



**US Army Corps
of Engineers**

HUNTSVILLE ENGINEERING
SUPPORT CENTER

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR
FORMERLY USED DEFENSE SITES

ORDNANCE AND EXPLOSIVES
CHEMICAL WARFARE MATERIALS

ARCHIVES SEARCH REPORT

FINDINGS

KANE SPRINGS SBT #62

KANE SPRINGS, CALIFORNIA

PROJECT No. J09CA017301

SEPTEMBER 1996

PREPARED BY
US ARMY CORPS OF ENGINEERS
ST. LOUIS DISTRICT

ORDNANCE AND EXPLOSIVES
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FOR
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EL CENTRO, CALIFORNIA
IMPERIAL COUNTY

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1.0 Introduction

1.1 Authority

In 1986, Congress established the Defense Environmental Restoration Program at 10 U.S. C. 2701 et.seq. This program directed the Secretary of Defense to "carry out a program of environmental restoration at facilities under the jurisdiction of the secretary."

In March, 1990, the EPA issued a revised National Contingency Plan. Under 40 C.F.R. 300.120, EPA designated DoD to be the removal response authority for incidents involving DoD military weapons and munitions under the jurisdiction, custody and control of DoD.

Since the beginning of this program, the U.S. Army Corps of Engineers has been the agency responsible for environmental restoration at Formerly-Used Defense Sites (FUDS). Since 1990, the U.S. Army Engineering and Support Center, Huntsville, has been the Mandatory Center of Expertise and Design Center for Ordnance and Explosives.

1.2 Subject

The former Kane Springs SBT #62, located in Section 2, Township 13 South, Range 11 East, consisting of 677.32 acres, was transferred from the Department of Interior to the Navy Department in August 1944. Pilots practiced air-to-ground strafing and dropped miniature bombs on the site. The site was used by the Navy until January 1947 when the land was returned to the Department of Interior.

1.3 Purpose

This Archives Search Report (ASR) compiles information obtained through historical research at various archives and records holding facilities, interviews

with individuals associated with the site or its operations, and personal visits to the site. All efforts were directed towards determining possible use or disposal of ordnance on site. Particular emphasis was placed on establishing the types, quantities and area of disposal. Information obtained during this process was used in developing recommendations for further actions at the site.

1.4 Scope

The entire area of the former SBT #62, consisting of 677.32 acres, was considered in assessing the potential for ordnance and explosives. Based on research, chemical warfare material contamination is not a concern.

2.0 Previous Site Investigations

2.1 Corps of Engineers Documents

U.S. Army Corps of Engineers, Los Angeles District (CESPL), prepared an Inventory Project Report (INPR) for the former Kane Spring SBT #62, Project No. J09CA017301, dated 22 September 1993. Science Applications International Corporation (SAIC) personnel conducted a site visit on 7 May 1993. They encountered some OE hazards and CESPL calculated a RAC score of 4. Copies of this information are in APPENDIX D.

CESPL did not identify any environmental concerns other than the potential for OE.

2.2 Other Reports

Research did not uncover any other reports on this site.

3.0 Site Description

3.1 Land Usage

In August 1944, the Department of Interior transferred Section 2, Township 13 South, Range 11 East to the Navy Department for use as a bombing target, known as the Kane Springs SBT #62. The range consisted of 677.32 acres. Pilots practiced air-to-ground strafing and dropped miniature bombs on the site. In January 1947, the Navy returned the land to the Department of Interior (Assistant Commandant (Logistics) 1944; Navy Department 1947; Vanantwerp 1993).

3.2 Climatic Data

The Imperial Valley of California has a desert climate and records a higher percentage of sunshine than any other place in the United States. The amount of possible sunshine fluctuates between 97%, occurring in June, and 82%, occurring in December.

The summers are long and hot with afternoon temperatures reaching 100° F and higher on the average. The highest temperature recorded at the climatological station at Yuma, Arizona was at 122° F in 1990. The highest daily average temperature of 106.6° F occurs during July.

December and January are the only two months that have an average daily high below 70° F, with temperatures of 68.5° F and 68.7° F, respectively. December through February are the only three months with an average daily low temperature below 50° F, falling between 44° F and 45° F. The average annual daily high temperature is 87.9° F, the low is 60.5° F, and the monthly mean is 74.2° F.

Precipitation is sparse with an annual average precipitation of only 3.17 inches. Moisture laden air from the Gulf of California continually invades the area during the summer months. The highest mean monthly precipitation of 0.64 inches occurs during August. May and June record the lowest mean monthly precipitation at 0.04 and 0.02 inches, respectively. The maximum monthly recorded precipitation of 3.44 inches, also the maximum recorded precipitation in a 24 hour period, occurred in August 1989. The minimum monthly recorded precipitation of 0.00 inches occurred in May 1983.

The relative humidity ranges from 30% to 50%, and it is higher in the winter and lower in the summer. On a daily basis, the relative humidity is usually higher in the early morning and lower in the early evening.

The mean annual wind speed is 7.8 mph with a prevailing direction of north. The prevailing wind direction for summer is south southeast; for fall and winter is north; and for spring is west northwest.

Climatological data for this area are summarized in TABLE 3-1. Data were collected at the National Weather Service meteorological station at Yuma, Arizona.

**TABLE 3-1
CLIMATOLOGICAL DATA
YUMA, ARIZONA**

Month	Temperature		Precipitation Average (inches)	Wind	
	Average Minimum (°F)	Average Minimum (°F)		Average Speed Miles/ Hour	Average Direction
January	44.2	68.7	0.35	7.3	N
February	46.9	74.4	0.22	7.4	N
March	50.8	78.9	0.21	7.9	WNW
April	56.5	86.3	0.14	8.3	W
May	63.8	94.2	0.04	8.3	WNW
June	72.0	103.3	0.02	8.5	SSE
July	80.7	106.6	0.26	9.5	SSE
August	80.1	105.3	0.64	8.9	SSE
September	73.2	100.5	0.31	7.3	SSE
October	62.2	90.3	0.29	6.6	N
November	50.9	77.4	0.24	6.9	N
December	44.3	68.5	0.45	7.2	N
Average	60.5	87.9	3.17	7.8	N

3.3 Geology and Soils

3.3.1 Geology/Physiography

The former Kane Springs Bombing Target is located in the Salton Trough section of the Basin and Range physiographic province. This section is characterized by desert alluvial slopes and deltaic plains. The site is located just over one hundred

miles to the north-northwest of the northern tip of the Gulf of California. The Salton Trough is a rift valley that owes its existence to the same tectonic forces that created the gulf.

Structurally, the Salton Trough section is a complexly faulted graben. There are three major northwest-trending fault systems in the southwestern portion of Imperial County. The faults are, from northeast to southwest, the San Andreas, San Jacinto, and Elsinore faults. These faults exhibit right-lateral and vertical movement.

The site is located on the Palm Spring Formation of Cenozoic age. The geology of the formation is interbedded nonmarine, light gray, arkosic sandstone and reddish clay. Folds are displayed along the margins of the Salton trough, in the vicinity of the former Kane Springs Target. These folds were produced where the young, Cenozoic sedimentary filling has been uplifted.

3.3.2 Soils

Soils of the former Bomb Target are nearly level soils on flood plains and alluvial basin floors. The soils are deep and well drained. The soils formed in alluvial and eolian sediments. The surface layer of the soil is typically 12 inches thick and is composed of pinkish gray, sandy silty clay. This layer is underlain by stratified very pale brown and pink, light silty sandy clay to a depth over 60 inches.

Permeability of the soil is generally rapid to moderate. The available water capacity is moderate to very high. The hazard of erosion is slight and the hazard of soil blowing is high. The risk of corrosion by the soils to uncoated steel is high and to concrete is low. TABLE 3-2 shows a typical profile of the soils found on the former Kane Springs Bombing Target.

TABLE 3-2. Soil Profile						
DEPT H (in)	SOIL DESCRIPTION	PERCENTAGE PASSING SIEVE NUMBER			LIQUID LIMIT	PLAS- TICITY INDEX
		#4	#40	#200		
0-12	Sandy silty clay	95-100	85-100	75-90	20-30	NP-5
12-60	Stratified, very fine sandy silty clay	95-100	85-100	75-90	20-30	NP-5

Table modified from Soil Survey of Imperial County, CA.

3.4 Hydrology

3.4.1 Surface Water

The study site is located within the Imperial valley of California. The terrain of the Imperial valley consists mostly of smooth plains. Approximately 50% to 80% of the local relief, which is between 100 and 300 feet, is gently sloping. A large part of the terrain of the Imperial valley is below sea level. The elevation of the water surface for the Salton Sea, located within the Imperial valley, is 228 feet below sea level.

The soil in the Imperial valley of California is warm and dry, with a mean annual temperature higher than 47° F. The western and southern sections of California have very low frost penetration amounts. The average frost penetration for the study site is between zero and 3 inches while the depth of extreme frost penetration is only about 5 inches. The soil in this region is sandy and generally lacks moisture. Evaporation is high due to the plentiful amounts of sunshine and the hot, dry conditions. The vegetation that grows naturally in this area is mostly brush and shrublands. The Imperial valley is generally vulnerable to droughts which may last several years.

The principle water use of the Imperial valley is for irrigation. Fresh surface water is provided from an extensive network of canals for irrigation .

The average concentration of sediment in the rivers is generally high; between 15,000 and 30,000 parts per million. The prevalent type of chemicals naturally in the rivers are sodium, potassium, sulfate and chloride. The concentration of dissolved minerals in the ground water is low with less than 1000 parts per million.

Natural drainage occurs through washes, draws and gullies (trenches cut out by the natural drainage of runoff from precipitation). These trenches are dry in times of no precipitation. A wash is the largest type of trench drainage, gullies are the smallest and draws are usually in between. These natural runoff drainage trenches empty into rivers or canals. Flooding at the site is unlikely because of the small amount of precipitation and the porous nature of the sandy soils throughout the Imperial valley.

Imperial Valley generally drains in a southern direction. The Alamo River, New River and the Western Main Canal all originate at the Salton Sea and flow south into the All American Canal. The Coachella Canal which originates at the Colorado Aqueduct near Coachella, California also flows south, just east of and parallel to the others. These four water systems empty into the All American Canal. The All American Canal flows east along the Mexican border and empties into the Colorado River near Yuma, Arizona. The Colorado River flows south and empties into the

Gulf of California.

The former target lies in the foothills of Superstition Hills. The site elevation ranges from a high of about 150 feet above sea level to a low of about 110 feet below sea level. The area drains north into the Salton Sea and the Trifolium Extension Canal.

While no gage data is available at this site, the U.S. Geological Service (U.S.G.S.) maintains gages on some of the major rivers located within the general area. One gage, covering 14 years of continuous record, located on the Alamo River at Calipatria, California, recorded a maximum discharge of 6770 cfs in January 1993. The minimum recorded discharge, 1080 cfs, occurred in August 1990. The maximum recorded stage, 7.20 feet, occurred in January 1993, equivalent to an elevation of 189.20 feet. Another gage, on the New River near Westmoreland, California, has 32 years of continuous record. It recorded a maximum discharge of 3000 cfs in August 1977, and its minimum recorded flow of 691 cfs occurred in January 1966. No stage data is provided for this gage site.

3.4.1 Ground Water

The Kane Springs Bombing Target site area is underlain by a regionally extensive system of desert basins. These desert or drainage basins receive the majority of their recharge from precipitation runoff from the surrounding mountains and the nearby Salton Sea. The water is absorbed and held by the coarse-grained Quaternary alluvial sediments. The water is therefore unconfined. The depth to groundwater fluctuates greatly due to the surplus or lack of precipitation in the area.

The land is dry and must be irrigated to be used for pastureland or farmland. There are extensive irrigation systems throughout the surrounding areas for both domestic and farm use.

3.5 Ecology

The information provided for this site was compiled from the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game Natural Diversity Data Base (NDDB).

The following federally-listed species may occur in the vicinity of the former Kane Springs SBT (#62): desert pupfish (Cyprinodon macularius), endangered; flat-tailed horned lizard (Phrynosoma mcalli), proposed endangered; Aleutian Canada goose (Branta canadensis leucopareia), threatened; bald eagle (Haliaeetus leucocephalus), endangered; peregrine falcon (Falco peregrinus), endangered; brown pelican (Pelecanus occidentalis), endangered; Yuma clapper rail (Rallus longirostris)

yumanensis), endangered; and Pierson's milk-vetch (Astragalus magdalenae var. piersonii), proposed endangered.

The NDDDB records indicated that the following state-listed species occurs in the vicinity of the former Kane Springs SBT (#62): desert pupfish, endangered; and Peirson's milk-vetch, endangered.

No additional information on the occurrence of rare or endangered species or natural communities is known at this time. This does not mean that other state or federally-listed species may not be present within the areas of interest. An on site inspection by appropriate state and federal personnel may be necessary to verify the presence, absence or location of listed species, or natural communities if remedial action is recommended as part of the final ASR.

3.6 Demographics

3.6.1 Center of Activity

The Kane Springs SBT #62 site is located near the town of Kane Springs, Imperial County, California. Demographic information could not be obtained for Kane Springs, therefore, demographic information for Brawley, a nearby town, will be used.

3.6.2 Population Density

CITY/COUNTY	CITY: Brawley	COUNTY: Imperial
AREA (sq. mi.)	N/A*	4,173
POPULATION	18,923	109,303
POP DENSITY	N/A*	26.2

NOTE: Population density is measure in persons per square mile.

*N/A denotes data which were not available to this study.

3.6.3 Type of Businesses and Industry

The number of business establishments in Imperial County can be broken down by type as follows: manufacturing 3.0%; agriculture 3.6%; services 28.3%; trade and financial 48.3%; and other 16.8%. Of the people employed in Imperial County, 21.6% are employed by classified businesses. Trade and financial firms employ 50% of the working population, and the service industry employs 20.5%. 7.6% of the

people employed work in manufacturing businesses, and 0.3% are employed by unclassified businesses. Foregoing percentages are from March 1991.

3.6.4 Type of Housing

Housing in Brawley is composed of both single family and multi-family dwellings. The median value of 6,124 specified owner-occupied housing units in Brawley is \$95,300.

3.6.5 New Development in the Area

Development in the area includes residential dwellings,

3.6.6 Typical Cross-Section of Population

The portion of the population under the age of 18 is 35.8%, and the portion over the age of 65 is 8.9%. The median age is 30 years.

3.6.7 Information Sources

U.S. Census reports as listed below:

- 1990 Census of Population and Housing, Imperial County, California
- 1990 Census of Population and Housing, Brawley, California
- 1988 County and City Data Book, Land Area and Population, Imperial County, California
- 1988 County and City Data Book, Land Area and Population, Brawley, California
- 1991 County Business Patterns, Imperial County

4.0 Site History

4.1 Historical Site Summary

4.1.1 General History of Naval and Marine Corps Facilities in Imperial County, California

4.1.1.1 El Centro Marine Corps Air Station

In May 1942, military construction began on the Civil Aeronautics Administration (CAA) airfield at El Centro, CA. Seven months later limited operations at the base started. The Marine Corps chose this location because the flat, sandy desert floor and the climate provided an excellent opportunity for all types of pre-combat training and a large amount of flying time. Additional facilities constructed included skeet and rifle ranges, gunnery practice ranges, a rocket range, and rocket ground school. Official commissioning of the base took place on 23 July 1943 (Coletta 1985).

In October 1943, El Centro expanded its facilities due to increasing requirements for Marine Corps pilots. It moved its moving target range closer to the base for convenience, and it expanded existing runways and also built two new ones. El Centro began training heavy bomber crews at this time. By the end of 1944, the base maintained training capabilities for sixteen squadrons of fighters, bombers and transports (Office of the Chief of Naval Operations 1943; Coletta 1985).

After World War II, jurisdiction for the base switched from the Marine Corps to the Navy. For most of the post-World War II period, Naval Air Facility (NAF) El Centro's mission has been to support the rocket, bombing, gunnery, anti-submarine warfare, and night flying training for fleet aircraft (U. S. Naval Auxiliary Air Station, El Centro, CA 1952a).

4.1.1.2 Holtville Naval Auxiliary Air Station

Construction on the Holtville station began in January 1943, and it was completed five months later. The official commission occurred on 4 July 1943. NAAS Holtville specialized in night flying. The instruction schedule included training in dive bombing, skip bombing, low-level bombing, target strafing, and carrier landings. Later, trainees also practiced rocket firing. The Navy reduced the station to caretaker status in April 1946 and declared it surplus on 10 June 1946 (U. S. Naval Auxiliary Air Station, Holtville, CA 1945, 1946; Navy Department 1948).

4.1.1.3 Salton Sea Naval Auxiliary Air Station

In 1942, after infrequent, limited use for seaplane landings and as a bombing target, the Navy established an auxiliary facility for seaplanes on the shore of the Salton Sea. It trained seaplane crews and served as an emergency landing area when seaplanes could not land at San Diego. Eventually, the base administered ten water targets, thirteen land targets and five emergency landing fields. The Manhattan project conducted some experiments from the base during World War II, and after the war the base was owned by the Atomic Energy Commission. In the 1960's, the Navy re-acquired the land and used it as a support facility for NAF El Centro. In 1988, the Base Realignment and Closure Commission recommended its closure (U. S. Army Corps of Engineers-Rock Island, IL 1996).

4.1.1.4 Kane Springs SBT #62

The Navy Department acquired this land in August 1944 from the Department of Interior. The range's target consisted of a radar-rigged fence, and pilots practiced air-to-ground strafing and dropped miniature bombs at this site. In January 1947, the Navy returned the land to the Department of Interior; no land restoration was required, and Navy personnel had removed the target (Assistant Commandant (Logistics) 1944; Navy Department 1947; Vanantwerp 1993; n.a. n.d.).

4.1.2 Historical Use of OE and CWM at the Kane Springs Bomb Target No. 62

A 1944 bombing range inventory listed miniature bombs and strafing to be the authorized use of this site, but the site inspection conducted February 1996 found evidence of M-38 100-pound practice bombs in addition to the expected 20mm scrap. The site visit conducted in May 1993 uncovered similar ordnance debris. At various times, the following OE or CWM was stored at the El Centro Marine Corps Air Station and could have been used on its ranges:

- 100-pound water filled bombs
- 100-pound general purpose bombs
- 500-pound water filled bombs
- 500-pound general purpose bombs
- 1000-pound water filled bombs
- 1000-pound general purpose bombs
- 1000-pound semi-armor piercing bombs
- Miniature bombs
- 2.25" rocket
- 3.5" rockets
- 5" rockets
- Tiny Tim (11.75") rockets

- .30 caliber incendiary
- .30 caliber armor-piercing ammunition
- .50 caliber ammunition
- 20mm ammunition
- FS Smoke drums
- .45 caliber ball ammunition
- pyrotechnics
- rocket firers

Both air stations at Holtville and Salton Sea also stored some OE and CWM, but the items stored at El Centro reflect the largest, most varied arsenal (Bureau of Ordnance 1946a, 1946b, 1946c; Headquarters, Naval Air Bases 1946b, n.d.; U. S. Marine Corps Air Station 1946; United States Pacific Fleet 1946).

4.2 Review of Historical Records

Records relating to the history of Bombing Target #78 were gathered from the following sources from between December 1995 and February 1996. The research team consisted of Rochelle Ross and Theresa Williams-Dye, CELMS-PM-M, and David Tajkowski, and John Daly CELMS-PD-R. Decisions about which record groups to examine at the various national, state, and local archives and records centers were made by consulting finding aids, archivists and records managers. Through the use of finding aids, such as inventories and master accession lists, the researchers were able to focus on those record groups they thought would be most fruitful before calling, or visiting, various repositories.

**National Archives
8th and Pennsylvania
Washington, D.C. 20408**

RG 72 Records of the Bureau of Aeronautics (NAVY)
Box 2323, General Correspondence, 1943-45, KV 91 Et 14, Dv 39 Vol 2
(no entry number). Contained the following information: acquisition of
Permit for use of land for rocket target, El Centro MCAS; lease of
additional land for El Centro Bombing Target #1; El Centro MCAS
Gunnery Training Facilities; access roads to El Centro Rocket Target
#'s 1 & 2.

Entry 67, Box 274, Confidential Correspondence, 1922-47 (1945), Kv to
Kv 58.

Entry 17A, Box 980, Confidential Correspondence, 1922-44 (1942), K7-Kv41. Contained a map showing the El Centro NAS Plot Plan (Nov 4, 1942).

RG 49 Records of the Bureau of Land Management
Abandoned Military Reservations File, CA-Fort Reading to Fort Collins, Boxes 25 & 27. No information on El Centro or Holtville.

**National Archives-Suitland Branch
Washington National Records Center
4205 Suitland Road
Suitland, MD 20409**

RG 127 Records of the United States Marine Corps
Office of the Commandant, General Correspondence, Box 1845, Jan 1939-June 1950, 2785-2385. Contained a file on the El Centro MCAS, no pertinent information.

RG 175 Records of the Chemical Warfare Service
Entry 2, Box 450, Index Briefs 1918-42, Samples-Schedule.
Entry 2, Box 448, Index Briefs 1918-1942, Sales-Samples
Entry 2, Box 259, Index Briefs 1918-1942, Hig-Hooker
Entry 2, Box 175, Index Briefs 1918-1942, Education-Electric

RG 74 Records of the Bureau of Ordnance (Navy)
Entry 1529, Box 1282, ND7-ND11, 1945. Req. disposition of 752 MK 6 Mod 1 parachute flares at NAAS Holtville.

Entry 5595, Box 209, ND10-ND12, 1947. The following information was copied from this box: request for ammunition, MCAS El Centro (2.25" Rocket SCARs, 8000 rounds); disposal officer has been acquired to effect demolitions of dud rockets and bombs on the El Centro Aviation Practice Ranges; discontinuance of target and bombing ranges (#'s 58, 59, 60, 61, 62, 69, 77, 90 & 91).

Entry 25, Box 362, KV37-NA8, 1943. Monthly ammunition allotment, MCAS El Centro.

Entry 25, Box 453, KV9-LL, 1943. This box contained information on empty drums for FS Smoke Mixture and a request for ammunition and water-fillable bombs MCAS El Centro.

Entry 4444, Box 194, KV thru L1-1, 1946. Receipt for shipment of rocket firers.

Entry 4444, Box 193, KK/579 thru Kv, 1946.

Entry 1529, Box 374, F4 1-10, 1945.

Entry 4444, Box 287, ND8-ND11, 1946. Training for a four month period, 1,224 Tiny Tim's, 53,292 SCARs, 11,176 100# H2O filled, 2,500 3.5 AR'S.

Entry 1529, Boxes 373, 376 & 377, 1216 & 1283.

Entry 4444, Boxes 154-156, 264 & 288.

Entry 25, Boxes 187 & 188, 248, 386 & 515.

Entry 5595, Boxes 100 & 101, 130 & 197.

- RG 72 Records of the Bureau of Aeronautics
Entry 69A2454, Box 2 & 3, California. Declaration of Surplus for the Holtville Naval Auxiliary Air Station.
- RG 143 Records of the Bureau of Supplies and Accounts (NAVY)
All requests for RG 143 were unsuccessful.

**Washington National Record Center
4205 Suitland Road
Suitland, MD 20409**

Based on the finding aids available at this repository and due to the nature of the site, no boxes were requested.

**National Archives at College Park
8201 Adelphi Rd
College Park, MD 20740**

- RG 48 Records of the Office of the Secretary of the Interior
Entry 748, Boxes 44, 45, 92, 142, 149, 162 & 748.
Entry 749, Boxes 3218, 3219 & 3220.
Entry 942, Not Found

**Naval Historical Center/AR
Washington Naval Yard
901 M Street S.E.
Washington, D.C. 20374**

Aviation History Files, 11th Naval District, Boxes 210, 212, 221, 290, 292 & 391. Information copied included: histories on El Centro MCAS and Holtville NAAS; 11th Naval District Directory of Naval Air Bases; chronologies of El Centro and Holtville NAAS; rounds expended by fleet units (El Centro NAAS).

**United States Marine Corps Historical Center
Washington Naval Yard
901 M Street S.E.
Washington, D.C. 20374**

Additional histories on El Centro were reviewed along with information on the Twenty-nine Palms Marine Corps Base. No copies were made at this repository.

**Chemical and Biological Defense Agency Historical Office
AMSCB-CIH
Aberdeen Proving Ground
Edgewood, MD 21010**

This facility contained the results of a chemical warfare material test in Imperial County, California, but further research revealed that it was not conducted on our site.

**National Archives-Pacific Southwest Region
24000 Avila Rd
Laguna Niguel, CA 92677-6719**

RG 181 Records of Naval Districts and Shore Establishments
Box 38, File N1-9, 11th Naval District General Correspondence 1925-1952. Naval and Marine flying within Western Air Defense Zone; survey of shore activities; mission of El Centro NAAS and a historical report on Holtville NAAS.

Box 39, File N1-N3, 11th Naval District General Correspondence 1925-1952. Danger area-El Centro Gunnery Range for MCAS.

Box 422, File NA-NA, 11th Naval District General Correspondence 1925-1952. Land occupied by rocket target #103; free gunnery range facilities located near El Centro; rocket stowage at El Centro NAS; permit for movable target range for El Centro MCAS and investigation of wrongful release of bombs near El Centro MCAS.

Box 57, File CF20C/SF20C/1943, 11th Naval District Formerly Classified Correspondence 1921-47. Board report of investigation of additional facilities requested at the Marine Corps Air Stations on the west coast.

Box 424, File NA(2), 11th Naval District General Correspondence 1924-1955. Price of construction for Holtville Outdoor Gunnery Range; acquisition of land for bombing targets and rental price for Holtville Target #1.

Additional boxes viewed under RG 181 at the Pacific Southwest Archives included: Boxes 5, 56, 116, 119, 421, 423, 427, & 435.

RG 270 Records of the War Assets Administration
Boxes 63 & 64, File Hollister-Holtville, Real Property Case Files.

**Federal Record Center-Pacific Southwest Region
24000 Avila Rd
Laguna Niguel, CA 92677-6719**

This repository contained no pertinent information on our site.

**National Personnel Record Center-Military Branch
9700 Page Avenue
St. Louis, MO 63132**

This repository contained no pertinent information on our site.

**USACE-Los Angeles District
300 Los Angeles Ave
Los Angeles, CA 90053**

Information gathered at the L.A. Corps of Engineers included reports of previous site visits, along with real estate data.

**National Archives-Pacific Sierra Region
1000 Commodore Dr.
San Bruno, CA 94066**

RG 291 Records of the Property Management and Disposal Service
Series 9NSS-121-90-002, Box 59, File B-Calif-730 Salton Sea Test
Base. *File contained regional information on El Centro.*

**Federal Record Center-Pacific Sierra Region
1000 Commodore Dr.
San Bruno, CA 94066**

Based on the consultation of the archivists and the corresponding finding aids, no documents were requested at this repository.

**NAVFAC Historian's Office
Seabee Museum
Construction Battalion Center
Port Hueneme, CA 93043**

Maps of the El Centro NAAS and of Imperial County (showing bombing targets).

**Naval Facilities Engineering Command
Southwest Division
1220 Pacific Hwy, Code 2421
San Diego, CA 92132-5190**

A Land Acquisition Map of range 2512 (East Mesa) and a Real Estate Summary Map of Imperial County (dated 7-1-65) were available at this repository.

**U.S. Department of the Navy
Public Works Department (Code 341)
Naval Air Facility
El Centro, CA 92243-5001**

A Historic and Archeological Resources Protection Plan for Naval Air Facility, El Centro (October 1994) and additional Land Acquisition Maps were copied at El Centro NAS.

**U.S. Department of the Navy
Base Library
Naval Air Facility
El Centro, CA 92243-5001**

The base library contained a series of scrapbooks on the history and social activities of El Centro.

**Bureau of Land Management
El Centro Resource Office
1661 South Fourth St.
El Centro, CA 92243**

Items procured included a Desert Access Guide to Imperial Valley California and BLM jurisdiction and site access maps.

**Combat Heritage Museum
Holtville Airport
Holtville, CA 92250**

Base newspapers of the Holtville Auxiliary Naval Air Station were available for viewing.

**BARSA Inc.
422 North Imperial Ave.
El Centro, CA 92243**

Maps on Imperial County and the State of California were available at this repository.

4.3 Summary of Interviews

None of the individuals interviewed, personnel from the Naval Amphibious Base, Naval Facilities Engineering Command, El Centro Naval Air Facility, EOD (Naval, Army, and Marines), and local residents, knew this range had ever existed.

4.4 Air Photo Interpretation and Map Analysis

4.4.1 Air Photo Interpretation

Photographic analysis and land-use interpretation were performed using the following photographic sources:

<u>Photography Date</u>	<u>Scale</u>	<u>Source</u>	<u>Frame Identifier(s)</u>
18 Nov 1937	1:20,000	National Archives	ABN-2 66 thru 77 ABN-2 104 thru 107
22 Feb 1949	1:20,000	National Archives	ABN-5F 38 thru 41 ABN-5F 47 thru 50
18 Apr 1953	1:20,000	ASCS	10M 117 thru 120
26 Apr 1953	1:20,000	ASCS	11M 131 thru 135
06 Jun 1965	1:20,000	ASCS	ABN 1FF 17 thru 19 ABN 1FF 20 thru 22
16 Sep 1979	1:20,000	ASCS	179 74 thru 76
22 May 1992	1:40,000	ASCS	6801 52 thru 54 6801 73 thru 75

The photography was referenced using the 1992 edition USGS Kane Spring, California 7.5' quadrangle.

The photography from 1949 and 1953 show no evidence of bombing or bombing targets in the area. However, there are a few ground scars in the area visible on the 1953 photos. There appears to be a few more ground scars on the 1965 photos. There doesn't appear to be any changes from the previous years visible on the photography from 1979 through 1992.

4.4.2 Map Analysis

Map analysis was performed using the 1992 USGS Kane Spring, California 7.5' quadrangle.

Planimetric and topographic features are shown on the quadrangle. The planimetric features include buildings, loose and hard surface roads, powerlines and levees. The topography of the area is to gently rising terrain to the southwest. Vegetation is sparse and low lying. The site area lies on relatively flat terrain.

5.0 Real Estate

5.1 Confirmed DoD Ownership

The former Kane Springs SBT #62, located in Section 2, Township 13 South, Range 11 East, consisting of 677.32 acres, was transferred from the Department of Interior to the Navy Department in August 1944. Pilots practiced air-to-ground strafing and dropped miniature bombs on the site. The site was used by the Navy until January 1947 when the land was returned to the Department of Interior.

5.2 Potential DoD Ownership

DoD only owned that land mentioned in Section 5.1.

5.3 Significant Past Ownership other than DoD

There is no significant past ownership other than DoD.

5.4 Present Ownership

According to the INPR and a Kane Springs Quad Sheet dated 1992 the west ½ of the southwest ¼ of the above section is under DoD control and is considered a part of the U.S. Naval Air Facility. However, NAF personnel and records indicate that this property is under the jurisdiction of the Bureau of Reclamation.

6.0 Site Inspection

We began walking in the northeast corner of the former Kane Springs SBT #62 and continued south and west through the site. We found several ordnance items, including .50-caliber and 20mm links, .50-caliber and 20mm casings, scrap from M-38 100-lb practice bombs, and .50-caliber bullets. The descriptions and locations of the items found are:

<u>Description</u>	<u>Location</u>
M38 100-lb Practice Bomb	N 33°04'25.1" W 115°47'52.5" (PG 12205 59901)
20mm Casing and M8 links from 20mm	N 33°04'13.9" W 115°48'34.6" (PG 11119 59547)
Concrete blocks from possible target location	N 33°03'50.9" W 115°48'36.7" (PG 11073 58834)

7.0 Evaluation of Ordnance Presence

An intact M38-series 100-lb. practice bomb was found in a deep gully at N 33° 04' 25.1", W 115° 47' 52.5"/PG 12205 59901. This bomb had been washed down the gully and was filled with dirt and rocks, visible through rusted-through holes in the side of the case. The tail section was missing, and thus had no spotting charge.

Two 20mm cartridge cases made of brass and an M8 20mm link were found at N 33° 04' 13.9", W 115° 48' 34.6"/PG 11119 59547. Many World War II era aircraft mounted 20mm guns.

A large number of very old concrete blocks were found in the vicinity of N 33° 03' 50.9", W 115° 48' 36.7"/PG 11073 58834. These blocks were scattered about and did not form any discernible pattern, yet could have formed a target circle or even mock buildings at one time. There were several crushed M38's in the area. Fins from MK 19 Mod 1 13-lb. miniature practice bombs were also found, but none of the bomb bodies were found.

8.0 Technical Data of Ordnance and Explosives

8.1 Ordnance related Mission

This was a practice bombing and aerial gunnery range in the 1940's. It is possible that target rockets or subcaliber rockets were fired.

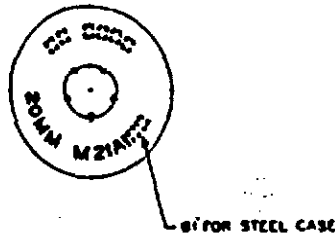
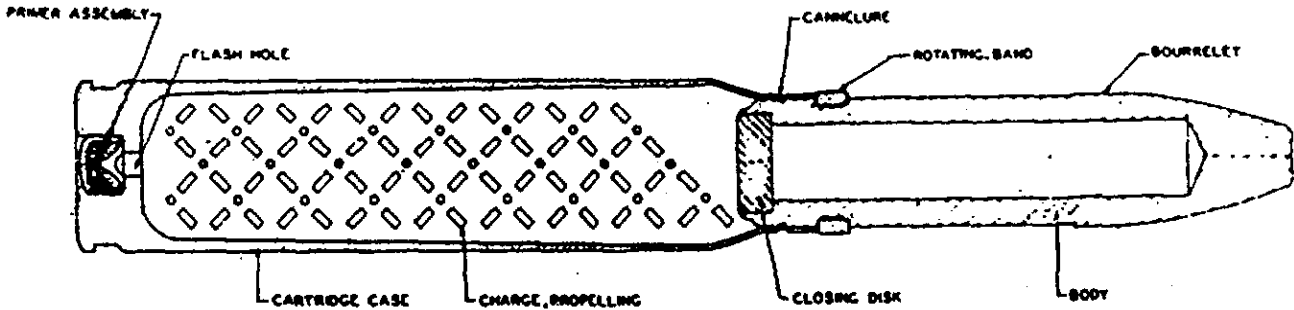
8.2 Description of Ordnance

Practice bombs like the 100-lb. M38 series, 25-lb. and 3-lb. miniature bombs may have been dropped. Aerial gunnery using .50 caliber machine guns and 20mm cannon took place. Target rockets may have been fired to indicate the target, or used as subcaliber munitions.

8.3 Reference

NAVSEA OP 1280, Aircraft Bombs, 1945
NAVSEA OP 1664, U.S. Explosive Ordnance, dated 1947
TM 9-1325-200, Bombs and Bomb Components, dated 1966
TM 9-1980, Bombs for Aircraft, dated 1950
TM 9-1901-1, Ammunition for Aircraft Guns, dated 1957

20 MM BALL MK I



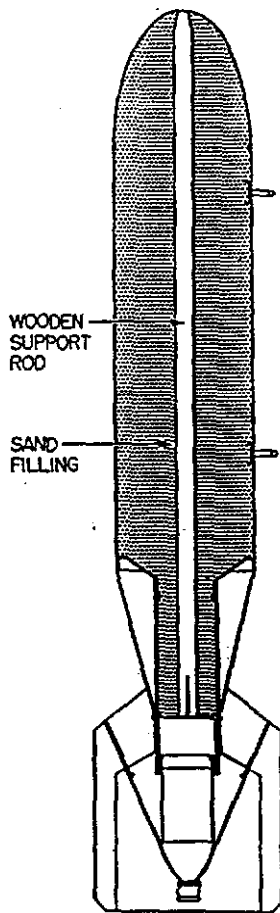
Use: This cartridge was originally designed as a training round to simulate the high explosive incendiary (HE-I) round. Later it was superseded by the practice M99 series.

Description: The 20 mm was a fixed round consisting of a projectile, cartridge case, propellant, and a primer. The aircraft weapons were fed either through a drum type magazine or disintegrating linked belts. The projectile was machined from bar steel. The nose appeared to have been cut off squarely, and was painted black.

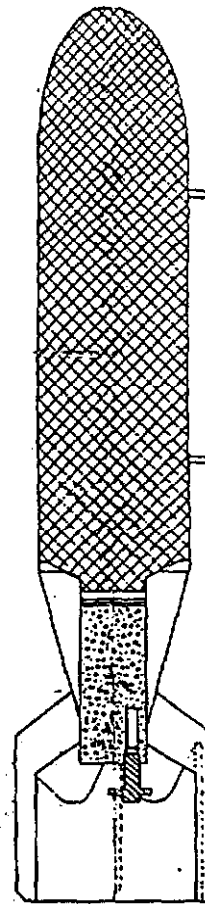
Purpose: Although originally designed for practice firing, this cartridge was so effective that it was later adopted for actual combat fire as a ball round.

Weight 0.56 pounds
 Diameter 0.784 inch (greatest)
 Length 7.23 inches
 Reference TM9-1904, March 1944

BOMB, PRACTICE, 100 POUND, M38A2



With M4 spotting charge



With M3 spotting charge

Description: This bomb simulates a General Purpose bomb of the same size. It is constructed of light sheet metal, approximately 22 gage, formed by rolling a rectangular sheet of metal into the form of a cylinder approximately 8 inches in diameter, and spot-welding the seam. The rounded nose is pressed from the same metal, as is the tail which is formed in the shape of a cone. The tail portion ends in a box type fins which is welded to the cone. Inside of the smaller end of the conical tail section is welded the spotting charge receiver. The spotting charge is assembled in a sleeve at the base of the bomb, within the fin box. Authorized spotting charges are the M1A1, M3, and M4. When using the M4 spotting charge a wooden support rod is installed in the bomb. Two suspension lugs are bolted to the bomb body during fabrication. The over-all length of the bomb body is 47½ inches. When empty, the bomb body weighs approximately 14 pounds. When completely loaded with sand and spotting charge, the weight of the bomb is approximately 100 pounds.

Over-all length	47.5 inches
Diameter	8.13 inches
Weight empty	15.7 pounds
Weight sand loaded & spotting charge	100 pounds

Reference OP 1664 Vol 1 & 2, U.S. Explosive Ordnance February 1954
 Complete Round Chart #5981, October 1944

THE 13-POUND MINIATURE PRACTICE BOMB MK 19 MOD 1

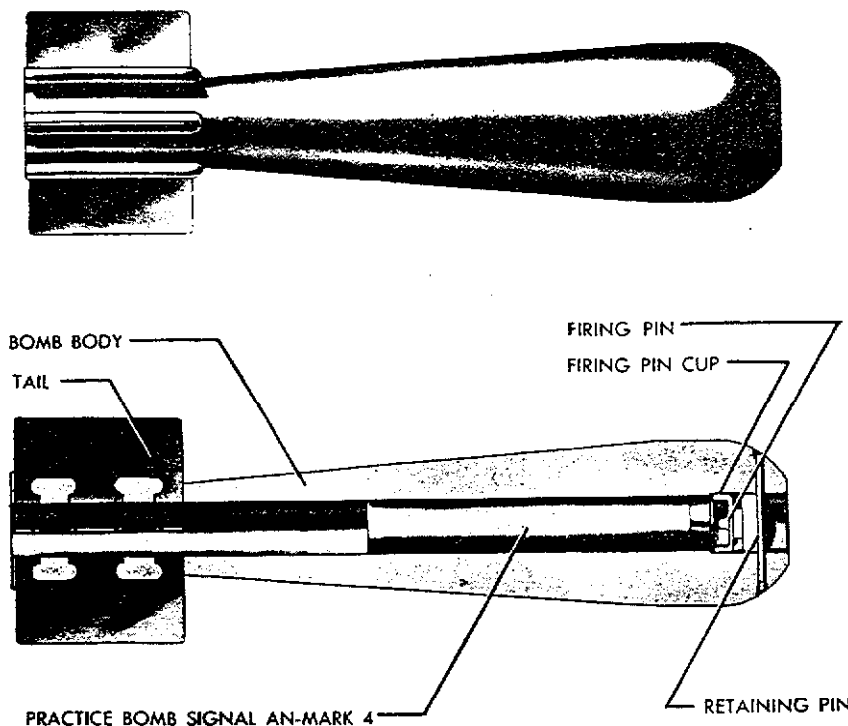


Figure 150.—13-Lb. Miniature Practice Bomb Mk 19 Mod 1

This bomb has the following characteristics:

- Weight, body, without signal or firing pin assembly 13 lb. \pm 3 oz.
- Overall length 13.06 in.
- Body diameter—
 - maximum 2.62 in.
- Fin dimension—
 - maximum 3.67 in.
- Material—body Lead-antimony
- Material—fins Steel
- Ballistic coefficient ... 2
- Total weight, with firing pin assembly and signal installed, ready for dropping. 13.2 lb. \pm 3 oz.

Auxiliary Equipment

- Firing pin assembly and retaining pin
- Miniature Practice Bomb Signal AN-Mk 4

Use

This bomb is for use in high-altitude horizontal bombing practice and may be used against armored-deck target boats having 20-pound STS (1/2-inch) deck armor, provided the altitude at release does not exceed 6,000 feet (horizontal altitude at release).

9.0 Evaluation of Other Site Information

The archive search did not reveal any additional areas of potential environmental concern associated with DoD use.

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Scott, Bruce K., BG, U.S. Army

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Bagley, D. W. and R. R. Smith.

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- 1945b Correspondence to Bureau of Yards and Docks, dated 30 July, regarding gunnery training facilities. Record Group 72; Entry: General Correspondence 1943-45; Box 2323; File: KV37. National Archives-Downtown Branch, Washington D.C.

Bureau of Docks.

- 1948 Routing Slip referencing correspondence to Eleventh Naval District, dated 8 April, regarding permission to use Department of Interior land for a movable target range, rifle range and pistol range. Record Group 181; Entry: 11th Naval District, Commandant's Office, General Correspondence 1924-55; Box 425. National Archives-Pacific Southwest Region, Laguna Niguel, CA.

Bureau of Naval Personnel.

- 1947 Correspondence to Commander, Eleventh Naval District, dated 19 February, regarding the cancellation of interim caretaker force allowances. Record Group 74; Entry 5595; Box 209: ND10-ND12, 1947. National Archives-Suitland Branch, Suitland, MD.

Bureau of Ordnance.

- 1943a Correspondence to Commanding Officer, Bombardier and Air Gunner School, El Centro MCAS, dated 5 May, regarding inert bombs and fuzes for Instruction. Record Group 74; Entry 25; Box 453: KV9-LL. National Archives-Suitland Branch, Suitland, MD.

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- 1943d "Cross Index: KV37," dated 5 October, for correspondence to S & A Ofcr MarCorps Air Sta. El Centro, Calif., regarding bombing trainers. Record Group 74; Entry 25; Box 362; KV37-NA 8. National Archives-Suitland Branch, Suitland, MD.
- 1946a Correspondence to Commanding Officer, El Centro Marine Corps Air Station, dated 4 January, regarding the Ammunition Stock Recording System. Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946. National Archives-Suitland Branch, Suitland, MD.
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- 1948 Correspondence to Chief of Naval Operations, dated 16 January, regarding Rock Mining Permit at Gunnery Range, NAS, El Centro, CA. Record Group 181; Entry: 11th Naval District, Commandant's Office, General Correspondence 1924-55; Box 425. National Archives-Pacific Southwest Region, Laguna Niguel, CA.

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- 1947 Correspondence, dated 7 November, regarding the Revised Planning Estimate for Roll-Up of Continental Air Stations, Satellites and Outlying Fields. Record Group 181; Entry: 11th Naval District, District Planning Officer, General Correspondence 1925-52; Box 38; File N1-9. National Archives-Pacific Southwest Region, Laguna Niguel, CA.

Coletta, Paola E., ed.

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- 1947a Correspondence to the Chief of Bureau of Yards and Docks, dated 28 February, regarding the leases and/or permits for Imperial Valley Bombing Targets. Record Group 181; Entry: 11th Naval District, Commandant's Office, General Correspondence 1924-55; Box 425. National Archives-Pacific Southwest Region, Laguna Niguel, CA.
- 1947b Correspondence to the Chief of Bureau of Yards and Docks, dated 24 July, regarding Free Gunnery Range Facilities near El Centro, CA. Record Group 181; Entry: Commandant's Office, General Correspondence; Box 425. National Archives-Pacific Southwest Region, Laguna Niguel, CA.
- 1947c Correspondence to the Chief of Bureau of Ordnance, dated 26 September, regarding rocket stowage at Naval Air Station, El Centro, CA. Record Group 181; Entry: 11th Naval District, Commandant's Office, General Correspondence 1924-55; Box 425. National Archives-Pacific Southwest Region, Laguna Niguel, CA.
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- 1947 Correspondence to Chairman General Board, dated 23 June, regarding Survey of Shore Activities of the Naval Establishment. Record Group 181; Entry: 11th Naval District, District Planning Officer, General Correspondence 1925-52; Box 38; File N1-9. National Archives-Pacific Southwest Region, Laguna Niguel, CA.

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- 1943 Correspondence to Bureau of Ordnance, dated 10 May, regarding mil sights for free gunnery instruction. Record Group 74; Entry 25; Box 453: KV9-LL. National Archives-Suitland Branch, Suitland, MD.

Headquarters, Naval Air Bases.

- 1945 Correspondence to Commanding Officer of All Units at Naval Air Bases, dated 23 April, regarding the numbering of land and water targets. Engineering Division, Installation Support Section, U. S. Army Corps of Engineers-Los Angeles, CA.
- 1946a Speedletter; File NAB11/S78-2, dated 28 February, regarding excess ammunition at Naval Air Bases. Record Group 74; Entry 4444; Box 287; ND8-ND11, 1946. National Archives-Suitland Branch, Suitland, MD.

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Marine Fighter Squadron 216.

- 1943 Correspondence to Bureau of Ordnance, dated 21 August, regarding a request for glide bombing monograms for F4U aircraft. Record Group 74; Entry 25; Box 453; KV9-LL. National Archives-Suitland Branch, Suitland, MD.

n.a.

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- 1966b Handwritten correspondence regarding disposition of 110 acres at NAAS Holtville, dated 16 November. Record Group 72; Entry 69A-2454; Box 2; File: California. National Archives-Suitland Branch, Suitland, MD.
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AAF	Army Air Field
AA	Anti-Aircraft
AEC	Army Environmental Center
AGO	Adjutant General's Office
AP	Armor Piercing
APDS	Armor Piercing Discarding Sabot
APERS	Antipersonnel
APT	Armor Piercing with Tracer
ASR	Archives Search Report
Aux	Auxiliary
BAR	Browning Automatic Rifle
BD	Base Detonating
BD/DR	Building Demolition/Debris Removal
BE	Base Ejection
BGR	Bombing and Gunnery Range
BLM	Bureau of Land Management
BRAC	Base Realignment And Closure
BT	Bomb Target
CAA	Civil Aeronautics Administration
CADD	Computer-Aided Design/Drafting
Cal	Caliber
CBDA	Chemical and Biological Defense Agency
CBDCOM	Chemical and Biological Defense Command
CE	Corps of Engineers
CEHND	Corps of Engineers, Huntsville Division
CELMS	Corps of Engineers, St. Louis
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERFA	Community Environmental Response Facilitation Act
CESPL	Corps of Engineers, Los Angeles District

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CFR	Code of Federal Regulations
cfs	Cubic Feet Per Second
COE	Chief of Engineers
COMP	Composition
CTG	Cartridge
CSM	Chemical Surety Material
CSM	Command Sergeant Major
CWM	Chemical Warfare Material
CWS	Chemical Warfare Service
DA	Department of the Army
DARCOM	Development and Readiness Command
DERA	Defense Environmental Restoration Account
DERP	Defense Environmental Restoration Program
DERP-FUDS	Defense Environmental Restoration Program-Formerly Used Defense Sites
DoD	Department of Defense
DOE	Department of Energy
DOI	Department of Interior
EE/CA	Engineering Evaluation/Cost Analysis
EIS	Environmental Impact Statement
EOD	Explosives Ordnance Disposal
EPA	Environmental Protection Agency
ERDA	Environmental Restoration Defense Account
FDE	Findings and Determination of Eligibility
FFMC	Federal Farm Mortgage Corporation
FLCH	Flechette
FS	Feasibility Study
FWS	(U.S.) Fish and Wildlife Service
FUDS	Formerly Used Defense Sites
GIS	Graphic Information System

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GSA	General Services Administration
HE	High Explosive
HEAT	High Explosive Anti-Tank
HEI	High Explosive Incendiary
HEP	Plastic
HE-S	Illuminating
HTRW	Hazardous Toxic and Radioactive Waste
HTW	Hazardous and Toxic Waste
IAS	Initial Assessment Study
INPR	Inventory Project Report
IRP	Installation Restoration Program
MCX	Mandatory Center of Expertise
MG	Machine Gun
MG	Major General
mm	Millimeter
MT	Mechanical Time
MTSQ	Mechanical Time Super Quick
NAF	Naval Air Facility
NARA	National Archives and Records Administration
NAS	Naval Air Station
NCDC	National Climatic Data Center
NCP	National Contingency Plan
NFS	National Forest Service
NG	National Guard
NGVD	National Geodetic Vertical Datum
NOAA	National Oceanic and Atmospheric Administration
NOFA	No Further Action
NPRC	National Personnel Records Center
NRC	National Records Center
OEWS	Ordnance and Explosive Waste

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OSHA	Occupational Safety and Health Act
PA	Preliminary Assessment
PD	Point Detonating
PIBD	Point Initiating, Base Detonating
PL	Public Law
QASAS	Quality Assurance Specialist Ammunition Surveillance
RA	Removal Action
RAC	Risk Assessment Code
RD	Remedial Design
RG	Record Group
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
SAIC	Science Application International Corporation
SARA	Superfund Amendments and Reauthorization Act
SCAR	Sub-Caliber Aircraft Rocket
SCS	Soil Conservation Service
SLD	St. Louis District, Corps of Engineers
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
SWMU	Solid Waste Management Units
TECOM	Test Evaluation Command
TEU	Technical Escort Unit
TNT	Trinitrotoluene
TP	Target Practice
USA	United States of America
USACE	U.S. Army Corps of Engineers
USADACS	U.S. Army Defense Ammunition Center and School
USAED	U.S. Army Engineer District
USAESCH	U.S. Army Engineering and Support Center, Huntsville, AL

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GLOSSARY AND ACRONYMS

USATHMA	U.S. Army, Corps of Engineers, Toxic and Hazardous Materials Agency
USC	United States Code
USDA	U.S. Department of Army
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UXO	Unexploded Ordnance
WAA	War Assets Administration
WD	War Department
WNRC	Washington National Records Center

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TEXT / MANUALS

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Coletta, Paola, E.

1985 *United States Navy and Marine Corps Bases, Domestic.* Greenwood
Press, Westport, CT.

**UNITED STATES
NAVY AND
MARINE CORPS BASES,
DOMESTIC**

PAOLO E. COLETTA, *Editor*
K. Jack Bauer, *Associate Editor*

1985



Greenwood Press
Westport, Connecticut • London, England

called for an addition to the gasoline storage supply and various other projects that amounted to more than \$2 million, but the cancellation of various other projects reduced costs by \$600,000.

Edenton was placed in caretaker status on 1 July 1946 and inactivated and disestablished on 1 August 1946. On 2 August 1955, however, it was reestablished as a naval auxiliary air station, only to be disestablished on 31 December 1958 and decommissioned on 1 January 1959. With another turn of the wheel of fate, it was redesigned as an outlying field for MCAS Cherry Point, N.C., on 9 January 1959. Within three months, however, it was disestablished again on 31 March 1959. Given the cost of modernization, about \$48 million, it was decided to close the facility; with the laying off of 1,294 military and 138 civilians, this would account for an annual saving of \$810,000. The 3,283 acres of land on which it sat were declared surplus with the right of recapture.

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B. "Four Stations Will Close," *Naval Aviation News*, Mar. 1958, p. 34.
Nancy Lindstrom-TAPEE2-445-457

EL CENTRO, CALIF., MARINE CORPS AIR STATION, 1943-1945, AND NAVAL AIR FACILITY, 1949-

Shortly after the Japanese attack on Pearl Harbor, the Navy approved the request of the Marine Corps for the establishment of five air stations on the West Coast. Site selection devolved upon Lt. Col. William Fox, USMCR, with directions to find sites in the Imperial Valley of California. One of the sites Fox chose was at El Centro, at the southern end of the valley not far from the Mexican border 125 miles east of San Diego, seven miles west of Imperial and El Centro, Calif., and fifty miles west of Yuma, Ariz. It was an excellent choice because the floor of the valley, at a mean elevation of minus fifty-two feet, is flat, sandy, and extends for many miles. Although summer temperatures reach 105° F, the air is dry, and winter weather runs between 75° F and 90° F. With an average wind speed of only ten mph, flying is possible 92 percent of the time. El Centro was thus ideal for all types of precombat training, for the solution of tactical problems, and for gunnery practice.

On a property acquired by the Navy (943 acres leased and 949 purchased, later expanded to 2,300 acres), the Civil Aeronautics Administration had already constructed two 4,500-by-150-foot runways. Additional construction began on 15 May 1942, and limited operations were possible only seven months later. Construction and improvement costs reached about \$11.5 million. Beyond the station area were skeet and rifle ranges, malfunction and turret ranges for gunnery practice, a rabbit range, a rocket range, and a rocket ground school. The first

air unit to report aboard, on 1 January 1943, was Marine Air Base Defense Aircraft Group 43, soon redesignated Marine Air Group (MAG 43) and still at the base at the end of the war. Commissioning occurred on 23 July 1943, Lt. Col. Thomas J. McQuade commanding.

Many were the trained squadrons that left El Centro for forward operating areas in the Pacific, and as the desirability of the base for training purposes became increasingly evident, the construction of a second area was authorized. Work began on 10 April 1944 and was completed for occupancy in December, with MAG-35 and a transport training group the first groups to come on board. The initial allotment for construction under a cost-plus-fixed-fee contract was \$6,014,671. The final expenditure for the first area was \$8.5 million; for the second area, \$3 million. To the end of 1944, sixteen squadrons of fighter, bomber, and transport aircraft pilots and aircrewmembers were trained at El Centro.

Soon after the end of World War II, El Centro was greatly reduced and on 1 May 1946 was commissioned as a naval auxiliary air station. On 15 October 1946 its status was that of modified maintenance. On 6 January 1947 the Bureau of Aeronautics established there a storage pool for TD2 *Devastator* torpedo aircraft and on 20 March authorized Western Air Lines to operate two flights daily. Its condition when inspected by the staff of the Commandant of the Eleventh Naval District had been found to be "good to very good." Inspected again on 3 June 1947, the report read "very good." In November 1947 the Parachute Experimental Division from NAS Lakehurst, N.J. (q.v.), moved to El Centro. On 9 June the Joint Parachute Test Facility was established; it consisted of the Naval Parachute Unit and the 6511 Parachute Development Test Group. Also, from 1947 to 1964, the Air Force cooperated as part of El Centro's test organization. The Naval Aerospace Recovery Facility commissioned in 1964 was combined with the Naval Auxiliary Air Facility on 1 July 1973 to form the National Parachute Test Range. When the last was transferred to the Naval Weapons Center, Inyokern/China Lake (q.v.), on 1 July 1979, El Centro again became a naval air facility.

Soon after the end of World War II, El Centro was used to provide support to various fleet squadrons. In 1949 there was established the Fleet Gunnery Unit, which for ten years provided support for squadrons that came to conduct gunnery, bombing, and carrier landing practice. In addition, a permanent detachment from Attack Squadron 174 beginning in 1979 provided maintenance support for East Coast A-7 pilots who fly out to use the range area. The expanded Desert Test Range is a modern inert target complex that utilizes remote TV and acoustical and laser scoring systems. The current mission of NAF El Centro is to support operational fleet units that come for bombing and gunnery practice or to use the simulated carrier deck landing area. In use are four runways, the longest of which is equipped with a permanent mirror landing system at each approach end. El Centro is the winter home for training for the Blue Angels Demonstration Team.

At the nearby town of El Centro is a general hospital, eleven public and

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parochial elementary schools, two junior high schools, one high school, and two schools for higher education: Imperial Valley (two-year) Community College, and the San Diego State College extension at Imperial Valley Center, Calexico. There are two man-made lakes nearby, and mountain areas and the former site of a naval seaplane base at Salton Sea, Westmorland, Calif. (q.v.) are but an hour's drive away. The usual range of station facilities is available, with quarters for 29 officers and 141 men, and off-base housing located in three suburban areas located within two miles of El Centro. Word about station affairs is passed in part through *The Sand Paper*. In addition to Attack Squadron 174, a second tenant command is U.S. Air Force Space and Missile System Organization (or SAMSO), which works with NAVSTAR, a naval satellite navigation system useful to all branches of the armed forces.

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- B. *Naval Air Facility, El Centro, California* (N.p.; C/R Printers, 1979), courtesy Ens. Apprentice, USNR, Public Affairs Officer, NAF, El Centro, 11 Feb. 1983.

EL TORO (SANTA ANA), CALIF., MARINE CORPS AIR STATION, 1944-

On 15 September 1944 Col. William J. Fox, USMCR, who during World War II served as a representative with Army and Navy people on a site selection board to choose sites for air stations in southern California, became the aviation assistant to the Commandant of the Marine Corps. In this billet his mission involved the military direction and administrative coordination of Marine Corps aeronautical activities in the Eleventh Naval District. In addition to subordinate units at Marine Corps Air Stations (MCAS) at Santa Barbara (Goleta) (q.v.), Mojave (q.v.), and El Centro (q.v.), he had charge of the Marine Corps Air Department at Miramar (q.v.); the Headquarters Squadron, Marine Corps Activities, Naval Air Bases, Eleventh Naval District; and Marine auxiliary air stations at Gillespie, Ill.; Chino Field, Ontario; and Ryan Field, Hemet, Calif., and all outlying fields for El Toro.

Since Naval Air Station (LTA) Santa Ana (q.v.) is covered separately, a brief resume of El Toro's beginnings must suffice.

Following the Japanese attack on Pearl Harbor, the United States direly needed aviation training areas. Because of the mountainous terrain and limited air space in southern California, the Army, Navy, and Marine Corps became involved in numerous conflicts. A particular problem was that the Army, responsible for coast defense, might send up aircraft to intercept naval or Marine aircraft and thus disrupt training schedules, and the Marines were under the pressure of knowing that their squadrons would soon be sent to engage in combat in the South Pacific. In early 1942 Marine aviation had only two wings, the First and

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INVENTORY PROJECT REPORT (INPR)

Scott, Bruce K., BG, U.S. Army

- 1995 Letter to Commander, USACE, Washington, D.C. and Commander, USACE, Huntsville, subject: Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS), Inventory Project Report (INPR) for Kane Springs SBT (#62), Imperial County, CA, Site No. J09CA017300, dated 17 January 1995; Findings of Fact, dated 13 January 1995; Site Survey Summary Sheet, dated 16 September 1993; Site Location Map; Project Summary Sheet, n.d.; RAC Form, n.d.; Justification sheet for RAC Score, n.d.

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REPORTS / STUDIES

U. S. Naval Auxiliary Air Station, Holtville, CA.

1945 Historical Report of U. S. Naval Auxiliary Air Station, Holtville, CA.
Box 221; Naval Historical Center and Archives, Washington Navy
Yard, Washington D.C.

1946 "Historical Report of U. S. Naval Auxiliary Air Station, Holtville
Calif" for 1 September 1945 to 15 April 1946. Box 221; Naval
Historical Center and Archives, Washington Navy Yard, Washington
D.C.

Scott, Bruce K., BG, U.S. Army

Letter to Commander, USACE, Washington, D.C.
and Commander, USACE, Huntsville,
subject: Defense Environmental Restoration Program for Formerly
Used Defense Sites (DERP-FUDS), Inventory Project Report (INPR)
for Kane Springs SBT (#62), Imperial County, CA, Site No. J09CA017300,
dated 17 January 1995;
Findings of Fact, dated 13 January 1995;
Site Survey Summary Sheet, dated 16 September 1993;
Site Location Map; Project Summary Sheet, n.d.;
RAC Form, n.d.; Justification sheet for RAC Score, n.d.

17 JAN '95

CESPD-ED-G (200-1c)

MEMORANDUM FOR

Commander, U.S. Army Corps of Engineers, 20 Massachusetts
Avenue, N.W., Washington, DC 20314-1000

Commander, U.S. Army Engineer Division, Huntsville,
P.O. Box 1600, Huntsville, AL 35807-4301

SUBJECT: Defense Environmental Restoration Program For Formerly
Used Defense Sites (DERP-FUDS), Inventory Project Report (INPR)
for ~~Kane Springs SBT (#62)~~, Imperial County, CA, Site No.
~~CEHND-01-300~~

1. I am forwarding the INPR for Kane Springs SBT (#62) for appropriate action. The site is eligible for DERP-FUDS.
2. I recommend that CEHND determine the need for further investigation and action at this site regarding a potential OEW project. Los Angeles District has computed a RAC 4 on this project, but recommends a RAC 3.

ORIGINAL SIGNED

Encl

BRUCE K. SCOTT
Brigadier General, U.S. Army
Commanding

CF:

~~CESPL~~-ED-MI (HTRW)



DEPARTMENT OF THE ARMY
LOS ANGELES DISTRICT, CORPS OF ENGINEERS
P.O. BOX 2711
LOS ANGELES, CALIFORNIA 90053-2325

REPLY TO
ATTENTION OF:

CESPL-ED-MI

22 September 1993

MEMORANDUM FOR Commander, South Pacific Division, CESP-D-ED-G
ATTN: Vince Del Greco

SUBJECT: DERP-FUDS Inventory Project Reports (INPR's) for Site Nos: J09CA017200, J09CA015300, J09CA016800, J09CA014500, J09CA014700, J09CA015600, J09CA017000, J09CA017300, and J09CA016700

1. Enclosed are the INPR's for:

- J09CA017200 HOLTVILLE ROCKET TARGET 1R
- J09CA015300 EL CENTRO BOMBING TARGET SITE
- J09CA016800 WINONA BT #2
- J09CA014500 BOMBING TARGET YUMA RECLAMATION PROJECT
- J09CA014700 EL CENTRO ROCKET TARGET #2
- J09CA015600 EAST BOREGO BT
- J09CA017000 HOLTVILLE TARGET #2
- J09CA017300 KANE SPRINGS SBT
- J09CA016700 WINONA BT #1

We determined that ordnance contamination eligible under DERP-FUDS may exist.

2. I recommend the following:

- a) Findings and Determination of Eligibility be approved and signed.
- b) Forward a copy of this report to Commander, Huntsville Division to determine if further action is appropriate.

9 Encl


R. L. VANANTWERP
COL, EN
Commanding

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

KANE SPRINGS SBT (#62)
IMPERIAL COUNTY, CALIFORNIA
SITE NO. J09CA017300

FINDINGS OF FACT

1. In August 1944, the Eleventh Naval District acquired temporary use of Section 2, Township 13 South, Range 11 East (677.32 acres) from the Department of Interior. In addition, in June 1966, an agreement was evidently made between the Bureau of Land Management (BLM), Bureau of Reclamation, and Department of the Navy concerning Navy use of the W 1/2 SW 1/4 of this section. No further information concerning this agreement was available for this report.
2. The Eleventh Naval District used the Kane Springs Bomb Target (#62) site as a "radar-rigged" fence target for low level bombing runs. Both miniature bombs and strafe were allowed in this area. It is not known whether the Navy actually used the W 1/2 SW 1/4 of Section 2 subsequent to 1966. This parcel is on the periphery of the lands involved in the above-mentioned agreement. An index to a BLM plat map for this township, references the area involved in this agreement as "R309 Navy Target Area."
3. In 1946, the target was declared surplus and unit commanders were directed to take necessary action to restore the area to its original state. This desert property has remained undeveloped. Currently, BLM considers all of Section 2 to be under their jurisdiction; however, BLM has indicated that their records are unclear as to the exact status of the W 1/2 SW 1/4 of Section 2.

DETERMINATION

Based on the foregoing Findings of Fact, this 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.

13 Jan 95
Date

for DEP/SA
BRUCE K. SCOTT
Brigadier General, U.S. Army
Commanding

SITE SURVEY SUMMARY SHEET
FOR
DERP-FUDS SITE NO. J09CA017300
KANE SPRINGS SBT (#62)
16 September 1993

SITE NAME: KANE SPRINGS SBT (#62), also known as Target 62.

LOCATION: Kane Springs SBT (#62) is located in Imperial County, California, approximately 3.42 miles south of Kane Springs off Highway 99.

SITE HISTORY: In August 1944, the Eleventh Naval District acquired temporary use of Section 2, Township 13 South, Range 11 East (677.32 acres) from the Department of Interior. This undeveloped desert land was used as a target for miniature bombs and strafe. The site was declared surplus in March 1946. The Navy also secured an agreement, concerning the southwest corner of this site, with the Bureau of Land Management (BLM) and Bureau of Reclamation. No further information concerning this agreement was available for this report. Currently, the target site is under the jurisdiction of BLM, and is vacant desert land; however, BLM records are not clear as to the status of the above-mentioned agreement. During the onsite survey the following evidence of past ordnance activity was observed: multiple 20-millimeter and 50-caliber clips; multiple 30-caliber and 50-caliber shells; and one practice bomb tail. The site is subject to weather conditions that may have concealed other ordnance.

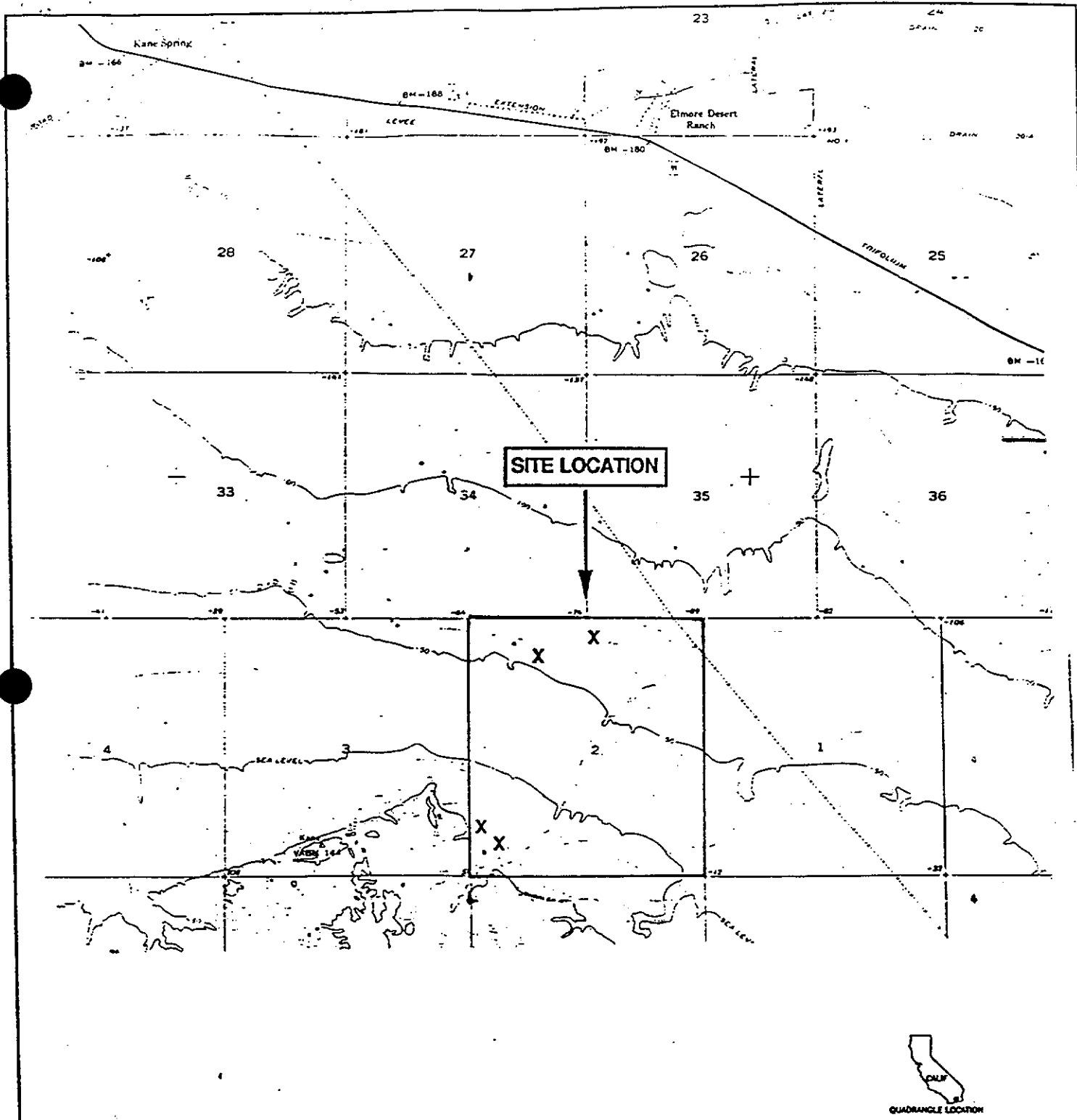
SITE VISIT: The site was visited on May 4, 1993, by Hunter Butler and Sandra Rehfeldt of Science Applications International Corporation, San Diego, California.

CATEGORY OF HAZARDS: OEW

PROJECT DESCRIPTION: OEW. Recommend the MCX for OEW at Huntsville Division make a determination regarding further investigation at this site.

AVAILABLE STUDIES AND REPORTS: Historical information on 11th Naval District bomb targets was obtained from the National Archives office in Laguna Niguel, California. Land acquisition and ownership records were obtained from the Bureau of Land Management, El Centro, California, and the Imperial County Assessor's Office, El Centro California.

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




X Ordnance sitings

Reference:
USGS 7.5 Minute Quadrangle, Kane Spring, Calif. (1:24 000), 1956.



1 Mile

 SAIC [®] Science Applications International Corporation An Employee-Owned Company	SITE LOCATION KANE SPRINGS SBT (#62) J09CA017300 33° 04' 05"N 115° 48' 14"W Imperial County, CA		
	PROJECT NO.		01-0255-04-1869
DRAWN BY	CHECKED BY	DATE	

PROJECT SUMMARY SHEET
FOR
DERP-FUDS OEW PROJECT NO. J09CA017301
KANE SPRINGS SBT (#62)
SITE NO. J09CA017300

PROJECT DESCRIPTION: The following ordnance was observed on site during the site survey: multiple 50 caliber and 20-millimeter belt clips, multiple 30-caliber and 50-caliber shells, and one practice bomb tail. Although the former target site is located in unimproved desert, the nearby road to the Redhill Geothermal Disposal facility (located 0.75 miles from the northwest corner of the site) and the adjacent service road that follows a power transmission line are both well traveled. In addition, the site is subject to weather conditions that may have concealed other ordnance.

PROJECT ELIGIBILITY: This site was formerly used by the Eleventh Naval District.

POLICY CONSIDERATION: No policy considerations prevent the proposal of this project.

PROPOSED PROJECT: Recommend the MCX for OEW at Huntsville Division make a determination regarding further investigation at this site.

RAC FORM: Attached.

DISTRICT POC: Request CEHND inform Mr. Jatin Desai at (213) 894-6266 when a determination is made regarding project status.

10 Jul 1992

Previous editions obsolete

RISK ASSESSMENT PROCEDURES FOR
ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES

Site Name	<u>KANE SPRINGS DBT (#62)</u>	Rater's Name	<u>H. BUIEK-SAC</u>
Site Location	<u>IMPERIAL COUNTY</u>	Organization	<u>LA DISTRICT</u>
DERP Project #	<u>JD9CA017301</u>	RAC	<u>4</u>

OEW RISK ASSESSMENT:

This risk assessment procedure was developed in accordance with MIL-STD 882B and AR 385-10.

The OEW risk assessment is based upon documented evidence consisting of records searches, reports of Explosive Ordnance Disposal (EOD) detachment actions, and field observations, interviews, and measurements. These data are used to assess the risk involved based upon the hazards identified at the site. The risk assessment is composed of two factors, hazard severity and hazard probability.

Any field activities should be made with the assistance of qualified EOD personnel.

Part I. Hazard Severity. Hazard severity categories are defined to provide a qualitative measure of the worst credible mishap resulting from personnel exposure to various types and quantities of unexploded ordnance items.

TYPE OF ORDNANCE

A. Conventional Ordnance and Ammunition

	YES VALUE	NO VALUE	VALUE
Small Arms (.22 cal - .50 cal)	1	0	1
Medium/Large Caliber (20 mm and larger)	10	0	10
Bombs, Explosive	10	0	10
Bombs, Practice (w/spotting charges)	6	0	6
Grenades, Hand and Rifle, Explosive	10	0	0
Grenades, Practice (w/spotting charges)	4	0	0
Landmines, Explosive	10	0	0
Landmines, Practice (w/spotting charges)	4	0	0
Rockets, Guided Missiles, Explosive	10	0	0
Detonators, Blasting Caps	6	0	0

B. Pyrotechnics (For munitions not described above.)

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Munition (Container) Containing White Phosphorus or other Pyrophoric Material (i.e., Spontaneously Flammable)	10	0	0
Munition Containing A Flame or Incendiary Material (i.e., Napalm, Triethylaluminum Metal Incendiaries)	6	0	0
Flares, Signals, Simulators	4	0	0
Pyrotechnics Value (Maximum of 10).			0

C. Bulk High Explosives (Bulk explosives not an integral part of conventional ordnance; uncontainerized.)

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Primary or Initiating Explosives (Lead Styphnate, Lead Azide, Nitroglycerin, Mercury Azide, Mercury Fulminate, Tetracene, etc.)	10	0	0
Demolition Charges	10	0	0
Booster, Bursting or Fuze Explosives (PETN, Compositions A, B, C, Teteryl, TNT, RDX, EMX, HBX, Black Powder, etc.)	8	0	0
Military Dynamite	6	0	0
Less Sensitive Explosives (Ammonium Nitrate, Explosive D, etc.)	3	0	0
High Explosives Value (Maximum Value of 10)			0

D. Propellants

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Solid or Liquid Propellants	6	0	0

E. Radiological/Chemical Agent/Weapons

	<u>YES</u> VALUE	<u>NO</u> VALUE	VALUE
Toxic Chemical Agents (Choking, Nerve, Blood, Blister)	25	0	0
Radiological	15	0	0
Riot Control and Miscellaneous	5	0	0

Radiological/Chemical Agent/Weapons Value (Maximum 25). 0

Total Ordnance and Explosive Waste Characteristics Value (Total = 10
A + B + C + D + E with a Maximum value of 61).

Apply this value to Table 1 to determine Hazard Severity Category.

TABLE 1

HAZARD SEVERITY

Description	Category	Value
CATASTROPHIC	I	≥21
CRITICAL	II	≥13 <21
MARGINAL	III	≥5 <13
NEGLIGIBLE	IV	≥1 <5
NONE		0

* Apply Hazard Severity Category to Table 3.

Part II. Hazard Probability. The probability that a hazard has been or will be created due to the presence and other rated factors of unexploded ordnance or explosive materials on a formerly used DOD site.

AREA, EXTENT, ACCESSIBILITY OF CONTAMINATION

A. Locations of Contamination

	YES VALUE	NO VALUE	VALUE
On the surface	5	0	5
Within Tanks, Pipes, Vessels or Other confined locations.	4	0	0
Inside walls, ceilings, or other parts of Buildings or Structures.	3	0	0
Subsurface	2	0	2
Value for location of UXO. (Maximum Value of 5).			5

B. Distance to nearest inhabited locations or structures likely to be at risk from OEW site (roads, parks, playgrounds, and buildings).

<u>Distance to Nearest Target</u>	VALUE
Less than 1250 feet	5
1250 feet to 0.5 miles	4
0.5 miles to 1.0 mile	3
1.0 mile to 2.0 miles	2
Over 2 miles	1
Distance to Persons Value (Maximum Value of 5).	3

C. Numbers and types of Buildings within a 2 mile radius measured from the hazardous area, not the installation boundary.

Number of Buildings	VALUE
0	0
1 to 5	1
6 to 10	2
11 to 15	3
16 to 25	4
26 and over	5

D. Types of Buildings (within a 2 mile radius)

	VALUE
Educational, Child Care, etc.	5
Residential, Hospitals, Hotels, etc.	5
Commercial, Shopping Centers, etc.	5
Industrial Warehouse, etc.	4
Agricultural, Forestry, etc.	3
Detention, Correctional	2
Military	1
No Buildings	0

Types of Buildings Value (Maximum Value of 5).

4

E. Accessibility to site refers to access by humans to ordnance and explosive wastes. Use the following guidance:

Barrier	Assigned Value
A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the facility;	0

or

Barrier	Assigned Value
An artificial or natural barrier (e.g., a fence combined with a cliff), which completely surrounds the facility; and a means to control entry, at all times, through the gates or other entrances to the facility (e.g., an attendant, television monitors, locked entrances, or controlled roadway access to the facility).	0

Isolated site	1
Security guard, but no barrier	2
A barrier, (any kind of fence) but no separate means to control entry	3
Barriers do not completely surround the facility	3
No barrier or security system	5

Accessibility Value (Maximum Value of 5).

5

F. Site Dynamics - This deals with site conditions that are subject to change in the future, but may be stable at the present. Examples would be excessive soil erosion by beaches or streams, increasing land development that could reduce distances from the site to inhabited areas or otherwise increase accessibility.

VALUE

None Anticipated
Expected

(5)
5

(Maximum Value of 5)

Total value for hazard probability.
Sum of Values A through F.
(Not to exceed 30).

Apply this value to Hazard Probability Table 2 to determine
Hazard Probability Level.

TABLE 2

HAZARD PROBABILITY

Description	Level	Value
FREQUENT	A	≥27
PROBABLE	B	≥21 <27
OCCASIONAL	(C)	≥15 <21
REMOTE	D	≥ 8 <15
IMPROBABLE	E	<8

* Apply Hazard Probability Level to Table 3.

Part III. Risk Assessment. The risk assessment value for this site is determined using the following Table 3. Enter with the results of the hazard probability and hazard severity values.

TABLE 3

Probability Level		FREQUENT A	PROBABLE B	OCCASIONAL C	REMOTE D	IMPROBABLE E
Severity Category:						
CATASTROPHIC	I	1	1	2	3	4
CRITICAL	II	1	2	3	4	5
MARGINAL	III	2	3	4	4	5
NEGLIGIBLE	IV	3	4	4	5	5

RISK ASSESSMENT CODE (RAC)

- RAC 1 Imminent Hazard - Emergency action required to mitigate the hazard or protect personnel (i.e., fencing, physical barrier, guards, etc.).
- RAC 2 Action required to mitigate hazard or protect personnel. Initial project phase--phased RECA.
- RAC 3 Action required to evaluate potential threat to personnel. Initial project phase--Archives search and site investigation.
- RAC 4 Action required to evaluate potential threat to personnel. Initial project phase--Archives search.
- RAC 5 No action required.

NOTE: Other phases may be considered depending on individual site conditions.

Justification. In narrative form, summarize the documented evidence that supports this risk assessment.

VISUAL EVIDENCE OF ORDNANCE USE AT THIS LOCATION INDICATED DURING SITE INSPECTION. SOME SHELL CASINGS AND BOMB FRAGMENTS OBSERVED. FRIABLE BUILDING MATERIALS IDENTIFIED ON SITE THAT MAY CONTAIN ASBESTOS. ADDITIONAL INVESTIGATION CONCERNING PREVIOUS SITE USE RECOMMENDED. RECOMMEND UPGRADE TO RAC 3.

(SEE NEXT PAGE)

RISK ASSESSMENT PROCEDURES FOR
ORDNANCE AND EXPLOSIVE WASTE (OEW) SITES
FOR
DERP-FUDS SITE NO. J09CA017300
KANE SPRINGS SBT (#62)

JUSTIFICATION

This site consists of a 677.32-acre section within Imperial County, California. The property is presently within vacant desert and located approximately 3.42 miles south of Kane Springs off Highway 99.

The Eleventh Naval District used this site as a low-level bombing and strafing target from 1944 to 1946. Evidence of former bombing and strafing activity was noted during the site survey. The remains of multiple ordnance were observed at several locations. In addition, the site is subject to weather conditions that may have concealed other ordnance.

An OEW risk assessment code (RAC) of 4 has been calculated, based on a severity category III (marginal) and a probability level C (occasional). An archives search is appropriate to resolve the issues concerning the status of the W 1/2 SW 1/4 of Section 2. Due to the extent of ordnance viewed on this site, however, we recommend upgrading to RAC 3 and conducting a more detailed site investigation.

Office of the Chief of Naval Operations.

"Board Report of Investigation of Additional Facilities Requested
at the Marine Corps Air Stations on the West Coast."
Record Group 181; Entry: 11th Naval District, Commandant's Office,
Formerly Classified Correspondence 1921-47; Box 57;
File: CF20C/SF20C/1943.
National Archives-Pacific Southwest Region, Laguna Niguel, CA.

BOARD REPORT
OF
INVESTIGATION OF ADDITIONAL FACILITIES REQUIRED
AT
THE MARINE CORES AND STATIONS ON THE WEST COAST

Aer-11-33- B

CONFIDENTIAL
In Reply, Please Refer to
and No.

NAVY DEPARTMENT
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON

18 October 1943

From: Senior Member, Board to Review Progress of Aviation
Shore Facilities.

To: Deputy Chief of Naval Operations (Air).

Via: (1) Director, Aviation Planning Division
(2) Assistant Deputy Chief of Naval Operations (Air).

SUBJECT: Board Report of Investigation of Additional Facilities
Requested at the Marine Corps Air Stations on the
West Coast.

Reference: (a) Memo from Director, Aviation Planning Div. to
Capt. E. M. McQuiston, USNR, dated 19 September 1943,
op-31-1-10/38.
(b) War Comd. Ltr. dated 2 Sept. 1943, op-31B-100(80),
A21-1, Doc. 91322.
(c) Command, WarFair West Coast conf. ltr to Comdr., War
Fair West Coast, 41-9/43-1/(0113)wfk, dated 17 June 1943,
with 1st end. dated 30 June thereto.

Enclosure: (1) Table of Existing and Required Personnel Facilities.

1. In accordance with instructions from the Director of
Aviation Planning, reference (a), the Board has investigated the matter of
additional facilities requested for Marine Corps Air Stations on the West Coast.
On September 23, 24, 25 and 26, the Board visited the Marine Corps Air Stations
at El Centro, El Toro, and Mojave, California, the Marine Corps Air Depot at
Miramar, and the Naval Auxiliary Air Station, Camp Kearney, California. Con-
ferences were held at the several stations at which the following officers
were present:

Comdr. S. L. Gunther, Comdt., SAC, San Diego, Air Officer, 11th District.
Capt. E. M. McQuiston, USNR, Senior Member of Board.
Capt. J. C. Adams, USN, Director of Aviation Medicine, PMAAS.
Capt. J. M. DeBaun, USN, Office of SAC, WFOC.
Capt. W. K. Fogg (USN), USN, Public Works Officer, 11th Naval District.
Col. Frank H. Lanson-Scribner, USMC, Asst. Chief of Staff, WarFair W.C.
Col. William Fox, USMC, Commanding Officer, PMAAS, El Toro, Calif.
Lt. Col. Avery C. Kier, USMC, Asst. Operations & Training, WarFair W.C.
Lt. Col. Willis, USMC, Marine Corps Air Station, El Toro, Calif.
Lt. Col. E. S. Carney, USMC, CG, Group 14, Marine Fleet Air West Coast.

Aer-MA-33-LA

SUBJECT:

Board Report of Investigation of Additional Facilities
Requested at the Marine Corps Air Stations on the West
Coast.

Lt. Col. D. Torrey, USMC, Exec. Officer, Group 44, MarFair West Coast.
Lt. Col. L. B. Stedman, Jr. USMC, Exec. Officer, MCAD, Miramar.
Lt. Col. Chauncey Burnett, USMC, Commanding Officer, MCAS, Santa Barbara.
Lt. Col. T. J. McQuade, USMC, Commanding Officer, MCAS, El Centro.
Comdr. Grant W. Elliott, USN (Ret), Operations Officer, MAC, San Diego.
Comdr. K. A. Godwin, (CEC), USNR, Asst. SupCo, Area VI.
Lt. Cdr. C. M. Boundy, (SC), USN, Supply Officer, MCAS, Mojave, Calif.
Lt. D. H. Askew, (CEC), USNR, Public Works Officer, MCAS, El Toro.
Lt. J. S. Hamel (CEC), USNR, Public Works Officer, MCAS, El Centro.
Lt. (JG) W. C. McCluskey, (CEC), USNR, Public Works Officer, MCAS, Mojave.
Lt. Cdr. E. C. Bench, USNR, Spec. Asst. USA, Navy Department.
Lt. Cdr. H. M. Humes, USN, Board Member, Bureau of Supplies and Accounts.
Lt. Cdr. R. L. Miles, (CEC), USNR, Board Member, Bureau of Yards & Docks.
Lt. Cdr. L. E. Root, (CEC), USNR, Board Member and Recorder, BU Aer.

2. The additional facilities in question for the Marine Corps Air Stations on the West Coast were requested by the Commanding General, Marine Fleet Air, West Coast, by reference (b). The background of this request may be summarized briefly as follows:

There have developed in the combat areas of the South Pacific certain shortages of pilots and crews both for carrier type aircraft and for heavy bombers. This shortage is apparently due in part to the inability of the Naval Air Operational Training Command to supply operationally trained pilots to the Marine Corps in sufficient numbers. In order to make up this deficiency, Cominch and Cincpac have directed, by correspondence of higher classification, that operational training of a considerable number of pilots for Marine Air Groups be conducted at the Marine Corps Air Stations on the West Coast. This is in addition to the normal function of the stations, which is to serve as bases for the forming and organization of Marine squadrons, preparatory to their joining the active forces of the fleet. The forming of squadrons has now expanded well beyond the planned rate for this function. The Commanding General, Marine Fleet Air West Coast has determined that in order to effect the entire program, including the operational training, the facilities at the stations will have to be expanded beyond the point directed by the Vice Chief of Naval Operations in reference (b). As a result of this, reference (c) was initiated and is now awaiting action.

3. The Board has made a careful study of the conditions which have given rise to the present situation, and has inspected the stations themselves in order to determine what facilities are presently available. The following conclusions were reached:

Aer-MA-33-1ER

SUBJECT: Board Report of Investigation of Additional Facilities Requested at the Marine Corps Air Stations on the West Coast.

(a) The present operational and training load, as far as can be seen at the present time, is a continuing and growing load. As of 6 October there were 18 tactical squadrons, 5 HEDRONS, 5 SERVONS, and 4 training units in Marine Fleet Air West Coast. Of these organizations, 1 HEDRON, 1 SERVON, and 1 tactical squadron were located at MAFS, Camp Kearney, leaving 4 HEDRONS, 4 SERVONS, 17 tactical squadrons and the 4 training units located at the four Marine Corps Air Stations. Squadrons are leaving for overseas duty at approximately the same rate that squadrons are returning, which would indicate a fairly steady or slightly increasing load. The operational training load is already in excess of the planned program and indications are that this load will continue. It was generally believed in the early summer that the operational training to be conducted by Marine Fleet Air West Coast was a temporary operation only, and that the operational training stations in the Florida area would soon absorb the training load. However, subsequent assignments of non-operationally-trained pilots have indicated that such is not the case and that the Marine Corps Air Stations on the West Coast must be prepared to carry on operational training for an indefinite period.

(b) Present facilities, both operational and personnel, are already severely overtaxed. This is due in part to the normal increase in Marine Corps Aviation, and in part to the operational training program. The current aviation shore facilities directive dated 2 September 1943 directs that provision be made to accommodate a total of 5 Marine Air Groups at the West Coast Marine Corps Air Stations. This would mean a total of 450 operating planes. Actually there are already operating from these stations a total of 673 planes and Commander Marine Fleet Air West Coast anticipates the necessity for operating more than 1000 planes in order to meet his training and operating schedule. A comparison of the program as set up in reference (b) with that presently existing and that anticipated by Marine Fleet Air West Coast is shown below.

Station	Plane Complement- 2 Sept. Directive	Present Plane Complement	Planned Plane Complement
1 Torro	180	299	486
Santa Barbara	90	138	203
1 Centre	90	117	180
Mojave	90	89	154
	<u>450</u>	<u>673</u>	<u>1023</u>

Enclosure (3) shows a comparison between the existing major personnel

Acr-1133-LER

SUBJECT: Board Report of Investigation of Additional Facilities Requested at the Marine Corps Air Stations on the West Coast.

facilities and the requirements estimated by Marine Fleet Air West Coast.

(c) In view of the fact that the present load on the stations is a continuing and growing load, and that the present facilities are already severely overtaxed, it is believed that additional facilities must be provided as quickly as possible for Marine Corps air operations on the West Coast. The possibility of using existing facilities at other locations was investigated with very little success. All aviation facilities in the southern west coast area are already congested, and there is apparently little possibility of relief by a re-distribution of operations to existing stations. Those present at the conferences, however, agreed that the possibility of conducting a limited amount of the training at one of our mid-western air stations should be investigated. This applies particularly to familiarization training in FM-1s. In any event, it will still be necessary to expand facilities at all four of the Marine Corps Air Stations in question.

h. The additional facilities requested by Marine Fleet Air West Coast in reference (c), are discussed in further detail below, the paragraphs lettered to conform with those in paragraph (10) of reference (c).

(a) "El Centro be made into a two-group base with additional facilities for a gunnery school." The board concurs with the need for these facilities. In brief, this concurrence is based on the fact that over-all additional facilities are required and that El Centro lends itself to expansion readily. Weather conditions in the Imperial Valley are unfavorable during certain seasons of the year due to the extreme heat, but experience has shown that operations can be carried on successfully in spite of this fact, and in view of the urgent need for additional facilities, approval of this request is recommended. The gunnery school, the only one available to Marine aviation units on the West Coast, is already operating, but under difficulties. Quarters are cramped, and it is now necessary to transport men by bus to Border Field near San Diego where the present moving target range is located. Facilities for the gunnery school should include personnel and range facilities at or near the Marine Corps Air Station, El Centro.

(b) "Additional headquarters building be constructed for the use of station personnel." At the time these stations were originally constructed, the plan was to have operating squadrons administer each station with a very small permanent station complement. Since that time, however, the training program has developed, the squadron complements have increased, the number of squadrons has increased, and administrative activities have therefore become a major problem. The small hangars constructed at the stations have very limited leanto

Per-33-33

SUBJECT:

Re: Report of investigation of additional facilities requested at the Marine Corps Air Stations on the West Coast.

space so that administrative office space is at a premium. In view of the above, approval of the request for additional administrative space is recommended.

(c) "Present runways be widened to 400'". This request was in accordance with a proposal deemed necessary in order for the stations to handle the increased operating loads placed upon them. The Board is of the opinion that maximum traffic at the Air Stations can be handled in a satisfactory manner without resorting to such an expensive procedure and one which would interfere with the continuity of operations. Alternate proposals were therefore suggested in conference, and the following recommendations were advanced.

1 Centro: widen existing runways, now capable of supporting heavy bomber wheel loads, to 200 feet by adding 25 foot stabilized shoulders. Construct two new runways 200 feet in width, with 25 foot shoulders, and parallel to the existing runways as determined by the wind rose at the station. All new construction to provide for CV type aircraft wheel loadings. New taxiways as required plus concrete turnarounds at ends of runways and at intersections of taxiways with runways.

1 Torro: Construct parallel runway 200' wide with 25' shoulders, along prevailing wind runway. New taxiways and turnarounds as at 1 Centro. New construction to be designed for heavy bombers.

1 Mojave: Widen existing runways by adding 100 foot shoulders for CV type aircraft wheel loadings. Turnarounds as at 1 Centro.

1 Santa Barbara: Construct two new runways parallel to existing runways as determined by the wind rose at the station. New runways to be 200 feet in width with 25 foot shoulders. Construction to be for CV type aircraft wheel loadings.

The above plans were arrived at taking into consideration the necessity for maintaining operations without interruption, the cost involved, and certain other conditions peculiar to individual stations. The widening of the runways at Mojave, for instance, was recommended in lieu of parallel runways because of the extremely variable winds at that location and the consequent desirability of wide runways to minimize chances of ground looping.

WAS- 1-33-1 R

SUPJ CF:

Board Report of Investigation of Additional Facilities
Requested at the Marine Corps Air Stations on the West
Coast.

(d) "El Centro and El Toro be converted into heavy bomber fields:"
The board concurs in the need for runways at these two fields capable
of supporting heavy bombers. Marine West Air West Coast is receiving
planes of the B24 type, and must have fields from which to operate
them. With this in mind, it was recommended that the proposed parallel
runway and new taxiways at El Toro be designed for heavy bombers.
The board was advised by the District Public Works Department that
the present runways at El Centro were adequate to support heavy
bombers, and for this reason no change in present runways is con-
sidered necessary other than shoulders adequate to support heavy
heavy bomber loads. It is not believed necessary to build the new
parallel runways at El Centro for planes larger than C4 type, since
the greater part of traffic will be by light planes, and the present
runways will accommodate any bombers assigned to the station. The
runways at El Toro are on Navy-owned land, and those at El Centro are
on leased land which will revert to the owner after the war.

(e) "Additional hard surface parking and warm-up areas for all
types planes be constructed at all stations." This request was
based on requirements for the large number of planes expected to be
operated at the Marine Corps Stations. The Bureau of Aeronautics has
partially complied with this request and has authorized construc-
tion of additional parking areas as follows:

MCAS, El Centro, Calif.	37,400 sq.yds.
MCAS, Mojave, Calif.	30,000 sq.yds.
MCAS, Santa Barbara, Calif.	30,000 sq.yds.
MCAS, El Toro, Calif.	60,000 sq.yds.

The board is of the opinion that adequate parking areas should be
provided to accommodate all planes to be operated at the stations
as listed in paragraph (3) above.

(f) "Immediately increase the existing facilities at the following
fields to provide for additional dispersal areas: Miramar, Camp
Cillespie, and Camp Pendleton". This request is not believed to be
urgent at the present time. The landing field at Miramar is too
small to be of much use for service type aircraft other than for
practice landings, and adjacent hills impair its use for this purpose.
It is not believed that additional funds should be expended at Miramar
for the above reasons. At Camp Pendleton the Marine Corps is pro-
viding facilities for the operation of one squadron of aircraft to
be used in connection with training of ground troops, and the field
will therefore not be available for the proposed dispersal of aircraft.

Aer-MA-33-LER

SUBJECT: Board Report of Investigation of Additional Facilities Requested at the Marine Corps Air Stations on the West Coast.

5. Attention is invited to the fact that the operation of a thousand planes from the four Marine Corps Air Stations, as planned by Marine Fleet Air West Coast, will result in undesirable congestion of landing fields and air space. It is clear, however, that the additional facilities should be provided as soon as possible in order to permit operations at the stations to reach their maximum efficiency, and to give Marine Fleet Air West Coast every opportunity to meet its schedules. An outlying field for practice landings adjacent to El Toro should also be obtained to relieve air traffic at the main field.

6. The Marine Corps Air Depot at Miramar was visited by the Board and a thorough inspection of facilities was made. The Depot functions as a receiving and distributing center for aviation personnel and equipment of the Marine Corps on the West Coast. - An indication of the scope of its activities may be had by the fact that it is now receiving and distributing from 5000 to 7000 officers and men about every two weeks, and that it now has on hand for distribution approximately 2500 pieces of automotive equipment. It was observed that all facilities are extremely overcrowded, and that personnel were occupying storehouses as a temporary measure. Large numbers of trucks were stored on the unpaved soil, where they could not be properly cared for. The Board was advised that additional facilities will be requested, roughly enough to increase the capacity of the camp by 2500 men. New facilities will include barracks, bachelor officers' quarters, paved areas for storing automotive equipment, fire station, garage and public works building, and other miscellaneous items. The Board concurs in the need for facilities adequate to permit the Depot to function properly, since its presence reduces the possibility of severe overlapping at such stations as San Diego and the Marine Corps Air Stations.

7. The study conducted by the Board, revealed, in brief, that essential Marine Corps Air Operations on the West Coast are severely overtaxing existing facilities, and that the construction of additional facilities should be given a high priority. Detailed recommendations are summarized below:

Recommendations:

The Board recommends that:

- (1) The WMO directive dated 2 September 1943 be modified insofar as the Marine Corps Air Stations on the West Coast are concerned to indicate actual planned loads.

COMMENTS: Since this directive is used as a basis for new construction, its modification will materially assist in the approval of additional facilities required by Marine Fleet Air West Coast.

Aer-MA-33-LEB

SUBJECT: Board Report of Investigation of Additional Facilities Requested at the Marine Corps Air Stations on the West Coast.

- (2) Additional facilities be provided at El Centro and the other Marine Corps Air Stations to provide for the increased personnel indicated in enclosure (A).

COMMENT: Information has been forwarded to the District Public Works Officer for his use in preparing estimates and plans for the proposed work.

- (3) Additional administrative office space be provided at all four stations.

COMMENT: The required amount of this space is now under study, and recommendations will be submitted by the stations.

- (4) Improvements to the runway and taxiway systems at all four fields as described in paragraph 4(c) above be provided.

COMMENT: Information was furnished the District Public Works Officer at the time of the Board's visit to permit preparation of plans and estimates.

- (5) Additional parking areas and warm-up aprons be provided in accordance with approved plane complements.

COMMENT: Information was furnished to the District Public Works Officer for use in preparing plans and estimates.

- (6) Facilities at the Marine Corps Air Depot, Miramar be expanded to permit accommodation of approximately 9000 men, and 2500 pieces of automotive equipment.

COMMENT: Present temporary type of construction is adequate and should be used for new construction.

- (7) An outlying field for practice landings be obtained in connection with training operations from Marine Corps Air Station, El Toro.

COMMENT: The Commanding Officer, Marine Corps Air Station, El Toro was instructed to submit his recommendations, via the Eleventh Naval District, for consideration and action by the Bureau of Aeronautics.

L. E. McQuiston, Captain, USMC
Senior Member

TABLE OF EXISTING AND REQUIRED PERSONNEL FACILITIES

Additional Facilities at El Centro - Projected Program

<u>Computation for Barracks</u>	<u>Enlisted</u>		<u>Officers</u>	
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
Station Complement	100	322	33	21
*Two Base Defense Groups	<u>3799</u>	<u>0</u>	<u>503</u>	<u>0</u>
Totals	<u>3899</u>	<u>322</u>	<u>536</u>	<u>21</u>
Living Ashore	<u>200</u>	<u>0</u>	<u>110</u>	<u>3</u>
Net	<u>3699</u>	<u>322</u>	<u>396</u>	<u>18</u>
Plus Contingencies, 25%	<u>925</u>	<u>0</u>	<u>99</u>	<u>0</u>
Total required	<u>4624</u>	<u>322</u>	<u>495</u>	<u>18</u>
Existing Facilities	<u>2112</u>	<u>376</u>	<u>240</u>	<u>26</u>
Additional required	2512	0	255	0

<u>*Based upon:</u>	<u>Officers</u>	<u>Men</u>
2 HELICONS	96	884
2 SERVICONS	20	490
7 Tact. Sqdns.	336	1926**
1 Gunnery School	<u>51</u>	<u>500</u>
	<u>503</u>	<u>3799</u>

** 275 used as average squadron complement.

Additional Facilities at El Toro - Projected program (Without 11-2)

<u>Computation for Barracks</u>	<u>Enlisted</u>		<u>Officers</u>	
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
Station Complement	500	400	50	30
*Two Base Defense Groups	3740	0	500	0
Totals	<u>4240</u>	<u>400</u>	<u>550</u>	<u>30</u>
Living Ashore	167	0	32	0
Net	<u>4073</u>	<u>400</u>	<u>518</u>	<u>30</u>
Plus Contingencies, 25%	1018	0	124	0
Total Required	<u>5091</u>	<u>400</u>	<u>642</u>	<u>30</u>
Existing Facilities	3600	400	480	32
Facilities Required	<u>1491</u>	<u>0</u>	<u>162</u>	<u>0</u>

* Based Upon:	<u>Officers</u>	<u>Men</u>
2 BDEBONS	96	884
2 BSRVONS	20	190
8 Tactical Squadrons	<u>384</u>	<u>2366</u>
	500	3740

Additional Facilities at Mojave - Projected Program

<u>Computation for Barracks</u>	<u>Unlisted</u>		<u>Officers</u>	
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
Station Complement	100	376	40	20
*Marine Base Defense Group	1955	0	298	0
Totals	<u>2055</u>	<u>376</u>	<u>338</u>	<u>20</u>
Living Ashore	60	0	71	0
Net	<u>1995</u>	<u>376</u>	<u>267</u>	<u>20</u>
Plus Contingencies, 25%	498	94	66	5
	<u>2493</u>	<u>470</u>	<u>333</u>	<u>25</u>
Existing Facilities	1995	376	240	32
	<u>498</u>	<u>94</u>	<u>73</u>	<u>0</u>

<u>*Based Upon:</u>	<u>Officers</u>	<u>Men</u>
1 HEDRON	48	442
1 SERVAUGH	10	245
4 VEF	192	968
1 WEO or WED	48	300
	<u>298</u>	<u>1955</u>

Additional Facilities at Santa Barbara - Projected Program

Computation for Barracks	Enlisted		Officers	
	Men	Women	Men	Women
Station Complement	209	300	33	28
# Marine Base Defense Group	2069	0	350	0
Other Activities	91	0	1	0
Totals	<u>2369</u>	<u>300</u>	<u>384</u>	<u>28</u>
Living Ashore Net	<u>118</u>	<u>0</u>	<u>69</u>	<u>3</u>
	2251	300	315	25
Plus Contingencies, 25%	<u>550</u>	<u>75</u>	<u>79</u>	<u>6</u>
Total Required	<u>2801</u>	<u>375</u>	<u>394</u>	<u>31</u>
Existing Facilities	<u>2320</u>	<u>110</u>	<u>210</u>	<u>32</u>
Facilities Required	481	0	184	0

Based Upon:

	Officers	Men
1 HEDRON	48	112
1 SEAVRON	10	215
2 VLF	96	464
2 VMTB	96	598
1 BTU	100	300
	<u>350</u>	<u>2069</u>

U. S. Army Corps of Engineers, Rock Island District.

Archives Search Report for Salton Sea Test Base.
Prepared for Naval Facilities Engineering Command-Southwest Division,
San Diego, CA.
On File: U. S. Army Corps of Engineers, Rock Island, IL.



US Army Corps
of Engineers
Rock Island District



Defense Environmental Restoration Program
for
Base Realignment and Closure
Ordnance and Explosives

Archives Search Report

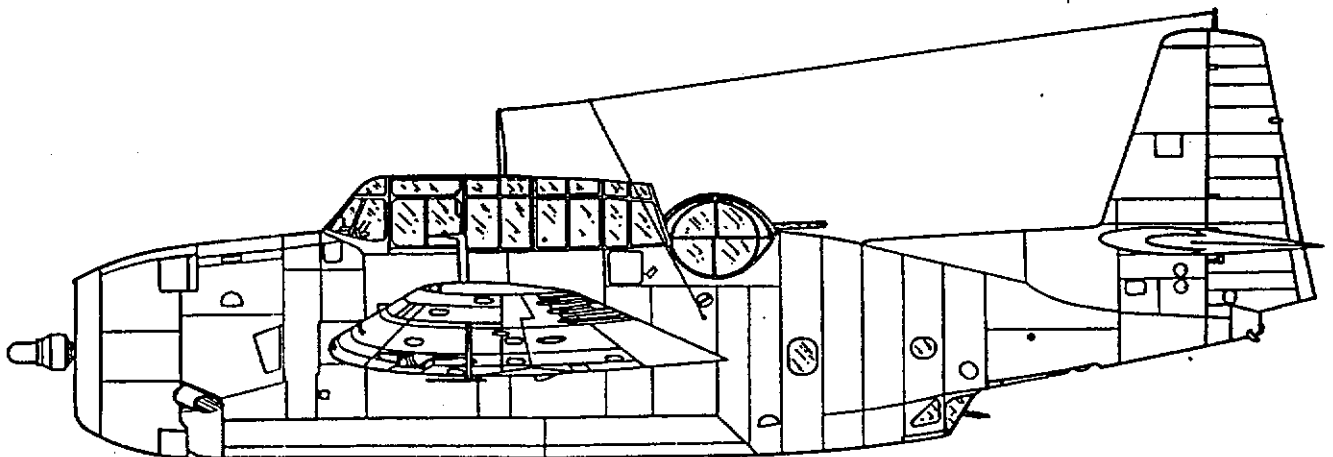
FINDINGS

for the

Salton Sea Test Base

Imperial County, California

January 1996



DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
BASE REALIGNMENT AND CLOSURE

FINDINGS

ORDNANCE AND EXPLOSIVES
ARCHIVES SEARCH REPORT
FOR
SALTON SEA TEST BASE
IMPERIAL COUNTY, CALIFORNIA

January 1996

Prepared For

Naval Facilities Engineering Command
Southwest Division
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1220 Pacific Highway
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Prepared By

U.S. Army Corps of Engineers
Rock Island District
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Rock Island, Illinois 61204-2004

and

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

4. HISTORICAL ORDNANCE PRESENCE

a. Chronological Site Summary

(1) The first known Naval activity in the Salton Sea took place in December 1939 when seaplanes from the USS Memphis used the sea for night landing operations. The first bombing target was built in July 1940. Permanent landing buoys were installed a year later in the northeastern corner of the sea. In early 1942, the Navy realized the need for additional seaplane training facilities and an emergency landing site. The Sandy Beach location was selected and the Navy began to acquire the land. In the meantime, Paramount Pictures built a clay runway and pier at the site to film the movie "Wake Island". A complete chronology of the WWII years is provided as document E-1 (reference B-11 and B-12).

(2) Construction of the seaplane base began in May 1942. The site was commissioned as a Naval Air Facility (NAF) on October 8, 1942. The site's mission was to train seaplane crews and served as an alternate landing area whenever San Diego was fogged in. Training was limited, however, by the lack of paved runways (see documents E-2 and E-3). By 1944, an additional clay runway had been built and the mission was expanded to include rocket training by carrier-type aircraft and experimental work with jet-assisted take-off (JATO) bottles. The station controlled 10 water targets, 13 land targets, and 5 emergency landing fields (see documents E-4 through E-6 and H-1).

(3) While Navy training operations continued, additional personnel from the Army arrived at the station. In December 1944, B-29s from the Manhattan project began using the site for drop testing of the first atomic bomb shapes. Ground crews built extensive monitoring facilities and used a water and a land target north of the main base (reference B-124 and B-125).

(4) Navy operations were reduced when WWII ended in 1945. The regional commander recommended closing the base. The few remaining personnel maintained the facilities and removed some of the bombing targets (see documents E-7, E-8, and H-2). In October 1946, the property was transferred to the War Department and renamed the Salton Sea Test Base. It was used as a site for further Manhattan Project development of newer atomic weapons (see document G-1).

(5) From 1946 until 1961, the site was used by the Atomic Energy Commission (AEC) for various types of testing. In addition, aircraft of the Strategic Air Command (SAC) used the water target to practice dropping weapons shapes (see document

E-9). In 1962, NAF El Centro acquired the site and used it as a Joint Parachute Test Facility to test equipment for the manned space program as well as for military systems (see documents E-10 and E-11).

(6) Operations were gradually reduced in the mid-1970s, and the site was turned over to the Naval Air Weapons Station, China Lake in 1979. In 1987, guard services were terminated and the site was listed as excess property. The 1988 Base Realignment and Closure (BRAC) Commission recommended the SSTB for closure. For several years beginning about 1977, Marines and SEALs from several bases used the site for training exercises. Live ammunition was frequently used (reference B-124 and B-125).

TABLE 4-1 SUMMARY OF CHRONOLOGICAL HISTORY	
Date	Action
Dec 1939	Navy seaplanes use Salton Sea for night landings
Jul 1940	First bombing target built
Nov 1941	Permanent bouys installed in NW corner of the sea
Apr 1942	Paramount films "Wake Island" at the site
May 1942	Construction begins on seaplane base
Feb 1944	Additional magazines and runway built
Mar 1944	Rocket training begins
Dec 1944	B-29s begin drop testing atomic shapes
Sep 1945	Station reduced to caretaker status
Oct 1946 to Jun 1961	Used by AEC and SAC for drops and environmental tests of atomic weapons components
Dec 1963	Property transferred to Navy for use as a joint parachute test facility
Circa 1977 to 1992	Site used by Marines & SEALs for training exercises
Sep 1979	Site closed, guard service maintained
Oct 1987	Guard service terminated
Dec 1988	BRAC Commission recommends closure

U. S. Naval Auxiliary Air Station, El Centro, CA.

"Historical Report of U. S. Naval Auxiliary Air Station, El Centro, CA
for the period of 1 July to 31 December 1951."
Naval Historical Center and Archives, Washington Navy Yard,
Washington D.C.

Washington Naval Yard
Historical Center and Archives
Washington, D.C.

IN REPLY REFER TO:

~~1459-225~~
A12/RNH/HWS:er
Serial: 51495

U. S. NAVAL AUXILIARY AIR STATION
EL CENTRO, CALIFORNIA

DECLASSIFIED

FEB 20 1952

From: Commanding Officer
To: Chief of Naval Operations (Aviation History and Research
Section)

Subj: Historical Report (OPNAV 575-1)

Ref: (a) OPNAV INSTRUCTION 5750.2

Encl: (1) Historical Report of U.S. Naval Auxiliary Air Station,
El Centro, California for the period of 1 July to
31 December 1951

1. Enclosure (1) is submitted herewith in accordance with
reference (a).


J.B. WAKELEY, JR.
Acting

Copy to:
CNABELL/12

U. S. NAVAL AUXILIARY AIR STATION
EL CENTRO, CALIFORNIA

PART I - CHRONOLOGY OF THE U.S. NAVAL AUXILIARY AIR STATION, EL CENTRO,
CALIFORNIA FOR THE PERIOD 1 JULY TO 31 DEC 1951

- 2 JUL 1951 - Completed work on Informal Contract ELC-48-51 - Construction of concrete foundations and floor slabs for two magazine buildings. Amount: \$1,935.55.
Commenced work on Informal Contract ELC-54-51 - Placing 2 $\frac{1}{2}$ " conduits at Target No. 94.
- 3 JUL 1951 - Completed work on Informal Contract ELC-49-51 - Alterations to the air conditioning system in Bldg. No. 435.
Amount: \$1,400.00.
Commenced work on Informal Contract ELC-57-51 - Construction and installation of doors in Bldg. No. 227.
- 9 JUL 1951 - Commenced work on Informal Contract ELC-51-51 - Repairs to shower floors in Bldg. No. 409.
- 12 JUL 1951 - Commenced work on Informal Contract ELC-53-51 - Installation of ceramic tile wainscote in lobby of Bldg. No. 313.
ENS. G. BASYEV, USN, attached to VF-113, was killed in the crash of an F4U-4 BuNo. 97102, while engaged in rocket runs.
- 20 JUL 1951 - Commenced work on Informal Contract ELC-1-52 - Removal, alterations, and reinstallation of refrigeration equipment in Bldg. No. 313.
- 23 JUL 1951 - Commenced work on Informal Contract ELC-2-52 - Installation of fiberglass in ceiling of Bldg. No. 313.

U. S. NAVAL AUXILIARY AIR STATION
EL CENTRO, CALIFORNIA

U. S. NAVAL AUXILIARY AIR STATION
EL CENTRO, CALIFORNIA

Commenced work on Informal Contract ELC-3-52 - Repairing and replacing the air conditioning unit in Bldg. No. 227.

Commenced work on Informal Contract ELC-4-52 - Alterations to the air conditioning system in Bldg. No. 110.

Commenced work on Informal Contract ELC-5-52 - Repairs and alterations to the air conditioning system in Bldgs. No. 335 and 336.

24 JUL 1951 - Completed work on Informal Contract ELC-57-51 - Construction and installation of doors in Bldg. No. 227. Amount: \$267.50.

Completed work on Informal Contract ELC-3-52 - Repairing and replacing the air conditioning unit in Bldg. No. 227. Amount: \$134.03.

Completed work on Informal Contract ELC-4-52 - Alterations to the air conditioning system in Bldg. No. 110. Amount: \$1,485.00.

Completed work on Informal Contract ELC-5-52 - Repairs and alterations to the air conditioning system in Bldgs. No. 335 and 336. Amount: \$950.00.

26 JUL 1951 - Completed work on Informal Contract ELC-54-51 - Placing 2 1/2" conduits at Target No. 94. Amount \$111.82.

31 JUL 1951 - Completed work on Project 34976-51 - Construction of TDD hangar and heavy stores warehouse building. Amount: \$3,975.00.

3 AUG 1951 - Completed work on Contract NOy-23448 - Construction of a special devices strafing target. Amount: \$12,985.00.

U. S. NAVAL AUXILIARY AIR STATION
EL CENTRO, CALIFORNIA

- 7 AUG 1951 - Commenced and completed work on Informal Contract ELC-10-52 - Application of flameout mastic heavy coating to Bldg. No. 542. Amount: \$1,400.00.
- Commenced work on Informal Contract ELC-11-52 - Application of flameout mastic heavy coating to Bldg. No. 1 at NATTU.
- 8 AUG 1951 - Commenced work on Informal Contract ELC-9-52 - Placing wall-paper in main entrance to Bldg. No. 227.
- 14 AUG 1951 - Completed work on Informal Contract ELC-1-52 - Removal, alterations, and reinstallation of refrigeration equipment in Bldg. No. 313. Amount: \$1,221.49.
- Completed work on Informal Contract ELC-2-52 - Installation of fiberglass ceiling in Bldg. No. 313. Amount: \$1,955.00.
- Commenced work on Informal Contract ELC-12-52 - Repairing and placing rubber tile on floor of lobby of Bldg. No. 313.
- 16 AUG 1951 - Commenced work on Informal Contract ELC-13-52 - Construction of a Jet Drone Launching platform.
- 2nd LT P. TAYLOR, USAF, attached to 170th Fighter Bomber Squadron, George AFB Victorville, California, was killed in the crash of an F-51, Aircraft No. 45-11665A, while engaged in dive bombing and strafing at Target No. 68.
- 30 AUG 1951 - Completed work on Informal Contract ELC-9-52 - Placing wall-paper in main entrance to Bldg. No. 227. Amount: \$129.50.
- Commenced work on Informal Contract ELC-14-52 - Placing

U. S. NAVAL AUXILIARY AIR STATION
EL CENTRO, CALIFORNIA

"Formica" strips on the counter, asphalt tile behind counter,
and asphalt tile baseboards in the heads and hallways in
Bldg. No. 313.

Commenced work on Informal Contract ELC-15-52 - Placing linoleum
on floors of ten (10) Homoja Apts.

31 AUG 1951 - Completed on Project 34921-51 - Construction of two (2) pre-
fabricated steel magazines and access road. Amount: \$2,600.00.

8 SEP 1951 - Completed work on Informal Contract ELC-12-52 - Repairing and
placing rubber tile on floor in lobby of Bldg. No. 313.
Amount: \$435.00.

10 SEP 1951 - Pursuant to BuPers Orders B115-SHR-1 Serial 37669 dtd 16 May
1951. CAPT R. N. HUNTER 57613/1310, reported aboard to relieve
CDR C. K. WILKINSON 60084/1310. CDR C. K. WILKINSON was
Commanding Officer of U.S. Naval Auxiliary Air Station, El Centro,
from 23 October 1949 to 10 September 1951.

11 SEP 1951 - Completed work on Informal Contract ELC-14-52 - Placing "Formica"
strips on the counter, asphalt tile behind the counter, and
asphalt tile baseboards in the head and hallways in Bldg. No.
313. Amount: \$363.06.

13 SEP 1951 - Completed work on Informal Contract ELC-11-52 - Application of
flameout mastic heavy coating to Bldg. No. 542. Amount: \$557.00.
Completed work on Informal Contract ELC-11-52 - Application of
flameout mastic heavy coating to Bldg. No. 1 at NATTU.
Amount: \$557.00.

U. S. NAVAL AUXILIARY AIR STATION
EL CENTRO, CALIFORNIA

- 17 SEP 1951 - Commenced and completed on Informal Contract ELC-17-52 - Construction of roads to magazine Bldgs. Nos. 181 and 182.
- 18 SEP 1951 - Commenced work on Contract NOy-27507 - Construction of runway extension, taxiway, and parking aprons.
- 29 SEP 1951 - Commenced work on Project 50701-52 - Marking the boundaries of Chocolate Mountain Gunnery Range, Carrizzo Impact Area, landing strip at Sand Hills, Hill Top Field, South Coyote Wells, Clarks Dry Lake Field, and Occotillo Field.
- 1 OCT 1951 - Completed work on Informal Contract ELC-13-52 - Construction of a jet launching platform. Amount: \$1,985.00.
- 4 OCT 1951 - Commenced work on Contract NOy-29189 - Alterations and additions to Bldg. No. 118.
- 10 OCT 1951 - Completed work on Informal Contract ELC-53-51 - Installation of ceramic tile wainscote in lobby of Bldg. No. 313. Amount: \$1,310.20.
- 12 OCT 1951 - Commenced work on Informal Contract ELC-17-52 - Construction of a temporary power line to the Parachute Whirl Tower.
- 17 OCT 1951 - Completed work on Contract NOy-22700 - Construction of a Rocket Assembly Bldg. Amount: \$66,654.00.
- 22 OCT 1951 - Completed work on Informal Contract ELC-15-52 - Placing linoleum on floors of ten (10) Homoja Apts. Amount: \$675.00.
- 23 OCT 1951 - Commenced work on Informal Contract ELC-21-52 - Installation of venetian blinds in Bldg. No. 513.

DECLASSIFIED
U. S. NAVAL AUXILIARY AIR STATION
EL CENTRO, CALIFORNIA

- 29 OCT 1951 - Commenced work on Informal Contract ELC-19-52 - Construction of a Septic Tank and tile drain at the Parachute Whirl Tower.
- Commenced work on Informal Contract ELC-23-52 - Installation of a "Solex" green plate glass in the control tower at Target No. 68.
- 2 NOV 1951 - Completed work on Informal Contract ELC-51-51 - Repairs to shower floors in Bldg. No. 409. Amount: \$1,859.78.
- 8 NOV 1951 - LT A. KING, USN, attached to VF-871, was killed in the crash of an F4U-4 BuNo. 81939, while engaged in air to air gunnery. Aircraft collided with tow target and crashed 13 miles North-east of Niland, California.
- 15 NOV 1951 - Commenced work on Informal Contract ELC-22-52 - Construction of a road and installation of clothes line in Homoja Housing.
- 23 NOV 1951 - Completed work on Informal Contract ELC-19-52 - Construction of a Septic Tank and tile drain line of Parachute Whirl Tower. Amount: \$920.60.
- 5 DEC 1951 - Commenced work on Informal Contract ELC-24-52 - Installation of glass in CO and XO offices in Bldg. No. 214.
- Completed work on Informal Contract ELC-21-52 - Installation of venetian blinds in Bldg. No. 513. Amount: \$194.30.
- 10 DEC 1951 - Completed work on Informal Contract ELC-24-52 - Installation of glass in CO and XO offices in Bldg. No. 214. Amount: \$91.20.

U. S. NAVAL AUXILIARY AIR STATION
EL CENTRO, CALIFORNIA

Completed work on Informal Contract EIC-25-52 - Installation
of "Solex" green plate glass in the control tower at Target
No. 68. Amount: \$491.20.

20 DEC 1951 - Commenced work on Contract NOy-29211 - Installation of a
sprinkler system in Bldg. No. 313.

DECLASSIFIED

EL CENTRO, CALIFORNIA
U. S. NAVAL AUXILIARY AIR STATION

DECLASSIFIED

U. S. NAVAL AUXILIARY AIR STATION
EL CENTRO, CALIFORNIA

PART II - NARRATIVE OF THE NAVAL AUXILIARY AIR STATION, EL CENTRO, CALIFORNIA
FOR THE PERIOD 1 JULY TO 31 DECEMBER 1951

The U. S. Naval Auxiliary Air Station has continued in its assigned mission as follows:

1. Provide facilities to support fleet aircraft rocket, gunnery, bombing, ASW, and night FCLP training operations, Fleet and other major activities will include:
 - (a) Four (4) carrier air group squadrons or Marine squadrons (transient).
 - (b) Fleet Air Detachment Personnel (transient).
 - (c) Joint Parachute Test Facilities.
 - (d) Naval Air Technical Training Unit.
 - (e) Military Airways Plan 62 Facilities.
 - (f) Emergency Seadrome (Salton Sea).

In accordance with DD Directive No. 2033-1, dated 9 June 1951, a Joint Parachute Test Facility was established at NAAS, El Centro, Calif., with an effective date of 15 Sep 1951. The purpose of this facility is to assure the maximum joint utilization of trained personnel, equipment, and technology in the development, testing and evaluation of parachute and related equipment used by the Armed Forces of the United States.

In implementing the DD Directive, General Order No. 26, dated 23 July 1951, was issued by Hg. AROC, which designated the Air Force activity at El Centro as Headquarters, 6502d Parachute Development Test Group. The Group was assigned to HgWADC for direct command responsibility.

U. S. NAVAL AUXILIARY AIR STATION
EL CENTRO, CALIFORNIA

The detailed delineation of USAF and Navy responsibility, as well as the proposed planning for operation of the Joint Facility, are contained in the "Agreement between the Department of the Navy and the Department of the Air Force", dated 2 December 1950.

The 6502d Parachute Development Test Group conducted its first drop test mission on 24 August 1951, using a borrowed Navy PV-2 aircraft. This is the date the Group first became operational.

7 JUL 1951 - CAPT DREW, Commanding Officer USNAS Los Alamitos, visited our station while enroute to Los Alamitos.

30 JUL 1951 - CDR V. WILLIAMS, Chief of Staff ComNAB11/12ND, and party, arrived aboard our station for an inspection.

31 JUL 1951 - CAPT BARWOOD, Assistant Inspector General Supply Corps (Air) arrived aboard our station for an inspection and departed for NAS Miramar 1 August.

1 SEP 1951 - ADM BAKER and party arrived on board our station for an inspection.

19 SEP 1951 - BRIGEN MANALY, USMC, visited our station while enroute to USMCAS El Toro.

30 SEP 1951 - SSW Air Lines R5C N54339 enroute from El Paso to San Diego made an emergency landing at our station - starboard engine afire. The aircraft carried forty (40) passengers and a crew of three (3). There were no injuries to passengers or crew. The aircraft sustained major damage.

DECLASSIFIED AUTHORITY: 48 CFR 1.101(a)(4) DATE: 03-15-2011 BY: 60322

U. S. NAVAL AUXILIARY AIR STATION
EL CENTRO, CALIFORNIA

PART III - APPENDICIES OF THE NAVAL AUXILIARY AIR STATION, EL CENTRO, CALIFORNIA
FOR THE PERIOD 1 JULY TO 31 DECEMBER 1951

AVERAGE NUMBER ON BOARD FOR DUTY AND TAD:

OFFICERS 58
ENLISTED 400

NUMBER OF PERSONNEL FROM FLEET UNITS ON BOARD FOR TRAINING:

OFFICERS

NAVY 1230
MARINE 403
AIR FORCE 53

ENLISTED

NAVY 3016
MARINE 1394
AIR FORCE 149

SUPPLY DEPARTMENT TONNAGE:

RECEIVED 13,250.0 Tons
SHIPPED 44.3 Tons

ORDNANCE EXPENDED BY FLEET UNITS:

<u>ITEM</u>	<u>WEIGHT</u>	
50 Cal. belted	60.29	tons
20 MM belted	111.91	tons
Miniature Bombs	76.28	tons
100 lb. w/s Practice bomb (empty)	21.02	tons

U. S. NAVAL AUXILIARY AIR STATION
EL CENTRO, CALIFORNIA

500 lb. w/s Practice bomb (empty)	2.16	tons
1000 lb.w/s Practice bomb (empty)	22.95	tons
100 lb. G.P. Bombs	45.26	tons
250 lb. G.P. Bombs	9.38	tons
500 lb. G.P. Bombs	93.26	tons
1000 lb.G.P. Bombs	66.18	tons
Fuzes, Bomb, Rocket	4.47	tons
2425 SCAR	365.50	tons
3425 Aircraft Rockets	20.63	tons
540 HVAR	400.67	tons
11475 Tiney Tim Rockets	58.46	tons
NaPalm, Type, 1 Mix	1.95	tons
Parachute flares	5.98	tons
Miscellaneous Small Arms Ammunition	1.21	tons

TOTAL TONNAGE . . .1367.56

U. S. Naval Auxiliary Air Station, Holtville, CA.

Historical Report of U. S. Naval Auxiliary Air Station, Holtville, CA.
Box 221; Naval Historical Center and Archives,
Washington Navy Yard, Washington D.C.

BOX 221
WASHINGTON Naval yard
Historical Center / Archives

ADDRESS REPLY TO

TO REPLY REFER TO NO.

U. S. NAVAL AUXILIARY AIR STATION
HOLTVILLE, CALIFORNIA



NA11-6/A9-3 KVS:ls
Serial 2179 10

20 September 1945

To: Chief of Naval Operations, History Unit, OP-33-J-6,
Aviation Training Division, Navy Department,
Washington, D. C.

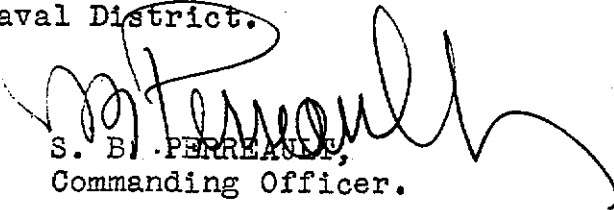
Via: Commander, NAVAL AIR BASES, ELEVENTH Naval District,
San Diego, Calif.
Commandant, ELEVENTH Naval District, San Diego, Calif.

Subj: Historical Report - Submission of

Ref: (a) Aviation Cir. Ltr. No. 74-44 of 7/25/44.

1. The Historical Report required by reference (a) is
herewith submitted.

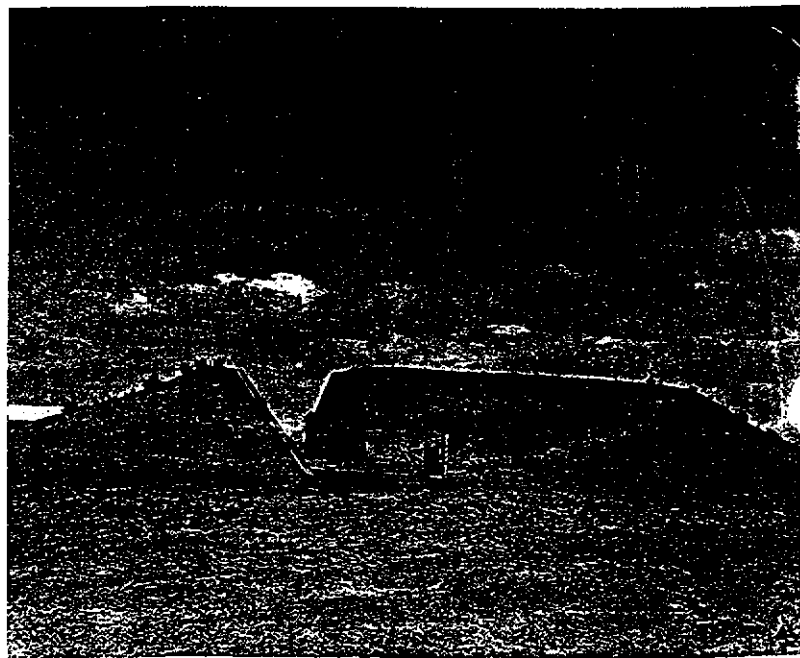
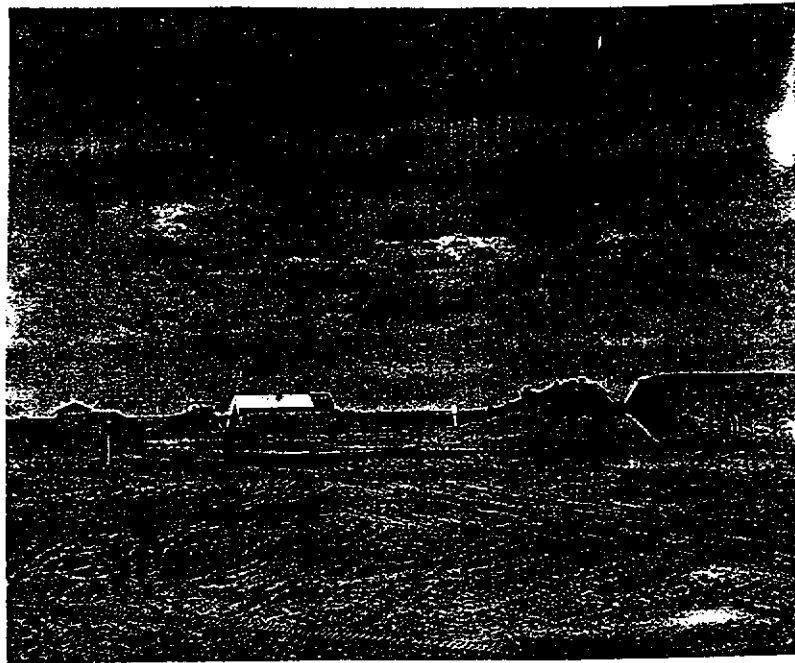
2. Copies of this report are enclosed for retention by
Commander, Naval Air Bases, Eleventh Naval District and
by the Commandant, Eleventh Naval District.


S. B. PERREAULT,
Commanding Officer.

Encl: (HW)

1. Subject Reports

U. S. NAVAL AUX. AIR STATION HOLTVILLE CALIF.



Ordnance Magazines

OFFICIAL U S NAVY PHOTOS

U.S. NAVAL AUX. AIR STATION
HOLTVILLE CALIF.

PART II: Narrative

1. Function

a. Purpose

This Naval Auxiliary Air Station was organized as a unit of the Naval Air Center Eleventh Naval District as part of a general plan for the training of Fleet aircraft units in the Southern California area. The sites selected were such that each station or facility could perform a specialized type of training in the syllabus of each squadron. In the case of NAAS Holtville the special type of training was night flying, the site selection in Imperial Valley being made due to the 360-day per year average of clear weather, especially under night-flying conditions. In general, the syllabus included dive bombing, low level bombing, skip bombing (at Salton Sea, about 30 miles airline northerly of Holtville), target strafing, and field carrier landing practice, as well as cross-country and round-robin flights. Originally the Composite-type squadrons were sent here for training. On 15 August 1944 a Fleet Air Training Detachment was established on the Station with primary function of rocket-firing training, and since that date a number of VF, VT and VB squadrons, plus a few VCB and VEP units, as well as streamlined VC groups have utilized the training facilities of the field. A considerable amount of Ground Training is carried on also, involving Recognition, Link Trainer, Free Gunnery and various special devices. With the construction of a special Carrier Landing Training Field about seven miles easterly of the Station, greater concentration was placed on PCLP training.

b. Construction

Original construction work was commenced in January 1943 by the Macao-McKittrick Construction Co. The original runways were 4500 ft., these being increased to 6000 ft. due to the anticipated usage of the field by larger aircraft than in the original plan. With the exception of a few minor structures, the base as planned was completed ready for occupancy in late June 1943. Subsequently it was determined that the housing facilities for pilots and enlisted personnel, and adequate maintenance facilities were insufficient to handle the proposed increase from three to six squadrons, and SecNav authority was granted 19 May 1944 to provide additional facilities, work being started on 10 August 1944. This expansion provided additional BOQ's, double-deck enlisted personnel barracks, a WAVE's barracks, two line shacks, two nose hangers, a Training building, an Officers' Mess, three Supply warehouses, and expanded water-supply system and sewage disposal system. Started about 1 February 1945, a Homeja Hut project for 84 families will relieve the critical housing situation in the Imperial Valley.

U. S. Naval Auxiliary Air Station, Holtville, CA.

"Historical Report of U. S. Naval Auxiliary Air Station, Holtville Calif"
for 1 September 1945 to 15 April 1946.
Box 221; Naval Historical Center and Archives,
Washington Navy Yard, Washington D.C.

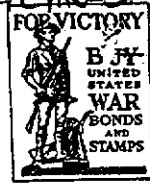
ADDRESS REPLY TO

TO REPLY REFER TO NO.

NAL-6/A9-3 KAS:
Ser 366-10

U. S. NAVAL AUXILIARY AIR STATION
HOLTVILLE, CALIFORNIA

BOX 221
WASHINGTON Naval Yard
Historical Center Archives



11 April 1946

To: Chief of Naval Operations, History Unit OP-33-J6,
Aviation Training Division, Navy Department,
Washington, D.C.

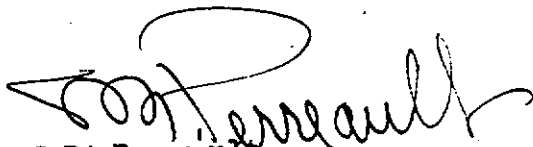
Via: Commander, NAVAL AIR BASES, ELEVENTH Naval District,
San Diego, Calif.
Commandant, ELEVENTH Naval District, San Diego, Calif.

Subj: Historical Report - Submission of

Ref: (a) Aviation Cir Ltr No. 74-44 of 7/25/44
(b) NAB11/A12/29-3 SWG:en Serial 83-95 3/26/46

1. The Historical Report required by references (a) and
(b) is herewith submitted.

2. Copies of this report are enclosed for retention by
Commander, Naval Air Bases, Eleventh Naval District and by the
Commandant, Eleventh Naval District.


S.B. Perreault,
Commanding Officer

Encl: (hw)
1. Subject reports

A HISTORICAL REPORT
ON
U.S. NAVAL AUXILIARY AIR STATION HOLTVILLE CALIF

This Report is composed of the following parts:

- I. Chronology
- II. Narrative
- III. Appendices
 - A. List of Fleet Activities
 - B. List of Casualties

Information compiled from 1 September 1945 to 15 April 1946

Enclosure (1)

U.S. NAVAL AUXILIARY AIR STATION
HOLTVILLE, CALIFORNIA

PART I: Chronology

1. Construction started: January 1943
2. First station Naval personnel on board: 20 June 1943
3. Placed in Commission: 4 July 1943
4. Commanding Officers:

	From	To
a. Lt. Cmdr. Emory B. Bronte USNR	4 July 43	28 Dec 43
b. Lt. Benoni H. McClure USNR, O-in-C during interim	28 Dec 43	3 Jan 44
c. Lt. Cmdr. Henry J. White USNR	3 Jan 44	31 July 44
d. Lt. Cmdr. David O. Parker USNR	31 July 44	27 Jan 45
e. Lt. Cmdr. Seraphin B. Perreault USN	27 Jan 45	

5. Originally established as a unit of the Naval Air Center, Eleventh Naval District.
6. Naval Air Center 11ND disestablished 10 August 1944 and the unit became part of Naval Air Bases, 11ND.
7. Reduced to caretaker status April 1, 1946.
8. This activity has not been involved in any enemy action.

Part II Narrative

1. Function

a. Purpose

Holtville Air Station has a past record as a training center for combat air groups scheduled for duty on the small Navy escort carrier, and became a center for strafing and bombing practice for fighters, dive bombers and torpedo bombers. Special attention was given to Rocket training. The 1397-acre station was built to serve as an operation training base for fleet units. There are two 6000 foot runways at the air station. Eight miles east of the station there is a 4000 foot strip designated and marked for practice carrier landings. Because of the all year flying weather, the station also has been used to train squadrons in the final phases of night formation flying.

Beginning with the termination of war with Japan operations at this station have steadily decreased. Squadrons continued to train on a reduced scale through 15 December 1945. On December fourth PV-2 aircraft began to arrive on station for short time preservation and were kept on a flyaway status. By January 1, 1946 there were one hundred eleven of these aircraft stationed here. April 10 1946 marked the departure of the last PV-2.

This station was reduced to caretaker status April 1, 1946 and is scheduled for surplus May 1, 1946.

b. Construction

There has been no construction since August 15, 1946.

APPENDIX A: DATA REGARDING ARRIVAL AND DEPARTURE DATES OF FLEET AND
 AIRCRAFT UNITS, AND DESTINATION

	ARRIVAL	DEPARTURE	DESTINATION
VT 80	17 Aug 1945	12 Sept 1945	NAAS Ream Field, Calif Decommissioned, Planes and Personnel going to NAAS Holtville
VC 80	2 Aug 1945	12 Sept 1945	
VF 84	28 Aug 1945	27 Sept 1945	NTB, Los Alamitos, Calif
VBF 84	28 Aug 1945	27 Sept 1945	NTB, Los Alamitos, Calif
AG 7	17 Oct 1945	6 Dec 1945	San Diego, California
VF 98	10 Dec 1945	15 Dec 1945	NTB, Los Alamitos, Calif
VBF 98	10 Dec 1945	15 Dec 1945	NTB, Los Alamitos, Calif
CASU 53	15 Aug 1944	18 Dec 1945	MCAS, El Centro, Calif

APPENDIX E

LETTERS / MEMORANDA / MISCELLANEOUS ITEMS

ORDNANCE AND EXPLOSIVES
CHEMICAL WARFARE MATERIALS
ARCHIVE SEARCH REPORT
FINDINGS
FOR
KANE SPRINGS SBT #62
KANE SPRINGS, CALIFORNIA
IMPERIAL COUNTY

PROJECT NO. J09CA017301

APPENDIX E

LETTERS / MEMORANDA / MISCELLANEOUS ITEMS

Assistant Commandant (Logistics).

1944 Correspondence to Comdr. NAC, SD, dated 29 August, regarding the acquisition of land for bombing targets. Record Group 181; Entry: 11th Naval District, Commandant's Office, General Correspondence, 1924-1955; File: NA(2). National Archives-Pacific Southwest Region, Laguna Niguel, CA.

Bureau of Ordnance.

1946a Correspondence to Commanding Officer, El Centro Marine Corps Air Station, dated 4 January, regarding the Ammunition Stock Recording System. Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946. National Archives-Suitland Branch, Suitland, MD.

1946b Correspondence to Commanding Officer, El Centro Marine Corps Air Station, dated 19 April, regarding the stowage of ammunition. Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946. National Archives-Suitland Branch, Suitland, MD.

1946c Correspondence to Commanding Officer, El Centro Marine Corps Air Station, dated 27 June, regarding a request for rocket firers. Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946. National Archives-Suitland Branch, Suitland, MD.

Headquarters, Naval Air Bases.

1946b Correspondence to Chief, Bureau of Ordnance, dated 12 August, regarding a Request for Disposition of Small Arms Ammunition for Caliber .30 Aircraft Machine Gun. Record Group 74; Entry 4444; Box 287; ND8-ND11, 1946. National Archives-Suitland Branch, Suitland, MD.

ORDNANCE AND EXPLOSIVES
CHEMICAL WARFARE MATERIALS
ARCHIVE SEARCH REPORT
FINDINGS

FOR
KANE SPRINGS SBT #62
KANE SPRINGS, CALIFORNIA
IMPERIAL COUNTY

PROJECT NO. J09CA017301

APPENDIX E

LETTERS / MEMORANDA / MISCELLANEOUS ITEMS

n.d. Speedletter; File NAB11/S78-2, regarding Ordnance inventories at 11th Naval District's Air Bases. Record Group 74; Entry 4444; Box 287; File ND8-ND11, 1946. National Archives- Suitland Branch, Suitland, MD.

Navy Department.

1947 Correspondence to Commandant, Eleventh Naval District, dated 19 February, regarding discontinuance of target and bombing ranges. Record Group 74; Entry 5595; Box 209; ND10-ND12, 1947. National Archives-Suitland Branch, Suitland, MD.

1948 Correspondence to Deputy Administrator, Office of Real Property Disposal, dated 11 February, regarding the declaration of surplus for Holtville Auxiliary Air Station. Record Group 72; Entry 69A-2454; Box 2; File: California. National Archives-Suitland Branch, Suitland, MD.

U. S. Marine Corps Air Station.

1946 Correspondence to Chief, Bureau of Ordnance, dated 10 July, regarding Rocket Firers. Record Group 74; Entry 4444; Box 194: KV-L1-1, Jun-July 1946. National Archives-Suitland Branch, Suitland, MD.

U. S. Pacific Fleet.

1946 "COMFAIR West Coast Service and Training Munition Requirements," dated 26 January. Record Group 74; Entry 4444; Box 287; File: ND8-ND11, 1946. National Archives-Suitland Branch, Suitland, MD.

Assistant Commandant (Logistics).

Correspondence to Comdr. NAC, SD,
dated 29 August 1944,
regarding the acquisition of land for bombing targets.
Record Group 181; Entry: 11th Naval District, Commandant's Office,
General Correspondence, 1924-1955; File: NA(2).
National Archives-Pacific Southwest Region, Laguna Niguel, CA.

KG 181 NA-Laguna
E: 11th Naval Dist
Commandant's Office
General Corr. 1929
5

Box 429
E: 10 NA-12
Mu: Bas

NAC11/F41-10
(Serial No. P-15546)

29 AUG 1944

To: Comdr. NAC, SD.

Subj: Acquisition of land for Bombing Targets, NAC, San Diego, California.

Ref: (a) Urltr NAC11/N1-13 (950333) fve, dated 22 April 1944.

1. By ref. (a) it was requested Government land under the jurisdiction of the Department of Interior be transferred to the Navy Department for use as Bombing Target Sites. The following sections of land were requested:

- Kona Sp.* →
- a. Section 2, Township 13 South, Range 11 East.
 - b. Section 12, Township 11 South, Range 9 East.
 - c. Section 10, Township 11 South, Range 9 East.
 - d. Section 16, Township 13 South, Range 10 East.
 - e. Section 12, Township 12 South, Range 15 East.
 - f. Section 32, Township 10 South, Range 12 East.

2. Encl. 1 is letter from the Secretary of Interior granting to the Navy Department temporary use of all the above sites requested with the exception of site d and e.

3. Item d, being Section 16, Township 13 South, Range 10 East, S.B.B.M. was changed to Section 15 by despatch after reference was forwarded, because said Section 16 was California State School property.

G. W. WINSOR
Assistant Commandant (Logistics)

Encl.

1. (HW) Copy of ltr from SecInt to SecNav, dated 15 Aug. 1944.

*Elzabeth
copy*



ike

Copy for Commandant's Office

Bureau of Ordnance.

Correspondence to Commanding Officer, El Centro Marine Corps Air Station,
dated 4 January 1946,
regarding the Ammunition Stock Recording System.
Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946.
National Archives-Suitland Branch, Suitland, MD.

KV

1946

OFFICE OF THE CHIEF OF BUREAU OF FINANCE
WASHINGTON 25

4 JAN 1946

AIR MAIL

From: The Chief of the Bureau of Finance
To: The Commanding Officer
Marine Corps Air Station
El Centro, California

Subject: Ammunition Stock Recording System.

Reference: (a) Navord ~~282-A~~ for code 11575 701-1100-J
showing balance on-hand for month ending
December 1945

1. Reference (a) reports the balance on hand for the
ammunition described below:

11575 Rocket Motor, Mark I Mod 1.

SSR
Paid 1/14/46
Add 1/16
Green

2. Reference (a) carries the correct code 11575 701-1100-J
for the item at the lower left hand corner and an incorrect code
701-1100-J at the upper right hand corner.

3. It is requested that the correct code be placed in
both spaces provided for it on the on-hand balance card.

G. F. BUSSET, JR.

R. A. Carosche
R. A. Carosche
By direction

XIV/mcc

Bureau of Ordnance.

Correspondence to Commanding Officer, El Centro Marine Corps Air Station,
dated 19 April 1946,
regarding the stowage of ammunition.
Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946.
National Archives-Suitland Branch, Suitland, MD.

Bureau of Ordnance.

Correspondence to Commanding Officer, El Centro Marine Corps Air Station,
dated 27 June 1946,
regarding a request for rocket firers.
Record Group 74; Entry 4444; Box 193: KK/S79-KV Mar-Apr 1946.
National Archives-Suitland Branch, Suitland, MD.

NAT'L Archives - Suitland
Rg 74, Entry 4444, Box 194
KV Thru 41-1 Jun July 46

B

KV
(date)

19

27 JUN 1946

Ad

AIR MAIL

From: The Chief of the Bureau of Ordnance.
To: The Commanding Officer, Naval Air Station,
El Centro, California.

Subject: Rocket Firers; request for.

- References:**
- (a) MEMO, El Toro, NEX 071084 of March.
 - (b) Memo (date) NEX 121155 of March.
 - (c) MEMO, El Toro, NEX 140205 of March.
 - (d) MEMO, El Centro, NEX 152217 of April.
 - (e) ANNO 315773 dated 17 April 1945.
 - (f) HAS, El Centro, NEX 152204 of May.
 - (g) Memo (date) NEX 152205 of May.
 - (h) HAS, Hawthorne, NEX 300528 of May.
 - (i) HAS, El Centro, NEX 210245 of June.

Min: In reply to reference (a) the following outline of action taken to supply the subject Rocket Firers is forwarded.

Major
Letter

Upon receipt of reference (a), reference (b) was sent to the Marine Corps Air Station, El Toro, with an information copy to the Marine Corps Air Station, El Centro, requesting clarification inasmuch as the Mark 40 Rocket Firer, Bureau of Ordnance Code, 750 5002, referred to the request type firer manufactured by the Union Aircraft Products Company while the memorandum issued in the request referred to the reel type firer manufactured by the Douglas Aircraft Company. Marine Corps Air Station, El Toro, in reference (c) had requested Marine Corps Air Station, El Centro, to advise the type desired. Marine Corps Air Station, El Centro, replied in reference (d) stating that the Douglas firer was required and with this information a purchase order order 121774 was written on the Naval Association Dept. of the Navy, Nevada, requesting shipment of this type. Reference (e) was subsequently received requesting a reply to reference (d) and reference (g) was received requesting that the Naval Association Dept. Hawthorne, supply shipping information which they did in reference (h) stating the material was shipped on 4 May 1945.

PL: It is noted that reference (i) again confuses the two types of firers by giving the code of the firer manufactured by Union Aircraft Products Company and naming the Douglas Reel type which has already been

Nat'l Archives
Rg 74, Entry 4444, Box 194
KV Thru 21-1 Jun-July '46

(122)
B

KV

shipped. It is requested that the preference as stated in reference (d) be confirmed and that one of the following codes be used:

Ad

(a) Code 700 8901-M - Beal Type, Manufactured by Douglas Aircraft Company.

(b) Code 700 8900-M - Magenta Type, Manufactured by Union Aircraft Products Company.

Re

A. F. JOHNSON, JR.

Fi

A. F. Johnson
By direction

Mn

Copy to
San Francisco, California

Pr

Pl

Sp

Lo

Headquarters, Naval Air Bases.

Correspondence to Chief, Bureau of Ordnance,
dated 12 August 1946,
regarding a Request for Disposition of Small Arms Ammunition for
Caliber .30 Aircraft Machine Gun.
Record Group 74; Entry 4444; Box 287; ND8-ND11, 1946.
National Archives-Suitland Branch, Suitland, MD.

Suttard Branch
Rm 74, Entry 4441, Box 287
ND 8-ND 11, 1946

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND PROJECT
NUMBER NND 917566, BY J3/CWC, DATE 12/14/95

In reply address
COMMANDER
NAVAL AIR BASES
11th Naval District
San Diego 35, Calif.
and refer to

HEADQUARTERS
COMMANDER, NAVAL AIR BASES
ELEVENTH NAVAL DISTRICT

NAB 11/ L11-3/F41-11 JEH:st
Serial 54-90

AUG 12 1946

To: Chief of the Bureau of Ordnance
Subj: Disposition of Small Arms Ammunition for Caliber .30
Aircraft Machine Gun - Request for.
Ref: (a) BuOrd ltr (Mn2b) S78-1(17) dtd 1Aug46
(b) BuOrd ltr F41-1(Mn6b) dtd 26Jul46

1. In compliance with references (a) and (b), disposition is requested for the following .30 Caliber aircraft machine gun ammunition which is surplus to the requirements of activities within Naval Air Bases.

NAVAL AIR STATION, SAN DIEGO

- .30 Caliber Ball M2
- .30 Caliber Incendiary M1
- .30 Caliber A.P. M2
- .30 Caliber Blank
- .30 Caliber Dummy
- .30 Caliber Link M1

106,550
48,000
35,500
2,815
79,678
540,000

*BOSO 517757
to
Fall Brook*

NAVAL AIR STATION, EL CENTRO

- .30 Caliber Tracer M1
- .30 Caliber Incendiary M1
- .30 Caliber A.P. M2
- .30 Caliber Links M1

130,235
575,000
125,000
40,000

*BOSO 517758
to
Fall Brook*

MARINE CORPS AIR STATION, EL TORO

- .30 Caliber Ball M2
- .30 Caliber Incendiary M1
- .30 Caliber Links M1

103,120
24,000
14,000

*BOSO 517759
-1- to
Fall Brook*

*ND 11
Mn 2
jm*

082046 0060

Headquarters, Naval Air Bases.

Speedletter; File NAB11/S78-2,
regarding Ordnance inventories at 11th Naval District's Air Bases.
Record Group 74; Entry 4444; Box 287; File ND8-ND11, 1946.
National Archives- Suitland Branch, Suitland, MD.

Suitland Branch
Rg 74, Entry 4444, Box 387
NDS - ND11, 1946

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND PROJECT NUMBER NND 917566, BY J3/CWC, DATE 12/14/95

FILE OR SERIAL NO. NAB11/S78-2
Serial 02-90 JEH:st

DATE

SPEEDLETTER

TO:

Page 3 of 3 Pages

Use in lieu of despatches, telegrams, teletypes, and mailgrams when appropriate.

Do not handle through Communication Offices.

Despatch phraseology may be used.

Use size No. 9 window envelopes when appropriate and available.

If used for classified matter handle as prescribed in U. S. Navy Regs., Arts. 78½ and 78.

Upon receipt EXPEDITE HANDLING and DELIVERY as much as possible.

NAAS REAM FIELD (Cont'd)

M16A1 8-15 Sec. delay 10
Auxiliary Booster MK 4 79

NAS SANTA ANA

7.2 Rocket head MK 5 (Torpex load) - 125,000 lbs. 600
7.2 Rocket motor MK 3 Mod 2 (inert) - 17,000 cu. ft. 620
7.2 Rocket Head MK 4 Mod 1 32
Fuze ANM 100A2 } 900 cu. ft. as of 1 Jan. '46 100
Fuze MK 140 } 600

MCAS EL CENTRO

Bomb S.A.P. 1000# ANM-59 76,000 cu. ft. space as of 1 Jan. '46 2
Bomb waterfillable 1000# MK 7 } 6500 cu. ft. space as of 1 Jan. '46 282
Bomb waterfillable 500# MK 2L } 28
FB Smoke Mixture 800# drums } 213 cu. ft. space as of 1 Jan. '46 148

MCAS EL TORO

FB Smoke Mixture 800# drums Space for 213 drums as of 1 Jan. '46 100

By direction.

Encl. 1. Copy of Ref(s)

- NAAS Brown Field
- NAAS Camp Kearney
- NAAS Ream Field
- NAS Santa Ana
- MCAS El Centro
- Com1
- MCAS El Toro
- ConFair WC (Ord Dept)

Title and Signature

H. T. WRAY
H. T. WRAY, Comdr., USN (ret)
Ordnance Officer

SENDER'S MAILING ADDRESS (Including symbol or identity of originating office.)

HEADQUARTERS RECEIVED
COMMANDER, NAVAL AIR BASES
ELEVENTH NAVAL DISTRICT
SAN DIEGO 35, CALIFORNIA

ATTENTION ADDRESS: Address reply exactly as indicated on right.

030646

REGISTERED MAIL
351826

Navy Department.

Correspondence to Commandant, Eleventh Naval District,
dated 19 February 1947,
regarding discontinuance of target and bombing ranges.
Record Group 74; Entry 5595; Box 209; ND10-ND12, 1947.
National Archives-Suitland Branch, Suitland, MD.

Suffland Division
Ry 741, Entry 5545, Box 209
ND 10-ND 12, 1947



ADDRESS REPLY TO
THE BUREAU OF YARDS AND DOCKS
AND REFER TO

NAVY DEPARTMENT

WASHINGTON 25, D. C.

- HP11/BI-13
- TS-2-SI-20
- TS-7-SI-1
- TS-7-SI-2
- TS-7-SI-3
- TS-7-SI
- TS-6-SI-MASIVW

19 FEB 1947

ND 11
MN 2
7740

022047
0300

To: Commandant, Eleventh Naval District,
San Diego, 30, California

Subject: Discontinuance of Target and Bombing Ranges.

Reference: (a) Ltr. Sec. Nav. dated 24 Jan. 1947, Same subject,
to Sec. Interior

1. In Reference (a) the Secretary returned to the jurisdiction of the Department of the Interior the public lands used for targets Number 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98 and 99, all in the general area of the Salton Sea. The Secretary of the Interior requests information "whether any harmful elements, such as unexploded shells or ammunition, which may have been deposited upon the lands as a result of Navy Department use, have been removed or rendered harmless." It is requested that such information in the premises as it is possible to obtain, be forwarded to this Bureau.

Jack E. Cochran
By direction of Chief of Bureau

CC: SecNav
C.N.O.
BuOrd
BuAer

Navy Department.

Correspondence to Deputy Administrator, Office of Real Property Disposal,
dated 11 February 1948,
regarding the declaration of surplus for Holtville Auxiliary Air Station.
Record Group 72; Entry 69A-2454; Box 2; File: California.
National Archives-Suitland Branch, Suitland, MD.

Sutland Branch
Rg 72, Entry 69A2454
Box 2, California.

ADDRESS REPLY TO
THE BUREAU OF YARDS AND DOCKS

AND REFER TO

ND11/AL-15
TS-2-100
B-413.5/DCE/vv

NAVY DEPARTMENT

WASHINGTON 25, D. C.



11 FEB 1948

Deputy Administrator
Office of Real Property Disposal
War Relocation Administration
Central Mail Room 1313
Railroad Retirement Building
Washington, D. C.

Dear Sir:

Reference is made to Navy Department Declaration of
Surplus No. 125 dated June 10, 1946 of the Naval Auxiliary
Air Station, Holtville, California.

Enclosed herewith is Form SPA-6 (Attachment). This
Attachment is used to indicate as surplus property lands trans-
ferred to the Department of the Navy by the Department of the
Interior under Public Land Order 424. Also included are certain
lands of unclassified property considered part of the estate, which
were not covered by the original Declaration.

If further information is desired, please advise this
Bureau.

Very truly yours,

Wilfred P. Tiencken
By direction of Chief of Bureau

Encl. (2)
Form SPA-6 No. 125
(Attachment)

cc: SPA (copy)
Assistant (Naval Div)
Navy
BUSA (Standard) NW-4
COMNAV-11
COMNAV-22
Lt. Larkin, Rm. 4229, Main Navy.

⑤
L-11-3/11/48

80430049

①

U. S. Marine Corps Air Station.

Correspondence to Chief, Bureau of Ordnance,
dated 10 July 1946,
regarding Rocket Firers.

Record Group 74; Entry 4444; Box 194: KV-L1-1, Jun-July 1946.
National Archives-Suitland Branch, Suitland, MD.

Nat'l Archives Suitland
Rg 74, Entry 4444, Box 194
KV Thru Lt-1 Jun Jly 1946

IN REPLY REFER TO No.

L21-5/MFO:dd
Serial 1475-40

U. S. MARINE CORPS AIR STATION
EL CENTRO, CALIFORNIA



10 July, 1946.

To: Chief of the Bureau of Ordnance (Section MN2C)
Navy Department, Washington 25, D. C.

Subj: Rocket Firers (El Centro S.R. 186-46)

Ref: (a) BuOrd. Air Mail ltr. KV(Mn2a) Serial 1519 of 27 June, 1946.
(b) NAS El Centro NEX 210045 of June.

KV Mn2
lrm

1. After receipt of reference (a), a careful search at this station reveals the fact that subject Rocket Firers have been received from the Naval Ammunition Depot at Hawthorne. However, the shipment was not marked with the shipment request number, and therefore was not properly identified with the original request.

2. Material was correct as received, and the order is therefore considered complete.

071546 0444

M. G. Oliver
M. G. OLIVER, LT(SC)USN
Supply Officer.

U. S. Pacific Fleet.

"COMFAIR West Coast Service and Training Munition Requirements,"
dated 26 January 1946.

Record Group 74; Entry 4444; Box 287; File: ND8-ND11,1946.
National Archives-Suitland Branch, Suitland, MD.

DECLASSIFIED PER EXECUTIVE ORDER 12356, SECTION 3.3, NND PROJECT
NUMBER NND 917566, BY J3/CWC, DATE 12/14/95

COPI

UNITED STATES PACIFIC FLEET
AIR FORCE
FLEET AIR, WEST COAST

046

26 Jan 1946

C O N F I D E N T I A L

COMFAIR WEST COAST SERVICE AND TRAINING MUNITION REQUIREMENTS

	<u>NAS SAN DIEGO</u>	<u>NAAS BROWN</u>	<u>NAAS CAMP KEARNEY</u>	<u>MCAS EL CENTRO</u>	<u>NAAS LOS ALAMITOS</u>
<u>SERVICE</u>					
100# GP	300	114	---	126	---
500# GP	96	48	---	48	---
1000# GP	20	20	36	32	---
350# DB	72	---	72	---	---
Torpedoes	44	---	---	---	---
.30 Cal.	96,000	48,000	---	48,000	---
.50 Cal.	434,460	145,050	172,800	195,630	---
20-MM	19,200	9,600	---	9,600	---
5' HVAR	900	342	---	272	---
Tiny Tin	---	---	---	12	---
<u>TRAINING (For a four month period)</u>					
100# Live	744	244	162	---	---
500# Live	318	122	---	---	---
1000# Live	372	122	81	---	---
325-350# DB	54	---	81	---	---
100# H2O fill.	7,440	2,440	810	11,176	1,220
Minatures	22,320	7,320	2,430	20,176	3,660
SCAR (fast)	7,632	2,928	---	53,292	1,464
S. S. A. R.	---	---	---	2,500	---
Tiny Tin	---	---	---	1,224	---
.30 Cal	696,000	348,000	---	348,000	174,000
.50 Cal	5,193,120	1,776,960	864,000	2,380,560	888,480
20 MM	139,200	69,600	---	69,600	34,800

ENCLOSURE (A)

ENCLOSURE (A)

C
O
P
Y

030646 0318

APPENDIX F

**REAL ESTATE DOCUMENTS
(NOT USED)**

APPENDIX G

**NEWSPAPERS / JOURNALS
(NOT USED)**

APPENDIX H

INTERVIEWS

TELEPHONE OR VERBAL CONVERSATION RECORD

DATE 4 January 1996

For use of this form, see AR340-15; the proponent agency is the Adjutant General's Office.

SUBJECT OF CONVERSATION: 2nd Quarter Sites		
OUTGOING CALL		
PERSON CALLING Rochelle Ross	ADDRESS CELMS-PM-M	PHONE NUMBER AND EXTENSION 314-331-8784
PERSON CALLED Command Master Chief Tom Dye	OFFICE Naval Amphibious Base Building 156, 2nd floor Coronado, CA	PHONE NUMBER AND EXTENSION 619-437-0732

SUMMARY OF CONVERSATION:

Dick Thiel and Dave Frandsen (HFA, Inc) gave me Tom's name and number.

Theresa, Randy and I will be stopping by the 16th of January to talk to Tom and his assistant Rick Kiser regarding any other possible points of contact who may have information regarding our sites this quarter.

He did suggest we contact the El Centro Naval Facility and go through their historical files.

The EOD unit in charge out there is the EOD North Island. The POC is the Officer in Charge, Lt Martinez at 619-545-0486.

TELEPHONE OR VERBAL CONVERSATION RECORD DATE 11 January 1996
 For use of this form, see AR340-15; the proponent agency is the Adjutant General's Office.

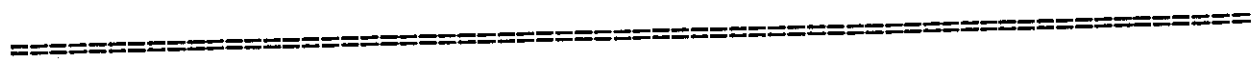
SUBJECT OF CONVERSATION: 2nd Quarter Sites		
OUTGOING CALL		
PERSON CALLING Rochelle Ross	ADDRESS CELMS-PM-M	PHONE NUMBER AND EXTENSION 314-331-8784
PERSON CALLED Officer in Charge, LT. Martinez and Officer Branum (used to the OIC)	OFFICE Naval EOD, North Island	PHONE NUMBER AND EXTENSION 619-545-0486

SUMMARY OF CONVERSATION:

Command Master Chief, Tom Dye, of the Naval Amphibious Base gave me the above name and number.

I spoke to Mr. Branum. Once Lt Martinez returns, they will review their files for UXO recovered around El Centro. He also suggested I call the Army 70th EOD located in Point Loma, 619-553-8500. This detachment maintains an historical database which contains all past recovered ordnance from all local EOD units. The Naval EOD send their info to this office.

Next Tuesday, when in San Diego, I am to call back to find out what information they were able to find. Lt. Martinez may meet us at Tom Dye's office Tuesday morning.



Neither the Army 70th EOD or the EOD North Island had any information on any of the Imperial County Ranges for us.

APPENDIX I

PRESENT SITE PHOTOGRAPHS

ORDNANCE AND EXPLOSIVES
CHEMICAL WARFARE MATERIALS
ARCHIVE SEARCH REPORT
FINDINGS

FOR
KANE SPRINGS SBT #62
KANE SPRINGS, CALIFORNIA

PROJECT NO. J09CA017301
APPENDIX I

PRESENT SITE PHOTOGRAPHS

Page I-1

PHOTO #1 - M38 100-LB. PRACTICE BOMB
(LOCATION: N 33°04'25.1" W 115°47'52.5"; PG 12205 59901)

PHOTO #2 - VIEW FACING SOUTHWEST
(LOCATION: N 33°04'29.25" W 115°47'50.19")

Page I-2

PHOTO #3 - 20MM CASING AND M8 LINKS FROM 20MM
(LOCATION: N 33°04'13.9" W 115°48'34.6"; PG 11119 59547)

PHOTO #4 - VIEW FACING NORTH NORTHEAST; CONCRETE BLOCKS
FROM POSSIBLE TARGET LOCATION
(LOCATION: N 33°03'50.9" W 115°48'36.7"; PG 11073 58834)



PHOTO #1
M38 100-LB. PRACTICE BOMB
(LOCATION: N 33°04'25.1" W 115°47'52.5; PG 12205 59901)



PHOTO #2
VIEW FACING SOUTHWEST
(LOCATION: N 33°04'29.25" W 115°47'50.19")



PHOTO #3
20MM CASING AND M8 LINKS FROM 20MM
(LOCATION: N 33°04'13.9" W 115°48'34.6"; PG 11119 59547)



PHOTO #4
VIEW FACING NORTH NORTHEAST; CONCRETE BLOCKS
FROM POSSIBLE TARGET LOCATION
(LOCATION: N 33°03'50.9" W 115°48'36.7"; PG 11073 58834)

APPENDIX J

**HISTORICAL PHOTOGRAPHS
(NOT USED)**

APPENDIX K

HISTORICAL MAPS / DRAWINGS

APPENDIX L

**SITE SAFETY AND HEALTH PLAN/
SITE INSPECTION REPORT**

SITE SPECIFIC SAFETY AND HEALTH PLAN (SSHP)

OE/CWM Archives Search Site Inspection Visit

Kane Springs SBT #62

Imperial County, CA

Site #J09CA017301

1. REFERENCES:

- a. Safety Manual, CELMS-PM-M, 16 Sep 93 w/ Ch1.
- b. SOP for Reporting Ordnance and Unexploded Ordnance (UXO), CELMS-PM-M, 19 Jan 95.
- c. OEW Guidance Regarding Coordination with EOD Organizations, 10 Jan 95.

2. GENERAL: This plan prescribes the safety and health requirements for team activities and operations conducted to determine the presence of ordnance and explosive waste and /or chemical warfare materials at the specified site.

a. The Safety Officer has final authority on all matters relating to safety. The safety rules will be followed at all times. Any member of the team may stop operations if they observe a situation or activity which poses a potential hazard to any individual or to the operation. All actions must comply with the common sense rule!

b. All team members will be aware of the local emergency numbers and the location of the nearest telephone.

c. A minimum of two and a maximum of eight persons will be allowed on-site at any one time.

d. The property owner is not required to sign the SSHP, but should be politely asked to participate in the safety briefing.

3. MISSION: Reconnoiter, document, and photograph areas on Kane Springs SBT #62 suspected to be contaminated with UXO and/or toxic chemical munitions.

4. SAFETY PRECAUTIONS: All team members will stay within sight of each other while

on site. A first aid kit will be on hand. The following three basic safety rules apply at all times:

a. Rule 1 - Do not touch or pick up anything at the site.

b. Rule 2 - Do not step anywhere you cannot see where you place your foot.

c. Rule 3 - There will be no eating or smoking at the site. Hands will be washed after the survey and prior to eating. Drinking fluids should be done during periodic breaks.

5. **SITE COMMUNICATIONS:** The primary means of communicating with other team members will be by voice. Team members will always remain within sight of each other. Cellular telephones should be carried to facilitate and expedite calling for emergency medical services.

6. **NATURAL HAZARDS:** This area is desert terrain with dry washes and desert vegetation. Venomous animals include rattlesnakes, scorpions, and spiders.

7. **ORDNANCE HAZARDS:** Mainly a practice bombing range, it was also used for some gunnery as evidenced by links from 20mm and .50 caliber ammunition having been found on previous visits. Practice bombs may include miniature (3-lb.), and water-filled varieties.

8. **HAZARD EVALUATION:** Estimate the overall hazards using the following guidelines: (check appropriate item)

Low (small arms ammunitions)

Moderate (practice bombs with spotting charge)

High (high explosive munitions, toxic chemicals, WP)

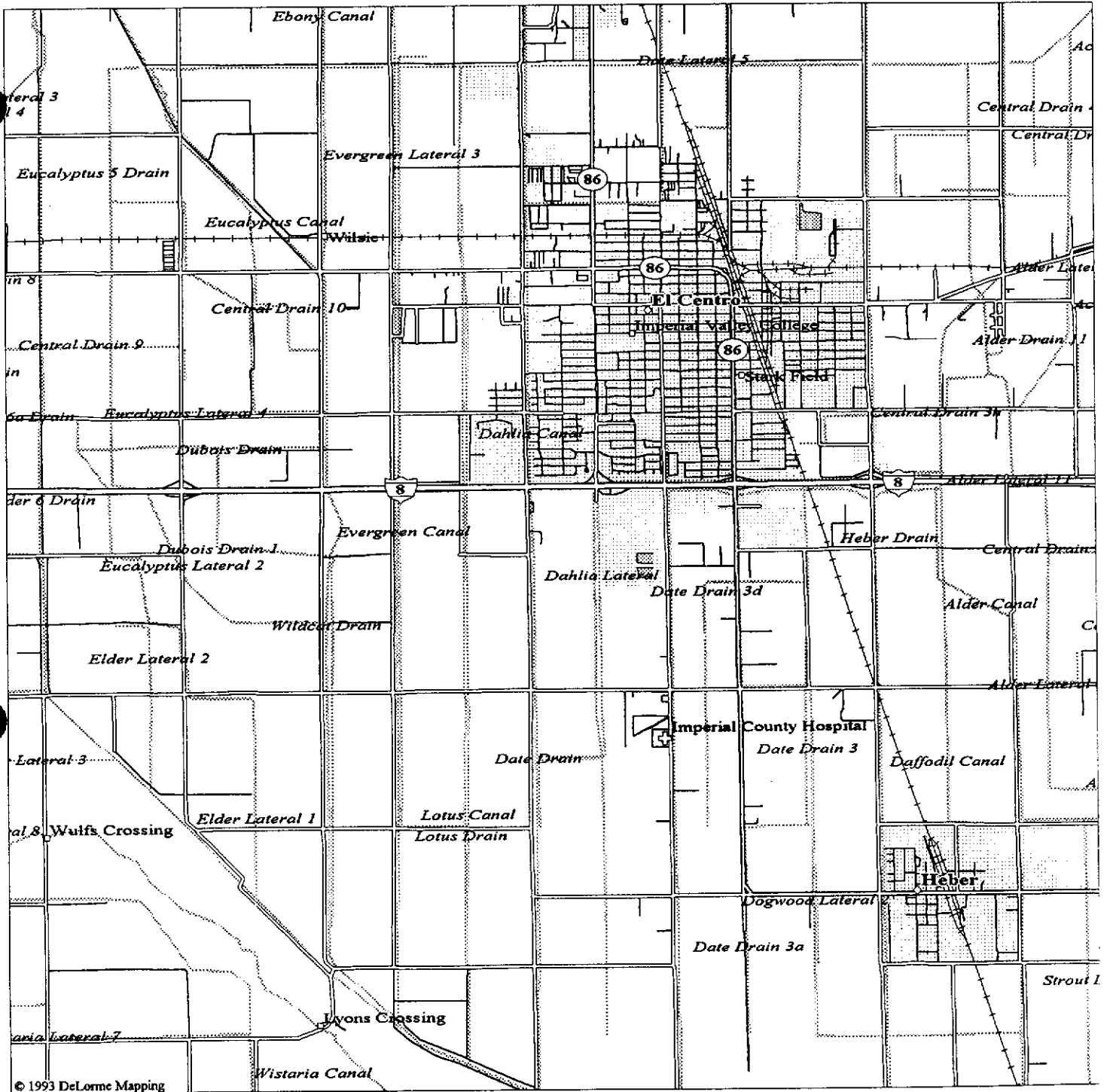
Unknown

9. **EMERGENCY PROCEDURES:** First aid will be rendered for any injuries. In the event of a detonation, everyone should freeze until the situation can be assessed by the team leader. Unnecessary injuries can be avoided by not panicking and planning a logical course of action, which may include retracing your steps out of an impact area. Emergency medical services will be contacted by the most expeditious means available.

10. **SAFETY STATEMENT:** Safety is everyone's business. No unnecessary risks will be taken to obtain photos or other data. Team members are responsible for notifying the project Manager or safety Officer of any physical conditions that may impede or prevent their

MANDATORY MINIMUM SAFETY GEAR

First aid kit (individual)	<u>✓</u>
Survival kit	<u>✓</u>
Fire starter	<u>✓</u>
Space blanket	<u>✓</u>
Whistle	<u>✓</u>
Mirror	<u>✓</u>
Cellular phone	<u>✓</u>
Flash light	<u>✓</u>
Survey tape	<u>✓</u>
Canteen	<u>✓</u>



LEGEND

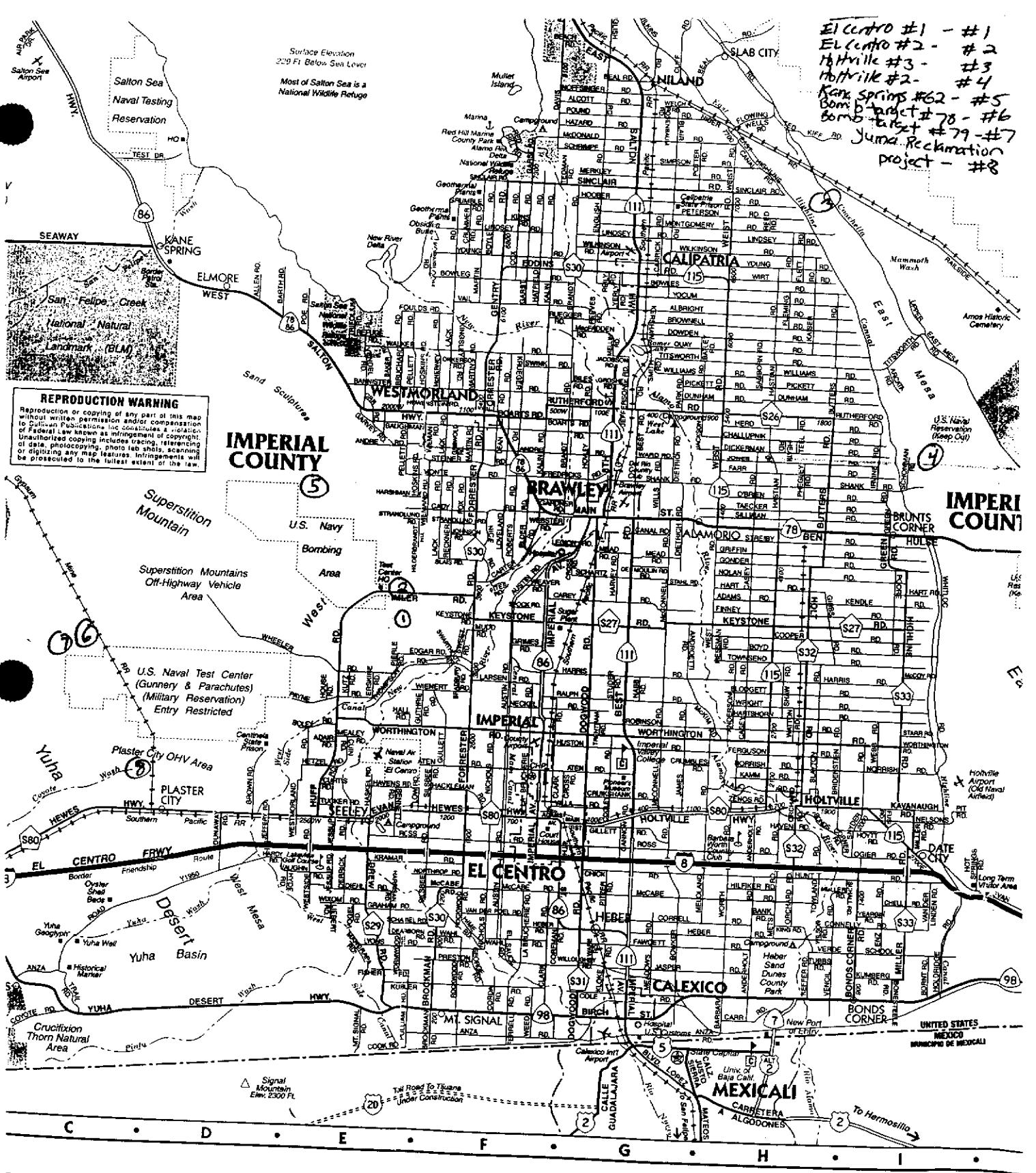
- | | | | |
|--|----------------------|--|--------------------|
| | Population Center | | Major Street/Road |
| | State Route | | State Route |
| | Geo Feature | | Interstate Highway |
| | Town, Small City | | Railroad |
| | Hospital | | River |
| | Interstate, Turnpike | | Airfield |
| | Street, Road | | Open Water |
| | Hwy Ramps | | |

Scale 1:62,500 (at center)

1 Miles

2 KM

Mag 13.00
Mon Feb 05 11:07:06 1996



El Centro #1 - #1
 El Centro #2 - #2
 Holtville #3 - #3
 Holtville #2 - #4
 Kank Springs #62 - #5
 Bomb target #78 - #6
 Bomb target #79 - #7
 Yuma Reclamation project - #8

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RECYCLING, INC.
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 608-808
 608-808

...and don't forget our

SITE INSPECTION REPORT

11 March 1996

MEMORANDUM FOR Mike Dace

SUBJECT: Trip Report for Site Visits to Bomb Target #78, Bomb Target #79, Holtville Target #2, Holtville Target #3, **Kane Springs SBT #62**, Yuma Target Reclamation Project, El Centro Rocket Target Range #1, and El Centro Rocket Target Range #2 during the week of February 19, 1996.

Personnel on the trip:

Rochelle Ross (PM-M)
 Gregg Kocher (PM-M)
 C. John Daly (PD-R)

Monday, February 19, 1996:

We departed St. Louis, MO and arrived in Yuma, AZ late afternoon. Due to problems with the airline, we stayed in Yuma for the night.

Tuesday, February 20, 1996:

We departed Yuma, AZ and drove to El Centro, CA for our 8:00 am meeting with the Operations Officer for El Centro Naval Air Facility, Chief Warrant Officer Durham. We discussed our plan of action for the week. A portion of a few of our sites are within the Naval Facility's boundaries, flight lines, and/or restricted air space. Because of this, it was necessary to coordinate our site visit with their training schedule. Chief Warrant Officer Durham would call Yuma for their schedule and inform us this afternoon when we can go into Holtville Target #2, southwest of their Target #95, and the Yuma Reclamation Project, south of their Target 103A. We then provided Mr. Fred Rivera, Naval Air Facility, Public Works Department, with our research information and our schedule for site visits. Before we started our site visits, we picked up a radio from Range Control and discussed our site visit schedule with Mr. Al Wilson, Range Control Contract Supervisor.

We began on El Centro Rocket Target Range #1 in the northwest corner of the range and criss-crossed through the area, covering a good portion of the property. We found several pieces of ordnance related items and scrap, including 2-prong electrical connector plugs and nozzle closures for 2.25" and/or 3.25" rocket motors which were scattered throughout the range. The description of these items and their location are:

<u>Description</u>	<u>Location</u>
Tail Boom from a 25-lb practice bomb, MK 76	N 32°55'31.7" W 115°40'24.9" (PG 24020 43613)

Tail Tube Assembly from 25-lb, MK 76	N 32°55'28.3" W 115°40'30.6"
Several scattered MK 76's	N 32°55'28.3" W 115°40'30.6"
20mm Dummy; early 1970's manufacture, cartridge case marked Mk 5 Mod 0 and projectile marked Mk 14 Mod 0	N 32°55'17.3" W 115°41'27.6"

After completing El Centro Rocket Target Range #1, we stopped by Range Control where we were given the dates and times we could go into Holtville Target #2 and the Yuma Reclamation Project. We then drove to El Centro Rocket Target Range #2. We began on the southern boundary of the site, made a loop through the area and returned to the jeep after we found a 5" Rocket Warhead and what appeared to be the target center due to the abundance of ordnance debris. The description of items found and their location are:

<u>Description</u>	<u>Location</u>
.50-caliber casing and link	N 32°56'57.8" W 115°40'26.3"
.50-caliber tracer bullet	N 32°57'17.4" W 115°40'47.7"
5" Rocket Warhead, MK 1 series	N 32°57'16.7" W 115°40'56.3" (PG 23164 46837)
Possible target center; 3.25" rocket motor, 2.25" rocket motor, 2.25" target rocket, 20mm projectile, TP-T, and scrap from 3-lb miniature practice bombs	N 32°55'25.0" W 115°40'58.3"

We also found, scattered throughout the range, 2-prong electrical connector plugs and nozzle closures for 2.25" and/or 3.25" rocket motors. We notified Range Control when we located the 5" Rocket Warhead. We marked this area and the possible target area and provided the GPS location and type of ordnance items found to the Range Control.

Wednesday, February 21, 1996:

Greg Boghossian from the Los Angeles District Corps of Engineers joined us for the day. Our first stop was at Fred Rivera's office where we informed him of yesterday's findings and provided him with Greg's security letter. Mr. Rivera would like a copy of our trip report, maps of our sites, and a copy of the pictures we took. He will receive this information in a few weeks.

We stopped by the Range Control to find out what happened with the ordnance we found on Tuesday and to pick up a radio. Since the employees at the Range Control

are contractors and cannot do anything outside of their contract, we contacted Chief Warrant Officer Durham and informed him of the items found the day before. Mr. Al Wilson faxed him a map with the GPS locations. He then would have someone from his office go to the site today.

An eastern portion of Holtville Target #2 is within the Navy's current Target #95. Between 10:00 am and 11:00 am, when the target is closed for maintenance, we are allowed to do our site visit. We began our site visit just off of Schoneman Road, criss-crossed through the area, covering a good portion of the property. We found several pieces of ordnance related items and scrap, including 2-prong electrical connector plugs and nozzle closures for 2.25" and/or 3.25" rocket motors scattered throughout the area. The description of these items and their location are:

<u>Description</u>	<u>Location</u>
Box fin from M38 100-lb practice bomb	N 33° 1'24.5" W 115° 18'32.8"
2.25" Target Rocket Motor, 2.25" diameter, 26" long	N 33° 1'28.8" W 115° 18'31.1"
Scrap from M38 100-lb practice bomb	N 33° 1'31.0" W 115° 18'29.0"
Most likely, the tail section of MK 21 500-lb practice bomb	N 33° 1'39.2" W 115° 18'32.2"
Most likely, the nose section of MK 21 500-lb practice bomb	N 33° 1'39.2" W 115° 18'32.2"
Most likely, the body of MK 21 500-lb practice bomb	N 33° 1'39.2" W 115° 18'32.2"
Lanyard; top disk is 3¾" diameter; overall diameter is 4¼"; possibly from an aircraft flare	N 33° 1'52.3" W 115° 18'32.2"
Unidentified stem; possibly part of an aircraft flare or electronic fuze	unknown location

On our return to the jeep, we walked through the location of the circular target as identified on the aerial photos. We found scrap from M-38 practice bombs scattered throughout the area.

After we completed the site visit we met with Mr. Chuck Phillips and his daughter, Mrs. Mathews of the Combat Heritage Museum at the former Holtville Army Air

Field. A previous phone call led us to believe that he and his daughter had a list of veterans names, information on the base's history, and inert ordnance. Unfortunately, the documents they had were already looked at when we visited the Pioneers Museum in Imperial. There was no other pertinent information available.

We continued on to Holtville Target #3. By the time we reached the site, it was too late to begin the site visit, therefore, we returned to Range Control to turn in the radio. We spoke to Pete, Range Control contract employee, who informed us that the Marine EOD out of Yuma, AZ were called in to detonate the 5" rocket warhead we located the day before. We were also told that there were two detonations, one of the rocket and one of an item located among the scattered ordnance items at the possible target center.

Thursday, February 22, 1996:

We checked in at the Range Control. Mr. Al Wilson informed us that there wouldn't be any training on Target 103A, just north of the Yuma Reclamation Project, between 7:00 am and 11:30 am. Therefore, we could complete the site visit on this site first, Target #78 second, and Target #79 third. Target #78 is within the flight line for the Navy's current Target 103A. If the pilots become nervous about us walking on Target #78, range control would radio us and instruct us to move to Target #79.

After struggling through the sandy wash, we reached the middle of the eastern side of the Yuma Project. We began walking at this point and covered a good sampled portion of the site. We found a few pieces of ordnance related items and scrap. The description of these items and their location are:

<u>Description</u>	<u>Location</u>
.30-caliber bullet, full metal jacket	N 32°50'21.8" W 115°53'47.9" (PG 03262 33829)
Fragment from M38 100-lb practice bomb	N 32°50'25.6" W 115°53'56.3" (PG 03043 33946)
25-lb practice bomb, Mk 76, Mod 5, recent vintage	N 32°50'31.3" W 115°54'26.0" (PG 02269 34113)

We next drove to Bomb Target #78. A jeep trail crosses over the Mining Railroad and through the southern half of the site. From where we parked, we walked north a short distance when we came across what appeared to have been the target area. Scrap from M-38 practice bombs was scattered throughout this area. Also found scattered throughout the area were 2-prong electrical connector plugs and nozzle closures for 2.25" and/or 3.25" rocket motors, .50-caliber casings, .50-caliber armor piercing bullets, and 20mm. The description of other items and their location are:

<u>Description</u>	<u>Location</u>
Scrap from M38 100-lb practice bomb	N 32°55'43.1" W 115°55'32.1" (PG 00452 43695)
View of possible target, facing NE, several pieces of scrap from M38 100-lb practice bombs	N 32°55'51.3" W 115°55'34.3"
25-lb practice bomb w/o tail boom	N 32°55'56.6" W 115°55'8.6"
3-lb Miniature Practice Bomb, AN/MK 23	unknown location
Tail Section from unknown item	N 32°55'58.0" W 115°55'4.6"
Unidentified item; possible target drone	just SW of N 32°55'58.0" 115°55'4.6"

After completing the site visit on Bomb Target #78, we continued along the jeep trail to the approximate center of Bomb Target #79. The Carizzo Wash runs through a large portion of the site. In this wash is where we located the remains of a 2.25" Rocket (location: N 32°55'7.3" W 115°57'29.9"). We also found a few pieces of HE frag and pieces from an M-38 100-lb practice bomb.

After completing the site visit on Bomb Target #79, we returned to Range Control to turn in the radio.

Friday, February 23, 1996:

Once we picked up a radio from Range Control, we drove to Holtville Target #3. We began our site walk in approximately the center of the northern boundary. We covered a good sampled area of the site while avoiding the heavy vegetation located along the southern side and the middle of the western side. No ordnance related items were discovered on this site.

We traveled to our final site visit, Kane Springs SBT #62. We began walking in the northeast corner and continued south and west through the site. We found several ordnance items, including .50-caliber and 20mm links, .50-caliber and 20mm casings, scrap from M-38 100-lb practice bombs, and .50-caliber bullets. The descriptions and locations of the items found are:

<u>Description</u>	<u>Location</u>
M38 100-lb Practice Bomb	N 33°04'25.1" W 115°47'52.5" (PG 12205 59901)
20mm Casing and M8 links from 20mm	N 33°04'13.9" W 115°48'34.6" (PG 11119 59547)

Concrete blocks from possible target location

**N 33°03'50.9" W 115°48'36.7"
(PG 11073 58834)**


We completed the site visit and returned the radio to Range Control.

Saturday, February 24, 1996:

We departed El Centro, CA and returned to St. Louis, MO.


Rochelle Ross
Project Manager


Gregg Kocher
Safety Officer


John Daly
Historian

APPENDIX M
REPORT DISTRIBUTION LIST

ORDNANCE AND EXPLOSIVES
CHEMICAL WARFARE MATERIALS
ARCHIVES SEARCH REPORT
FINDINGS

FOR
KANE SPRINGS SBT #62
KANE SPRINGS, CALIFORNIA
IMPERIAL COUNTY

PROJECT NO. J09CA017301

APPENDIX M

REPORT DISTRIBUTION LIST

<u>Addressee</u>	<u>No. Copies</u>
Commander, U.S. Army Engineering and Support Center Huntsville, ATTN: CEHNC-OE-PM P.O. Box 1600 Huntsville, Alabama 35807-4301	2
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Commander, U.S. Army Chemical & Biological Defense Command ATTN: AMSCB-CIH, Bldg. E5183 Aberdeen Proving Ground, Maryland 21010-5423	1
U.S. Army Technical Center for Explosives Safety ATTN: SIOAC-ES Savanna, Illinois 61074-9639	1
Commander, U.S. Army Corps of Engineers, Los Angeles District ATTN: CESPL-EN-MI (Clinton Chien) P.O. Box 2711 Los Angeles, California 90053-2325	1
CELMS-ED-G	1
CELMS-ED-H	1
CELMS-PD-R	1
CELMS-PM-M	1

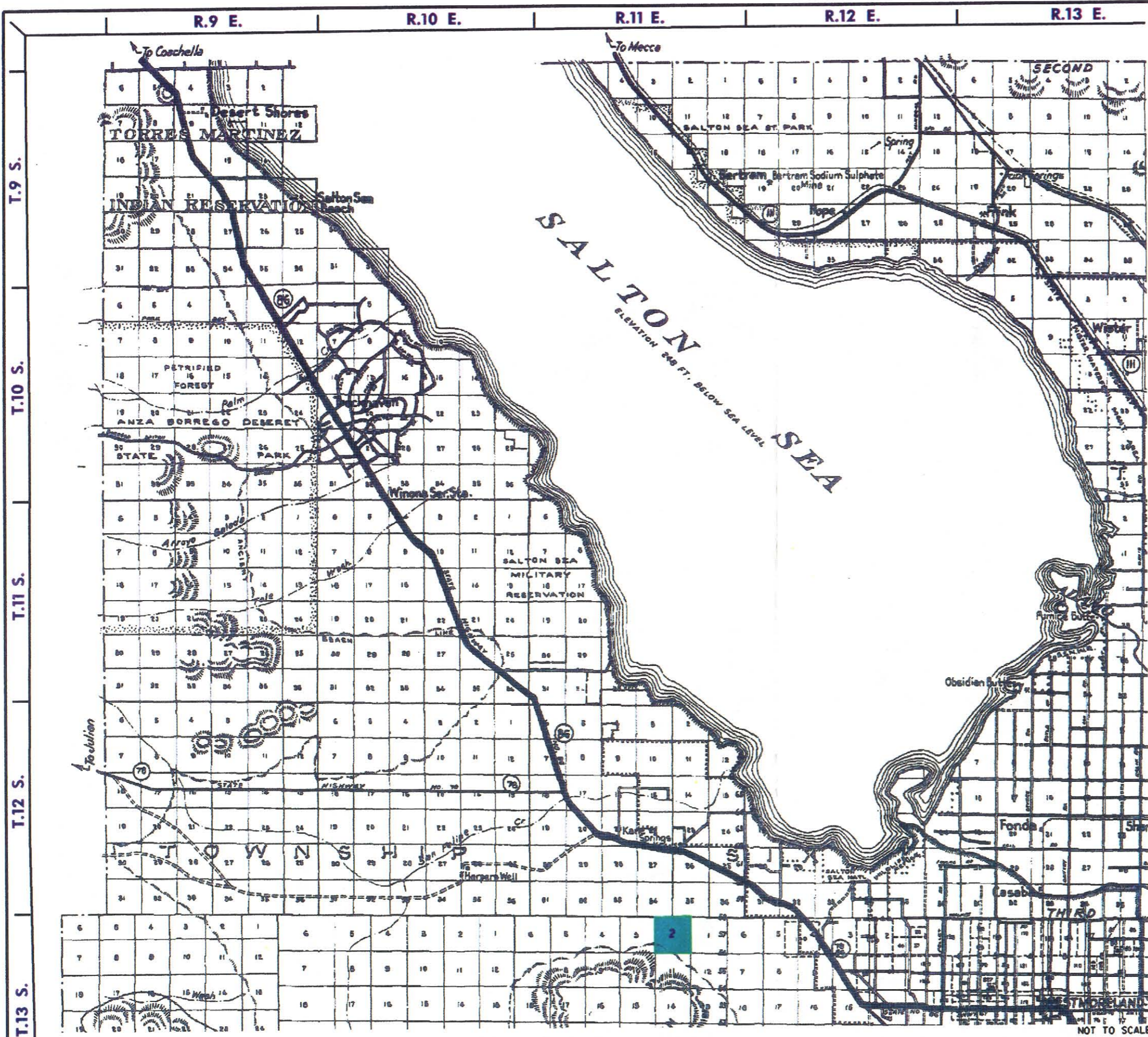
REPORT PLATES

ORDNANCE AND EXPLOSIVES
CHEMICAL WARFARE MATERIALS
ARCHIVE SEARCH REPORT
FINDINGS
FOR
HOLTVILLE TARGET BT NO. 2 (#95)
KANE SPRINGS, CALIFORNIA
IMPERIAL COUNTY

PROJECT NO. J09CA017301

REPORT PLATES

<u>PLATE</u>	<u>DESCRIPTION</u>
1	LOCATION MAP
2	SITE MAP
3	LOCATION OF FOUND ORDNANCE
4	PHOTO LOCATIONS
5	AERIAL PHOTO INTERPRETATION - 1949
6	AERIAL PHOTO INTERPRETATION - 1953
7	AERIAL PHOTO INTERPRETATION - 1994



T.9 S.
T.10 S.
T.11 S.
T.12 S.
T.13 S.

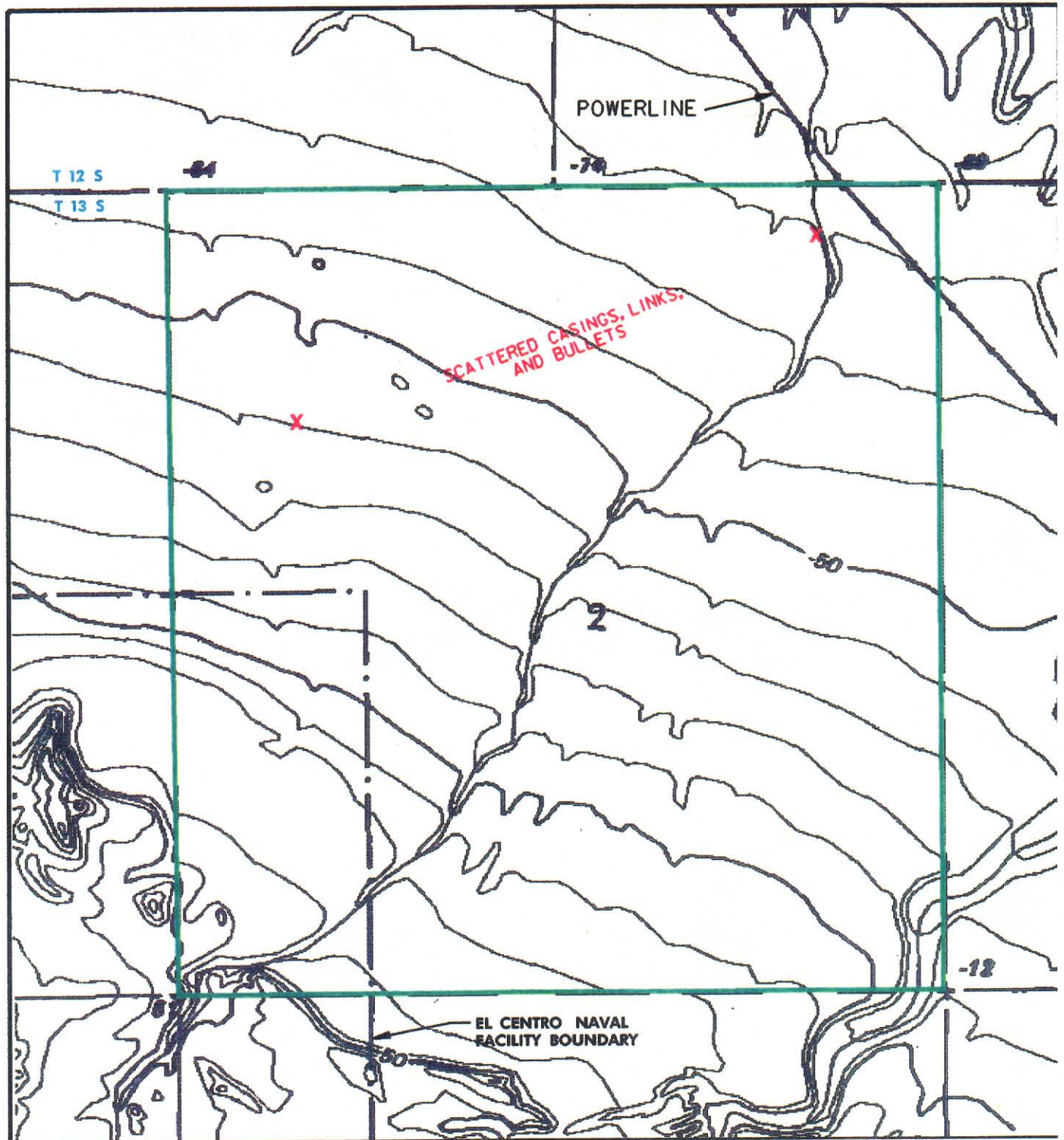
R.9 E. R.10 E. R.11 E. R.12 E. R.13 E.

PLATE 2

KANE SPRINGS SBT NO. 62
CALIFORNIA
IMPERIAL COUNTY
DERP-FUDS# J09CA017301
SITE MAP

PROJ. DATE: MARCH 1996	DATE OF MAP: UNKNOWN
18-MAR-1996 16:57	n:\oew96b\j3\map\kane\cty.dgn

NOT TO SCALE



LEGEND

X ORDNANCE LOCATION



NOT TO SCALE

PLATE 3

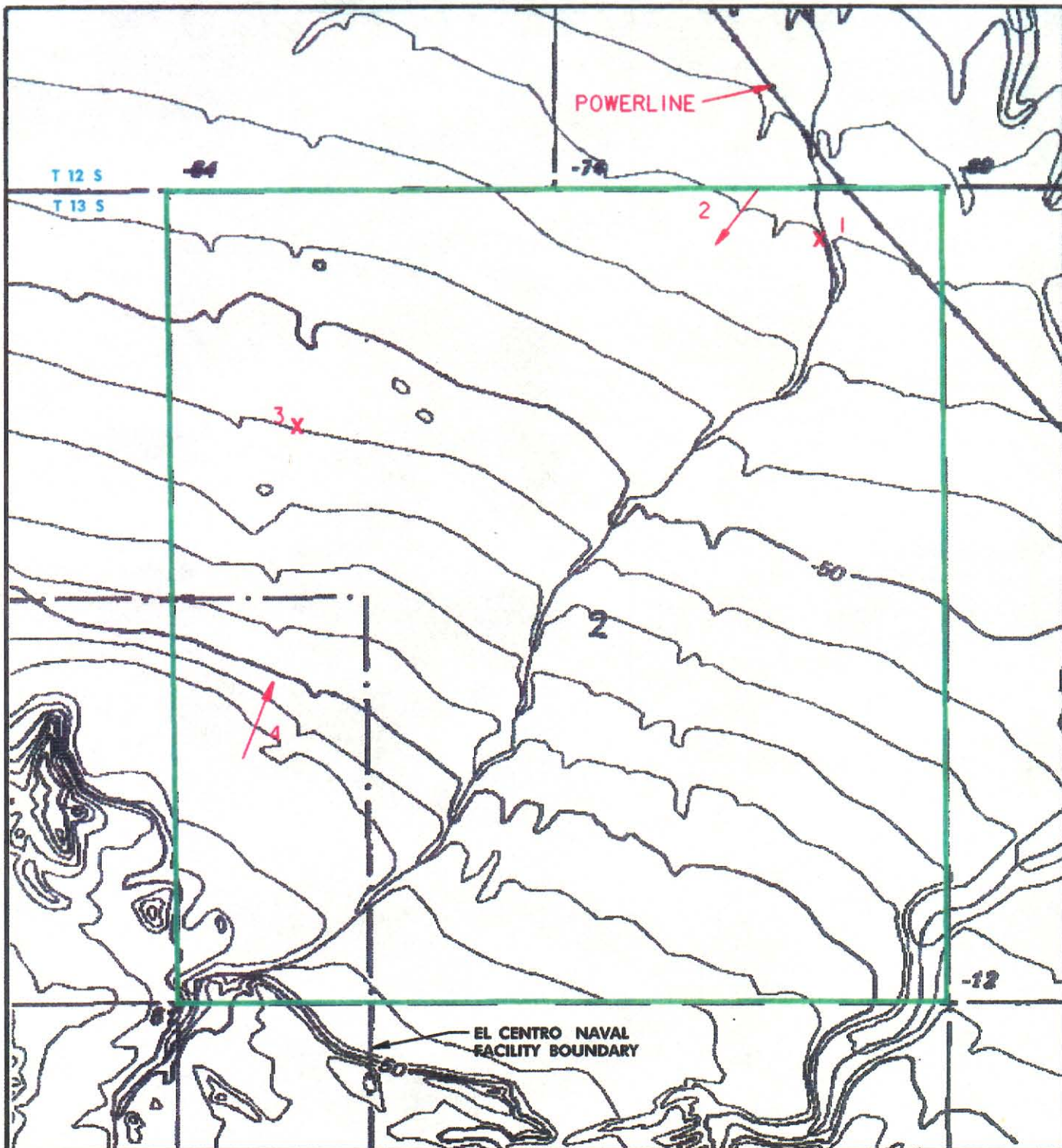
KANE SPRINGS SBT NO. 62
CALIFORNIA
IMPERIAL COUNTY
DERP-FUDS* J09CA017301
LOCATION OF FOUND ORDNANCE

PROJ. DATE: MARCH 1996

DATE OF QUAD: 1992

25-MAR-1996 10:01

n:oe96b*J3*quad*lkane_92.dgn



LEGEND

- PHOTO LOCATION
- X ORDNANCE LOCATION



NOT TO SCALE

PLATE 4

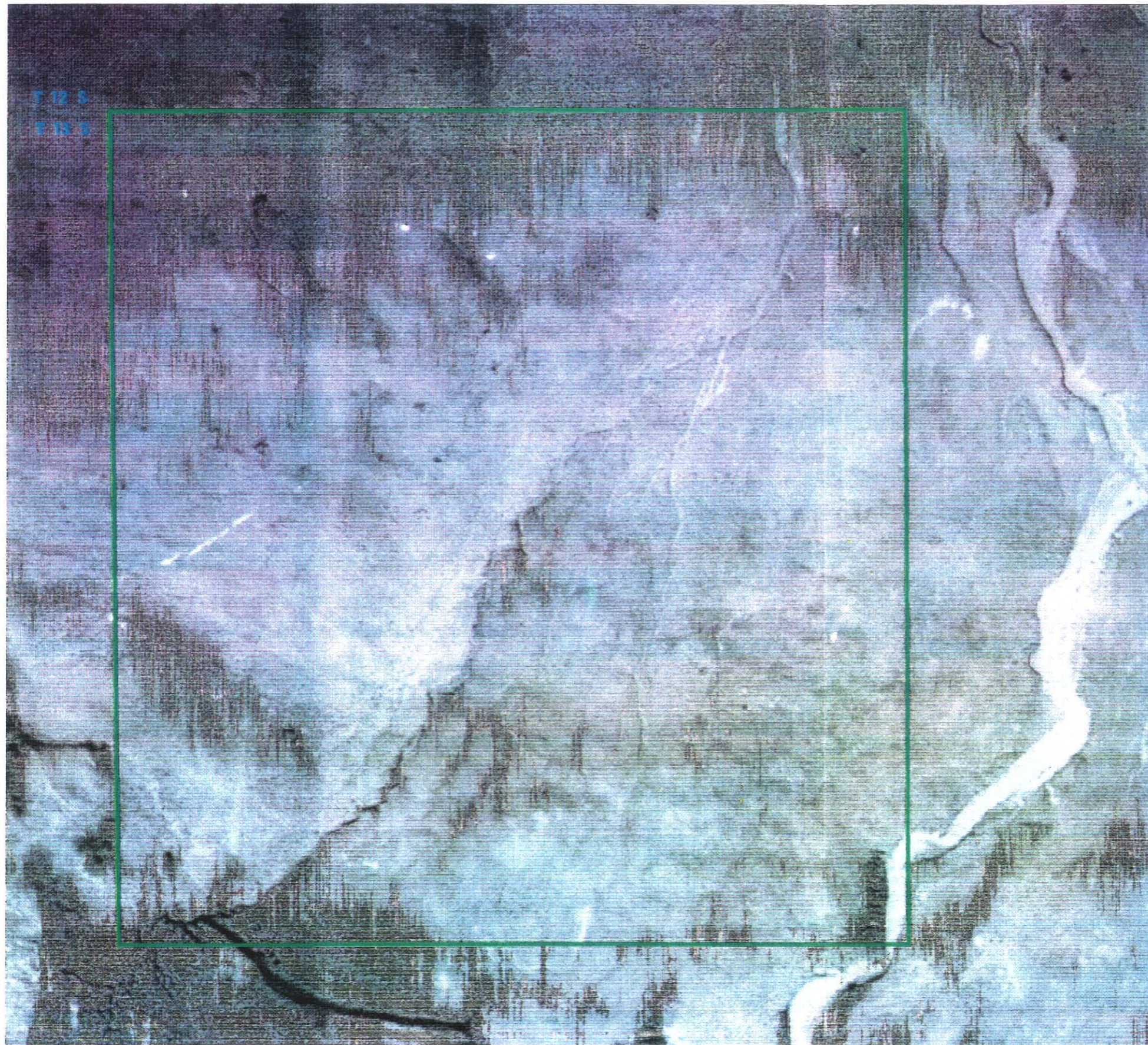
**KANE SPRINGS SBT NO. 62
CALIFORNIA
IMPERIAL COUNTY
DERP-FUDS# J09CA017301
PHOTO LOCATIONS**

PROJ. DATE: MARCH 1996

DATE OF QUAD: 1992

27-MAR-1996 08:43

n:\oew96b\j3\quad#2kane_92.dgn



NOTE:
NO VISIBLE EVIDENCE OF ORDNANCE AND
EXPLOSIVE (OE) ACTIVITY.

LEGEND



SITE BOUNDARY



PLATE 5

KANE SPRINGS SBT NO. 62
CALIFORNIA
IMPERIAL COUNTY
DERP-FUDS* J09CA017301
AERIAL PHOTO INTERPRETATION
1949 PHOTO

NOT TO SCALE

PROJ. DATE: MARCH 1996

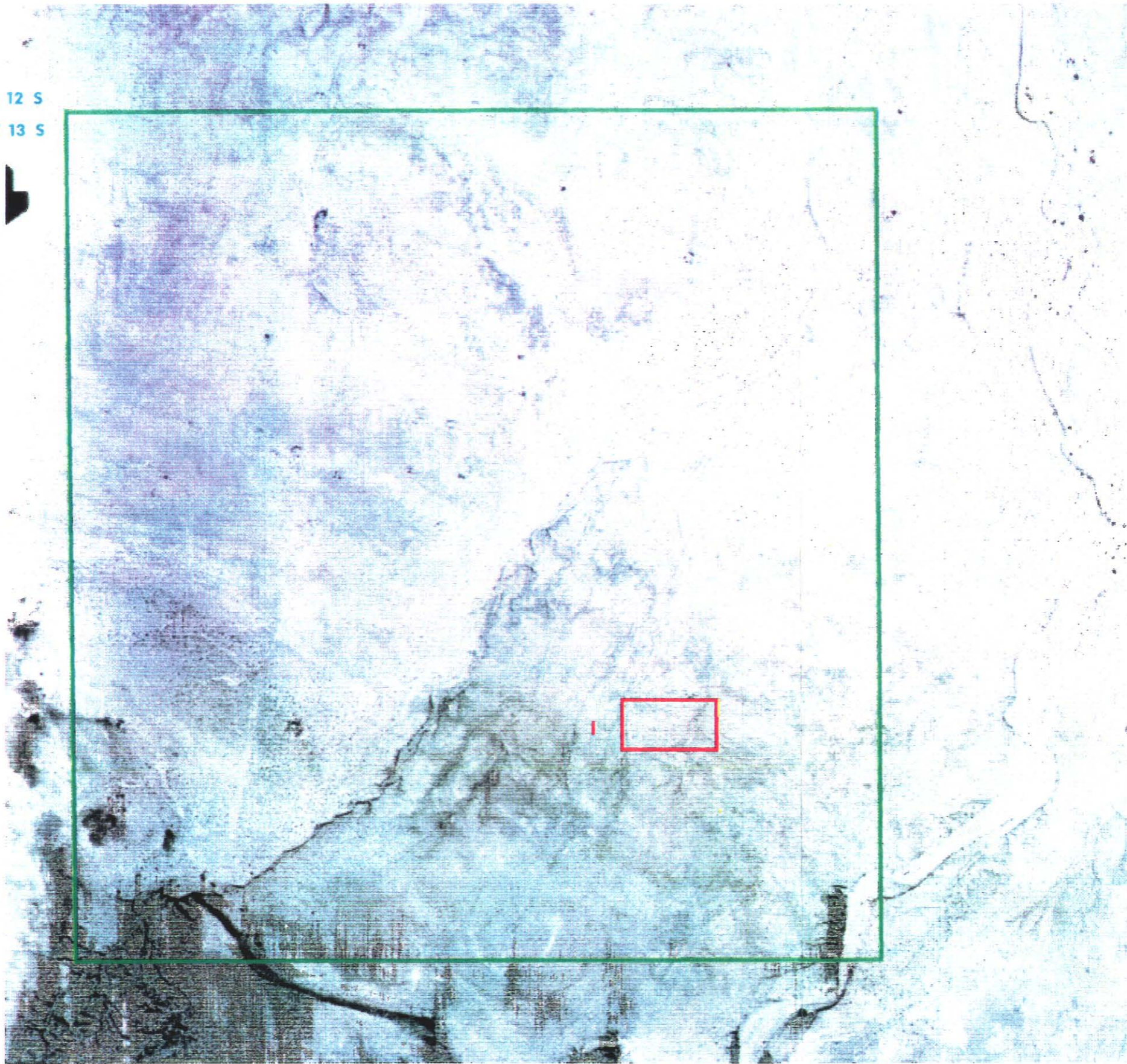
DATE OF PHOTO: 22 FEB 1949

21-MAR-1996 09:39

n:\oew96b\j3\photo\kanep490.dgn

<u>FEATURE NUMBER</u>	<u>FEATURE DESCRIPTION</u>
1.	POSSIBLE GROUND SCARS

T 12 S
T 13 S



NOTE:
NO VISIBLE EVIDENCE OF ORDNANCE AND
EXPLOSIVE (OE) ACTIVITY.

LEGEND

-  SITE BOUNDARY
-  FEATURE LOCATIONS

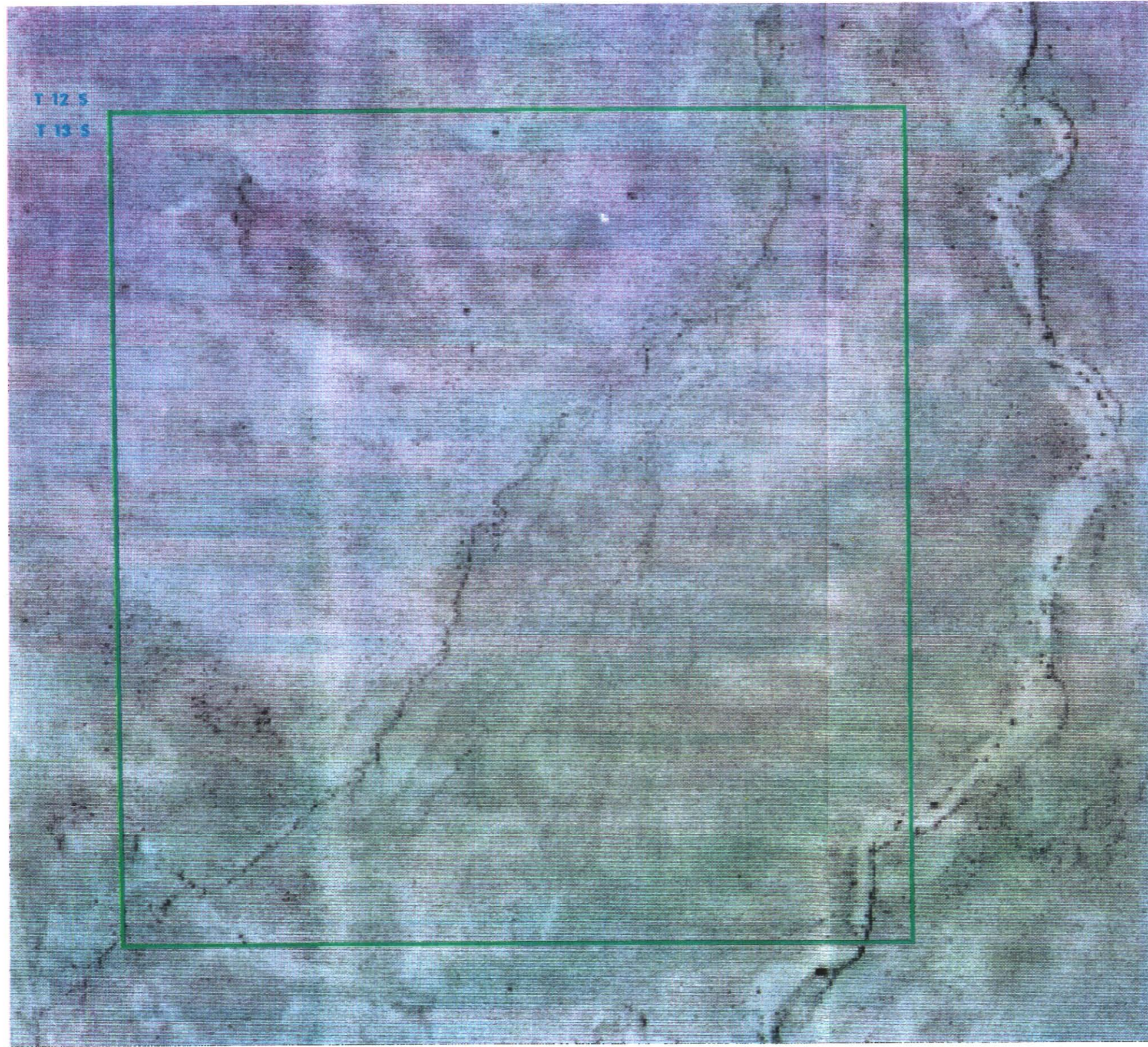


PLATE 6

KANE SPRINGS SBT NO. 62
CALIFORNIA
IMPERIAL COUNTY
DERP-FUDS* J09CA017301
AERIAL PHOTO INTERPRETATION
1953 PHOTO

NOT TO SCALE

PROJ. DATE: MARCH 1996	DATE OF PHOTO: 18 APRIL 1953
26-MAR-1996 01:24	nr:oe96b:j3photo:kansp530.dgn



NOTE:
NO VISIBLE EVIDENCE OF ORDNANCE AND
EXPLOSIVE (OE) ACTIVITY.

LEGEND



SITE BOUNDARY



PLATE 7

KANE SPRINGS SBT NO. 62
CALIFORNIA
IMPERIAL COUNTY
DERP-FUDS# J09CA017301
AERIAL PHOTO INTERPRETATION
1994 PHOTO

NOT TO SCALE

PROJ. DATE: MARCH 1996

22 MAY 1994

25-MAR-1996 13:37

n:\aew96b\j3\photo\kansp940.dgn