21, 28, 29, 32, 33.

SITE HISTORY: In January 1942, the success of the German Army in North Africa led the U.S. War Department to focus U.S. Army training efforts in areas with a desert terrain and environment. On 5 February 1942, the Chief of Staff, General Headquarters, approved of a Desert Training Center and designated General George S. Patton as the Center's Commanding General. The total maneuver area encompassed 12 million acres, making it the largest training area in the U.S. Close to one million troops trained in this area between 1942 and 1944.

Within the organization of the Desert Training Center, the Camp Ibis site was established as one of the several divisional camps. Therefore, under Real Estate Directive 959, dated 13 May 1942, 5,760 acres were transferred from the U.S. Department of the Interior to the War Department to establish Camp Ibis as part of the Desert Training Center. Two tracts encompassing 4,455.5 acres were acquired by permit. One tract, encompassing 640 acres, was acquired from the State of California under the terms of Revocable Permit No. 12, dated 24 March 1942. Another tract, encompassing 3,815.5 acres, was acquired from the Southern Pacific Company under the terms of a comprehensive permissive use permit, dated 11 February 1942. Thus, a total of 10,215.5 acres were acquired for Camp Ibis. A license dated 24 August 1943, was granted by the Atchison, Topeka and Santa Fe Railroad Company. This no-area license established a communication line right-of-way for a telephone line.

The Camp was established during the Spring of 1942 and ultimately occupied by the 4th Armored Division. The 4th Armored Division moved out of Camp Ibis in June 1943 and the 9th Armored Division simultaneously moved in. The 11th Armored Division was the last division which occupied Camp Ibis. Temporary improvements constructed on the site include 28 enlisted men's shower buildings, 14 officer's shower buildings, 173 latrines, 234 various pyramided wood tent frames, and a 50,000 gallon wooden elevated storage tank. Equipment installed on the site included deep well pumps, a chlorinator, platform scales, three 700 gallon drums. The only permanent structure constructed on the site was

one 50,000 gallon concrete reservoir. At least 23 firing ranges were provided on the site. The ranges accommodated pistols, rifles, machine guns and tank guns. These ranges were located on the acquired site and on portions of 21,945 acres which surrounded the formally acquired property.

By March 1943, the North Africa Campaign was in its final stages and the primary mission of the DTC changed. By the middle of 1943, the troops who originally came for desert training maneuvers, were now deployed worldwide. Therefore, to reflect that change in mission, the name of the Center was changed to the California-Arizona Maneuver Area (CAMA). The CAMA was to serve as a Theater of Operations to train combat troops, service units and staffs under conditions similar to those which might be encountered overseas. The CAMA was enlarged to include both a Communications Zone and Combat Zone, approximately 350 miles wide and 250 miles long.

Toward the end of 1943, the need for service units for overseas duty increased dramatically, leaving little or no support for the CAMA. Without service unit support, commanders made the decision in January of 1944 to suspend operation of the CAMA. The entire CAMA was declared surplus on 30 March 1944 and the Army formally announced that the CAMA was to be closed by 1 May 1944.

Camp Ibis was declared surplus on 16 March 1944. On that date, 5,760 acres were transferred from the War Department to the U.S. Department of the Interior. The permissive use permit with the Southern Pacific Company, which allowed use of 3,815.5 acres, was terminated on 17 February 1945. Revocable Permit No. 12, for 640 acres, was terminated by the State of California on 8 March 1945. The license with the Atchison, Topeka and Santa Fe Railway Company, was terminated on 26 September 1945.

Activities on the CAMA nominally continued until the 1950s while equipment and materials were collected and shipped and decontamination squads searched out and destroyed unexploded ordnance. A letter from the Army Corps of Engineers to the Bureau of Land Management, dated 3 May 1951, relinquished custody of the 5,760 acres of public lands to the Department of the Interior and stated that all improvements placed on the property had been removed.

In another letter from the Army Corps of Engineers to the BLM, dated 31 May 1951, it was stated that the site was carefully and visually inspected and cleared of explosives that were reasonably possible to detect. However, the letter recommended that an area of 20,640 acres, including 3,840 acres of the Camp Ibis site, be

restricted to surface use only. Another 11,520 acres, including the remaining 6,375 acres of the site, was certified clear.

The BLM has recorded no incident reports in the past several years. The Needles Search and Rescue Team of the San Bernardino County Sheriff's Department and the Explosive Ordnance Detachment (EOD) Headquarters at Fort McPherson, Georgia have no record of civilian injury or death due to ordnance left on the site by DOD in the past 10 years. Local townspeople familiar with the training maneuvers, the BLM, and representatives from the Patton Museum believe that ordnance and artifacts have been collected over the years by hobby collectors but that little, if any, remains. No evidence was found of ordnance or unsafe conditions upon recent visual inspection of the site. However, BLM officials have knowledge of unexploded ordnance located off of U.S. 95 near the Nevada-California state line.

Much of the original roadway network is deteriorating due to sheet erosion and the emergence of natural vegetation. Entire sections of the encampment area are now inaccessible to vehicular traffic. Rock alignments still mark what remains of the roadways. Throughout the camp, however, artifacts of camp life can be found including eating utensils, ration cans, and bottles.

A monitoring program, which includes a permanent photographic record, will be implemented by the BLM to ensure the stability of the site. Preservation of the site and protection from damage are primary concerns of the BLM; they do not want any surface disturbance of the site. Unless there is a clear and present danger, the BLM does not desire restoration. The BLM requested they be notified of any proposed activity on the project site. No evidence was found of unsafe debris, toxic or hazardous waste, or unexploded ordnance resulting from DOD use of the site. The Regional Water Quality Control Board (RWQCB), Colorado River Basin Region and the County of San Bernardino Department of Environmental Health Services have no record of toxic or hazardous waste in the area.

Portions of the site are currently owned by the U.S. Department of the Interior-Bureau of Land Management, the Southern Pacific Land Company, the State of California, and the Atchison, Topeka and Santa Fe Railway Company.

SITE VISIT: The site was visited on 20 October 1993 by Ron Kepford and David Eckstein of Ebasco Environmental, Santa Ana, California. Since military facilities appear to have been removed from the site, and the site returned to an undeveloped condition, no on-site point of contact was established.

CATEGORY OF HAZARD: OEW.

PROJECT DESCRIPTION: Recommend that the MCX for OEW at Huntsville Division make a final OEW determination if further action is appropriate.

AVAILABLE STUDIES AND REPORTS: A real estate file was found at the Real Estate Division, Los Angeles District, U.S. Army Corps of Engineers. Real estate documents, aerial photographs, and other information was obtained at the Needles Branch of San Bernardino County Public Library. Extensive personal interviews were conducted with Mr. John Lynch of the Council on America's Military Past. Other reports includes "Iron Mountain Divisional Camp, Resource Management Plan" by the U.S. Department of the Interior, Bureau of Land Management, 1984; Desert Training Center, California-Arizona Maneuver Area, Interpretive Plan", by U.S. Department of the Interior, Bureau of Land Management, 1986; "Patton's Desert Training Center" by Lynch, Kennedy and Wooley, Council on America's Military Past, 1982; and "The Desert Training Center and CAMA, Study No. 15", by Sgt. Sidney L. Meller, Historical Section--Army Ground Forces, 1946.

DISTRICT POC: Jatin Desai, Los Angeles District, (213) 894-6266

SITE NO. J09CA028300

Department of the Interior and stated that all improvements placed on the site had been removed and no restoration work was considered necessary. The War Department's permissive use permit with the Southern Pacific Company, which allowed the use of 3,815.5 acres, was terminated on 17 February 1945. In a letter to the War Department, dated 6 March 1945, Southern Pacific stated that they refused to sign a release of liability because they did not charge the government for the use of the land and felt the expense of inspecting the lands to execute the release was not warranted. Revocable Permit No. 12 from the State of California for 640 acres was terminated on 8 March 1945. The State of California also refused to sign a release of liability because the permit contained a restoration clause. License W04-193-eng-3213, from the Atchison, Topeka and Santa Fe Railway Company, was terminated on 26 September 1944. The company signed a release from liability on 10 November 1944. In another letter from the Corps to the BLM, dated 31 May 1951, it was stated that duds had been discovered inside and outside the site boundaries, necessitating ordnance clearance and deduinding activities on the site. The letter stated that the site had been visually inspected and cleared of all explosives or explosive objects reasonably possible to detect. It was recommended, however, that 3,840 acres of the site be restricted to surface use only. The remaining 6,375 acres were certified clear and recommended for any use for which the land was suited. Since that time, no ordnance reports have been made by the Bureau of Land Management. The entire site is undeveloped; private lands are used for grazing.

DETERMINATION

Based on the foregoing Findings of Fact, the site has been determined to be formerly used by the Department of Defense. It is therefore eligible for the Defense Environmental Restoration Program - Formerly Used Defense Sites established under 10 USC 2701 et seq.

DATE

9 Sep 96

for DE PIST coc
MILTON HUNTERBrigadier General, US Army
Commanding

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FORMERLY USED DEFENSE SITES
FINDINGS AND DETERMINATION OF ELIGIBILITY

CAMP IBIS
NEEDLES, CALIFORNIA
SITE NO. J09CA028300

FINDINGS OF FACT

1. A use permit was originally cited as the means for acquiring 5,760 acres of public land from the Department of the Interior for Camp Ibis. However, this permit was replaced by Real Estate Directive 959, dated 13 May 1942. This served as an implied transfer. One tract, encompassing 640 acres, was acquired from the State of California under the terms of Revocable Permit No. 12, dated 24 March 1942. Another tract, encompassing 3,815.5 acres, was acquired from the Southern Pacific Company under the terms of a comprehensive permissive use permit, dated 11 February 1942. License W04-193-eng-3213, dated 24 August 1943, was granted by the Atchison, Topeka and Santa Fe Railroad Company. This no-area license established a communication line right-of-way for a telephone line. Thus, real estate records indicate that a total of 10,215.5 acres were acquired for Camp Ibis.

2. Within the organization of the Desert Training Center, the Camp Ibis site was established as one of several division camps dedicated to the training and conditioning of troops and testing military equipment. The camp was established during the Spring of 1942 and ultimately occupied by the 4th Armored Division. The 4th Armored Division moved out of Camp Ibis in June 1943 and the 9th Armored Division simultaneously moved in. The 11th Armored Division was the last division to occupy Camp Ibis. Temporary improvements constructed on the site include 28 enlisted men's shower buildings, 14 officer's shower buildings, 173 latrines, 234 various pyramided wood tent frames, and a 50,000 gallon wooden elevated storage tank. Equipment installed on the site included deep well pumps, a chlorinator, platform scales, and three 700 gallon drums. The only permanent structure constructed on the site was one 50,000 gallon concrete reservoir. At least 23 firing ranges were provided on the site. The ranges accommodated pistols, rifles, machine guns and tank guns. The range locations could not be determined.

3. Camp Ibis was declared surplus on 16 March 1944. On that date, there was an authorized retransfer of 5,760 acres from the War Department to the U.S. Department of the Interior, under the terms of Real Estate Directive 959. On 4 April 1945 however, the Corps of Engineers assumed custody of these and other public lands adjacent to the site, pending completion of ordnance clearance and dedudding activities. In a letter from the Army Corps of Engineers to the Bureau of Land Management (BLM), dated 3 May 1951, the Corps relinquished custody of the 5,760 acres to



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
Ventura Field Office
2493 Portola Road, Suite B
Ventura, California 93003

November 22, 1995

Mike Harper
Project Leader
Attention: SIOAC-ESL Larry Dauphin
Department of the Army
Defense Ammunition Center and School
Savanna, Illinois 61074-9639

Subject: Species List for Former Camps Essex, Iron Mountain, Ibis, and Needles Division,
San Bernardino and Riverside Counties, California

Dear Mr. Harper:

This letter is in response to your correspondence dated October 2, 1995 requesting a compilation of listed and candidate species that may occur in the vicinity of the former Department of Defense (DOD) sites noted above. Your request was forwarded to this office by the U.S. Fish and Wildlife Service's (Service) Carlsbad Field Office and received on October 26, 1995. The former DOD camps at Essex, Iron Mountain, Ibis, and Needles Division may contain unexploded ordnance and/or explosive wastes. The U.S. Army Defense Ammunition Center and School (USADACS), in coordination with the U.S. Army Corps of Engineers, is preparing investigative reports evaluating Department of Defense facilities that stored explosive wastes. The information enclosed with this letter will be used by the USADACS in preparation of its investigative report for the referenced sites.

In addition to the project areas in San Bernardino County, our file search included that portion of Camp Iron Mountain that lies within Riverside County. Riverside County and counties to the south lie within the area of responsibility of the Service's Carlsbad Field Office. Because all but a very small portion of the project areas lie within San Bernardino County, the Carlsbad Field Office forwarded your request to this office. In the future, should a significant portion of a project lie within or to the south of Riverside County, requests for technical assistance on such projects should be directed to the Carlsbad Field Office.

Our records indicate that all four camps support the desert tortoise (*Gopherus agassizii*), federally listed as threatened, and the following category 2 candidates for Federal listing: pallid bat (*Antrozous pallidus*), California leaf-nosed bat (*Macrotis californicus*), occult little brown bat

(*Myotis lucifugus occultus*), southwestern cave myotis (*Myotis velifer brevis*), spotted bat (*Euderma maculatum*), Pacific western big-eared bat (*Plecotus townsendii townsendii*), and the greater western mastiff-bat (*Eumops perotis californicus*).

The Needles Division Camp, in the vicinity of the Colorado River, supports the federally listed Yuma clapper rail (*Rallus longirostris yumanensis*). In addition, Camp Ibis may support Howe's hedgehog cactus (*Echinocereus engelmannii* var. *howei*), also a category 2 candidate for Federal listing. ←

This letter fulfills the requirements of the Service under section 7(c) of the Endangered Species Act of 1973, as amended (Act). If the subject project may affect a listed species, your agency has the responsibility to prepare a Biological Assessment if the project is a construction project which may require an Environmental Impact Statement^{1/}. If a Biological Assessment is not required, your agency still has the responsibility to review its proposed activities and determine whether the listed species will be affected.

During the assessment or review process, your agency may engage in planning efforts, but may not make any irreversible commitment of resources. Such a commitment could constitute a violation of section 7(d) of the Endangered Species Act. If a listed species may be affected, your agency should request, in writing through our office, formal consultation pursuant to section 7 of the Act. Informal consultation may be used to exchange information and resolve conflicts with respect to listed species prior to a written request for formal consultation.

Only listed species receive protection under the Act. However, candidate species should be considered in the planning process in the event they become listed or proposed for listing prior to project completion. Preparation of a biological assessment, as described in section 7(c) of the Act, is not required. If early evaluation of the project indicates that it is likely to adversely affect a candidate species, you may wish to request informal consultation with this office.

Should you have any questions regarding the species listed, or your responsibilities under the Act, please contact Kirk Waln of my staff at (805) 644-1766.

Sincerely,



Diane K. Noda
Field Supervisor

^{1/} "Construction Project" means any major Federal action which significantly affects the quality of the human environment designed primarily to result in the building or erection of man-made structures such as dams, buildings, roads, pipelines, channels and the like. This includes Federal actions such as permits, grants, licenses, or other forms of Federal authorizations or approval which may result in construction.

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ARCHAEOLOGICAL INFORMATION CENTER
San Bernardino County Museum
2024 Orange Tree Lane
Redlands, California 92374
(909) 792-1497
(909) 798-8585 - FAX

5 October 1995

SIOAC-ESL
Larry Dauphin, Director
USADACS
Savanna, IL 61074-9639

RE: Absence/Presence of Sites In Selected Areas of CHL-985

Dear Mr. Dauphin,

Below is the information which you requested on 29 September 1995.

Camp Essex/Clipper

T8N R16E Sec 1-3, 10-30, 33, 34	1 Historic site
T8N R17E Sec 3-9, 17-19	2 Prehistoric, 4 Historic sites
T9N R16E Sec 22-27, 34-36	1 Prehistoric, 3 Historic sites
T9N R17E Sec 31-33	same 3 Historic sites as above

Camp Iron Mountain

T1S R17E Sec 1, 2, 6, 7, 11-14, 18	1 Historic site (Sec 19-33 are in Riverside Co.)
T1S R18E Sec 1-15, 17, 18	1 Historic site (Sec 19-35 are in Riverside Co.)
T2S R18E In Riverside Co.	
T1N R18E All	1 Prehistoric isolate, 2 Historic sites

Camp Ibis

T10N R20E Sec 13	0 sites
T10N R21E Sec 4-9, 16-19, 21	3 Historic sites
T11N R21E Sec 20, 21, 28, 29, 32, 33	2 sites, Historic sites, sections 32, 33 (only)
R20E	PER Robin Laska 11/20/95 3-7-96

Needles Division

T9N R22E Sec 2-4, 8, 10, 11, 14, 15, 22, 23, 26, 27, 34, 35	1 Prehistoric, 2 Historic sites
T8N R22E Sec 1-5, 7-23, 26-36	Many Prehistoric sites
T8N R23E Sec 5-9, 18-20, 27-35	Many sites
T7N R22E All	0 Sites
T7N R23E Sec 1-12, 15, 17-21, 30, 31	Many Prehistoric, 2 Historic sites

Only the T8N R22 & 23E have had systematic surveys. Other areas have had an occasional small survey, but all areas are relatively unsurveyed. These areas encompass 16 7.5' quadrangles, but CHL-985 covers a much larger area in San Bernardino County.

I hope this answers your immediate needs. If I can be of further assistance, please, call me at (909) 792-1497, Tuesday through Friday 8AM-4PM Pacific time.

Sincerely,



ANNOUNCEMENT OF SERVICES

The Center houses historical and archaeological site records; National Register of Historic Places property records; State landmark, historic structures and points of interest records; isolated artifact and pending site records; Historic Resource Inventory records, and cultural resource reports for the County of San Bernardino. Additional files include: historic maps, aerial photographic indexes, and indices and bibliographies of historic records and scientific works pertaining to the cultural history of the County. The Center is staffed week days, with hours devoted to professional inquiries between 8:00-12:00 AM and 1:00-4:00 PM Tuesday, Wednesday and Thursday. Fees for record searches:

Cultural Resource Management:

AutoCAD Record Search (by Center Staff)	
Electronic (original)	\$100/quad
Electronic (update)	\$25/quad
Plotted (basic fee)	\$150/quad
Plotted	\$10/overlay
Landowner	\$90/request
Literature Review	\$90/request
Record Search (by Center staff)	\$90/hour
Planning review (by Center staff)	\$10/request
Student and Independent Research:	
Record Search (by Center staff)	\$90/hour
Self-search	\$10/request or overlay
Historic Resource Inventory Files	\$20/hr
General Plan Maps (by Center staff):	
Electronic (original)	\$100/quad
Electronic (update)	\$10/quad
Plotted	\$200/quad
Photocopying & NADB Printouts	\$0.25/page
(original records may not be removed from the Center)	
FAX Charges:	\$2.00/page (incl. cover sheet)
Bibliographies	\$2-20/bibliography
Overnight mailings	Billed at cost to the Center OR Charged to your FedEx Account

All requests for searches must be made in writing or in person, and must be accompanied by a copy of the appropriate USGS 7.5' quad map with your project

area clearly outlined. Telephone requests from recognized professionals and CRM agencies can be made to initiate record searches by Center staff, but information will not be mailed until a written request and a signed agreement form are received. Site locations will only be released to professionals who have filed a signed Agreement of Confidentiality form and who have provided a career statement (vitae) detailing academic and professional qualifications. Students and avocationalists must file a letter from a supervising professional stating the goal of their research, their expected product and the individuals involved in the research. A copy of the report or paper detailing the results of the research must be filed with the Center.

Landowner record searches must be requested in writing by the landowner or his agent and be accompanied by a copy of a utility bill or deed showing that they are the owner, a copy of a USGS quad map or Thomas Bros. map with the property clearly outlined and a letter signed by the landowner if the person requesting the search is not the legal owner. This is in accordance with California Government Code, Section 6254.10.

Failure to comply with State requirements and Center procedures are grounds for the denial of access to cultural resource files.

For further information, contact: Robin Laska, Assistant Center Coordinator, or Christy Tenney, Assistant Center Coordinator at (909) 792-1497.

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ARCHAEOLOGICAL INFORMATION CENTER
San Bernardino County Museum
2024 Orange Tree Lane
Redlands, California 92374
(909) 792-1497
(909) 798-8585 - FAX

4 March 1994
Dr. J. C. ...
1000 ...
CERAMIC ...
Redlands, CA 92374

Dear Dr. ...

Here is the information you requested by FAX. In 1981, 1985, and 1986, I did
that you requested. I have also included a copy of the California Archaeological
Inventory, Vol. 1, 1981. A copy of the California Archaeological Inventory, Vol. 1, 1981
is also included. I hope this information is helpful. If you have any questions,
please contact me at (909) 798-8585.

I hope this information is helpful. If you have any questions, please contact
me at (909) 798-1497. Thank you for your interest in the California Archaeological
Inventory. Sincerely,
909 798 8585.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert E. Latta".

Robt. E. Latta
Acting Coordinator

ORDNANCE AND EXPLOSIVE
ARCHIVES SEARCH REPORT
FOR
FORMER CAMP IBIS (PROPER)
SAN BERNARDINO COUNTY
NEEDLES, CALIFORNIA
PROJECT NUMBER J09CA028301

APPENDIX F

LETTERS/MEMORANDUMS/MISCELLANEOUS ITEMS

APPENDIX F

LETTERS/MEMORANDUMS/MISCELLANEOUS ITEMS

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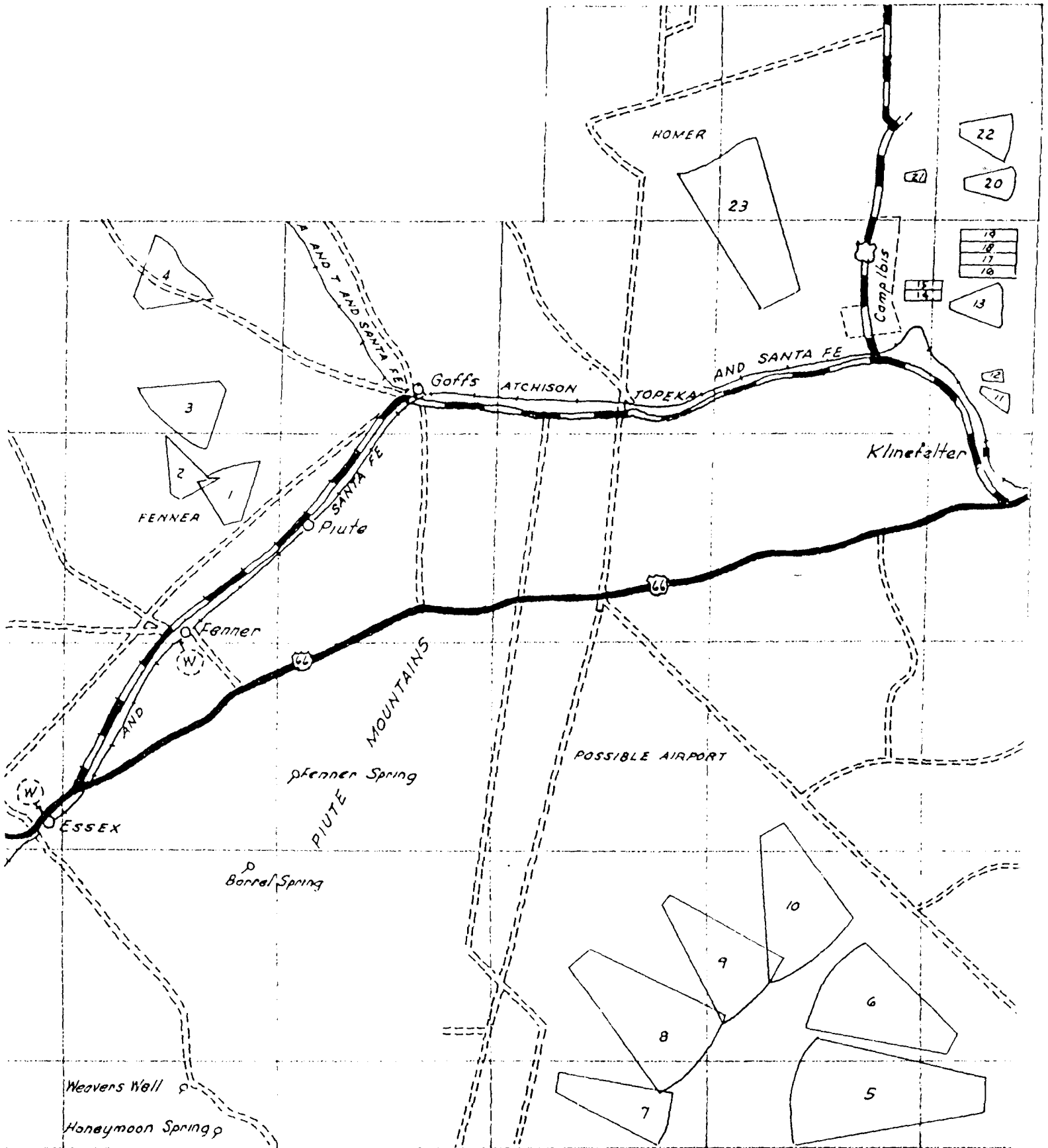
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IBIS RANGE

RANGE	DESCRIPTION
No. 1	MOVING TARGET - Machine gun. .50 Cal.
No. 2	COMBAT RANGE - Dismounted.
No. 3	COMBAT RANGE - Mounted.
No. 4	COMBAT RANGE - Tanks.
No. 5	COMBAT RANGE - Tanks.
No. 6	COMBAT RANGE - .30 Cal.
No. 7	COMBAT RANGE - Tanks
No. 8	COMBAT RANGE - .30 Cal.
No. 9	VEHICLE COMBAT RANGE - Small caliber.
No. 10	COMBAT RANGE - .22 Cal. rifle, Carbine and .45 Cal. pistol.
No. 11	KNOWN DISTANCE - .45 Cal. pistol.
No. 12	KNOWN DISTANCE - Carbine.
→ No. 13	MOVING TARGET - .50 Cal. machine gun.
→ No. 14	KNOWN DISTANCE - 100 and 300 yds. .30 Cal.
→ No. 15	KNOWN DISTANCE - 100 and 300 yds. .30 Cal.
No. 16	KNOWN DISTANCE - Carbine.
No. 17	TRANSITION COURSE - .30 Cal.
No. 18	KNOWN DISTANCE - .50 Cal. machine gun.
No. 19	TRANSITION COURSE - .30 Cal.
No. 20	MOVING TARGET
→ No. 21	KNOWN DISTANCE - 1000 inches. .30 Cal. Rifle and Browning Auto rifle.
No. 22	MOVING TARGET
No. 23	COMBAT RANGE - Tank. Large caliber.

LIST OF PROJECT TESTED BY DESERT WARFARE BOARD (Cont'd)

Ration Boxes	Rations
Motors	Restrictor Rings, Tires
Rucksacks	Refrigerated Chamber
AC Spark Plug Pump	High Speed Road Pioneering
Spring Loaded Idler Assembly	Air Ground Signalling
Shell, Illuminating, 60 mm	Gasoline Stoves
Impregnite Shoe M1	Shirts, Convertible Collar
Shorts	Socks, Ski
Socks, Cool Cushion Sole	Hardwater Soap
Spring Fatigue in 1/4 Ton Truck	Steering Stabilizers for Half
Double Coil Springs for Spring	Trucks and Scout Cars
Loaded Idler Assembly	Snubbers for Scout Cars
Station Wagons	Steel Shell Cases
Signal, Ground M21	Tape, Phosphorescent
Steel Tent Frame	Towels
Synthetic Tracks for Tanks	Amphibian Trucks
Tire Tubes	Gas Tankers
Ordinance Shop Trucks	12 volt Electrical System for
	1/4 Ton Trucks
Dodge Truck 1-1/2 Ton	1/4 Ton Welding and Crane Truck
Truck, 1/2 Ton	Armored Cargo Trailer, M8
Tractors	Trailers
Trailers for Light Tanks	Trailers for Medium Tanks
Water Trailer	Caterpillar Tractor D4
Ten Ton Tractors D7	Traction Devices
High Speed Tractors	Heavy Tractor T16
Goodrich Company Tubeless Combat	Galand Watson Iyr Tracs
Tires	
Special Tires	Desert Tires for Motorcycles
Aircraft Tires	Tank Destroyers M10 and M10A1
Lt Tank M3 with Low Turret	Rogie Suspension for Medium Tank M3
Tank M4A1E1	Medium Tank M4A2
Medium Tank M4A3	Medium Tank M4A4
Medium Tank M3	Steel Tank Tracks T36E2 and E6
Air Cleaners for Medium Tank M3	Vortex Air Cleaners for Light Tank M3
Veotographs	Motor Transport Vehicles
Medical Vehicles	Command Post Vehicles
Marking of Vehicles	Vapor Locks
Wire	Kater
Storage Batteries	Tank Recovery Vehicle, T2
Desert Clothing	Cars, Armored, Reconnaissance, M8
Cargo Carriers, T15, T16 & T24	2 1/2-Ton, Cross Country Carrier
	(Swamp Buggy)
Camouflage	Overall Zipper Covers
40mm Gun Carriage, M2 and T2	Multiple Gun Motor Carriage, T29
Thornton Locking Differentials	Radio Direction Finding Equipment
Eye Shields, Anti-gas	Lights
Lubricants and Fuels	Luminous Markers
Antitank Mines, Mine Sweepers, and	AA Mounts for Tanks
Detectors	
Recording Odograph	Radio Set SCR-504 & 274
Dust Respirators	Smoke Munitions
Telescopes	Truck-Tractors & Semi-Trailers
Tank Transporters	Heavy Freckers

APPENDIX "H" (cont'd)

LIST OF PROJECTS TESTED BY DESERT WARFARE BOARD

Air Filters	Carriage M1
Precleaner and Oil Bath Cleaner	Clutch Dust Covers
Anti-Aircraft Material	Clutch Assemblies
Air Conditioned Ambulance	75mm Gun Motor Carriage, Half-Track, Special Springs For
Refrigerated Ambulance	76 MM Gun Motor Carriage T-70
Field Ambulance	155mm Gun Motor Carriage T-6
Ammunition	Special Two Plate Clutch
Airborne Ammunition Containers	Detergent, Synthetic Neutronyz
Air Tank Bombing	Detector Set, A/T Mine
Air-Bomber Supply	V Type Road Drag
Anti-Dust Measures	Duck, Coated Canvas
Automotive Equipment(Accessories)	Armored Force Vehicles
Marker, Beacon	Chemical Warfare Equipment
Desert, Warfare Boots	Engineer Equipment
Boots, Parachutest	Matchbox, Compass Type
Boots, Field M1943	Insect Repellant
Boots, Cavalry	Photographic Equipment
Boots, Commercial	Tire Patching Equipment
Level Bubbles	Visual Equipment
Steel Treadway Bridges	Polaroid Eyeshades
Tire Chains	Jettison Fuel Tanks and Trailers
Coveralls	Clare Filters for Tank Telescopes and Periscopes
Gasoline Cans	Smoke Generators
Canteens, 2-1/2 Gallon	Sun Glasses
Hull Compasses	Gasoline
Compasses	Goggles Ski Type
Cots, Canvas Folding	Gas Warfare
Armored Car T-17 (British)	Gun T10 & Gun Carriage T1, 3"
Armored Utility Car M20	Half Track Personnel Carriers M3
Carriage, MG, Cal. 50	Hose Tops
87mm Gun M3A1	Modified Half Tracks, M2 & M3
Heaters, Circulated Fuel Oil Burner	Half Track Shutter Brackets
Havelocks	Blockout Headlights
Scout Car M3A1	Special Springs for Half Tracks
Half Track Car, M2E6	
Special Springs for 75 MM Gun Motor Carriage.	Interphone Equipment
Ventilating Insoles	Lubricants
Kits, Medical, Jungle	Linens, Helmet
Trouble Lamps	Lipsticks and Creams
Leather	Medical Supply Units
Lubrication, Artillery	Muzzle Cover
Muzzle Cover	Motor Carriage Gun Mount M8
Mount, 105 Howitzer, M7	Oil, Can, Replaceable Caps for
Navigation Sets	Paint
Oil	Puttees, Khaki, Woolen
Public Address Systems	Prime Covers
Panel Set AP 50	Ground Projector M4
Pack Boards	Radio Set SCR 806
Radio Carrier T17	

ASIA FILE

HEADQUARTERS
ARMY GROUND FORCES
Army War College
Washington 25, D.C.

72-G-2
72-G-3
72-G-4
RG 331
Entry 29C
BOX 118
1 AAO For Action

Copy +
List
322,099

321/161(CA)(R)(4 Aug 43)GNGCT

4 August 1943. This copy to be returned
A. G. showing action taken

SUBJECT: Test of New Type Antiaircraft Automatic Weapons Battalion.
Commanding Generals,
Second Army,
Antiaircraft Command,
Desert Training Center.

1. Commanding General, Antiaircraft Command has been directed by letter, H. ACF, 321/155(CAC)(R)(26 Jul 43)GNGCT, 26 July 1943, Subject: "Reorganization of 560th and 561st Antiaircraft Artillery Automatic Weapons Battalions," (Inclosure 1), to organize two experimental automatic weapons battalions under Tentative Table of Organization 44-25 (no date, see Inclosure 1). One of these battalions will be made available to each of Second Army and Desert Training Center for test during scheduled maneuvers in September-October 1943.

2. In order that a comparison may be made with standard battalions, a mobile automatic weapons battalion (Table of Organization 44-25, 27 February 1943) will also be assigned to Second Army and Desert Training Center concurrently with experimental battalions.

3. Tests will be conducted in conjunction with current maneuvers to determine which of the two type battalions can better perform the mission of providing antiaircraft protection for combat units.

4. Commanding General, Antiaircraft Command will notify this headquarters at earliest practicable date, the date when experimental battalions will be equipped and prepared for movement to stations indicated by Commanding Generals, Second Army and Desert Training Center.

5. Each of the battalions assigned to Second Army and Desert Training Center for test will be employed on similar exercises and assigned similar missions. Normal employment should include attachment to a division both infantry and armored, during attack, defense, advance or retrograde operations. Consideration should also be given to missions in air-drome defense and special operations where practicable.

6. Commanding General, Antiaircraft Command will send observer personnel to witness the tests. Each other major Army Ground Force command may send observer personnel if desired. Direct communication between interested commands for purpose of facilitating the tests is authorized.

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HEADQUARTERS
ARMY GROUND FORCES
Army War College
Washington, D. C.

4716 (Dept. of the Army)
(S. 100)

4716 (Dept. of the Army)-GNSPL
(S. 100)

May 30, 1962
LHH/js 356

Subject: Allocation of Training Ammunition for June

To: Commanding General, Smart Training Center, Indio, California.

1. The Chief of Ordnance has been requested to issue credits to the following quantities of ammunition for the month of June:

Cart., ball, cal. .22	100,000 rounds
Cart., ball, cal. .30	100,000 "
Cart., tracer, cal. .30	40,000 "
Cart., ball, cal. .45	15,000 "
Cart., tracer, cal. .45	2,000 "
Cart., ball, cal. .50	20,000 "
Cart., tracer, cal. .50	2,000 "
Shot, 75mm M51	800 "
Shell, 75mm M1926	300 "
Shell, 81mm, 60mm Mortar	50 "
Shell, 81mm, 81mm Mortar	60 "
Shell, 81mm, 75mm Gun (R.C.)	139 "
Shell, Smoke, 81mm Mortar	20 "
Shell, 81mm, 75mm Howitzer	15 "
Shell, 81mm, 105mm Howitzer	110 "
Granade, 60mm	88 each
Signals, ground, assorted	5 "

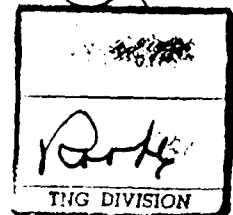
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2. It is requested that this headquarters be furnished with copies of suballotments made under these credits.

Approved: LT. GEN. McMAIR:

JOHN W. ROSEY
Major General
Assistant Adjutant General

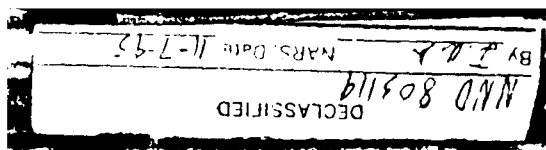
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REPRODUCED AT THE NATIONAL ARCHIVES

HEADQUARTERS DESERT TRAINING CENTER
Camp Young, California

471 - 0

May 23, 1942

SUBJECT: Ammunition for Test Purposes - Desert Warfare Board

TO : Commanding General, Army Ground Forces, Army War College,
Washington, D. C.

Attention: Colonel Robert W. Daniels, Ordnance Officer

1. Reference letter Headquarters Army Ground Forces, Army War College, Washington, D. C., dated May 9, 1942, subject: Ammunition for Test Purposes - Desert Warfare Board, 471/2 (Desert Tr. Cen.) -GMSPL (5/9/42) it is requested that the following ammunition be furnished this Headquarters for test purposes for the month of June:

- a. 15000 rounds Cal. .30 Ball
- b. 3000 rounds Cal. .30 Tracer
- c. 10000 rounds Cal. .45 Ball
- d. 2000 rounds Cal. .45 Tracer
- e. 8000 rounds Cart. Cal. .50 Ball
- f. 2000 rounds Cart. Cal. .50 Tracer
- g. 150 rounds Shell 37mm H.E. M63
- h. 150 rounds Shot, TP, M51, 37mm
- i. 200 rounds Shell 75mm w/fuze M18
- j. 200 rounds Shell 75mm w/fuze M54
- kg. 100 rounds Shell 75mm Smoke
- l. 100 rounds Shell 105mm w/fuze M18
- m. 100 rounds Shell 105mm w/fuze M54
- n. 100 rounds Shell 105mm Smoke

X 471/6 Desert

2. The ammunition referred to in paragraph one above is to be used on tests that have been approved and tests that are to be developed for the month of June, 1942. The tests referred to cover such items as the blast effect with artillery weapons in sandy areas and the suitability of various types of fuses for 37mm and larger caliber projectiles to be fired for impact at 100, 200 and 300 yards on the various types of soil existing in the desert such as sand, detrided igneous rock, dry lakes, etc.

For the Commanding General:

D. W. JONES,
Lieut. Colonel, A. G. D.,
Asst. Adjutant General.

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BY T.P. AB
NARS. DATE 11-7-95
NND 803119
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IX Corps (29 March - 23 July 1943)

Under Maj. Gen. Charles H. White the area of the Center was enlarged. (See Areas "B" and "C" in map opposite.) It was broadened into a rough oval, approximately 350 miles wide from Pomona, California, eastward to Phoenix, Arizona (which was considered part of the communications zone); and 250 miles deep from Yuma, Arizona, northward to Boulder City, Nevada (which also was considered part of the communications zone). The military population of the Center soared until it reached almost 190,000, the elements of which were scattered through an area exceeding in size the state of Pennsylvania.

→ These elements had to be provided with division camps. In June of 1943 the 4th Armored Division moved out of Camp Ibis and the 9th Armored Division simultaneously moved in. The 8th Division and the 3d and 6th Tank Groups occupied Camp Laguna. The 7th Armored Division was at Camp Coxcomb. Other camps were being built by engineer units during the period of General White and the IX Corps. There were two camps in the area of Camp Clipper. The one occupied by the 33d Division was temporary. The permanent camp, completed in the latter part of June, was occupied by the 93d Division. The temporary camp was retained for use as a transition camp, so that if a condition should arise when one division was moving out and one moving in, as in the case of the 33d and 93d, they could both be accommodated. The 76th Field Artillery Brigade was at Camp Granite although the permanent camp was not yet completed. The 85th Infantry Division was at Camp Pilot Knob. The 77th Division was at Camp Hyder. Camp Horn was to be ready for occupancy about 1 August.

Other constructions were necessary. Roads were always being built or repaired. Hospitals were badly needed. In June of 1943, although but 90% complete, the general hospital at Spadra, California, was occupied by over a thousand patients. After engineer troops had completed projects of higher priority, such as hospitals, they built open-air theaters of simple design at Base General Depot and Pomona.⁵

Movement in and out of the Center by the large numbers of units and the load the railroads had to bear in supplying them led Mr. Eastman of the Office of Defense Transportation to request the Under Secretary of War to have activities in the Center decreased. The greatest rail congestion in the country existed in this western region. The War Department wished the Western railroads to improve and increase their facilities in preparation for the war effort in the Pacific, but it believed that the point had been reached, especially on the Santa Fe, when an interval for recovery had to be allowed.

Since curtailment of the Center would have had to be counterbalanced by acquisition of equal facilities in another locality, the Army Ground Forces met the problem in three ways. In the first place, it did not further expand the Center. In the second place, movement of large units was arranged so as to cause the least possible interference with other activities by the railroads. Wherever possible the rolling stock bringing in a unit was used to carry a similar unit from the Center. In the third place, equipment was exchanged. With the exception of the armored division which left the Center in August, exchange of equipment was made in all cases. A vehicle pool was introduced. In general, after a unit arrived at the Center it borrowed equipment and vehicles from pools in the Center; before it left, it returned equipment and vehicles to the pools.⁶

The major units involved in the maneuvers under the IX Corps, from 27 June until 15 July 1943, were the 7th Armored Division, the 8th and 77th Infantry Divisions and the 76th Field Artillery Brigade. In the maneuvers were also the 114th Coast Artillery (Antiaircraft), the 4th Mechanized Cavalry, the 5th and 6th Tank Destroyer Groups, the 144th Field Artillery Group, the 8th Reconnaissance Squadron, and the 6th Tank Group composed of its headquarters and the 742d Tank Battalion (Light) and the 743d Tank Battalion (Medium).⁷

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Command Post installation, taking full advantage of ironwood tree. (From files of Engineer Board, Yuma Test Branch)

the II Armored Corps, which inhibited the use of reconnaissance, did not permit a testing of the ability of a unit to keep supplied, and to keep its vehicles rolling. To take better advantage of the situation, the number of exercises was cut to three in the three-week maneuvers under the IV Armored Corps, and General Walker recommended lengthening exercises even further to permit a more realistic play of supply and maintenance as well as to test the endurance of troops and equipment.⁵ In April 1943 the schedule was altered and the number of exercises reduced to two in the three-week maneuvers.⁶ Continuity also permitted improvements of the training area. Thus, a defensive position was built up at Palen Pass successively by units passing through the DTC-CAMA.

Since this installation was going at all times, whenever overseas-experienced officers came to this country they could stop off and watch and perhaps offer suggestions which could be tested at once. During the period of the XV Corps, Lt. General Bucker and Maj. General Bonesteel spent several days at the Center. Brig. F. A. B. Copland-Griffiths of the British Army delivered an instructive talk to the Commanding General and the staff of the Center on his experiences as an armored brigade commander in North Africa. Lt. Col. MacAlpin Blackwatch, a leader in British Commando training and operations, strongly impressed by the training being conducted in the desert, was liberal with comments and suggestions.⁷

A concomitant benefit existed in always having on hand troops, operating under theater conditions, to test materiel. At a period when only a small proportion of our troops were committed to actual combat, this testing was of vital importance.

→ A third attribute of the DTC-CAMA was its spacious and varied terrain. The size of the area and the lack of civilian population permitted exercises to be conducted over wide expanses. At the beginning of Exercise "A" of the maneuvers under the IV Arm i

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Corps, the main forces of Blue and Red were 175 miles apart. Commanders had to move their units over such distances as they had later to cover in the campaign of France and beyond the Rhine.⁶ The breadth of the area permitted some units to be going through maneuvers while other units undertook pre- or post-maneuver training in other areas.

→ Antiaircraft artillery units and units equipped with antiaircraft weapons could fire at towed targets, restricted only by the limited number of tow-target missions that were provided. Signal units erected telephone lines. Flame throwers were used against pillboxes. The varied terrain permitted varied training, and almost no obstacles interfered with freedom of maneuvers. Maneuvers in Tennessee and Louisiana were subject to artificial restrictions. The DTC-CAMA was not in the neighborhood of a large city, was not in a region of farms; units went freely cross-country, climbed and defended and attacked positions in mountains. Firing could be carried on without fear of interlopers being harmed. Highways were placed off limits for tactical movements, except as defiles. Blackout driving was practiced at night.⁹ Commanders faced all the logistical responsibilities they would encounter in actual warfare.¹⁰

A fourth major advantage of the DTC-CAMA was in permitting the imposition on it of an organization simulating that of an active theater. Its spaces permitted locating installations in approximately the positions they would occupy in a theater. Again, since realism made it necessary for the troops to live the Spartan life, they became hardened. Numerous observers attested to this. For example, Lt. Gen. Ben Lear, watching an attack by an infantry company of the 8th Infantry Division in the desert, commented on the splendid physical condition of the men.¹¹ AGF and AAF officers praise the physical condition of men in the 79th Infantry Division.¹² General Anderson wrote that the accomplishments of the Center "in hardening the individual and acclimating the individual and the unit to honest field operations, more than justified the natural hardship upon materiel and equipment incident to the character of the operations therein."¹³ General Walker, on his return from the war in Germany in 1945, believed that the experience had given the men who had it an invaluable confidence in finding they could conquer and survive the hardships imposed by nature which remained their great foe even in a war with a human foe.¹⁴ By merely going through one's duties in the DTC-CAMA an officer or enlisted man was being trained to function as he would function overseas in an active theater. That was the supreme contribution to training made by theater framework and the imposition of realistic conditions.

A fifth benefit was the varied training that could be carried on. Some notion of the variety has already been given. The subjects for training of units listed in the AGF directive of 6 April 1943 will indicate this in more detail:

Movement across country; navigation

Reconnaissance, combat intelligence, counterintelligence and liaison

Exercises which were to be realistic and complete in all details

Dispersion of vehicles during the march, halts and in bivouac

Aggressive action by dismounted individuals and small units against armored vehicles.

→ Laying and removal of mine fields

Antiaircraft defenses with both organic and task weapons and units. Each vehicle authorized an antiaircraft gun was to carry it or a dummy machine gun, mounted and ready for action during the daylight hours of each tactical exercise. A gunner or antiaircraft sentry was to be on the alert at gun at all times. Other vehicles, carrying more than two soldiers, including the driver,

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were to have an antiaircraft sentry on the alert. Planes were to make simulated attacks to test antiaircraft personnel. Fire of all available and suitable weapons was to be delivered against hostile planes when concealment was not essential or obviously did not exist.

Rapid close-in air support of ground units, on call

Artillery observation by liaison planes

Camouflage

Night operations

Use of identification panels

Adherence to tables of equipment

Battlefield recovery and evacuation of armored vehicles and other heavy equipment

Day-by-day maintenance of motor vehicles

Driver training with emphasis on night driving and driver maintenance; aggressive supervision of driving and maintenance by all command echelons

Realistic supply of all classes, including ammunition, with actual tonnage, especially at night

Special features of hygiene, sanitation, and first aid peculiar to desert

Cooking by individuals and small groups

Supply by air¹⁵

→ "Tough and Realistic Conditions"

Realism was not an isolated compartment in the DTC-CAMA, like a gas chamber, into which personnel from a unit were introduced for a lecture and a spray. Realism was an atmosphere in which troops ate and worked and slept for at least three months and usually longer. It pervaded all departments of the DTC-CAMA. Men learned not only how to fight other men but nature also. As soon as they had defeated nature a few times -- as by enduring some thirst, getting lost and finding themselves, fixing up a car that had broken down on a desert trail -- they gained confidence in themselves, and that spirit remained with them.¹⁶

It was not a simple process. General Walker and Colonel Sweet set the theater going in the spirit desired by Headquarters, Army Ground Forces. When officers from Headquarters, Army Ground Forces, observed lapses in realism, these were brought to the attention of the Commanding General of the Center.

General White and the IX Corps took over and because they concentrated on administration, the emphasis on realism decreased. An officer of Headquarters, Army Ground Forces, reported that the camp of the 76th Field Artillery Brigade showed devotion to cleanliness and order; stones flanked gravel foot paths and rock borders protected bushes. On the other hand, the field exercises of the Brigade had been reduced to those which could be accomplished within a four-day period, including movement to the maneuver area and return to the base camp. Too many men were being authorized a

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The War Department, early in 1943, had pointed out the crux of the matter. "Combined air-ground training is...necessarily a joint responsibility of the Commanding General, Army Air Forces, and the Commanding General, Army Ground Forces, which requires close coordination and cooperation."⁶⁸

The difference between the Army Air Forces and the Army Ground Forces concerning air-ground cooperation in the CAMA represented a difference of emphasis and direction. General McNair was intent on thorough all-around training of his troops before they entered combat. The eyes of the Army Air Forces, on the other hand, were fixed on "strategic" air war and its immediate potentialities. The Air Forces, in 1943 and early 1944, were still carrying the burden of the offensive against Germans and, to some extent, the Japanese. General Arnold declared that the Air Forces found it increasingly difficult to justify to theater commanders, to the public, and even to themselves, the great number of airplanes in this country in comparison with the number in theaters. Airplanes earmarked for test and development work had to be used to the maximum, loaded down with numerous devices being tested or developed. General Arnold put it this way in his letter to the Commanding General of the I Troop Carrier Command: "Every airplane in the United States which can be made capable of combat operations must pay its way."⁶⁹

→ The 13-Week Training Cycle.*

The DTC-CAMA training cycle began with four weeks of individual and small unit training, special attention being devoted to junior leadership and battle conditioning. Individual training was of an advanced type. Individual weapons were used, but under combat conditions. The war having showed the necessity for units to operate under all conditions of terrain and weather at night, night operations were made habitual for → infantry. Mines were laid by all personnel of combat branches, and all personnel engaged in detection and removal of mines. Exact performance was demanded in duties affecting the security of the command. Men were instructed to dig in, even if stopped momentarily. Individual and field sanitation were carried on and food was prepared by individual and group cooking.

In order to toughen officers and men mentally and physically and to imbue them with the desire to close with the enemy and to destroy him, training included rough-and-tumble fighting, games and exercises involving physical combat, normal exertion over long periods, extreme exertion over short periods, battle conditioning exercises to accustom the men to the sound of bursting shells in their immediate vicinity and to the crack of small arms bullets passing near them.

Not only during the first four weeks but also throughout the entire training cycle, as might be feasible, effort was directed to teaching junior leaders to accept responsibility, to be self-reliant and to operate effectively "on their own." It was attempted to have every non-commissioned officer able successfully to lead a patrol over extended distances, unknown terrain, at night, and to infiltrate into the hostile positions and return with specific information. Night patrol problems were conducted over difficult terrain, with groups pitted against one another. Each platoon participated in a platoon leadership course.

The utmost realism was introduced. In at least one 24-hour exercise personnel were given no opportunity to snatch any sleep, had only limited quantities of food and water, and operated over difficult terrain at night. Measures such as these helped

* Except where otherwise noted, this section is based on the AGF letter 320.2/46(Desert)GNGCT, 6 Apr 43, subject: "Organization and Training." In 320.2/40(CAMA).

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weed out officers and men who could not stand the pace. From 23 July until the middle of September, Headquarters, Desert Training Center, processed seventy-one new cases officers found to be unsatisfactory. As General Haislip phrased it, "There is no doubt that the desert soon separates the men from the boys."⁷⁰

The free spaces in the DTC-CAMA made certain precautions necessary. Thus, instructions were issued by the 90th Infantry Division headquarters that platoon leaders were to be instructed to halt their platoon in place when it became apparent that they were lost. During daylight hours, red and yellow panels were to be displayed to form a cross in order to identify the unit to searching aircraft. During darkness, ground signals would be fired.⁷¹

AAF officers watched the training of various organizations at the Center. Some of their observations were relayed to Headquarters, Desert Training Center, for whatever use it desired to make of them. Headquarters, Desert Training Center, brought these observations to the attention of the organizations concerned. To paraphrase some of these observations contained in one AGF letter:

79th Infantry Division:

1st Battalion of the 315th Infantry conducted carbine transition firing - excellent results; there was some confusion on the firing line.

The instruction given to Company "K" of the 315th Infantry on weapon emplacements (previously prepared) would have been more effective if actual weapons had been installed in the emplacements.

5th Tank Destroyer Group:

Reconnaissance Company of the 643d Tank Destroyer Battalion was conducting field training in a method of dead reckoning utilizing sketches to scale and the speedometers of the vehicles - the men appeared to know how to prepare and use the sketches; the company commander could not account for all of his men.

81st Infantry Division:

The training of Company "B" of the 323d Infantry in scouting and patrolling -- although ample training facilities appeared available, the training was conducted in an area in and adjacent to the camp; this restricted area caused the distances and intervals between members of the patrols to be too close and was causing patrols to interfere with each other.

→ During the fifth week attention shifted to the battalion. Combat firing exercises were held, in at least one of which the complete battalion with all weapons participated with coordinated fire. Targets represented the enemy as realistically as possible. The problems were conducted so as to require action by reconnaissance and intelligence agencies to locate the targets.

The firing exercise of Company "I" of the 315th Infantry, 79th Infantry Division, observed by officers of the Army Ground Forces, illustrates this phase of training. The enemy was represented by soldiers on the objective who exposed targets and shot blanks from deep foxholes; this provided realism for the attacking company and superb battle indoctrination for the soldiers occupying the foxholes. The only control exercised over the company was that imposed by the battalion order, orders of the company commander and enemy action. The progress of the attack was slowed down to battlefield speed by enemy action. The initial orders for the attack by the company commander were

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voluminous and covered unessential details, and left insufficient time for subordinate commanders to issue orders. By energetic leadership the company managed to be only four minutes late in jumping off to the attack. The use of cover, effectiveness and control of fire, and fire and movement throughout the exercise were excellent. Order for the forward displacement of heavy machine guns in support of the attack were late. Officers from the Army Ground Forces did not notice any provision for contact with adjacent units.⁷³

In the sixth week battalion combat firing was carried on, and units supporting or attached to the battalion were now included.

The seventh week raised training to the level of the combat team or command. The combat team together with supporting combat and service units engaged in a field exercise lasting about four days and three nights.

During the eighth week one exercise was held against a represented or complete hostile force. In June 1943, for example, Combat Command "B" of the 7th Armored Division engaged in the combat command firing exercises. The command was composed of its headquarters, an armored regiment (which included a reconnaissance company), an armor field artillery battalion, a battalion of armored infantry regiment, an armored reconnaissance battalion, an engineer company, a medical company, a maintenance company and detachment trains as required. The trains were subject to mechanized attacks which they drove off with organic antitank guns. Twelve dive bombers and one reconnaissance plane provided air support.

The reconnaissance battalion and the reconnaissance company aggressively developed the hostile position by probing and reconnaissance by fire. Many of the vehicles made excellent use of cover and defilade, and in general they withdrew satisfactorily.

→ Infantry and engineers, under cover of air attack, artillery fire, and smoke, breached the mine fields. A "snake" was pushed forward by a tank and successfully breached a gap. Otherwise tanks remained out of range of light field artillery fire. The commanding general of the combat command directed that two passages be opened through the mine field, although in North Africa it was the practice to provide a minimum of three per battalion front. Tanks moved through these gaps in the mine field supported by air attack, artillery fire, and smoke. The infantry followed.⁷⁴

During the ninth week the division received attention. A field exercise of about four days and three nights was held by the division for the purpose of perfecting performance, step by step, of both combat and service functions, and developing standard operating procedure.

During the tenth week the division held a field exercise of about four days and three nights during which it engaged in a retirement that involved a defense in depth on a narrow front; a defense on a broad front, with combat teams abreast; a defense by the division across open, flat terrain; a defense through parallel corridors and defiles by semi-independent columns retiring on a common objective. Here full use was made of the desert's varied terrain.

Maneuvers

In the eleventh and twelfth and thirteenth weeks the cycle of training culminated in maneuvers. In the first of the two exercises composing the maneuvers a defending force, usually a reinforced division, selected and organized a position in detail for the purpose of protecting a vital area or installation. The fortifications included tank ditches and traps, road blocks and demolitions, mine fields and other obstacles.

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Since the construction of a complete position by a particular unit would have taken more time than was available, the position was built up successively by units as they passed through the DTC-CAMA, each unit involved constructing typical fortifications. The operations of the attacker were as complete and detailed as time permitted, including a rehearsal in the rear area of operations against simulated portions of the position before the actual attack was launched.

The second exercise consisted in a series of field maneuvers simulating a campaign of approximately eleven days and ten nights which tested the endurance of units and their ability to fight, and which tested the capability of administrative echelons to resupply units over great distances and to provide day-by-day maintenance, battlefield recovery, and evacuation of combat vehicles. Supply was played in all details. (An extended account of both exercises is contained in the second section of Appendix "X".)

Officers from Headquarters, Army Ground Forces, observed part of each maneuver and evaluated what they observed. Of the six visits of General McNair to the DTC-CAMA, four were during maneuvers. At times AGF officers were joined by observers from other headquarters, such as the Army Air Forces, the Army Service Forces, and the War Department.

Units often arrived before the cycle of training was scheduled to begin, others remained after its completion. The former concentrated on individual and small unit training and reduced to a minimum the existing deficiencies in basic training, marksmanship qualification and familiarization firing. Divisions completed the "Special Battle Course." Units remaining after maneuvers put weapons and equipment in good order and corrected deficiencies disclosed during the training cycle. To illustrate, the 77th Division's leadership, physical and disciplinary standards as observed during the maneuvers under the IX Corps, were considered unsatisfactory by the Army Ground Forces, and the division remained at the Center until the deficiencies were corrected.⁷⁶ On the other hand, the standard of training of the 33d Division warranted its early departure for a combat theater. It did not complete the 13-week cycle, but left in June before the maneuvers.⁷⁷

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CHAPTER VII

THE CLOSE

Decision

When shipments of service units overseas were increasing towards the end of 1943, conditions in the California-Arizona Maneuver Area became correspondingly worse with no promise of improvement. In December 1943, the need for service units was such that Operations and Planning Division considered the possibility of detaching them from divisions in training in the United States for immediate shipment overseas. General McNair therefore recommended to the War Department that the CAMA be closed. The 80th Division, the last of four divisions to complete its training in CAMA, would have done so by approximately the first of April 1944. Allowing for the necessary delay in movements, General McNair believed it possible to close the theater on or about 1 May 1944.¹

The War Department was receptive to the proposal for additional reasons also. The number of divisions remaining in the United States would progressively decline. Moreover, the anticipated commitment of tactical aviation would leave at a maximum only enough to support air-ground training in two maneuver areas concurrently. Of the two maneuver areas, one might possibly be a training theater of operations. The War Department called for a representative of the Commanding General of the Army Ground Forces, the Army Service Forces, and the Army Air Forces to confer on 12 January 1944 and to agree on the controlling elements of a general plan.²

The conference accepted the recommendation of Headquarters, Army Ground Forces. The CAMA was to be closed as rapidly as possible after 15 April 1944, and no theater of operations training area would be maintained thereafter. The Tennessee Maneuver Area would be discontinued as a maneuver area after March 1944. The West Virginia Maneuver Area would be discontinued after June 1944, except for one training assignment. The Louisiana Maneuver Area was to be continued, and the Carolina Maneuver Area was to be used in airborne training.³

The War Department formally announced to the Commanding General of the Army Ground Forces, the Army Air Forces, and the Army Service Forces that the CAMA was to be discontinued as a maneuver area on 15 April 1944 and was to cease internal operations as a training theater as of 1 May 1944. A relatively small number of troops was to be maintained in the CAMA to preserve its status as an army training area pending later decision as to its future utilization or disposition.⁴

Execution

In the latter part of January 1944, Headquarters, Army Ground Forces, communicated the decision of the War Department to the Commanding General of the CAMA.⁵ Conferences were held between officers from the Army Ground Forces and the Army Service Forces, and AGF officers attended conferences at the CAMA.⁶ What should be done, for example, about vehicles? About 27,000 vehicles were scattered throughout the area on 17 January 1944.⁷ Brig. Gen. J. W. Barnett of the War Department estimated about 12,000 of these to be in pools. About half of the pooled vehicles needed only first and second echelon maintenance; of the remaining 6,000, about 600 were beyond economical repair. So approximately 5,400 would require third or higher echelon maintenance. The limited space at the Pomona Ordnance Base permitted the storage of only about 5,500 vehicles, and about 4,500 vehicles were already there.⁸

The Commanding General of the Army Ground Forces was made responsible for the rehabilitation and evacuation of equipment in the CAMA. For fear of too greatly

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restricting the Commanding General of the CAMA, Headquarters, Army Ground Forces, instructed him only in general terms to repair, overhaul, and evacuate equipment in excess of that required. The Pomona Ordnance Base Depot and the Base General Depot would be turned over to the Commanding General of the Army Service Forces with such personnel as was stationed there and such stocks as might be on hand at the time agreed upon by the Commanding Generals of the Army Ground Forces and the Army Service Forces.⁹

The War Department's indecision over the possible future utilization of the desert area hampered Headquarters, CAMA. On 23 February, General Anderson asked the Chief of Staff of the Army Ground Forces for instructions as to the utilities he should take out of the camps being abandoned. General Walker, G-4, AGF, informed General Christiansen that the Commanding General of the Army Service Forces had stated he favored cleaning out the CAMA lock, stock and barrel. By tearing down buildings, except those at hospitals and at bases such as Pomona and Base General Depot, General Somervell estimated that the Army Service Forces would be able to retrieve approximately 35,000,000 feet of lumber needed for the boxing and crating of equipment going overseas. But the Army Service Forces could do nothing until the War Department reached a decision.¹⁰

Early in March 1944, G-3, War Department, expressed himself to be willing to have no camp sites retained. The closing was to be coordinated with the Army Service Forces, without whose advice General Anderson was to do nothing. This decision by the War Department permitted General Anderson, who was in touch with the Army Service Forces, to proceed more effectively.¹¹

He took steps and secured coordination with the Army Air Forces. Four army air fields were located within the CAMA, at Thermal, Rice, Shavers Summit, and Desert Center. Abandoning of AAF activities at these fields was not contemplated in the near future, and utility service to those fields was to be continued. Liaison was maintained with agents of the Army Air Forces until full control of the area was returned to the Army Service Forces.¹²

Headquarters, CAMA, drew up a plan which involved the following:

Personnel. Combat troops were to move from the area on completion of the 13-week training cycle. Service troops not on an alert status or more urgently required elsewhere were to remain in the area until no longer required. Units in an alert status were to be processed in the area and moved to a port until 1 April. Those with later dates were to be moved domestically after 1 March and were to be processed elsewhere. Details of the transfer of units and personnel to the Army Service Forces were to be coordinated with the Army Service Forces.

→ Material. As the troop strength diminished, depots in the combat zone were to be closed and stocks shipped to Base General Depot, Pomona Ordnance Base, or out of the area.

→ Installations. Camps were to be closed, tentage, stoves, and similarly movable items being shipped to the base depot. No steps were to be taken to dismantle permanent structures but camps were to be policed and placed in condition for subsequent occupation if the need arose. Pole lines were to be removed.

→ General Police. The entire area was to be policed for the purpose of recovery and disposition of any abandoned equipment and supplies, and for general clean-up purposes. This procedure was to devolve principally upon combat troops.

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➔ Location and Disposal of Unexploded Shells. Consideration was to be given to the location and disposal of unexploded shells. It was recognized that practically the entire maneuver area had been used for firing during a period of approximately one-and-a-half years. In a majority of cases no record were available detailing areas in which firing had actually been conducted. The training requirements and preparations for movement of troops prevented any extensive use of troops to search for duds. Headquarters and Headquarters Battery of the X Corps Artillery was to police the Iron Mountain Range.

Fortified Area, Palen Pass. The task of restoring this area to its original condition exceeded the capabilities of the troops available, so it was to be left as it was and marked by appropriate signs. Materials of various types which had not been incorporated into the position were to be collected and disposed of.

➔ A high priority was given to the sorting and classification of material in the base depots, and service troops were made available for this work. They were aided between 4 February and 14 March by approximately thirteen hundred Italian Prisoners of War.¹³

By 7 March 1944, General Anderson was able to inform General McNair that everything was running according to schedule with the single exception of getting troops out of the area.¹⁴ Heavy demands on the Southern Pacific, which carried the bulk of traffic from the desert, limited the movement to about three trains daily. The fact that units moved with full, and sometimes extra, equipment created a considerable demand for cars.¹⁵

By the beginning of April the number of troops in the area had been reduced to approximately 35,000. All divisions had departed from the area except the 80th Infantry Division, and it cleared on 5 April. Seven principal camps, two general hospitals, and three principal supply installations were evacuated. Plans for disposition of personnel not in tabular units had been put into effect, and approximately 250 men were being processed weekly through the replacement training depot which checked to see if they were qualified for overseas duty. Conferences with local government representatives were held for the purpose of discussing road damage and measures to be taken. Investigations were conducted on reports of alleged destruction or misappropriation of government property, the majority of which were proved to be groundless.

➔ By 15 April, all camps and installations were evacuated except Camp Young, headquarters of the communication zone, the Base General Depot and the Pomona Ordnance Base.¹⁶

Lt. Col. Rolf Dallmer of the Fourth Army had previously been directed by the Commanding General, Army Ground Forces, to survey the Army fixed-wire plant in the CAMA. His report, written in January 1944, was intended to indicate possible economies in the wire plant, but instead served as an aid in its dismantling.¹⁷ The Army open-wire plant in the CAMA consisted of 659.35 line miles of a total of 6655.1 wire miles. At the request of the Commanding General, Ninth Service Command, 827.4 wire miles were left in place to serve installations to be operated by the personnel of the Service Command after the closing of the simulated theater. The remainder, a total of 5827.7 wire miles, was removed and the salvaged equipment shipped in accordance with instructions received through representatives of the Army Service Forces. All commercial contracts were terminated except those required for operation by the Ninth Service Command.¹⁸

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The Headquarters and Headquarters Detachments, Special Troops, were inactivated, except the 4th, which was transferred to Fort Riley and assigned to the Second Army.¹⁹ Records of the Headquarters of Special Troops were turned over to headquarters of the communication zone.

Base General Depot and Pomona Ordnance Base retained records pertaining to their respective headquarters. Records pertaining to Headquarters, CAMA, and headquarters, communications zone, were turned over intact in their file cabinets to the Ninth Service Command Liaison Detachment, CAMA, at San Bernardino, California. Records pertaining to the various staff sections, such as Signal, Engineer, Finance, were turned over to the corresponding staff officers of the Liaison Detachment. Records of the CAMA Post Exchange were turned over to the Ninth Service Command Liaison Exchange representative.²⁰

Authority was obtained to ship surplus maps, plates, and negatives to the Army Map Service, San Antonio, Texas. Over 400,000 copies of maps were finally shipped.²¹

Some concept of the magnitude of the task may be grasped from a few figures:

→ Between 17 January and 15 April 1945, the following ordnance materiel had been turned in to the zone of interior:

1,239	pieces of artillery
43,708	small-arms weapons
6,110	tons of serviceable parts (automotive and weapons)
3,830	tons of reclaimable parts
989	tons of scrap
13,604	vehicles 22

Of the 27,000 vehicles in the CAMA on 17 January, all were evacuated from the CAMA except 1,238 which were turned over to the Ninth Service Command. Of these, 300 were in the hands of troops, 536 were on Memorandum Receipts, and 402 were pooled. All of the pooled vehicles had been given technical inspections and 266 were ready for issue.²³

Within the capabilities of the troops available, work on the location and destruction of duds was carried out in the Iron Mountain impact area. Two hundred eight duds were located and destroyed. In the records a map was included of the known impact areas throughout the CAMA for the information and guidance of the Army Service Forces.

By the end of April all camps east of San Geronio Pass, that is, in the entire combat zone and a portion of the communications zone, had been evacuated of personnel, supplies, and readily removable property. At the request of the Ninth Service Command and by agreement with the District Engineer, Pacific Division, six division camps were released through the Commanding General, Ninth Service Command, to the District Engineer for disposal. Two temporary nondivisional camps were completely dismantled by CAMA troops. The remaining installations and camps, including those not declared surplus, were turned over under guard to the Ninth Service Command on 30 April 1944.²⁴

The certificates of audit for Class I, II, and IV Quartermaster Section accounts at Base General Depot indicated many errors and discrepancies. The discrepancies were adjusted prior to the completion of the audit.²⁵

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Four hundred fourteen units, with a total strength of approximately 130,000, were moved from the area, turned over to the Army Service Forces, or disbanded.

Equipment processed at Base General Depot included among much else approximately 100,000 tents, 400,000 cots, and 300,000 gasoline cans; among other shipments from the depot were included about 45 tons of scrap rubber, 90 tons of rags, 90 tons of tin cans, and 100 tons of assorted metal.

The status of all personnel remaining in the area had been established and the necessary records transmitted to the service command.²⁶

Officers from Headquarters, Army Ground Forces, inspected the CAMA during the final period and found the general appearance of the entire area to be excellent. All highways, tracks, and trails had been policed to a condition probably better than had existed before Army use of the area. The officers from Army Ground Forces declared the performance of Major General Anderson, Colonel Edmunds, and their respective staffs to be superior. Since the results could have been serious if the evacuation had not been carried out as efficiently, they recommended the Distinguished Service Medal for General Anderson, the Legion of Merit Medal for Col. James B. Edmunds (Colonel Hughes of Army Ground Forces not concurring), and three other officers Headquarters, Army Ground Forces, made formal recommendation but The Adjutant General did not consider their duties to have been such as to warrant the awards.²⁷

When Maj. Gen. D. McCoach, Commanding General, Ninth Service Command, had first seen the extent of work that would be necessary to clear material from the maneuver area, he had not believed that the evacuation could be as nearly completed as it was toward the end of April. He stated that finishing the job would be an easy task and he expressed his appreciation for what General Anderson had accomplished.²⁸

At midnight of 30 April - 1 May 1944, General Anderson relinquished command and turned over responsibility for the CAMA to the Commanding General, Ninth Service Command, the representative of the Commanding General, Army Service Forces.²⁹ The allotment of personnel by Headquarters, Army Ground Forces, to the CAMA personnel were transferred to the control of the Commanding General, Ninth Service Command, for a short period.³⁰

The first simulated theater of operations in the United States was at an end.

* * * *

Assistant to the State Supervisor

September 20, 1956

Acting Chief, Status Unit, Los Angeles Land Office

Conference regarding Public Lands Contamination by Explosives -
California-Arizona Maneuver Area - 9:00 to 10:30 September 19, 1956

Presents: Mr. E. J. Palmer, Assistant to the State Supervisor
Mr. R. Sporkeder, Officer in Charge of Southern Field Group
Mr. F. J. Corbett, Acting Chief, Status Division, LALO
Mr. John Houston, Chief, Management and Disposal Branch,
Real Estate Division, Corps of Engineers, U. S. Army,
Los Angeles

Mr. Houston gave the following brief history:

The southeastern part of Southern California and the southwestern part of Arizona were taken over in 1942 by General Patton as training grounds prior to the North African invasion. The precise limits of the area, designated as the California-Arizona Maneuver Area, are not of record, but the limits have been fixed by approximation. (See Corps of Engineers, USA, Drawing No. 16-13-01 approved October 1951.) Where explosives are used, it is customary to have maps showing the impact areas, but General Patton kept no records of the impact areas in the California-Arizona Maneuver Area. The Corps of Engineers was given the task in 1948 of sending dedudding teams into the field searching the area. Since 1948, it is believed that all of the impact areas have been "pretty well located". No dedudding team is in the field now; and since May of 1954, only twice has a dedudding team been out to search the area. The Corps of Engineers have taken precautionary steps by posting signs along the road which abut contaminated areas; by notifying the owners of private lands, and by filing affidavits in the County Records attesting the areas that have been cleared for all use and those that have been cleared for surface use only. The Corps of Engineers has knowledge of only one fatality and one injury in the contaminated areas. Eight private land owners have filed claims against the Government for a total of \$130,000.00. Seven of the claims were filed by landowners south of the Danby Area and one claim was filed by a landowner west of the town of Frieda. Mr. Houston believes that these claims were filed when the landholders became cognizant that their lands had been contaminated. It is the intent of the Corps of Engineers to search the County Records in order to ascertain the landowners in the maneuver area so as to apprise them of the hazards in the contaminated areas.

Mr. Palmer told Mr. Houston that our concern was for entries on the Public Lands; that 337 townships were involved; and that we were concerned about the allowance of entries in the contaminated areas.

Mr. Houston stated that the known contaminated areas were colored red on his map and that entries in such lands were hazardous.

Mr. Palmer referred to the map and ascertained that all the areas shaded green had been cleared of all explosives, and therefore the land would be suitable for all purposes. Mr. Palmer, thereupon, inquired of the lands within the boundaries of the California-Arizona Maneuver Area that were not shaded or not otherwise shown as contaminated or dedudded.

Mr. Houston stated that no search for explosives had been conducted in such areas or if a search had been made, the search would have consisted of merely walking over the land to see if any unexploded ammunition lay on the ground.

Mr. Sporleder indicated the Chuckawalla Area on the map, and Mr. Houston stated that if the area is thought to be contaminated BLM could request a dedudding team to inspect the area. Mr. Houston stated that the cost of dedudding one acre of land averaged \$15,000.00 and that if shells are in the ground it would not pay to clear the area.

Ordinance experts consider that unexploded projectiles generally are not a menace after 25 years. Fourteen years have passed, so that the danger period can be from the present until 1967, according to Mr. Houston.

Mr. Palmer then asked Mr. Houston if the California-Arizona Maneuver Area had been publicized as dangerous. Mr. Houston replied that at the time of the maneuver there was a little publicity in local newspapers, but none since. However, the Corps of Engineers plans to search the County Records in order to warn the present owners of private lands in the maneuver area.

Mr. Palmer inquired whether the Corps of Engineers had any contact with BLM in Arizona on the contaminated lands within that State. The reply was in negative.

Mr. Palmer put the following questions to Mr. Houston:

1. Can you give us clearance on all areas but those in red on the map?

Answer: No. Clearance can be given only on the areas in green on the map.

2. Can you give us the known contaminated areas by legal description, that is, to the section within the affected townships?

Answer: Yes.

3. Can you give us a letter showing the white areas on the map as not searched; a clearance statement on the green areas; a legal description of hazardous areas, giving the hazardous No. 1 priority?

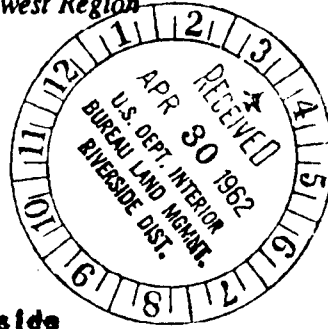
Answer: Yes, I will send a letter to you. Also, I will have a duplicate map made up for you.

4. Can you have an extra map and a similar letter for BLM
State Supervisor in Arizona?

Answer: Yes.

Mr. Falmer concluded the conference, and Mr. Houston estimated that he
would have the map and letter for us by September 30th.

F. J. CORBETT
Acting Chief, Status Unit



LOR

Director

ACTING
Manager, Land Office, Riverside

APR 27 1962

Contamination of Land by Defense Agencies (6.03b)

The following is in answer to your Memorandum, Instruction No. L&R-6:

1. Present withdrawals (some in process of restoration or amendment) are as follows:

<u>Name</u>	<u>Acres</u>
Inyokern	306,555.32
Mojave B and C	174,000.00
Chocolate Mountain	228,319.62
George Air Force Base	7,545.00
Pondleton	80.87
Irwin	645,282.72
El Centro	30,701.50
Twenty Nine Palms	443,000.00
Elliott	2,594.86
Muroc	564.46
Edwards	156,473.13
Carrizo Impact	10,325.24
	<u>2,005,443.52</u>

2. There appear to be no outstanding Special Land Use Permits to the Department of Defense. One Free Use Permit, covering 160 acres, is still operative.

3. Portions of the southeastern part of California were taken over in 1942 by Gen. Patton, as training grounds prior to the North Africa Invasion. The precise limits of the area are not known but have been set by approximation. Where explosives are used it is customary to have maps showing impact areas, but as far as we know Gen. Patton kept no record of the impact areas in the southern California area.

By approximation and with the aid of the Army Engineers, figures were set up in the following-listed areas:

Reproduced from the holdings of the National Archives
Pacific Southwest Region

<u>Name</u>	<u>Total Area</u>	<u>De-dudded, Clear for all uses</u>	<u>Inspected and/or de-dudded and restricted to surface use only</u>
Midway	92,160	92,160	
Camp Wiley	5,760	5,760	
Camp Granite	46,080		46,080
" "			
Sand Dunes	7,680		7,680
5th Artillery	46,080		46,080
Vidal	2,560	2,560	
Whippie Mts	69,120		69,120
Needles Div.	70,640	11,520	59,120
Ibis	80,640	11,520	69,120
Plute Artillery	46,080		46,080
Essex	103,680	34,560	69,120
Cadiz	55,040	11,520	43,520
Iron Mt	30,600	23,040	7,560
Shoop Hole			
Mts	7,680	3,840	3,840
Coxcomb	40,840	26,080	14,560
Desert Center	23,040		23,040
Young	46,080	23,040	23,040
Chuckawalla			
Maneuver	11,520	11,520	
Iron Mt Div	166,480	86,200	80,640
Sand Hills	46,080	*	*
Victorville	1,920	1,920	
Wiley Wells	26,400	26,400	
Gavilan	1,312	1,312	
	<u>1,027,272</u>	<u>372,592</u>	<u>608,600</u>
			* <u>46,080</u>
			654,680

* The extent of contamination is not known.

Note: Contaminated areas are flagged conspicuously at frequent intervals.

cc: State Director
Manager, LO
Manager, Riverside DO ✓
" Bakersfield

Oliver J. Johnson

, except for one company of artillery, was withdrawn and the post then became a subdepot, maintained primarily to provide supplies to Fort Gaston. Department commander Brigadier General Irvin McDowell reported on September 14, 1867, that the company of artillery had been withdrawn and the post completely abandoned (one historical chronologist reports abandonment took place in 1866, in accordance with Special Order No. 243, Department of California). On April 6, 1870, the military reservation, now a state historic monument, was transferred to the Department of the Interior. The post hospital, completely renovated, was moved a short distance from its original site. Also still standing is the restored building which formerly housed the commissary's headquarters, now a museum.

FORT HUNTER LIGGETT (*Hunter Liggett Military Reservation*). Occupying land purchased by the Army from the William Randolph Hearst estate in late 1940 for World War II troop training, 164,000-acre Fort Hunter Liggett is adjacent to the town of Jolon, the site of the old Mission of San Antonio de Padua founded in 1771 by Father Junipero Serra. The fort is located halfway between San Francisco and Santa Barbara, and about 60 miles south of Fort Ord, of which it is a subpost. The post functions as a 7th Division maneuver area and a field laboratory of the Combat Development Experimentation Center (CDEC). Originally designated the Hunter Liggett Military Reservation, it was named in honor of Lieutenant General Hunter Liggett, who served during the Spanish-American War, and was chief of staff for General Pershing during World War I. In 1975 the reservation was redesignated a fort and was further developed for its present uses. The fort's main area, nestled in the San Antonio River Valley, is centered around an imposing structure called the Hacienda, built in the 1920s as headquarters for the Hearst ranch. Today it serves as an officers' club and guest quarters.

HUNTER LIGGETT MILITARY RESERVATION. FORT HUNTER LIGGETT.

FORT IAQUA (*Camp Jaqua*). The fort was established primarily as a Civil War post on August 5, 1863, on the travel route between Fort Humboldt and Fort Gaston, and its garrison attempted to reconcile differences between the area's settlers and Indians without significant success. The fort was reportedly situated on Yeager (Iaqua) Creek, about 18 miles east of the mouth

of the Eel River, in Humboldt County. The post was abandoned on August 9, 1866.

CAMP IBIS. One of the temporary World War II camps forming the Desert Training Center, known after October 20, 1943, as the California-Arizona Maneuver Area, it was discontinued on April 30, 1944. Camp Ibis was constructed during the period of November 8, 1942-March 28, 1943. The 4th Armored Division, under Major General John S. Wood, was at Camp Ibis until June 1943, when its place was taken by the 9th Armored Division, commanded by Major General John W. Leonard. Most of the troops trained at Camp Ibis in desert survival, gunnery, and armored vehicle tactics were destined to join General George S. Patton's European command, far from a desert battlefield. The post was located near Needles, close to the point where the borders of California, Arizona, and Nevada meet.

CAMP INDEPENDENCE. FORT YUMA.

CAMP INDEPENDENCE. Situated in Inyo County on the north side of Oak Creek, about three miles from the town of Independence, in the Owens River Valley, on the eastern slope of the Sierra Nevadas, the post was established by Lieutenant Colonel George S. Evans, 2nd California Cavalry, on July 4, 1862. Never officially designated a fort, it was established to provide protection for the area's miners, who were troubled by Indian marauders. Temporarily abandoned in 1864, it was reoccupied in March 1865, due to renewed Indian depredations. The post was finally abandoned on July 5, 1877. The military reservation was transferred to the Interior Department for disposition on July 22, 1884. The building which served as the commanding officer's quarters was moved from its original site to its new setting on Edwards Street in Independence.

CAMP NEAR IONE CITY. CAMP JACKSON.

CAMP IRON MOUNTAIN. A World War II installation, one of a number established during the 1942-44 period, it was located in the Desert Training Maneuver Area, just north of Camp Granite, almost halfway between Indio and the Colorado River, south of Needles.

CAMP IRWIN. FORT IRWIN.

FORT IRWIN (*Mojave Antiaircraft Range [MAAR]; Camp Irwin*). Situated in the Mojave Desert, San Bernardino County, Fort Irwin is lo-

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HEADQUARTERS DESERT TRAINING CENTER
Camp Young, Indio, California

March 20, 1943

SUBJECT; Final Report D.T.C. Maneuvers

TO : Commanding General, A.G.F., Army War
College, Washington, D.C.

1. Transmitted herewith is a final report for the Desert Training Center Maneuvers, conducted during the period February 15, to March 6, 1943.

2. These maneuvers were conducted under the new D.T.C. Training Theater of Operations organization. A short description of the Organization and Functioning of this training theater is included in Section I of the report.

/s/ WALTON H. WALKER
/t/ WALTON H. WALKER
Major General
Commanding

DECLASSIFIED

Authority NND 770072
BY ERC DATE 4/26/84

SECTION II

GENERAL CONCEPTS OF THE MANEUVERS

The D.T.C. Maneuvers directed by letter Headquarters Army Ground Forces Subject: "Organization and training Desert Training Center", November 18, 1942, conducted between February 14 and March 6, 1943, had as their primary object the attainment as nearly as possible of actual battle conditions. They were intended to force troops to live, move and fight under the same conditions which they would encounter in combat.

The exercises were designed to extend personnel and equipment to the limit of their capabilities so that from this experience units and individuals would develop complete confidence in their ability to extend themselves to that limit in battle.

Paved roads were off limits to participating troops, and certain restrictions in crossing railroads and the aqueduct were obligatory, but in all other respects, maneuver was free and controlled only by the tactical situation.

There were no assumed demolitions or obstacles; restrictions were not placed upon their execution and the effect was real. Demolitions were executed in several instances to destroy passes through mountains and block other defiles, causing advancing units to remove many obstacles. Roads were built by units to facilitate their advance and destroyed to hinder the opposing forces.

→ Tear gas was sprayed from the air and otherwise used as opposing commanders directed to the extent available. Three thousand smoke pots were used for screening operations and marking artillery fires. Land mines were extensively used and it was demonstrated that all units had been trained in the laying of mine fields and in their removal. More than 20,000 mines were buried by a division during one exercise.

Available aviation included one observation group and one dive bombardment group, both at reduced strength. In two exercises it was divided equally between the two forces. In exercise "C" the blue force was given all available observation aviation while the red force was supported by the entire bombardment group. The IV Air Support Command exercised command over all air units and acted as Air Director Headquarters. Air support parties were furnished to all divisions and in some instances down to and including combat commands and combat teams. Control was exercised both by the Corps and by allotment to divisions.

→ Artillery fires were marked by the use of lime bombs and smoke and in some instances by the use of explosives. Lime bombs were also used to indicate gun positions. Fire power was credited in accordance with the umpire manual and gun crews were required to be present and operating their pieces. The play of ammunition supply was carefully checked by umpires and no credit was allowed for fire power where units failed to deliver represented ammunition to the guns.

Two of the three divisions used vehicular or group cooking almost entirely. The C ration was extensively used by small parties and reconnaissance elements.

SECTION IV

Purpose: Exercise "B" was intended to give defending units practice in actually organizing and constructing a defensive position in detail including tank ditches, mine fields, wire entanglements, and similar obstacles, and to require the attacking units to first rehearse an attack against this position, then attack with artillery and infantry leading, followed by tanks.

Initial Situation: The Blue Motorized Division, assumed to be a part of a larger force, was directed to organize and defend a sector with secure flanks 8000 yards in width. Blue Tank and Tank Destroyer Groups remained in concealed locations and prepared plans to meet probable Red attacks. Two Red armored divisions, which had recently arrived in the area, reinforced an assumed Red force which was in contact with Blue. An attack to penetrate the Blue position was delayed due to non arrival of ammunition.

Action: Pending the arrival of ammunition the Red divisions rehearsed attacks against outlined replicas of the Blue positions. Information of Blue positions was furnished by aerial photograph prepared by Corps Topographic troops in the field and by engineer reconnaissance.

When ammunition supply was assured Red attacked to breach the Blue position and exploit. One armored division reinforced with all the artillery and one third the infantry of the other division breached the enemy position, then the second armored division passed through the first.

The collapse of assumed Blue forces on one flank had forced the motorized division to withdraw to a second position prior to Red's attack. When the exercise ended, Red had developed and was preparing to attack Blue's second position. Blue tanks and tank destroyers units were poised for a counterattack.

Comments: As was realized when this exercise was prepared, an additional Red infantry division, and an artillery brigade would have been required to actually justify Red's attack against Blue's strong position. The greatest value of this exercise was the cooperation and coordination required between Red divisions for the execution of an attack against an organized position, followed by a passage of lines. Blue benefited by the actual construction of an organized defensive position, including type obstacles and demolitions of all kinds.

→ Blue buried and later recovered 20,000 mines. Again deficiencies in liaison and communications were noted in some units. Aviation was much more effectively employed than in the preceding exercise.

SECTION V

Exercise "C"

Purpose: The purpose of Exercise "C" was to test and develop the ability of the IV Armored Corps to maneuver, fight, and supply itself under desert conditions with long lines of supply.

Initial Situation: Headquarters IV Armored Corps which had operated as Director Headquarters during Exercise "A" and "B" took the field as Blue Corps Headquarters in Exercise "C". Umpires exercised the only control used.

The Blue Armored Corps, consisting of two armored divisions (less one combat command), one motorized division, one AA Group (Automatic Weapon) one mechanized cavalry regiment, and an Observation Aviation Group was completing concentration south of highway 60-70. Mechanized cavalry protected the concentration. Aviation operated from Yuma airfields. Supply was through Yuma and Niland.

The Red force consisting of a composite force of a combat command from an armored division, a tank group, a tank destroyer group, an engineer detachment was north of Parker Dam Highway. It was supported by a Dive Bombardment Group operating from the Needles airfield. Red forces were not required to observe maneuver restrictions. Umpires acted as Red observation aviation.

Action: The IV Blue Armored Corps received a mission requiring it to move north to destroy a red force concentrating in the vicinity of Searchlight. Red was given the mission of delaying Blue's advance.

Blue moved north in wedge formation, the motorized division leading. The mechanized cavalry reconnoitered in advance of the Corps. The advance was controlled by boundaries and phase lines. It continued until at the end of the second day Red's dispositions and strength had been determined. Blue then initiated an attack to destroy the Red force, to facilitate the advance on Searchlight. The exercise ended at dark the third day, when Red's destruction was assured, and orders for continuation of the advance on Searchlight had been issued.

Comments: At the end of the exercise the fuel supply situation for Blue was critical and continuation of the advance would have resulted in immobilizing the Blue force.

The Corps Command Post was located well in rear of the divisions at the start of the exercise resulting in long lines of communications over difficult terrain. This conditions made the use of wire and messenger communications uncertain and placed a strain on radio communications. This exercise brought out the necessity for Corps command posts being located well forward close behind the divisions. Liaison officers were invaluable, but the long distances they were required to travel, limited their effectiveness.

TRAINING MEMORANDUM) *V.1*
NUMBER 27)

U. S. Army
HQ DESERT TRAINING CENTER,
Camp Young, California, / 5
19 July, 1943. *Arthur*

TRAINING, D.T.C. PERIOD BEGINNING 19 July, 1943.

- Section I Re-issuance.
- Section II Combat Units.
- Section III Program - Combat Units.
- Section IV Program - Service Units.

353.01

SECTION I RECISSION.

1. Training Memorandum No. 17, 1 April, 1943 is hereby rescinded.

SECTION II PERIOD BEGINNING 19 July.
COMBAT UNITS

2. Divisions will start training cycles as follows:

9th Armored Division -----	19 July, 1943.
85th Infantry Division -----	19 July, 1943.
93rd Infantry Division -----	16 Aug, 1943.
81st Infantry Division -----	16 Aug, 1943.
79th Infantry Division -----	13 Sept, 1943.
90th Infantry Division -----	13 Sept, 1943.
16th Field Artillery Brigade ----	13 Sept, 1943.

- a. Pursue the program of Desert Training prescribed in Section III.
- b. Deficiencies in MTP individual and small unit training will be corrected concurrently with this training program.
- c. Attachments and supporting missions will be assigned appropriate non-divisional units by this headquarters to provide for combined training.
- d. Attached units will follow the program prescribed for the unit to which attached modified only to fit the particular type of attached unit.

3. Non-divisional units not attached will pursue the program of training prescribed by Section III, modified only as necessary to adapt it to the special type of unit concerned.

4. All combat units will cover all elements of training prescribed in Section III for the 1st - 4th week in individual and small unit training in the most thorough manner. Careful supervision of training performed during this period in particular will be given by all echelons of command.

SECTION III THIRTEEN WEEKS TRAINING PROGRAM.

5. Extract AGF letter, 320.2/46 (Desert)-GNGCT, (11-18-42), April 6, 1943, subject: "Organization and Training, Desert Training Center".

- "4. Purpose. a. To train, maintain, and supply troops realistically as in a theater of operations.
- b. To harden troops physically.
 - c. To train soldiers mentally for the shock of battle.
 - d. To conduct firing under realistic battle conditions.
 - e. To develop tactics, technique, and training methods suitable for desert warfare.
 - f. To test and develop equipment and supplies.

"5. Subjects of Training. Special attention will be given to:
a. Movement across country; navigation. Highways will be placed off-limits, **F-9**
except at defiles.

and liaison.

#11. QUARTERMASTER UNITS:

a. Units which have completed training prescribed in MTP 10-1 will stress unit and individual specialist training emphasizing the technical functions of individuals. The training objective will be the development of units capable of providing quartermaster service for combat units.

b. Maximum advantage will be taken of all permanent installations at stations to secure technical training for individual specialists. Where mobile equipment has been furnished, field installations will be set up to augment permanent quartermaster facilities.

#12. SIGNAL UNITS:

a. Units which have completed the training prescribed in MTP 11-1 will continue training according to principles outlined in TM 11-450. Emphasis will be placed on the following:

(1) Training of wire teams. Proficiency will be acquired in laying wire in open country, woods, and across streams. Wherever practical, wire lines should be laid so as to be a minimum of 100 yards from roads.

(2) Training of radio teams in procedure to be followed in the event of jamming. Reference Training Circular No. 58, War Department, August 22, 1942.

(3) Command post exercises employing communication personnel and equipment at reduced and normal distances. Arrangements should be made for participation of sufficient staff personnel in order to develop teamwork.

(4) Training in air-ground communication.

b. Communication exercises will include periods of radio silence and will simulate enemy neutralization of radio and wire channels.

c. The maintenance and repair of communication equipment will be performed by Signal Corps units of the Army Ground Forces to the limit of their capabilities.

#13. CHEMICAL WARFARE UNITS:

a. Mobilization Training Programs are prescribed for Chemical Warfare Units as follows:

Chemical Weapons Battalions - 3-1

Chemical Service Units - 3-2

b. Unit training will be for eleven weeks and will include tactical training and a review of special technical training. Emphasis will be placed on the practical use of special equipment.

(1) Chemical weapons battalions will perfect the tactical training the platoon, company, and battalion. Platoon training will stress support operations. In all operations, special attention will be given to communications and liaison with the support.

(2) Chemical depot and chemical maintenance companies will establish separate chemical warfare depots and maintenance facilities in the field. In no large units of combat troops are located in the training area, operations will be represented with salvaged and simulated materials.

(3) Chemical decontamination companies will stress all types of decontamination operations in field exercises, using simulated materials.

(4) Chemical laboratory companies will install and operate laboratories. Training will be given in collection of samples in the field, determination of contents, examination of materials, and the preparation of laboratory records and reports.

d. Additional training time will be utilized in review."

*** *****

13. REPORTS:

a. All service units will submit weekly training schedules to the next higher headquarters.

b. Each Special Hq., DTC and Hq Communications Zone will maintain current files of "Status Reports" on service units under its control.

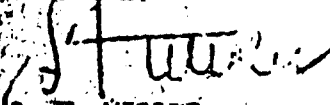
c. A "Status Report" will be made on each unit immediately after its arrival in DTC. Changes in "Status" will be determined by inspections made monthly or more often if necessary.

d. Three copies of the original "Status Report" and each change in "Status" will be submitted to this headquarters.

By command of Major General WHITE:

JOHN C. WYETH,
Colonel, G.S.C.,
Chief of Staff.

OFFICIAL:



S. W. MILLER,
Colonel, A.G.D.,
Adjutant General.

DISTRIBUTION: "B" (G-3).

2 Incl: Sketch (reverse side).

353rd Cml. Depot Co - Moving Orders, ARZ.
 374th Cml. Depot Co - Move to Camp Roberts,
 California upon receipt of orders from AOF.
 194th Cml. Depot Co - Has a telephone date of 15
 March 1944 but will remain until 1 April 1944 as per
 order in telephone conversation with AOF.
CWS Evacuation

W. H. BISHOP
 1944
 1944
 1944

ACofS, B-4 The following is submitted as plan for CWS evacuation:

It is recommended that:

1. Army Cml Depots #1 and #2 ship excesses to Chemical Depot, B. G. D., San Bernardino, each day by motor transport or other available means.
2. Combat units draw chemical shortages by requisition on Chemical Depot #1 and Chemical Depot #2 and turn in all salvage and repair before 15 Mar 1944 so that they can be replaced immediately.
3. The Army Chemical Depot #1 will evacuate all stocks on hand at closing to Chemical Section, Coachella Depot (operated by Communication Zone). The
 → Army Chemical Depot #2 (Needles) will evacuate all stocks on hand at closing to the Chemical Section, B.G.D., San Bernardino, (also operated by Communication Zone).
- 4. Chemical Depot #1 at Yuma close 15 March 44. Chemical Depot #2 at Needles also close 15 March 44.
5. On 1 April 1944, Chemical Section, Coachella Calif, close and evacuate stock to B. G. D., San Bernardino.
6. Upon closing of the various forward depots, units remaining in C-AMA area will be served by direct application of requisitions upon the Chemical Section, B. G. D., San Bernardino, Calif.
7. The 191st Cml Depot Co be immediately removed from C-AMA. If this removal occurs prior to 15 March 1944, one platoon of the 194th Cml Depot Co is to be sent to operate Army Cml Depot #1, at Yuma.
8. Transportation for evacuation of depots to be furnished by motor transportation service.
9. One platoon 194th Cml. Depot Co be immediately removed to B. G. D. to assist in the operation of Chemical Section, B. G. D. and Coachella Depot. Also, if the 191st Cml Depot Co leaves Yuma, Ariz, prior to 15 March 1944, one platoon of the 194th Cml Depot Co be sent from Needles to Yuma to conduct Army Cml Depot #1. Upon closing Army Cml Depot #1 this platoon would move to B. G. D.
10. At the close of Army Cml. Depot #2, the portion of the 194th Cml. Depot Co. present rejoin balance of company at B. G. D., San Bernardino. The 194th Cml Dep Co can be released for movement of C-AMA, 1-15 April 1944.
11. In addition to the 191st and 194th Cml Cos.,
 See Reverse) the disposition of other Chemical Warfare units is

HEADQUARTERS, ARMY GROUND FORCES
CHIEF OF CHEMICAL SERVICE
ARMY GROUND FORCES
WASHINGTON, D.C.

1942 AUG 6 PM 2 17

August 4, 1942.

AUG 6 6 S

MEMORANDUM FOR Field Service Division, Office, Chief of Chemical Warfare Service, War Department, Washington, D. C. (Attn: Colonel Sillett).

Subject: Chemical Ammunition for Desert Training Center.

1. The Commanding General, Army Ground Forces has authorized the issue of the following listed chemical ammunition to the Desert Training Center, Indio, California:

Pot, smoke, HC, M1	400
Pot, tear gas, CN	500
Mine, land, chemical, empty, w/burster	100
Gas, tear solution, CHB, gallons	200

AW-1719

*Figures increased
Col. had to be
informed by
1st Lt.*

2. The above munitions are to be charged to the allowances of the Commanding General, Army Ground Forces. It is requested that the undersigned be informed when the shipment of these munitions has been effected.

Thomas G. Ford
THOMAS G. FORD,
Colonel, C.W.S.,
Ground Chemical Officer.

66-0WS
FILED
AUG 29 1942
22

MEMO FOR RECORD:

Paragraph 67, AR 775-10 which is now in the process of publication, authorizes the following chemical munitions for the Commanding General, Army Ground Forces:

Mine, land, chemical, empty, w/burster	15000
Pot, smoke, HC, M1	15000
Pot, tear gas, CN, M1	5000
Gas, tear solution, CHB, gallons	10000

*1919
8-11-42
412*

2



DESERT TRAINING CENTER California - Arizona Maneuver Area

PART II - SITES and RELICS

© 1988

by
Francis G. Blake
Fullerton, California

Forward

Over 43 years have drifted by since the close of the California - Arizona Maneuver Area. Choking dust no longer swirls around convoys of tanks and half-tracks. The canyons no longer echo the bark of cannon and mortar fire. GI's no longer suffer sweaty summer maneuvers or freezing winter bivouacs. American troops and Italian P.O.W.'s pulled the tent camps down soon after they were abandoned in early 1944. Salvaging everything, they left nothing. Or did they? When the army moved out, civilians moved in: scavengers, treasure hunters, historians, shooters, jeepers and politicians. After four decades of being picked over, could anything remain? Could anything but faded memories survive this long?

Yes, indeed! The camp roads and gravel paths are still there. Unit insignias, relief maps and foxholes are still there. Flying over the maneuver areas reveals miles upon miles of tank track marks. Walking through the campsites reveals numerous artifacts lost or discarded by men who are now of retirement age. Thanks to the climate, even delicate artifacts are found today: pages of a 1943 Los Angeles HERALD EXAMINER newspaper, a utility jacket sleeve with a 93rd Infantry Division shoulder patch, small glass ampuls of Mercurochrome and, the most delicate of all, ashes of a burned Dodge 1/2 ton truck parts book.

If someone were to ask me what is the most common artifact found at all these

places, I would immediately answer "bottle caps". There are thousands at every campsite. Next would be tin cans, razor blades and broken bottles. Among all this junk are the real souvenirs: uniform buttons, coins, dogtags, gun and auto parts, tent pegs and even an occasional whole Coca-Cola bottle. Canvas and webb material survive too. As you will see, administrative sites such as flag circle and battalions' headquarters are discernible by the fancier rockwork, insignias and/or small artifacts like ink pen tips, paperclips and thumb tacks.

➔ Rumors of buried equipment are rife in the desert. Tanks are the most common victim of these stories, but, except for some battered ones still on old target ranges, none have been found (and publically announced). The WHY of buried equipment has to do with, so it is said, a unit having too many of something on their T O and E list. An old gas station attendant in Needles, California, swears a pal of his took a backhoe to the site of Camp Ibis in the 1960's and dug up a case of Thompson submachine guns.

Unfortunately, all this activity within the old C.A.M.A has spooked environmentalists. They are pushing the federal government to make C.A.M.A. off limits to the only practical mode of transportation: the 4 wheel drive auto. The Bureau of Land Management, the agency with jurisdiction over most of the desert, is caught between those who want to use the desert and those who want to "save it for future generations." (Which one, we

wonder?) Sadly the BLM leans toward the save it side. It is far easier and cheaper to keep everyone out - except themselves of course - than to regulate limited use. If the BLM had the necessary budget, all the old campsites would be fenced off (one campsite already is) and helicopters would patrol the countryside. U.S. Senator Alan Cranston has joined the environmentalists and is trying to make a large chunk of the Eastern Mojave Desert into another national park. (Death Valley and Joshua Tree National Parks already consume much of the desert.) Presently however, the BLM is limited to posting areas as historical places where souvenir collecting is forbidden.

If man had ignored C.A.M.A. since 1944, the desert would have preserved it to nearly 1944 condition. But man has a way of changing nature faster than nature itself. Evidence of all eleven tent camps remain, but today's visitor would find it difficult to explore some of them. The site of Arizona's Camp Horn has been ploughed back into farm land. Camp Pilot Knob, in California near Yuma, has been mutilated almost beyond recognition by private landowners. Camp Young, C.A.M.A. headquarters, was picked squeaky clean by scavengers in the 1950's, badly eroded by flash floods and partially destroyed by a modern Interstate highway. Other camps, thankfully, such as Iron Mountain, have a wealth of interesting relics still in good condition. Most are still accessible too.

ARMY MOTORS

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..... continued next page



Chapel altar at the south end of Camp Iron Mountain in 1986. Same view as Army photo on page 23 of Army Motors #40. A St. Christopher medal was found here.



Chapel altar Northeast of flag circle, Camp Iron Mountain. Same view as Army photo on page 23 of Army Motors #40. Like the altar at the Southern end, all the crosses and inscriptions are missing.

→ Near most campsites, especially in canyons, are areas of small unit training sites such as rifle and grenade firing ranges, obstacle and driving courses. At some sites, grenade fragments are so plentiful, they can be shoveled into a bucket. Waste dumps accompany campsites and interesting bits of army life can be found there. Some dumps have been burned by the army, some not. It is disheartening to find a useful instrument gauge or taillamp damaged beyond repair.

The following text is a description of the camps and nearby points of interest as the author has found them during his explorations with Club members since 1983. Two members have been exceptionally helpful in this regard: Lino Milesi of Riverside and Mack Mitchell of Redlands, California. Photographs have been selected herein to show a characteristic or an unusual feature of each campsite. Some photos can be compared to the 1942-1944 Army photos printed in Part 1, C.A.M.A. history (ARMY MOTORS, issue No. 40, Spring,

1987). Those camps not yet visited are very briefly described in a following section using the words of Kennedy, Lynch and Wooley (see bibliography, Part 1). Finally, the Palen Pass maneuver area, the Freda Quartermaster supply depot and two army airfields are also described in a separate section because of their importance to C.A.M.A.

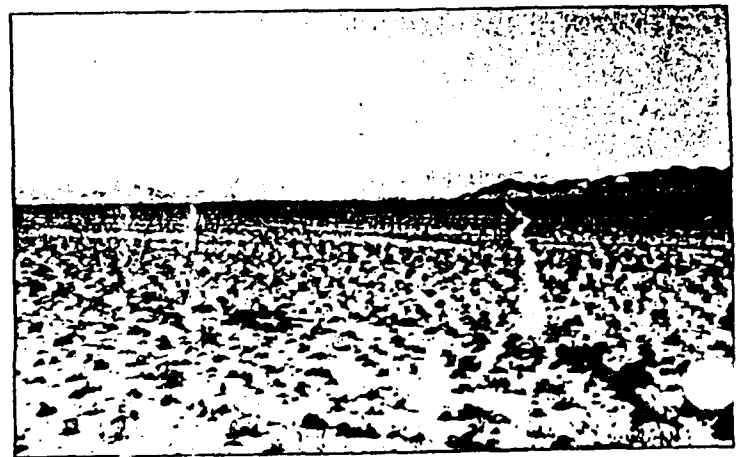
For the reader who is planning to explore C.A.M.A., words of warning are appropriate here: while most camps are not far from paved roads, today's visitor should take the precaution of using a 4 wheel drive auto. A 4x4 is not absolutely necessary, but it is a safe method of exploring the desert. Take a buddy and his 4x4 too. Be wary of BLM patrols. Be sure to carry ample drinking water (1 gallon per person per day at least). If high heat bothers you, stay out of the desert during May to September. One warning cannot be emphasized enough: there is still live ordnance in the desert. Artillery rounds, mortar bombs and live anti-tank land mines have been found in recent years. Leave the ordnance alone!

CAMP YOUNG, CALIFORNIA

Very little evidence remains of the most important camp. It was here Major General George Patton, Jr. commanded the Desert Training Center (later renamed California - Arizona Maneuver Area) in mid-1942 before he was ordered to North Africa. Old Highway 60/70 skirted the southern edge of the camp back then. Now interstate 10 passes through the campsite. Construction of it and a gas pipeline destroyed the southern half of Young. Flash flood erosion, funneled by gaps in the Colorado River aqueduct, has partially destroyed the northern half. Some camp roads are still present especially the paved ones, but all are badly eroded with large sections entirely missing. Flag circle, the administrative center of every camp, was found with great difficulty. Only meager rockwork (rock lined paths and roads) is to be found. A few pieces of concrete foundations lie scattered about. Abrupt changes in the density and color of desert vegetation marks the old boundaries of an often used area such as a



King's Throne, a 100 foot hill used by Major General Patton to observe tank maneuvers in 1942.



View to the North from King's Throne. Camp Young is behind the hills at the left.

F-12.. continued next page



Lino Milesi at a Camp Granite baking oven made of cement and rock around a metal box.



413th Infantry Regiment shield insignia with a Latin motto at Camp Granite. The meaning of the letters at the top are unknown.

throughout this area. A short distance to the north of Camp Iron Mountain, is the village of Iron Mountain. It is a pump station for the Metropolitan Water District's Colorado River aqueduct, which was the main source of water for all the camps in this area.

CAMP CLIPPER, CALIFORNIA

Another camp partially destroyed by an interstate, Clipper has been gored through its middle by progress. Flag circle is within a stone's throw of speeding cars. Also known as Camp Essex (for the nearby village named Essex), Clipper was occupied by the 93rd Infantry, a "colored" division that later went to the South Pacific. Rockwork and insignias are only fair here but artifacts abound. Considering its nearness to a civilian town on old Route 66, the quantity of items still remaining is very puzzling. Not only are auto parts common, but also personal gear, gun parts and whole bottles. Due to erosion and fences (interstate and private), camp roads are not

easy to follow. The only remaining permanent structure is an empty 500,000 gallon reservoir set into the ground. Camp access is easy since the southwest corner touches the Mitchell Caverns - Essex paved road.

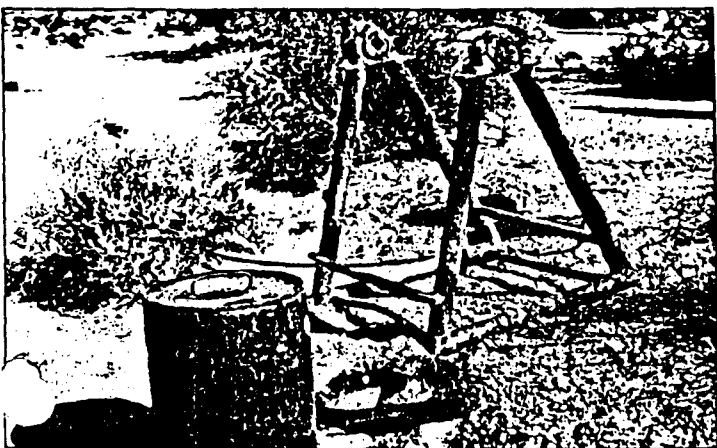
→ CAMP IBIS, CALIFORNIA

Far to the north lies Ibis in Piute Valley. Named after a nearby railroad siding, Ibis has a campsite on both sides of highway 95. The famous 4th Armored Division called this home from November, 1942 to June, 1943., then followed the 7th and 11th Armored Divisions. Camp roads are well defined but badly eroded by deep gullies. Rockwork and insignias are better than Camp Clipper's but only by a little. The most spectacular white stars are near the flag circle. A few artifacts found have been spectacular too: dogtags, 1943 newspaper and full bottles of beer buried in the ground. (The dogtags belonged to a GI from Minnesota. In contacting the

man's brother, we sadly learned the GI had been accidentally killed at Ibis in 1942.) The camp dump at the north end is probably the most interesting feature. Destruction by fire was incomplete, so useable items can still be retrieved. The flat ground west of Ibis is a mass of criss-crossed tank track marks. Exploring this area will reveal field kitchen and vehicle maintenance sites. Pails of old lube grease and 1942/1943 5 gallon gas cans are occasionally found. A reservoir similar to Camp Granite's is the only remaining structure.

UNNAMED CAMP, CALIFORNIA

Laid out in typical pattern east of the Rice Army Airfield, this division sized camp was only occupied for a short time by the 5th Armored. After their participation in the August to October, 1942, maneuvers, the 5th Armored moved out, and because of major changes in C.A.M.A. operations, this site was not used again. Except around flag circle, rockwork is scanty and insignias are



SAE 30 oil can and a mechanics tool (?), Camp Granite.



Foxhole at right; tank trail at left, South of Camp Iron Mountain.

→ Salvage began on February 4th using 1300 volunteer Italian prisoners of war who had been captured in Tunisia in 1943. (They were paid 80¢ per eight hours of labor, ate GI food and wore GI uniforms with a small, green "Italy" shoulder patch.) Dismantling the camps was no small job. For instance, Camp Young had 231 large administration buildings, 93 mess halls, 12 large shops and over 3,000 wooden tent frames to be raised. Recovered equipment included 1,239 pieces of artillery; 43,708 small arms weapons; 100,000 tents; 400,000 cots and 300,000 gasoline cans.

The last division evacuated was the 80th Infantry on April 5th. By the end of April, all the camps were evacuated except for personnel guarding unremoved equipment. At midnight, April 30th, responsibility for CAMA was turned over to the Commanding General, Ninth Service Command. Sometime after the War, most of CAMA was returned to public domain.

Camp Bouse, Arizona

Constructed within CAMA's boundaries in late 1943, Camp Bouse nevertheless was not part of it. It is not even

mentioned in the official history of CAMA. Three members of the Council on America's Military Past (CAMP), John Kennedy, John Lynch and Robert Woolley, dug out the story on Camp Bouse and published it in a 1982 PERIODICAL. Laid out somewhat similar to the other CAMA camps, but in a very remote area, Camp Bouse was the home base for the 9th Tank Group battalions (Medium) (Special) involved in the very secret "Canal Defense Light Project" (CDL). A pre-war British invention, a powerful armored searchlight was mounted in place of the tank's turret. Used in night operations, the searchlight, which flickered, was supposed to blind the enemy. Various British and American tanks were tested, but the U.S. M3 medium Lee/Grant was found to be the best since the main gun was mounted in the right sponson, not in the turret. This was the only CDL tank able to defend itself. After training at Camp Bouse, all CDL tank battalions were shipped to England prior to the D-Day landings at Normandy. However, except for some river crossings, the CDL tanks were not fully utilized.

Rice and Desert Center Army Air Fields

While most DTC-CAMA camps had a small airstrip nearby, two large airfields with air tactical units were established deep inside the DTC-CAMA to train with the ground tactical units. One airfield each was located near the small communities of Rice in San Bernardino County and Desert Center in Riverside County. While Rice Airfield was a former municipal airport, Desert Center Airfield was constructed in late 1942, then activated January 15th, 1943. Rice was occupied by the Army October 26th, 1942. Eventually, housing for 3,000 men of the tactical air units was provided at Rice. Base "housekeeping" for the most part was done by personnel of the 2nd Airdrome Detachment of the 475th Base Headquarters and Air Base Squadron. Desert Center had the 3rd Airdrome Detachment and both were sub-bases of the Thermal Army Air Field. Airdrome personnel varied in number, but four officers and fifty enlisted men with another fifty attached from Quartermaster, Signal Corps, Medical, Military Police and Communications was the average throughout 1942-1944. Tactical



Trucks and equipment of the 34th Armored Regiment, 5th Armored Division, preparing to move to a new camp area, October 19, 1942. U.S. Army Photo SC 147943

ARMY MOTORS

personnel of combat branches learned land mine laying and detection; individual and group cooking. During the fifth and sixth weeks, battalion training consisted of combat firing exercises. By the eighth week, exercises with opposing "red" and "blue" teams complete with all support units including the Air Force were conducted. Divisional exercises occurred during the ninth and tenth weeks to perfect teamwork and the defense of retirements. The final three weeks contained major field exercises involving large scale maneuvers using built-up fortifications, endurance marches, battlefield supply and recovery.

Despite all the problems, the DTC-CAMA was considered the most realistic training area available to U.S. Ground

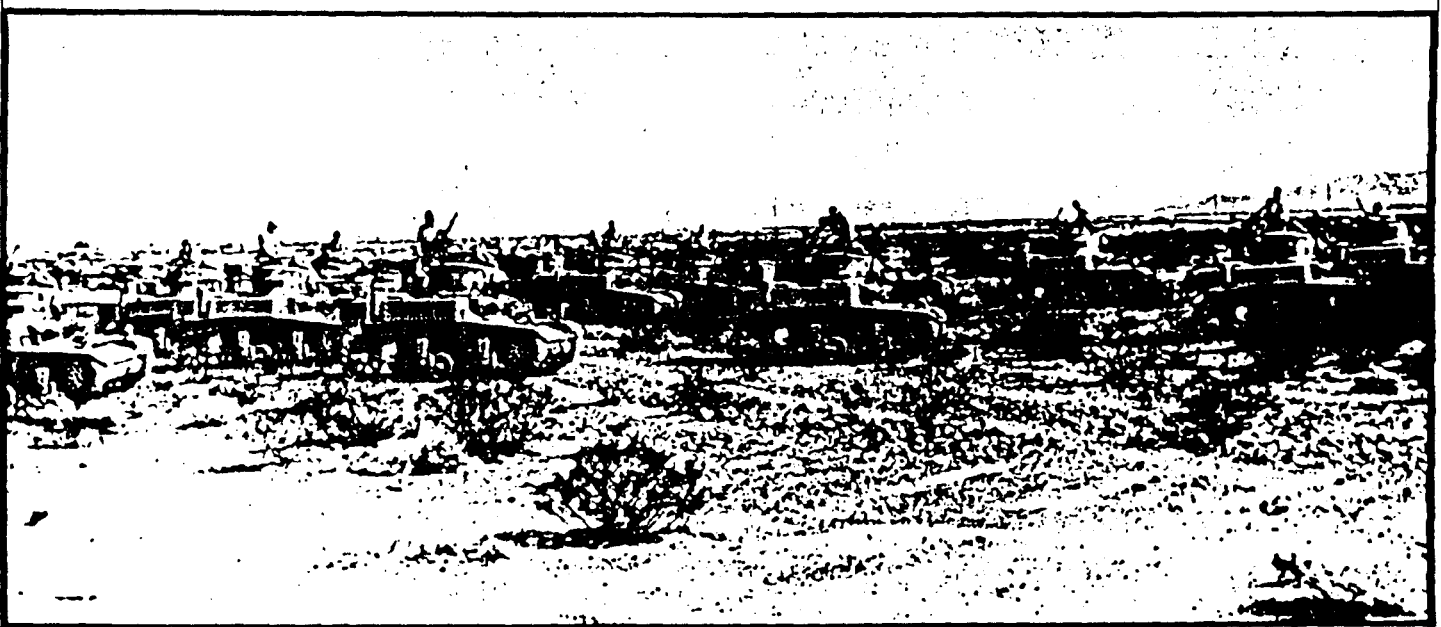
Forces. This was substantiated later by the positive results during actual combat.

→ **The Close**

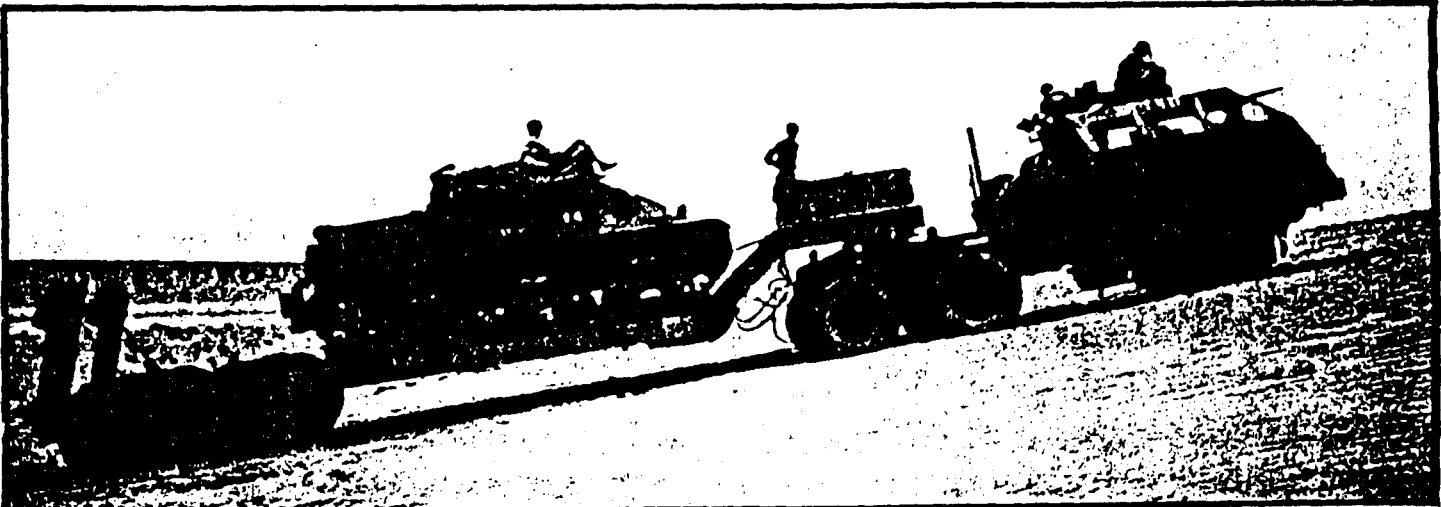
Because of increasing overseas shipments of service, tactical and Air Force units, conditions at CAMA worsened to the point where it became impractical to continue operations. Finally, in January 1944, upon recommendation by the Headquarters Army Ground Forces, the War Department formally announced that CAMA was to be closed by May 1st, 1944. (The announcement also closed the Tennessee and West Virginia maneuver areas leaving only Louisiana for ground forces and Carolina for airborne forces). Conferences at CAMA

were held to determine disposition of government equipment such as the 27,000 vehicles scattered throughout the area. Of the 12,000 pool vehicles, half only needed first and second echelon maintenance. Six hundred more were beyond economical repair; 5,400 would require high echelon repair.

→ A directive from the War Department in March, 1944, indicated that all camp sites were to be closed, everything was to be removed and salvaged where possible. Unexploded ordinance was superficially removed, but the lack of sufficient troops prevented extensive searches for duds on firing ranges. The fortified area of Palen Pass was left as it was and marked with signs as a hazardous site.



M3 light tanks, "Stuarts", on maneuvers.



Desert Training Center. Side view of a tank retriever with M3 chassis on carrier showing maximum distance of climb during test made for Desert Warfare Board, Jan. 29, 1943. (M23 tractor truck, armored, "Dragon Wagon", with M15 trailer; total weight: 143,300 pounds including the M3A2 chassis). U.S. Army Photo SC 165211; courtesy of Brad Milne.

F-1

FEDERAL HEADQUARTERS CALIFORNIA-ARIZONA MANEUVER AREA
APO 183, Los Angeles, California

8 February 1944.

AG 400 GNVXD

SUBJECT: Target Ranges

TO : See Distribution:

1. Reference is made to Ltr., AG 400 GNVXD, this headquarters, 31 Jan 1944, Subject: Property and Equipment.

2. Commanders of major units are charged with responsibility for closing of target ranges, and removal of salvageable material, supplies and equipment, at each camp or vicinity thereof as follows:

- a. ESSEX: By 827 TD Battalion, before departure about 14 February.
- b. IRON MOUNTAIN: By X Corps Artillery as determined by that unit.
- c. IBIS: By the 15th TD Group before departure for maneuvers about 10 February. To coordinate with the 819th TD Battalion and 711th Tank Battalion which will leave about 25 February and 1 March respectively.
- d. GRANITE: By 1135th Engineer C Group prior to departure of units to Camp Young about 19 March.
- e. COXCOMB: By 95th Division, before departure.
- f. HORN, HYDER: By the 104th Division prior to departure for maneuvers about 10 February.
- g. LAGUNA: By 80th Division before departure.
- h. PILOT KNOB: By 15th TD Group prior to departure about 15 March.
- i. Camp YOUNG: By 1134th Engineer C Group prior to departure about 15 April.

3. Permanent installations will be left in place, and such items (target frames, pulleys, ropes, supplies, etc) as are readily removable or could be easily carried away by trespassers, will be turned in to Area Property Officer, along with tentage, cots, and other PC&S Property.

4. In addition to the above, each unit indicated will show on a copy of the 1:25,000 Photomap where available, and otherwise upon the largest scale map available, the location and description of each major range installation. This is for future records and for further dismantling if later required.

By command of Major General ANDERSON:

D C Blake

D C BLAKE
Major A. G. D.
Asst Adj General

DISTRIBUTION

80th Inf Div	5
104th Inf Div	5
X Corps Arty	5
1134 Engr C Gp	5
1135 Engr C Cp	5
95th Inf Div	5
15th TD Gp	5
827th TD Bn	5
819th TD Bn	5

IBIS

Location by map coordinates
[Handwritten scribbles]

The following are the approximate government owned and constructed improvements at Ibis at the time of turnover to the District Engineer:

INSTALLATIONS:

a. SHOWER BUILDINGS:

- (1) Battalion Enlisted Men's shower buildings, total 25.
- (2) Battalion Officer's shower buildings, total 14.

b. LATHING BUILDINGS, Total 173.

c. WOOD TEST FRAMES, PYRAMIDAL:

- (1) Single, total 97.
- (2) Double, total 127.
- (3) Triple, total 10.

d. WATER SUPPLY INSTALLATIONS:

- (1) Source: 2 deep wells
- (2) Storage facilities: 1 - 50,000 gallon concrete reservoir,
1 - 50,000 gallon wooden elevated storage tank.
- (3) Equipment: 2 deep well pumps with engine, 3 booster pumps
with engine, 1 Chloro chlorinator, 2 - gas cylinders, 1 - Fair-
banks platform scales, 1 - Foamite fire extinguisher, 3 - 700 gal.
drums, metal, fuel, storage.

b. CAMP IBIS

David

Camp Ibis was named after the Ibis railroad siding. The Camp is located in the southern end of Piute Valley.

The infrastructure of the camp is easy to identify once a camp road has been located. Although the roads within the camp have a good base, at several points they have washed out. Vegetation and washouts along the roads have forced vehicles to travel cross-country throughout the camp.

The only remaining original structure noted to date is a 95' X 140' concrete reservoir located northeast of Division Headquarters. The reservoir is in good shape, however, it is a natural collection site for trash.

The rocks which outline roads and trails are in varying degrees of disorder. In some areas (Division Headquarter and the west side of Hwy 95) the rockwork is still in excellent condition. With little effort many areas could be restored to their original appearance.

→ The BLM manages the majority of the land within the camp area. The southern portion of the camp is located on private land. Acquisition of this land is not contemplated at this time, but could be a consideration in the future. The California Desert Plan has designated the entire area as Multiple Use Class "L".

In order to arrest the site's deterioration and provide opportunities for the public to enjoy and to better appreciate the significance of this historic site, a number of specific actions are proposed for Camp Ibis.

A monument with a plaque identifying the camp will be erected at the intersection of Highway 95 and the road leading to the Divisional Headquarters area. The monument will be placed off of the highway in order to provide room for vehicles to pull over. The other roads leading into the site will remain closed. The Motor Pool Road, Administration Road, 4th Street, and 14th Street will be opened for vehicle traffic on the east side of Highway 95. The 5th and 8th Streets will be opened for vehicle traffic on the west side of Highway 95. This network will provide access into the site in addition to a loop drive that will place visitors within very short walking distance of most of the remaining areas. These roads will be signed "open" and identified by their original names. Vegetation will be removed, rock alignments replaced and repairs made to the surface to insure that the route is passable and vehicles are not forced "cross-country."

CAMP IBIS, CALIFORNIA

Camp Ibis was one of the temporary camps forming a part of the Desert Training Center, known after 20 October 1943 as the California - Arizona Maneuver Area, discontinued 30 April 1944.

→ Camp Ibis during the period 8 November 1942 - 28 March 1943 was under construction. The 4th Armored Division, under MG John S. Wood was at Camp Ibis until June 1943, when its place was taken by the 9th Armored Division, under MG John W. Leonard.

SOURCE: Army Ground Forces Study No. 15. The Desert Training Center and C - AMA. (1946).

LA DISTRICT
CAMA FILE (REAL ESTATE)

RECEIVED
LAND OFFICE
LOS ANGELES, CALIF.

CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
LOS ANGELES DISTRICT
751 SOUTH FIGUEROA STREET
LOS ANGELES 17, CALIFORNIA

REFER TO FILE NO.
SPLRM 602 (CAMA - Dedudding)

Manager, Land Office
Bureau of Land Management
Department of the Interior
215 W. 7th Street
Los Angeles 14, California

Route	Initial	Date
1 Palmer		9/24
2 Wilmar	PAW	10/3
3 Corbett		

RECEIVED
AND OFFICE
LOS ANGELES, CALIF.

P 2:11 AM 10:00

21 September 1956

Dear Sir:

Needs Action.....
Information.....
Distrb.....

RETURN TO: PALMER

Reference is made to conference held in your office on 19 September 1956 between your Messrs. Palmer and Corbett and Mr. John Houston of this office, at which time the contamination by explosives of certain lands under jurisdiction of the Bureau of Land Management was discussed.

There is inclosed for your use in determining the location of such contaminated land a drawing indicating the following:

- a. Lands (shown in red) which have been visually inspected and cleared of all explosive materials reasonably possible to detect, but because of the possibility that there may remain unexploded mines, bombs, shells and other missiles which might possibly constitute a hazard to life and property, their use is restricted to surface use only.
- b. Lands (shown in green) which have been given a careful visual inspection and have been cleared of all explosive materials reasonably possible to detect. These lands are recommended for any use for which suited.
- c. Uncolored areas within the boundaries of the California-Arizona Maneuver Area have not been inspected for explosive materials as it has been determined from information available that these lands were never used by the Department of the Army as artillery ranges or bombing areas.

If this office can be of further assistance in this matter do not hesitate to call upon us.

FOR THE DISTRICT ENGINEER:

Very truly yours.

Handwritten signature

LIST OF LANDS IN CALIFORNIA CONTAMINATED
BY EXPLOSIVES - CALIFORNIA-ARIZONA MANEUVER AREA
COMPILED FROM DRAWING NO. 16-13-C1,
CORPS OF ENGINEERS MAP APPROVED OCTOBER 1951

(List Compiled by Status Unit, LALO, 10/12/56)

SBM

- T13N R19E ✓
Secs. 34, 35
- T12N R19E ✓
Secs. 2, 3, 10, 11, 14
- T11N R18E ✓
Secs. 1, 2, 11, 12
- T11N R19E ✓
Secs. 2, 3, 10, 11, 12, 13, 14, 23, 24, 25, 26, 27, 28, 29, 32, 33, 34, 35, 36
- - T11N R20E ✓
Secs. 13 thru 36
- T10N R17E ✓
Secs. 8, 9, 10, 14, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 32, 33, 34, 35, 36.
- T10N R19E ✓
Secs. 1, 2
- T10N R20E ✓
Sec. 6
- T9N R15E ✓
Secs. 22, 23, 25, 26
- T9N R17E

- T9N R20E ✓
Secs. 1, 2, 4, 5, 6, 7, 8, 9, 11, 12, 17, 18

- T9N R21E ✓
Secs. 6, 7, 23, 24, 25, 26, 35, 36

- T9N R22E ✓
Secs. 19, 20, 21, 28, 29, 30, 31, 32, 33

- T8N R14E ✓
Secs. 12, 13, 14, 15, 16, 17, 21, 22, 23, 24, 28, 29

- T8N R15E ✓
Secs. 2, 7, 8, 9, 10, 11

- T8N R16E ✓
Secs. 17, 18, 19, 20, 29, 30, 31, 32

- T8N R18 ✓
Secs. 13, 23, 24, 25, 26, 35, 36

- T8N R19E ✓
Secs. 7, 17, 18, 19, 20, 29, 30, 31

- T8N R21E ✓
All of Township

- T6N R22E ✓
Secs. 3, 4, 5, 8, 9, 10, 15, 16, 17, 20, 21, 22, 27, 28, 29

- T7N R11E ✓
Secs. 25, 26, 35, 36 .

- T7N R12E ✓
Secs. 13, 19, 20, 21, 28, 29, 30, 31, 32, 33

- T7N R13E ✓
Secs. 4, 5, 8, 9, 15, 16, 17, 18, 19, 20, 21, 22, 23, 26,
27, 28, 29, 30, 32, 33, 34

- T7N R15E ✓
Secs. 1, 11, 12, 13, 14, 24, 27, 28, 33, 34

- T7N R16E ✓
Secs. 4, 5, 6, 7, 8, 9, 16, 17, 18, 19

- T7N R18E ✓
Secs. 1, 2, 3, 10, 11, 12, 13, 14, 15, 21, 22, 23, 24, 25,
26, 27, 28, 32, 33, 34, 35, 36

⊕ T7N R19E ✓
Secs. 6, 7, 18, 19, 25, 30, 31, 35, 36

- T7N R20E ✓
Secs. 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, thru 36

- T7N R21E ✓
Secs. 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 22,
23, 28, 29, 30, 31, 32, 33, 34

+ T6N R16E ✓
Secs. 20, 21, 22, 27, 28, 29, 32, 33, 34

+ T6N R18E ✓
Secs. 1, 2, 3, 4

⊕ T6N R19E ✓
Secs. 1, 2, 6, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25, 26,
27, 33, 34, 35, 36

x T6N R20E ✓
All of Township

⊕ T6N R21E ✓
All of Township

.. T5N R16E

+ T5N R20E ✓
Secs. 19, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35

no plat. + T4N R20E ✓
Secs. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 16, 17, 18

* T4N R23E ✓
Secs. 25 thru 36

* T4N R24E ✓
Secs. 19, 20, 21, 28, 29, 30, 31, 32, 33

* T3N R17E
Secs. 25, 35, 36

⊖ T3N R18E
Secs. 14, 15, 22, 23, 30, 31

⊕ T3N R19E
Secs. 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 14, 15, 16, 17, 18, 19,
20, 21, 22, 23, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35

no plat. * T3N R20E
All of Township

no plat. * T3N R24E
Secs. 4, 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, 21, 28, 29, 30, 31,
32, 33

* T2N R17E
Secs. 1, 2, 22, 23, 24, 25, 26, 27

* T2N R18E
Secs. 19, 29, 30, 31, 32

* T2N R19E
Secs. 2, 3

* T2N R23E
Secs. 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16

* T2N R24E
Secs. 4, 5, 6, 7, 8, 9, 16, 17, 18

* T1N R13E
Secs. 13, 24

* T1N R14E
Secs. 18, 19

* T1N R15E
Secs. 13, 24, 25, 36

* T1N R16E
Secs. 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 26, 27, 28, 29,
30, 31, 32, 33, 34, 35

* T1N R18E
Secs. ~~2~~, ~~3~~, ~~10~~, ~~11~~, 12, 13, ~~14~~, ~~15~~, 22, 23, 24, 25, 26

* T1N R20E
Secs. 16, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32, 33

* T1N R21E
Secs. 34, 35

* T1S R15E
Secs. 1, 12, 13

* T1S R16E
Secs. 1 thru 24

* T1S R17E
Sec. 36

⊕ TLS R21E
Secs. 25, 26, 34, 35, 36

25 10 27

⊕ TLS R22E
Secs. 28, 29, 30, 31, 32, 33

26 3 11 5

⊖ TLS R23E
Secs. 19, 30, 31

27 2 1 5

⊕ T2S R17E
Secs. 1, ~~8~~, 9, 13, 14, 15, ~~16~~, ~~17~~, ~~20~~, ~~21~~, ~~22~~, 23, 24, 25,
26, 27, 28, ~~29~~, ~~32~~, ~~33~~, ~~34~~, ~~35~~, ~~36~~

⊕ T2S R18E
Secs. 1, 2, 3, 4, 5, ⁶/₈, 9, 10, 11, 12, 13, 14, 15, 16, 23,
24, 25, 26, 30, 31, 32, 36.

⊕ T2S R19E
Secs. 1, 2, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19,
20, 21, 23, 24, 25, 26, 28, 29, 30, 31, 32, 33, 35, 36

⊕ T2S R20E
Secs. 30, 31

⊕ T2S R21E
Secs. 1, 2, 3, 4, 10, 11, 12, 13, 14, 24,

⊖ T2S R22E
Secs. 1 thru 30, 32 thru 35

⊖ T3S R16E
Secs. 15, 21, 22, 29, 34, 35

⊖ T3S R17E
Secs. 1, 2, 3, 4, 5, 25, 26, 35, 36

⊖ T3S R18E
Secs. 2, 3, 4, 5, 6, 10, 11, 14, 15, 16, 21, 22, 23, 25, 26, 27, 28,
29, 30, 31, 32, 33, 34, 35

* T3S R22E
Secs. 3, 4

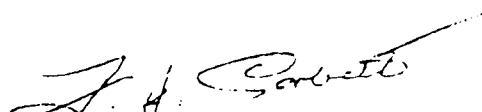
* T4S R16E
Sec. 2

+ T4S R17E
Secs. 1, 2, 11, 12, 13, 14

+ T4S R18E
Secs. 1 thru 11, 15, 16, 17, 20

+ T6S R11E
Secs. 24, 25, 36

+ T6S R12E
Secs. 21, 22, 23, 26, 27, 28, 30, 31, 33, 34, 35


F. J. Corbett
Acting Chief, Status Unit

Additional lands contaminated - per telephone conversation, John
Houston, C of E, and Corbett, 10/17/56

- T2S R16E
Secs. 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22,
27, 28, 29, 32, 33, 34

T3S R16E
Secs. 3, 4, 5

- T6S R11E
Secs. 25 thru 36

^{S.}
T7S R12E
Sec. 3

WARNING:

THE FOLLOWING APPLICABLE STATE DEPT. REGULATIONS BY POLARIS

SEP 30 1954

RECORDED

Recorded in Book 3463, Page 117
Official Records, San Bernardino
County, California

AFFIDAVIT

STATE OF CALIFORNIA }
COUNTY OF LOS ANGELES } SS

I, Robert N. Swarts, Lt. Colonel, C. E., Executive Officer of
the Los Angeles District, Corps of Engineers, U. S. Army, being
first duly sworn on oath depose and say as follows:

THAT the land hereinafter described was a part of the California-
Arizona Maneuver Area:

Twenty parcels of land in the County of San Bernardino, State
of California, described as follows:

PARCEL 1:

Sections 34 and 35, Township 13 North, Range 19 East;
Also Sections 2, 3, 10, 11 and 14, Township 12 North,
Range 19 East.

PARCEL 2:

Sections 1, 2, 11 and 12, Township 11 North, Range 18 East.

→ **PARCEL 3:**

The South 1/2 of Sections 2 and 3; the Southeast 1/4 of
Section 4; the East 1/2 of Section 9 and Sections 10, 11,
12, 13, 14, 23, 24, 25, 26, 32, 33, 34, 35 and 36, all in
Township 11 North, Range 19 East;

Also Sections 13 to 36 inclusive, in Township 11 North,
Range 20 East;

Also Sections 5, 6, 7 and 8, Township 10 North, Range 20 East;

Also Sections 1, 12 and the East 1/2 of Sections 2 and 11,
Township 10 North, Range 19 East.

PARCEL 4:

Sections 22, 27, 28, 33, 34 and the West 1/2 of Sections 23,
26 and 35, all in Township 11 North, Range 21 East;

Also Sections 4, 5, 8, 9, the East 1/2 of Sections 6 and 7,
the North 1/2 of Sections 16 and 17, and the Northeast 1/4
of Section 18, all in Township 10 North, Range 22 East.

Incl # 3

PARCEL 5:

Beginning at the Northeast corner of Section 3, Township 10 North, Range 17 East (said section consisting of approximately 200 acres); thence West following section lines 3 miles to the Northwest corner of Section 5, Township 10 North, Range 17 East (said Section 5 consisting of approximately 259 acres); thence South following section lines 8-1/4 miles more or less to the Southwest corner of Section 17, Township 9 North, Range 17 East; thence East following section lines 5 miles to the Southwest corner of Section 18, Township 10 North, Range 18 East; thence Northeasterly in a direct line to the Northeast corner of said Section 18; thence Northwesterly in a direct line 8 miles more or less to the point of beginning.

PARCEL 6:

Sections 8 and 9, the North 1/2 of Sections 16 and 17, the West 1/2 of Section 10, the Southwest 1/4 and the South 1/2 of the Northwest 1/4 of Section 3; also the South 1/2 and the South 1/2 of the North 1/2 of Sections 4 and 5, all in Township 9 North, Range 20 East.

PARCEL 7:

Sections 1 and 12 of Township 9 North, Range 20 East; also Sections 6 and 7 of Township 9 North, Range 21 East.

PARCEL 8:

Beginning at the Northeast corner of Section 21, Township 9 North, Range 22 East; thence West following section lines 2 miles to the Northwest corner of Section 20, Township 9 North, Range 22 East; thence South 1/2 mile along the West line of said Section 20; thence West in a direct line 3 miles to a point in the West line of Section 23, Township 9 North, Range 21 East, 1/2 mile North of the Southwest corner of said Section 23; thence South following section lines 2-1/2 miles to the Southwest corner of Section 35, Township 9 North, Range 21 East; thence West following section lines 3 miles to the Northwest corner of Section 5, Township 8 North, Range 21 East; thence South following section lines 5-1/2 miles to a point where the East-West centerline of Section 32, Township 8 North, Range 21 East, intersects the West line of said Section 32; thence Southeasterly in a direct line 4 miles more or less to a point where the East-West centerline of Section 15, Township 7 North, Range 21 East intersects the West line of said Section 15; thence South in direct line 1-1/2 miles to the Southwest corner of Section 22, Township 7 North, Range 21 East; thence East following section lines 3 miles to the Southeast corner of Section 24, Township 7 North, Range 21 East; thence North following section lines 10 miles to the Southwest corner of Section 31, Township 9 North, Range 22 East; thence East in a direct line 1 mile to the Northwest corner of Section 5, Township 8 North, Range 22 East; thence South following section lines to the Southwest corner of Section 29, Township 8 North, Range 22 East; thence East following section lines 3 miles to the Southeast corner of Section 27, Township 8 North, Range 22 East; thence North following section lines 5 miles to the

X
Northeast corner of Section 3, Township 8 North, Range 22 East; thence West 1 mile to the Southeast corner of Section 33, Township 9 North, Range 22 East; thence North following section lines 3 miles to the point of beginning.

PARCEL 9:

That area lying on the south side of Granite Mountain Road described as follows:

Beginning at a point on the Granite Mountain Road which is intersected by the East line of Section 2, Township 8 North, Range 15 East; thence Southwesterly along said road for a distance of 10 miles more or less to a point which is intersected by the West line of Section 8, Township 8 North, Range 14 East; thence Southeasterly in a direct line a distance of 4-1/2 miles more or less to a point in the South line of Section 27, Township 8 North, Range 14 East distant 1500 feet West from the Southeast corner of said Section 27; thence Northeasterly in a direct line 2-1/4 miles more or less to the Northeast corner of Section 23, Township 8 North, Range 14 East; thence Northeasterly in a direct line 6 miles more or less to the Southeast corner of Section 11, Township 8 North, Range 15 East; thence North in a direct line 1-1/2 miles more or less to the point of beginning.

PARCEL 10:

Sections 22, 23, 26 and 27, Township 9 North, Range 15 East.

PARCEL 11:

Sections 17, 18, 19, 20, 29 and 30, Township 8 North, Range 16 East.

PARCEL 12:

Sections 25 and 36, Township 7 North, Range 11 East and Sections 28, 29, 30, 31, 32 and 33, Township 7 North, Range 12 East.

PARCEL 13:

Beginning at the Northeast corner of Section 8, Township 7 North, Range 13 East; thence Southwesterly in a direct line 3-1/2 miles more or less to a point on the South line of Section 13, Township 7 North, Range 12 East distant 1/2 mile West from the Southeast corner of said Section 13; thence Southeasterly in a direct line 4-1/2 miles more or less to a point distant South 1500 feet and West 1500 feet from the Northeast corner of Section 4, Township 6 North, Range 13 East; thence Northeasterly in a direct line 3-1/2 miles more or less to the Northeast corner of Section 26, Township 7 North, Range 13 East; thence Northwesterly in a direct line 4-1/4 miles more or less to the point of beginning.

PARCEL 14:

Sections 27, 28, 33 and 34, Township 7 North, Range 15 East.

PARCEL 15:

Beginning at a point on the West line of Section 12, Township 6 North, Range 18 East distant 1320 feet South of the Northwest corner of said Section 12; thence Southwesterly in a direct line 12-1/2 miles more or less to a point on the South line of Section 5, Township 6 North, Range 18 East distant 1320 feet East from the Southwest corner of said Section 5; thence East following section lines 5-3/4 miles to the Southeast corner of Section 6, Township 6 North, Range 19 East; thence Northeasterly in a direct line 11-1/4 miles more or less to a point on the East line of Section 8, Township 6 North, Range 19 East distant 1320 feet North from the Southeast corner of said Section 8; thence Northwesterly in a direct line 3 miles more or less to the point of beginning.

PARCEL 16:

Beginning at the Southwest corner of Section 34, Township 6 North, Range 19 East; thence East following section lines 13 miles to the Southeast corner of Section 34, Township 6 North, Range 21 East; thence North following section lines 6 miles to the Northeast corner of Section 3, Township 6 North, Range 21 East; thence Northwesterly in a direct line 7 miles more or less to a point 1320 feet South and 1320 feet West from the Northeast corner of Section 14, Township 7 North, Range 20 East; thence West in a direct line 2-3/4 miles to a point in the West line of Section 16, Township 7 North, Range 20 East distant 1320 feet South of the Northwest corner of said Section 16; thence Southwesterly in a direct line 5-1/4 miles more or less to a point in the South line of Section 35, Township 7 North, Range 19 East distant 1/2 mile from the Southeast corner of said Section 35; thence Southwesterly in a direct line 6-1/2 miles more or less to the point of beginning.

PARCEL 17:

Beginning at the Northwest corner of Section 29, Township 6 North, Range 16 East; thence South along the West line of said Section 29 and continuing in a direct line 5-1/2 miles more or less to a point where said line intersects the Danby-Chubbuck Road, said point lying within Section 19, Township 5 North, Range 16 East; thence Southeasterly along the east side of the Danby-Chubbuck Road 4 miles more or less to the Southwest corner of Section 4, Township 4 North, Range 16 East; thence East following section lines 3 miles to the Southeast corner of Section 2, Township 4 North, Range 16 East; thence Northwesterly in a direct line 9 miles more or less to the Northeast corner of Section 27, Township 6 North, Range 16 East; thence West following section lines 3 miles to the point of beginning.

PARCEL 18:

Beginning at the Southeast corner of Section 12, Township 4 North, Range 19 East; thence Easterly in a direct line 5 miles into unsurveyed Government land along the Easterly prolongation of the South line of said Section 12; thence North and parallel

to the East line of said Township and range a distance of 5 miles; thence West in a direct line 5 miles to the Northeast corner of Section 24, Township 5 North, Range 19 East; thence South following section lines 5 miles to the point of beginning.

PARCEL 19:

Beginning at the Northwest corner of Section 30, Township 4 North, Range 23 East; thence South following section lines 9 miles to the Southeast corner of Section 1, Township 2 North, Range 22 East; thence East in a direct line 2 miles into unsurveyed Government land along the Easterly prolongation of the South line of said Section 1; thence South and parallel to the East line of said township and range a distance of 2 miles; thence East and parallel to the North line of said township and range a distance of 7 miles; thence North in a direct line 11 miles to the Northeast corner of Section 28, Township 4 North, Range 24 East; thence West following section lines 9 miles to the point of beginning.

PARCEL 20:

The Northwest 1/4 of Section 19, Township 1 North, Range 22 East.

THAT said parcels of land were used by the Department of the Army as artillery ranges and bombing areas in connection with maneuver training during the period April 1942 through April 1946.

THAT, although an attempt has been made to decontaminate and dedud said areas, there may remain unexploded mines, bombs, shells and other missiles which might constitute a hazard to life, limb and property and hence said areas are considered to be dangerous for any purpose involving the use of said land below the surface area.

DATED this 13th day of September 1954.

Robert M. Swartz
ROBERT M. SWARTZ
Lt. Col., Corps of Engineers

SUBSCRIBED AND SWORN TO BEFORE ME this 13th day of September 1954.

Jessie M. Estey
Notary Public
in and for said County and State



DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON 25, D. C.

IN REPLY REFER TO

602/Camp Ibis, California/(CAMA) ENGLT

3 May 1951

Director
Bureau of Land Management
Department of the Interior
Washington 25, D. C.

Dear Sir:

An area of 32,160 acres of land, more or less, at Camp Ibis, California, as outlined on the inclosed map, has been used by this Department with the informal permission of your Department. There is no evidence in the files of this Department that formal permission to use the land was ever granted.

The use of this property is no longer required and is hereby relinquished. The lands are described in the inclosed report.

All improvements placed on the property by this Department have been removed and no restoration work is deemed necessary.

Your attention is invited to the inclosed certificate of clearance wherein it is stated that the subject lands have been given a careful visual inspection and cleared of all explosives or explosive objects reasonably possible to detect. It is recommended, however, that the area of 20,640 acres, more or less, as outlined in red on the inclosed map be restricted to surface use only. All the other lands, as outlined in green are recommended for any use for which the land is suited.

Your cooperation in making these lands available is appreciated.

Sincerely yours,

W. H. HASTINGS
Colonel, Corps of Engineers
Assistant Chief of Engineers
for Real Estate

- 3 Inclosures:
1. Report
2. Ex. A - Map
3. Ex. D - Certificate
of Clearance

61735

ADDRESS REPLY TO:
DISTRICT ENGINEER
LOS ANGELES DISTRICT
CORPS OF ENGINEERS
P. O. BOX 5180-METRO. STATION
LOS ANGELES 89, CALIFORNIA

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
OFFICE OF THE DISTRICT ENGINEER
LOS ANGELES DISTRICT
751 SOUTH FIGUEROA STREET
LOS ANGELES 14, CALIFORNIA

REFER TO FILE NO.

15 July 1950

~~SECRET~~

CERTIFICATE OF CLEARANCE
CAMP IBIS
NEEDLES, CALIFORNIA

~~XX~~

All lands within Camp Ibis and surrounding artillery maneuver area, located approximately 17 miles northwest of Needles, California, have been given a careful search (or visual inspection) and have been cleared of all dangerous and/or explosive materials reasonably possible to detect.

It is recommended that the area as outlined in red (approximately 20,640 acres) on attached Real Estate Map No. 2277, Camp Ibis (CAMA), be restricted to surface use only. All other land outlined in green (approximately 11,520 acres) is recommended for any use for which the land is suited.

B. C. Hedrick
B. C. HEDRICK
Engineer, Civil
Los Angeles District, CE

Joseph P. Sainato
JOSEPH P. SAINATO
1st Lt., CE
9800th TSU-CE Det. #14
Bomb & Shell Disposal Team
Commanding

EXHIBIT 'D'

F-18

REPORT ON RETURN OF LAND TO FEDERAL
AGENCIES AS REQUIRED BY ORDERS AND
REGULATIONS 5111.08c(2)

Land Used for Camp Ibis (C.A.M.A.)

5111.08c(2)

- a. Description and Location of the Property: Land is approximately 21 miles northwest of Needles in San Bernardino County, California. (SEBAM, Township 10N, R20E, Section 12, 13; Township 10N, R21E, Sections 2, 3, 5, 6, 7, 8, 10, 11, 14, 15, 18, 19, 20, 22, 23; Township 11N, R20E, Sections 1, 2, 3, 10, 11, 12, 13, 14, 15, 23, 24, 25, 26, 35, 36; Township 11 N, R21E, Sections 14, 15, 16, 18, 19, 20, 22, 23, 24, 26, 27, 28, 30, 31, 32, all of Section 34 except E 1/2 NW 1/4 & Gov Lot 1 & SW 1/4 NE 1/4 & Gov. Lots 2, 3, 4 & 5 & W 1/2 SE 1/4 & SW 1/4, all of Section 35 except Fraction SW 1/4 SW 1/4, NE 1/4 NW 1/4 & Fraction NE 1/4, SE 1/4 NW 1/4 & Fr SE 1/4, all of Section 36 except Lot 1, 2, 3, 4, 5 & 6, SW 1/4 SE 1/4 & S 1/2 SW 1/4. (SEE EXHIBIT "A")
- b. Date Use was Acquired: Approximately March 1942.
- c. Department or Agency from whom Acquired: Department of the Interior.
- d. Manner of Acquisition: There is no evidence in the files of the Los Angeles District Engineer that written permission was ever secured for the use of subject land.
- e. Statement of Cost: None required.
- f. Statement of Restoration Work Performed by Department of the Army: All improvements have been removed and land restored.
- g. ~~Statement of Local Representative of Owning Agency: (See Exhibits "B" and "C").~~
- h. Recommendations of the Los Angeles District Engineer: It is recommended that land be formally relinquished to the Department of the Interior, subject to the restrictions recommended in the Certificate of Clearance (Exhibit "D").
- i. See Exhibit "D"
- j. Not applicable.



ent and Disposal Branch

F-18

602 Camp Ibis, California (CAMA) ENOLT

3 May 1951

Director
Bureau of Land Management
Department of the Interior
Washington 25, D. C.

Dear Sir:

An area of 32,160 acres of land, more or less, at Camp Ibis, California, as outlined on the inclosed map, has been used by this Department with the informal permission of your Department. There is no evidence in the files of this Department that formal permission to use the land was ever granted.

The use of this property is no longer required and is hereby relinquished. The lands are described in the inclosed report.

All improvements placed on the property by this Department have been removed and no restoration work is deemed necessary.

Your attention is invited to the inclosed certificate of clearance wherein it is stated that the subject lands have been given a careful visual inspection and cleared of all explosives or explosive objects reasonably possible to detect. It is recommended, however, that the area of 20,640 acres, more or less, as outlined in red on the inclosed map be restricted to surface use only. All the other lands, as outlined in green are recommended for any use for which the land is suited.

Your cooperation in making these lands available is appreciated.

Sincerely yours,

- 3 Inclosures:
1. Report
2. Ex. A - Map
3. Ex. D - Certificate
of Clearance

W. H. HASTINGS
Colonel, Corps of Engineers
Assistant Chief of Engineers
for Real Estate

HEADQUARTERS CALIFORNIA-ARIZONA MANEUVER AREA
Office of the Ordnance Officer
APO 183, Los Angeles, California

MEMO TO: Commanding General

9 February 1944.

SUBJECT: Ordnance Plan.

1. AMMUNITION.

a. Ammunition Depot #3, YUMA, closed 1 February. Excess ammunition being inspected for return to ASF Depots. 569th Ordnance Ammunition Company released to Special Troops Headquarters. A Detachment of 640th Ordnance Ammunition Company is at Yuma to handle details of shipment.

b. Ammunition Depot #4, GOFFS, will close as soon after 15 February, as possible. Excess ammunition will be inspected, week of 7 February. Wanted ammunition moved by truck to Depot #1. After shipment of excess ammunition out of C-AMA, 670th Ordnance Ammunition Company will move to Desert Center to assist in clearing excess in Depot #1 (including Maneuver ammunition). ←

c. Ammunition Depot #1, DESERT CENTER, to remain open as long as ammunition is needed by combat troops. Evacuation of excess to start after completion of Maneuver.

d. Maneuver ammunition to be turned in to Depot #1 upon completion of maneuver, and evacuated from CAMA at once. Inspection has been requested. 670th Ordnance Ammunition Company can be released when ammunition in CAMA falls to less than 500 tons. (Est. 1 April).

e. Simulated ammunition will be piled in designated localities for future disposition, unserviceable material to salvage, or destroyed.

2. MAINTENANCE.

a. Battalion control, at YUMA, GOFFS, AND CAMP YOUNG, for operating companies. (Normal operations, service to troops).

b. Units involved, and dates of release shown on separate report forms for each area.

c. Combat Zone.

(1) Perform Technical Inspection on all vehicles now on hand, and immediately on receipt of vehicles turned in by troops. (This has been done at Goffs).

UNITED STATES MARINE CORPS
Explosive Ordnance Disposal Unit
Operations and Training Directorate
Box 788104
Twentynine Palms, California 92278-8104

8027
3-60-161
29 Sep 95

From: GySgt Wheeler, Explosive Ordnance Disposal Unit
To: Larry Dauphin, USATCES

Subj: Formerly Used Defense Sites (FUDS)

Ref: (a) PhonCon w/ Larry Dauphin on 29 Sep 95


Encl: (1) EOD letter 3-60-227 dtd 22 Oct 91

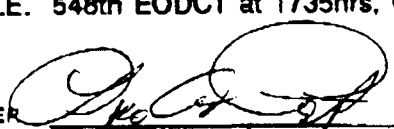
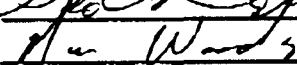

1. Per reference (a), I researched our local records, finding only a file from Camp Coxcomb. No other files of the camps mentioned in your fax has been covered by this unit, as far as I know.

2. I, personally, was in charge of the Coxcomb Operation in Oct 91. I was in contact with Ranger Sauer from the Joshua Tree National Monument, who had great information and maps of the area and also what types of ordnance that was fired on the range. Ranger Sauer had obtained all his information from the Bureau of Land Management (BLM).

3. Still today this unit occasionally receives calls for assistance from the National Monument on ordnance items found within the monument area.

4. I hope I have been some assistance to you. If any more questions should arise, please contact me again!


W. B. WHEELER

1. UNIT NUMBER 259-F095-95	EXPLOSIVE ORDNANCE INCIDENT	2. CONTROL NUMBER	2a. SIR <input type="checkbox"/>
		2b. UNUSUAL <input type="checkbox"/>	
SECTION A: INITIAL INFORMATION			
3. DATE/TIME REPORTED 061330MAY95	7. INCIDENT LOCATION/DIRECTIONS Wilderness trail 30 min. south of Needles. Need guide.	9. ITEM(S) REPORTED 1ea Projo, 75mm HE w/damaged fuze.	
4. REPORTED BY Mike Dodson			
5. PHONE NUMBER (619)326-3896			
6. ADDRESS Highway 95 South Needles, California	8. POINT OF CONTACT Mike Dodson	10. THREAT CATEGORY IMMINENT THREAT <input checked="" type="checkbox"/> THREAT <input type="checkbox"/> EXTENDED THREAT <input type="checkbox"/>	
SECTION B: ACTION BY EOD			
11. PERSONNEL DISPATCHED SSG Patschull SPC Woods	12. DATE/TIME DEPARTED 070700MAY95	14. MAN HOURS 21	
	13. DATE/TIME COMPLETE 071730MAY95	15. MILEAGE	
16. CONFIRMED IDENTIFICATION 1ea Projo, 75mmHE w/damaged fuze	17. DISPOSITION BIP	CODE OFF	
EPA COORDINATION	22. NOTES		
18. POC MR Brad Shipley	<p>Team will depart 7 MAY 95 at 0700hrs. Departing notifications: EOC at 0655hrs, MAJ Fields. 548th EODCT at 0700hrs, CPT Borowitz. Returning notifications: EOC at 1735hrs, SSG OGLE. 548th EODCT at 1735hrs, CPT Borowitz.</p> <p style="text-align:center;">  TEAM LEADER _____  TEAM MEMBER _____ </p>		
19. TIME CONTACTED 070700MAY95			
20. PHONE NUMBER (415)744-2000			
21. PERMIT NUMBER Verbal Statement.			
23. EXPLOSIVES EXPENDED			
NOMENCLATURE	LOT NUMBER	NOMENCLATURE	LOT NUMBER
<u>03</u> EA CHG DEMO BLK M112, C4	<u>LOP91A020-001</u>	<u>12</u> FT FUSE, TIME BLAST, M670	<u>EMB92G002-041</u>
<u>02</u> EA IGNITER, TIME FUSE, M60	<u>SGK92E013-007</u>	<u>02</u> EA CAP. BLASTING NE, M7	<u>HEP8-18</u>
<u>00</u> EA CAP BLASTING ELEC, M6	<u>NA</u>	<u>00</u> FT CORD, DETONATING	<u>NA</u>
<u>00</u> EA CTG, IMPULSE 50 CAL, ELEC	<u>NA</u>	<u>00</u> EA CTG, 50 CAL BALL	<u>NA</u>
<u>00</u> EA CHG DEMO BLK, M118	<u>NA</u>	<u>00</u>	<u>NA</u>
<u>00</u>	<u>NA</u>	<u>00</u>	<u>NA</u>
24. NAME-GRADE SIGNATURE OF UNIT COMMANDER  STEVEN M. TOLLER, CPT, OD, Commanding		25. TELEPHONE NUMBER (619)380-4092	26. DATE 6 JUN 95



INCIDENT REPORT

NO. CA-069-80-22
AREA Cima R.A.

INCIDENT Explosive Ordinance found 45-05-03 60-01-00	DATE-TIME OCCURED 15 March 80
LOCATION Kelbeck Hills	T & R T. 2 N., R. 16 E. Sec. 25
REPORTED BY Jim Wells/Jim Mosses	DATE-TIME REPORTED 16 March 80 1100
ADDRESS Barstow R.A.	PHONE 326-3896
HOW REPORTED Verbal	RECEIVED BY Ranger Heskett

PERSONS INVOLVED	ADDRESS	PHONE	SEX-RACE-DOB
Mosses, Jim	Barstow R.A.	256-3591	
Wells, Jim	A.M.A.		

VEHICLES INVOLVED
N/A

DETAILS:
15 March 80 - Mosses and Wells while laying out a motorcycle course near the Iron Moutain area discovered an old Anti Tank Mine. They reported the discovery to Ranger Heskett.

Mine is described as 12" in diameter and 3" thick. Exterior is rusted except for 2" brass primer on top side. Located in a wash in the lower left quarter of Sec. 25, Cadiz Valley Quad.

Photos were taken and mine was marked with Red/White ribbon.

Information will be turned over to Military Explosive Ordinance Disposal Units.

17 March 80 1600 hours - Military E.O.D. Units contacted from 29 Palms Marine Corps Base and Fort Irwin. 29 Palms Marine E.O.D. responding to retrieve military ordinance Seargent Coble in charge.

REPORT BY: Heskett R.I. DATE: 16 Mar. 80 REVIEWED BY: *[Signature]* DATE: 3/21/80
Copy To: (1) E.O.D. (2) Dist. Eng... CSO 6260-11 6177

CIA-069-81

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CALIFORNIA STATE OFFICE

Inv: CODE 26-022
Inv: No: 1846

HAZARD INVENTORY

Area Identification Number: 69161

Location of Hazard:

SAN BERNARDINO County
NEEDLES Resource Area
_____ Planning Unit

30 Sec. 3N T. 23 R. 5E Mer.

Distance and direction from nearest service
or town: 12 miles from VIDAL
TECT

Land Status (from Statement of Search):
 Permit Lease Private Lands
 License Easement Withdrawn
 National Resource Lands
 Other Government (describe): MINING

Primary Use of Surrounding Land:
 Occupancy Mining Grazing Forestry Recreation Watershed

Recommended Action (Examiner):

ELIMINATE DELINEATE
 Fill Fall Remove
 Bury Burn
 Other (describe): EOD Fence Barricade Post Signs
 Other (describe): _____

Recommended Equipment:

Hand Tools (describe) _____ Power Tools (describe) _____ Equipment (describe)
EOD WILL
SUPPLY

Estimated Manhours Required: 5HR

Remarks: WAS REPOSED OF ON BY FORT
TRWN EOD ON 8-17-84

Date: _____ Examiner: _____

Recommended Action (Area Manager): Jerry Mundy - Chief Ranger

Date: _____ Area Manager: _____

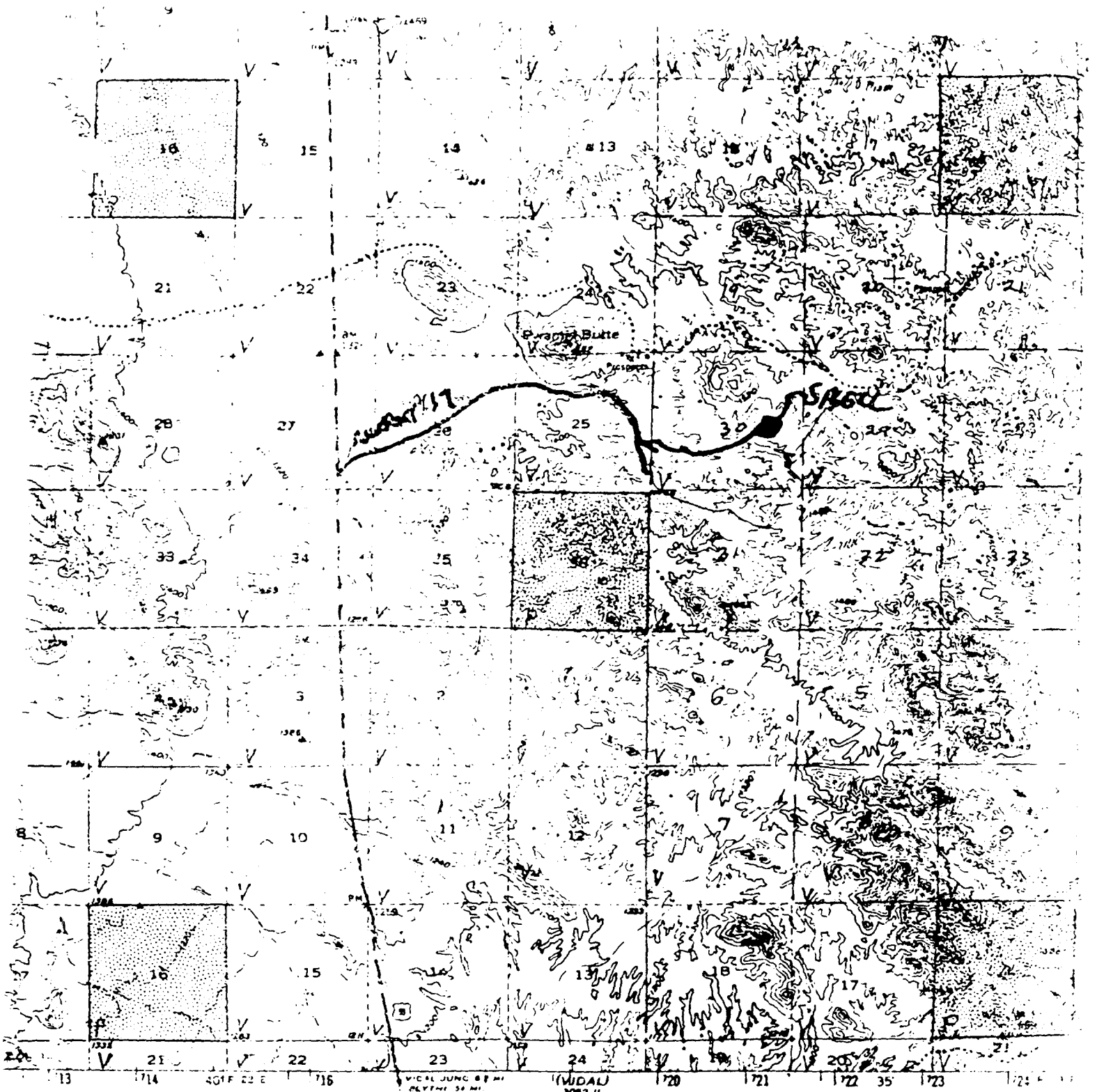
Hazard Code: _____ Priority: _____
Hazard Inventory Number: _____
THIS BOX TO BE COMPLETED BY DISTRICT

Description of Hazard: UNEXPLODED
SHELL FROM WWII
PATRON TRAINING

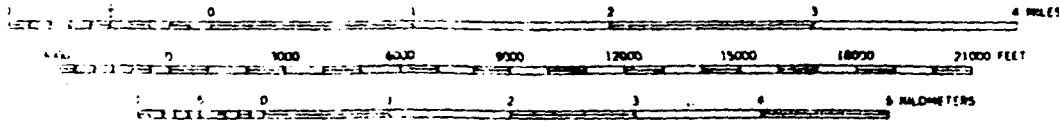
Hazard Rating:
 Extreme High Moderate Minor

Number of Known Accidents at Hazard Site: _____

Access to Hazard:
 Public Road Private Road Trail
 Hard Surface Road Motorcycle
 Gravel Road 2 WD Vehicle
 Foot Only 4 WD Vehicle



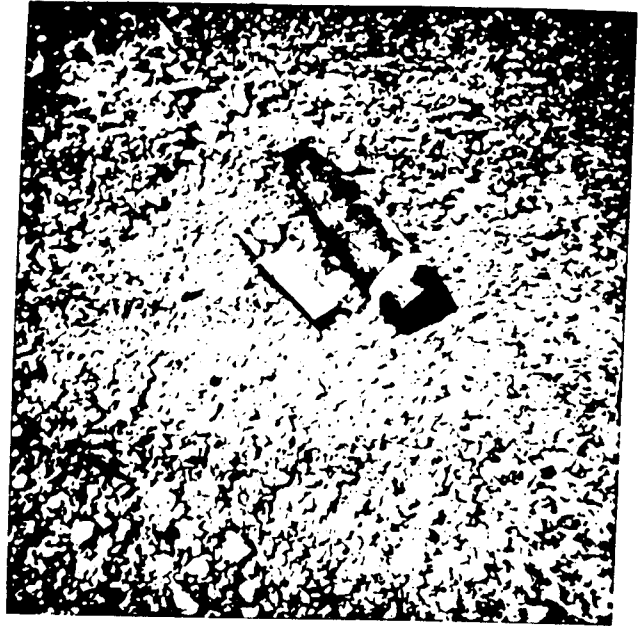
SCALE 1:62500



CONTOUR INTERVAL 40 FEET
 DOTTED LINES REPRESENT HALF-INTERVAL CONTOURS
 DATUM IS MEAN SEA LEVEL

PATENTED & RESERVED LANDS

CONFORMS WITH NATIONAL MAP ACCURACY STANDARDS
 FOR SALE BY U.S. GEOLOGICAL SURVEY DENVER, COLORADO 80225 OR WASHINGTON, D.C. 20242
 A FOLDER ESTIMATING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



AIRDROMES AND LANDING STRIPS
In the Desert Training Center Area

→ Landing Strips (Sand or Gravel) Cont.

	<u>NAME</u>	<u>RUNWAYS</u>	<u>ELEVATION</u>
*21.	Calipatria	2000' sq	-182 ft
22.	Chocolate Mts. (east end)	1000'x100'	1350 ft
x23.	Chuckwalla Mts.		
24.	Connor	2-2000'	900 ft
25.	Coxcomb Camp	2500'x150'	700 ft
x*26.	Datelan	2000'x100'	900 ft
27.	Desert Center Auxillary	2-4000'x150'	855 ft
x28.	Ford Well	1000'x150'	600 ft
29.	Freda Station	2-1500'x150'	875 ft
30.	Goffs	1500'x150'	2650 ft
**31.	Harveys	3500'	565 ft
**32.	Heron	2-3600'x150'	365 ft
33.	Hopkins Well	1500'x150'	500 ft
34.	Hyder	3-3000' (tri)	500 ft
→35.	Ibis	2500'x150'	2000 ft
*36.	Imperial County Airport	2500'sq	-69 ft
37.	Iron Mountain	1500'x150'	900 ft
38.	Laguna	2500'x150'	350 ft
39.	Little Chuckwalla Mts	1500'x150'	850 ft
40.	McCoy Springs	1000'x500'	700 ft
41.	Milpitas Wash	2000'x300'	500 ft
42.	Palo Verde	3000'	350 ft

2033

25 April 1985

RECEIVED
BUREAU OF LAND MANAGEMENT

1985 MAY -7 AM 8:48

NEEDLES RESOURCE AREA
NEEDLES, CA

1. Inclusive Dates: 17 -24 April 1985.
2. Location: Needles, California.
San Diego, California.
3. Purpose: Perform initial site visits for two potential DERF Projects.
4. Name of Travelers: Robert D. Dempsey
R. Frank Shearer
5. Persons Contacted: Everell G. Hayes, USDOJ-BLM Area Manager
Jerry Needy, USDOJ-BLM Lead Ranger
Bob Ausmus, Cima General Store, Cima, CA

6. Narrative: a. The USDOJ-BLM Needles Resource Area encompasses an area approximately 125 by 150 miles and over 5,000,000 acres in the Mohave Desert. The entire area was used by DOD as a training and maneuver area during the 1942-1944 timeframe. Eight division size Camps and two Army Airfields were set up within the boundaries of this BLM Resource Area. Over 1,000,000 men were trained in these facilities. Training facilities included small arms, anti-aircraft, tank, artillery, air to ground gunnery, air to air gunnery, and bombing ranges. A large part of this area was also used for Operation Desert Strike in 1961-1962.

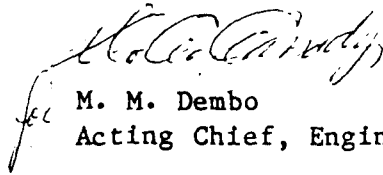
b. Two large scale ordnance disposal and clearing operations have been performed previously. The first of these was conducted using prisoners of war during 1943-1946. The second was conducted between 1947 and 1952 under the supervision of the US Army Corps of Engineers. Exact records of these clearance activities have not been located. A 1951 USACE Map of the area indicates large areas that were deduded and cleared but which should still be restricted from future subsurface development or operations.

c. Reports of findings of ordnance items occur one to four times per year at random sites throughout the resource area. In 1980 erosion uncovered approximately 80 tons of ordnance items that most likely were the buried remains of one of the early ordnance clearing operations. This ordnance had previously been burned or exploded and the remains buried. This material was transported to an abandoned mine shaft and buried once again on 16 Sep 80.

d. The BLM request for a DERF Project in this area indicated that a public visitor had found near the West Riverside Mountains a sign that stated that poison gas had been buried at that location. Range 36, Road, and 300 located. The sign had a warning section of the entire area. The sign had been reported. The sign could not be located and there was no

details of this site visit. Within this Division, Mr. Robert D. Dempsey will be responsible for coordination of this visit. He may be reached by telephone at (205) 895-5785 or FTS 873-5785.

Sincerely,



M. M. Dembo
Acting Chief, Engineering Division

Copies Furnished:

Commander, U. S. Army Engineer Division, South Pacific, ATTN:
SPDCO-E (Mr. A. Mei), 630 Sansome Street, San Francisco,
California 94111

Commander, U. S. Army Engineer District, Los Angeles, ATTN: SPLED
(Mr. L. Jauman), PO Box 2711, Los Angeles, California 90053

Commander, U. S. US Army Engineer District, Los Angeles, Arizona
Real Estate Office, 2721 N. Central Avenue, Suite 1010, Phoenix,
Arizona 85005

Commander, U. S. Army Corps of Engineers, ATTN: DAEN-ECE-B, 20
Massachusetts Avenue, N. W., Washington, D. C. 20314-1000

United States Department of Interior
 Bureau of Land Management
 California State Office



INCIDENT REPORT

NO. CA-069-80-48
 AREA Cima R.A.

INCIDENT Assist Military, Weapons (46-10-05)	DATE-TIME OCCURED 9-15-80, 0830 hours
LOCATION Goffs Butte (69555)	T & R T. 9 N., R. 18 E., Sec. 10
REPORTED BY Needles Search and Rescue Team	DATE-TIME REPORTED 4-8-80, 0800 hours
ADDRESS Needles, CA	PHONE 326-4515
HOW REPORTED E.O.D. Fort Irwin	RECEIVED BY Ranger K. Freeman

PERSONS INVOLVED	ADDRESS	PHONE	SEX-RACE-DOB
N/A			

VEHICLES INVOLVED
 N/A

DETAILS: On 4-28-80, I was contacted by Ft. Irwin's E.O.D. team concerning a report they had received from Needles Search and Rescue Team of a 1943-1945 military explosives dumpsite located near Goffs Butte. Note attached form DA 3265-R. Sgt. Redman of E.O.D. and Art Hayes of BLM, met me at the site a few days later and determined the project was too immense to begin without additional equipment and would have to be re-scheduled.

After a considerable amount of planning, two E.O.D. Tech's from Ft. Irwin, Art Hayes, 1 backhoe and 2 dump trucks with operators from Phillips Construction Co. of Needles, and myself, met at the dumpsite location on 9-15-80 to begin the project of determining the explosives degree of danger and removing them to a safer location. Approximately 80 tons of ordnances including rockets, gernades, and land mines were uncovered from a 30' X 30' X 6' area with most of them found to be safe. The explosives were then transported to an abandoned excavation (T. 10 N., R. 20 E. Sec. 34) and buried.

REPORT BY: Karen Freeman DATE: 9-7-80 REVIEWED BY: _____ DATE: _____ **E-22**

United States Department of Interior
Bureau of Land Management
California State Office



SUPPLEMENTAL
INCIDENT REPORT

NO. CA-069-80-48
AREA Cima R.A.

INCIDENT	Assist Military, Weapons	DATE-TIME OCCURED	9-15-80, 0830 hours
LOCATION	Goffs Butte	T & R	T. 9 N., R. 18 E., Sec. 10

The project was completed in 2 days leaving the original dumpsite free of ordnances and well-graded to enhance the landscape. A clean-up of the excavation area was conducted the following day.

A reporter from Needles Desert Star, Mike Perry accompanied me to the site on 9-16-80 to obtain photographs and a story for a future article. BLM photographs were obtained.

Cleared 9-17-80

259-651

4. ROUTINE

SECTION A: INITIAL INFORMATION

5. DATE/TIME REPORTED	9. INCIDENT LOCATION	11. ITEM(S) REPORTED 40EA ML LAND MINES 40EA Rifle Grenades 30EA 2.36 Rockets
6. REPORTED BY Cap B. Lutes	San Bernardino S.O. Needles, Ca	
7. PHONE NUMBER	10. WHO TO CONTACT Dep. Dave Beard Dep. Buck Lutes	
8. ADDRESS S.B. Co. 50 Needles Ca		

SECTION B: ACTION BY EOD

12. PERSONNEL DISPATCHED Sp5 Davis Sp4 Swager	13. DATE/TIME 28 APR 0630 hrs 80	14. TRAVEL DATA	15. MAN-HOURS
	A. DEPT 0530	A. AIR-FLYING TIME	A. TRAVEL 27
	B. ARR 0800	B. VEH-MILEAGE 300	B. INCIDENT 16
C. COMPL 1900			

16. CONFIRMED IDENTIFICATION 43EA; 2.36" Rockets, Practice, expended 51EA; M19 type Rifle Grenades 67EA; ML PRACTICE D-PLATE MINES, EMPTY	17. DISPOSITION Disposal at S.O. Selected Site
--	---

18. INCIDENT NARRATIVE (INCLUDE ALL SIGNIFICANT DETAILS AND PROBLEMS)

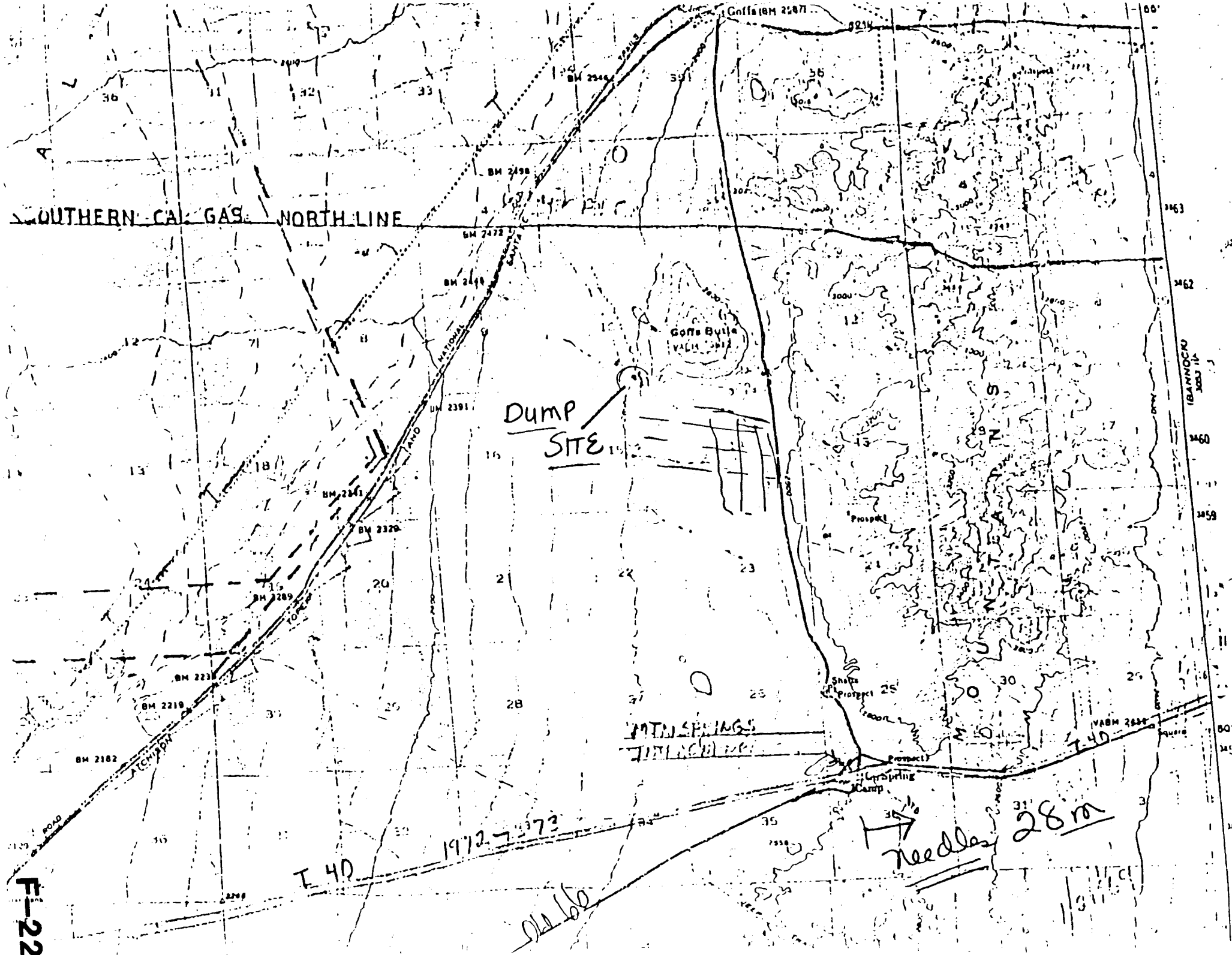
Above listed items were recovered by Sheriff S: R team from BCM property near Holt, Calif. A survey of that site by this team disclosed about 200+ ordnance items above surface and unknown quantity below surface. This area was a former wartime Army camp that was rapidly clear by POW's btwn 1943-45 by Army Corps of Eng'rs and certified for Public use. (as noted by official Doct DTD 1451 APPROX)

It appears this ordnance burial ground was selected at the foot of a mountain in a wash area that eventually uncovered the ordnance. Recommend the ordnance be recovered by the Govt or re-buried to prevent public circulation. This area is popular desert RV use area.

See attached map

19. AUTHENTICATION

A. TYPED NAME, GRADE OF UNIT COMMANDER	B. TELEPHONE NO.	C. DATE



SOUTHERN CAL GAS NORTH LINE

DUMP SITE

Mtn Springs
T-40

Needles 28m

1972-7-373
T-40

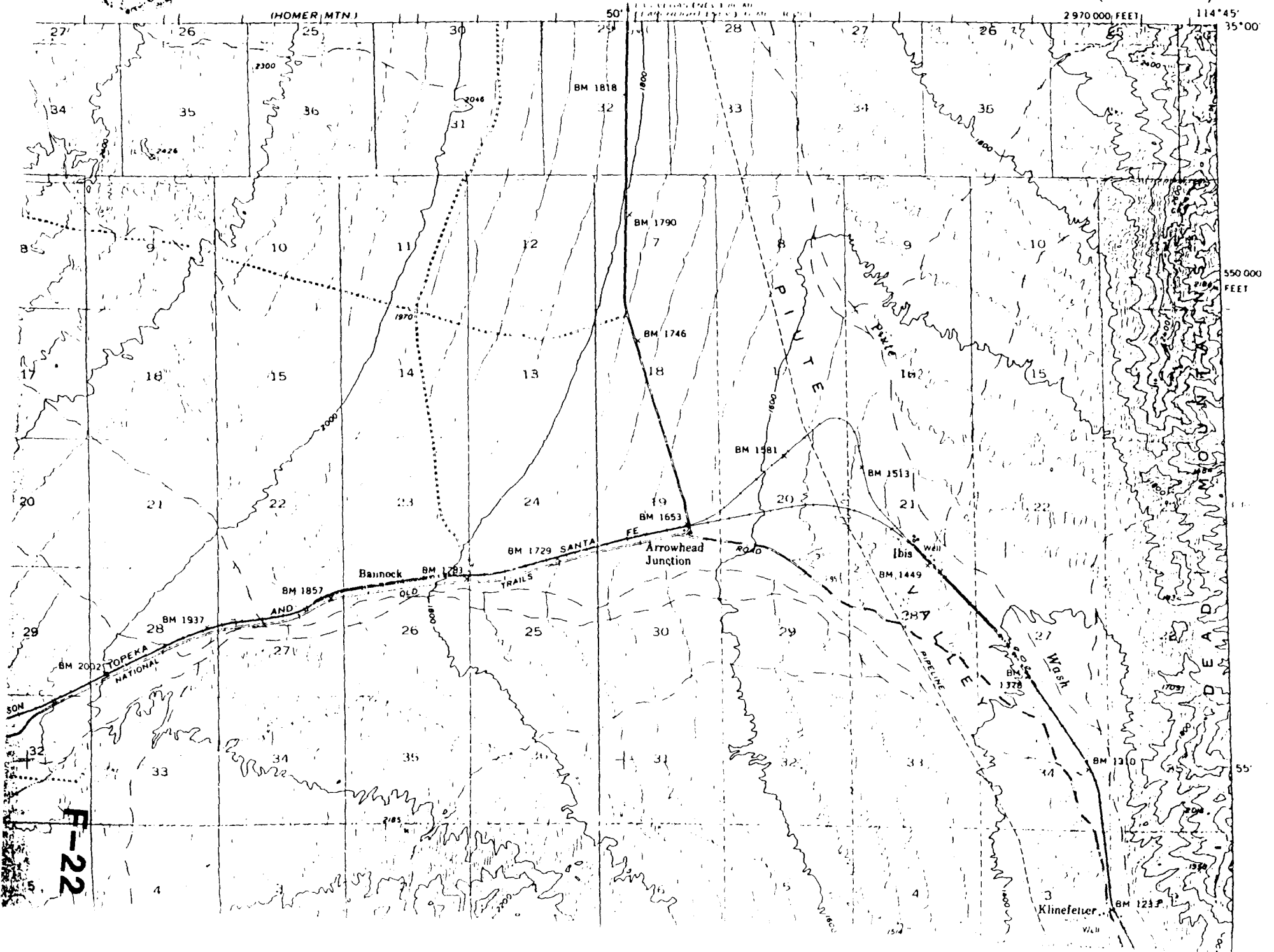
JAL 66

F-22

STATE OF CALIFORNIA
REPRESENTED BY THE
DIRECTOR OF WATER RESOURCES

BANNOCK QUADRANGLE
CALIFORNIA-SAN BERNARDINO CO.
15 MINUTE SERIES (TOPOGRAPHIC)

DAVIS DATA



F-22

A History of Large Scale Army Maneuver
in the United States, 1935-1964
by Jean R. Moenk Dec. 1969

Exercise DESERT STRIKE

Exercise DESERT STRIKE was an unfunded, unprogramed, joint training exercise conducted by the U.S. Strike Command during the period, 17 to 30 May 1964, to satisfy a requirement developed by the Joint Chiefs of Staff. At the time the JCS approved the concept for DESERT STRIKE, all exercises remaining in the U.S. Strike Command's FY 1964 joint exercise program had been cancelled, with the exception of a brigade level CPX/FIX. Exercise DESERT STRIKE was to be a 2-sided, semi-controlled joint Army-Air Force field training exercise which would permit the forces of the U.S. Strike Command to become familiar with the concepts and doctrines associated with the large-scale employment of nuclear weapons. Its major purpose was to train the major combat organizations, as well as combat support and combat service support units, of USARSTRIKE and USAFSTRIKE in the conduct of joint operations employing tactical nuclear as well as conventional weapons. The exercise also would train Army and Air Force troop units and individuals in passive and active Electronic Counter Measures and Electronic Counter Counter Measures; stress joint and unilateral intelligence operations in support of joint conventional and nuclear warfare; and evaluate appropriate concepts, operations, and procedures having a joint interest.⁵⁶

Exercise DESERT STRIKE was conducted in the desert maneuver area used in World War II which was located in western Arizona, southern California, and the southern tip of Nevada. This vast area was used to depict two fictitious world powers, CALONIA on the west and NEZONA on the east, whose common border extended from Mexico on the south (played as a neutral country) along the Colorado River to Las Vegas in the north (Map 20). Armed conflict resulted from a dispute over water rights, with CALONIA's armed forces represented by Joint Task Force MOJAVE and NEZONA's by Joint Task Force PHOENIX. An important innovation of this exercise was the creation of an official War Cabinet for each country. In view of the importance of nuclear play in the conduct of the exercise and the necessity for testing a means to limit escalation, the physical presence of a War Cabinet as a decision maker lent realism to political direction as well as to judgment as to when nuclear or chemical weapons should be used.⁵⁷

56

(1) Ltr, CINCSRIKE to CINCAFSTRIKE, 19 Aug 64, subj: Final Report of USSTRICOM Joint Exercise DESERT STRIKE. In ODCSOPS Ops Div files. (2) USCONARC Stf Study, 1 Dec 64, subj: DESERT STRIKE. (3) Semiannual Hist Rept, ODCSUTR Ops Div Mvr Br, Jan - Jun 64, pp. 18 - 19.

57

U. S. Army Military History Institute

HEADQUARTERS SIXTH UNITED STATES ARMY
PRESIDIO OF SAN FRANCISCO, CALIFORNIA 94129

IN REPLY REFER TO:

AMEDS

23 July 1964


SUBJECT: Final Report, Joint Exercise DESERT STRIKE (RCS ATUTR-368)

TO: Commanding General
United States Continental Army Command
Fort Monroe, Virginia
ATTN: ATUTR-P&O (Maneuvers Branch)

Attached final report of ARSTRIKE Action Agent, Joint Exercise DESERT STRIKE, is forwarded in accordance with paragraph 2, Appendix XI to Annex L, USCONARC Training Directive, dated 17 February 1964.

FOR THE COMMANDER:

1 Incl
as

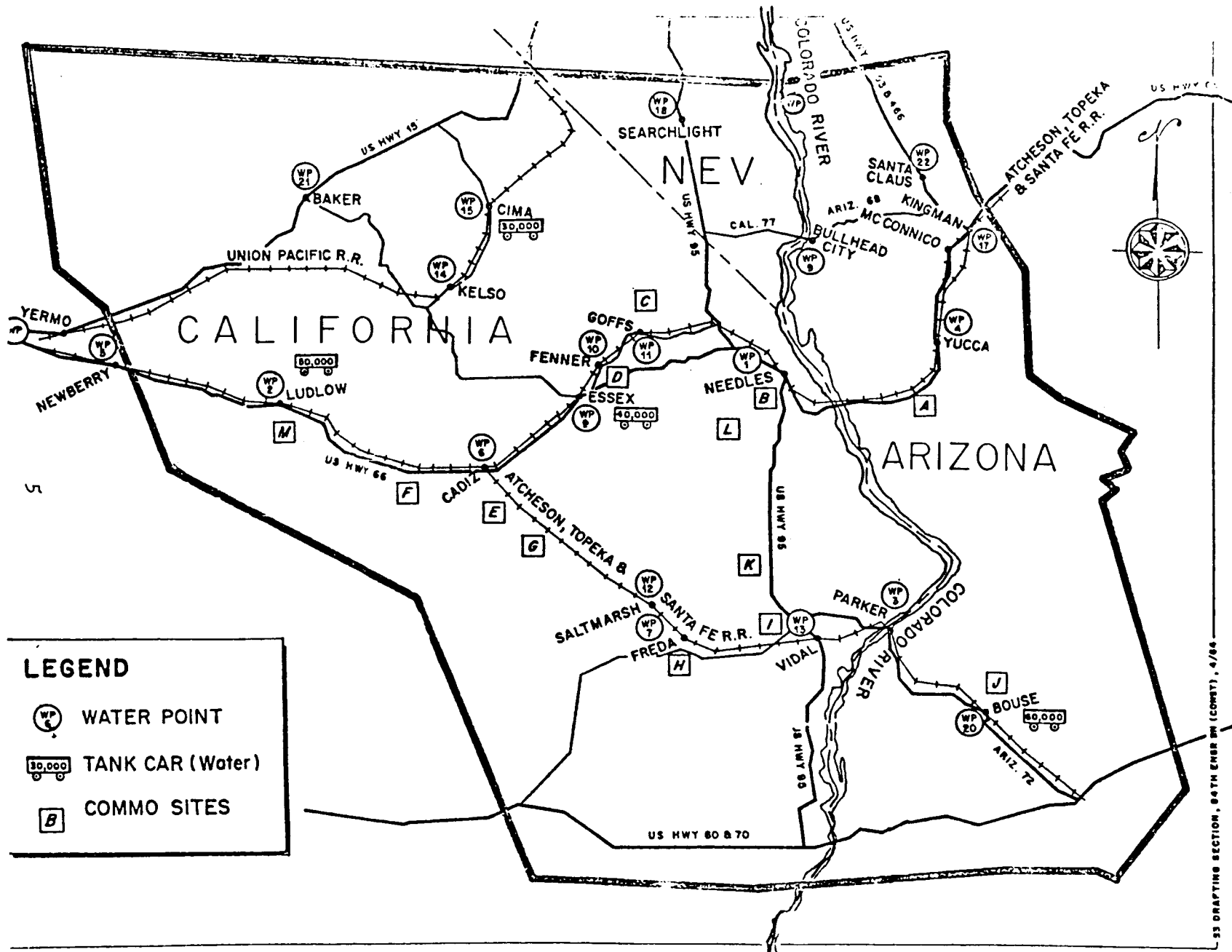

B. J. BROWN
Colonel, AGC
Adjutant General

DISTRIBUTION:

A,C,D(2.1),E,J(6,7) 2 ea
Addressees listed in Appendix XVI,
Annex L to USCONARC Training
Directive, 17 February 1964

LIBRARY
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F-24



53 DRAFTING SECTION, 84TH ENBR BN (COMST), 4/66

FINAL REPORT
JOINT EXERCISE DESERT STRIKE

SUPPORT UNITS

<u>UNIT</u>	<u>STRENGTH</u>	<u>SUPPORT FURNISHED</u>
<u>AVIATION-AVN MAINT</u>		
4th Avn Bn*	241	Avn supt for Dir Hq, Ump/Cont, NF
Co E, 704th Maint Bn	50	2d & lmtd 3d ech acft maint supt, 4th Avn Bn
217th TC Bn (Acft Maint)(ARNG)	557	Backup 3d & 4th ech acft maint, all exer units
SUB TOTAL	<u>848</u>	
<u>ENGINEER</u>		
30th Eng Det(WP)	4	Operate NF water supply points
35th Eng Bn(C)	622	Initially augment 84th Eng Bn; asgd JTF during exer; post-exer damage repair
84th Eng Bn(Const)*	795	Build tent city; operate NF water supt pts; pre-exer survey; damage repair
506th Eng Det(Util)*	27	Maintain util at NF FSPs & Needles
582d Eng Det(FFG)	18	Fire protection at 2 NF FSPs
593d Eng Gp HHC (S&M)*	37	Staff office of Dir, S&M, Hq NF & NF FSPs
593d Eng Det(FFG)*	18	Fire protection at Needles & Ludlow
SUB-TOTAL	<u>1,521</u>	
<u>ORDNANCE</u> ←		
1st Ord Co(GAS)	189	Backup 3d & 4th ech auto maint, Dir Hq, CSE, Ump/Cont, NF USAR equip pool
19th Ord Co(DAS)	119	Operate DX facility; 3d ech maint for Dir Hq, CSE, Ump/Cont, NF, USAR equip pool
63d Ord Bn HHD (Maint Supt)	35	
133d Ord Det(ED)	7	Fire atomic simulators; explosive ← disposal
170th Ord Det(ED)	7	Fire atomic simulators; explosive ← disposal
SUB-TOTAL	<u>357</u>	
<u>QUARTERMASTER</u>		
16th QM Bn	274	Operate 3 NF FSPs (Class I & III resupply; field maint, salvage
* Unit hq personnel also utilized as members of NF staff		

FINAL REPORT
JOINT EXERCISE DESERT STRIKE

SECTION III - OPERATIONS

1. Land Acquisition: ←

a. CG Sixth US Army, as personal representative of CG USCONARC for land acquisition matters, briefed governors, mayors, civic leaders, etc., during the period 13-18 November. Information presented included:

(1) Purpose and scope of the exercise.

(2) Facilities, such as house, barn, corral, plowed or planted fields, etc., which exercise troops would not be permitted to use.

(3) Damage control measures.

(4) Claims procedures.

b. The Los Angeles District Engineer, charged with primary responsibility for land acquisition, effected the initial public news release (prepared by USSTRICOM) on 18 November 1963. Dispatch of letters to the 4,373 land owners involved was initiated on the same date. Final results of the land acquisition program are summarized as follows:

(1) Of the estimated 12,500,000 acres for which maneuver permits were requested, signed agreements were received granting permission to use 12,204,481 acres (98%).

(2) Only 24 of the 4,373 land owners contacted ($\frac{1}{2}$ of one percent) specifically refused use of their property for exercise purposes.

c. Upon conclusion of the exercise, letters were dispatched by CG Sixth US Army to all land owners, expressing appreciation for their cooperation and contribution to the success of the exercise.

2. Deployment/Redeployment.

a. Deployment of Neutral Force units was accomplished in accordance with movement schedules developed by Hq Sixth US Army and approved by Hq USCONARC. Deployment of player units was accomplished in accordance with letter, Hq, USCONARC, subject: Transportation Movement Data - Joint Exercise DESERT STRIKE, dated 17 March 1964,

unprogrammed items as gas cylinders, construction materials, generators and tentage. Some requirements were not made known until the units arrived in the exercise area. A request for 3,000 water cans was not received until 7 days prior to the start of the exercise.

(9) 46% of the 17,808 Class II and IV requisitions received by the Neutral Force Consolidated Supply were filled during the exercise. A total of 4,753 short tons of II and IV supplies were received by Neutral Force.

d. Class V: ←

Requirements for Ordnance and Chemical Class V ammunition were developed by the player forces and requisitioned by Hq Sixth US Army and/or Neutral Force; approximately 850 short tons of Class V supplies were received.

e. Supply Liaison Representatives:

(1) Several supply agencies, namely DSA, GSA, AMC, SMC, OTAC and USAVSCOM, assigned supply liaison representatives on TDY to Hq, Neutral Force to assist in identifying sources of supply and to expedite exercise requisitions as much as possible.

(2) The assistance rendered by these liaison representatives was of incalculable value to the Neutral Force supply operation.

(3) Technical representatives of Gruman Aircraft, Bell Helicopter, Sikorsky Helicopter, De Havilland Aircraft, Lycoming Engine and Hamilton Standard Propeller were also present in the exercise area and provided invaluable assistance to Neutral Force.

6. Maintenance

a. Player force maintenance capabilities were self-sufficient except for aircraft. Neutral Force provided maintenance assistance during the pre-exercise and post-exercise periods.

b. The 217th Transportation Battalion (California National Guard), assigned to Neutral Force, provided direct third echelon support for 110 aircraft in non-divisional player forces, and direct fourth echelon and back-up third echelon support for all participating Army aircraft (approximately 400).

c. The national short supply of certain repair parts restricted maintenance capabilities, particularly parts required for the M 38A1 $\frac{1}{4}$ ton truck.

d. The second echelon maintenance capability of USAR and National Guard units was virtually non-existent, since these units did

ORDNANCE AND EXPLOSIVE
ARCHIVES SEARCH REPORT
FOR
FORMER CAMP IBIS (PROPER)
SAN BERNARDINO COUNTY
NEEDLES, CALIFORNIA
PROJECT NUMBER J09CA028301

APPENDIX G

REAL ESTATE DOCUMENTS

APPENDIX G

REAL ESTATE DOCUMENTS

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- G-1 Land Acquisition and Disposal (B-41).
- G-2 Letter, Subject: Land Acquisition, Desert Training Center (B-42).
- G-3 Document, Land Acquisition Camp Ibis (B-43).
- G-4 Current Real Estate owners, San Bernardino County (B-44).
- G-5 Document, Revocable Permit No. 12 (B-45).
- G-6 Document, No Area License (B-46).
- G-7 Document, Acquisition and Release of Southern Pacific property (B-47).
- G-8 Document, Surplus Notice (B-48).
- G-9 Letter, Subject: Land Releases (B-49).
- G-10 Real Estate documents, BLM Needles (B-50).

REALTY CONTROL FILE SUMMARY
(Land Acquisitions and Disposals Subsequent to 1 July 1940)

2277

RESERVATION NAME:

Camp Ibis, California

OFFICIALLY DESIGNATED BY:

LOCATION:

In San Bernardino County, 21 Miles Northwest of Needles, California

TYPE:

Campsite - California - Arizona Maneuver Area

LAND OWNERSHIP AND COST DATA

ACQUISITION ACTIONS

DISPOSAL ACTIONS

Exhibits "A"

Exhibits "B"

NET AREA

GROSS COST

5,760.00 acres, transferred*
4,455.50 acres, Permit (2)
0.00 Of an acre, License (1)
10,215.50 acres, total area acquired
4,455.50 acres**
5,760.00 acres
5,760.00 acres***
00.00

Nominal

JURISDICTION

RELOCATIONS

FINAL PROJECT MAP:

Exhibit "F"

MISCELLANEOUS PAPERS:

REMARKS:

- * Implied Transfer..
- ** 1 License no area, terminated 26 September 1944; 3815.50 acres 1 Permit, terminated 17 February 1945; 640.00 acres 1 Permit, terminated 8 March 1945.
- *** Relinquished to Dept. of the Interior 3 May 1951.

COPY

Consecutive RE-D 959
May 16, 1942

WAR DEPARTMENT
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON

Refer to File No. GE 601.1(Needles, Calif.)
SPELA

May 13, 1942

SUBJECT: Land Acquisition, Desert Training Area, Needles,
California,

TO: The Commanding General of the Services of Supply.

1. There is a military necessity for the acquisition by transfer from the Department of Interior of certain lands in the vicinity of Needles, California, to be used as a desert training area for armored troops. Although the War Department has received a permit from the Department of Interior to use several million acres in this area, 105,901.27 acres are necessary for camp sites and must be transferred to the jurisdiction of the War Department. The transfer is essential in order to prohibit the filing of land claims in the area for the duration. Inclosed is a copy of the proposed Executive Order described the lands to be withdrawn and transferred.

2. The determination of military necessity is based upon conclusions reached in several conferences between this office, the Army Ground Forces, and the Department of Interior.

3. It is recommended that the Under Secretary of War be requested to authorize this office to acquire the necessary land by transfer from the Department of Interior.

FOR THE CHIEF OF ENGINEERS:

THOMAS M. ROBINS,
Major General,
Assistant Chief of Engineers.

2 Incls.
#1 - Cy. ltr. 5-24-42
#2 - Executive Order

* FOR INFORMATION ONLY *

G O P Y

SUBJECT: Land Acquisition, Desert Training Area, Needles, California.

1st Ind.

**War Department, Headquarters, Services of Supply, May 13, 1942.
To: The Under Secretary of War.**

1. The Secretary of War directs that you be informed that a military necessity exists for the acquisition of the land referred to in basic communication, by transfer from the Department of Interior.

For the Commanding General:

**W. D. STYER,
Brigadier General, G.S.C.,
Chief of Staff.**

2 Incls. n/c

2nd Ind.

Office of the Under Secretary of War, May 13, 1942. To: Chief of Engineers.

For acquisition by transfer from the Department of Interior in compliance with memorandum, Subject: "Acquisition of Land", approved by the Under Secretary of War June 7, 1941.

By direction of the Under Secretary of War:

**BASIL D. EDWARDS,
Colonel, Infantry,
Assistant Executive**

2 Incls. n/c

TRACT REGISTER

2210
 (Prepared for each Real Estate District)

PROJECT (Official Name) Camp Ibis (CAMA)		PURPOSE (As Set Forth In Directive) Campsite CAMA			DATE OF DIRECTIVE 5-15-42 Date Unknown		DIRECTIVE NO. (In Lieu of Use Permit formal dir.) 2-2957
TRACT NUMBER	LANDOWNER'S NAME	ACREAGE	PRICE	ESTATE ^{1/}	METHOD ^{2/}	LAST ACTION STEP TAKEN	REMARKS (Including Contract No. Total Acres)
	Department of the Interior	5,760.00	---		T	IMPLIED TRANSFER Use Permit, date Unknown	
	State of California	640.00	---	✓	PE	D	Revocable Permit No. 12 Public Resources Code dated 24 March 1942
	Southern Pacific Company	3,815.50	---	✓	PE	D	Permissive Use Agreement dated 11 February 1942
	The Atchison, Topeka and Santa Fe Railway Company	No area	Nominal	✓	LI	D	License W04-193-eng-321 dated 24 August 1943 for communication line right of way
TOTAL		10,215.50					

10,215.50 Acres, Lesser Interests
 10,215.50 Acres, Total Area Acquired

AUDITED
 June 1948
[Signature]

AS0071 TRANSFER RESEARCH SCREEN 01/17/96
16:05:04
PARCEL NUMBER 0659071180000 PARC STAT A TAX STAT 1 ADDR CHNG 06/01/90

SITUS ADDR
MAILING ADDR 201 MISSION ST NOTES
SAN FRANCISCO CA 94105
C/O SANTA FE PACIFIC REALTY CORP

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> SF PACIFIC PROPERTIES INC CI 9001177500000 011090

TRACT FORMATTED LEGAL
LOT 0 BLOCK/UNIT
UNFORMATTED LEGAL

ALL SEC 13 TP 10N R 20E 640 AC

PROBLEM DEED HISTORY
TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS PFK1 PFK10 RETURN PFK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 01/17/96
16:05:10

PARCEL NUMBER 0659181010000 PARC STAT A TAX STAT 2 ADDR CHNG
SITUS ADDR
MAILING ADDR ADDRESS UNKNOWN NOTES

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> GOVERNMENT LAND SU

TRACT FORMATTED LEGAL
LOT 0 BLOCK/UNIT
UNFORMATTED LEGAL

GOV SLOTS 1 THRU 4 TP 10N R 21E 14.61 AC

PROBLEM DEED HISTORY
TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS PFK1 PFK10 RETURN PFK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 01/17/96
16:05:16

PARCEL NUMBER 0659181020000 PARC STAT A TAX STAT 2 ADDR CHNG
SITUS ADDR

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> GOVERNMENT LAND 50

TRACT FORMATTED LEGAL
LOT 0 BLOCK/UNIT
UNFORMATTED LEGAL

SEC 7 TP 10N R 21E 621.74 AC

PROBLEM DEED HISTORY

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER ADDRESS PER1 PER10 RETURN PER13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 01/17/96
16:05:27

PARCEL NUMBER 0659181030000 PARC STAT A TAX STAT 1 ADDR CHNG 06/01/90
STATUS ADDR

MAILING ADDR 201 MISSION ST NOTES
SAN FRANCISCO CA 94105

C/O SANTA FE PACIFIC REALTY CORP

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> SF PACIFIC PROPERTIES INC CT 9001177500000 011090

TRACT FORMATTED LEGAL
LOT 0 BLOCK/UNIT
UNFORMATTED LEGAL

ALL SEC 5 TP 10N R 21E 13.64 AC

PROBLEM DEED HISTORY

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER ADDRESS PER1 PER10 RETURN PER13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 01/17/96
16:05:27

PARCEL NUMBER 0659181040000 PARC STAT A TAX STAT 2 ADDR CHNG
STATUS ADDR

MAILING ADDR ADDRESS UNKNOWN NOTES

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> GOVERNMENT LAND 50

TRACT FORMATTED LEGAL
LOT 0 BLOCK/UNIT
UNFORMATTED LEGAL

SEC 8 TP 10N R 21E 641.18 AC

PROBLEM DEED HISTORY

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS FPK1

AS0071

TRANSFER RESEARCH SCREEN

01/17/96

16:05:39

PARCEL NUMBER 0659181050000 PARC STAT A TAX STAT 2 ADDR CHNG

SITUS ADDR

MAILING ADDR ADDRESS UNKNOWN

NOTES

BILL

OWNER NAME

ETAL R/I REC DOC-NO.

REC-DATE

ACQ-DATE

=> GOVERNMENT LAND

50

FORMATTED LEGAL

TRACT

LOT

0

BLOCK/UNIT

UNFORMATTED LEGAL

GOV LOTS 1 THRU 4 SEC 4 TP 10N R 21E 4.57 AC

PROBLEM DEED HISTORY

TYPE

DATE

DOCUMENT-NO

TYPE

DATE

DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS FPK1

PK10 RETURN

FPK13

VIEW NOTES

AS0071

TRANSFER RESEARCH SCREEN

01/17/96

16:05:39

PARCEL NUMBER 0659181060000 PARC STAT A TAX STAT 1 ADDR CHNG 06/01/90

SITUS ADDR

MAILING ADDR 291 HESSTON ST

NOTES

SAN FRANCISCO CA 94105

C/O SANTA FE PACIFIC REALTY CORP

BILL

OWNER NAME

ETAL R/I REC DOC-NO.

REC-DATE

ACQ-DATE

=> SF PACIFIC PROPERTIES INC

CT 9001177500000

011090

FORMATTED LEGAL

TRACT

LOT

0

BLOCK/UNIT

UNFORMATTED LEGAL

ALL SEC 9 TP 10N R 21E 641.36 AC

PROBLEM DEED HISTORY

TYPE

DATE

DOCUMENT-NO

TYPE

DATE

DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS FPK1

PK10 RETURN

FPK13

VIEW NOTES

AS0071

TRANSFER RESEARCH SCREEN

01/17/96

16:05:44

PARCEL NUMBER 0659181090000 PARC STAT A TAX STAT 2 ADDR CHNG

SITUS ADDR

MAILING ADDR ADDRESS UNKNOWN

NOTES

BILL

OWNER NAME

ETAL R/I REC DOC-NO.

REC-DATE

ACQ-DATE

=> GOVERNMENT LAND

50

File M. Aragon County Assessor San Bernardino 1-30-96 1057/ua.

FORMATTED LEGAL

TRACT

LOT

0

BLOCK/UNIT

UNFORMATTED LEGAL

TYPE DATE DOCUMENT NO TYPE DATE DOCUMENT NO

ENTER PARCEL NUMBER /PRESS FPK1 FPK10 RETURN FPK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 01/17/96
16:05:50

PARCEL NUMBER 065918110000 PARC STAT A TAX STAT 2 ADDR CHNG
STATUS ADDR
MAILING ADDR ADDRESS UNKNOWN NOTES

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> GOVERNMENT LAND 50

TRACT FORMATTED LEGAL
LOT 0 BLOCK 73411
UNFORMATTED LEGAL

~~SECTION 11~~ TRACT 10N R 21E 640 AC 7

PROBLEM DEED HISTORY

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT NO

ENTER PARCEL NUMBER /PRESS FPK1 FPK10 RETURN FPK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 01/17/96
16:06:04

PARCEL NUMBER 0659181140000 PARC STAT A TAX STAT 2 ADDR CHNG
STATUS ADDR
MAILING ADDR ADDRESS UNKNOWN NOTES

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> GOVERNMENT LAND 50

TRACT FORMATTED LEGAL
LOT 0 BLOCK 73411
UNFORMATTED LEGAL

~~SECTION 14~~ TRACT 10N R 21E 631.68 AC 7

PROBLEM DEED HISTORY

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS FPK1 FPK10 RETURN FPK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 01/17/96
16:06:10

PARCEL NUMBER 0659181150000 PARC STAT A TAX STAT 2 ADDR CHNG
STATUS ADDR
MAILING ADDR ADDRESS UNKNOWN NOTES

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> GOVERNMENT LAND 50

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> STATE OF CALIFORNIA 50

TRACT FORMATTED LEGAL
LOT 0 BLOCK/UNIT

UNFORMATTED LEGAL
SEC 16 T10N R 21E EX RE R/W 556.32 AC
PROB FIN DEED HISTORY

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER / ADDRESS PERM PER ID RETURN PER IS VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 01/17/96
16:06:37
PARCEL NUMBER 0659241000000 PARC STAT A TAX STAT 1 ADDR CHNG 11/27/89
SITUS ADDR
MAILING ADDR BOX 27017 NOTES
ALBUQUERQUE, NH 87125

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> SFP MINERALS CORP CT 8735895200000 100687

TRACT FORMATTED LEGAL
LOT 0 BLOCK/UNIT

UNFORMATTED LEGAL
MINERAL RIGHTS IN A PARCEL OF LAND 47.5 AC M/L LYING IN W 1/2 NW 1/4 AND IN SW
PROB FIN DEED HISTORY

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

MORE UNFORMATTED LEGAL, PERM
ENTER PARCEL NUMBER / ADDRESS PERM PER ID RETURN PER IS VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 01/17/96
16:06:45
PARCEL NUMBER 0659241090000 PARC STAT A TAX STAT 3 ADDR CHNG
SITUS ADDR
MAILING ADDR ADDRESS UNKNOWN NOTES

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> CALIFORNIA ARIZONA AND SANIA FE R P 50

TRACT FORMATTED LEGAL
LOT 0 BLOCK/UNIT

UNFORMATTED LEGAL
NAP-804 36 79B PAR NO 3 47.5 AC M/L Y
PROB FIN DEED HISTORY

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

AS0071

TRANSFER RESEARCH SCREEN

01/17/96

15:06:54

PARCEL NUMBER 065924110000 PARC STAT A TAX STAT 3 ADDR CHNG

SITUS ADDR

HAILING ADDR ADDRESS UNIFORM

NOTES

BILL	OWNER NAME	ETAL R/I	REC DOC-NO.	REC-DATE	ACQ-DATE
=>	ALCHISON LOPEZA AND SALLA PE TR CO	50			

TRACT

FORMATTED LEGAL
LOT 0 BLOCK/UNIT

UNFORMATTED LEGAL

MAP 804 36 79 PAR NO 3

PROBLEM DEED HISTORY

TYPE	DATE	DOCUMENT-NO	TYPE	DATE	DOCUMENT-NO
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ENTER PARCEL NUMBER /PRESS PFK1	PKF10	RETURN	PKF13	VIEW NOTES
AS0071	TRANSFER RESEARCH SCREEN			01/17/96 15:07:01

PARCEL NUMBER 0659241130000 PARC STAT A TAX STAT 2 ADDR CHNG

SITUS ADDR

HAILING ADDR ADDRESS UNIFORM

NOTES

BILL	OWNER NAME	ETAL R/I	REC DOC-NO.	REC-DATE	ACQ-DATE
=>	GOVERNMENT LAND	50			

TRACT

FORMATTED LEGAL
LOT 0 BLOCK/UNIT

UNFORMATTED LEGAL

SEC 20 TR 10N R 21E EX RR R/W EX CD RD PER 12-4-89 #89-08952A -

PROBLEM DEED HISTORY

TYPE	DATE	DOCUMENT-NO	TYPE	DATE	DOCUMENT-NO
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ENTER PARCEL NUMBER /PRESS PFK1	PKF10	RETURN	PKF13	VIEW NOTES
AS0071	TRANSFER RESEARCH SCREEN			01/17/96 15:07:09

PARCEL NUMBER 0659241140000 PARC STAT A TAX STAT 2 ADDR CHNG

SITUS ADDR

HAILING ADDR ADDRESS UNIFORM

NOTES

BILL	OWNER NAME	ETAL R/I	REC DOC-NO.	REC-DATE	ACQ-DATE
=>	GOVERNMENT LAND	50			

TRACT

FORMATTED LEGAL
LOT 0 BLOCK/UNIT

UNFORMATTED LEGAL

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS PFK1 PFK10 RETURN PFK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 01/17/96
16:07:17

PARCEL NUMBER 0659241160000 PARC STAT A TAX STAT 1 ADDR CHNG 06/01/90
SITUS ADDR

MAILING ADDR 201 MISSION ST NOTES
SAN FRANCISCO CA 94105
C/O SANTA FE PACIFIC REALTY CORP

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> SF PACIFIC PROPERTIES INC 01 900117500000 011090

FORMATTED LEGAL

TRACT LOT 0 BLOCK/UNIT

UNFORMATTED LEGAL

~~ALL THAT PTN SEC 21 1/4 10N R 21E LYING ELY OF RR R/W EX AT AND SF RR PARCELS~~
PROBLEM DEED HISTORY

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS PFK1 PFK10 RETURN PFK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 01/17/96
16:07:26

PARCEL NUMBER 0659241170000 PARC STAT A TAX STAT 1 ADDR CHNG 06/01/90
SITUS ADDR

MAILING ADDR 201 MISSION ST NOTES
SAN FRANCISCO CA 94105
C/O SANTA FE PACIFIC REALTY CORP

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> SF PACIFIC PROPERTIES INC 01 9001177500000 011090

FORMATTED LEGAL

TRACT LOT 0 BLOCK/UNIT

UNFORMATTED LEGAL

~~ALL THAT PTN SEC 21 1/4 10N R 21E LYING SWLY OF AT AND SF RR PARCELS~~
PROBLEM DEED HISTORY

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS PFK1 PFK10 RETURN PFK13 VIEW NOTES

SITUS ADDR
MAILING ADDR ADDRESS UNKNOWN

NOTES

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> GOVERNMENT LAND SO

TRACT FORMATTED LEGAL
LOT 0 BLOCK/UNIT

UNFORMATTED LEGAL
GOV LOTS 1 THRU 5 AND N 1/2 SEC 22 TP 11N R 20E 446.99 AC.
PROBLEM DEED HISTORY

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS PFK1 PFK10 RETURN PFK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 02/09/96
12:06:18

PARCEL NUMBER 0658121070000 PARC STAT A TAX STAT 2 ADDR CHNG
SITUS ADDR

MAILING ADDR ADDRESS UNKNOWN NOTES

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> GOVERNMENT LAND SO

TRACT FORMATTED LEGAL
LOT 0 BLOCK/UNIT

UNFORMATTED LEGAL
GOV LOTS 1 THRU 6 AND S 1/2 S 1/2 SEC 27 TP 11N R 20E 292.46 AC
PROBLEM DEED HISTORY

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS PFK1 PFK10 RETURN PFK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 02/09/96
12:06:25

PARCEL NUMBER 0658121030000 PARC STAT A TAX STAT 2 ADDR CHNG
SITUS ADDR

MAILING ADDR ADDRESS UNKNOWN NOTES

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> GOVERNMENT LAND SO

TRACT FORMATTED LEGAL
LOT 0 BLOCK/UNIT

UNFORMATTED LEGAL
SEC 28 TP 11N R 20E 640 AC
PROBLEM DEED HISTORY

TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS PFK1 PFK10 RETURN PFK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 02/09/96
12:06:33

PARCEL NUMBER 0658101020000 PARC STAT A TAX STAT 2 ADDR CHNG
SITUS ADDR
MAILING ADDR ADDRESS UNKNOWN NOTES

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> GOVERNMENT LAND SO

TRACT FORMATTED LEGAL
LOT 0 BLOCK/UNIT
UNFORMATTED LEGAL

SEC 29 TP 11N R 20E 640 AC
PROBLEM DEED HISTORY
TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS PFK1 PFK10 RETURN PFK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 02/09/96
12:06:39

PARCEL NUMBER 0658101030000 PARC STAT A TAX STAT 2 ADDR CHNG
SITUS ADDR
MAILING ADDR ADDRESS UNKNOWN NOTES

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> GOVERNMENT LAND SO

TRACT FORMATTED LEGAL
LOT 0 BLOCK/UNIT
UNFORMATTED LEGAL

SEC 32 TP 11N R 20E 661.00 AC
PROBLEM DEED HISTORY
TYPE DATE DOCUMENT-NO TYPE DATE DOCUMENT-NO

ENTER PARCEL NUMBER /PRESS PFK1 PFK10 RETURN PFK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 02/09/96
12:06:46

PARCEL NUMBER 0658111050000 PARC STAT A TAX STAT 2 ADDR CHNG
SITUS ADDR
MAILING ADDR ADDRESS UNKNOWN NOTES

BILL OWNER NAME ETAL R/I REC DOC-NO. REC-DATE ACQ-DATE
=> GOVERNMENT LAND SO

UNFORMATTED LEGAL

SEC 33 TP 11N R 20E 661.56 AC

PROBLEM DEED HISTORY

TYPE	DATE	DOCUMENT-NO	TYPE	DATE	DOCUMENT-NO
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ENTER PARCEL NUMBER /PRESS PFK1 PFK10 RETURN PFK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 02/09/96
12:06:51

PARCEL NUMBER 0658111040000 PARC STAT A TAX STAT 2 ADDR CHNG
SITUS ADDR
MAILING ADDR ADDRESS UNKNOWN NOTES

BILL	OWNER NAME	ETAL R/I	REC DOC-NO.	REC-DATE	ACQ-DATE
=>	GOVERNMENT LAND		SO		

FORMATTED LEGAL

TRACT	LOT	BLOCK/UNIT
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UNFORMATTED LEGAL

SEC 34 TP 11N R 20E 666.80 AC

PROBLEM DEED HISTORY

TYPE	DATE	DOCUMENT-NO	TYPE	DATE	DOCUMENT-NO
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ENTER PARCEL NUMBER /PRESS PFK1 PFK10 RETURN PFK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 02/09/96
12:07:02

PARCEL NUMBER 0658101040000 PARC STAT A TAX STAT 2 ADDR CHNG
SITUS ADDR
MAILING ADDR ADDRESS UNKNOWN NOTES

BILL	OWNER NAME	ETAL R/I	REC DOC-NO.	REC-DATE	ACQ-DATE
=>	GOVERNMENT LAND		SO		

FORMATTED LEGAL

TRACT	LOT	BLOCK/UNIT
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UNFORMATTED LEGAL

SEC 31 TP 11N R 20E 882.27 AC

PROBLEM DEED HISTORY

TYPE	DATE	DOCUMENT-NO	TYPE	DATE	DOCUMENT-NO
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ENTER PARCEL NUMBER /PRESS PFK1 PFK10 RETURN PFK13 VIEW NOTES
AS0071 TRANSFER RESEARCH SCREEN 02/09/96
12:07:09

PARCEL NUMBER 0658111030000 PARC STAT A TAX STAT 2 ADDR CHNG
SITUS ADDR
MAILING ADDR ADDRESS UNKNOWN NOTES

RETAINED

REVOCABLE PERMIT
NO. 12 PUBLIC RESOURCES CODE

WHEREAS, The War Department is desirous of obtaining the use of certain lands of the State of California situated in the Counties of San Bernardino, Riverside and Imperial, State of California, and lying within the exterior boundaries of that certain area more particularly described as follows:

Beginning at a point at the intersection of the township line between Townships 15 and 16 North and the State boundary line between California and Nevada; thence West to a point at Townships 15 and 16 North, Ranges 12 and 13 East; thence South to a point at Townships 10 and 11 North, Ranges 12 and 13 East; thence South to a point at Townships 5 and 6 North, Ranges 11 and 12 East; thence South to a point at Townships 2 and 3 North, Ranges 11 and 12 East; thence South to the San Bernardino base between Ranges 13 and 14 East; thence South to a point at Townships 4 and 5 South, Ranges 13 and 14 East; thence West to a point at Townships 4 and 5 South, Ranges 9 and 10 East; thence South to a point at Townships 6 and 7 South, Ranges 9 and 10 East; thence East to a point at Townships 6 and 7 South, Ranges 16 and 17 East; thence South along the line between Ranges 16 and 17 East to the intersection of said line with the northerly right-of-way line of the Southern Pacific Railroad from Diland, California, to Yuma, Arizona; thence southeasterly along the northerly right-of-way line of the Southern Pacific Railroad to the west bank of the Colorado River; thence northerly following the west bank of the Colorado River to its intersection with the California-Nevada boundary line; thence northwesterly along said California-Nevada boundary to the point of beginning, the points described being at the intersection of the respective township and range lines all referred to the San Bernardino Base and Meridian; and

WHEREAS, the State of California, through the State Lands Commission, pursuant to Division 6 of the Public Resources Code, has consented to the use of said lands by the United States for the purpose of conducting armored division maneuvers; and,

WHEREAS, the use of said lands will be of mutual benefit to the parties hereto;

Ind 2

WHEREAS, in consideration of the foregoing, the State of California hereinafter referred to as the Permitter, pursuant to the authority contained in Division 5 of the Public Resources Code, hereby grants permission to the United States of America, hereinafter referred to as the Permittee, to use those lands under the jurisdiction of the State Lands Commission lying within the exterior boundaries of the foregoing described area as a site for armored division maneuvers.

Permission to use said lands for the purposes indicated is granted only for the duration of the present war and six months thereafter, and is subject to the following terms and conditions:

1. That the use of the lands involved shall not interfere with the use and occupancy of any portion of such lands occupied by any persons with the consent of the Permitter;

2. That this authorization is not to be construed as vesting in the Permittee any permanent interest of whatever nature in the above described lands, and upon termination of the within permit, the use of said lands shall revert to the State of California;

3. That upon termination of this authorization, the Permittee shall at its sole expense and within a reasonable time after receipt of notice therefor remove all its property from said land and restore it as early as practicable to its original condition if so requested by the Permitter;

4. That in the event that loss, destruction or damage occurs to any property of the Permitter or to any property of any person occupying any of said lands with the consent of the Permitter occasioned in whole or in part by the negligence of any of the officers, agents, employees or servants, of the Permittee in connection with the use of said land, the

Permittee shall submit to the Congress of the United States a statement of facts in regard thereto and make appropriate recommendations with respect to indemnifying and saving harmless the Verifier or any person holding under it in whole or in part as the circumstances warrant;

5. That no Member of or Delegate to Congress, or Resident Commissioner shall be admitted to any share or part of this permit, or to any benefit to arise therefrom. Nothing, however, herein contained shall be construed to extend to any incorporated company, if the permit be for the general benefit of such corporation or company;

6. That in all matters in connection with this permit requiring the approval or action of the Secretary of War, the Commanding Officer, Ninth Corps Area, Salt Lake City, is hereby designated and empowered to act as the local representative of the War Department.

IN WITNESS WHEREOF, on behalf of the State of California, the within-revocable permit has been executed this 8th day of March, 1942.

STATE OF CALIFORNIA
STATE LEGISLATURE

/s/ By J. M. CLIFFORD

J. M. CLIFFORD
Executive Officer.

This permit is executed on behalf of the United States of America by the Secretary of War, representing the War Department, in acknowledgment of the acceptance of the terms and conditions therein set forth,

UNITED STATES OF AMERICA
By Secretary of War.

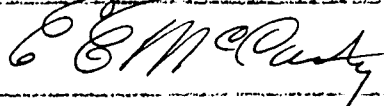
FORM 1029 STANDARD

(Approved by General Solicitor.)

All or part of the property to which the foregoing instrument pertains is owned by The California, Arizona and Santa Fe Railway Company, hereinafter called "Owner," and, together with all other physical property of Owner, is in the possession of The Atchafalaya, Tepeka and Santa Fe Railway Company, hereinafter called "Operating Company," under a lease authorizing the making of the foregoing instrument by Operating Company with the consent of Owner; and Owner hereby consents to and approves the making of the foregoing instrument with the understanding and upon the condition that if at any time during the term thereof Owner shall take possession of its railroad and property, it shall be substituted in the place and stead of Operating Company, and shall succeed to all of Operating Company's interest in said instrument for and during the remainder of any unexpired term thereof.

THE CALIFORNIA, ARIZONA AND SANTA FE RAILWAY COMPANY,

By



Its Vice President

CERTIFICATE OF AUTHORITY

I, C. W. Jones, hereby certify that I am the Assistant Secretary of The Atchison, Topeka and Santa Fe Railway Company the corporation described in and which executed the foregoing _____

License _____;

that said corporation is organized under the laws of the State of Kansas _____; that the corporate seal affixed to said instrument is the

seal of said corporation; that J. M. Elliott and _____

_____ who executed said license as Assistant to General Manager

and _____ of said corporation ~~was~~ ^{was} then the _____

Assistant to General Manager and _____

of said corporation ~~was~~ ^{has} and ~~was~~ been duly authorized to execute said

instrument on behalf of said corporation; that I know the signature~~s~~ of said

J. M. Elliott and _____,

and that the signatures affixed to such instrument are genuine.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the corporate seal of said company, this 24th day of December, 1943.

C. W. Jones

Assistant Secretary

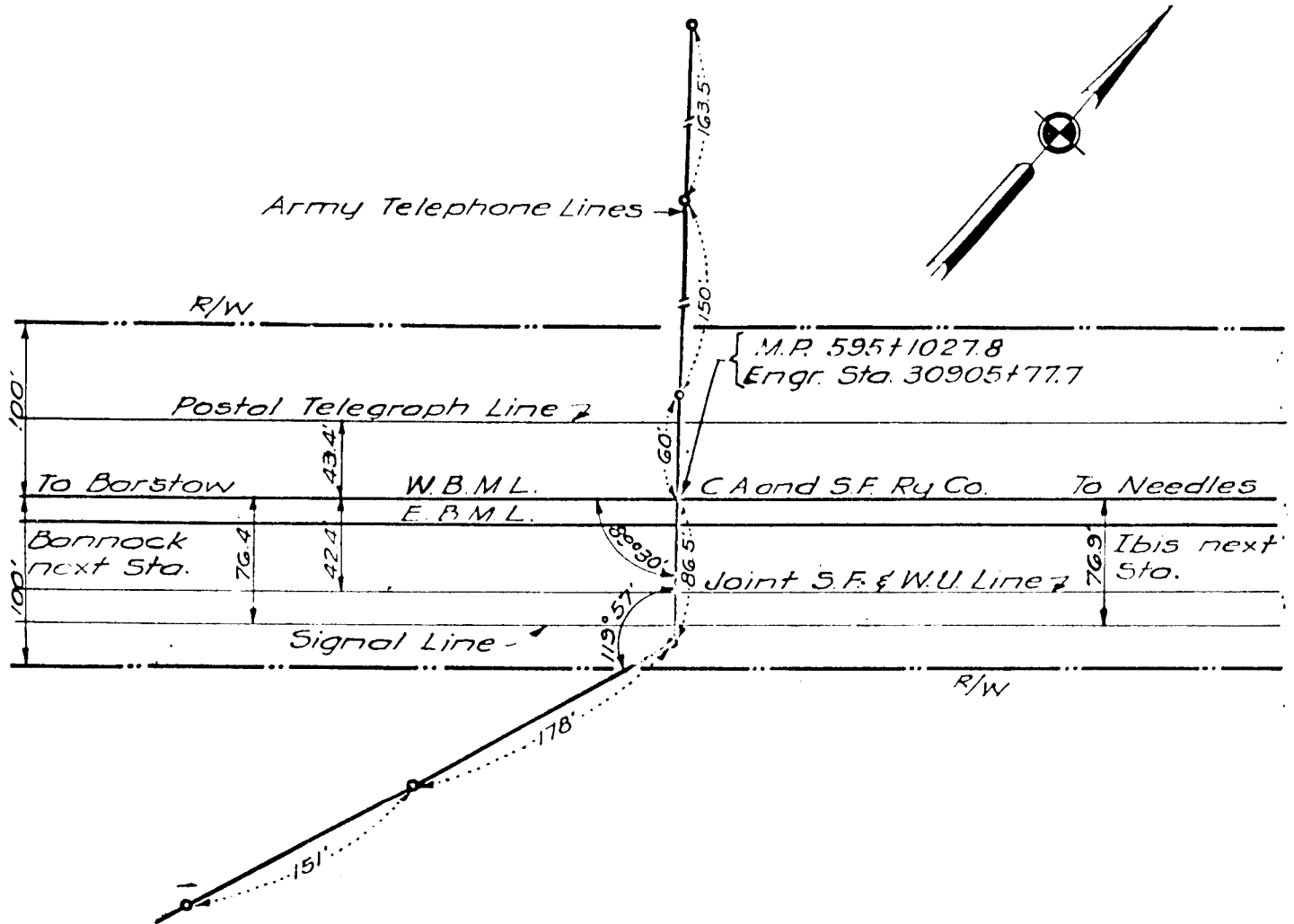
EXHIBIT "A"

ATTACHED TO CONTRACT BETWEEN
 THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY
 AND
 UNITED STATES OF AMERICA
 WAR DEPARTMENT

NEEDLES, CALIF.
 AUG. 21, 1943

DESCRIPTION CORRECT
E. L. McDonald
 DIVISION ENGINEER

SCALE: 1 IN. TO 100 FT.



DESCRIPTION

A 20 wire Telephone Line crossing over the main tracks and right of way of The California, Arizona and Santa Fe Railway Company near Ibis, San Bernardino County, California as shown hereon colored red.
 Top of rail to lowest wire 28.8'

Form 1612 Standard
(Approved by General Solicitor)
LICENSEE FOR
COMMUNICATION LINES ACROSS OR ALONG RAILWAY PROPERTY
(Telegraph, Telephone and Similar Lines. Overhead or Underground)

THIS LICENSE, made this 24th day of August, 1943, between The Atchison, Topeka and Santa Fe RAILWAY COMPANY, a Kansas corporation (hereinafter called "Railway Company"), and United States of America, War Department (hereinafter whether one party or more called "Licensee").

WITNESSETH, that the parties hereto for the considerations hereinafter expressed covenant and agree as follows:

1. In consideration of the sum of Ten and no/100 Dollars (\$10.00) in hand paid by Licensee to Railway Company, the receipt whereof is hereby acknowledged, and of the covenants and agreements of Licensee hereinafter set forth, and of the faithful performance by Licensee of the same, Railway Company licenses and permits Licensee to construct, maintain and use a communication line containing a maximum of Twenty (20) conductors across or along the premises of Railway Company at or near the station of Ibis, California, the location of said communication line being more particularly shown upon the print hereto attached, No. DKO 21-2521, dated August 21, 1943, marked "Exhibit A," and made a part hereof. For convenience, the said communication line, with all conductors and their supporting or containing structures, insofar as they relate to said communication line upon said premises, is hereinafter called the "Communication Line."

2. Licensee shall, at Licensee's own cost, construct and at all times maintain the Communication Line in strict accordance with the Specifications for the time current, for Communication Lines across or along railway property, adopted by the Telegraph and Telephone Section of the Association of American Railroads, or any successor agency, except where by statute or order of competent public authority a different type of construction or a different degree of maintenance is required or permitted, in which case such construction or maintenance shall be in strict accordance with such statute or order; provided, however, all materials and workmanship employed in the construction and maintenance of the Communication Line shall be subject to the approval of Railway Company.

3. Licensee shall, at Licensee's own cost, remove all combustible material from around wooden poles and will at all times keep the space around such poles free of such material, and if removal of such combustible material shall not be attended to within fifteen (15) days after having been requested by Railway Company so to do, Railway Company shall have the right itself to perform the work and Licensee hereby agrees to reimburse Railway Company for the expense so incurred.

4. During construction and while repairing, renewing or changing the Communication Line, Licensee shall exercise utmost and extraordinary diligence to the end that no damage shall occur to the property of Railway Company, and there shall be no interference with the operation of its railroad. Upon completion of the Communication Line or after the making of any changes, repairs or renewals, Licensee shall, at Licensee's own cost, restore said premises to their former state; and, Licensee shall within fifteen (15) days after receipt of bill therefor, pay to Railway Company the entire cost incurred in employing watchmen or such other means of protection as in the judgment of Railway Company may be required during the construction, maintenance, repair, renewal or changing of the Communication Line.

6. If at any time, the term hereof, Railway Company shall desire to make any use of its property with which the Communication Line will in any way interfere, including the relocation of existing or the construction of new lines of poles, wires, conduits and other facilities in which it shall have an interest, Licensee shall, at Licensee's own cost, within thirty (30) days after receiving written notice from Railway Company to such effect, make such changes in the Communication Line as in the judgment of Railway Company may be necessary to avoid interference with the proposed use of its property.

6. Railway Company shall have the right at its election itself to construct the Communication Line, and at any time to make such repairs, renewals or changes therein as it may deem necessary or desirable, and in the event Railway Company shall decide to exercise such right, Licensee shall advance to Railway Company the cost, as estimated by Railway Company, of such construction, repair, renewal or change. If the actual cost incurred by Railway Company in performing such work shall prove more or less than the amount so advanced, the difference shall be promptly paid by Licensee or refunded by Railway Company, as the case may be. Railway Company may, at its election, advance the necessary moneys to cover such cost and, in that case, Licensee agrees promptly upon demand to pay to Railway Company all sums so advanced.

7. The Railroad Company and other Companies operating over its track and the Western Union Telegraph Company shall not be liable for damage to property or injuries to persons arising from the construction, operation or maintenance of said Communication Line by the Government.

8. Since this license is made in part for the benefit of other companies operating over Railway Company's tracks and for the benefit of The Western Union Telegraph Company, any of said companies may enforce the provisions hereof, either jointly or severally, as their interests may be joint or several. None of said Companies shall be liable for any damage to the Communication Line, except due to its negligence and/or the negligence of its agents, servants and/or employees.

9. If Licensee shall at any time fail or refuse to comply with or carry out any of the covenants herein contained, and such failure or refusal shall continue for a period of thirty (30) days after written demand for such performance or compliance shall have been made upon Licensee by Railway Company, Railway Company may, at its election, without notice, forthwith revoke this license, and in case of such election, or upon any termination hereof, Licensee shall, upon request, forthwith remove the Communication Line and restore said premises to the condition in which they were prior to the construction of said Communication Line. In case Licensee shall fail to make such removal or reparation within thirty (30) days, Railway Company may proceed with such work, and Licensee will promptly repay to Railway Company the cost thereof. No waiver by Railway Company of any default or defaults, or the right to terminate this license, shall be deemed or held to be a waiver of the right to terminate the same for any subsequent default or defaults, but notwithstanding such waiver Railway Company may terminate this license upon any subsequent default or defaults which may occur; nor shall any termination hereof release Licensee from any liability or obligation hereunder, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or such later date when the Communication Line may be removed and said premises restored as hereinabove provided.

10. Licensee shall at all times, at Licensee's own cost, maintain the most effective system and use the best known and most effective methods to protect the lines, wires, and service of Railway Company, The Western Union Telegraph Company and of any licensee of Railway Company whose permission to use said premises ante-

When the license and permission herein to Licensee, from interference and physical hazard, and if necessary in order to prevent such interference or hazard, Licensee shall, at Licensee's own cost, transpose Licensee's circuits or make such changes in the construction or location of the Communication Line as may be specified by Railway Company.

11. In case of the eviction of Licensee by any one owning or claiming title to said premises, Railway Company shall not be liable to Licensee for any damage of any nature whatsoever, or to refund any moneys paid hereunder.

12. Any notice to be given by Railway Company to Licensee hereunder shall be deemed to be properly served if the same be delivered to Licensee or if deposited in the postoffice, postpaid, addressed to Licensee at Camp Young, Indio, Calif.

13. In the event Licensee herein consists of two or more parties, all the covenants and agreements of Licensee herein contained shall constitute the joint and several covenants and agreements of such parties.

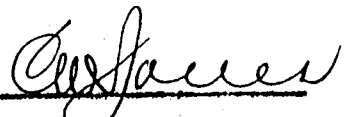
14. This license may be terminated by either party hereto upon One (1) months' notice in writing to be served upon the other party, stating therein the day of the month that such termination will take place; and upon the expiration of the time specified in such notice, this license, and all rights and privileges of the Licensee thereunder, shall absolutely cease.

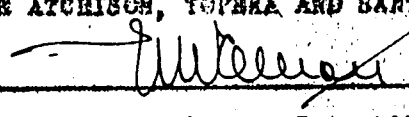
15. This license shall be binding upon and inure to the benefit of the parties and their respective legal representatives, successors and assigns; provided, however, no assignment hereof by Licensee, Licensee's legal representatives, successors or assigns, nor any subsequent assignee, shall be binding upon Railway Company without the written consent of Railway Company in each instance, and that at the option of Railway Company this license shall be forfeited by any such voluntary assignment or by any assignment thereof by operation of law.

16. No member of, or delegate to Congress or resident commissioner, shall be admitted to any share or part of this Agreement, or to any benefit to arise therefrom. Nothing, however, herein contained should be construed to extend to any incorporated company, if the Agreement be for the general benefit of such corporation or company.


17. All expenditures to be made by the Government, under the provisions of this Agreement, shall be subject to appropriations being available therefor.

IN WITNESS WHEREOF, the parties hereto have executed this license (in Six Parts) the day and year first above written.

Attest: 
Assistant Secretary

THE ATCHISON, TOPEKA AND SANTA FE RAILWAY COMPANY
By 
Its Assistant to General Manager

Form Approved:

THE UNITED STATES OF AMERICA
War Department
By 
RAY T. MARSH
Major, Corps of Engineers
Contracting Office
(Official title)

THIS AGREEMENT, made and entered into this _____ 11th
day of February, 1942, by and between the UNITED STATES
OF AMERICA, herein called the "United States", and SOUTHERN PACIFIC
COMPANY, a Kentucky corporation, herein called the "Company",

WITNESSETH THAT:

1. The Company hereby licenses and permits the United States during the life of this agreement, to enter upon and use, for any and all military purposes, the lands, rights of way and buildings not used or required for railroad purposes, forming a part of or appurtenant to the lines of railroad operated by the Company in the States of Oregon, California, Nevada, Utah, Arizona, Texas and New Mexico, and extending from San Francisco, California, to Portland, Oregon, from San Francisco, California, to Ogden, Utah, and from San Francisco, California, to El Paso, Texas, via Los Angeles, California, including all branches thereof.

2. This license shall not be deemed to give the United States the exclusive use of said property of the Company, except in cases where such exclusive use is deemed necessary by the United States because of military reasons, and subject to this qualification the property of the Company may be used in common by the United States, the Company and others having the lawful right to use said property. This license is further subject to leases, licenses, easements and other contracts and agreements which have heretofore or may hereafter be made between the Company and other parties affecting the property within the scope of this agreement.

3. No rental shall be charged by the Company for the use and occupation of any of its said property for said military purposes, but the United States agrees to pay for all public utility services supplied to it for use or consumption on the premises of the Company, such as water, light, heat, power, telephone and similar services.

4. The Company shall be under no obligation to make any additions, alterations or repairs to its property for use by the United States hereunder. The United States agrees to so use the proper-

ty of the Company as to effect the least possible interference with the railroad operations of the Company.

5. This agreement is made by the Company on its own behalf and on behalf of the following named companies which are wholly owned and controlled by the Company through stock ownership, and operate lines of railroad in the State of California, and shall include the lands, rights of way and buildings of said companies:

Holton Inter-Urban Railway
Northwestern Pacific Railroad Company
Pacific Electric Railway Company
Petaluma & Santa Rosa Railroad Company
San Diego and Arizona Eastern Railway Company
South San Francisco Belt Railway
Visalia Electric Railroad Company

6. This agreement shall continue in full force and effect until terminated by either party hereto giving thirty (30) days notice in writing to that effect to the other, in which event the United States agrees to vacate and surrender possession of all property of the Company, and to leave the premises in the same condition as that existing at the time of entering upon, reasonable and ordinary wear and tear and damages by the elements or by circumstances over which the United States has no control excepted.

7. All expenditures to be made by the Government under the provisions of this agreement shall be subject to appropriations being available for such purpose.

8. No member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this agreement or to any benefit to arise therefrom. Nothing, however, herein contained shall be construed to extend to any incorporated company, if the agreement be for the general benefit of such corporation or company.

IN WITNESS WHEREOF, the parties hereto have executed this

agreement in duplicate the day and year first hereinabove written.

SOUTHERN PACIFIC COMPANY,

By *D. J. Russell*
Vice President.

Attest *H. J. Carroll*
Assistant Secretary.

UNITED STATES OF AMERICA,

By *R. B. Daugherty*

R. B. Daugherty, Captain, Corps of Engineers, Contracting Officer

I, H. J. CARROLL, certify that I am ~~an~~ an
Assistant Secretary of the corporation named as the
Company in the attached agreement; that D. J. RUSSELL,
who signed said agreement on behalf of the said Company, was then
a Vice President of said corporation; that said agree-
ment was duly signed for and in behalf of said corporation by
authority of its governing body, and is within the scope of its
corporate powers.

H. J. Carroll
Assistant Secretary

Form Approved:
Quinn Crow
General Solicitor.

RETAINED

C E R T I F I C A T E

I do hereby certify that:

1. On the 17th day of February, 1945, a Release of permit, covered by Master Permissive Agreement, entered into between the Southern Pacific Company and the U. S. Government on 11 February 194~~8~~², on the following described property was mailed to the Permitter at 65 Market Street, San Francisco, California:

Section 21, Twp. 11 N. Range 20 E. SBB&M (640 Acres)
Section 29, Twp. 11 N. Range 20 E. SBB&M (640 Acres)
Section 23, Twp. 11 N. Range 20 E. SBB&M (640 Acres)

Note: Tracts 43, 45 & 46 show partly within above Sections.

Section 9, Twp. 10 N. Range 21 E. SBB&M (641.36 Acres)
Section 17, Twp. 10 N. Range 21 E. SBB&M, except R/W of
18.05 Acres - (621.95 Acres)
Section 21, Twp. 10 N. Range 21 E. SBB&M, except 21.45
& 618.55 Acres.)
Government Lots 1, 2, 3 and 4, also known as:
Section 5, Twp. 10 N. Range 21 E. SBB&M, (13.64 Acres)

2. Permitter refuses to sign a Release inasmuch as the property was used by the Government without charge, and expense of examination for such lands necessary to determine propriety of executing Release is not warranted.
3. No Government improvements or property are located on the premises.

Date: 9 March 1945

S. N. Tideman, Jr.
S. N. TIDEMAN, JR.,
Major, Corps of Engineers,
Chief, Los Angeles Sub-Office.

To Class this 30 Mar 45 JH

RETAINED

The undersigned hereby releases now and forever, the United States Government from any and all claims for rental that may have accrued or may accrue, and any and all other claims we may have or claim arising out of or incidental to the use and/or occupancy of the following described property.

Section 21, Twp. 11 N. Range 20 E. SBB&M (640 Acres)
Section 29, Twp. 11 N. Range 20 E SBB&M (640 Acres)
Section 23, Twp. 11 N. Range 20 E. SBB&M (640 Acres)

Note: Tracts 43, 45 & 46 show partly within above Sections.

Section 9, Twp. 10 N. Range 21 E. SBB&M (641.36 Acres)
Section 17, Twop. 10 N, Range 21 E. SBB&M, except R/W of 18.05 Acres -(621.95 Acres)
Section 21, Twp. 10 N. Range 21 E. SBB&M, except 21.45 & 618.55 Acres.
Government Lots 1, 2, 3, and 4, also known as:
Section 5, Twp. 10 N. Range 21 E. SBB&M, (13.64 Acres)

From the 2nd day of February 1943 to the
17th day of February 1945.

SOUTHERN PACIFIC RAILROAD COMPANY

BY: _____
(Owner)

(Address)

(Witness)

(Address)

MDM-LAD-105.

SOUTHERN PACIFIC COMPANY
65 Market Street, San Francisco 5, California
Land Department

W-21-11-20

March 6, 1945

S. W. Tideman, Jr.
Major, Corps of Engineers
Chief, Los Angeles Sub-Office
621 South Hope Street
Los Angeles 14, California

Dear Sir:

Referring to your letter of February 17, 1945, file 601.5
(Camp Ibis, Calif. Southern Pacific RR Co.) LA PADRE-D 7.15 MLG.

I return herewith unsigned, in quadruplicate, the Release enclosed with your said letter, covering certain sections in Twp. 11N., 11N., Rge. 20E., and Twp. 10N., Rge. 21E., SEM., for the reason that as no charge was made for the use of these lands by the United States for Army Maneuvers, the expense of examination of such lands necessary to determine propriety of executing Release is not warranted.

Yours very truly,

/s/ D. G. Christen

WEZ:MK
3-1
Encl.

30 Mar 1944

MEMORANDUM FOR THE CHIEF OF ENGINEERS:

SUBJECT: Surplus Installations, California-Arizona
Maneuver Area.

1. Reference is made to our memorandum of 23 March 1944, file SPRMC 354.2, subject as above, which directed the Chief of Engineers to proceed immediately with the disposition of all facilities within the Desert Training Area with the following exceptions:

- a. Pomona Ordnance Depot.
- b. San Bernardino Base Depot.
- c. General Hospitals at Spadra, Benning and Beaumont.
- d. Station Hospitals at Needles, Camp Young, and Yuma.
- e. Army Air Force installations at Thermal, Desert Center, Rice, and Shaver's Summit.
- f. All government owned or leased land.

2. As the War Department does not own any of the land in the Desert Training Center and the annual rental is less than \$50,000 per year, all land except that occupied by the installations enumerated in items a to e above is declared surplus and will be disposed of in accordance with existing regulations.

For the Commanding General:

LEE A DENSON
Colonel, General Staff Corps
Director, Requirements Division

W. O'B. HILLMAN
Lt. Colonel, Corps of Engineers
Acting Chief, Constr. Pl. Br., Req. Division

C O P Y

INSTRUCTIONS

ALL MONIES WILL BE EXPENDED TO THE NEAREST DOLLAR OR ACRES IN PREPARING THIS REPORT

- a. REPORTS WILL BE PREPARED MONTHLY AS OF THE 15TH DAY OF EACH MONTH.
- b. REPORTS WILL BE PREPARED IN QUADRUPPLICATE FOR THE FOLLOWING DISTRIBUTION: original and one copy will be forwarded so as to reach the Chief of Engineers, ATTENTION: ENCLM, not later than the 23rd day of the month in which the report is prepared. One copy forwarded to the Division office and one copy retained in the preparing office.
- c. WHEN REQUIRED: Reports will be required commencing with the month in which the installation or any portion thereof is placed in Standby, inactive, Excess, or Surplus status and continued until excess or surplus property is disposed of by transfer, sale, termination of leases, or otherwise, but if another portion of the installation is placed in a management or disposal status at a later date and the report resumed, all previous actions subsequent to 1 July 1940, will be reflected; where the installation or portion thereof is inactive or Standby, the report may be suspended when the granting of temporary use of facilities made available for such purposes shall have been completed or definite information shall have been received that temporary use of facilities at installations or portions thereof in standby or inactive status cannot be granted. Only military installations are definitively placed in a Standby or inactive status; therefore, reports covering Civil Works or Atomic Energy Commission projects are required only in connection with excess or surplus statuses. Where no progress has been made during a reporting period, a "negative EBG Form 836" may be submitted identifying the installation, the state, the Division, the District, and the reporting period with the words, "No Progress since report dated . . .", posted in Part II of the report.
- d. PART I will identify the installation as to name, location, department and type and set forth the entire acreage either acquired or being acquired. The acreage will be divided to show Fee owned, public Lands (Public Domain and Lands transferred from other Government agencies), Leased, and Lesser interests. If an installation is part industrial and part Command, the acreages of these parts similarly broken down will be reflected in "Remarks". State, County or municipally owned lands will not be shown as public lands.
- e. Part II will reflect information as to areas which have been placed in a "Standby", "inactive", "Excess", or "Surplus" status. A separate line will be used for each report of status, but subsequent withdrawals or adjustments affecting an area will be reflected by net figures with an explanation under "Remarks". The date will be that on which the appropriate Authority approved the status. A symbol P or E will be used to denote whether the area is a portion of or the entire installation. The acreage will be divided as explained in PART I above, but will cover only the actual area or areas involved, the nature or use of the area will be reflected under "nature of facilities", i.e. Housing Area, warehouse Area, Modification Center #2, POW Camp, etc. and if the installation is comprised of both command and industrial portions the symbol I (Industrial) or C (Command) will be used to indicate to which portion the area belongs. The cost of both land and construction will be shown under "Cost to Government". If the Corps of Engineers assumed custody the date will be shown, otherwise "no" will be entered in the last column.
- f. PART III will reflect management of disposal actions taken in connection with areas listed under PART II. The reference column will indicate the area by referring to the line on which it is listed under PART II (A, B, C, etc.) and the appropriate column (1), (2), (3), or (4). No areas or portions of areas which were listed separately in Part II will be combined in a single line under PART III, however, it may be necessary to use several lines under PART III to reflect separate actions taken in connection with an area listed on a single line under PART II. The latter occurrence will be explained under "Remarks" and if necessary a further division of acreage is needed.
1. TEMPORARY USE GRANTS will be reported by cumulative figures showing the number of instruments, acres involved and annual consideration. When right of entry has been given but a formal instrument not executed and delivered it will be reported "in process" with appropriate footnote under "Remarks" including date right of entry granted. After delivery of the instrument it will be reported "granted". Purpose will reflect type of interest to be Lease, LI for License and the proposed use of the area, such as agriculture, industrial, etc. Elaboration where necessary will be made under "Remarks".
2. REPORTED TO WAA OR GSA will include only property formally reported by forms SPB-5, SPA-5, WAA 1005, or GSA Form 30 for disposal but will not include leases reported for clearance purposes only. The following will be recorded: date of report, name of disposal agency designated, and the date disposal agency designated. (In case of Declaration of Surplus to WAA and its predecessor agencies, the date of designation of disposal agencies need not be recorded unless readily available). Disposition column will be utilized (a) to reflect assumption of custody by the disposal agency by recording the symbol "C" followed by the date of assumption, or (b) to refer to further disposal actions recorded in subsequent portions of the report where the CE is designated disposal agency or is acting under specific direction of GSA. The symbol "R" will refer to "Transfer to other Government agencies". The symbol "LC" will refer to "Lease Cancellations". The symbol "N" will refer to "Other Disposals".
3. TRANSFERS TO OTHER GOVERNMENT AGENCIES will include transfer, retransfer, or relinquishment of all types of interests or estates to another Gov't. Agency not acting as a disposal agency. If property has been reported to GSA and so recorded under "Reported to WAA or GSA" the entry in the reference column will be preceded by the symbol "R". Entries in the second, third, and fourth columns will be made from information or informational copies of documents received from DCE, except when leases are transferred at the direction of GSA Field offices. The date restoration or building disposal (if required) is completed will be shown, otherwise the entry "none" will be made. The last column will reflect the date of written acceptance either from a field or departmental level with appropriate notation in "Remarks".
4. LEASE CANCELLATIONS will include all excess or surplus leases which have been cancelled or are proposed for cancellation. If leases have been formally reported for disposal to GSA (GSA Form 30), entry in the reference column will be preceded by the symbol "R" and no entry will be made in "Reported to GSA" column. If leases have been reported to GSA (GSA Form 30) for clearance purposes only, the symbol "R" will not be placed in the "Reference" column and the date they were "Reported to GSA" for clearance will be recorded. An explanatory entry, reflecting disposal status, reasons for delay and expected termination date, will be made in "Remarks" for any lease that has been in an excess status for a period of ninety days or longer.
5. OTHER DISPOSALS will include sales, termination of special contracts involving interests in realty, disposal of easements, etc. Entries most nearly applicable to the circumstances will be recorded with an explanation in "Remarks" to explain unusual actions. If the property has been formally reported to GSA (by GSA Form 30) the symbol "R" will precede the entry in the "Reference" column.

REMARKS

PART II

<u>Ref</u>	<u>Authority</u>	<u>P.L.</u>	<u>L.I.</u>	<u>Cost to Gov't</u>
A2,4	WDONS 11314	5,760 Ac.	4,455.50 Ac.	\$5,000 (Net)

PART III

Retransfer to Other Gov't Agency

A2	Used without formal permission of Dept. of Interior - Relinquished	5,760 Ac.		\$5,000 (Net)
----	--	-----------	--	---------------

* NOTE: Letter dtd 5-3-51 relinquished Public Domain to Dept of Interior. As there is no record of the use of the land by the Dept. of the Army, official assumption of custody by the Dept. of Interior will not be effected.

Other Disposals

A4	Permit #12, State of Calif, Agreement, So. Pac. Company, License WOL-193-eng-3214,	640 acres, 3815.5 " , No area "	Cancelled effective	3-0-45 2-17-45 9-26-44
----	--	---------------------------------	---------------------	------------------------------

MILITARY ACQUISITION PROJECT REPORT			DATE OF REPORT 1 June 1948		REPORTS CONTROL SYMBOL ENGLC-2 (R1)			
TO WAR DEPARTMENT, OFFICE OF THE CHIEF OF ENGINEERS, REAL ESTATE, REALTY REQUIREMENTS DIVISION, REALTY CONTROL BRANCH, WASHINGTON 25, D.C.			FROM (DIVISION) South Pacific					
PROJECT NAME Camp Ibis (CAMA)			DIRECTIVE DATE 5-13-48 Date Unknown		DIRECTIVE NUMBER RE-D 959 Use Permit (in lieu of formal directive)			
PURPOSE Campsite			COUNTY San Bernardino		STATE California			
2277			CURRENT PERIOD			PROGRESS TO DATE		
			TRACTS	ACRES	DOLLARS	TRACTS	ACRES	DOLLARS
GENERAL								
1. TOTAL AUTHORIZED FOR ACQUISITION						4	10,216	-
a. Fee						-	-	-
b. Easements & Lesser Interests						3	4,456	-
c. Public Lands						*1	5,760	-
d. Leased to U.S.						-	-	-
ACQUISITION OF FEE, EASEMENTS AND LESSER INT.								
2. TOTAL (Items 1a & 1b)						3	4,456	-
3. TRACT OWNERSHIP DATA COMPLETED						3		
4. TRACT MAPS COMPLETED						3		
5. APPRAISALS APPROVED						-	-	-
6. TITLE EVIDENCE ORDERED						3		
7. TITLE EVIDENCE RECEIVED						3		
PURCHASE (Including Donations)								
8. OPTIONS OBTAINED						**3		
9. OPTIONS ACCEPTED						3	4,456	-
10. TITLE EVIDENCE SUBMITTED						3		
11. PRELIMINARY TITLE APPROVED						3		
12. PAYMENTS AND CLOSINGS COMPLETED						3	4,456	-
13. FINAL TITLE PAPERS SUBMITTED						3	4,456	-
CONDEMNATION (Including Declarations of Taking)								
14. ASSEMBLIES SUBMITTED								
15. CONDEMNATION PETITION FILED								
16. ORDER OF POSSESSION ENTERED								
17. TITLE EVIDENCE TO U.S. ATTORNEY								
18. DECLARATION OF TAKING FILED								
19. STIPULATIONS AND AWARDS APPROVED								
20. AWARDS AND DEFICIENCIES DEPOSITED								
21. PARTIAL DISBURSEMENTS								
22. FINAL DISBURSEMENTS								
PROJECT MANAGER <i>John M. Kessler</i> JOHN M. KESSLER Chief, Real Estate Division			OFFICE ADDRESS SOUTH PACIFIC DIVISION Oakland Army Base Oakland 14, California					

(SEE INSTRUCTIONS ON REVERSE SIDE)

- a. REPORTS WILL BE PREPARED QUARTERLY AS OF 15 MARCH, 15 JUNE, 15 SEPTEMBER, AND 15 DECEMBER.
- b. REPORTS WILL BE PREPARED IN QUADRUPPLICATE FOR THE FOLLOWING DISTRIBUTION: Forward original and one copy in sufficient time to reach the Office, Chief of Engineers on or before the 22nd of the month in which the report is prepared. One copy forwarded to the Division Office and one copy retained in the project office.
- c. SUBMISSION OF REPORTS WILL BEGIN AS SOON AS NOTICE OF ISSUANCE OF A DIRECTIVE IS RECEIVED AND CONTINUED UNTIL ALL ACTION HAS BEEN COMPLETED, INCLUDING DISTRIBUTION OF FUNDS DEPOSITED ON EXCESS AWARDS.
- d. RECORDS WILL BE MAINTAINED ON A FRACTIONAL ACREAGE AND DOLLAR BASIS: Totals thereof however will be rounded to the nearest acre or dollar in preparing this report (.50 acre will be reported as an additional acre; 50 cents will be reported as an additional dollar).
- e. THE NUMBER OF TRACTS, ACRES, AND AMOUNT OF MONEY SHOWN IN ITEM 1 OF THE INITIAL REPORT WILL BE AS RECITED THE DIRECTIVE. The number of tracts and acres will be revised as the preparation of tract ownership data and tract maps progresses. The amount of money will remain constant under item 1 unless changed by a subsequent Directive.
- f. THIS REPORT WILL COVER ALL TYPES OF ACQUISITION OF REAL ESTATE OR INTERESTS THEREIN:
 - 1. Tracts involving Public Domain, State owned land not being acquired, or land to be leased will NOT be reported in six columns of report but will be reported under remarks below. Tracts under lease will be identified by contract number, tract number and acreage.
 - 2. Completed transactions not involving condemnation which do not follow regular acquisition procedure steps (such as easements, licenses, and donations) will for report purposes be reflected in all purchase steps (items 8-13) and will be identified by appropriate footnote showing interest acquired and number of tracts. Where no actual acreage is involved as in the case of informal agreements to top trees, only "tract" and dollar data will be reported.
- g. ALL TRACTS TRANSFERRED FROM "PURCHASE" TO "DECLARATION OF TAKING" SHOULD BE DEDUCTED FROM ALL "PURCHASE" STEPS AFFECTED AND REPORTED UNDER "DECLARATION OF TAKING".
- h. ALL TRACTS TRANSFERRED FROM "CONDEMNATION" TO "PURCHASE" SHOULD BE DEDUCTED FROM ALL "CONDEMNATION" STEPS AFFECTED AND REPORTED UNDER THE "PURCHASE" STEPS.
- i. WHERE TWO OR MORE "REAL ESTATE DIRECTIVES" HAVE BEEN ISSUED IN CONNECTION WITH THE SAME PROJECT, A SEPARATE REPORT WILL BE SUBMITTED FOR EACH DIRECTIVE. "GENERAL DIRECTIVES" WILL BE REPORTED WITH THE "REAL ESTATE DIRECTIVE" TO WHICH EACH RELATES.

ADDITIONAL TRACTS: DURING THE CURRENT PERIOD, _____ TRACTS, IDENTIFIED AS TRACTS NUMBERS _____ WERE ADDED UNDER THE FOLLOWING AUTHORITY _____ AND FOR THE FOLLOWING REASONS:

TRACT REDUCTIONS. DURING THE CURRENT PERIOD, _____ TRACTS, IDENTIFIED AS TRACTS NUMBERS _____ WERE DROPPED UNDER THE FOLLOWING AUTHORITY _____ AND FOR THE FOLLOWING REASONS:

REMARKS

- * 5,760 acres of Public Domain transferred from Department of the Interior by Use Permit, date unknown. *Implied Transfer*
- ** 2 tracts covering permits and 1 tract covering license, 4,455.50 acres, all nominal consideration.

G-5

INCLOSURE NO. 8

Camp Ibis
Surplus Directive: 20 April 1944.
Pacific Division No. 245-75
Los Angeles District No. 126-75

Description: From Map of Camp-Site prepared subsequently
to 8 October 1943.

San Bernardino Base and Meridian.

T 11N, R 20E,
Secs. 20, 28, 32.

T 10N, R 21E,
Secs. 19, 18, 7, 8, and Sec. or Lot 6.

T 10N, R 20E
Sec. 13.

Reference: Files in the Los Angeles Sub-Office do not disclose that permission to use described Public Domain was obtained from Department of Interior. Attention is invited to Letter, Office Chief of Engineers to Division Engineers, Pacific Division, 30 August 1943, paragraphs 1, 2, and 4. Inclosure No. 29.

James S. Dean
Chairman
Frederick F. Houser
Member
Harry B. Riley
Member

Earl Warren
Governor

Carlyle F. Lynton
Executive Office

STATE LANDS COMMISSION
Division of State Lands
Department of Finance
State of California
State Building
Los Angeles
12

A TRUE COPY

March 8, 1945.

Major S.N. Tideman, Jr., Chief,
Los Angeles Sub-Office,
Office of the Division Engineer,
WAR DEPARTMENT,
621 South Hope Street,
Los Angeles 14, California.

In re: 601.5 (Indio, Riverside County, California,
C-AMA, State of California, Camp Young)
LA PADRE-D 7.15 MLG.

Dear Major Tideman:

May I acknowledge and thank you for your letter of February 17, 1945 with reference to the Release Form to be executed by the State Lands Commission for State land in Indio, Riverside County, which has been used and/or occupied by the United States Government.

The Release, in its present form, can not be signed by anyone on behalf of the State. The only form of release that can be signed is one releasing for any claims for rental after the expiration of the agreement.

In other words, the State could not give a release for any liability that might accrue from any act or condition incident to the use of the property by the United States. If a release can be drafted by the United States Government with the above feature incorporated, please submit it to this office for Commission approval.

Yours most sincerely,

s/s CARLYLE F. LYNTON
CARLYLE F. LYNTON,
Executive Officer

CFL:mk

WAR DEPARTMENT
Office of the Division Engineer
621 South Hope Street
Los Angeles 14, California

NOTICE OF CANCELLATION

License No. W 04-193-eng-3

OF ~~LEASE~~
LICENSE

Dated 25 August 1944

TO The Atchison, Topeka and Santa Fe Railway Company

560 So. Main

Los Angeles, Calif

Pursuant to Article 14 of a certain lease dated the 24 day of
August, 1943, by and between The Atchison, Topeka and Santa
Fe RAILWAY COMPANY, a Kansas Corporation as Lessor,
Licensee
and the United States of America, as Licensee, covering Property located at as
being Communication lines across or along railway property near the station
of Ibis, California

said property being more particularly described in the lease referred to;

NOTICE is hereby given that the United States of America exercises its
rights reserved in said License and will quit, relinquish, and give up said
premises on the 26 day of September 1944.

John A. Loomis
Asst Chief, Los Angeles Sub-Office
For and in behalf of the United States of America

Receipt of the above notice is hereby acknowledged this 26
day of August 1944. A joint survey of the condition of the pre-
mises ~~(is)~~ (is not) requested as restoration ~~(will)~~ (will not) be required
by the ~~Licensee~~ under paragraph 9 of the ~~License~~. (Delete inapplicable
words) Lessor License

Witness:
J. E. Bollinger

THE ATCHISON, TOPEKA AND SANTA FE
RAILWAY COMPANY, a Kansas
Corporation
By [Signature]
General Manager
By _____

RETAINED

C E R T I F I C A T E

WAR DEPARTMENT
CORPS OF ENGINEERS
OFFICE OF THE DIVISION ENGINEER
SOUTH PACIFIC DIVISION
REAL ESTATE DIVISION
LOS ANGELES SUB-OFFICE
621 SOUTH HOPE STREET
LOS ANGELES 14, CALIFORNIA

I do hereby certify that:

1. Revocable Permit No. 12, Public Resources Code was issued by the State of California to the United States Government 24 March 1942.
2. On the 11th day of November 1944, a Release was mailed to State of California, State Lands Commission, Sacramento, California. Description of the Property covered by the Release follows:
Beginning at a point at the intersection of the township line between Townships 15 and 16 North and the State boundary line between California and Nevada; thence West to a point at Townships 15 and 16 North, Ranges 12 and 13 East; thence South to a point at Townships 10 and 11 North, Ranges 12 and 13 East; thence South to a point at Townships 5 and 6 North, Ranges 11 and 12 East; thence South to a point at Townships 2 and 3 North, Ranges 11 and 12 East; thence South to the San Bernardino Base between ranges 13 and 14 East; thence South to a point at Townships 4 and 5 South, Ranges 13 and 14 East; thence West to a point at Townships 4 and 5 South, Ranges 9 and 10 East; thence South to a point at Townships 6 and 7 South, Ranges 9 and 10 East; thence East to a point at Townships 6 and 7 South, Ranges 16 and 17 East; thence South along the line between Ranges 16 and 17 East to the intersection of said line with the Northerly right of way line of the Southern Pacific Railroad from Niland, California, to Yuma, Arizona; thence southeasterly along the northerly right of way line of the Southern Pacific Railroad to the West bank of the Colorado River; thence Northerly following the West bank of the Colorado River to its intersection with the California-Nevada Boundary line; thence Northwesterly along said California-Nevada boundary to the point of beginning, the points described being at the intersection of the respective township and range lines all referred to the San Bernardino Base and Meridian. (Camp Young, California).
3. Acknowledgement of the Receipt of the Release by the State Lands Commission was made by letter under date of 8 March 1945, copy of which is attached.
4. I certify that the premises have been inspected and there are no Government improvements located thereon.
5. I further certify that the State Lands Commission has refused to sign the Release and that further efforts to obtain said release are not justified.
6. The period of the duration of the permit extended from the date of the issuance of permit through approximately 1942, 1943 and 1944.

5 September 1946


HAROLD E. SPICKARD
Chief, Los Angeles Sub-Office

in lieu of Release - To be used by Unit only

WAR DEPARTMENT

RETAINED

RELEASE
(CORPORATIONS)

V 04-193-Sub-5213

WHEREAS on the 24th day of August, 1945

The Atchison, Topeka and Santa Fe Railway Company, a Kansas Corporation

a corporation existing under and by virtue of the laws of the State of Kansas

with its principal office located in the city of Los Angeles

county of Los Angeles, and State of California

license, did lease, demise, and let unto the United States of America certain premises situated in the city of

San Bernardino, county of San Bernardino, and State of

California, and more particularly described as follows:

Two wire Telephone Line crossing over the main tracks and right of way of The California Arizona and Santa Fe Railway Company near Mills, San Bernardino County, California, as more particularly described in license dated 24 August 1945,

and

WHEREAS the use of said premises is no longer required by the United States of America and possession of said property having been redelivered by the United States of America to the lessor, on the 25th day of September, 1944

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS, that we,

The Atchison, Topeka and Santa Fe Railway Company

for and in consideration of the cancellation of said lease and the redelivery to us of possession by the

United States of America of the property hereinbefore described, on the 25th day of

September, 1944, the receipt of which in good condition is hereby acknowledged, have released, released, and forever discharged, and by these presents do for ourselves, our successors, and assigns, remise, release, and forever discharge the United States of America, its officers and agents, of and from all manner of actions, liability, and claims which against the United States of America, its officers and agents, we or they ever had, now have, or ever will have upon, or by reason of any matter, cause, or thing whatsoever, particularly arising out of said lease and the occupation by the United States of America of the aforementioned property.

IN WITNESS WHEREOF, we have caused these presents to be signed by our Assistant Secretary

attested by our Assistant Secretary, and our corporate seal to be hereto affixed this

20th day of November, 1944.

THE ATCHISON, TOPEKA and SANTA FE RAILWAY COMPANY, a Kansas Corporation

Assistant Secretary

TOWNSHIP 11 NORTH RANGE 20 EAST OF THE SAN BERNARDINO MERIDIAN, CALIFORNIA

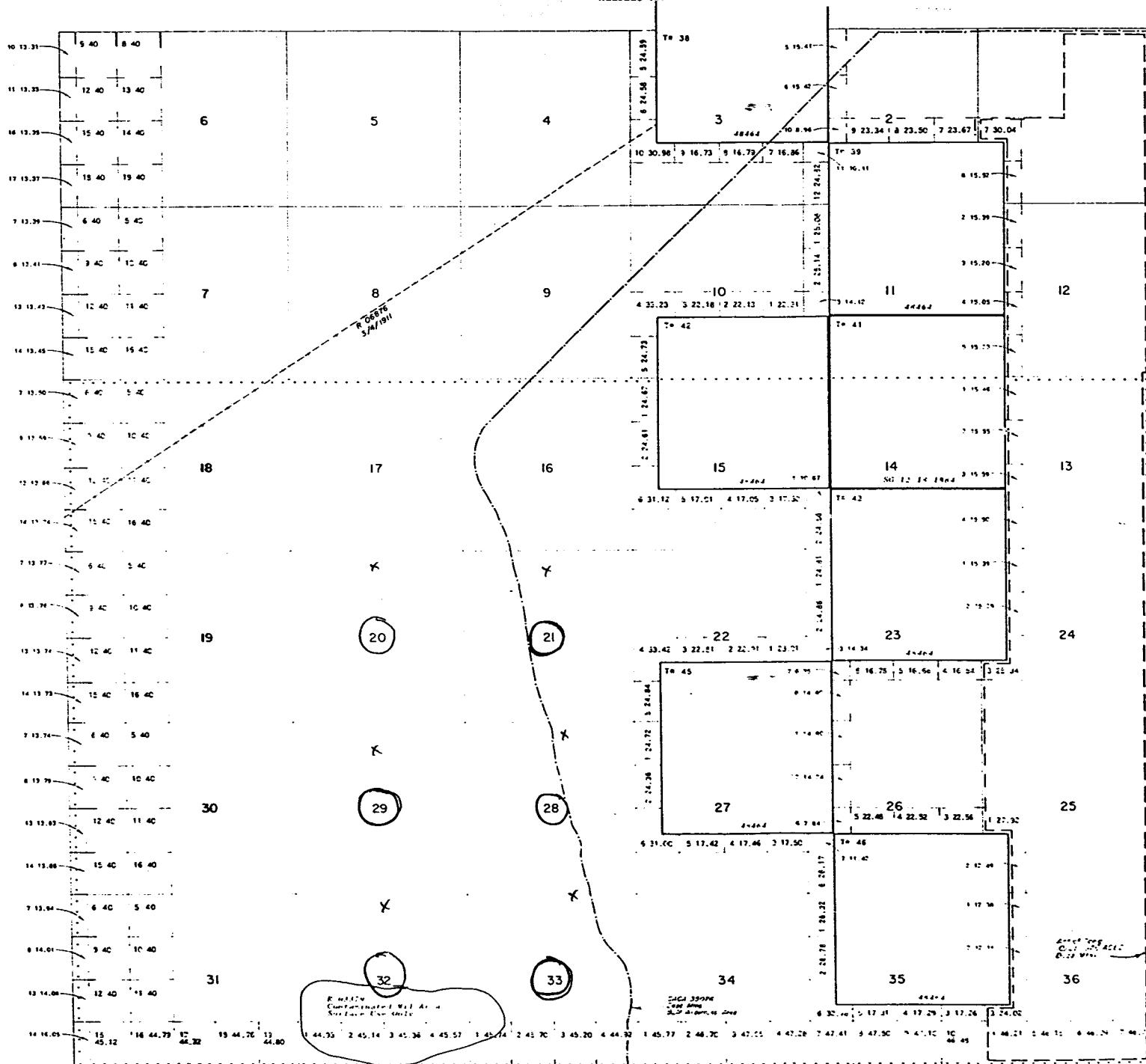
SAN BERNARDINO COUNTY
 CALIFORNIA DESERT DIST SEC 15
 NEEDLES RA

STATUS OF PUBLIC DOMAIN
 LAND AND MINERAL TITLES

MT PLAT

INDEX TO SEGREGATED TRACTS					
RECURVEY	ORIGINAL SURVEY				
TRACT NO	T	R	SEC	SUBDIVISION	
38	11N	20E	5	ALL	
39	"	"	9	ALL	
41	"	"	16	ALL	
42	"	"	17	ALL	
43	"	"	21	ALL	
45	"	"	29	ALL	
46	"	"	33	ALL	

All Tp within designated California Desert Conserv Area Act of Cong 10/21/1975



CAMP I.B.'S
 (PROPER)

FOR OWNERS EFFECTING DISPOSAL OR USE OF UNIDENTIFIED LANDS REFER TO INDEX OF MISCELLANEOUS DOCUMENTS

CURRENT TO	CURRENT TO
FEB 1975	
USE PLATS	

ORDNANCE AND EXPLOSIVE
ARCHIVES SEARCH REPORT
FOR
FORMER CAMP IBIS (PROPER)
SAN BERNARDINO COUNTY
NEEDLES, CALIFORNIA
PROJECT NUMBER J09CA028301

APPENDIX H

NEWSPAPERS/JOURNALS

(NOT USED)

ORDNANCE AND EXPLOSIVE
ARCHIVES SEARCH REPORT
FOR
FORMER CAMP IBIS (PROPER)
SAN BERNARDINO COUNTY
NEEDLES, CALIFORNIA
PROJECT NUMBER J09CA028301

APPENDIX I

INTERVIEWS

APPENDIX I

INTERVIEWS

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- I-1 William T. Willey, BLM Needles.
- I-2 Mick Joplin, BLM Ranger Needles.
- I-3 Kevin Madison, BLM Needles.
- I-4 Jill Miller-Allert, BLM Needles.
- I-5 Mike McGill, BLM Needles.
- I-6 Ken Downing, BLM Sacramento.
- I-7 Ron Morrison, former BLM Needles.
- I-8 Bob Lyons and Jerry Lyons, San Bernardino County Sheriff's Office.
- I-9 Robert Derichsweiler, Local Needles Resident.
- I-10 Walter 'Pony' Acuna, former Captain San Bernardino County Sheriff's Office.
- I-11 Bill Claypool, Local Businessman.
- I-12 Mark Wetmore, Local Historian.
- I-13 Glenn Hill, Local Businessman.
- I-14 Butch Gates, former San Bernardino County Sheriff's Office.
- I-15 Dennis Casebier, Local Historian.
- I-16 Bill Abernathy and Harry Hatch, San Bernardino County Bomb Squad.
- I-17 Hank Counts, USACE, St. Louis, Mo.
- I-18 John Bezzant, SF Pacific Properties Incorporated.

I-19 Jerry N. Theaker, LAPD North Hollywood Division.

I-20 George Wagner, Santa Fe Pacific Gold.

I-21 Fred Sledd, California State Land Commission.

CONVERSATION RECORD	TIME 0830	DATE February 6, 1996
----------------------------	---------------------	---------------------------------

TYPE

VISIT CONFERENCE

TELEPHONE
INCOMING
OUTGOING

NAME OF PERSON CONTACT WITH William T. Wiley	ORGANIZATION BLM, HAZMAT Specialists	TELEPHONE NO. (619) 326-3896
--	---	--

SUBJECT Camp Ibis (Proper)

SUMMARY (I-1)

Mr. Wiley has been with the Bureau of Land Management (BLM) at the Needles office for 10 years. Prior to his BLM experience, was an assignment with the Corps of Engineers in Portland Oregon as a Ranger.

In the past ten years Mr. Wiley doesn't remember any Ordnance Explosives (OE) or Chemical Warfare Material (CWM) being discovered at Camp Ibis (Proper). He repeated that Camp Ibis (Proper) has been picked over pretty clean by the scavengers that passed through. He mentioned that John Keyes, BLM California Desert District, Riverside, California has knowledge of an area near Los Angeles the chemical decontamination drums were discovered. He also stated that this area is sterile.

Mr. Wiley agreed with the team on the Townships/Ranges/Sections for Camp Ibis (Proper) as opposed to what the Corps of Engineers map dated 1948 stated as the Range.

Other items discussed: Mr. Wiley said even though a BLM incident report dated 9-15-80, stated ordnance was found near Goffs Butte and latter transported to T 10N, R 20E, Sec 34, no really knows for sure. Mr. Wiley also believes that during the early 1960's, a Military exercise, code name Desert Strike took place in the old California Arizona Maneuver Area. The Camp Ibis area is one of the areas that was used in this exercise.

ACTION REQUIRED
NONE

ACTION TAKEN
NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 0930	DATE February 6, 1996
----------------------------	---------------------	---------------------------------

TYPE		
<input checked="" type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	<input type="checkbox"/> TELEPHONE <input type="checkbox"/> INCOMING <input type="checkbox"/> OUTGOING
NAME OF PERSON CONTACT WITH Mick Joplin	ORGANIZATION BLM Ranger (Needles Area)	TELEPHONE NO. (619) 326-3896

SUBJECT) Camp Ibis (Proper)

SUMMARY (I-2)

Mr. Joplin has been a Bureau of Land Management Ranger in the Needles area for five years, which includes his total employment with the BLM. Before his move to the BLM in Needles, he was with the Corps of Engineers in Waco, Texas.

Mr. Joplin stated that Camp Ibis (proper) and surrounding areas are in his sector. He stated in the November time frame of 1995, he was informed of a large caliber round discovered on Camp Ibis (proper). He said he went out to locate this round and could not find it. Mr. Joplin said he informed the individual that discovered this round that he could not locate the projectile. This individual who Mr. Joplin said discovered this projectile went back out and also could not find the item. The team asked for this individuals name and Mr. Joplin stated he did not remember who he was. Mr. Joplin said he has been in the area where the .50 caliber moving target range was located and found HE fragments. In a final note to this conversation, Mr. Joplin said during hunting season many hunters travel through the Piute Wash area.

ACTION REQUIRED
NONE

ACTION TAKEN
NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 0910	DATE February 6, 1996
----------------------------	---------------------	---------------------------------

TYPE

VISIT CONFERENCE

TELEPHONE
 INCOMING
 OUTGOING

NAME OF PERSON CONTACT WITH Kevin Madison	ORGANIZATION Range Land Mgmt. Specialists	TELEPHONE NO. (619) 326-3896
---	--	--

SUBJECT: Camp Ibis (Proper)

SUMMARY (I-3)

Mr. Madison who has been working for the Bureau of Land Management at the Needles Office for seven years, as the Range Land Management Specialist help the team look for range allotments. To Mr. Madison's knowledge there are no range leases (allotments) on BLM owned land in Camp Ibis (proper).

ACTION REQUIRED
NONE

ACTION TAKEN
NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1000	DATE February 6, 1996
----------------------------	---------------------	---------------------------------

TYPE

VISIT CONFERENCE

TELEPHONE
 INCOMING
 OUTGOING

NAME OF PERSON CONTACT WITH Jill Miller-Allert	ORGANIZATION Wilderness Specialists	TELEPHONE NO. (619) 326-3896
--	--	--

SUBJECT: Camp Ibis (Proper)

SUMMARY (I-4)

Ms. Allert who is a Wilderness Specialists for the BLM Needles Office outlined the Wilderness Area that is apart of Camp Ibis (proper). Ms. Allert said the Wilderness Area starts on the eastern side of the Piute Wash, which runs through the eastern half of Camp Ibis (proper).

She also stated that some years back she discovered a spent .30 caliber cartridge and a mess kit south of Camp Ibis (proper). In a follow-up to this find, there are two ranges in that particular area according to documented maps.

ACTION REQUIRED
NONE

ACTION TAKEN
NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1010	DATE February 6, 1996
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TYPE

VISIT CONFERENCE

TELEPHONE
 INCOMING
 OUTGOING

NAME OF PERSON CONTACT WITH Mike McGill	ORGANIZATION Bureau of Land Management (Needles)	TELEPHONE NO. (619) 326-3896
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SUBJECT Camp Ibis (Proper)

SUMMARY (I-5)

Mr. McGill has been with BLM for a total of five years, three of those in the Needle's Office. Mr. McGill also confirmed that the BLM owned land in Camp Ibis (proper) does not have any leasees. He said this area is only used for recreational vehicles and upland games hunting.

Mr. McGill stated since 1972 he has been an active historical researcher. He said since the aforementioned time he has walked on foot and driven in vehicle all over Camp Ibis (proper). During this time he has only discovered an intact .50 caliber cartridge. Mr. McGill continued the conversation by stating that he was in the U.S. Marine Corps at Twenty-nine Palms for his service training. When asked about any chemical warfare material, Mr. McGill said he has not found anything like that on Camp Ibis (proper). But, he did mention that glass ampoules have been discovered in an area one mile north of the town of Goffs. The team asked if these ampoules were sealed by heat (melting the end of glass to seal). Mr. McGill stated that a plastic plug was inserted in the end and it looked as if some of them were in a fire. The team at this time doubts if any chemical agents are in these ampoules. However, this information will be passed on to the Los Angeles COE District. When asked if he could name anyother individuals that discovered these ampoules, he said he could not remember there names.

ACTION REQUIRED
NONE

ACTION TAKEN
NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD		TIME 1045	DATE February 6, 1996
TYPE			
<input checked="" type="checkbox"/> VISIT		<input type="checkbox"/> CONFERENCE	<input type="checkbox"/> TELEPHONE
			<input type="checkbox"/> INCOMING
			<input type="checkbox"/> OUTGOING
NAME OF PERSON CONTACT WITH Ken Downing	ORGANIZATION Geologist, BLM	TELEPHONE NO. (916) 979-2860	

SUBJECT: Camp Ibis (Proper)

SUMMARY (I-6)

Mr. Downing is a BLM Geologists who is from the BLM Office in Sacramento on loan to the Needles Office for a short period. Mr. Downing stated that the BLM Office in Needles has not had a geologists for a couple of years and the files are behind on the latest claim information. The last update was August 30, 1995. With this information and to Mr. Downing's knowledge there are no active mining claims or active oil/gas claims on Camp Ibis (proper). Also, in areas off Ibis (proper), location: Township 10 North, Range 21 East, Sections 10, 11, 14, 15 and Township 11 North, Range 20 East, Sections 22, 23, 24. There are no active mining or oil/gas claims in these areas.

ACTION REQUIRED

NONE

ACTION TAKEN

NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1430	DATE February 6, 1996
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TYPE

VISIT CONFERENCE

<input type="checkbox"/>	TELEPHONE
<input type="checkbox"/>	INCOMING
<input type="checkbox"/>	OUTGOING

NAME OF PERSON CONTACT WITH Ron Morrison	ORGANIZATION Former BLM Real Estate Specialists	TELEPHONE NO. (520) 763-5851
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SUBJECT: Camp Ibis (Proper)

SUMMARY (I-7)

Mr. Morrison was on business at the Needles BLM Office at the time of the teams visit. Mr. Morrison who no longer works for the BLM stated that he worked for the BLM Needles Office for 12 years. The team asked Mr. Morrison a question about differences in acreages on an historical COE map and a current San Bernardino Accuser's tax plat maps. Mr. Morrison believes that the individuals who surveyed this area made a mistake on the acreages of Sections 4, 5 and 6 of Township 10 North, Range 21 East. He went on to state after World War II, this area was probably resurveyed and acreages were corrected. To his belief, Mr. Morrison thinks the total acreage of Camp Ibis (proper) should be smaller than 10,215.5.

ACTION REQUIRED
NONE

ACTION TAKEN
NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1615	DATE February 7, 1996
----------------------------	---------------------	---------------------------------

TYPE		
<input checked="" type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	<input type="checkbox"/> TELEPHONE
		INCOMING
		OUTGOING

NAME OF PERSON CONTACT WITH Bob Lyons	ORGANIZATION San Bernardino Sheriff's Dept.	TELEPHONE NO. (619) 326-9200
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SUBJECT: Camp Ibis (Proper)

SUMMARY (I-8)

Mr. Lyons has worked for the San Bernardino County Sheriff Department for the past 12 years as a search and rescue team member. Besides working in the Needles area for the past 12 years, he was born in this community. Mr. Lyons said the only items he has discovered on Camp Ibis (proper) were spent .50 and .30 caliber cartridge cases located south of the Headquarters Circle in the cantonment area. He also stated he has heard rumors of equipment burials i.e. jeeps, tanks and rifles in an around the Camp Ibis area. But, so far nothing has been discovered in these areas. Mr. Lyons informed the team about the chain of informing if military ordnance items are discovered. He continued, individuals will call either BLM or the Sheriff's Office and then either department will call EOD Fort Irwin.

Mr. Lyons related an ordnance report that happened two weeks ago. An intact mortar was discovered on the eastern slopes of the Dead Mountains, exact location unknown. EOD from Fort Irwin was called out and the item was destroyed. Mr. Lyons stated he would send the team a copy of the incident report.

ACTION REQUIRED
NONE

ACTION TAKEN
NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1630	DATE February 7, 1996
----------------------------	---------------------	---------------------------------

TYPE		
<input checked="" type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	<input type="checkbox"/> TELEPHONE
		INCOMING
		OUTGOING

NAME OF PERSON CONTACT WITH Jerry Lyons	ORGANIZATION San Bernardino Co. Sheriff's Dept.	TELEPHONE NO. (619) 326-9200
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SUBJECT: Camp Ibis (Proper)

SUMMARY (I-8)

Mr. Lyons is also on the San Bernardino County Sheriff's Search and Rescue team along with his son (see document I-8) Mr. Lyons said he has been with the Sheriff's Office for 37 years and has lived in the Needles Community for 53 years Years ago Mr. Lyons was informed by a Mr. Butch Gates who was another team member about a .45 caliber machine gun range east of Piute Wash, which is located on Camp Ibis (proper). He stated he has not seen or heard of any live military or chemical warfare material being discovered on Camp Ibis (proper). Mr. Lyons said he has discovered shrapnel on a range far north of Camp Ibis (proper), in the Dead Mountain areas (see document L-9).

ACTION REQUIRED
NONE

ACTION TAKEN
Included information in the AsR.

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1015	DATE February 8, 1996
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TYPE

VISIT CONFERENCE

TELEPHONE
INCOMING
OUTGOING

NAME OF PERSON CONTACT WITH Walter Acuna	ORGANIZATION Retired Sheriff	TELEPHONE NO. (619) 326-1255
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SUBJECT: Camp Ibis (Proper)

SUMMARY (I-10)

Mr. Acuna was born and has lived in Needles all of his life. He started his employment, after serving with the Marine Corps, in 1947 with the Needles Police Department. After nine an one-half years with the City Police, he went to work for the San Bernardino County Sheriff's Office for 22 years reaching the rank of captain.

Mr. Acuna stated that he has no knowledge of any 'live' ordnance or chemical warfare material being discovered on Camp Ibis (proper). He went on to say that he believes the camp has been picked over by individuals in the past. He said the only items he has found on Camp Ibis (proper) has been practice ordnance and spent live ordnance. When asked about any burial sites on Camp Ibis (proper), he said he has no knowledge of any burial sites.

ACTION REQUIRED
NONE

ACTION TAKEN
NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1300	DATE February 8, 1996
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TYPE	<input checked="" type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	<input type="checkbox"/> TELEPHONE INCOMING OUTGOING
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NAME OF PERSON CONTACT WITH Bill Claypool	ORGANIZATION Owner of a Hardware Store	TELEPHONE NO. (619) 326-2109
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SUBJECT: Camp Ibis (Proper)

SUMMARY (I-11)

Mr. Claypool has lived in the Needles Community for 73 years. He is currently the owner of a hardware store in Needles.

Mr. Claypool said he has no knowledge of anyone finding 'live' ordnance or chemical warfare material on Camp Ibis (proper). He also stated that he has not heard of any burial sites on Camp Ibis (proper) either. He said the only ordnance items discovered that he is aware of were empty cartridge cases.

ACTION REQUIRED
NONE

ACTION TAKEN
NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1350	DATE February 8, 1996
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TYPE

VISIT CONFERENCE

TELEPHONE
INCOMING
OUTGOING

NAME OF PERSON CONTACT WITH Mark Wetmore	ORGANIZATION Retired	TELEPHONE NO. (619) 326-2546
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SUBJECT: Camp Ibis (Proper)

SUMMARY (I-12)

Mr. Wetmore has lived in the Needles Community since 1936. After retiring from the service in 1976, he went to work for the railroad.

He said he has found numerous pieces of shrapnel on Ibis (proper) and east. He pointed out to the team the areas, which are the following: Township 10 north, Range 21 east, Sections 9, 10, 15 and 16. He believes the shrapnel is from anti-aircraft ordnance. Mr. Wetmore stated that he has not seen any 'live' ordnance or heard of any 'live' ordnance being discovered on Camp Ibis (proper). He said he has heard stories about jeeps and tanks being buried, but nothing about buried ordnance or chemical warfare material.

ACTION REQUIRED
NONE

ACTION TAKEN
NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1445	DATE February 8, 1996
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TYPE		
<input checked="" type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	<input type="checkbox"/> TELEPHONE
		INCOMING
		OUTGOING

NAME OF PERSON CONTACT WITH Glenn Hill	ORGANIZATION Business owner	TELEPHONE NO. (619) 326-4655 home: 2687
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SUBJECT Camp Ibis (Proper)

SUMMARY (I-13)

Mr. Hill has lived in the Needles Community since 1953 and is currently operating a business in Needles.

Mr. Hill said he has seen scrap pieces of metal all over Camp Ibis (proper), but no 'live' ordnance.

He went on to tell the team about two medical waste burial sites near Camp Ibis (proper). One of these sites was east of the camp proper and the other west towards Goffs. Mr. Hill had a hard time locating these areas on a map the team provided, but said he could take anyone who is interested in these findings right to them. Mr. Hill said he did not know the source of the medical waste. He went on to mention that while doing some prospecting in the Homer Mountains, which is just west of Camp Ibis (proper), he found some exploded shells. There is a tank combat range just west of Camp Ibis (proper), which looks as if it's impact area is in the Homer Mountains.

ACTION REQUIRED
NONE

ACTION TAKEN
Put in ASR.

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 2100	DATE February 8, 1996
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TYPE		
<input type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	<input checked="" type="checkbox"/> TELEPHONE
		<input type="checkbox"/> INCOMING
		<input checked="" type="checkbox"/> OUTGOING
NAME OF PERSON CONTACT WITH Butch Gates	ORGANIZATION	TELEPHONE NO.

SUBJECT Camp Ibis (Proper) Page 2 of 2

SUMMARY (I-14)

a matter of time before the water and wind erosions uncover these items. As for one more burial area, Mr. Gates stated that south of the runway there was a motor pool area. He said this was another burial area too and anything could be buried there. Mr. Gates said shortly after World War II, Italian POWs and American GIs picked up everything they could find and buried the items in the Piute Wash area and ravines inside and outside Camp Ibis (proper). Again, he repeated it could have been anything including 'live' ordnance items. Mr. Gates stated that in the soft areas projectiles would bury in approximately one to one and one-half feet, which will eventually be washed out by the rains. He also stated that a big majority of tank training took place east of Piute Wash and the Dead Mountains, using the mountains as a impact area too. A place in the Dead Mountains called (Red Hills) seems to be a large contaminated area. Mr. Gates also informed the team about a military exercise taking place in May 1964, called Desert Strike. He stated it encompassed the majority of the DTC/CAMA area, this includes parts of Camp Ibis (proper). Mr. Gates furnished maps of Desert Strike showing the contaminated areas.

ACTION REQUIRED

Include potential areas in ASR.

ACTION TAKEN

Placed the aforementioned information within the ASR.

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 2100	DATE February 8, 1996
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TYPE		
<input type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	<input checked="" type="checkbox"/> TELEPHONE
		<input type="checkbox"/> INCOMING
		<input checked="" type="checkbox"/> OUTGOING
NAME OF PERSON CONTACT WITH Butch Gates	ORGANIZATION	TELEPHONE NO. (208) 529-5313 call evenings

SUBJECT Camp Ibis (Proper)

SUMMARY (I-14)

Mr. Gates who is an EXCELLANT source of information for the entire Desert Training area work for the San Bernardino County Sheriff's Office since 1972. He has currently moved to Idaho Falls, Idaho. Not only is he very familiar with Camp Ibis (proper), but he is very familiar with all areas.

Throughout Mr. Gates' years with the Search and Rescue Department of the San Bernardino County Sheriff's Office, he has compiled maps, photos and first hand knowledge of ordnance areas. He is a must to talk with when researching the Desert Training Center.

To start out, Mr. Gates told the team areas along and in the Piute Wash, which runs through the eastern half of Camp Ibis (proper) were used for burial sites. He said the entire Piute Wash both east and west banks and extending out approximately 300 to 400 yards from the banks, could be contaminated with anything, including ordnance. Mr. Gates did say he has no knowledge of any chemical warfare material being buried on Camp Ibis (proper). The potential sites he discussed with the team are too numerous to list. Instead plate 5, will allow you to locate the areas. He told the team that he has not heard of any 'live' ordnance or chemical warfare material being discovered at Camp Ibis (proper). But, he continued by stating these burial areas along Piute Wash and in other areas, it's just

ACTION REQUIRED
NONE

ACTION TAKEN
NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1940	DATE February 10, 1996
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TYPE

VISIT CONFERENCE

<input checked="" type="checkbox"/>	TELEPHONE
	INCOMING
<input checked="" type="checkbox"/>	OUTGOING

NAME OF PERSON CONTACT WITH Dennis Casebier	ORGANIZATION Retired/Local Historian	TELEPHONE NO. (619) 733-4482
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SUBJECT Camp Ibis (Proper)

SUMMARY (I-15)

Mr. Casebier has been living in the Goffs California area for 6 years. Mr. Casebier is retired from civil service and has become a local historian about the Desert Training Center a.k.a. California Arizona Maneuver Area. He has written and published two books on the training area. He stated that he has no knowledge of anyone discovering live ordnance or chemical warfare material on Camp Ibis (proper). He also said he has no knowledge of any burial sites on Camp Ibis (proper) either.

ACTION REQUIRED
NONE

ACTION TAKEN
NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1045	DATE January 29, 1996
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TYPE		
<input type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	<input checked="" type="checkbox"/> TELEPHONE
		<input type="checkbox"/> INCOMING
		<input checked="" type="checkbox"/> OUTGOING

NAME OF PERSON CONTACT WITH Bill Abernathy and Harry Hatch	ORGANIZATION San Bernardino Co. Bomb Squad	TELEPHONE NO. (909) 387-3607
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SUBJECT Camp Ibis (Proper) page 1 of 2

SUMMARY (I-16)

Mr. Bill Abernathy has been with the San Bernardino County Bomb Squad since 1989. In these past six years with the squad he has not personally been to these areas for any UXO incidents. He said he has gone out to several houses in the area and picked up live and practice ordnance that were taken from the Desert Training Center area. The items he remembers picking up in houses were: live projectiles and practice land mines. Mr. Abernathy continued by saying that most of the items that he picked up were just practice.

MR. Harry Hatch who is also with the San Bernardino County Bomb Squad said before joining the the squad, he was with the County Sheriff's Office in Needles from 1974-78. He said he has heard rumors of buried ammunition bunkers and an M3 Grant tank being buried out in the Ibis area. He continued saying that he has been out in the area looking for this rumor and found nothing. He stated who knows where this stuff is located. He stated recently that .50 and 37 mm practice rounds were found around the Ibis area. He gave two contacts that would know a great deal about the Ibis area, they were Butch Gates and Walter 'Pony' Acuna. In a final note, Mr. Hatch said COE people from where he didn't know, found .50 caliber incendiary and 37mm practice rounds near the Camp Ibis area. He stated this took place two to

ACTION REQUIRED
see continuation

ACTION TAKEN
see continuation

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME	DATE January 29, 1996
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TYPE		
<input type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	<input checked="" type="checkbox"/> TELEPHONE
		<input type="checkbox"/> INCOMING
		<input checked="" type="checkbox"/> OUTGOING

NAME OF PERSON CONTACT WITH Bill Abernathy and Harry Hatch	ORGANIZATION San Bernardino Co. Bomb Squad	TELEPHONE NO. (909) 387-3607
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SUBJECT Camp Ibis (Proper) page 2 of 2

SUMMARY (I-16)

three months ago. He continued by saying he picked up the rounds from the EOD (Marine Corps) unit from 29 Palms, which picked up the items from the COE personnel who found the rounds.

ACTION REQUIRED Contact Mr. Gates and Mr. Acuna

ACTION TAKEN Contacted both individuals

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1355	DATE January 29, 1996
----------------------------	---------------------	---------------------------------

TYPE		
<input type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	<input checked="" type="checkbox"/> TELEPHONE
		<input type="checkbox"/> INCOMING
		<input checked="" type="checkbox"/> OUTGOING

NAME OF PERSON CONTACT WITH Hank Counts	ORGANIZATION UXO Safety Specialists, St. Louis (FUDS)	TELEPHONE NO. (314) 331-8762
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SUBJECT Camp Ibis (Proper)

SUMMARY (I-17)

See previous interview I-16 Mr. Harry Hatch. To follow-up Mr. Hatch's statement about rounds being found by COE personnel near the Camp Ibis area. The team called the St. Louis FUDS Office and found that a Mr. Hank Counts, who is an UXO Specialists with the FUDS Office was the individual Mr. Hatch was talking about in interview I-16.

In the phone interview with Mr. Counts, he stated yes, he was out in the southern California area doing research the 2nd week of December 1995. Mr. Counts remembers talking with Mr. Harry Hatch from the San Bernardino Bomb Squad about the UXO finds. But, Mr. Counts said they were not discovered near the Camp Ibis area. He continued by saying the OE items where found in the Cadiz (Dry) Lake. He said 96 rounds of .50 caliber API where found in the dry lake and 37mm TPT's where found near Rice California, which is another Desert Training Center area of the World War II time frame.

ACTION REQUIRED
Inform Mr. Rick Hale another Technical Manager of the OE finds.

ACTION TAKEN
Informed Mr. Hale

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1045	DATE February 27, 1996
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TYPE

VISIT CONFERENCE

<input checked="" type="checkbox"/>	TELEPHONE
<input checked="" type="checkbox"/>	INCOMING
<input type="checkbox"/>	OUTGOING

NAME OF PERSON CONTACT WITH John Bezzant	ORGANIZATION SF Pacific Properties Inc.	TELEPHONE NO. (714) 237-7306
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SUBJECT Camp Ibis (Proper)

SUMMARY (I-18)

Mr. John Bezzant is the Director of Diverse Holdings for the SF Pacific Properties Incorporated, which is a subsidiary of Catellus (parent company). He stated he has been with this company for 10 years and is familiar with the Ibis area. Mr. Bezzant stated his company owns other lands in the Southern California Desert. This includes land in and around Camp Ibis (proper).

The team asked Mr. Bezzant if any future developments are in the plans for your land on Ibis. Mr. Bezzant said there is a study going on now about the possible agriculture development of land in the Ibis area. He stated that within the next five years, depending on the water situation, there could be an agriculture development in the Ibis area. When the team asked if he or anyone else in his office has visited Camp Ibis (proper), his response was No. When the team asked if he has heard of anyone discovering live military ordnance on Camp Ibis (proper) or in the area, he responded by saying NO.

The team asked Mr. Bezzant if the Southern Pacific Company was the former name of the now SF Pacific Properties Incorporated. He stated the Southern Pacific Company was the former name of the SF Pacific Properties Incorporated of today.

ACTION REQUIRED

Gave Mr. Bezzant, Mr. Greg Boghossian's phone number, who is the POC for the LA COE District.

ACTION TAKEN

Told Mr. Bezzant that if he had any questions, he was to contact Mr. Boghossian.

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 0800	DATE February 23, 1996
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TYPE		
<input type="checkbox"/> VISIT	<input type="checkbox"/> CONFERENCE	<input checked="" type="checkbox"/> TELEPHONE
		<input checked="" type="checkbox"/> INCOMING
		<input type="checkbox"/> OUTGOING

NAME OF PERSON CONTACT WITH Jerry N. Theaker	ORGANIZATION LA Police Dept. North Hollywood	TELEPHONE NO. (818) 756-8822 (805) 527-6758 Home
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SUBJECT: Camp Ibis (Proper)

SUMMARY (I-19)

Mr. Theaker stated even though his full time position is with LAPD, North Hollywood Area, he has been visiting these World War II camps just for hobby. He said he has been at this hobby for seven years now. The term Desert Ordnance Hunters is a misnomer, he said they go into to the camp areas and camp for two or three days. Mr. Theaker continued by saying they do not look specifically for ordnance items, he said they try and figure out what Patton did at each camp.

Mr. Theaker said, he has personally been out with COE personnel from the St. Louis FUDS Office on area walk through. He stated he has learned a lot from these individuals.

As for Camp Ibis (proper), Mr. Theaker said he only visited the camp for two hours on his way to Laughlin, Nevada. He said Camp Ibis (proper) is on his schedule visit for March 14-15 of this year. Mr. Theaker told the team about the other camps he visited by himself and with COE personnel. Mr. Theaker asked the team if there where any certain areas the team wanted him to visit. The team replied, that they had NO areas for him to visit, but if he came across something he thinks might interest the team, please call.

ACTION REQUIRED

Inform other Technical Managers and Safety Specialists about Mr. Theaker visiting other camps of interest in the DTC/CAMA.

ACTION TAKEN

Gave Mr. Theaker's phone number to these Technical Managers/Safety Specialists.

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1430	DATE March 5, 1996
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TYPE

VISIT CONFERENCE

<input checked="" type="checkbox"/>	TELEPHONE
	INCOMING
<input checked="" type="checkbox"/>	OUTGOING

NAME OF PERSON CONTACT WITH George Wagner	ORGANIZATION Santa Fe Pacific Gold	TELEPHONE NO. (505) 880-5300
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SUBJECT: Camp Ibis (Proper)

SUMMARY (I-20)

A lead in to this conversation record occurred when the team called Mr. John Bezzant (see I-18). The team noticed a mineral rights claim on Township 10 north, Range 21 east, Section 21, containing 47.5 acres. This particular property belongs to SF Pacific Properties Incorporated. Mr. Bezzant helped the team track down the SF Mineral Corporation, Albuquerque, New Mexico, which has the mineral rights. A Mr. George Wagner was the individual Mr. Bezzant said that could probably help. Mr. Wagner was contact and the following conversation occurred.

Mr. George Wagner has been the Manager of Land Administration for 25 years with Santa Fe Pacific Gold. Mr. Wagner confirmed what Mr. Bezzant said about Santa Fe Pacific Gold formerly being SF Mineral Corporation. The team asked Mr. Wagner about the mineral rights in Section 21 Township 10 north, Range 21 east containing 47.5 acres. He opened up his computer files and found the said property. Mr. Wagner stated there is 'no active' mining on the property and as for any future mining, Mr. Wagner did not know at this time. At this time the team told Mr. Wagner if he had any questions or concerns or if mining operations were going to start, please call Mr. Greg Boghossian from the COE LA District. Also the team gave another poc, Mr. William T. Wiley, Needles BLM Office.

ACTION REQUIRED

Give phone number for Mr. Boghossian/Mr. Wiley

ACTION TAKEN

Gave the phone number for the two aforementioned individuals.

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DO	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

CONVERSATION RECORD	TIME 1025	DATE March 20, 1996
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TYPE

VISIT CONFERENCE

<input checked="" type="checkbox"/>	TELEPHONE
	INCOMING
<input checked="" type="checkbox"/>	OUTGOING

NAME OF PERSON CONTACT WITH Fred Sledd	ORGANIZATION Public Land Management Spec.	TELEPHONE NO. (916) 574-1817
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SUBJECT: Camp Ibis (proper)

SUMMARY (I-21)

Mr. Fred Sledd stated this land, Section 16, Township 10 North, Range 21 East, which the State of California owns is in the process of being purchased by the Federal Government. He stated this buy back is under the California Desert Protection Act (CDPA). When asked about the date of this transaction taking place, Mr. Sledd said he has no knowledge of this, but thinks within one to two years. He also stated the appraisal is going on now with this property and others the Federal Government, Department of Interior is interested in purchasing.

ACTION REQUIRED
NONE

ACTION TAKEN
NONE

NAME OF PERSON DOCUMENTING CONVERSATION	ORGANIZATION CENCR-ED-DN	TELEPHONE NUMBER (309) 794-6016
SIGNATURE	TITLE QASAS	DATE

ORDNANCE AND EXPLOSIVE
ARCHIVES SEARCH REPORT
FOR
FORMER CAMP IBIS (PROPER)
SAN BERNARDINO COUNTY
NEEDLES, CALIFORNIA
PROJECT NUMBER J09CA028301

APPENDIX J

PRESENT SITE PHOTOGRAPHS

APPENDIX J

PRESENT SITE PHOTOGRAPHS

TABLE OF CONTENTS

J-1 Looking West, Camp Ibis (proper) foreground, HWY 95 and Homer Mountains background.

J-2 Looking East, Camp Ibis (proper) foreground, Dead Mountains background.

J-3 Looking S, 50,000 gal. water reservoir.

J-4 Fragment pile, 30 ft. south of reservoir.

J-5 Fragment pieces within pile, 75mm/105mm.

J-6 Mortar Fins within pile, 81mm.

J-7 Barbed wire 50 ft. south of reservoir.

J-8 Looking SW at possible .45 cal. machine gun/pistol firing point.

J-9 Looking SE at possible target area for .45 cal. machine gun.

J-10 75mm fragment.

J-11 MK II grenade fragment

J-12 75mm fragment.

J-13 155mm fragment.

J-14 60mm mortar fragment.

J-15 Possible impact site.

J-16 Grenade fuze, M204.

J-17 Grenade fuze, M201.

J-18 Artillery fuze, M557.

- J-19 Artillery fuze, M557.
- J-20 Burial site.
- J-21 Burial site.
- J-22 Burial site.
- J-23 Equipment debris/possible burial site.
- J-24 Pieces of M1 Practice Mine.
- J-25 Cartridge case .30 cal. carbine.
- J-26 Slug .45 caliber.
- J-27 Cartridge case .30 cal. rifle.
- J-28 Slug .50 caliber.
- J-29 Target trash with Pulley system.
- J-30 Blank cartridge cases 7.62mm (Desert Strike).
- J-31 Blank cartridge cases 7.62mm (Desert Strike).
- J-32 Rocket, 2.36 inch M7 Practice.
- J-33 One of numerous rusted out drums found in wash.
- J-34 Burial site discovered in cantonment area.
- J-35 Rock alignments on Camp Ibis (proper).



J-1 Looking West, Camp Ibis (proper) foreground, HWY 95 and Homer Mountains background.



J-2 Looking East, Camp Ibis (proper) foreground, Dead Mountains background.



J-3 Looking S, 50,000 gal. water reservoir.



J-4 Fragment pile, 30 ft. south of reservoir.



J-5 Fragment pieces within pile, 75mm/105mm.



J-6 Mortar Fins within pile, 81mm.



J-7 Barbed wire 50 ft. south of reservoir.



J-8 Looking SW at possible .45 cal. machine gun/pistol firing point.



J-9 Looking SE at possible target area for .45 cal. machine gun.



J-10 75mm fragment.



J-11 MK II grenade fragment



J-12 75mm fragment.



J-13 155mm fragment.



J-14 60mm mortar fragment.



J-15 Possible impact site.



J-16 Grenade fuze, M204.



J-17 Grenade fuze, M201.



J-18 Artillery fuze, M557.



J-19 Artillery fuze, M557.



J-20 Burial site.



J-21 Burial site.



J-22 Burial site.



J-23 Equipment debris/possible burial site.



J-24 Pieces of M1 Practice Mine.



J-25 Cartridge case .30 cal. carbine.



J-26 slug .45 caliber.



J-27 Cartridge case .30 cal. rifle.



J-28 Slug .50 caliber.



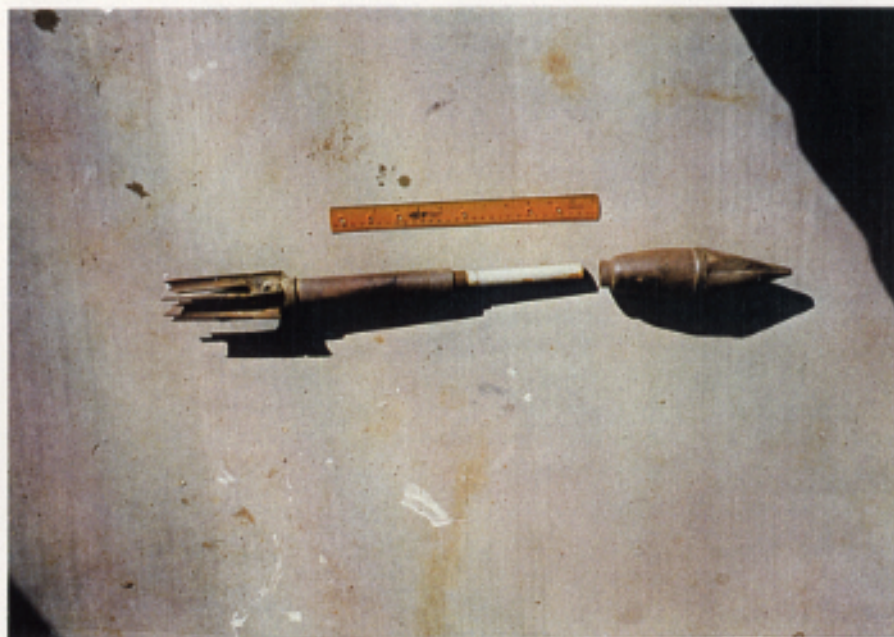
J-29 Target trash with Pulley system.



J-30 Blank cartridge cases 7.62mm (Desert Strike).



J-31 Blank cartridge cases 7.62mm (Desert Strike).



J-32 Rocket, 2.36 inch M7 Practice.



J-33 One of numerous rusted out drums found in wash.



J-34 Burial site



J-35 Rock alignments on Camp Ibis (proper).

ORDNANCE AND EXPLOSIVE
ARCHIVES SEARCH REPORT
FOR
FORMER CAMP IBIS (PROPER)
SAN BERNARDINO COUNTY
NEEDLES, CALIFORNIA
PROJECT NUMBER J09CA028301

APPENDIX K

HISTORICAL PHOTOGRAPHS

APPENDIX K
HISTORICAL PHOTOGRAPHS

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- K-1 Historical aerial photo (B-51).
- K-2 Historical photo (B-52).
- K-3 Historical photo (B-53).

AIR FIELD NEAR CAMP IBIS

US16MS-25:7:43:1430-1142013410N-1142013410E
FIELD IS MI. NW. OF NEEDLES, CALIF. CN



K-1



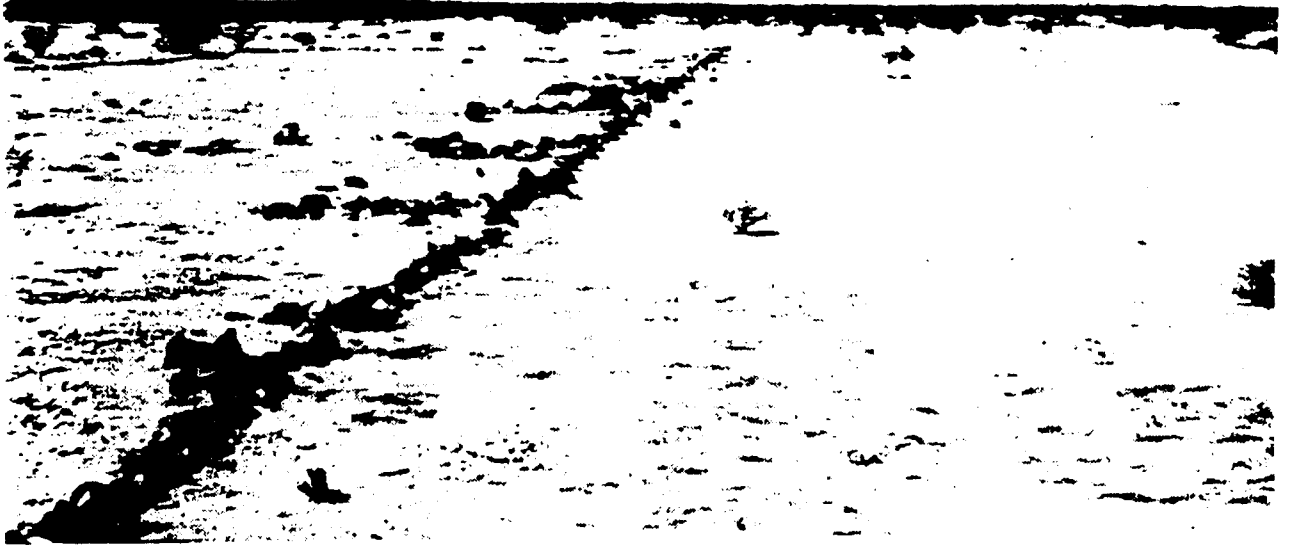
TANKS CROSS THE COLORADO RIVER

(right)
ARMY TROOPS GUARD THE INTERSECTION
OF U.S. HIGHWAYS 95 AND 66

BOTH PHOTOS TAKEN
DURING 1964 OPERATION
"DESERT STRIKE"

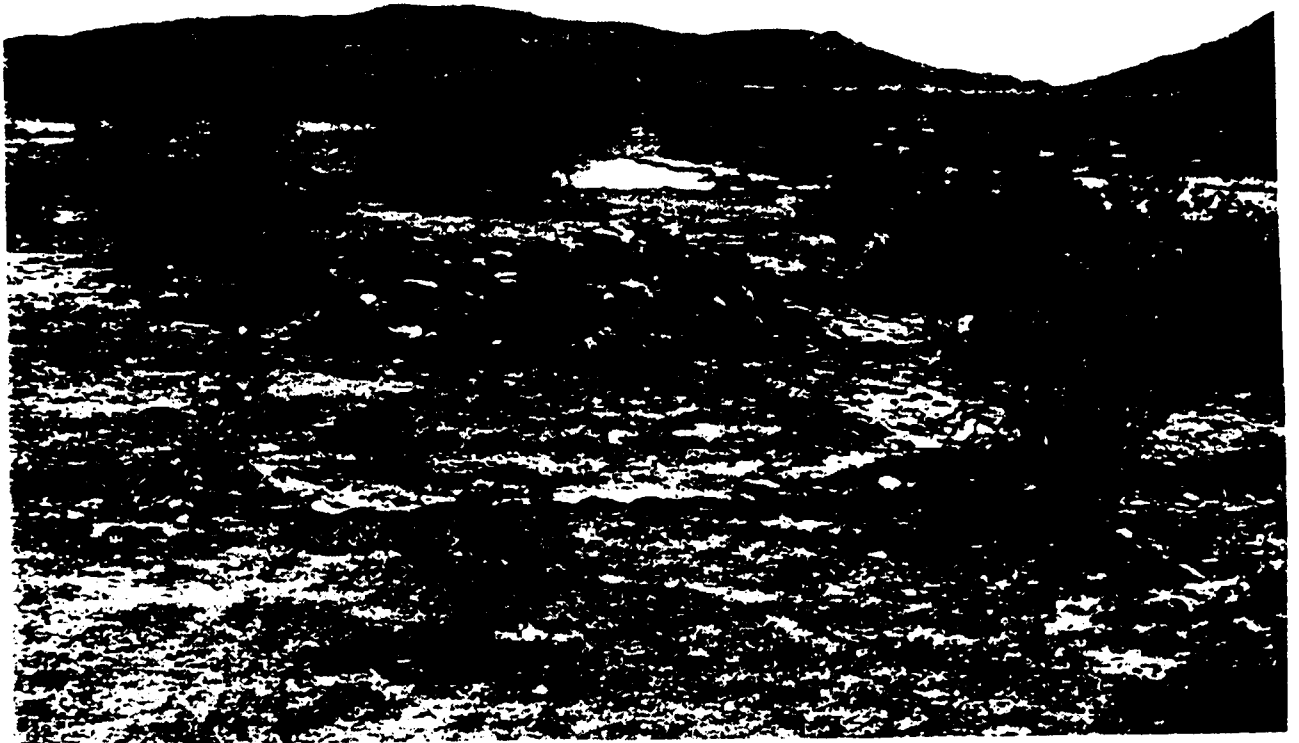
U. S. Army Photographs

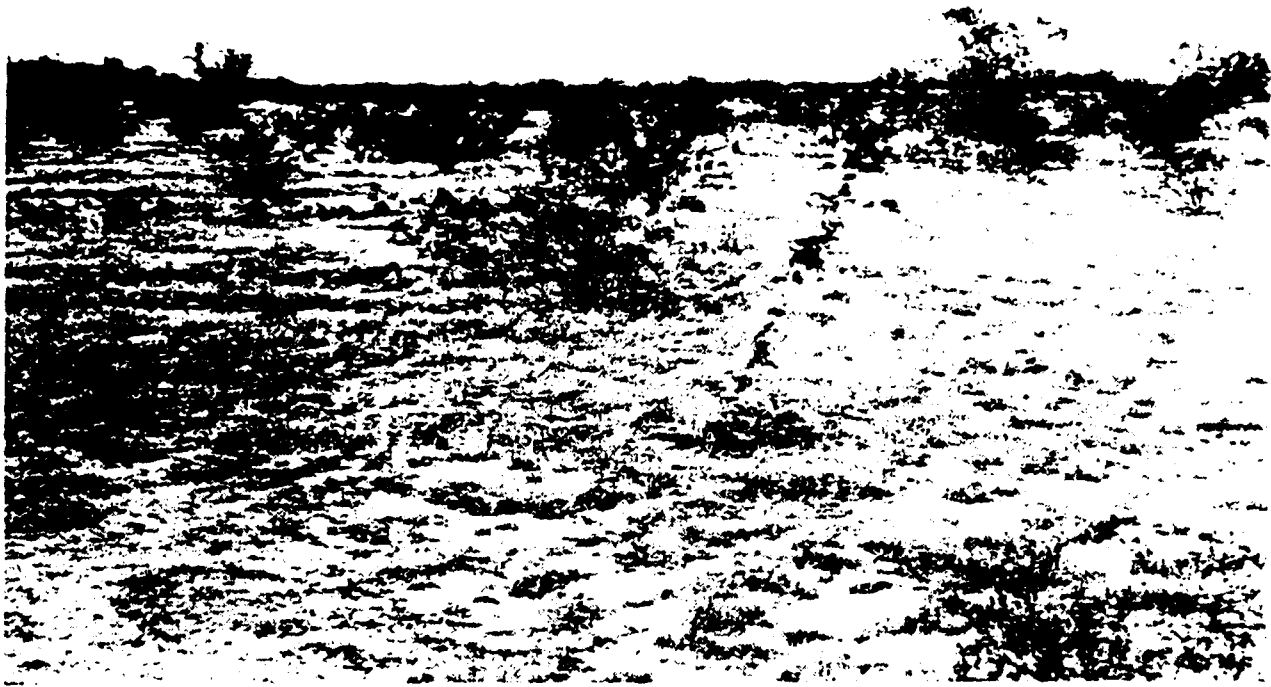




Onetime street marked by rocks. ←

Tent area, Camp Hyder.





→ *A few lines of stones which once marked streets and walks are all that remain of much of Camp Horn.*

meats, canned sausages and dehydrated foods.” However, an historian continued, “Despite the difficulties of the life in the desert, some came to enjoy the desert and found it interesting in many ways and a provider of choice reminiscences. Its space was immeasurable — in the 1,200 square miles assigned to the Division, there lived only two civilians, both hermit guards at inactive gold mines. However, it was not entirely deserted because there were many kangaroo rats, sidewinders, and other rattlesnakes, birds, tarantulas and coyotes.”¹

Phoenix, a difficult 135-mile ride from camp, was believed by GIs to be the desert’s greatest oasis. Leave-takers in packed autos left camp weekends as often as permitted, so the San Carlos, the Westward Ho and other luxurious hotels were quickly filled. In addition, recreational convoys took groups of 1,000 Wildcats to the Division’s temporary camp at the Arizona State Fair Grounds in Phoenix where they could enjoy heavy meals of steak, salad and steins of cold beer.

On August 4, 1943, a “battle demonstration group” made up of the 322nd Infantry’s Company I and detachments from the 306th Engineer and 306th Medical Battalions left for the Fair Grounds. In Phoenix, Ogden, Salt Lake City and other Western mining cities, this Wildcat “roadshow” demonstrated sham battles and military equipment usage, and underscored the importance of western metals in the war effort.

Training of course was given first priority at Camp Horn. Emphasis was

ORDNANCE AND EXPLOSIVE
ARCHIVES SEARCH REPORT
FOR
FORMER CAMP IBIS (PROPER)
SAN BERNARDINO COUNTY
NEEDLES, CALIFORNIA
PROJECT NUMBER J09CA028301

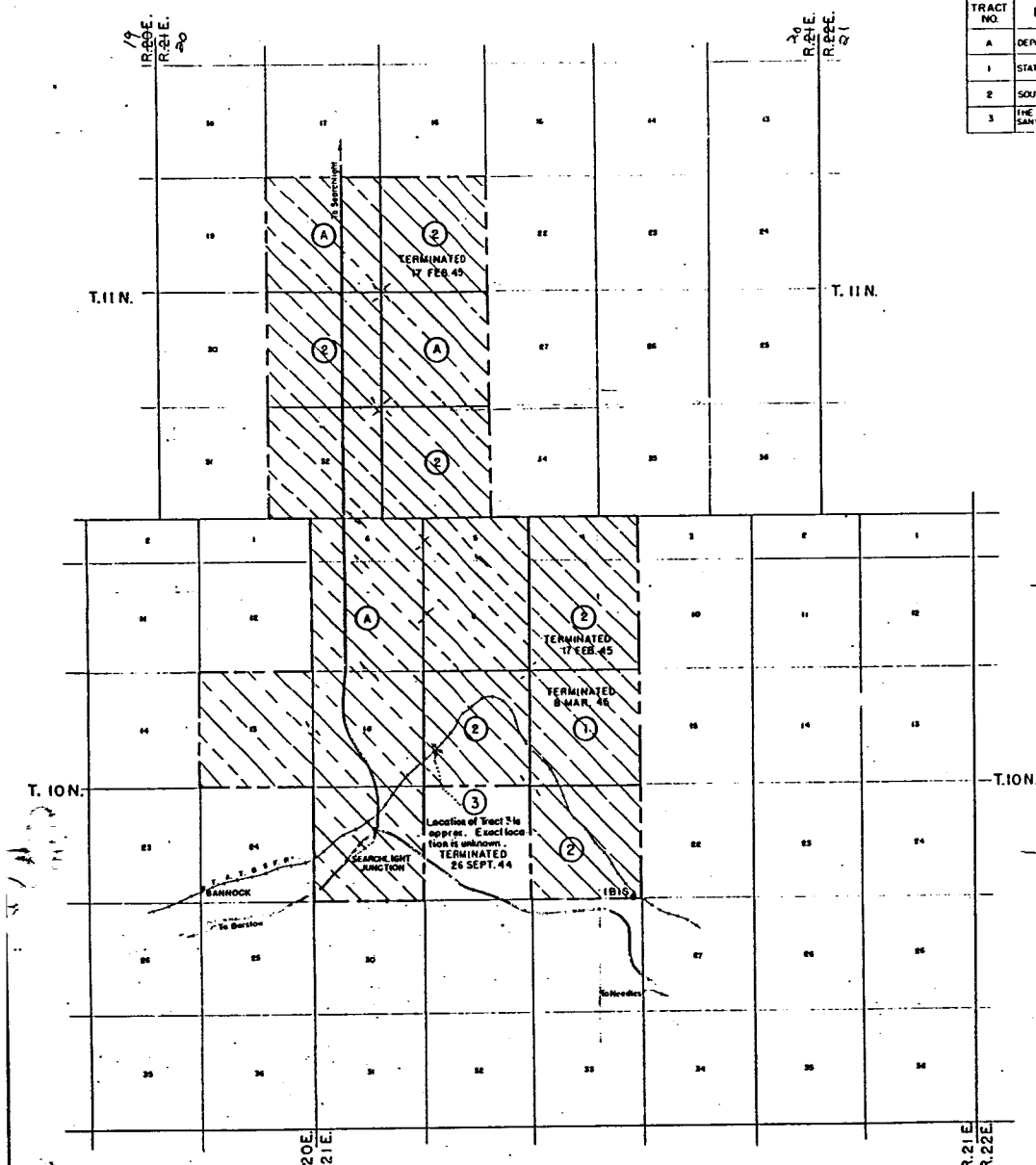
APPENDIX L

REFERENCE MAPS/DRAWINGS

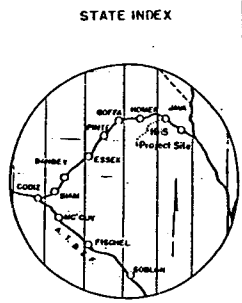
APPENDIX L
REFERENCE MAPS/DRAWINGS

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- L-1 Historical Map COE, 1948 (B-54).
- L-2 Current County Tax Plat Maps (B-55).
- L-3 DTC/CAMA Map (B-56).
- L-4 Historical Map COE, 1948 (B-57).
- L-5 Dead Mountain Wilderness Map 38 (B-58).
- L-6 Historical Maps (B-59).
- L-7 Locally originated map (B-60).
- L-8 BLM Aerial Photo (B-62).
- L-9 Hand scaled map of cantonment area (B-63).
- L-10 Map of CAMA, Circa 1943 (B-65).
- L-11 Desert Strike Contamination (B-66).
- L-12 Map DTC/CAMA 1942-43



ACQUISITION TRACT REGISTER				
TRACT NO.	LAND OWNER	ACREAGE		REMARKS
		TRANS.	LESSER INTERESTS	
A	DEPARTMENT OF INTERIOR	5,760.0		Implied Transfer
1	STATE OF CALIFORNIA		640.0	Revocable Permit No 12, 24 Mar 42
2	SOUTH-EAST PACIFIC COMPANY		3815.50	Permissive Use Agreement, Dated 11 Feb 42
3	THE A. O'NEILL TOPEKA & SANTA FE RAILWAY COMPANY		NO AREA	W-04-193-Eng-3213 Dtd 24 Aug '43 For Communication Line Right of Way



FINAL
PROJECT OWNERSHIP MAP

STATE CALIFORNIA
COUNTY SAN BERNARDINO
DIVISION SOUTH PACIFIC
DISTRICT LOS ANGELES
SOUTH ARMY AREA

LOCATION OF PROJECT
2 1/2 MILES N.W. OF NEEDLES
MILES OF

TRANSPORTATION FACILITIES
RAILROADS A.T. & S.E. RY.
STATE ROADS
FEDERAL ROADS
AIRLINES

ACQUISITION
TOTAL ACRES ACQUIRED 10,215.50
ACRES FEE
ACRES TRANSFER TO WAR DEPT. 5,760.00
ACRES LEASED TO WAR DEPT. PERMIT (1) 640.00
ACRES LESSER INTERESTS USE AGREEMENT (1) 3815.50 LICENSE (1) NO AREA

DISPOSAL
TOTAL ACRES DISPOSED OF 10,215.50
ACRES SOLD BY WAR DEPT.
ACRES TRANSFERRED BY WAR DEPT.
ACRES RETRANSFERRED TO GOVT. ACCT. 5,760.00
ACRES LEASES TERMINATED PERMIT (1) 640.00
ACRES LESSER INT'S TERM. USE AGREEMENT (1) 3815.50 LICENSE (1) NO AREA

LEGEND
NOTE: USE SYMBOLS FROM 6 M-21-30 (WAR DEPT. BASIC FIELD MANUAL) PAGES 31 TO 37 INCL. EXCEPT

RESERVATION LINE
RESERVATION LINE (Actual Survey)
DAM SITE (Taking Line)
RESERVOIR SITE (Taking Line)
CONTOUR LINES
AVIGATION EASEMENTS
TRACT NUMBER 88

ACQUISITION AUTHORIZATION
RE-D 959 DATED 13 MAY 1942

REVISIONS	DATE	DESCRIPTION	BY
1	1 JUN 42	ONE TO FINAL ALERT	D.B.
2	7 JUN 42	Disposal added.	J.W.K.

DEPARTMENT OF THE ARMY
OFFICE OF THE DIVISION ENGINEER
SOUTH PACIFIC DIVISION

REAL ESTATE
CAMP IBIS
(C. A. M. A.)

APPROVED BY: *Maria J. Coppes* DATE: 21 Aug 45
OFFICE: CHIEF OF ENGINEERS, WASHINGTON, D. C.

AUDITED 2277

SCALE IN FEET
0 1000 2000 3000 4000

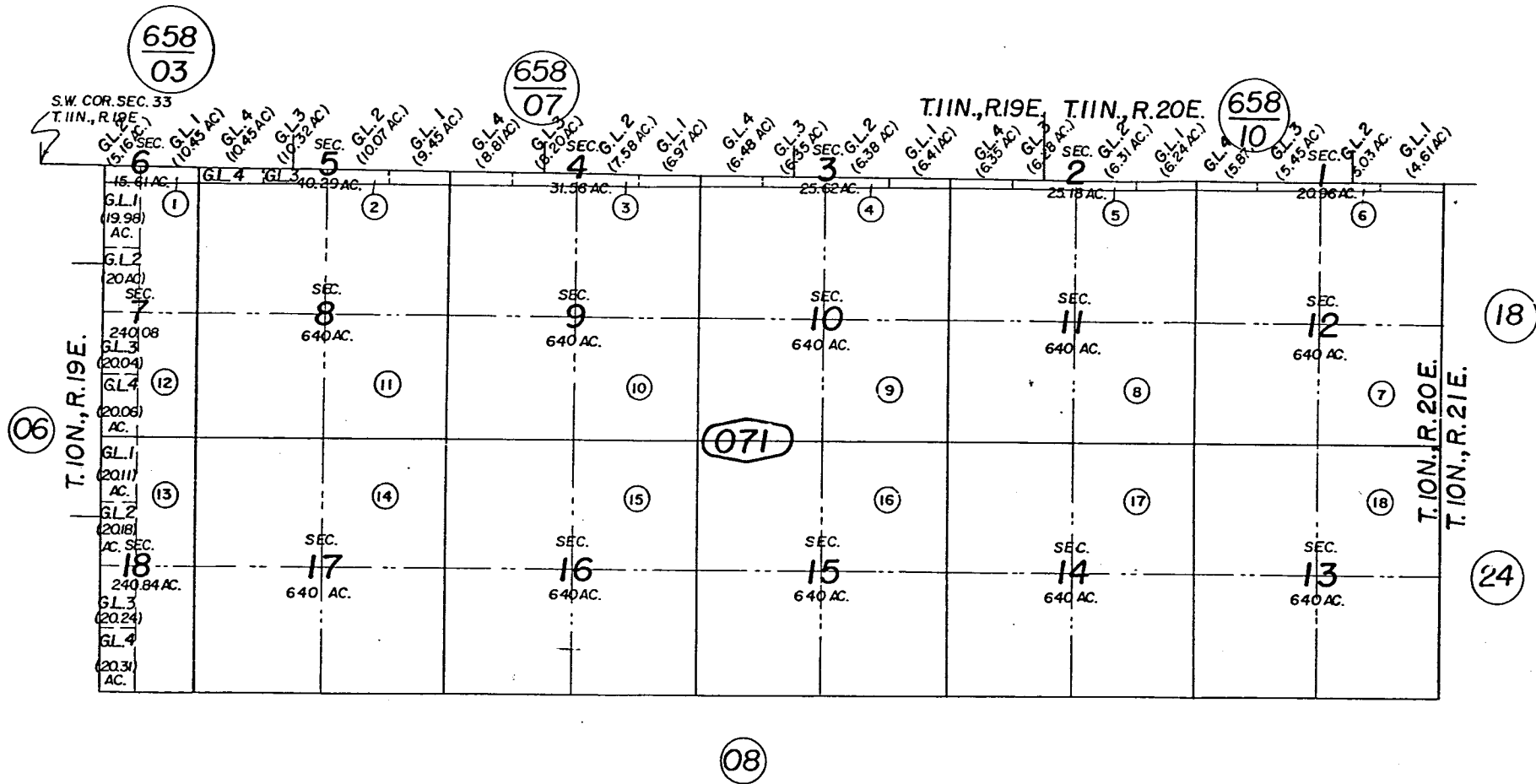
IMPLIED TRANSFER FOR 5,760.00 ACRES RELINQUISHED TO DEPT. OF INTERIOR, 3 MAY 1951.



N. 1/2 T.10N., R.20E. S.B.B.&M.

Needles Unified
Tax Rate Area
96005

659-07



Oct. 1962 *pl*

Note - Assessor's Blk & Lot

Assessor's Map
Book 659 Page 07

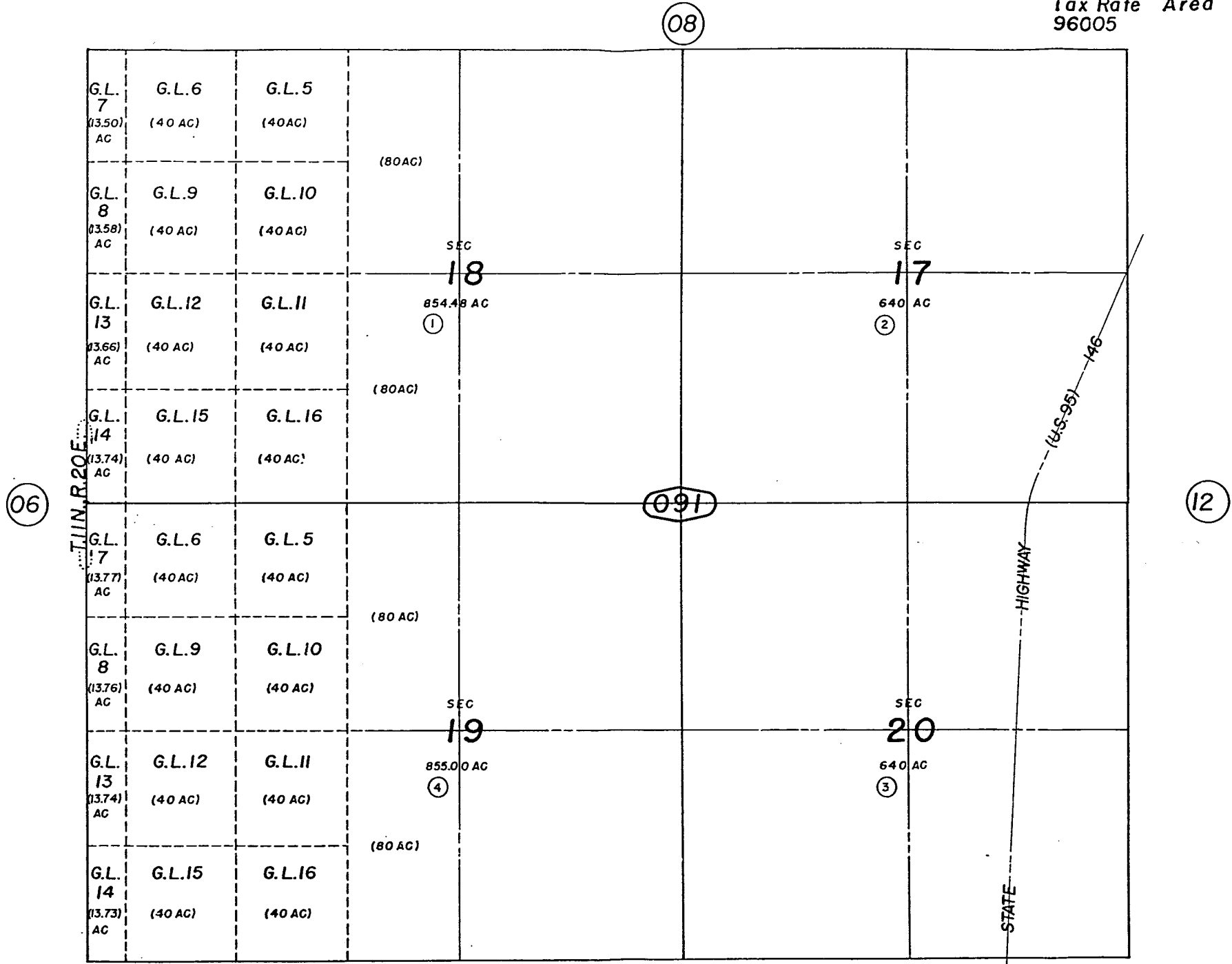
REVISED
12-23-66
6-22-67



Secs. 17 & 20 Fractional Secs. 18 & 19 T.11 N.R. 20E. S.B.B. & M.

Needles Unified
Tax Rate Area
96005

658-09



06

08

09

12

10

Note-Assessor's Blk. & Lot

Assessor's Map
Book 658, Page 09

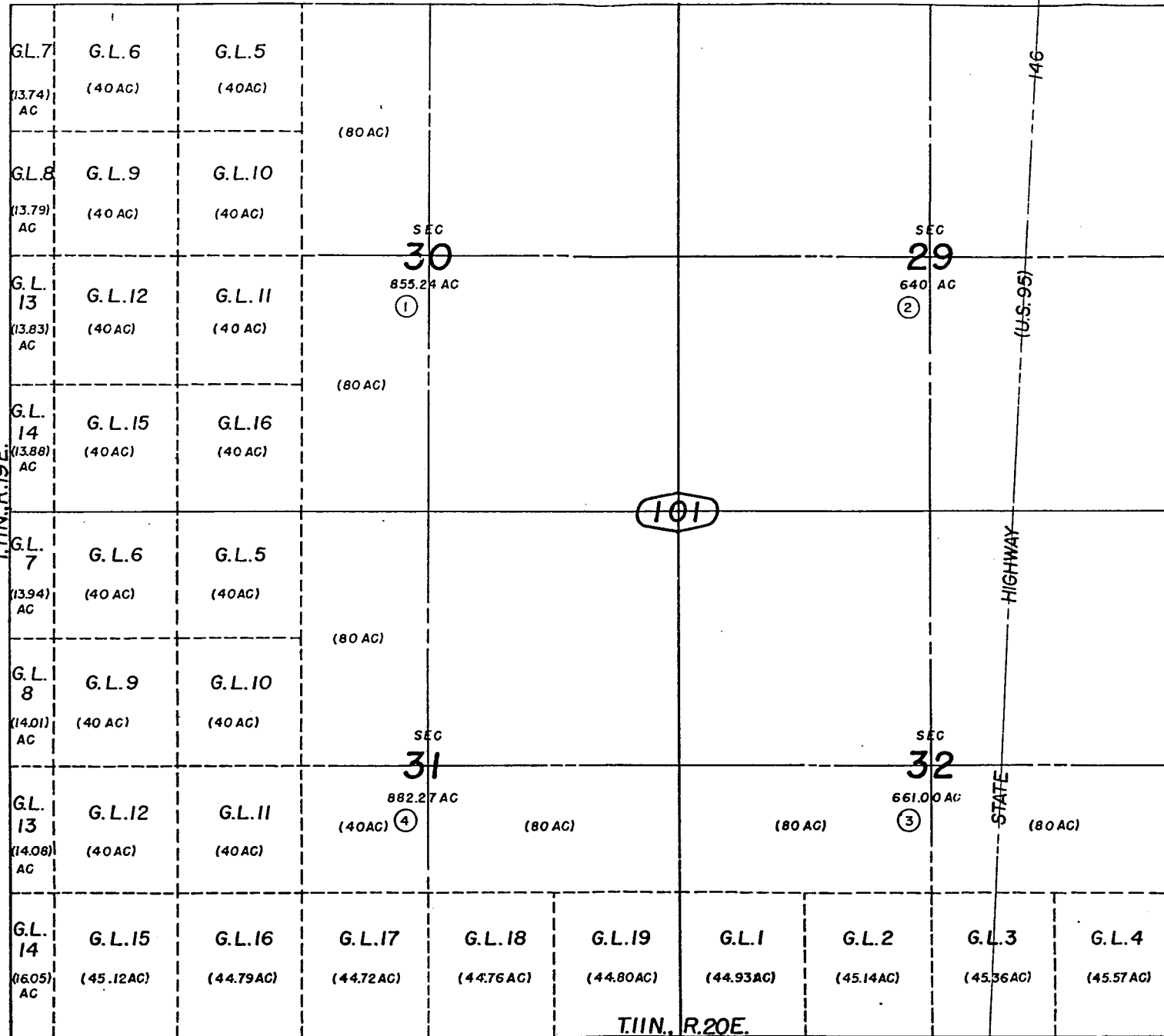
REVISED
12-21-66
2-22-67



Sec. 29 Fractional Secs. 30, 31, & 32 T.11N.R.20E. S.B.B.&M.

Needles Unified Tax Rate Area 96005

658-10



07

09

12

101

11

659/18



REVISED 12-21-66 4-22-67

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Assessor's Map Book 658 Page 10

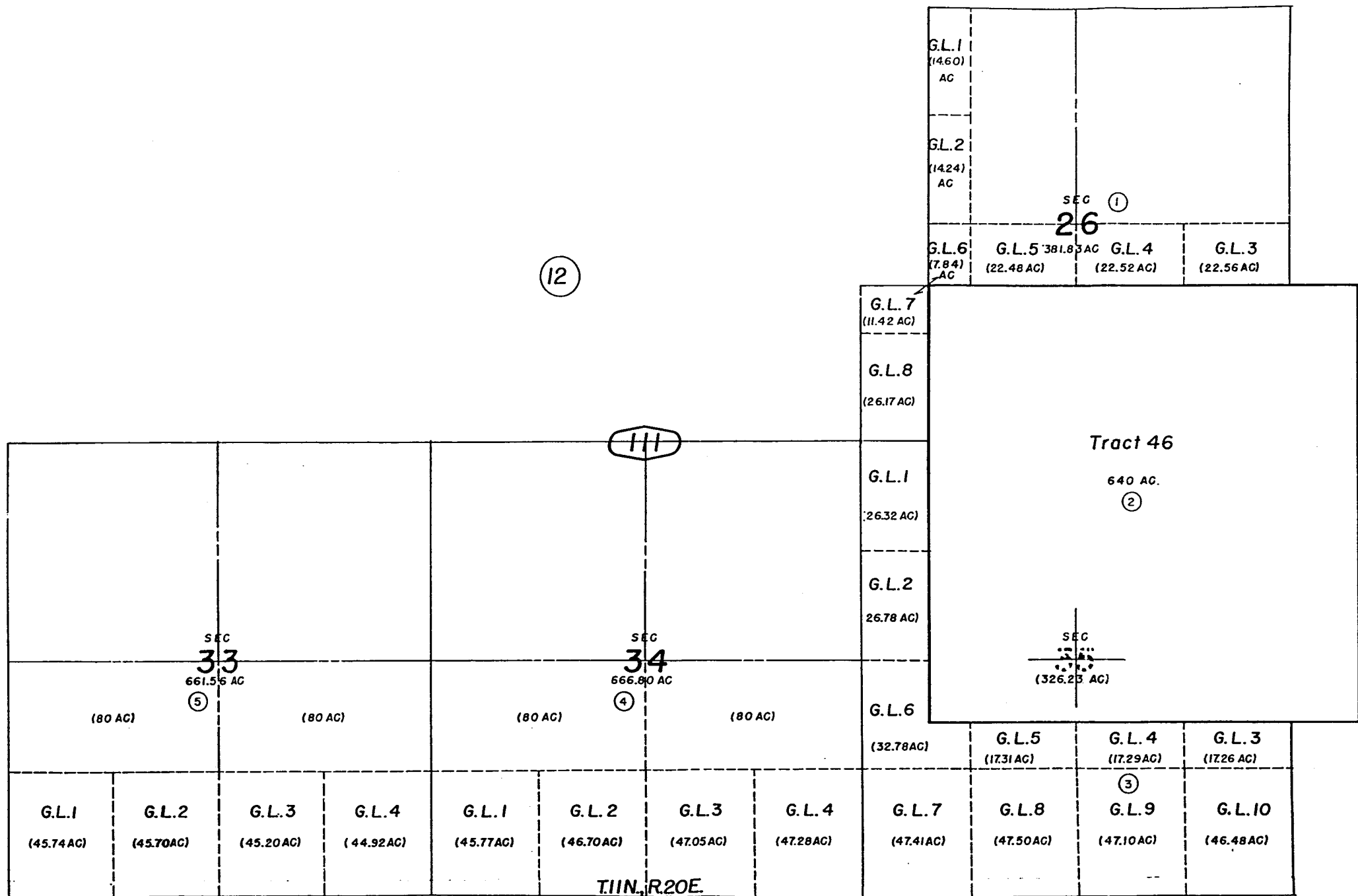


Fractional Secs. 26, 33, 34, & 35 T. 11N. R. 20E. S. B. B. & M.
Tract No. 46 T.P. 4395 A

Needles Unified
Tax Rate Area
96005

658-11

15



T. 11N. R. 20E.
T. 10N. R. 20E.

659

Note-Assessor's Blk. & Lot

Assessor's Map
Book 658, Page 11

REVISED
12-21-66
L-22-67

L-2



Secs. 16, 21, & 28 Fractional Secs. 15, 22, & 27 T. 11 N. R. 20 E. S. B. B. & M. Tract No. 45 T.P. 4395A

Needles Unified Tax Rate Area 96005

658-12

13

13

14

15

STATE HWY (US 91) ROAD

SEC 15 291.76 AC

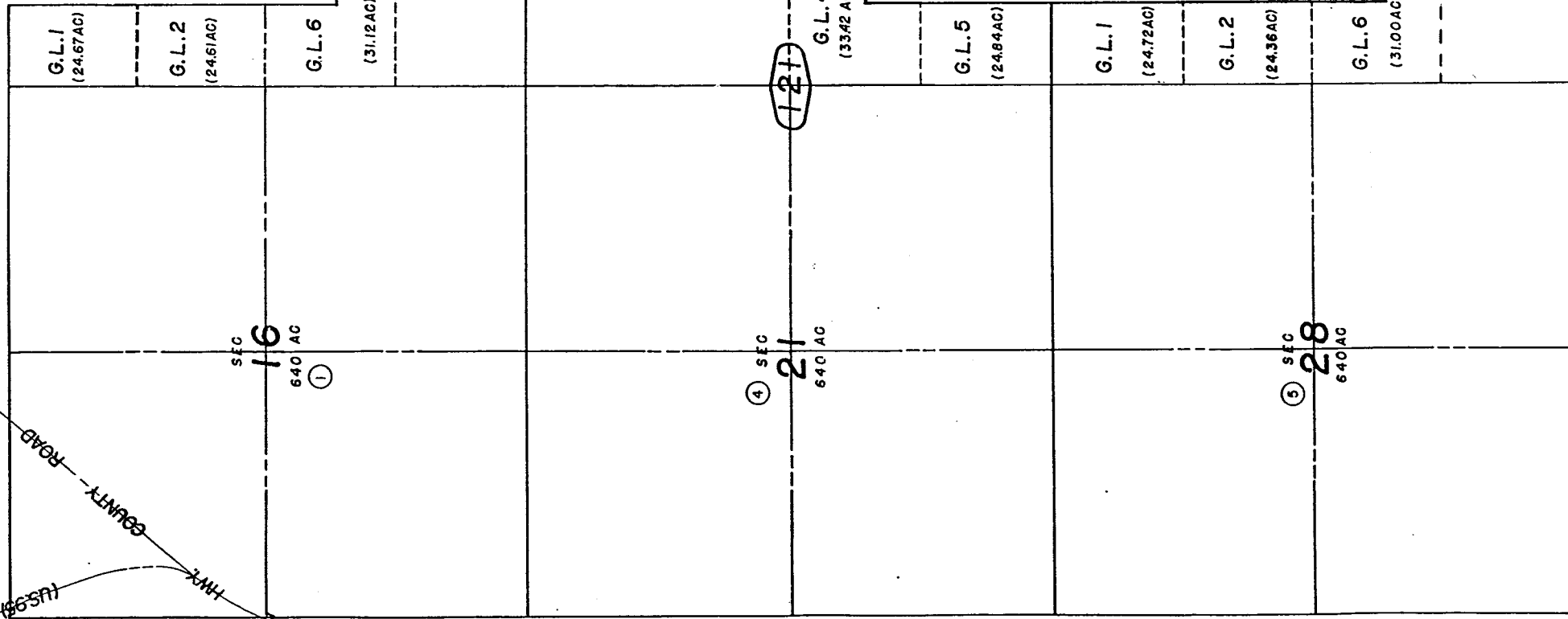
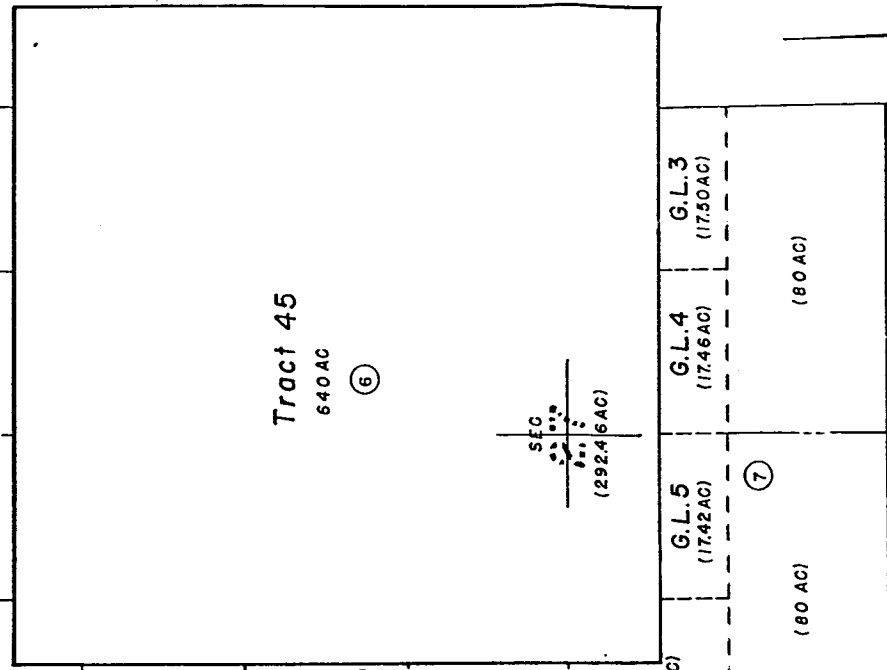
SEC 16 640 AC

SEC 22 446.99 AC

SEC 21 640 AC

SEC 28 292.46 AC

SEC 28 640 AC



G.L. 1 (24.67 AC)

G.L. 2 (24.61 AC)

G.L. 6 (31.12 AC)

G.L. 5 (17.01 AC)

G.L. 4 (17.05 AC)

G.L. 3 (17.30 AC)

G.L. 4 (33.42 AC)

G.L. 3 (22.81 AC)

G.L. 2 (22.91 AC)

G.L. 1 (24.84 AC)

G.L. 5 (24.84 AC)

G.L. 1 (24.72 AC)

G.L. 2 (24.36 AC)

G.L. 6 (31.00 AC)

G.L. 5 (17.42 AC)

G.L. 4 (17.46 AC)

G.L. 3 (17.50 AC)

Assessor's Map

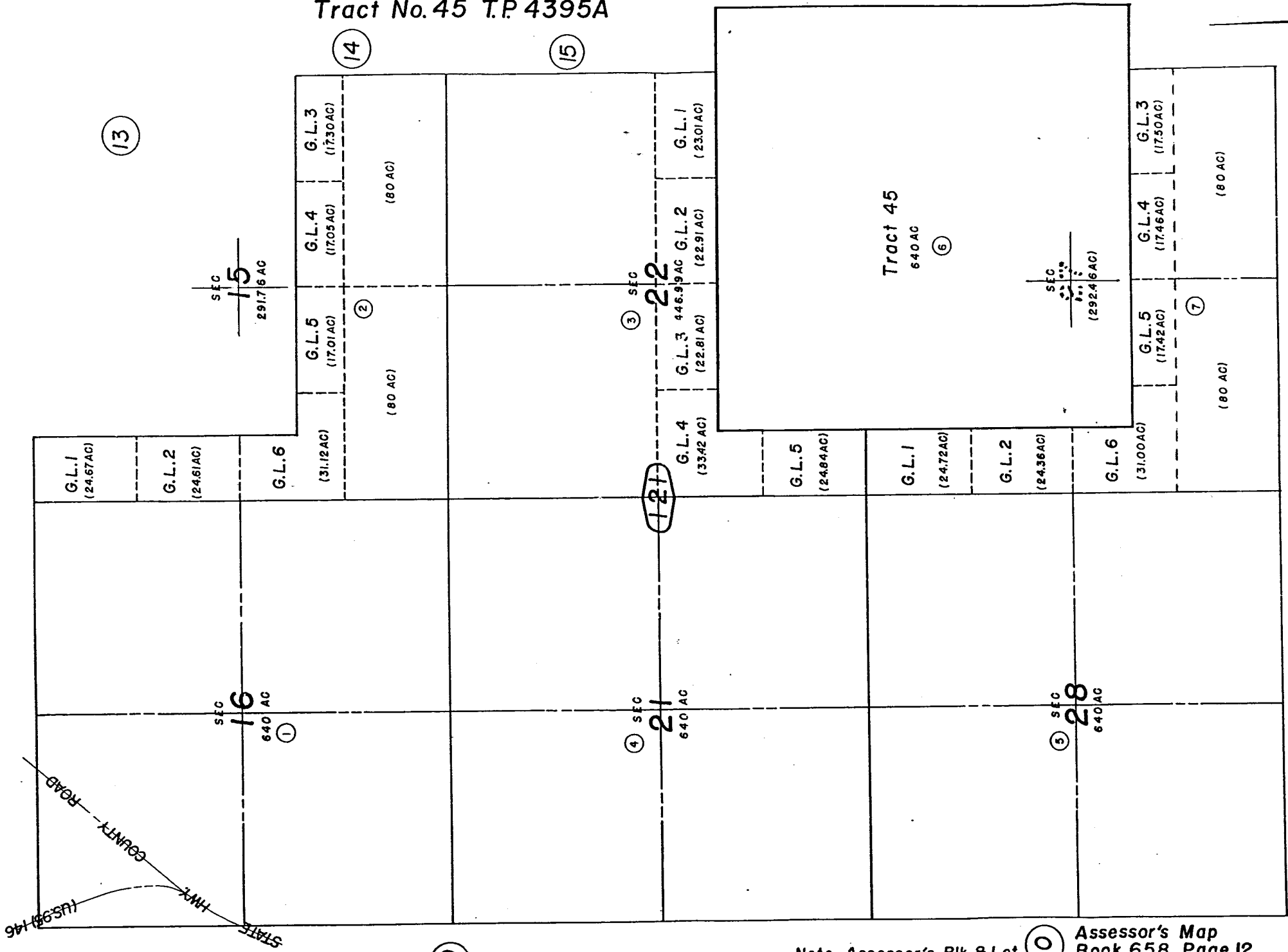
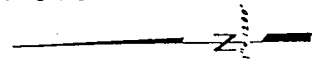
REVISED 12-21-66 L-22-L7



Secs. 16, 21, & 28 Fractional Secs. 15, 22, & 27 T. 11 N. R. 20 E. S. B. B. & M.
Tract No. 45 T.P. 4395A

Needles Unified
Tax Rate Area 96005

658-12



13

13

14

15

SEC 15
2917.6 AC

SEC 22
446.99 AC

SEC 28
2924.6 AC

121

11

COUNTY ROAD
STATE HWY. (US 99) 146

SEC 16
640 AC

SEC 21
640 AC

SEC 28
640 AC

G.L. 1
(24.67 AC)

G.L. 2
(24.61 AC)

G.L. 6
(31.12 AC)

G.L. 3
(17.30 AC)

G.L. 4
(17.05 AC)

G.L. 5
(17.01 AC)

(80 AC)

(80 AC)

G.L. 4
(33.42 AC)

G.L. 3
(22.81 AC)

G.L. 2
(22.91 AC)

G.L. 1
(23.01 AC)

G.L. 5
(24.84 AC)

G.L. 1
(24.72 AC)

G.L. 2
(24.36 AC)

G.L. 6
(31.00 AC)

G.L. 3
(17.50 AC)

G.L. 4
(17.46 AC)

G.L. 5
(17.42 AC)

(80 AC)

(80 AC)

Tract 45
640 AC

6

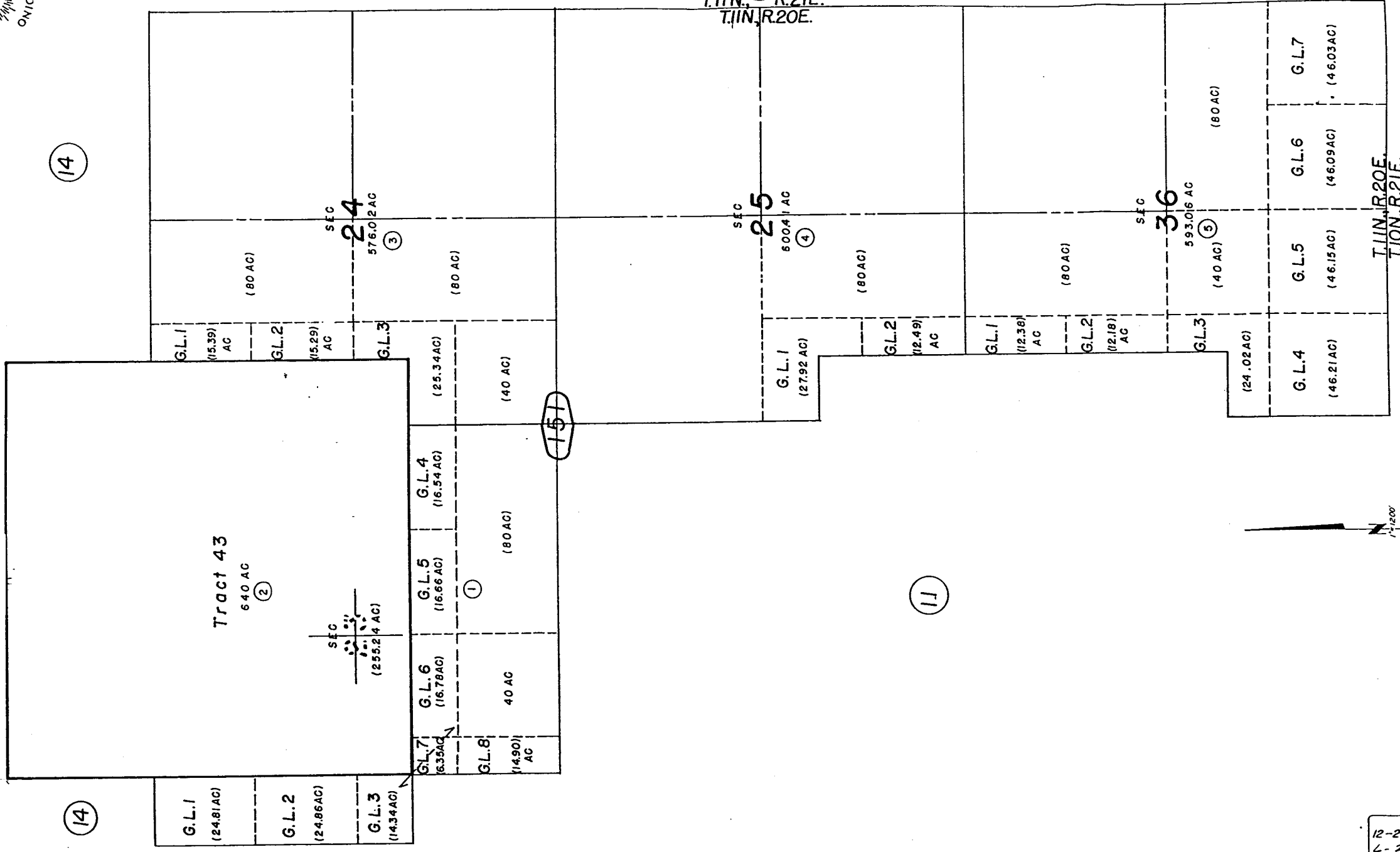
7



Fractional Secs. 23, 24, 25, & 36, T.1N., R.20E., S.B.B. & M.
Tract No. 43, T.P. 4395 A

Needles Unified
Tax Rate Area
96005

658-15



(14)

(14)

(14)

(2)

(15)

(11)

T.1N., R.21E.
T.1N., R.20E.

T.1N., R.20E.
T.1N., R.21E.

659
18

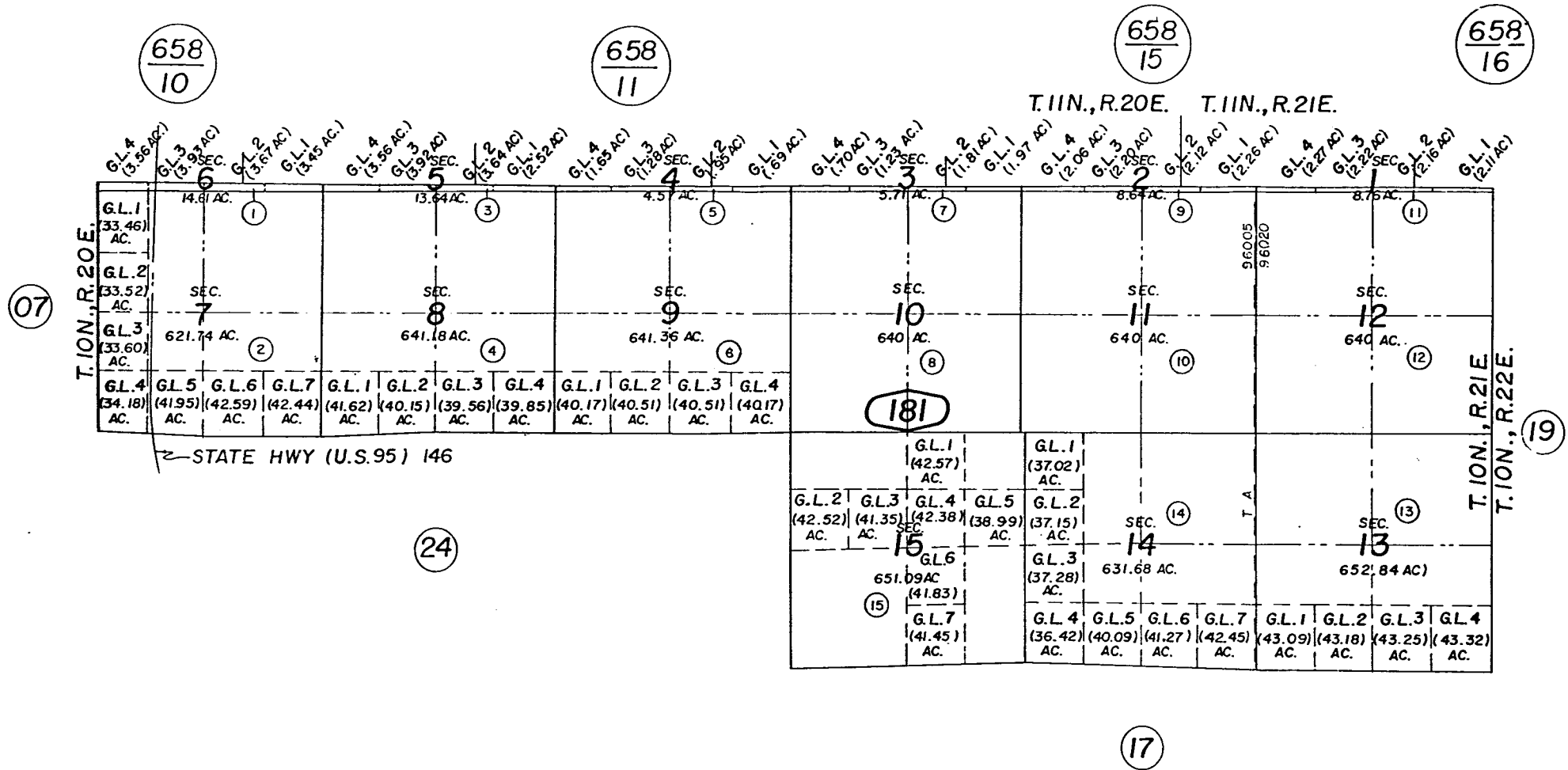
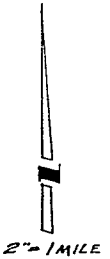


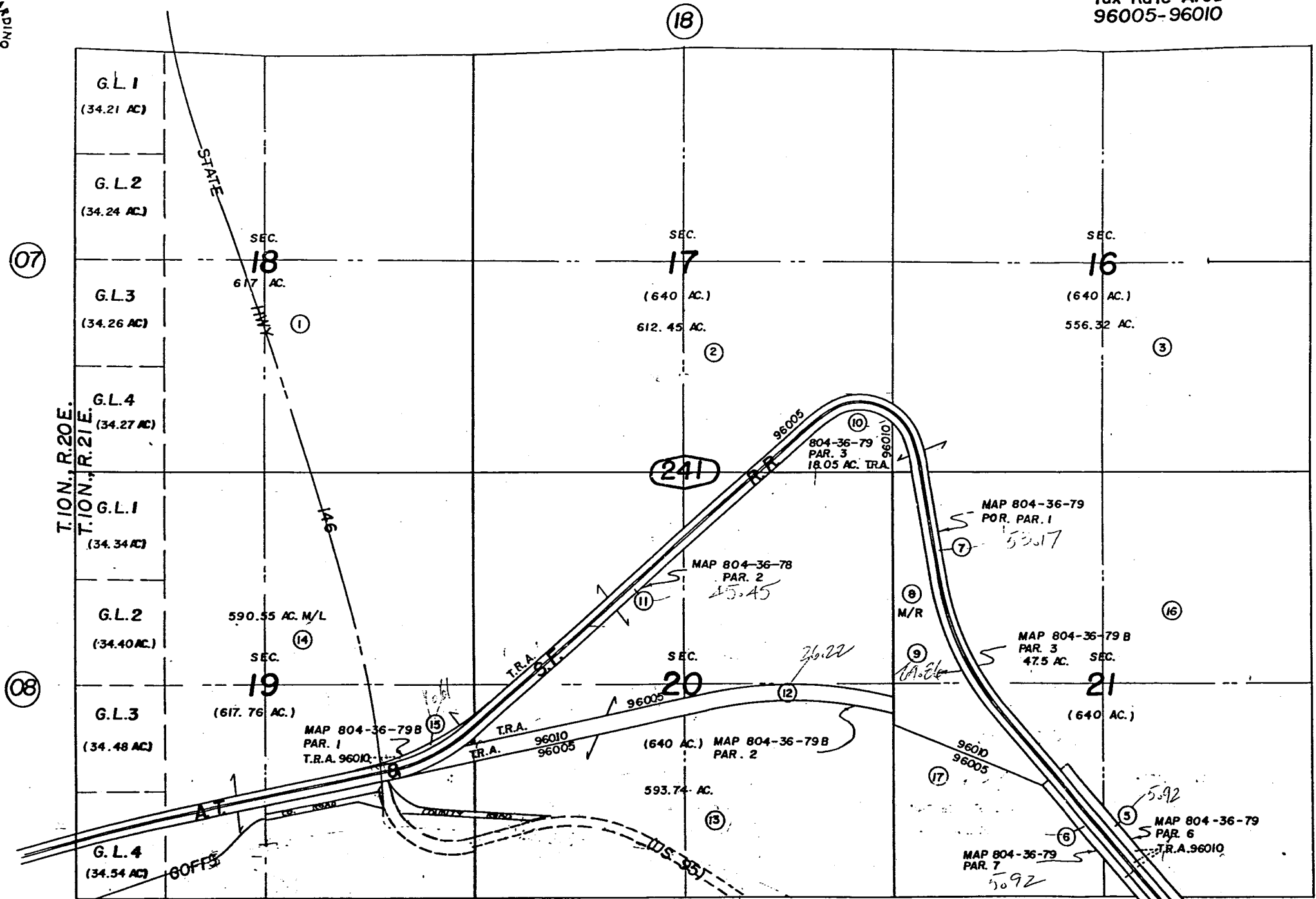
Note-Assessor's Blk. & Lot

Assessor's Map
Book 658, Page 15

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12-21-66
L-22-L7

L-2





(07)

(18)

(18)

(08)

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(17)

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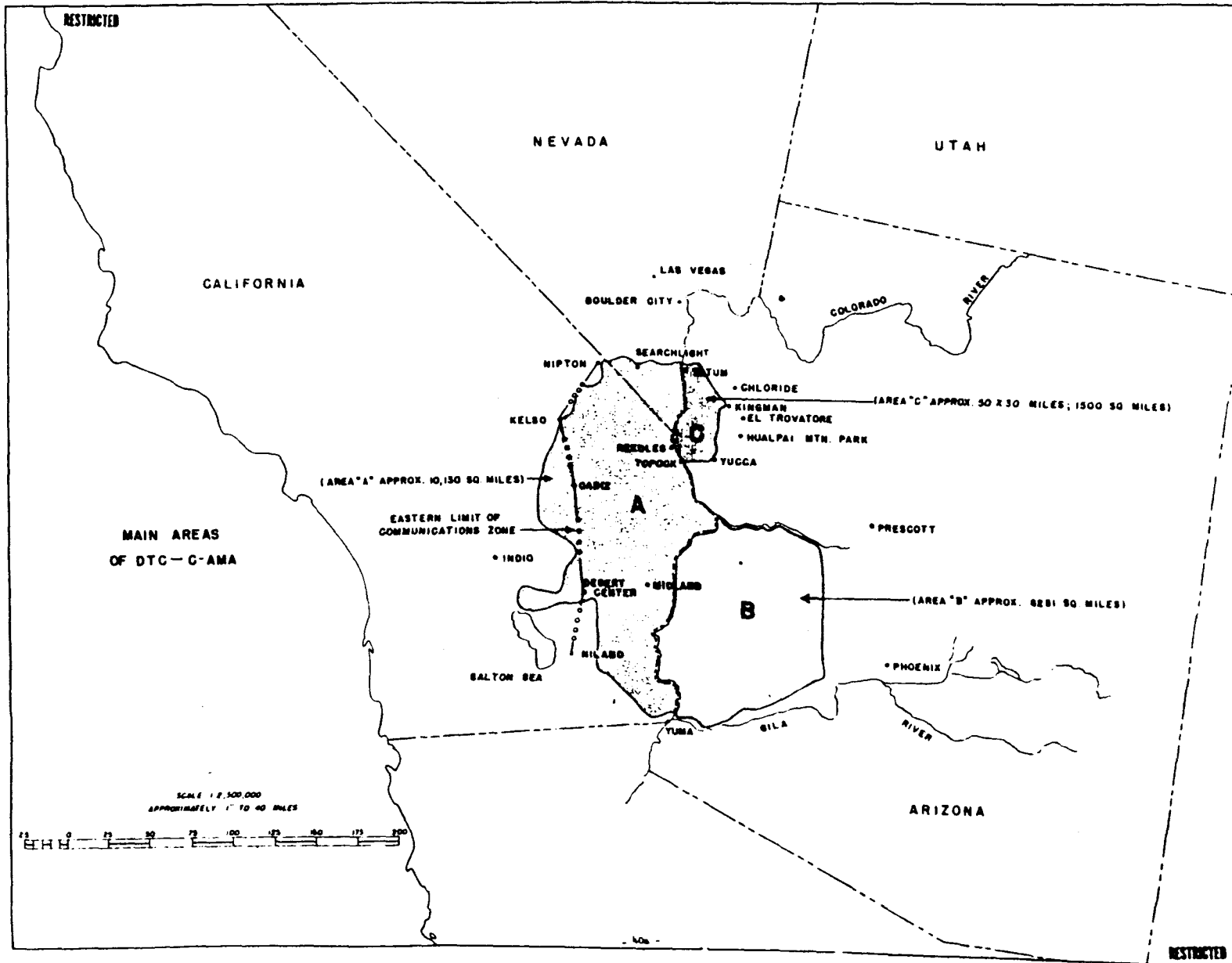
Oct. 1962

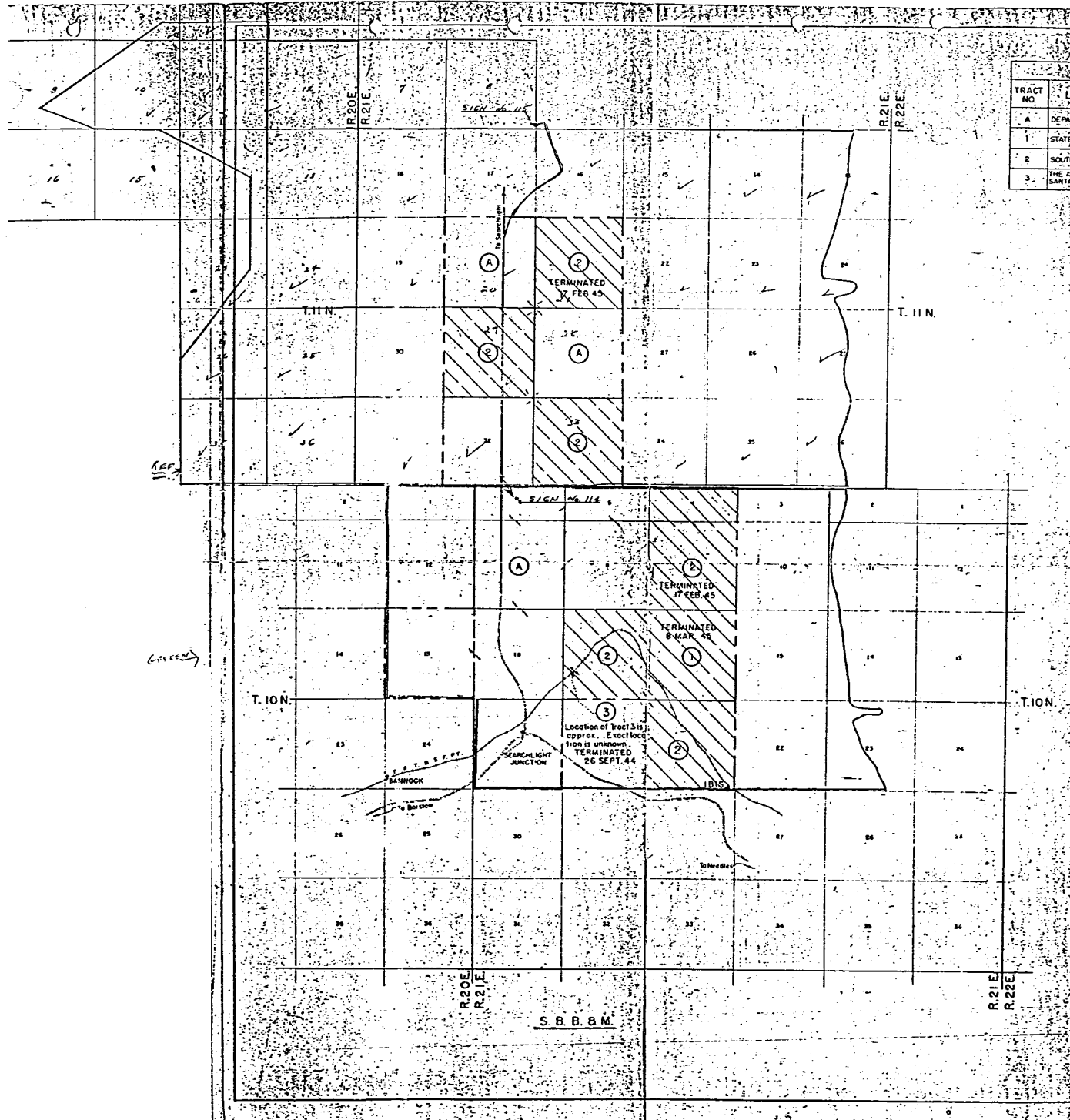
Note - Assessor's Blk & Lot

Assessor's Map Book 659 Page 24

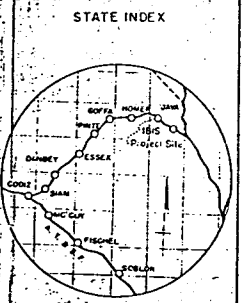
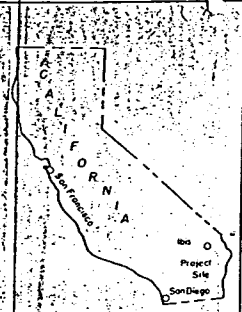
REVISED	
12-23-66	
L-22-67	
8 7 72	GH
3 28 75	
4 6 80	AGS

L-2





ACQUISITION TRACT REGISTER					
TRACT NO.	LAND OWNER	ACREAGE		REMARKS	
		TRANS	LESSER INTERESTS		
1	DEPARTMENT OF INTERIOR	5,760.0		Implied Transfer	
2	STATE OF CALIFORNIA		640.0	Revocable Permit No 12, 24 Mar 42	
3	SOUTHERN PACIFIC COMPANY		3815.50	Permissive Use Agreement, Dated 11 Feb 42	
4	THE ATCHAFALAYA TOPEKA & SANTA FE RAILWAY COMPANY		NO AREA	W-04-193; Eng-3213 Dtd 24 Aug 43 For Communication Line Right of Way	



PROJECT OWNERSHIP MAP
 STATE CALIFORNIA
 COUNTY SAN BERNARDINO
 DIVISION SOUTH PACIFIC
 DISTRICT LOS ANGELES
 SIXTH ARMY AREA

LOCATION OF PROJECT
 2 1/2 MILES NW OF NEEDLES
 _____ MILES OF _____

TRANSPORTATION FACILITIES
 RAILROADS A.T. & S.F. RY.
 STATE ROADS
 FEDERAL ROADS
 AIRLINES

ACQUISITION
 TOTAL ACRES ACQUIRED 10,215.50
 ACRES FEE
 ACRES TRANSFER TO WAR DEPT. 5,760
 ACRES LEASED TO WAR DEPT. _____
 ACRES LESSER INTERESTS USE AGREET (1) 31
 LICENSE (1) NO A _____

DISPOSAL
 TOTAL ACRES DISPOSED OF 4,455
 ACRES SOLD BY WAR DEPT. _____
 ACRES TRANSFER BY WAR DEPT. _____
 ACRES RETRANSFER TO GOVT. AGCY _____
 ACRES LEASES TERMINATED _____
 ACRES LESSER INT'S TERM USE AGREET (1) 31
 LICENSE (1) NO _____

LEGEND
 NOTE: USE SYMBOLS FROM F.M. 31-30 (WAR D BASIC FIELD MANUAL) PAGES 21 TO 27 INCL EXCEPT

RESERVATION LINE _____
 RESERVATION LINE (Actual Survey) _____
 DAM SITE (Taking Line) _____
 RESERVOIR SITE (Taking Line) _____
 CONTOUR LINES _____
 AVIGATION EASEMENTS _____
 TRACT NUMBER _____

ACQUISITION AUTHORIZATION
 RE-D 959 Dated 13 May 1942

RED: RESTRICTED AREA 20,640 ACRES
 GREEN: AREA CERTIFIED CLEAR 11,520 ACRES

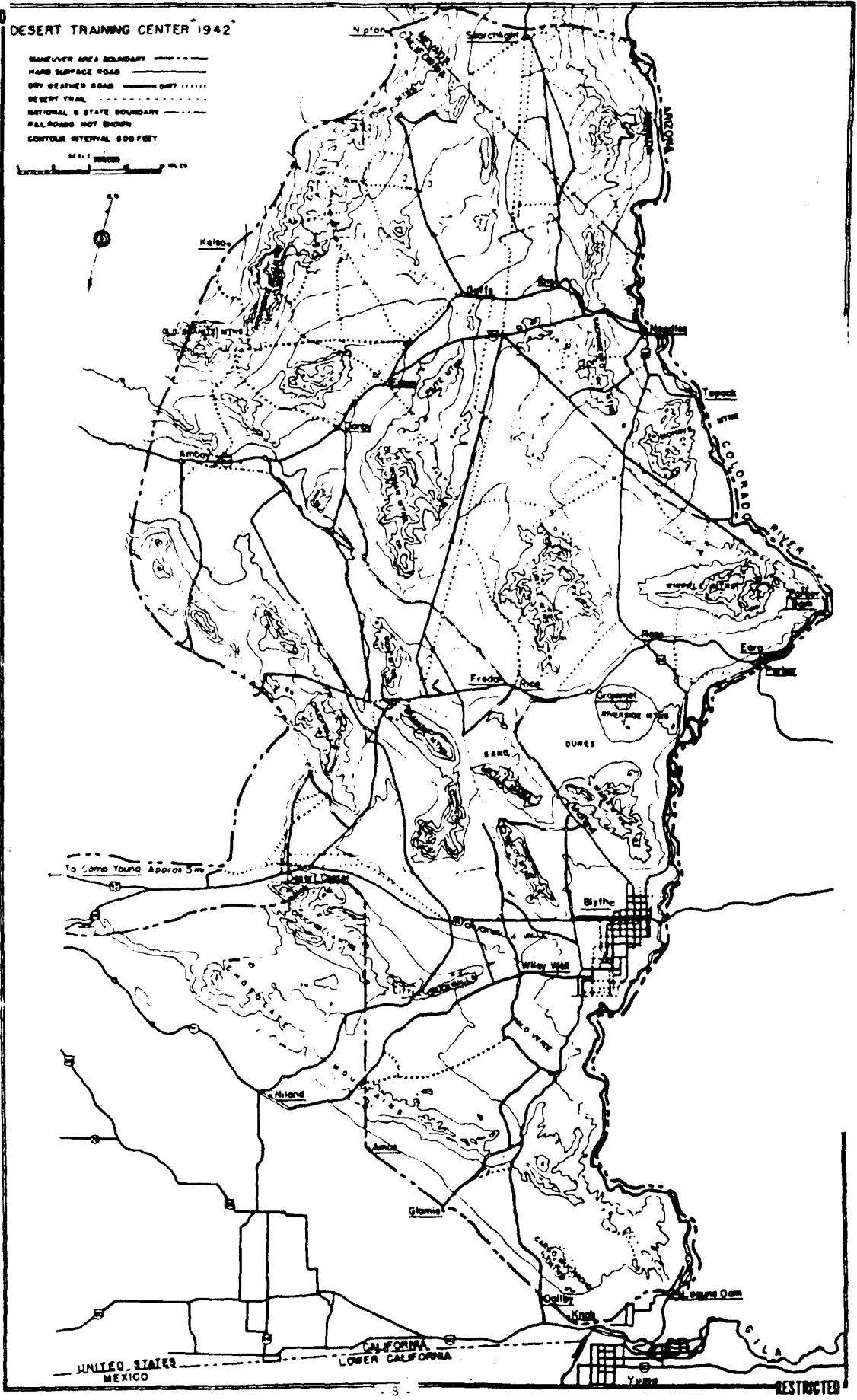
REVISIONS	DATE	DUE TO FINAL AUDIT
CORPS OF ENGINEERS, U.S. ARMY OFFICE OF THE DIVISION ENGINEER SOUTH PACIFIC DIVISION		
DRAWN BY: R.S.	SCALE BY: R.S.	CHECKED BY: _____
APPROVED BY: _____	APPROVED BY: _____	
REAL ESTATE CAMP IBIS (C.A.M.A.)		
AUDITED		
2277		
EXHIBIT A		

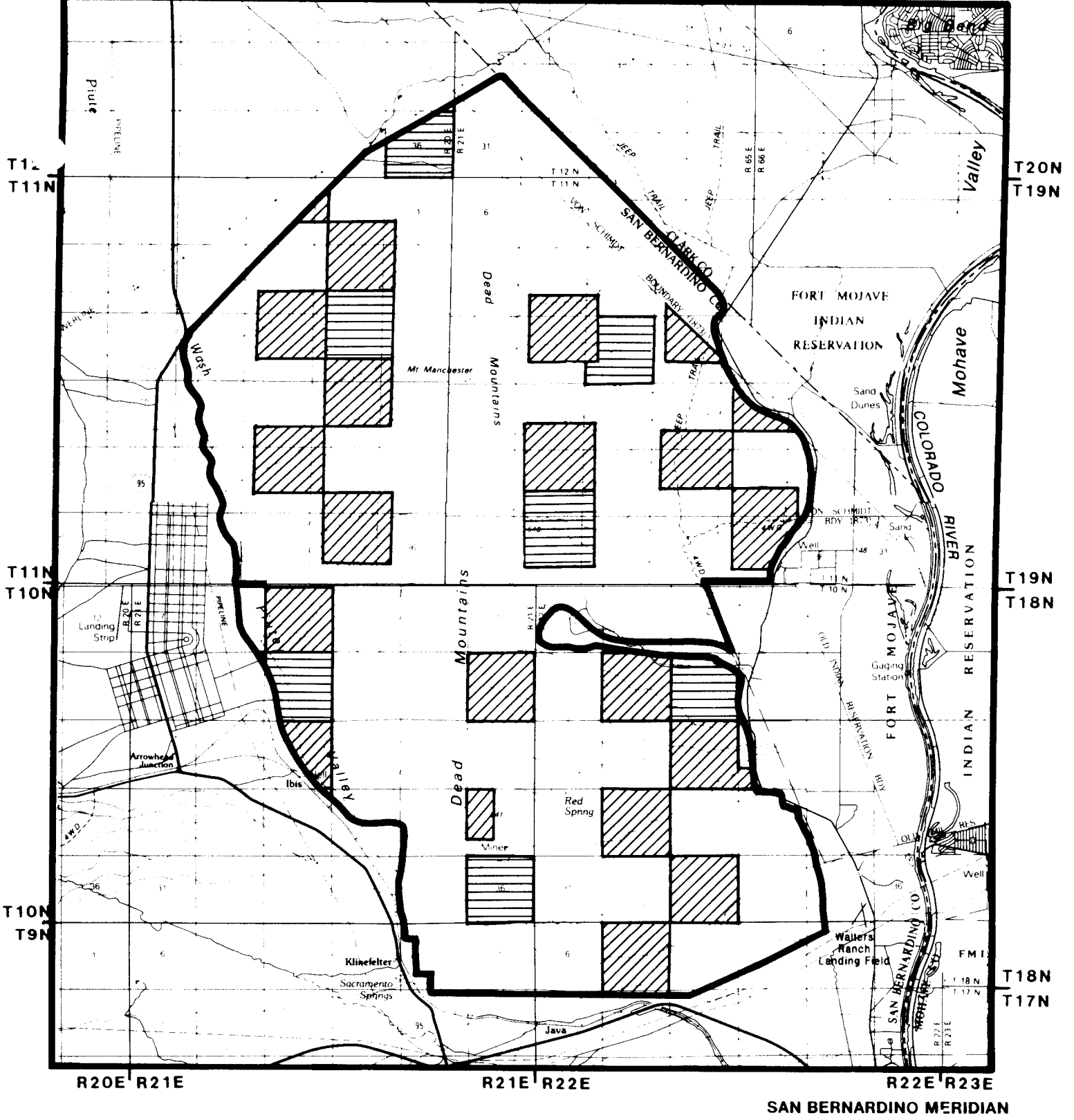
RESTRICTED

DESERT TRAINING CENTER 1942

- MANEUVER AREA BOUNDARY
- HARD SURFACE ROAD
- DRY WEATHER ROAD
- DESERT TRAIL
- NATIONAL & STATE BOUNDARY
- RAILROADS NOT SHOWN
- CONTOUR INTERVAL 500 FEET

SCALE 1:50,000





DEAD MOUNTAINS WILDERNESS AREA

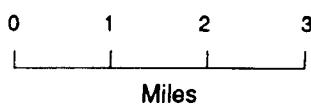
MAP 38



- Wilderness Area
- State
- Split Estate
- Private



DRAFT



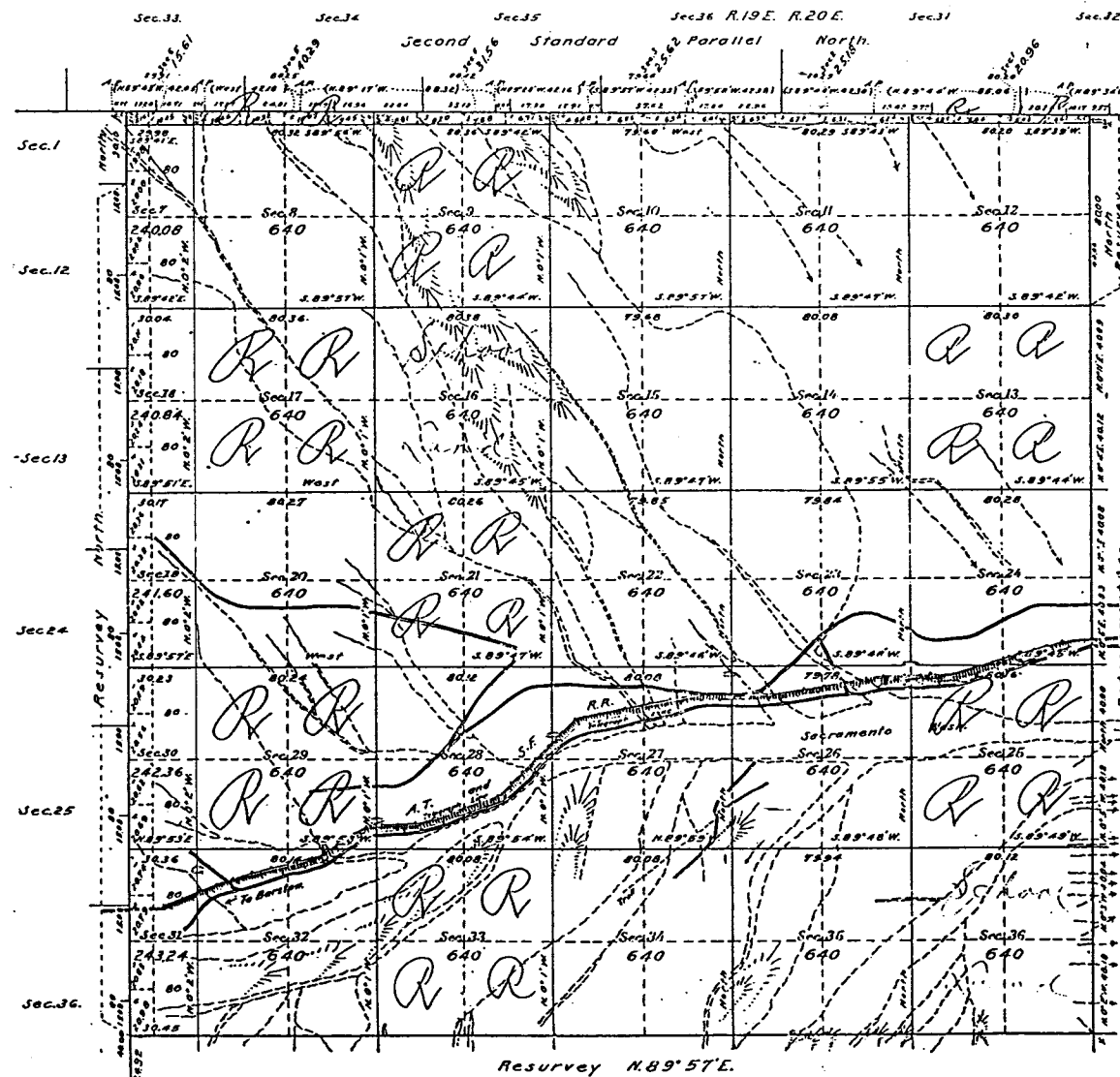
L-5

October 1994

Township No. 10 North Range No. 20 East, San Bernardino Meridian, California

POST TO NEW RECORDS

WARNING:
 THE FOLLOWING SECTIONS HAVE BEEN DESIGNATED BY EXECUTIVE
 ORDER AS PUBLIC RESERVE AREA (PRA) PER O. M. L., AS AMEND. 1/21/56.
 SECTIONS 3, 4, 7, 8



Letter T 67333, of June 6, 1924,
 advises that Secs. 16, 26, are classified
 as non-mineral in character T 67333

Installation of gravel - watering device Jan. 32, 1924

Water table: Apr. 20, 1925. Maximum
 depth: 200 ft. of land to surface
 of gravel - watering device. (Sec. 20, NE 1/4,
 T. 10 N., R. 20 E.)

Closed to Small Tract Appl., pending
 classification by memo of May 31,
 1927 (43 CFR 257.6(e)(4)(iii)) as to:
 All Land in San Bernardino County

Permission granted to State of
 California to install: Gravel
 watering device. T. 10 N., R. 20 E.,
 Sec. 20, NE 1/4, T. 10 N., R. 20 E.,
 Sec. 20, NE 1/4.

To Needles.
 Filed in U. S. Land Office,
 Los Angeles, Cal.
 AUG 15 1924

Handley D. Dalton
 Register.

Areas in Acres	
Public Land	17367.34
Indian Reservation	
Indian Allotments	
Miners' Claims	
Water Surface	
Total Area	17367.34

Scale 40 Chains to an inch

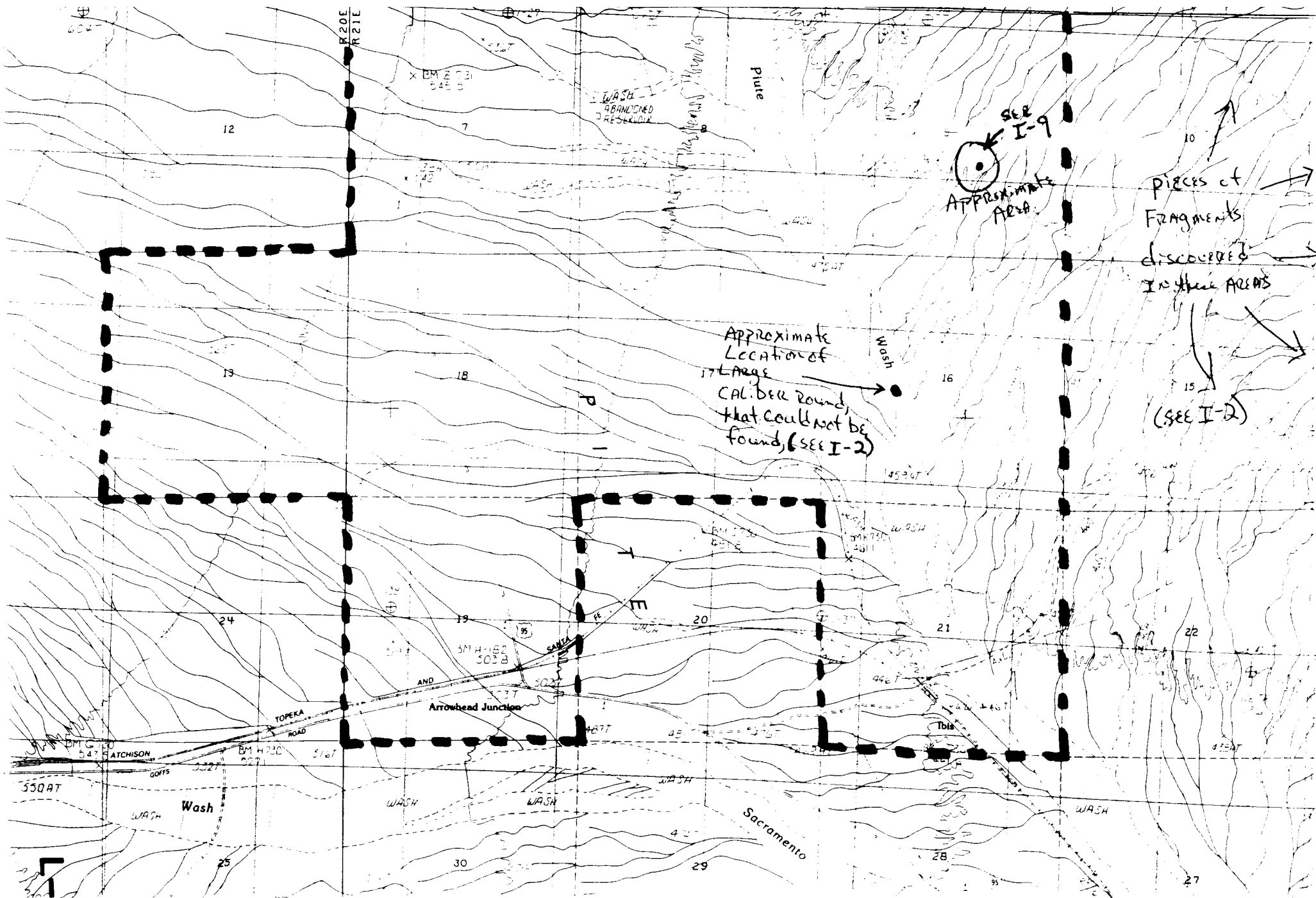
Magn. Magnetic Declination
 Lat. 34° 56' N. Near center of Sec. 27.
 Long. 114° 53' W.

Survey Designated	By Whom Surveyed	No.	Date	Group	Amount of Survey			When Surveyed	
					Ac.	Sq. M.	Sec.	By Whom	Completed
South bdy. res.	William B. Rimmel, U.S. Cadastral Engineer	67	Feb 4, 1919	See plat of F.S. N. R. 20 E.					
East - railroad res.	and	-	-	5	2	92	Jan 12, 1922	Feb 11, 1922	
West - sur and res.	and	-	-	5	5	18	- 27 -	Jan 27, -	
Subdivisions	Francis R. Irlbie	-	-	52	12	98	- 26 -	Feb. 11, -	
Connections	U.S. Transitman	-	-	1	56	46	Feb 3, -	- 11 -	

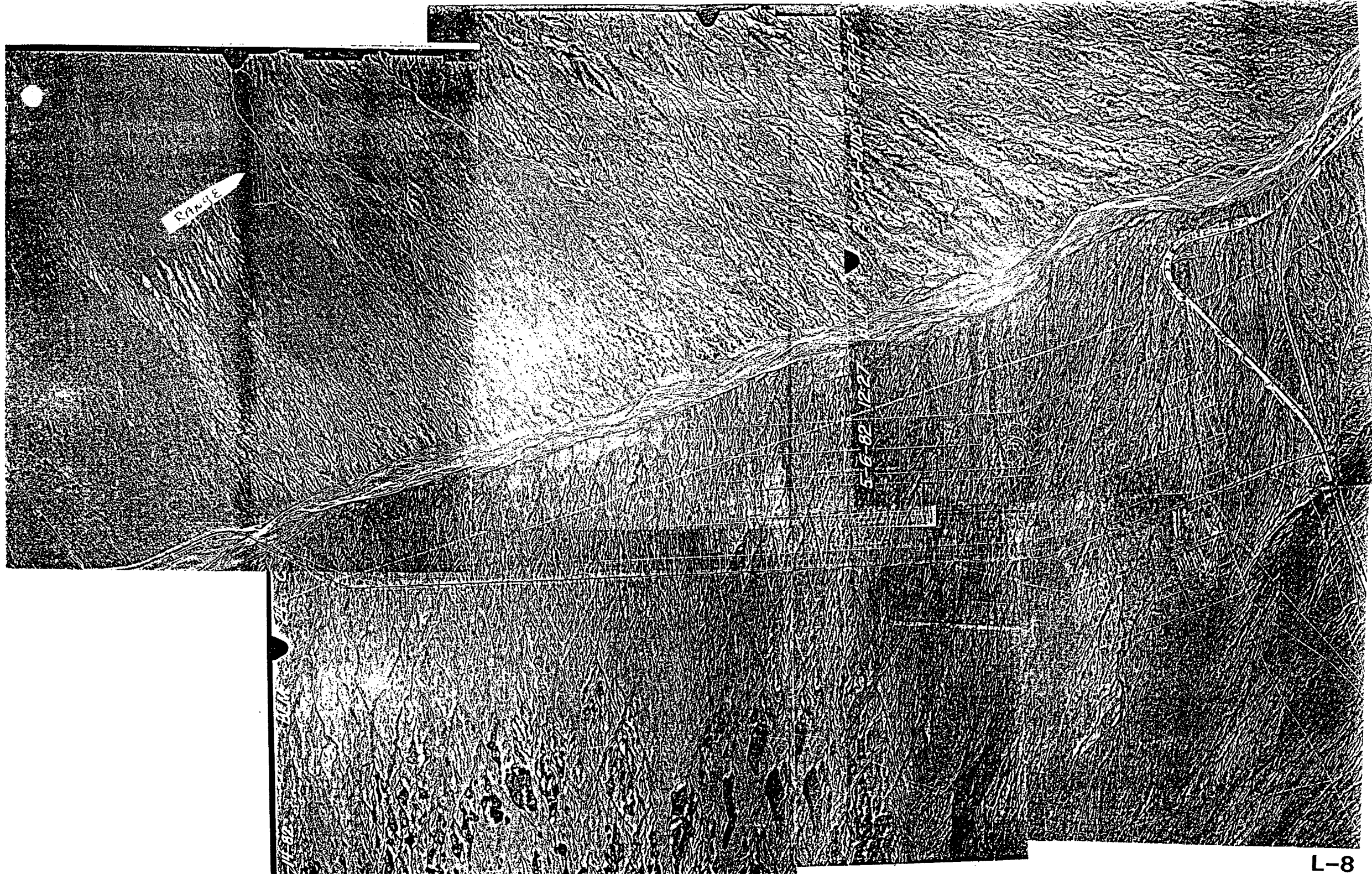
The above map of Township No. 10 North Range No. 20 East of the San Bernardino Meridian, California, is strictly conformable to the field notes of the survey thereof on file in this office, which have been examined and approved.

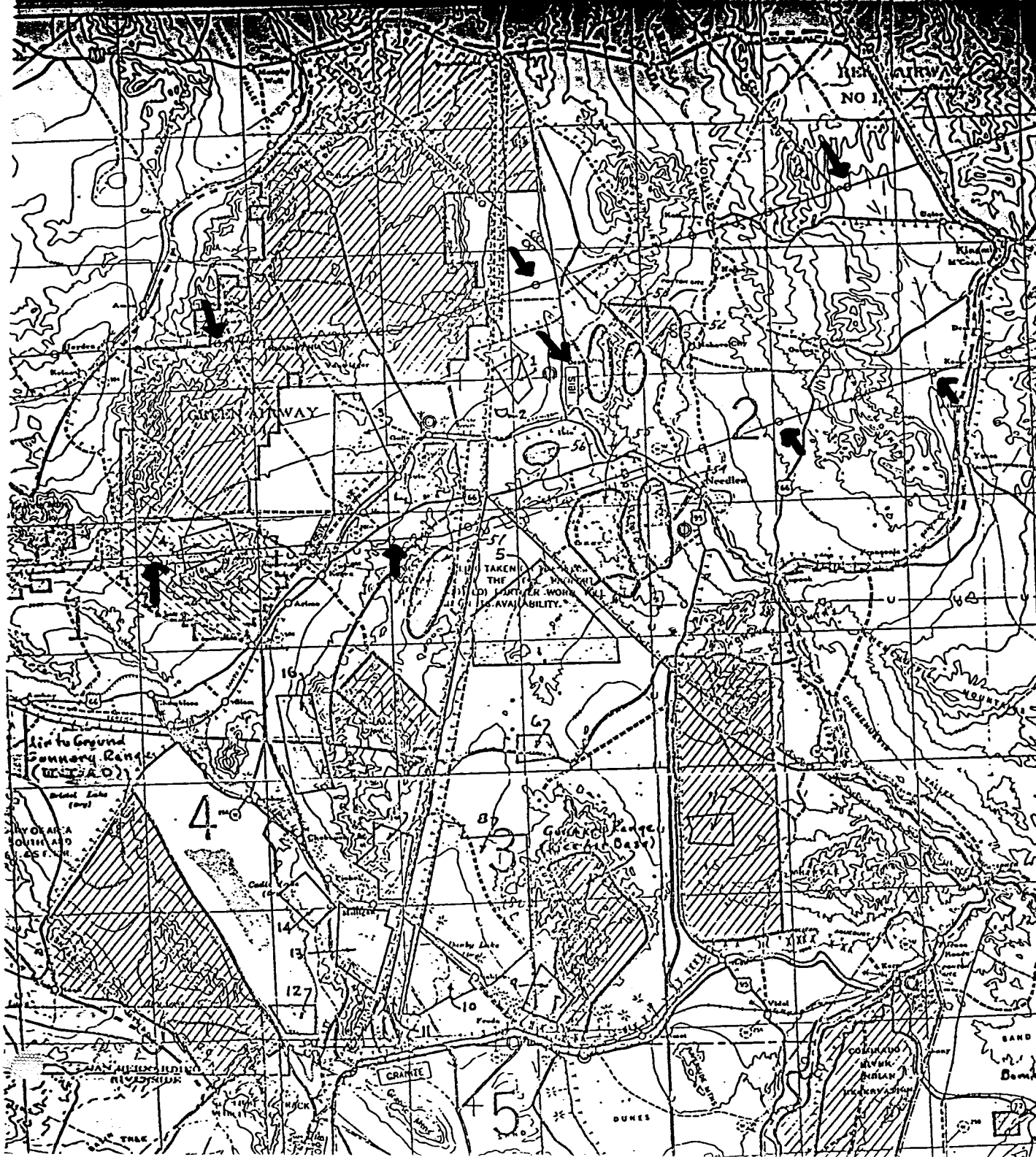
U. S. Surveyor General's Office
 San Francisco, California
 February 11, 1924.

John Plover
 U. S. Surveyor General
 for California.



57





CALIFORNIA-ARIZONA MANEUVER AREA

Contour Interval 200 Feet
 Datum is mean sea level

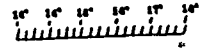
Scale
 1 inch = 1 mile



THE DISTANCE FROM THE CENTER OF GRAVITY TO THE CENTER OF THE EARTH IS 3,959 MILES. THE DISTANCE FROM THE CENTER OF THE EARTH TO THE CENTER OF THE SUN IS 93,000,000 MILES. THE DISTANCE FROM THE CENTER OF THE SUN TO THE CENTER OF THE GALAXY IS 250,000,000,000 MILES.

LEGEND

- | | | | | |
|---------------------------|-----------|----------------------------------|-----|----------------|
| MANEUVER AREA BOUNDARY | ===== | WATER SUPPLY | ⊙ | 10000 G. P. D. |
| OFF LIMITS BOUNDARY | ----- | UNLIMITED SUPPLY | ⊕ | |
| IMPROVED ROADS | ————— | AVAILABLE BY SPECIAL ARRANGEMENT | ⊙ | |
| DESERT ROADS AND TRAILS | - - - - - | | | |
| AIRWAY BOUNDARY | ⊕ | AIR BASE | ⊙ | |
| UNLIMITED FIRING AREA BDT | U | LANDING STRIP | ⊕ | |
| RAILROAD CROSSING PUBLIC | + | PRIVATE AIR FIELD | ⊙ | |
| MILITARY | + | AQUEDUCT CROSSING | — — | |
| AREAL OFF LIMITS | ▨ | | | |
-
- | | |
|--|---|
| ROAD CLASSIFICATIONS | |
| Dependable hard surface, heavy duty road | Lesser surface graded, dry weather road |
| Secondary hard surface, all weather road | Dirt road |
| More than two lanes, indicated by note with thick point of change. | |
-
- | | |
|------------|---|
| U. S. Road | ⊕ |
| State Road | ⊕ |
| Local Road | ⊕ |



THIS MAP WAS PREPARED BY THE ARMY ENGINEERING CENTER, WASHINGTON, D. C. FROM DATA, 1952

ORDNANCE AND EXPLOSIVE
ARCHIVES SEARCH REPORT
FOR
FORMER CAMP IBIS (PROPER)
SAN BERNARDINO COUNTY
NEEDLES, CALIFORNIA
PROJECT NUMBER J09CA028301

APPENDIX M

ARCHIVES SEARCH REPORT CORRESPONDENCE

(Not Used)

ORDNANCE AND EXPLOSIVE
ARCHIVES SEARCH REPORT
FOR
FORMER CAMP IBIS (PROPER)
SAN BERNARDINO COUNTY
NEEDLES, CALIFORNIA
PROJECT NUMBER J09CA028301

APPENDIX N

REPORT DISTRIBUTION LIST

APPENDIX N

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INTERNAL

Commander, U.S. Army Corps of Engineers
Rock Island District
P.O. Box 2004
Rock Island, Illinois 61201

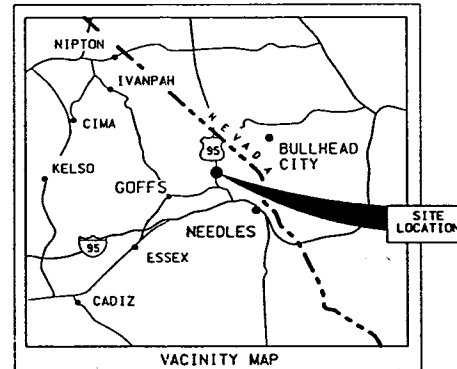
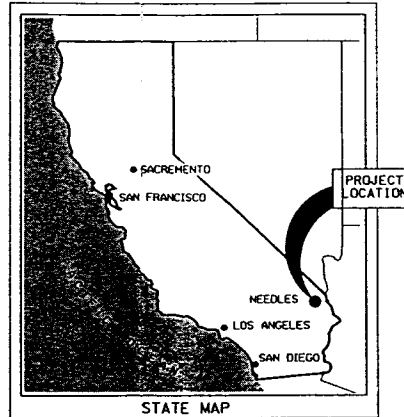
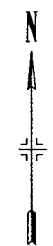
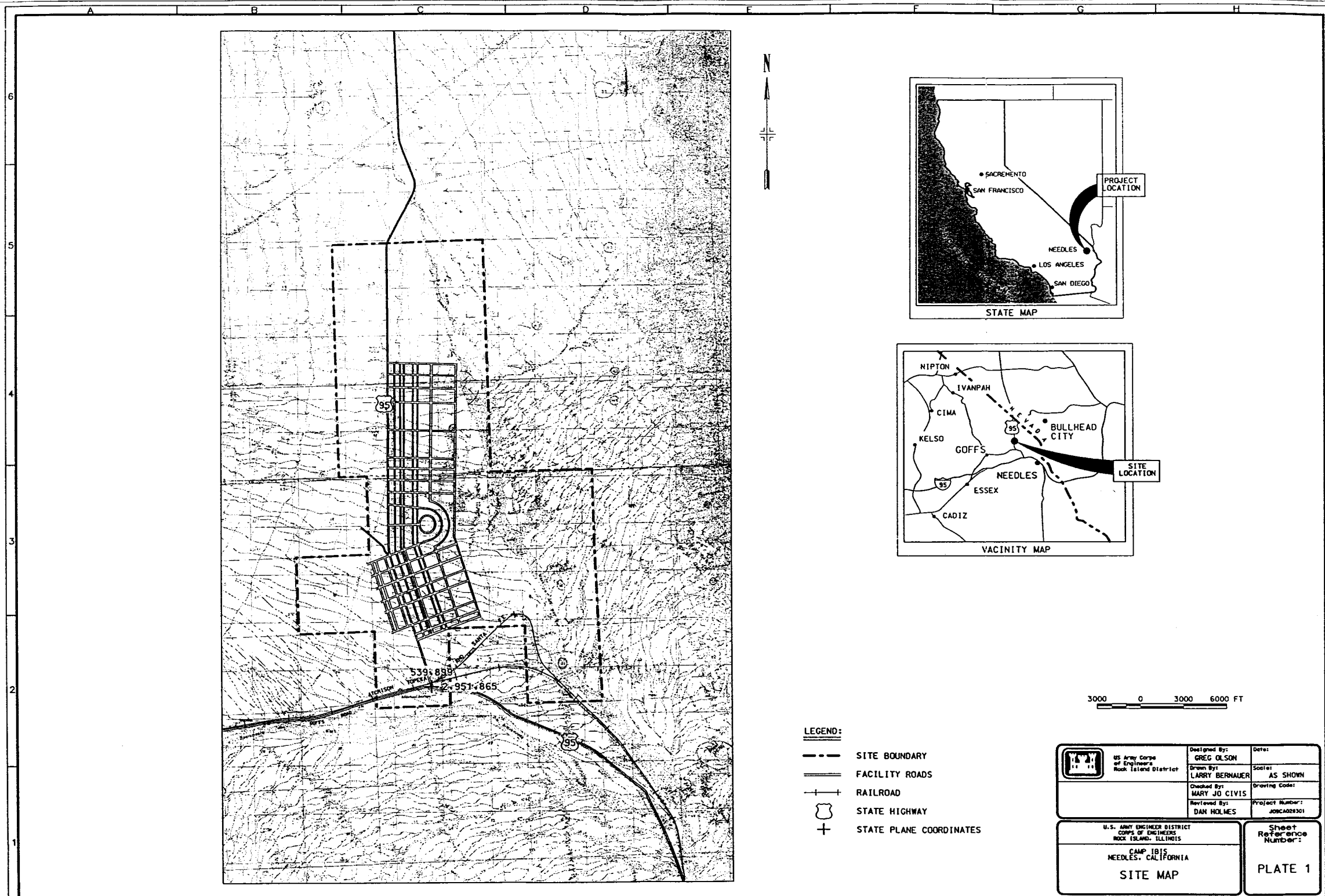
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ED-D	-	-	1
ED-DO	3	-	-
SO	-	-	1
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PD	-	-	1
RE	-	-	1

I - Final Report
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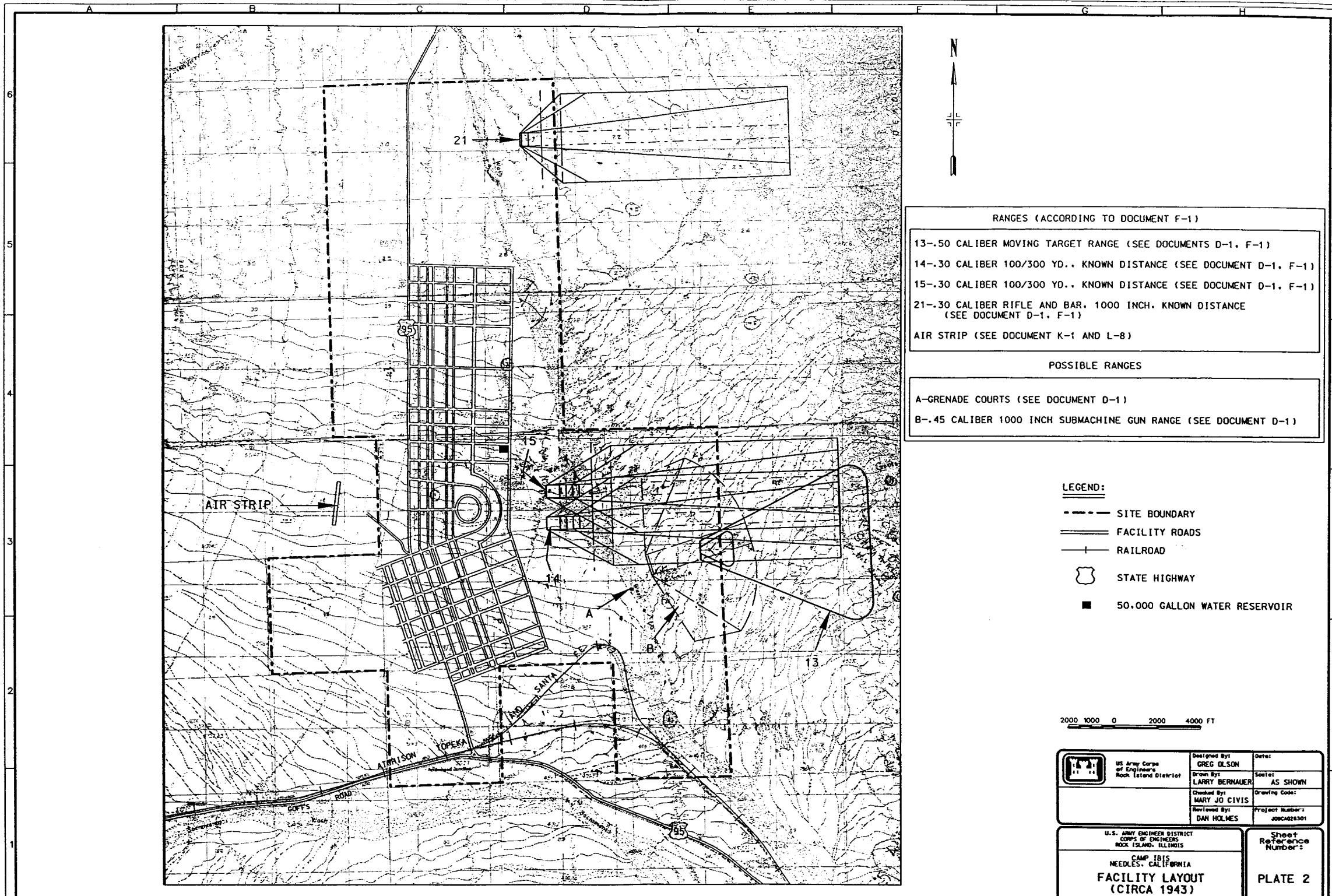
ORDNANCE AND EXPLOSIVE WASTE
ARCHIVES SEARCH REPORT
FOR
FORMER CAMP IBIS (PROPER)
SAN BERNARDINO COUNTY
NEEDLES, CALIFORNIA
PROJECT NUMBER J09CA028301

REPORT PLATES



- LEGEND:**
- SITE BOUNDARY
 - ==== FACILITY ROADS
 - +--- RAILROAD
 - ⬢ STATE HIGHWAY
 - + STATE PLANE COORDINATES

	Designed By: GREG OLSON	Date:
	Drawn By: LARRY BERNAUER	Scale: AS SHOWN
	Checked By: MARY JO CIVIS	Drawing Code:
	Reviewed By: DAN HOLMES	Project Number: JOBCA028301
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS		Sheet Reference Number:
CAMP IBIS NEEDLES, CALIFORNIA		PLATE 1



RANGES (ACCORDING TO DOCUMENT F-1)

- 13--50 CALIBER MOVING TARGET RANGE (SEE DOCUMENTS D-1, F-1)
- 14--30 CALIBER 100/300 YD.. KNOWN DISTANCE (SEE DOCUMENT D-1, F-1)
- 15--30 CALIBER 100/300 YD.. KNOWN DISTANCE (SEE DOCUMENT D-1, F-1)
- 21--30 CALIBER RIFLE AND BAR. 1000 INCH. KNOWN DISTANCE (SEE DOCUMENT D-1, F-1)
- AIR STRIP (SEE DOCUMENT K-1 AND L-8)

POSSIBLE RANGES

- A--GRENADE COURTS (SEE DOCUMENT D-1)
- B--.45 CALIBER 1000 INCH SUBMACHINE GUN RANGE (SEE DOCUMENT D-1)

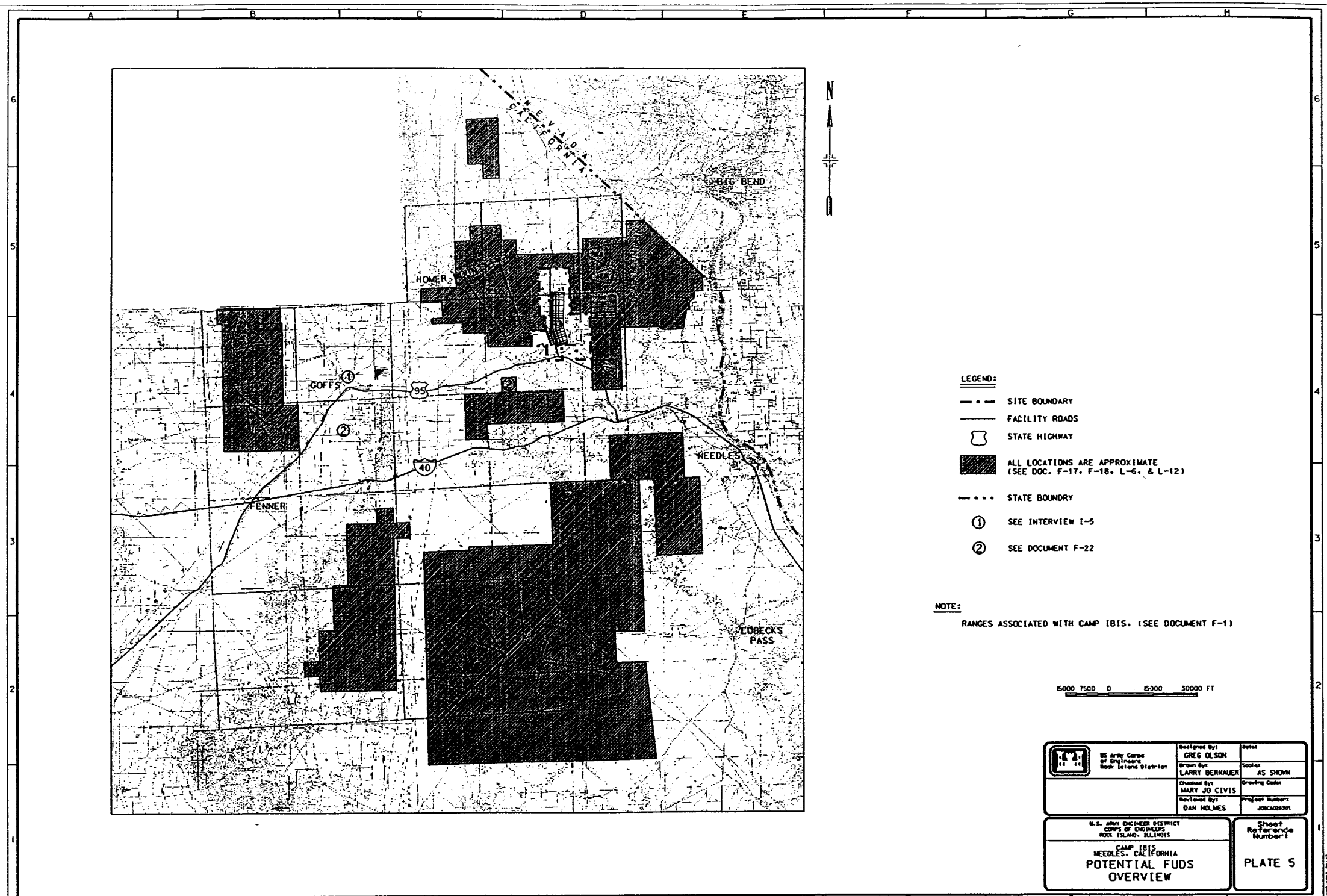
LEGEND:

- SITE BOUNDARY
- ==== FACILITY ROADS
- +--- RAILROAD
- ⬡ STATE HIGHWAY
- 50,000 GALLON WATER RESERVOIR



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	Checked By: MARY JO CIVIS	Drawing Code:
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U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS CAMP IBIS NEEDLES, CALIFORNIA FACILITY LAYOUT (CIRCA 1943)	Sheet Reference Number: PLATE 2
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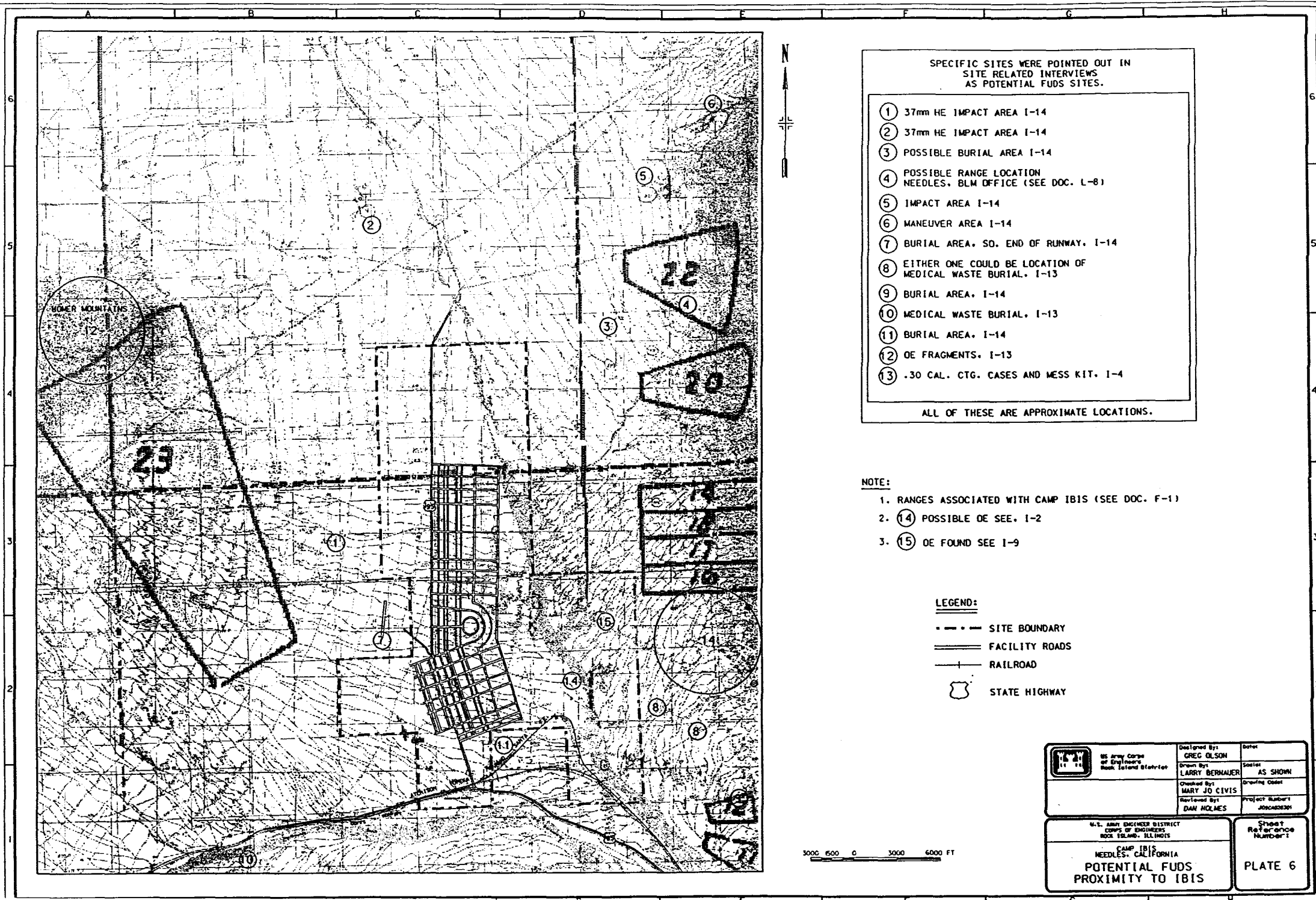
- - - SITE BOUNDARY
- FACILITY ROADS
- ⬡ STATE HIGHWAY
- ▨ ALL LOCATIONS ARE APPROXIMATE
(SEE DOC. F-17, F-18, L-6, & L-12)
- - - STATE BOUNDARY
- ① SEE INTERVIEW I-5
- ② SEE DOCUMENT F-22

NOTE:

RANGES ASSOCIATED WITH CAMP IBIS. (SEE DOCUMENT F-1)



	U.S. Army Corps of Engineers West Island District	Designed By: GREG OLSON	Date:
		Drawn By: LARRY BERMAUER	Scale: AS SHOWN
		Checked By: MARY JO CIVIS	Drawing Code:
		Reviewed By: DAN HOLMES	Project Number: J93C4283M
U.S. ARMY ENGINEER DISTRICT NOOK ISLAND, ILLINOIS		Sheet Reference Number:	
CAMP IBIS NEEDLES, CALIFORNIA POTENTIAL FUDS OVERVIEW		PLATE 5	



- SPECIFIC SITES WERE POINTED OUT IN
SITE RELATED INTERVIEWS
AS POTENTIAL FUAD SITES.
- ① 37mm HE IMPACT AREA I-14
 - ② 37mm HE IMPACT AREA I-14
 - ③ POSSIBLE BURIAL AREA I-14
 - ④ POSSIBLE RANGE LOCATION
NEEDLES, BLM OFFICE (SEE DOC. L-8)
 - ⑤ IMPACT AREA I-14
 - ⑥ MANEUVER AREA I-14
 - ⑦ BURIAL AREA, SO. END OF RUNWAY, I-14
 - ⑧ EITHER ONE COULD BE LOCATION OF
MEDICAL WASTE BURIAL, I-13
 - ⑨ BURIAL AREA, I-14
 - ⑩ MEDICAL WASTE BURIAL, I-13
 - ⑪ BURIAL AREA, I-14
 - ⑫ DE FRAGMENTS, I-13
 - ⑬ .30 CAL. CTG. CASES AND MESS KIT, I-4
- ALL OF THESE ARE APPROXIMATE LOCATIONS.

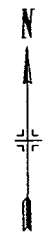
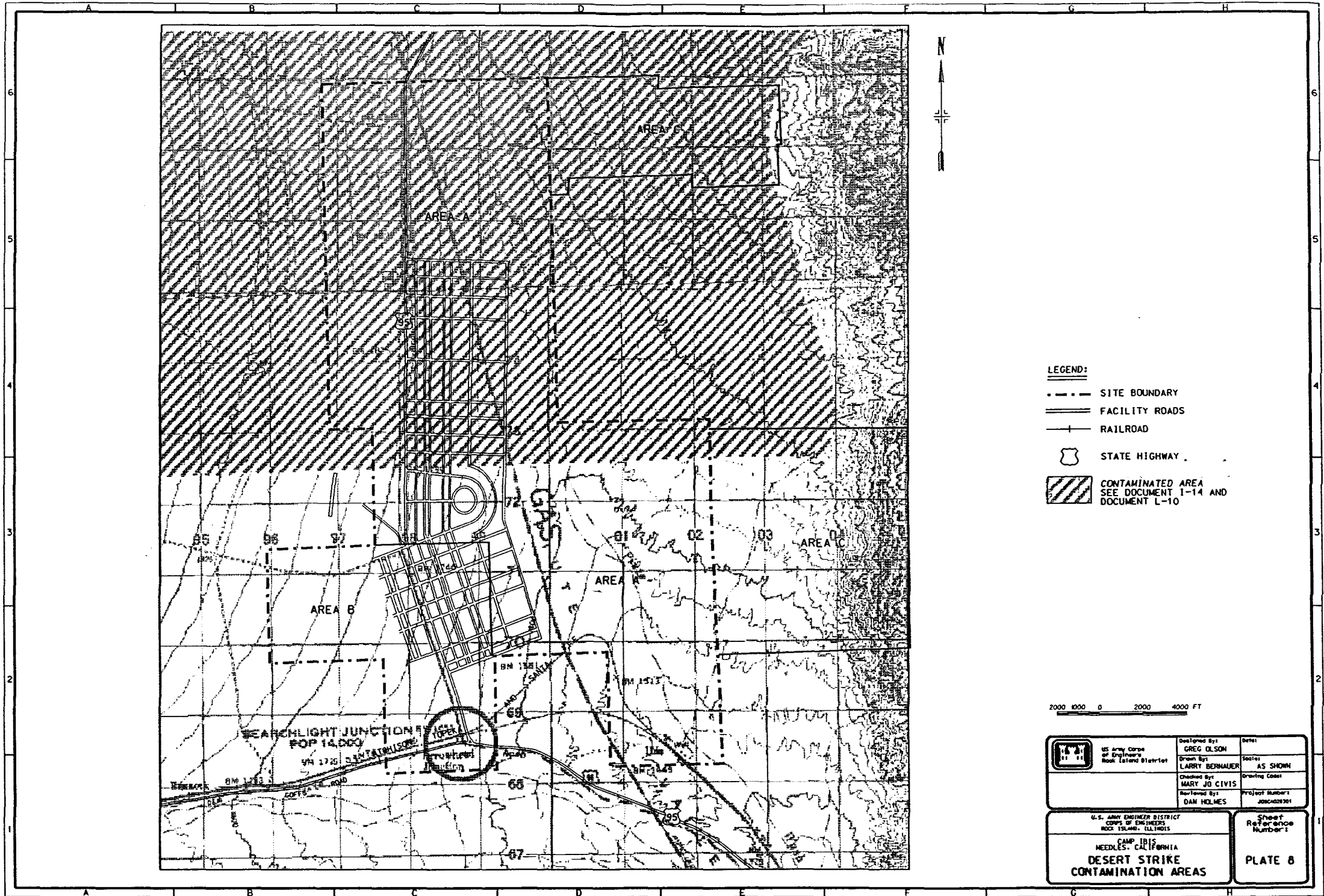
- NOTE:**
- 1. RANGES ASSOCIATED WITH CAMP IBIS (SEE DOC. F-1)
 - 2. ⑭ POSSIBLE DE SEE, I-2
 - 3. ⑮ DE FOUND SEE I-9

- LEGEND:**
- - - - - SITE BOUNDARY
 - ==== FACILITY ROADS
 - +— RAILROAD
 - ⬢ STATE HIGHWAY

3000 500 0 3000 6000 FT

	Designed By: GREG OLSON	Date:
	Drawn By: LARRY BERNAUER	Scale: AS SHOWN
	Checked By: MARY JO CIVIS	Drawing Code:
	Reviewed By: DAN HOLMES	Project Number: J09C028301
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILL 619015		Sheet Reference Number: PLATE 6
CAMP IBIS NEEDLES, CALIFORNIA POTENTIAL FUAD PROXIMITY TO IBIS		

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 11-8000-108-01/15

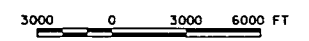
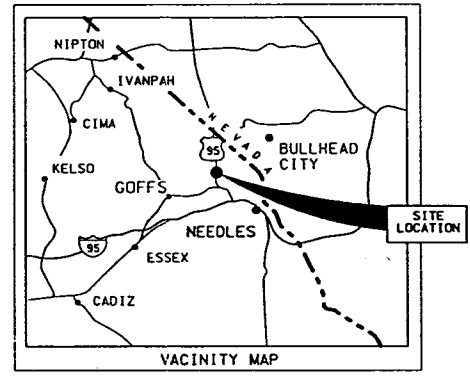
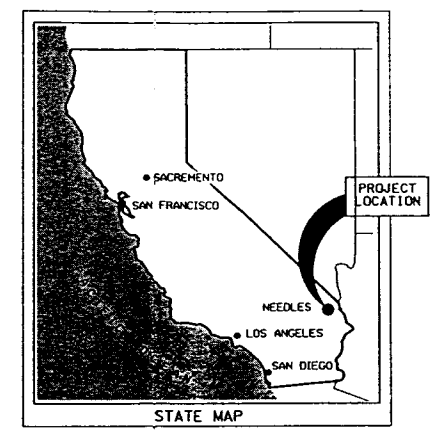
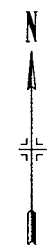
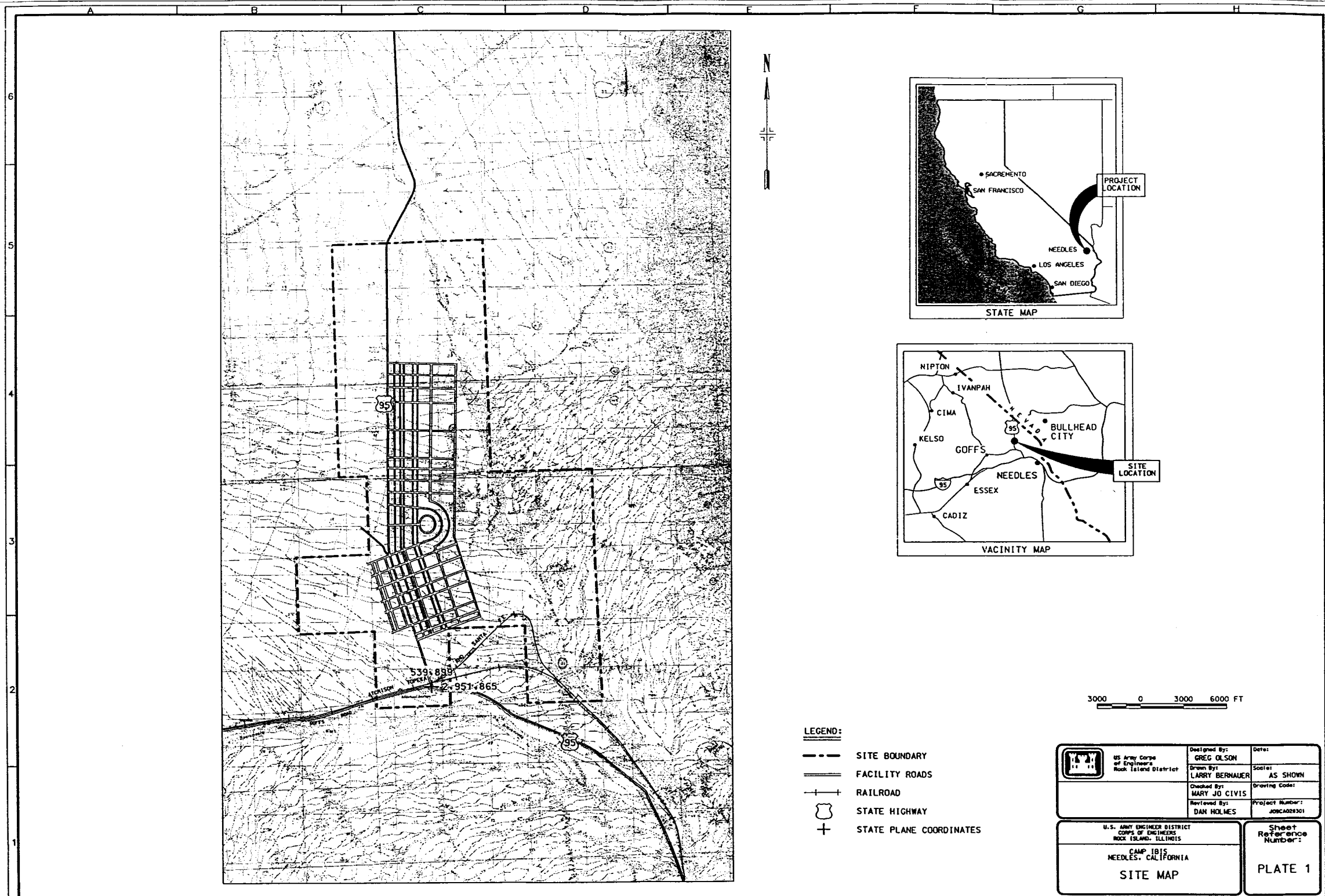


- LEGEND:**
- - - SITE BOUNDARY
 - ==== FACILITY ROADS
 - +— RAILROAD
 - ⬡ STATE HIGHWAY
 - CONTAMINATED AREA
SEE DOCUMENT I-14 AND
DOCUMENT L-10

2000 4000 0 2000 4000 FT

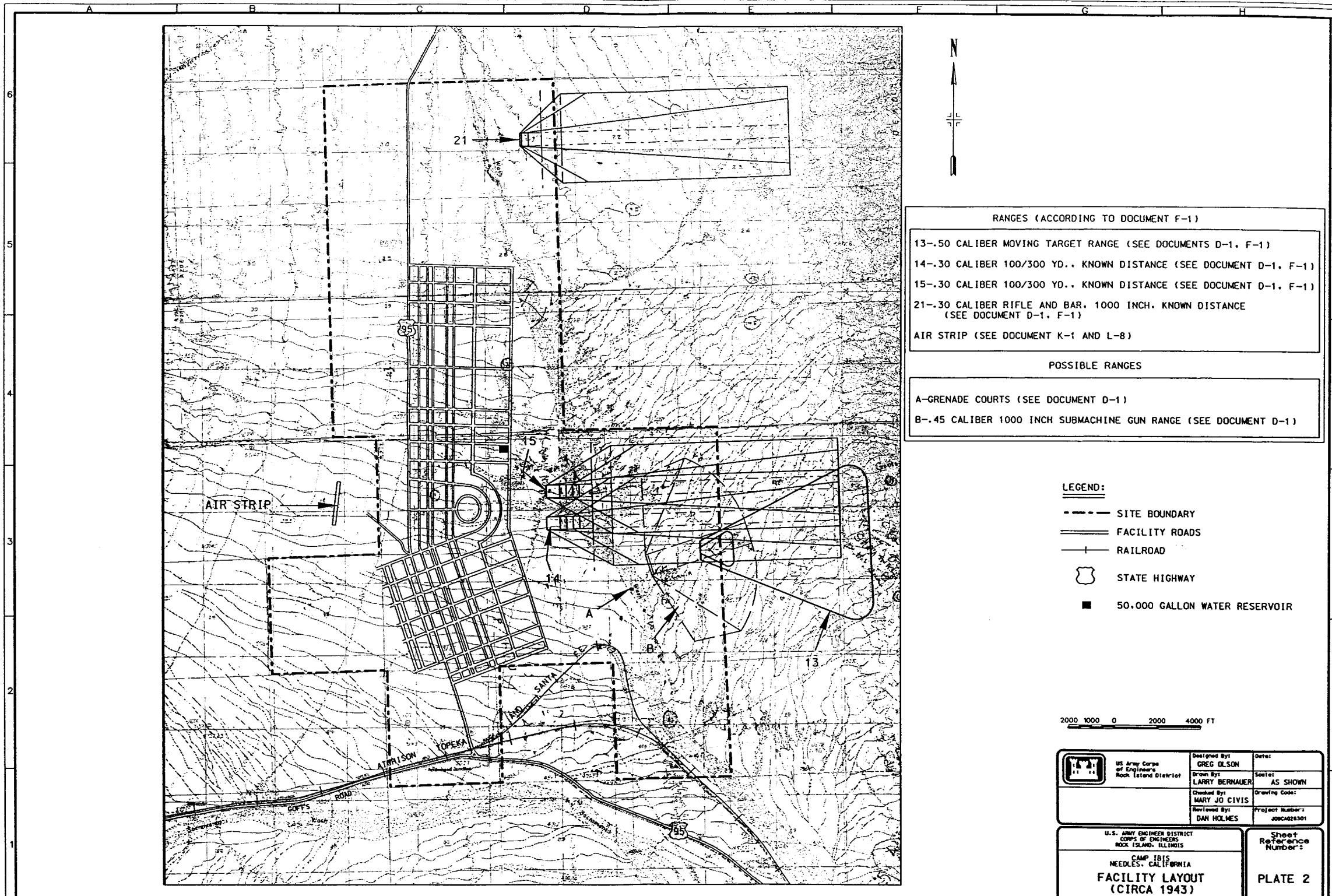
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		Drawn By: LARRY BERNAUER	Status: AS SHOWN
	Checked By: MARY JO CIVIS	Drawing Code:	
	Reviewed By: DAN HOLMES	Project Number: JONC428301	
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS			Sheet Reference Number: PLATE 8
CAMP IRIG NEEDLES, CALIFORNIA DESERT STRIKE CONTAMINATION AREAS			

11-11-1988 11:17
 410001 (08/08) 13 Jan 1989 40



- LEGEND:**
- SITE BOUNDARY
 - ==== FACILITY ROADS
 - + + RAILROAD
 - ⊕ STATE HIGHWAY
 - + STATE PLANE COORDINATES

	US Army Corps of Engineers Rock Island District	Designed By: GREG OLSON	Date:
		Drawn By: LARRY BERNAUER	Scale: AS SHOWN
		Checked By: MARY JO CIVIS	Drawing Code:
		Reviewed By: DAN HOLMES	Project Number: JOBCA028301
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS			Sheet Reference Number:
CAMP IBIS NEEDLES, CALIFORNIA			PLATE 1
SITE MAP			



RANGES (ACCORDING TO DOCUMENT F-1)

- 13--50 CALIBER MOVING TARGET RANGE (SEE DOCUMENTS D-1, F-1)
- 14--30 CALIBER 100/300 YD.. KNOWN DISTANCE (SEE DOCUMENT D-1, F-1)
- 15--30 CALIBER 100/300 YD.. KNOWN DISTANCE (SEE DOCUMENT D-1, F-1)
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- AIR STRIP (SEE DOCUMENT K-1 AND L-8)

POSSIBLE RANGES

- A--GRENADE COURTS (SEE DOCUMENT D-1)
- B--.45 CALIBER 1000 INCH SUBMACHINE GUN RANGE (SEE DOCUMENT D-1)

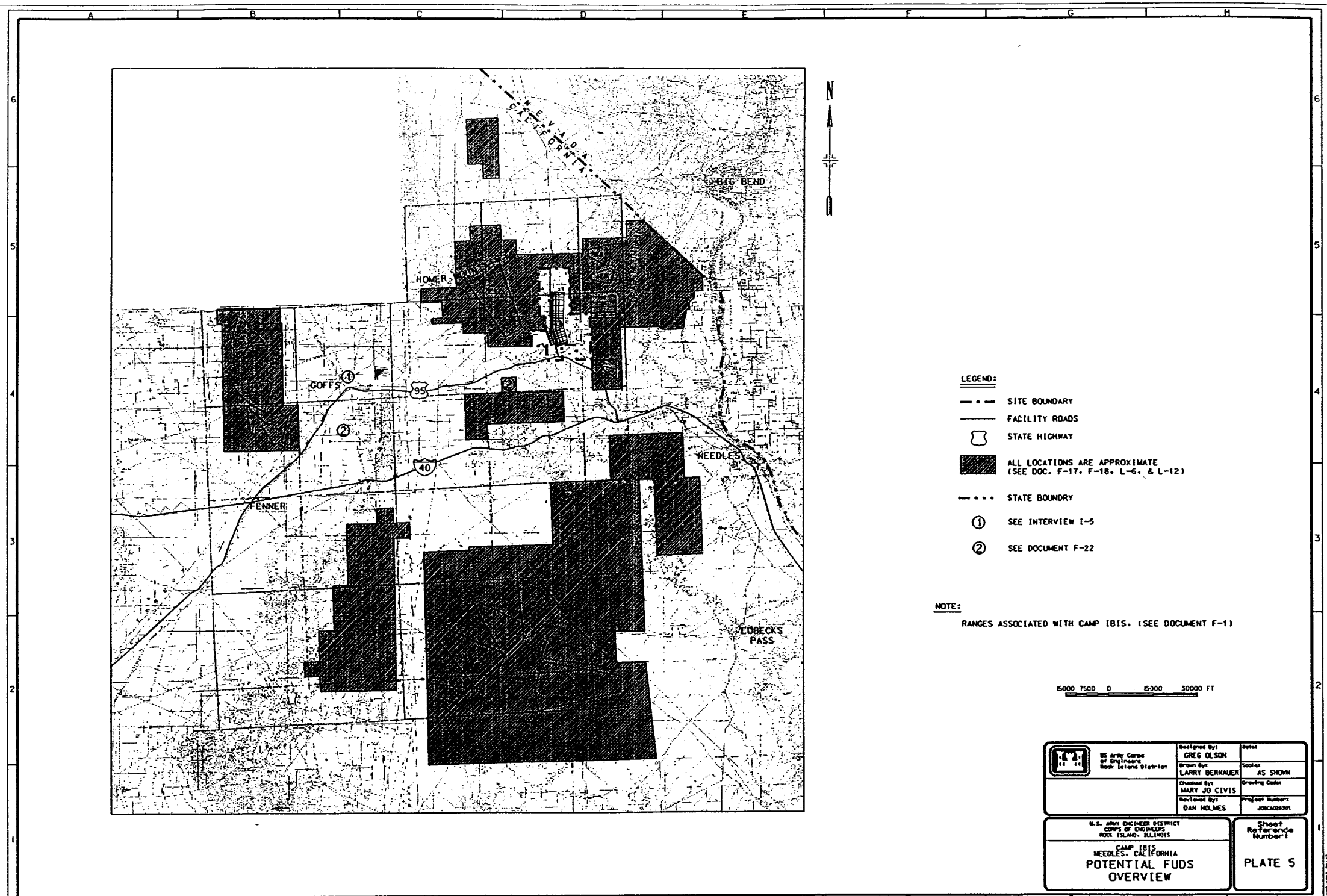
LEGEND:

- SITE BOUNDARY
- ==== FACILITY ROADS
- RAILROAD
- ⬡ STATE HIGHWAY
- 50,000 GALLON WATER RESERVOIR



	Designed By: GREG OLSON	Date:
	Drawn By: LARRY BERNAUER	Scale: AS SHOWN
	Checked By: MARY JO CIVIS	Drawing Code:
	Reviewed By: DAN HOLMES	Project Number: JOB#422301

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILLINOIS CAMP IBIS NEEDLES, CALIFORNIA FACILITY LAYOUT (CIRCA 1943)	Sheet Reference Number: PLATE 2
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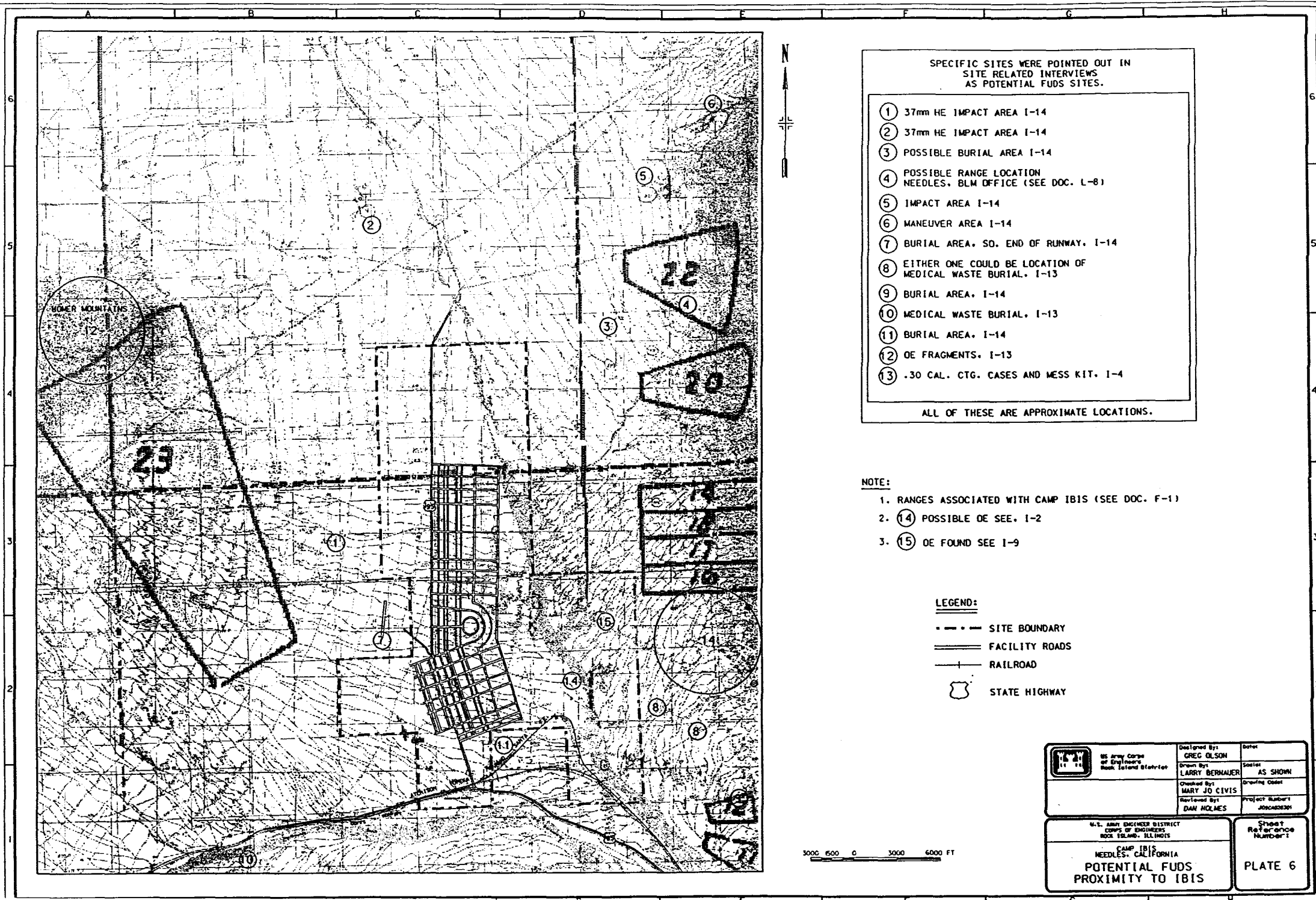
- - - SITE BOUNDARY
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- ALL LOCATIONS ARE APPROXIMATE
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- - - STATE BOUNDARY
- ① SEE INTERVIEW 1-5
- ② SEE DOCUMENT F-22

NOTE:

RANGES ASSOCIATED WITH CAMP IBIS. (SEE DOCUMENT F-1)



	U.S. Army Corps of Engineers West Island District	Designed By: GREG OLSON	Date:
		Drawn By: LARRY BERMAUER	Scale: AS SHOWN
		Checked By: MARY JO CIVIS	Drawing Code:
		Reviewed By: DAN HOLMES	Project Number: J93C4283M
U.S. ARMY ENGINEER DISTRICT NOOK ISLAND, ILLINOIS		Sheet Reference Number:	
CAMP IBIS NEEDLES, CALIFORNIA POTENTIAL FUDS OVERVIEW		PLATE 5	



SPECIFIC SITES WERE POINTED OUT IN SITE RELATED INTERVIEWS AS POTENTIAL FUAD SITES.

- ① 37mm HE IMPACT AREA I-14
- ② 37mm HE IMPACT AREA I-14
- ③ POSSIBLE BURIAL AREA I-14
- ④ POSSIBLE RANGE LOCATION NEEDLES, BLM OFFICE (SEE DOC. L-8)
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- ⑨ BURIAL AREA, I-14
- ⑩ MEDICAL WASTE BURIAL, I-13
- ⑪ BURIAL AREA, I-14
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ALL OF THESE ARE APPROXIMATE LOCATIONS.

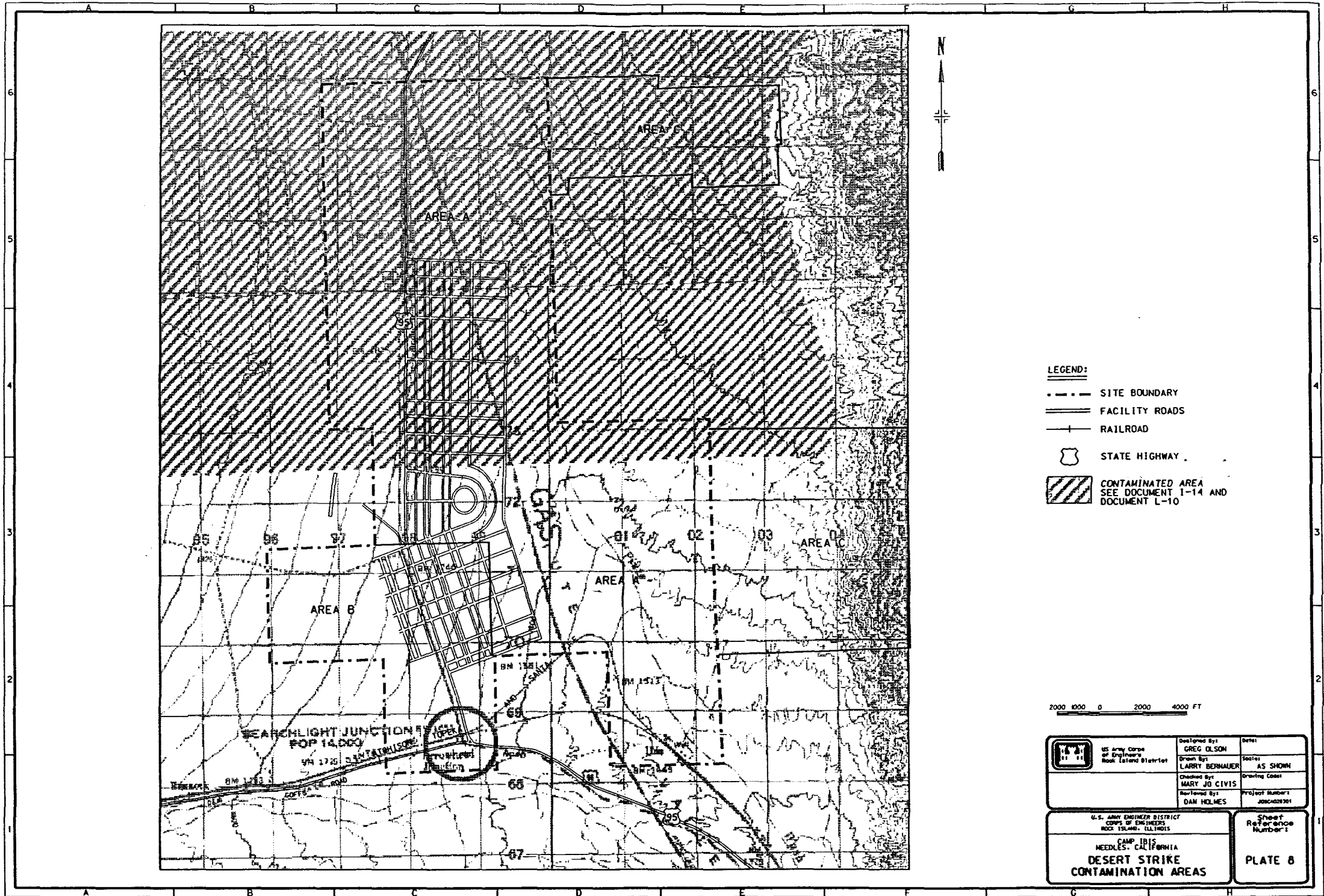
- NOTE:
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 - 2. ⑭ POSSIBLE DE SEE, I-2
 - 3. ⑮ DE FOUND SEE I-9

- LEGEND:
- - - - - SITE BOUNDARY
 - ==== FACILITY ROADS
 - +— RAILROAD
 - ⬢ STATE HIGHWAY


3000 500 0 3000 6000 FT

	Designed By: GREG OLSON	Date:
	Drawn By: LARRY BERNAUER	Scale: AS SHOWN
	Checked By: MARY JO CIVIS	Drawing Code:
	Reviewed By: DAN HOLMES	Project Number: J09C028301
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS ROCK ISLAND, ILL 619015		Sheet Reference Number: PLATE 6
CAMP IBIS NEEDLES, CALIFORNIA POTENTIAL FUAD PROXIMITY TO IBIS		


11/15/83 08:15
 11/15/83 08:15



LEGEND:

- - - SITE BOUNDARY
- ==== FACILITY ROADS
- +— RAILROAD
- ⬡ STATE HIGHWAY
-  CONTAMINATED AREA
SEE DOCUMENT I-14 AND
DOCUMENT L-10

2000 4000 0 2000 4000 FT

	U.S. Army Corps of Engineers Rock Island District	Destined By: GREG OLSON	Date:
		Drawn By: LARRY BERNAUER	Scale: AS SHOWN
		Checked By: MARY JO CIVIS	Drawing Code:
		Reviewed By: DAN HOLMES	Project Number: JONC428301

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
ROCK ISLAND, ILLINOIS

CAMP IRIG
NEEDLES, CALIFORNIA
**DESERT STRIKE
CONTAMINATION AREAS**

Sheet
Reference
Number:
PLATE 8