The Desert Training Center/
California-Arizona Maneuver Area,
1942–1944

HISTORICAL AND ARCHAEOLOGICAL CONTEXTS
The Desert Training Center/
California-Arizona Maneuver Area,
1942–1944
HISTORICAL AND ARCHAEOLOGICAL CONTEXTS

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Table 1. Assigned Strength of the DTC/C-AMA from Opening to Closing ........... 32
In October 1997, Statistical Research, Inc. (SRI), was contracted by the U.S. Department of the Interior Bureau of Land Management (BLM), California Desert District, with the administrative assistance of the U.S. Army Corps of Engineers (USACE), Los Angeles District, to prepare a historic context for the Desert Training Center/California-Arizona Maneuver Area (DTC/C-AMA) in the Mojave Desert. Historical research and field studies for this project were conducted between November 1997 and October 1998 by SRI historian Matt Bischoff, the project director and principal author. Teresita Majewski served as principal investigator, providing overall management of the project and editorial oversight of the report. S. Greg Johnson served as technical editor, and Daniel M. Shapiro proofread the document. Lynne Yamaguchi, SRI's production manager, oversaw the final formatting and production of the report, with assistance from Karen Barber. SRI's graphics manager, Cynthia Elsner Hayward, prepared the illustrations.

Thanks first go to Ms. Pamela Maxwell of the USACE Los Angeles District for her able administration of the project. I would particularly like to express my thanks to Mr. Rolla Queen, District Archaeologist, BLM, Riverside, California, whose foresight made the project possible. Queen also provided direction for the project and assisted in providing research leads. Mike Mitchell, archaeologist with the BLM, Palm Springs, California, office, provided additional insight, loaned several valuable items, and provided further research leads. BLM staff at the Needles Field Office also provided valuable assistance, which included the loan of a great deal of written material concerning the history of the DTC/C-AMA.

Don Hermanson and Barbara Root, both at the USACE Survey and Mapping Office, El Monte, California, assisted in locating several pertinent aerial photographs of the DTC/C-AMA, and provided a means by which to reproduce them.

Carol Rector, director, General Patton Memorial Museum, Chiriaco Summit, California, provided access to the museum's well-organized collections. John Lynch, of the Council on America's Past, offered suggestions and helpful direction on several resources. Suzanne Dewberry, curator, National Archives and Records Administration (NARA), Laguna Niguel, California, shared her almost limitless knowledge of the holdings of that institution.
Abstract

AGENCY: U.S. Department of the Interior Bureau of Land Management (BLM), California Desert District, Riverside, California, with the assistance of the U.S. Army Corps of Engineers, Los Angeles District, Los Angeles, California

PROJECT TITLE: Historical and Archaeological Contexts, Desert Training Center/California-Arizona Maneuver Area (DTC/C-AMA), 1942–1944, Mojave Desert, California

PROJECT DESCRIPTION: Prepare a historic context for the World War II-era DTC/C-AMA for the California Desert District, BLM. The project includes preliminary archaeological assessments of classes of extant resources. A National Register of Historic Places (NRHP) multiple property nomination for the DTC/C-AMA and an NRHP district nomination for Iron Mountain Divisional Camp have also been completed as part of this project.

LOCATION: Mojave Desert, southern California

NUMBER OF NATIONAL REGISTER OF HISTORIC PLACES (NRHP)-ELIGIBLE PROPERTIES: One multiple property submission and one NRHP district nomination
Introduction

In October 1997, Statistical Research, Inc. (SRI), was contracted by the U.S. Department of the Interior Bureau of Land Management (BLM), California Desert District, with the administrative assistance of the U.S. Army Corps of Engineers (USACE) Los Angeles District (Contract No. DACW09-96-D-005, Delivery Order No. 12) to provide a historic context for the World War II-era Desert Training Center/California-Arizona Maneuver Area in the Mojave Desert (DTC/C-AMA) (Figure 1). In addition to a historic context, the scope of work also required preparation of a multiple property submission for the resource as a whole and a nomination to the National Register of Historic Places (NRHP) for one of the divisional camps within the DTC/C-AMA.

The BLM has jurisdiction over the majority of the land that was formerly the DTC/C-AMA. This project was designed to aid the BLM in managing, protecting, and interpreting resources related to the DTC/C-AMA that are under its jurisdiction. Although the original facility also encompassed lands in southwestern Arizona, the current project addresses only those resources within the Mojave Desert of southern California (Figure 2).

During the opening days of World War II, more than 18,000 square miles of the Arizona and California desert were identified and developed by U.S. Army ground forces as an armor training facility. The facility was originally intended to prepare troops for the rigors of desert warfare in the forthcoming invasion of North Africa. Operating between 1942 and 1944, the training area expanded far beyond this original scope, and became known as the DTC/C-AMA in 1943 to reflect its new role as a maneuver area. Countless reminders of this massive training facility can be found throughout the deserts of Arizona and California today. In California, remaining features include training camps, airfields, bivouacs, and maneuver areas, as well as more ephemeral features, such as tank tracks. The complex represents a significant event and period in U.S. history and is considered eligible for listing in the NRHP. Although NRHP listing was recommended by the BLM in the Desert Training Center/California-Arizona Maneuver Area Interpretive Plan (BLM 1986), the BLM currently has no systematic inventory or evaluation of this important resource.

Objectives

The primary goal of the current project is to provide a historic context for the DTC/C-AMA. The context will aid in developing future management and interpretive plans for the various resources associated with the DTC/C-AMA. The context is an essential first step in listing the complex in the NRHP and will also provide a basis for evaluating the sites that constitute the DTC/C-AMA. The remaining resources are extremely fragile and present an enormous management and interpretive challenge. The sites are threatened by damage from off-highway vehicle and recreational use, as well as casual artifact collection and visitor use. Natural erosion is also taking its toll. Many remaining sites present an opportunity to interpret this important time in U.S. history. When properly protected and interpreted, the DTC/C-AMA has great potential to serve as an important heritage tourism focus for the area. The current project will be a foundation for
follow-up projects that will deal more specifically with the interpretation and preservation of individual sites.

Following this introduction, the report contains four chapters. Chapter 2 details the methods used to collect the information upon which the historic context presented in Chapter 3 is based. The property types used to construct the multiple property submission are introduced in Chapter 4, along with assessments of current condition and brief NRHP-eligibility recommendations for resources documented within each property type. The report concludes with management recommendations for the resources contained within the DTC/C-AMA.

Figure 1. General overview map of the Desert Training Center/California-Arizona Maneuver Area.
Figure 2. Map of the project area.
Methods

This chapter presents the methods used to complete the DTC/C-AMA project, which included archival research, archaeological documentation, and application of the NRHP evaluation process.

Archival Research

A limited amount of documentary material related to the history of the DTC/C-AMA had been collected by various BLM representatives throughout the past 20 years in attempts to better manage the resources. These materials include photographs, maps, letters, and articles from various periodicals. Most of these were assembled by staff from the BLM’s Needles and Palm Springs offices, which have jurisdiction over many DTC/C-AMA sites. The materials were compiled and analyzed during the current project in conjunction with additional material assembled during the archival research.

Several other reports already in the possession of SRI were consulted, compiled, and analyzed. Short pamphlets and articles, including The Land That Forgot, the Saga of General George Patton’s Desert Training Center (Henley 1989), The Desert Training Center/California-Arizona Maneuver Area (Howard 1985), and Patton’s Desert Training Center (Kennedy et al. 1984), were consulted for historical background, as well as sources of additional information. Several books detailing the history of World War II, and General Patton in particular, were consulted for general background information and for further research avenues. These sources included The Armies of George S. Patton (Forty 1996), The Patton Papers 1940–1945 (Blumenson 1974), and Patton: A Genius for War (D’Este 1995).

Several sources were collected at the University of Arizona Main Library, in Tucson. Most of these were secondary sources, consisting of abstracts, articles, and books that were used to locate additional sources of archival information.

Each class of written sources contains limitations and biases. Secondary sources, which include articles and books, reflect the standpoints of their authors. An author’s perspective must be borne in mind when evaluating the source. If, for example, an author is a fan of George Patton, his or her writing is bound to portray the general in a favorable light. Authors’ sources must also be scrutinized to determine inherent biases in the secondary document. Government documents, although supposedly more objective than secondary sources, possess their own limitations. Official army reports, for example, describe only those activities that are under the purview of the report. They often fail to mention “unofficial activities,” such as black market trading of goods and services. Diaries and journals, although thought to be honest and forthright, are often written with the expectation that they will be read by future generations. They often, therefore, omit important events that do not reflect favorably upon their authors. Correspondence is subject to similar weaknesses, including omission of important facts. Many primary and secondary sources were located at various repositories in southern California, including historical societies, museums, research institutions, government offices, and universities. Sources reviewed included press releases, official reports, diaries, newspaper accounts, and correspondence. These sources were compiled, organized, and
subjected to scrutiny. Each was evaluated for weaknesses and biases. The following repositories were visited:

**Bureau of Land Management**
Needles Field Office  
101 W. Spikes Road  
Needles, CA 92363  
(760) 326-7000

Palm Springs South Coast Field Office  
690 W. Garnet  
North Palm Springs, CA 92258  
(760) 251-4800

Yuma Field Office  
2555 E. Gila Ridge Road  
Yuma, AZ 85365

**General Patton Memorial Museum**
Chiriaco Summit, CA  
(619) 227-3483

**Los Angeles Public Library**
Local History Room  
Los Angeles, CA  
(213) 228-7000

**National Archives and Records Administration**
Southwest Branch  
Laguna Niguel, CA  
(714) 360-2626

**San Bernardino County Library**
Needles Branch  
1111 Bailey Avenue  
Needles, CA 92363

**San Diego Aerospace Museum**
Balboa Park  
San Diego, CA 92101

**San Diego Historical Society**
P.O. Box 81825  
San Diego, CA 92138

**University of California, Los Angeles**
Main Library  
Los Angeles, CA

**U.S. Army Corps of Engineers**
Los Angeles District  
Survey and Mapping Department  
El Monte, CA 91733

The following repositories were contacted, and relevant information and material were collected via the U.S. mail:

**3rd Armored Division Association**
P.O. Box 776  
Lynn, MA 01903

**4th Armored Division Archives**
University Archives, Room 19  
1408 West Gregory Drive  
Urbana, IL 61801

**6th Armored Division Association**
P.O. Box 5011  
Louisville, KY 40205

**11th Armored Division Association**
2328 Admiral Street  
Aliquippa, PA 15001

**Bancroft Library**
University of California, Berkeley  
Berkeley, CA

**California State Library**
California History Section  
Sacramento, CA

**Council on America's Military Past**
P.O. Box 1151  
Fort Myer, VA 22211

**Metropolitan Water District of Southern California**
1111 Sunset Blvd.  
Box 54153  
Los Angeles, CA 90054

**National Archives and Records Administration**
Archives I Textual Reference Branch  
Washington, DC 20408

Archives II Textual Reference Branch  
8601 Adelphi Road  
College Park, MD 20740-6001

Modern Military Headquarters Branch  
Military Archives Division  
Washington, DC 20408

Still Picture Branch  
Special Archives Division  
8601 Adelphi Road  
College Park, MD 20740-6001
Archaeological Research

Several trips were made to the original centers of DTC/C-AMA activities to better assess the condition and location of extant sites. These trips were not comprehensive but were made to verify the locations of sites reported in the written record or noted in photographs. All divisional camps were visited during these trips, as were several other types of sites, including bivouacs, depots, railroad sidings, maneuver and training areas, and airfields. These sites were photodocumented, and notes were made of current manifestations and conditions.

NRHP-Eligibility Evaluation

The National Historic Preservation Act (NHPA) of 1966, as amended, requires federal entities to identify and evaluate cultural resources under their jurisdiction, particularly in areas to be affected by federal undertakings. The NHPA also established the NRHP, which is maintained by the secretary of the interior. The NRHP provides standards by which resources are evaluated for eligibility for listing in the NRHP. For a resource to be eligible for inclusion in the NRHP, it must meet one or more criteria defined in Title 36, Part 60, of the Code of Federal Regulations (36 CFR 60). Four criteria have been established within this code (36 CFR 60.4), as well as a general stipulation that the property in question must be at least 50 years old. Eligibility of a resource may be based on any of the criteria, as noted below (National Park Service [NPS] 1995:2).

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, association, and:

A. that are associated with events that have made a significant contribution to the broad patterns of our history; or

B. that are associated with the lives of persons significant in our past; or

C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. that have yielded, or may be likely to yield, information important in prehistory or history.

The National Register process requires that the "significance" of a property be assessed according to the above criteria. Significance focuses on the strength of the associative values that qualify a resource or historic property for listing in the NRHP. To evaluate significance, one must first establish "historic contexts," which are defined as bodies of information about historic properties organized by three basic elements—theme, place, and time. More specifically, historic contexts are those patterns or trends in history by which a specific occurrence, property, or site is understood and its meaning (and ultimately its significance) within history or prehistory is made clear (NPS 1995:7). A comprehensive historic context is grounded in the thorough historical investigations undertaken for a project. The NRHP criteria further stipulate that, to be considered eligible for listing, a property must
possess integrity of location, design, setting, materials, workmanship, feeling, and association. According to the definitions established by the NRHP, “integrity is the ability of a property to convey its significance.” The NRHP also stipulates that “to retain historic integrity, a property will always possess several, and usually most, of the aspects” (Townsend et al. 1993:17).

Based on the research conducted for this project and the nature of the resources documented, SRI recommends that the DTC/C-AMA be nominated to the NRHP using a multiple property submission format (Hanks 1999; NPS 1991). This type of National Register submission was created to streamline the nomination and registration process for properties that share a common theme. A multiple property submission can include both individual properties and districts as long as they share similar physical characteristics and historical associations. Within the submission, information that is common to the group of resources—such as methods, bibliography, and historic context(s)—is presented just once, whereas information specific to each individual building, archaeological site, structure, or district is recorded on an individual NRHP registration form. Some multiple property submissions are written to establish the registration requirements for properties that may be nominated in the future, which makes the format exceptionally useful for management purposes.

A multiple property submission includes four components: a name for the multiple property listing, an associated historic context or contexts, an associated property type or types, and individual NRHP registration forms for each property or district to be registered. In the case of the proposed multiple property submission for the DTC/C-AMA, the name of the listing is “Desert Training Center/California-Arizona Maneuver Area (DTC/C-AMA).” Relevant historic contexts include World War II, 1939–1945, and U.S. military training and home-front preparation for World War II, 1942–1944. Within these broad contexts, SRI explored the specifics of U.S. preparation for World War II and U.S. military training as played out in the area encompassed by the DTC/C-AMA as well as the impact of significant American military figures such as Generals Patton and Walker. These themes mesh well with the new NPS thematic framework for history and prehistory (Little 1997), which includes topics such as the changing role of the United States in the world, shaping the political landscape, expanding science and technology, and transforming the environment.

Each multiple property submission must have at least one associated property type (additional property types can be submitted later, as necessary). In the case of the DTC/C-AMA, property types include divisional camps, airfields and airports, landing strips, bivouacs, maneuver areas, ranges, training areas, campsites, hospitals, quartermaster depots, railroad sidings, tank tracks and refuse deposits. Finally, each multiple property listing must have individual NRHP registration forms for each property or district to be registered. For this project, an NRHP district nomination has been prepared for the Iron Mountain Divisional Camp. It is clear that there are many classes of DTC/C-AMA–related features currently extant that have not been evaluated for NRHP eligibility. The present nomination “package” is designed to allow for the inclusion or exclusion of resources as they are encountered.

Another important aspect of the nomination process is the evaluation of integrity, including how resources reflect (or do not reflect) their historical associations. To make initial assessments of integrity, sites were visited to obtain information on current condition, including whether or not extensive disturbance had occurred or whether threats to the site existed.

NPS standards also require the documentation of each individually eligible resource. Standard documentation includes a U.S. Geological Survey (USGS) topographic map, a sketch map or aerial photograph, and a description of resources present at the site nominated, all of which are provided with the nomination documentation.
In the opening days of 1942, the world was torn apart by war; the United States had only recently been drawn into the global conflict, and the German army was advancing across Europe with relative ease. Several years earlier, the Italian army had invaded Libya and portions of Egypt in an attempt to link those areas with Italian East Africa. Following a wildly successful British counterattack against the hapless Italian forces, Adolf Hitler decided to bail out his ally. Several units from the German army, including what would become known as the Afrika Korps, were sent to North Africa. Led by the soon-to-become-famous Gen. Erwin Rommel, this desert army was a force to be reckoned with. Despite British resistance, Axis armor won immediate victories in the deserts of Libya. The desert war soon became a seesaw affair, with both sides advancing and retreating over the same ground. By January 29, 1942, however, the German Panzers had once again driven the British back and recaptured the port of Benghazi. During a subsequent offensive beginning in spring 1942, the Germans recaptured Tobruk and advanced into Egypt. The British were unable to check this advance and were forced to retire to a little-known oasis called El Alamein. The Afrika Korps and its Italian allies were now deep within Egypt and within striking distance of the Suez Canal. The situation was bleak. If the Germans controlled Egypt, they would have a foothold in the Middle East. Another, more frightening, possibility existed that if the Japanese, also conquering territory at an alarming pace, moved through India, they might meet the Germans in Persia; the two powers might supplement each other in supplies. This situation was exacerbated by the fact that Russia would be opened to invasion from the west, east, and south. It soon became clear that the American army would be fighting a war in the deserts of North Africa.

Meanwhile, the U.S. Army had only recently and reluctantly accepted the idea of separate armored units. Despite the obvious successes of the German Panzer units, a large contingent of U.S. Army leadership resisted forming a separate tank corps. A major factor in the acceptance of separate tank units was the success of training maneuvers conducted in Louisiana and the Carolinas, led by the commanding general of the 2nd Armored Division, Maj. Gen. George S. Patton, Jr. (Figure 3).

Born in 1885 in the San Gabriel Valley of southern California, Patton graduated from West Point in 1909. During the punitive expedition against Pancho Villa in 1916, Patton served as an aide to Gen. John J. "Blackjack" Pershing and made his first combat kill. During World War I, Patton again served on Pershing's staff, and was wounded in battle for the first time in 1918. Armor had recently been used in battle for the first time, and Patton transferred into the new tank corps. After the war, Patton returned to service in the cavalry, but in 1940, he was selected as brigadier general in the newly formed 2nd Armored Division. By April 1941, Patton was promoted to major general and given command of the division, which was at the time stationed at Fort Benning, Georgia (D'Este 1995). Shortly after this promotion, Patton led his division in maneuvers in Louisiana.
Conception of the Training Facility

With the United States thrust into World War II by the Japanese attack on Pearl Harbor in December 1941, Patton was promoted to command the newly formed I Armored Corps. By February, Lt. Gen. Lesley J. McNair, chief of staff of the Army General Headquarters, had developed a plan to combat the Germans in North Africa. At the same time, McNair realized that the U.S. Army had never fought a large-scale war on the type of terrain found in North Africa. General McNair ordered that a location be found for a training center that would prepare American soldiers for desert warfare. McNair placed Major General Patton in charge of this project. Patton recognized the need for desert training in a speech he gave at his first staff meeting with the I Armored Corps:

The war in Europe is over for us. England will probably fall this year. Our first chance to get at the enemy will be in North Africa. We cannot train troops to fight in the desert of North Africa by training in the swamps of Georgia. I sent a report to Washington requesting a desert training center in California. The California desert can kill quicker than the enemy. We will lose a lot of men from heat, but the training will save hundreds of lives when we get into combat. I want every officer and section to start planning on moving all our troops by rail to California [as quoted in Williamson 1979:30].

Patton also understood the importance of training:

We are in for a long war against a tough enemy. We must train millions of men to be soldiers. We must make them tough in mind and body, and they must be trained to kill. As officers we must give leadership in becoming tough physically and mentally [as quoted in Williamson 1979:26].

Although envisioned by General McNair, the training center would soon reflect Patton’s penchant for tough training, with realistic situations and spartan living conditions. Patton, like many Roman centurions before him, believed that in a successful army “the legionnaires should fear their officers more than the enemy” (Williamson 1979).

Largely ignorant of the California desert and the problems it presented, Patton wrote to his acquaintance, Roy Chapman Andrews, for general information on the desert. Andrews had spent considerable time exploring the Gobi Desert, and Patton asked him for everything he knew (BLM 1986).

Location of the Training Site

Soon after Patton received command of the I Armored Corps, he and his staff flew to March Field in Riverside, California, to find a suitable place for the training center. For four days in March, Patton and several members of his staff toured the desert of eastern California and western Arizona by air, on horseback, and on foot. The desert terrain pleased Patton, who thought the region’s mountains, vegetation, climate, and dearth of population would make for an ideal place to train troops (D’Este 1995:408–409). From the vantage point of his private plane, Patton looked out upon the millions of acres of uninhabited desert and stated that “The
training area is the best I have ever seen. It is desolate and remote . . . large enough for any kind of training exercise" (Meller 1946:3). The region was judged to be similar to that found in North Africa, except for the fact that the southern California desert contained numerous rugged mountain ranges. The area, although isolated and rugged, could be supplied with water and was accessible by rail facilities (Riverside Press-Enterprise [RP-E], 2 July 1975:J-1). Three railroads, in fact, supplied the area: the Union Pacific in the north, Santa Fe in the center, and Southern Pacific in the south. In addition, there was very little in the way of privately held land (about 1.5 percent), and most of this land consisted of mining claims. The only local towns of note consisted of Needles (population 5,000 in 1940), Blythe (population 2,340), and Yuma (population 5,325) along the Colorado River, and Indio (population 1,600) to the west. A few military installations existed on the fringes of what would become the DTC/C-AMA, including March Army Airfield, an army airfield north of Las Vegas (later Nellis Air Force Base), an artillery training area near Indio, a desert test facility near Yuma (later Yuma Proving Ground), Camp Haan in Riverside, an antiaircraft training ground (later Fort Irwin), and Blythe Army Air Field.

The Desert Training Center, as the massive facility was designated, originally consisted of that portion of the Mojave Desert from roughly east of Indio to the Colorado River, and from Yuma north to Searchlight (Figure 4). The facility was to be used not only for training troops, but also for developing tactical doctrine and techniques, as well as testing equipment and developing new items (Howard 1985).

In the coming desert warfare, Patton maintained that the fundamental tactics of the U.S. Army would remain the same, although many new techniques would be used. Patton outlined these new methods in an unedited paper entitled "Notes on Tactics and Technique of Desert Warfare (Provisional)." This paper was widely circulated in the early summer of 1942 and was largely based on what the general had learned during the first few field operations. Because the desert presented such a different environment than that in which the army was accustomed to fighting, unit movement and security had to be revamped. Initially the DTC's purpose was "to determine the technique of living and moving in the desert and the tactics of desert fighting, particularly when opposed by armored formations, and in the face of inevitable air attack" (Patton 1942a:1). Perhaps more typically, Patton expressed his true desire for the desert training program:

Formation and material are of very secondary importance compared to discipline, the ability to shoot rapidly and accurately with the proper weapon at the proper target and the irresistible desire to close with the enemy with the purpose of killing and destroying him [as quoted in Meller 1946:15].

The army, in the form of the U.S. Engineers, determined that much of the land upon which the center would be established would have to be acquired by the War Department. Although the Department of the Interior, which owned the vast majority of the Mojave Desert, agreed to permit the army to use millions of acres, the land for the campsites themselves would be transferred to the jurisdiction of the War Department. The War Department felt that this was necessary in order to prevent the filing of claims on the land by private individuals. Approximately 105 million acres, therefore, were acquired by the War Department through transfer or outright purchase (U.S. Army Office of the Chief of Engineers 1942). Permits and leases were obtained from various agencies for the remaining land that the DTC/C-AMA would use.
Prior to the establishment of camps, General Patton met with representatives of the railroad companies, as well as the Metropolitan Water District (MWD) of Los Angeles (see below). Agreements were worked out with both industries whereby the army would be supplied with transportation and water (Meller 1946:2).

In March 1942, the General Headquarters, Army Ground Forces (AGF), realized the need for the testing of equipment under conditions they were likely to face in combat situations. The Desert Warfare Board (DWB; see below) was established for this task. The commanding general of the DTC was to ensure that the DWB was adequately staffed and performed its duty. Originally, the DWB was commanded by Lt. Col. Daniel Franklin, at a time when the board was stationed in tents (Meller 1946:Appendix H).

Camp Young

By late March 1942, Patton sent out an advance party to establish the first camp in the DTC/C-AMA. A location was found near the small community of Shaver's Summit and named Camp Young, in honor of the army's first chief of staff, Gen. Samuel B. M. Young. Young, who attained the rank of lieutenant general by his retirement in 1904, was a captain in the Eighth Cavalry in the late 1860s. The Eighth Cavalry had patrolled Mojave Road, which passed through land encompassed by the camp (King and Casebier 1981).

The land on which Camp Young was established was not totally uninhabited. Joseph Chiriaco and his family had arrived in the area in 1933 and had built a small store and restaurant, which became known as Shaver's Summit (RP-E, 4 May 1985). Patton purchased 28 acres from Chiriaco for five dollars per acre and used the land as an airstrip. The rest of Chiriaco's land soon became encompassed by the massive DTC/C-AMA, although he was never forced to leave. Chiriaco's property remained in his hands; when interviewed after the war, he emphasized that Patton respected the civil rights of the private landowners in the desert. Soldiers occasionally frequented the small settlement at Shaver's Summit (now known as Chiriaco Summit), one of the few places where they could purchase beer (The Desert Sun, 9 May 1985).

Involved in the initial construction of Camp Young was a newly organized medical battalion from Camp Bowie, Texas. The unit traveled to California via train and reached Indio in spring 1942. The battalion was formed to provide medical support to Patton's I Armored Corps and eventually consisted of a field hospital and an ambulance company (Harrison 1988). Another unit to arrive early at Camp Young was the 773rd Tank Destroyer Battalion, which was also ordered to assist in the construction of the camp. Along with quartermaster heavy maintenance units, these battalions began laying out the camp. Brush was cleared with machetes and placed in large piles to be disposed of later. After the brush was cleared away, streets were laid out with stakes, and pup tents were pitched for the various companies that would soon be arriving. During this initial construction, a temporary camp existed nearby, occupied only during the construction phase. Within a couple of weeks, engineering units arrived, bulldozing streets and constructing pyramidal tents and temporary wooden structures (Kennedy 1983:645; Figures 5 and 6). Water was brought from the MWD aqueduct, power was brought from main power lines extending to Parker Dam, and a small spur line from the railroad was built by the U.S. Engineers (Meller 1946:11).

Camp Young was constructed and laid out as Patton wished. Accommodations were simple, consisting of pyramidal tents, with few wooden structures being built. Those that were constructed were temporary in nature, and served as administrative centers or hospitals (Figures 7–10). The tents (Figure 11) were without electricity and contained only beds (no sheets), foot lockers, and musette bags (Pew 1985). Other division camps constructed later would follow the pattern of Camp Young. The 773rd Tank Destroyer Battalion described the camp and its surroundings in the following way: “Camp Young was the world’s largest army post and the greatest training maneuver area in U.S. military history. Eighteen square miles of nothing, in a desert designed for Hell” (as quoted in BLM 1986:14).

The camp was bordered by the Los Angeles MWD Aqueduct (built in 1938) on the north, Cottonwood Springs Road on the west, and Highway 60 on the south. Located approximately 1 mile from the highway, the camp was isolated, but the infrequent traveler through the area could see the camp when driving along the highway. The great deal of men and supplies (including tanks; Figure 12) coming into the small town of Indio (roughly 30 miles west of the camp) overtaxed the town’s railroad station, and logistical problems resulted (RP-E, 2 July 1975).

The DWB, mentioned above, was taken over by Col. Donald Sanger in May and moved into one of
Figure 5. Camp Young in 1942, viewed northeast. Photograph by William Halloway. Courtesy BLM Needles Field Office, Needles, California.

Figure 6. Camp Young, showing Company A, 203rd Quartermaster Battalion area. Photograph by L. Mundis. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.
The Desert Training Center/California-Arizona Maneuver Area, 1942–1944

Figure 7. Headquarters and administration buildings of the Desert Training Center, Camp Young, May 30, 1942. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.

Figure 8. Headquarters building, Desert Training Center, Camp Young, April–August 1942. Photograph by B. G. Plowman. Courtesy BLM Needles Field Office, Needles, California.
Chapter 3 • Historic Context

Figure 9. Hospital at Camp Young. Photograph by B. G. Plowman. Courtesy BLM Needles Field Office, Needles, California.

Figure 10. Bill Caprafoli in the G. V. ward. Photograph by B. G. Plowman. Courtesy BLM Needles Field Office, Needles, California.
Figure 11. Tentmates at Camp Young.
Left to right: Lou Mondo, Ray Gregenheimer, and Joe Sydlowski, October 1942. Gregenheimer’s tent at left. Courtesy General Patton Memorial Museum, Chiriaco Summit, California, and Ray Gregenheimer.

Figure 12. Unloading M4 medium tanks in the GRRR yards in Indio, California, December 6, 1942. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.
the temporary buildings erected at Camp Young. The board was officially charged with testing equipment, clothing, procedures, arms, and vehicles, and providing information and recommendations to the AGF and the commanding general of the DTC. Throughout its life, the DWB succeeded in developing a wide variety of new supplies, as well as making improvements to existing materials. Of particular note were improvements suggested by the DWB for combat boots, cross-country tires, lubricants for small arms, and cooling systems for many vehicles. The DWB provided many other recommendations for improvements in equipment and weapons. The board also received complaints regarding existing equipment and materials. These complaints were taken under consideration and investigations were made into the source of the problems (Meller 1946:Appendix H).

Opening of the DTC

Despite logistical difficulties, the DTC was officially opened on April 30, 1942, with a total of 20 officers (BLM 1984:2). The I Armored Corps was quite under strength at this time, with less than a division in the desert by April (Meller 1946). The men of the I Armored Corps who were still stationed back east were, meanwhile, boarding trains bound for Indio and Camp Young. Troops generally arrived in troop trains, as the rubber in vehicle tires was too valuable to use in transporting troops via roads. The units de-trained at small towns such as Indio, as well as at such tiny sidings as Rice and Freda, many of which were simply whistle stops (Third Armored Division 1980:46).

By May 30, there were more than 4,800 enlisted men stationed at Camp Young. Within four days of their arrival, the troops made their first desert march. Patton required all soldiers, including officers, to be able to run 1 mile in 10 minutes with rifles and full packs (BLM 1986).

The training program for Patton’s I Armored Corps began immediately, with a six-week program in the early summer. The first few weeks involved small-unit activities that emphasized teamwork and junior officer leadership. The last two weeks involved larger units and focused on the testing of vehicles, weapons, and equipment. Approximately 10,000 men took part in this first exercise, covering 300 miles in seven days. A great deal was learned regarding weapon and vehicle capabilities and limitations during this operation, especially with regard to the 75-mm and 105-mm guns, M3 light tanks, half-tracks, and various trucks (Blake 1987:23).

Patton, forever disdainful of officers commanding from the rear echelons, lived at Camp Young and established his headquarters in a simple, temporary, wooden building. His wife lived at the Hotel Indio, where the headquarters was initially set up. Upon Patton’s arrival, however, all I Armored Corps officers lived at Camp Young. Early into his stay at the DTC/C-AMA, Patton explained to his officers the efficacy of training in such a harsh environment: “If you can work successfully here, in this country, it will be no difficulty at all to kill the assorted sons of bitches you meet in any other country” (Friends of the Museum n.d.).

Shortly after arriving at Camp Young, Patton established additional camps for the other divisions that would be arriving soon. Two other divisional camps were set up, Camp Iron Mountain and a camp near the town of Needles (Las Vegas Review Journal [LVRJ], 24 March 1985:4A).

By fall 1942, more than seven target ranges, two moving-target ranges, two mechanized-combat ranges, and a normal infantry combat range had been constructed (Patton 1942b:2). As far as Patton was concerned, the tactical mission of the troops at the DTC was to “devise formations for marching and fighting which, while affording control and concentrated fire power [sic], at the same time do not present lucrative air targets” (Patton 1942a:2). Tactical techniques, as well as strategic methods, were improved upon at the DTC, providing much-needed training for the armored units. Patton felt that his units were able to move cross country and deploy to attack without presenting a target to aerial bombardment. In addition, the armored units learned how to go into bivouac and rapidly deploy for combat (Patton 1942b:3).

In keeping with his much celebrated brash and bravado, Patton’s presence at the DTC was always felt. His departure every morning was accompanied with a great deal of fanfare. Patton rode in a different vehicle every day, among them tanks, sedans, half-tracks, and jeeps. All of the vehicles, however, left with sirens blaring and Patton’s voice over a loudspeaker (Heidtman 1990). Patton established a radio station early in the life of the DTC, which allowed him to instantly communicate with his troops. Called Special Service Camp Young (SSCY), the radio station could interrupt regular broadcasts with Patton’s personal remarks (Los Angeles Times [LAT], 9 May 1985). Apparently, Patton frequently took the opportunity to address his troops, extolling the virtues of one or ranting on the shortcomings of another.
Most of the men assigned to the DTC/C-AMA, including those of the 65th Field Artillery Battalion (Figure 13), had gone through basic training elsewhere and had most likely maneuvered with their units previously. Training, nonetheless, was rugged. According to Gen. Jacob L. Devers, “This is like training for the 440-yard dash at 600 yards. Whatever these men come up against after their training here will be easy by comparison” (Yank, 23 September 1942:7).

The training was apparently successful. The 3rd Armored Division, in retrospect, had the following to say about their training at the DTC:

Desert maneuvers of 1942 probably did more to toughen the 3rd and prepare it for ultimate combat than had all previous training. Stripped of essentials, the tankers and supporting arms took to the wide open spaces in mock battle [RP-E, 11 September 1984:B-1].

A reporter with the army’s periodical, Yank, visited the DTC in summer 1942 and provided a confident assessment of the training that was taking place in the Mojave Desert:

Somewhere in the California Desert, under a molten sun and in a country where the very earth feels like fire, American armored vehicles are training. They compose a force terrible in its potentialities. One sees a small cloud on the fringe of the desert, and it grows until, with a sound like a thousand thunderclaps, it sweeps by and beyond, crushing everything in its path. It is this force that will someday leave death in its wake in the sandy places of Libya, or wherever it may be sent [Yank, 23 September 1942:5].

Early Logistical Considerations

In addition to the three camps mentioned above (i.e., Young, Iron Mountain, and Needles), several more were established shortly thereafter. The number of camps varied, but at its height the facility contained 14 (11 in California and 3 in Arizona). The camps were generally designed for a full division each, and, therefore, housed up to 15,000 soldiers, and sometimes more. The camps were laid out in rectangular fashion, generally 3 miles in length and 1 mile in width (Figure 14). In addition to the divisional camps, there were numerous other facilities, such as railheads, hospitals, airfields, and supply depots. Many logistical problems were overcome during the early days of the DTC. Because of the isolated location of these facilities, water was not readily available. The City of Los Angeles, however, had constructed a large aqueduct from the Colorado River to a reservoir outside of the city in 1938. An employee of the MWD (the agency that built and maintained the aqueduct) recalled Patton arriving in his office to acquire water for his camps. An agreement was worked out, and 15 water points were established along the aqueduct, which allowed water to be diverted into the camps. Water delivery from the MWD began in May to Camp Young and was followed by several other diversion points to the east for other camps. The water was supplied from the aqueduct through the use of stop logs. The government was charged 20 dollars per acre-foot for the diversion of the water and 30 dollars where there was evaporation from open storage (MWD 1942:24). At one location, a 500-man shower was built (RP-E, 28 January 1973:C-1-C-8).

Other water sources included the Colorado River at various points, wells at railroad sidings, irrigation canals, municipal water sources, and private wells (Figure 15).

The MWD also provided power to Camp Young, from the Hayfield Pumping Plant (12 miles east), early in 1942. Power was also provided to a large encampment near Eagle Mountain (most likely Camp Desert Center) sometime in fall 1942 (MWD 1942:30).

Although the DTC was to be spartan in accommodations, with little permanent or even temporary construction, certain facilities were required. Hospitals, supply depots, railheads, and a communications system were constructed to ensure its smooth operation (XX Corps 1984:7). Supplying what would soon become an immense facility was, understandably, a problem. The Southern Pacific Railroad was not equipped to handle the incredible volume of material associated with the U.S. Army’s arrival in the desert. Charged with handling this flow of material was the Base General Depot, located 5 miles north of San Bernardino. The depot established railheads at several locations to supply the various divisional camps, which needed large lineups of armored vehicles (Figure 16). Unfortunately, there was only one track on the main line from Colton to Yuma, and traffic often backed up
Figure 13. 65th Field Artillery Battalion at Camp Young, ca. 1942. Photograph by Edward L. Holloway. Courtesy BLM Needles Field Office, Needles, California.
Figure 14. Typical divisional camp layout (Camp Coxcomb pictured).
Courtesy General Patton Memorial Museum, Chiriaco Summit, California.

Figure 15. Water supply for Camp Laguna, Arizona. Photograph by Mrs. J. Calacrone.
Courtesy General Patton Memorial Museum, Chiriaco Summit, California.
Figure 16. Motor park lineup, Company A, 68th Tank Battalion, 6th Armored Division, at either Camp Coxcomb or Camp Rice, February–March 1943. Photograph by O. Hailey. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.

(Kennedy 1983:646; Meller 1946:Appendix E). The Southern Pacific Railroad increased tracks in several locations, including at Yuma and Indio, to handle the army’s supply requirements. Improvements were particularly required at these two locations, where several track extensions were built, as were freight yards and other facilities (Meller 1946).

Despite herculean efforts, most units were well undersupplied, even with vehicles and weapons. The lack of spare parts, however, seemed to present the greatest supply problem. Vehicles were not repaired at required intervals primarily because of this lack of parts and equipment. In addition, vehicles were often driven beyond their capabilities. Rough terrain, along with excessive speeds and overloading, wore on the vehicles immensely. When Patton’s I Corps departed the DTC, for example, more than 230 armored vehicles and 270 general-purpose vehicles were disabled (Blake 1987:28). The desire on the part of the DTC leadership to emphasize realistic training, however, explains this rough use of vehicles.

Another major logistical problem encountered in the initial phase of the DTC operation was communications. Originally, the Coachella Valley Home Telephone and Telegraph Company was used by the army, but it soon became overloaded with calls. The much larger Southern California Telephone Company was eventually requested to supply telephone service to portions of the training facility, and it did so by 1943. The headquarters for communications was eventually established at the town of Banning, immediately west of the DTC area (Meller 1946:Appendix C).

An ordnance base was established at the Pomona Fairgrounds, although it is not known if this was the primary ordnance facility (Meller 1946:Appendix H). Another, perhaps subordnance, depot was established between Indio and Palm Desert (the latter town did not exist at the time). This ordnance depot was reportedly 1 mile long, although its exact location is not currently known (Weight 1977).
Continued Training

Headquarters AGF, which oversaw the DTC, mandated a realistic combat training environment for the units stationed there. Without a doubt, the realism was achieved, according to the chief of staff of the IV Corps:

Operations here on the desert are conducted on a war basis. We do not have to simulate the problems of supply in the desert. They already exist, and war merely intensifies them. We hope to make our troops so tough that the "real McCoy" will come easy. This is war—all but! And it's a mighty small change from "all but" to "all out" [as quoted in XX Corps 1984:11].

Secrecy was sought by the commanders of the DTC, and it was apparently obtained in the vastness of the Mojave Desert. In 1942, there were few settlements in the area encompassed by the center, and those that did exist were quite small. Few roads or railroads passed through the region, and its immensity was capable of hiding thousands of troops.

Because of its incredible isolation, the men stationed at the DTC were unable to go even to Indio until a bus line was established late in 1942 (RP-E, 2 July 1975:J-1). Because of the relatively few roads into and out of the DTC, Patton clamored for a direct route to Parker Dam on the Colorado River. Locals in the area, including retired Gen. Charles Farnsworth, also desired a highway through Twenty-Nine Palms, and they formed a highway committee. Although a route was developed, the war was over before it was even paved. The route was eventually paved all the way to Vidal junction in 1959 and became known as California Highway 62 in 1972 (Weight 1977).

During Patton's tenure at the training center, all activities were under the direct jurisdiction of the headquarters, which was located at Camp Young. Traditionally, training installations contained two commanders, one in charge of the training and the other in charge of the post itself. This, however, was not the case for the DTC/C-AMA. Personnel from the Ninth Corps area were assigned to the DTC/C-AMA to establish post administration. This group, which became known as the Corps Area Service Command Unit 1925, was immediately absorbed into the DTC/C-AMA, and fell under the direct command of Patton. The DTC/C-AMA itself was under direct command of the AGF.

Patton's Departure and the Arrival of the II Corps

Patton and his I Corps were ordered to depart the DTC late in summer 1942, only a few months after being ordered there. The corps was to be a part of the U.S. Army's landings in North Africa, known as Operation TORCH. General Patton commanded the western task force of the operation, and after successes in North Africa was placed in command of the U.S. Seventh Army that, with the British Eighth Army, invaded Italy (Meller 1946:41).

The I Armored Corps was replaced at the DTC by the II Armored Corps, which was commanded by Maj. Gen. Alvan Gillem. The II Corps officially took over the DTC on August 2, 1942, although the unit was involved with maneuvers in Carolina until August 15. Logistical problems continued after the arrival of the II Corps, with weapons, vehicles, and parts in short supply. Personnel shortages also remained. Many units (particularly service units) had only half of their usual number of officers (Meller 1946:31).

Gillem and his II Corps came to the DTC soon after Patton departed. Unfortunately, there was not an effective method by which the transition would take place. Because Patton left in such a hurry, conditions at the center were confused. The II Corps conducted maneuvers, the first such at the DTC, between September and October 1942. Although Patton had planned for the first maneuvers, he was ordered away by the time they could finally get underway. They had originally been planned for summer 1942, but, because of logistical and supply problems, the maneuvers were postponed until fall (Meller 1946:18). The maneuvers consisted of eight exercises between elements of the 5th Armored Division, the 7th Motorized Division, the 3rd Armored Division, and units from the VII Corps. It was found, however, that there were many deficiencies in these first maneuvers. For example, none of the units used reconnaissance the way the leaders desired, coordination with air power was not achieved, and many vehicles remained on roads when they should have gone cross-country (Meller 1946:Appendix K; see "Maneuvers," below).
Theater of Operations

Because of the perceived lack of realism in portions of the first maneuvers, a more realistic environment for combat training was established. Supply points and lines, for example, would be fought over by the opposing forces under the new system. By January 1943, the entire DTC was ordered to operate like a theater of operations in a combat setting, the first such order in U.S. military history. This plan was followed to the minutest detail, including the placement and operation of mess halls and troop areas. The theater included a communications zone and a combat zone (XX Corps 1984:11). Within the communications zone were the commanders and service units, all of which surrounded the combat zone (Eleventh Armored Division 1945). Instead of supply points being established close to the troops, they were pushed out to locations within the communications zone, as they would be in real war. Although their locations varied, advanced depots were often in Yuma, Needles, and Coachella (Meller 1946:Appendix H). The combat zone, which formed the core of the facility, was the location of the actual maneuvers and live-fire exercises. Several additional divisional camps were constructed during the change to a theater of operations, as was a general hospital at Spadra.

Under the theater of operations setup, divisional camps were essentially the equivalent of rear area camps. This whole organization was designed to train all units to operate in a theater of war. Service units located in the communications zone, for example, were trained in their responsibilities to support combat units. A much more regulated facility was the result. Daily ration trains, for example, supplied the troops with a regularity that had not formerly existed. Troops and such installations as camps and supply points were moved to the perimeter of the combat zone to permit unencumbered movement (Meller 1946:39).

In July 1943, the concept of a communications zone surrounding the combat zone was changed to promote a more realistic situation. Instead of enveloping the combat zone, the communications zone was designated as that area west of a north-south line running from Niland, through Desert Center and Cadiz (not shown), to Kelso and Nipton (Figure 17). The rest of the DTC was designated a combat zone. The army also stipulated that no supply points would be within 20 miles of any combat unit. By November 1943, the headquarters of the communications zone was moved to San Bernardino, California.
Another desired change for the DTC/C-AMA came from Brig. Gen. Edward S. Ott of the Operations Division, AGF. Ott recommended expanding the geographical area of the DTC to include portions of the Colorado River, permitting the army to conduct riverine operations (Figure 18). Ott also suggested that all units arriving at the DTC receive basic training prior to arriving at the facility (Meller 1946:35).

The logistical operation of the DTC continued to present a multitude of challenges. A great deal of the “behind-the-scenes” operations of the facility took place outside of the actual training area. San Bernardino was used as an off-site logistical center. In addition to the base general depot, which oversaw the majority of supply, a replacement depot that handled all personnel transfers and replacements was located in the city. In addition, all rail and motor traffic destined for the DTC was eventually routed and regulated from the base general depot (Meller 1946:Appendix L).

IV Corps

By fall 1942, the IV Armored Corps had been activated, and it was ordered to occupy the DTC in winter of that year. The corps was commanded by Maj. Gen. Walton Walker, who had previously been in command of the 3rd Armored Division. General Walker oversaw the change of the facility to a theater of operations and shared the same goals of previous DTC commanders. Walker stated his objectives in the following way: “It is our job to rehearse for war, to bring these units to that state of perfection that will be demanded of them by actual warfare, the perfection necessary to win battles” (as quoted in XX Corps 1984:7). Col. J. B. Sweet was placed in command of the communications zone; Walker held direct command of the entire facility.

The IV Corps was redesignated the XX Corps in 1943. Called the “Ghost Corps” by the Germans, the XX Corps had a reputation for being where the enemy least expected them and then vanishing. Walker, after the war, went on to command the Eighth Army in Korea, where he was killed (Weight 1977). Several new camps were established while General Walker was in command, including Ibis, Laguna (Arizona), and Coxcomb. Camp Young was also expanded during this period, most of the work being accomplished by engineer units stationed in Banning, California. Walker’s troops, including the 4th and 6th Armored Divisions, maneuvered between February and March 1943 (Figures 19–21). Before the IV Corps left in March 1943, the population of the facility had reached more than 90,000 troops (XX Corps 1984:25).

The DTC/C-AMA was far more than an armored-training facility, although armored units were certainly stationed there in large numbers. Infantry units, air squadrons, and various support units took part in the training and maneuvers. Engineering battalions constructed camps, airfields, and other facilities. Artillery squadrons practiced and perfected their techniques in the vast open spaces of the Mojave Desert (Figures 22–25). Supply units learned to deal with large distances and the lack of modern facilities.
Figure 20. Vehicles of the 6th Armored Division on maneuvers in the DTC/C-AMA (from Solarz n.d.).

Figure 21. Officers of the 6th Armored Division, February 15, 1943 (from Solarz n.d.).
Figure 22. Antiaircraft-gun demonstration, September 24, 1942. Photograph No. 111-SC-144030, National Archives and Records Administration, Still Picture Branch, College Park, Maryland.

Figure 23. Antiaircraft demonstration. Night firing at aerial targets with automatic weapons, September 24, 1942. Photograph No. 111-SC-144045, National Archives and Records Administration, Still Picture Branch, College Park, Maryland.
Figure 24. Antiaircraft demonstration. Simulated enemy tank coming into view of 90-mm antiaircraft-gun crews. Photograph No. 111-SC-144034, National Archives and Records Administration, Still Picture Branch, College Park, Maryland.

Figure 25. Caterpillar tractor of the 181st Field Artillery Regiment, 75th Brigade, used to pull 155-mm howitzer, June 1942. Photograph by H. Smiley. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.
Medical care was taken seriously by the leaders of the DTC/C-AMA, with field first-aid stations established throughout the area. Evacuation hospitals were also established throughout the DTC/C-AMA, usually consisting of several temporary buildings and numerous tents. In addition, a hospital was established in the El Mirador Hotel in Palm Springs, California. Unfortunately, because the camps were isolated and built hastily, conditions for field hospitals were not the best. Nurses arriving at the DTC in 1943 (Figure 26) recalled that “We were operating in tents with sand blowing right onto the operating tables” (as quoted in the RP-E, 9 May 1985).

IX Corps

On March 29, 1943, Maj. Gen. Charles H. White took over the facility with the IX Corps. The IX Corps maneuvered in June and July 1943. Units included the 7th Armored Division, the 8th and 77th Infantry Divisions, and several other artillery, reconnaissance, and cavalry units. General White was the first commanding officer to be directly criticized for lessening the realism of the maneuvers, and he was removed from command on July 23, 1943 (Blake 1987:26). General White apparently focused the majority of his attention on the communications zone and administration issues, and less on combat training. The AGF also believed that the spartan living conditions the soldiers had been training under since the inception of the DTC had been relaxed under General White:

There has been a noticeable tendency at the Center as a whole to drift away from the original and proper conception of tough and realistic conditions toward the luxurious and artificial conditions of other camps and posts throughout the United States. Training at the Center is enormously expensive, due to railroad transportation. Operation of such an establishment is justified only when the training is conducted on a Spartan basis which will result in superior physical condition and a more realistic setting than any obtainable elsewhere [as quoted in Meller 1946:52].

By the time White took over the facility, training at the DTC was well regulated and organized. A
14-week program was basically used, consisting of the following schedule:

1st–4th weeks: Individual and small unit training
5th week: Battalion—combat firing
6th week: Reinforced battalion—combat firing
7th week: Combat command or team—field exercise
8th week: Combat command or team—combat firing
9th–10th weeks: Division—field exercise
11th–14th weeks: Field maneuver—attack and defense of an organized position

All units stationed at the DTC/C-AMA took part in the training. Service units, as well as the combat units, were required to play a role in the training activities. The training program paid special attention to several areas, including:

- Cross-country movement
- Reconnaissance, combat intelligence, counterintelligence, and liaison
- Dispersion of vehicles during marches, halts, and bivouacs
- Realistic exercises, complete in all details
- Aggressive action by dismounted units
- Antiaircraft defense
- Rapid, close-in air support of ground units
- Artillery observation by liaison planes
- Camouflage
- Night operations
- Use of identification panels
- Adherence to tables of equipment
- Battlefield recovery and evacuation of armored vehicles and other heavy equipment
- Maintenance of motor vehicles
- Driver training
- Realistic supply of all classes of material
- Hygiene, sanitation, and first aid in the desert
- Cooking by individuals and small groups
- Supply by air [Headquarters Desert Training Center 1943a:1–2]

Perhaps one of the most important aspects of the training was the small-unit exercises. Extra emphasis was placed on unit leadership, particularly by lieutenants. The AGF had determined that small units were often instrumental in altering the course of a large battle. At the DTC/C-AMA, platoons were given several “problems,” which taught them to work as a unit. The AGF desired that its junior officers be able to accept responsibility, be self-reliant, and operate on their own. Officers were required to lead a patrol over extended distances through unknown terrain, often at night, and return with information. These exercises often lasted longer than 24 hours, with the men receiving no sleep, few rations, and limited water. Officers who were unable to successfully lead these types of exercises were soon removed (Meller 1946:60–61).

During one of these exercises, a platoon of the 337th Infantry became separated from their food and water supplies while in the Arizona desert near Pilot Knob. The commanding officer, with one private, set off to obtain supplies for the unit. During their absence, however, one of the platoon’s men died from exposure. Seeing the dire straits that the unit was in, two more men left in search of supplies. These men, unfortunately, got lost in their attempt. The lieutenant and private returned and brought the unit back to camp. A search for the other two men by the entire company ensued that succeeded in locating the men, but they had already died (Chamberlin 1990:25).

The training regimen stressed realism. Wherever possible, live-fire exercises were conducted. During one of these exercises, a unit was ordered to attack a defended position. The position was actually a deep foxhole held by another unit. This “defending” unit exposed targets, designed to look as much as possible like the enemy, and shot blanks at the “attacking” unit. The “attacking” unit shot live rounds at these targets, providing all of the participating soldiers with an introduction to the combat environment (Meller 1946:61). Most large camps, including the divisional camps, had firing and infiltration ranges attached to them (Headquarters Desert Training Center 1943b:9).

The DTC/C-AMA also provided continuity in training, despite the almost constant changing of units in and out of the center. Training, along with supply and administration, proceeded without interruption. This continuity saved time and permitted improvements in administration, as well as in maneuver areas.

The original area of the DTC was 19,000 square miles and at some point was labeled “Area A” (see Figure 17; also Figure 27). This area encompassed land between the Colorado River to the east and Desert Center on the west, and from Searchlight to the north and Yuma to the south. The area remained the core of the DTC/C-AMA, particularly because of available rail transportation, a good water supply, and the fact that the majority was government
owned. The area was bounded by a line from Nipton, through Crescent, Searchlight, the Colorado River, Yuma, Amos, Desert Center, Bush, Amboy, Kelso, Cima, Ivanpah, and back to Nipton (Headquarters Desert Training Center 1943b:3).

Between March and July 1943, “Area B,” consisting of land in Arizona, was added east of Area A (see Figures 17 and 27). Encompassing 11,000 square miles, Area B was bounded by the Colorado River, Parker Dam east along the Bill Williams River to Ives Peak, then south to Montezuma, 10 miles northeast of Agua Caliente, and then along the Gila River to the Colorado River. By this time, more than 190,000 men were being trained on the DTC. Finally, “Area C” was added, consisting of approximately 1,500 square miles northeast of Area A. Area C was bounded by the Colorado River from Topock to a point 15 miles north of Katherine, then east to U.S. Highways 466 and 99, south through Kingman, then along the Santa Fe Railroad through Franconia to Topock (Headquarters Desert Training Center 1943b:3; see Figures 17 and 27).

The expanded facility included such communities as Phoenix, Arizona, and Boulder City, Nevada, which were both included in the communications zone. Construction of new camps, hospitals, and other facilities increased during this period. New roads were also built, as were several open-air theaters at various divisional camps. Because of the wartime demand on rail facilities, the army was forced to coordinate their transportation to a higher degree. It was also during this period that motor pools were established to better coordinate the supply of vehicles. In order to alleviate supply problems, equipment was recycled. Departing units left their equipment for incoming units to use, leading to unusually high wear on many items (Meller 1946:41).
Chapter 3 • Historic Context

XV Corps

The next corps to arrive at the DTC/C-AMA was the XV Corps, under the command of Maj. Gen. Wade H. Haislip. General Haislip inherited a profound shortage of service units. One of the largest maneuvers took place under General Haislip; it included the 81st and 79th Infantry Divisions, along with mechanized cavalry, field artillery, tank destroyer, and antiaircraft groups. The maneuvers, which took place between October and November 1943, were conducted in the Palen Pass area between the Granite, Little Maria, and Palen Mountains (Blake 1987:27).

California-Arizona Maneuver Area

By early 1943, the campaign in North Africa was coming to a close. With less need for combat training in the desert, the concept of the DTC was changed to serve the purpose of large-scale training and maneuvering. To meet this change, the name of the facility was changed, in October 1943, to “California-Arizona Maneuver Area.” Because most of the troops to be trained at the facility would not fight in desert environments, the name change was particularly warranted (BLM n.d.:2). General McNair expressed his opinion regarding this issue:

Some officers and enlisted men have reached the wishful conclusion that the termination of the African campaign has rendered desert training unnecessary. Desert training is merely an incident; the main objective is tough, realistic general training [as quoted in Meller 1946:52].

The name change, however, was in reality an acknowledgment of how the facility had already changed. By late 1942, the leaders of the DTC and AGF had already realized that there would be no more desert warfare. The leaders instead saw the continued viability of the desert area as a large-scale training area. The mission of the facility largely remained as it had been from the beginning. An army memorandum spelled out the DTC/C-AMA mission in 1943:

a. To harden troops physically.
b. To develop tactics, technique, and training methods suitable for desert warfare.
c. To train soldiers mentally for the shock of battle.
d. To conduct firing under realistic battle conditions.
e. To test and develop equipment and supplies [Headquarters Desert Training Center 1943a:3].

Many areas within the DTC/C-AMA area were designated “off limits” to soldiers, including private property of landowners in the area. Additionally, Joshua Tree National Monument, various game refuges, Native American reservations, many privately owned roads, and dam sites (including Parker and Imperial) were off limits.

The DTC/C-AMA saw the greatest amount of activity during the period between May and December 1943. On July 31, 1943, for example, there were 10,966 officers, 514 flight officers, 604 nurses and hospital attendants, and 179,536 enlisted men in the facility (BLM 1984; Table 1).

IV Corps

Following the XV Corps, the IV Corps, under Maj. Gen. Alexander M. Patch, took over the DTC/C-AMA in November 1943. The IV Corps (formed after Walker's was changed to the XX Corps) maneuvered between November and December and included the 90th and 93rd Infantry Divisions, along with cavalry, antiaircraft, tank destroyer, and tank groups and battalions. It was during this period that personnel shortages began to hamper the effectiveness of the DTC/C-AMA. Troops were desperately needed overseas, and fully staffing the DTC/C-AMA was difficult. Service units, in particular, were in short supply (Blake 1987:27).

X Corps

The last corps to occupy the DTC/C-AMA was the X Armored Corps, under the command of Maj. Gen. Jonathan W. Anderson, who took over on January 17, 1944. The X Corps remained until April. The X Corps' maneuvers took place between February and March, and involved the 80th and 104th Infantry Divisions, as well as tank destroyer units and antiaircraft and engineer battalions. Approximately 24,000 combat troops were involved, as were 2,800 service and communications zone troops and 1,500 Army Air Force personnel. The 76th Reconnaissance Group and the 339th Fighter
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Note: After Meller (1946:Appendix I).
and Bomber Group of the III Tactical Air Division were coordinated with the ground troops and were used in observation, reconnaissance, bombing, strafing, and gasoline missions. Following the maneuvers, however, the majority of the corps’ energy was devoted to the evacuation of men and material from the DTC/C-AMA, because of its closure on April 30, 1944 (Blake 1987:27).

**Personnel Shortages and Closure**

By late 1943, the DTC/C-AMA was suffering personnel shortages, particularly in such service specialists as those in communications and transportation. These specialists were needed overseas, and relatively few could be spared for the DTC/C-AMA. General McNair, therefore, recommended shutting down the DTC/C-AMA because of its inefficient operation. As troops had been evacuating the area since early 1944, the War Department finally agreed with McNair; the facility was declared surplus on April 1, 1944 (BLM n.d.:2). More than 27,000 vehicles remained in the area at the close, many of which needed repair. All equipment and material that could be removed was, and the campsites were closed. Equipment and material were sent to the base general depot, Pomona Ordnance Base, or out of the area entirely. The army made a concerted effort to police the campsites. All abandoned equipment and supplies were picked up and transported from the camps. All telephone poles and wire installed by the army were removed. An attempt was made to locate and remove unexploded ordnance, although this was accomplished only on a small scale. The only area cleared to any extent was in the Iron Mountain impact area. The army recognized that practically the entire maneuver area had been used for live-fire exercises, and that clearing it was nearly impossible. The Palen Pass maneuver area was left as is, and only marked with signs (Blake 1987:30).

The 80th Infantry Division was the last unit evacuated, on April 5. A few facilities were kept open after April 1, including Pomona Ordnance Depot; San Bernardino Base Depot; general hospitals at Spadra, Banning, and Beaumont; station hospitals at Needles, Camp Young, and Yuma; and Army Air Force installations at Thermal, Desert Center, Rice, and Shaver’s Summit. By the end of the month, only guards remained to oversee the removal of leftover equipment. On April 30, the jurisdiction of the camp was turned over to the Army Service Forces, in the form of the Ninth Service Command (Blake 1987:30). The majority of the facility was eventually turned back over to the U.S. Department of the Interior and private landowners, and most government leases were canceled (U.S. Army Office of the Chief of Engineers 1944).

**Air Power**

From the outset, the command staff of the DTC/C-AMA wanted air support to be an integral part of the training experience in the desert. Although planes were used from virtually the beginning of the DTC/C-AMA, an official air support command was first established at Camp Young. Subsequently, four other divisional camps received air support commands (Meller 1946). Unfortunately, like every other type of equipment at the DTC/C-AMA, airplanes were in short supply.

In June 1942, the Second Air Force assumed responsibility for air operations at the DTC. Headquartered at Camp Young, the Second Air Force also assumed responsibility for the many airfields throughout the DTC/C-AMA area (U.S. Air Force Historical Division n.d.a:1). In the early months, air units were under the direct command of the AGF and were not allowed to act in their usually autonomous roles. Air squadrons were primarily assigned supporting roles to the ground contingents, providing tactical support and generally creating a realistic combat environment (Blake 1987:23). During maneuvers and other training operations, planes were flown low over the troops in order to prepare them for strafing in actual combat.

Airdrome detachments were stationed at various airfields and were under the command of the III Tactical Air Division at Camp Young (U.S. Army Air Corps 1944:1). The III Tactical Air Division was given the responsibility of assisting in the training of tactical air units. In addition to training, however, each unit was in charge of maintaining its airfield and had little time for anything else (U.S. Army Air Corps 1944:3).

In January 1943, other Army Air Force units were assigned to the DTC. During the maneuvers of February and March 1943, the IV Air Support Command, which was headquartered at Thermal Army Airfield, oversaw all air units and supplied air support to all divisions and some smaller units. By April
of the same year, an Air Forces Service Command was established at the DTC and assigned to the IV Air Support Command (Meller 1946:58).

All manner of airplanes were used, particularly L-1 and L-4 Piper Cubs for surveillance. Patton himself used his own private plane, a Stinson Voyager, or “flying jeep” as the planes were also known. C-50 cargo planes were used in several instances, including for troop supply during maneuvers. Supplies, including ammunition, were parachuted to waiting troops by the C-50s, with mixed results. Light bomber–ground attack A-20 Havocs were stationed at Blythe Army Air Field, as well as at Camp Essex. P-40 Warhawks and P-38 Lightnings are also known to have been used at the DTC/C-AMA, as were B-24 Liberators (Figure 28).

There were four main army airfields in the DTC/C-AMA: Rice, Shaver’s Summit, Desert Center, and Thermal. In many other locations, the army used existing civilian facilities, such as the airport in Boulder City, Nevada. In other cases, the army established facilities that were subsequently taken over for civilian use after the end of the war. For example, an airfield built in Palm Springs by the army became the city’s municipal airport after the war (Weight 1977).

In addition to the more permanent airfields, landing strips were created throughout the facility. In most cases, these temporary strips were prepared by clearing vegetation and compacting the sand with water. Usually measuring 1,000 feet long and 100 feet wide, the strips were built in the direction of the prevailing winds and could generally accommodate only small surveillance airplanes (U.S. Army Air Corps 1942:C-1).

One of the more visible makeshift airfields was adjacent to Essex Divisional Camp. This field, unlike the other temporary strips, was designed to handle aircraft as large as A-20 Havocs. The flying surface was 4,500 feet long and 111 feet wide, and consisted of a light bar-and-rod steel landing mat. Shoulders measuring 120 feet wide were constructed with compacted sand, and the taxiways and warm-up ramps were made of soil cement and desert mix. The area was graded and was watered down with commercial trucks, which received water from the Santa Fe Railroad well at Fenner (U.S. Army Air Corps 1942:G-1–G-4).

At the height of DTC/C-AMA operations, when total personnel reached 190,000, only 4,000 of these troops were from the Army Air Forces. Beginning on December 1, 1943, all air units and installations in the DTC/C-AMA were taken over by the commanding general of the Army Air Forces. The III Tactical Air Division, which had been overseeing the air operations, came under the control of the Third Air Force. From the AGF’s perspective, this was not a welcome change. The army felt that the headquarters of the DTC/C-AMA must command the entire facility, including all air activities; if not, a great deal of realism would be lost. According to some, air support became almost nonexistent by 1944 (Meller 1946:43).

By August 1944, after the DTC/C-AMA closure, most of the airfields were assigned to March Field as subbases, and the number of personnel stationed at them decreased (U.S. Air Force Historical Division n.d.b:1-2).

**Daily Life at the DTC/C-AMA**

Most of the men who trained at the DTC/C-AMA were unaccustomed to desert life. Particularly at the beginning of their rotation into the DTC/C-AMA, men would suffer from heat prostration, cramps, and dehydration. In an effort to combat this, all soldiers were required to take a salt tablet three times per day. The usual tour of duty for units at the DTC/C-AMA was 14 weeks. Generally, by the end of this period, the men had been hardened to the rigors of the desert. It was also found that most troops could survive on 1 gallon of water per day, particularly by the end of...
the 14-week period. The training regimen was tough. The leaders of the DTC/C-AMA sought to harden their men: “Officers and men must be tough, physically and mentally, and imbued with the desire to close with the enemy and destroy him” (Headquarters Desert Training Center 1943a:3). Soldiers were subjected to hand-to-hand combat, live-fire exercises, and night exercises. Battle-conditioning exercises were to accustom the men to the sound and experience of small arms fire and bursting shells nearby. At least once, each unit was required to conduct a 24-hour exercise with no sleep and little food and water. Troops were driven to the limits of endurance “to find out the leaders and men who can’t take it” (Headquarters Desert Training Center 1943a:3).

The tough training and primitive conditions in which the soldiers lived did not, however, appear to lead to a significantly higher than usual casualty rate. According to a report covering a 1-month period:

[The men’s] health was generally good. Sporadic cases of simple diarrhea occurred. In one month from August 17 to September 1942 there were seven deaths and 82 severe injuries resulting from the common causes. Deaths and causes: Acciden-

tal, crushed by boxcar rail head 1; skull fracture, motorcycle, 1; gunshot wound, 1; railroad versus tank, 2. Suicide: gunshot wound, 1; Disease: septicemia, 1; Total deaths 7. Injuries: dislocations 11, burns 1, concussions 8, fractures 54, miscellaneous 2. Gunshot wounds, accidental 2, venomous snake bites 2, internal injuries 1. Total injuries 82 [Kennedy 1983:644].

Obviously, one of the toughest aspects of the training regimen was the environment. California’s Mojave Desert is a difficult place to live, under the best circumstances. Temperatures in the summer can exceed 120°F. Inside a tank or other armored vehicle, the temperature was often 20 degrees higher. Perhaps more difficult to deal with, however, were the great fluctuations in temperature. Although many troops were prepared for the heat, many were not adequately suited for the cold nights that frequently occur in the high desert.

Soldiers complained more about the wind than any other factor. With the predominance of sandy soil throughout the desert, the frequent sandstorms left camps in disarray (Figure 29) and coated everything with dirt and sand. Soldiers’ recollections

Figure 29. Damage done to Camp Young by windstorm, including 200 tents destroyed. Note white painted rocks in foreground. Photograph by William Holloway. Courtesy BLM Needles Field Office, Needles, California.
almost universally mention the presence of sand in their meals (Kennedy 1983:647). The 85th Infantry Division was no exception, and the unit's history recalls the dust as follows:

Trucks, armored cars and tanks were swirling about everywhere churning up great clouds of fine white powdered dust, and the men who had come to meet the Custermen [85th Infantry] were covered with it from their shoes to their helmet liners. The layers of dust were so thick on their faces that their features were hardly recognizable [as quoted in Chamberlin 1990:22].

Training was constant, every day of the week. Most men received only three days off per month. During these furloughs, soldiers would generally travel to the closest city to their camp and enjoy civilian life for a little while (Martin 1991:6). Some of the more frequent destinations for these soldiers on leave were Los Angeles and the new gaming halls of Las Vegas. Before the megaresort complex took over the city, such resorts as El Rancho Vegas and the Last Frontier were vacation destinations for soldiers with passes (LVRF, 24 March 1985:4A). According to some reports, a black market thrived at the DTC/C-AMA, particularly in alcohol and prostitution (Scull 1985).

During the infrequent furloughs and breaks in training, the soldiers overwhelmed the small towns in the surrounding areas. It was common for civilians in Indio to find the few restaurants and single theater overcrowded with soldiers. The grocery and hardware stores were often cleaned out by supply officers, and virtually all warehouse storage space was full. The townspeople generally responded hospitably to the great influx of soldiers, and many social organizations attempted to provide some form of entertainment and diversion for the men. Perhaps a greater problem occurred when the wives of the thousands of servicemen followed their husbands to the desert. With housing shortages already occurring, many of these women were unable to find shelter of any kind. Trailers were established adjacent to several towns. Prostitutes also used trailers to conduct their business, until they were forced to leave by local authorities.

Segregation was still the order of the day in the World War II army. In many towns, black troops were required to eat at separate restaurants. Apparently, black troops were also overseen by white military police, all of which bred resentment among the black troops. A riot in an Indio restaurant occurred at one point. Following the riot, the black troops went back to Camp Young to obtain guns, planning to return to town. The troops were caught by military police on their way back to town, and a major disaster was averted.

Entertainment would occasionally be brought to the soldiers. The Los Angeles Symphony Orchestra, for example, played in an open amphitheater at one of the camps on October 11, 1942. An LAT reporter who was there at the time recalls that “Out in front of the stage, back far as the eye could see, and even further [sic] into the shadows, stood the young men, shoulder to shoulder, thousands upon thousands, their faces all turned to the same spot. The Symphony was led by Leopold Stokowski in a presentation of Dmitri Shostakovich’s ‘War Symphony’” (RP-E, 28 January 1973:C-1–C-8).

Although Red Skelton and Bob Hope, among others, also entertained the troops, most of their leisure time was spent relaxing in their tents playing cards (Figures 30–33). Each battalion was assigned a post exchange where many items could be obtained, including beer (RP-E, 27 January 1985:B-1–B-4; Figures 34 and 35). Camp exchanges were organized through Camp Young, and warehouses for their materials were located at Coachella, Freda, Yuma, and Needles (Figure 36). Entertainment, including a show by Linda Darnell (Figure 37), was provided by

Figure 30. “Rest Time.” Company D, 22nd Armored Engineer Battalion, 8th Armored Division, October 26, 1942. Photograph by Walter Schulenburg. Courtesy BLM Needles Field Office, Needles, California.
Figure 31. “How we spend our rest time.” Company D, 22nd Armored Engineer Battalion, 5th Armored Division, October 26, 1942. Photograph by Walter Schulenburg. Courtesy BLM Needles Field Office, Needles, California.

Figure 32. “I was lucky, I had a sleeping bag. But watch out for the sidewinders.” Company D, 22nd Armored Engineer Battalion, 5th Armored Division, October 26, 1942. Photograph by Walter Schulenburg. Courtesy BLM Needles Field Office, Needles, California.
Figure 33. “Taking in the sun, Needles California.” Company D, 22nd Armored Engineer Battalion, 5th Armored Division, November 19, 1942. Photograph by Walter Schulenburg. Courtesy BLM Needles Field Office, Needles, California.

Figure 34. Men of the 56th Field Artillery Battalion, 8th Infantry Division, enjoy beer from the PX at Camp Laguna. Photograph by W. Knowlton. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.
Figure 35. Field PX at Camp Coxcomb, 1943. Photograph No. 111-SC-182228, National Archives and Records Administration, Still Pictures Branch, College Park, Maryland.

Figure 36. Supply Battalion of the 7th Armored Division at the Freda siding PX between February and August 1943. Photograph by J. Lewis. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.
U.S.O. Camp Shows, the Hollywood Victory Committee, and U.S.O. Spot Shows. These entertainment groups were organized and contracted through the DTC/C-AMA Special Service Office (Headquarters Desert Training Center 1943b:10).

The DTC/C-AMA was built so rapidly that there was little time to construct permanent buildings. Moreover, the army, particularly Patton, wanted soldiers to be trained in the most realistic conditions and be “hardened” as quickly as possible. As a result of these factors, the camps’ only permanent constructions were open-air chapels (known to exist only at Camp Iron Mountain) and large relief maps. All other structures were temporary in nature, including shower buildings, latrines, wooden tent frames, amphitheaters, water-storage tanks, and firing ranges (BLM 1984; Figures 38–41).

Food for the soldiers consisted largely of powdered eggs, Spam, canned hash, and canned fruit (LVRJ, 24 March 1985:4A). According to some soldiers, however, it was how they ate their food that made it so difficult: “In order to get out of the wind, we would squat down behind tents to eat. By the time we got the food into our mouths, no matter how short the time, it was always cold. Then, on top of that, the wind got the grit and sand into our food” (RP-E, 28 January 1973:C-1—C-8). The standard appeared to be five days of B rations (canned) and three days of A rations (perishable foods). During maneuvers, the soldiers ate a great deal of canned sardines, along with tomatoes, fruit salad, and canned turkey (Third Armored Division 1980:46). Apparently, the menus changed throughout the life of the DTC/C-AMA. For a short period of time, all perishable foodstuffs were banned, and only B rations were issued. Later, however, the ban was lifted, and canned food was supplemented with A rations (Blake 1987:28; Figures 42 and 43).

Although little information regarding the DTC/C-AMA reached the general public, occasional newspaper stories did trickle back to the civilian world. A particular company from the 83rd Armored Reconnaissance Battalion of the 3rd Armored Division received a great deal of press coverage for their exploits in training maneuvers. “Gage’s Gangsters,” as the unit was called, passed into and out of “enemy” lines with impunity, wreaking havoc upon supply lines and then disappearing (Third Armored Division 1980:48).
Figure 38. Unknown company area at Camp Iron Mountain. Photograph by B. G. Plowman. Courtesy BLM Needles Field Office, Needles, California.

Figure 39. Unknown company area at Camp Iron Mountain. Photograph by B. G. Plowman. Courtesy BLM Needles Field Office, Needles, California.

Figure 40. Interior of tent at Camp Iron Mountain. Photograph by B. G. Plowman. Courtesy BLM Needles Field Office, Needles, California.
Figure 41. Member of the 7th Armored Division's supply battalion shaving outside his tent at Camp Coxcomb between February and August 1943. Photograph by J. Lewis. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.

Figure 42. "Chow Call!" Thanksgiving 1942 at Camp Rice. Photograph by Ray Gregenheimer. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.
Maneuvers

As the primary goal of the DTC/C-AMA was to train soldiers, maneuvers became a key aspect of the facility. Designed as part of the 14-week training schedule, the maneuvers were the final phase and were intended to put the finishing touches on a division's fighting ability. Maneuvers, like everything at the DTC/C-AMA, were designed to be as realistic as possible, forcing the soldiers to live, move, and fight under the same conditions that they would encounter in combat. In addition, the maneuvers were designed to extend personnel and equipment to the limit of their capabilities. Paved roads were not used during movements, and units were forced to make their own roads in many places. The men were generally allowed only one canteen of water per day, a great reduction from what they received in camp. Rations were also quite different than those received in camp. Nonperishable K rations were common and included canned foods, biscuits, powdered eggs, and chocolate bars (Martin 1991:4).

During the operation of the DTC, a keen eye was kept on the fighting in North Africa. Lessons learned there were applied to training in the deserts of Arizona and California. Even after the Germans were driven completely out of North Africa in 1943, tactical and strategic lessons learned from the desert war were applied to the DTC. These lessons were particularly applied in the conduct of the training maneuvers.

Specific assignments were given to the units maneuvering, which included such things as attacking and defending an organized position, movement to contact, and a meeting engagement. Critiques were issued to each unit after the maneuver was completed, as were narratives and staff comments. Umpires were used to ensure that all units obeyed the rules, and they assisted in determining the victor. It is not known, however, from where these umpires were drawn. In order to differentiate between the two forces, red or blue paint was applied to the fronts of the vehicles.

Demolition and sabotage were also used extensively, as they would be in a combat situation. Passes through mountain ranges were destroyed, land mines were placed, tear gas was dropped from the air, and smoke pots were used as screens. During exercises, one combat team would establish a defensive position, set up targets at the location, and then vacate the area. The offensive team would attack the
position with live ammunition, destroying the targets left by the defensive team (Headquarters Desert Training Center 1943a:4). As a part of the defensive position, tank ditches, roadblocks, demolitions, mine fields, and other obstacles were placed (Meller 1946:62).

Following the attack and defense of certain positions, the second exercise generally consisted of a maneuver designed to simulate a campaign. These exercises lasted up to 11 days and tested the ability of units to act in unison. All aspects of a real campaign were incorporated, including administration (Figure 44), supply, maintenance, and evacuation (Meller 1946:63).

A total of six major maneuvers took place during the life of the DTC/C-AMA. Each of these large-scale (division) maneuvers consisted of a “red” team and a “blue” team. All units were included in these maneuvers, from armor to service units (Blake 1987:22).

The reporter with Yank, cited above, with war correspondent Robert Casey, witnessed a portion of one of the early maneuvers, in fall 1942. An unknown armored column approached the railroad siding at Freda, simulating an attack on an enemy position:

We watched the battle. First came the armored infantry, advancing in half-track troop carriers, leaping from their vehicles, storming enemy strong points with fixed bayonets, and knocking out enemy tank destroyers with their 37-mm guns. Then came their own tank destroyers—75’s with tremendous fire power, mounted on shielded half tracks, smashing the enemy tank formations sent out to meet them. Then came the heavy artillery, moving up into the front lines to blast the enemy’s fixed positions at point-blank range. Then came the swarms of tanks, smashing everything before them. Then came more infantry in half-tracks to mop up the ground won by the tanks. Overhead, attack bombers and dive bombers annihilated enemy columns rushing up to close the breach. Behind came more tanks, more infantry, and the supply trains—trucks, water carriers, ammunition carriers, salvage vehicles, ambulances. The noise was like the roar of a hundred thunderstorms [Yank, 23 September 1942:6].

Apparently, this particular maneuver was immense in scope, the largest ever seen by war correspondent Casey:

I saw the German panzers crash through the forest of French 75’s at Longwy. I saw the British knock the Italian Army out of Libya, and I saw Rommel knock the British right back to Sollum, but never in my life have I seen anything equal this. Why, brother, there were more armored vehicles in this one action than there were in the whole first Libyan campaign [Yank, 23 September 1942].

Figure 44. Open-air company headquarters of the 27th Quartermaster Truck Battalion, unknown location. Photograph by D. Haines. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.
Some aspects of a mock battle were detailed in a *Yank* article. All aspects of battle were reproduced, including the element of surprise:

One night, for instance, I sat in the operations tent of one of the Army headquarters. News of a sham battle was coming in via field telephone. An enemy column of armored infantry had been discovered pushing its way down a narrow corridor of desert lying between a range of mountains and the salt flats of Danby Lake. The situation was strangely similar to that in Egypt, where Rommel was limited to a narrow corridor between the Mediterranean and the impassable salt marshes of the Qattara Depression.

The Danby Salt Flats were supposed to be impassable, too. Heavy vehicles could sink in them and get lost. But before anyone knew what had happened, an entire tank destroyer battalion had suddenly popped up in the middle of the salt flats, and was blasting the enemy column. The enemy didn’t even have a chance to take the covers off its guns, and the umpires ruled that the whole regiment was destroyed or captured (*Yank*, 23 September 1942:6).

Perhaps the largest maneuver to take place was the first mock battle of Palen Pass. The battle was partly conducted for the benefit of visiting dignitaries, including several state governors. One of the participants in the battle, Sgt. Joe Delgado, recalled the action several decades later:

First came the airplanes and strafed hell out of it. Then the artillery shells began to cover the ground, next came tanks rumbling into the pass blasting away and finally streams of troops. There was so much dust and smoke up there you wouldn’t think anything could be alive for miles. But when we stopped, and the smoke began to clear, someone shouted, “Hey look up there, what’s that moving?” And just like nothing at all had been going on, this old dusty prospector and his burro, looking like something from the last century, came walking through all that smoke and dust and debris paying no attention at all to any of us or all the live ammunition we’d blasted that pass with [as quoted in Pew 1985:29].

The first fully equipped divisions to maneuver in the desert were the 3rd and the 5th Armored Divisions, under the command of Maj. Gen. Alvan Gillem. Each division consisted of 15,000 men and 400 tanks. The maneuver period was between three and four days, after which the division rested and regrouped (BLM 1984). Because the war in North Africa was still in full swing during the II Corps maneuvers, comparisons were continually made between terrain in that region and the terrain found on the DTC.

During the maneuvers, a headquarters was established to oversee the exercises. The headquarters was not always at Camp Young, but was usually at one of the divisional camps. During the II Corps maneuvers, for example, the headquarters was shifted among Iron Mountain for two weeks, Needles for two weeks, and Blythe for two weeks.

Maneuvers conducted by the II Corps serve as a good example of the type of undertaking these operations represented. Eight exercises were carried out during the duration of the maneuvers, consisting of the following (Meller 1946:Appendix K):

1. Meeting engagement. VII Corps with 5th Armored Division vs. 7th Motorized Division reinforced.
2. Attack of a defensive position. VII Corps with 5th Armored Division attacking 7th Motorized Division reinforced, in position.
3. Advance and delaying action. VII Corps with 5th Armored Division and 3rd Armored Division pressing reinforced 7th Motorized Division.
4. CPX. VII Corps with 5th Armored Division and 7th Motorized Division attacking an imaginary enemy occupying a bridgehead.
5. Advance and delaying action. VII Corps with 5th Armored Division and 7th Motorized Division pressing 3rd Armored Division in delaying action.
6. Advance and delaying action on different ground.
7. Same as 5 and 6 on different terrain.
8. Meeting of two forces, both in offensive. VII Corps with 3rd Armored Division and 7th Motorized Division (both with mixed armor and infantry) vs. 5th Armored Division strongly reinforced.

The IV Corps (under General Walker) maneuvered in February and March 1943, involving more than 12,098 wheeled vehicles and 3,649 combat vehicles. During Exercise A, one division was located near Searchlight, one near Yuma, and a third near Desert Center. The units moved toward each other, and engaged late on the first day. Gasoline supplies were almost exhausted by the second day, however, as supply vehicles had not kept up with the armored columns. During Exercise B, defense of a fortified position was emphasized.
The IV Corps maneuvers, organized at Camp Young, were designed to train air units to perform in conjunction with ground units in a theater of operations. Emphasis was placed on realism, as with the other maneuvers. The maneuver basically consisted of moving individual units to different duty stations as quickly as possible. The units were not allowed to use any of the improved blacktop roads, but instead had to travel cross country to their destinations. En route, the units bivouacked and attempted to conceal themselves as much as possible (Figure 45). A simulated air attack was usually a part of the maneuvers (Turner n.d.:1-A).

During the maneuvers, service units were required to act in conjunction with the combat units to which they were assigned. The 54th Evacuation Hospital, for example, was required to follow its “Blue Team” during maneuvers in the Wiley Wells and Midway areas during February and March 1943.

Homing Pigeons

A fair amount of experimentation was performed within the DTC/C-AMA. Homing pigeons were used for signal communications between ground troops, as well as from air to ground, during periods of radio silence. An entire company was established to test the efficacy of using pigeons in combat communications. A detachment of the 280th Signal Pigeon Company was given the task of using and experimenting with pigeon-borne communication during several large-scale maneuvers. At first, the unit was stationed at Camp Young, but it was soon moved out to take part in maneuvers. During the II Corps maneuvers, the pigeon detachment was stationed at Camp Iron Mountain between August and September 1942. The detachment contained one pigeon loft during the period of the maneuvers. A second loft was established at Needles, and then moved to Blythe for the remainder of the operation. Because of the successful use of pigeons in these operations, an entire “combat pigeon” platoon was established, with a second lieutenant in command of 40 enlisted men and 1,500 birds (Folsom 1944:1).

The newly formed pigeon platoon embarked on a breeding program to provide the necessary number of birds for the large-scale maneuvers that would take place. The company also wanted to raise pigeons in the desert, which would make them better suited for service in harsh climate and terrain. It is likely that this breeding was accomplished at Camp Young. The older birds were sent to such other locations as Yuma, Needles, Blythe Army Air Base, Rice, and Freda for various message work until the young birds were old enough. During the IV Corps maneuvers of February 1943, a loft of pigeons was stationed in the Milpitas Wash area near Wiley Well. A pigeon loft was placed in the wash to mislead enemy aircraft regarding the location of corps headquarters (Folsom 1944:2).

Between maneuvers, the pigeon company experimented with the birds, provided instruction on pigeon communication, and provided message service. Daily ration-strength reports, for example, were forwarded from the Coachella Railhead to Camp Young via pigeons (Folsom 1944:2–3).

The next major maneuver in which the pigeon company took place was in June and July 1943. Pigeon communication was provided to both units maneuvering, as well as to air officiating units. At first, lofts were established for the birds at the armored corps’ headquarters. It was soon found, however, that with the mobility of these units, lofts were impractical. Text, encoded messages, maps, and other information were carried by the pigeons to combat teams, scouting patrols, and reconnaissance units (Office of the Chief Signal Officer 1944:42–45).
Vehicles

Light Tanks

The basic light tank used by the army at the time of the DTC/C-AMA was the M3, which was known as the Stuart. Stuart tanks were provided in large numbers to the British in North Africa. Although lightly armored, the Stuarts were mechanically reliable and lovingly referred to as “Honeys” by the British. The M3 was built beginning in 1941 and was largely replaced by an improved model, the M3A1, by May 1942. The M3 weighed approximately 27,400 pounds; the M3A1, approximately 28,500 pounds. Although both radial gasoline and diesel engines were used in M3-series tanks, only those with gasoline engines were used in combat. The crew consisted of four men. Armament included a 37-mm gun, a .30-caliber machine gun, and a .30-caliber antiaircraft gun. The tracks were 11.5 inches wide, with various types of tread—including rubber and steel. These light tanks were fairly maneuverable, being only 178 inches long, and top speed was approximately 36 miles per hour, with a maximum range of 135 miles. It appears that relatively few Stuarts were used in the DTC/C-AMA.

By July 1943, the M3A1 had become obsolete and was largely replaced by the M5 and M5A1, which had vastly improved engines. Instead of the radial engines used in the M3 series, two V-8 engines were installed. The M5 also had a few other advantages over the earlier series, including easier access and an improved turret. The M5 series also had heavier armor, increasing the weight to 34,700 pounds. The next generation of light tanks, the M24s, were too late in production to be used on the DTC/C-AMA.

Medium Tanks

Although not used in large numbers in the DTC/C-AMA, the basic American tank at the onset of World War II was the General Grant tank. The Grant was provided to the British during their fight against Rommel in North Africa. The Grant gave the British a long range weapon that could destroy the German tanks from a much longer range than the British tanks could. Prior to the arrival of the Grant, the British had to be within 600 yards of the enemy tanks to knock them out, whereas the German panzers needed only 800 yards.

The tank most often used by U.S. troops in World War II was the M4 Sherman. The Sherman was a much more common sight in the DTC/C-AMA. The M4 evolved from designs established in the 1930s, and consisted of several variations. More than 72,400 M4 tanks were built from December 1941 to when production ended, in 1945. Their weight was almost twice that of the light tanks, ranging from 66,500 to 71,000 pounds. Speeds were slower than those of the light tanks, ranging from 24 to 29 miles per hour on level roads, with a 100–150-mile range. The M4s were between 19 and 20 feet long, and their tracks were generally 23 inches wide. The basic weapons system used on the M4s was a 75-mm gun, along with .30-caliber machine guns and .50-caliber antiaircraft guns. The Sherman tank went through several different versions as the war progressed, beginning with the M4 and proceeding to the M4A1 through M4A4.

Half-Tracks

Half-tracks, vehicles with wheels in the front and tanklike tracks on the rear, were used by the army primarily to transport infantry in support of armored units. They were also used as antiaircraft-gun mounts, carriages for artillery or other large guns, and mortar carriers. Several variations were built, including the M2, M3, M4, M5, M9, and M21 half-tracks. Both 57- and 75-mm guns were common on half-tracks (Berndt 1994).

Other Vehicles

Other mechanized weapons used at the DTC/C-AMA included 150-mm howitzers mounted on half-tracks, which were the first self-propelled artillery used by the army. Tank destroyers were an integral part of training in the DTC/C-AMA. Generally attached to tank units, the tank destroyers were armed with 105-mm howitzers. Also used were 75-mm self-propelled artillery (Weight 1977). All manner of vehicles were used, including jeeps, peeps (0.75-ton trucks), scout cars, 2.5-ton 6-by-6 trucks, 0.75-ton 4-by-4s, 10-ton wrecker trucks, and 750-gallon tank trucks, among others.

A great deal was learned during maneuvers about how best to drive all these different types of vehicles. For example, it was shown that tanks would throw their tracks if they attempted to scale a sand dune diagonally, half-tracks would roll relatively easily when a rapid change in direction was made at higher
speeds, and some types of desert vegetation could puncture tires with ease (Meller 1946:13–14).

Artillery and Antiaircraft Units

Because artillery and antiaircraft were integral parts of an effective ground fighting force, both were well represented at the DTC/C-AMA. Aside from the self-propelled artillery mentioned above, there were several types of stationary artillery units, firing 75-mm, 105-mm, and 155-mm projectiles. Antiaircraft units generally fired 40-mm and 90-mm projectiles.

Historical Themes

U.S. Preparation for World War II

Encompassing more than 31,500 square miles, the DTC/C-AMA was the largest army post and training maneuver area in U.S. military history (Gish 1985). Of the total of 85 army divisions that served in World War II, 23 trained at the DTC/C-AMA (Pew 1985:28). Over 1 million men were trained at the facility, roughly 10 percent of all U.S. servicemen who served in World War II.

The DTC/C-AMA clearly reflects America’s commitment to winning the war. The massive undertaking that the facility represents is an indication of the scale of America’s home-front preparations for the war. The DTC/C-AMA was far more than simply a place to conduct desert maneuvers; it included an incredible amount of material and huge numbers of men and women, all spaced in a vast territory. The size, extent, and varied nature of the DTC/C-AMA show what a massive undertaking this training center was. The 14 divisional camps spread out over a huge territory are complemented by the incredible diversity of sites related to the facility, including railroad sidings, airfields, hospitals, depots, maneuver areas, ranges, and others.

U.S. Military Training

The effort represented by the DTC/C-AMA was, and is still today, unprecedented in U.S. military history. Never before had the army attempted training on such a large scale, with such varied units.

The facility was the U.S. Army’s first attempt at desert-warfare training. Although originally designed to train soldiers for the North African campaign, the facility proved useful in a variety of other ways. The vast expanses of the Mojave Desert allowed the army to move across long distances, in realistic preparation for what they would have to accomplish in Europe. Because of the isolation of the area, their movements were unencumbered by towns or large numbers of civilians. Live-fire exercises could be conducted without fear of harming nearby citizens. The success of the DTC/C-AMA depended on the territory in which it existed.

The DTC/C-AMA served as an example and case study of what a real theater of operations under combat situations would, and should, be like. This was the first time that the army had ever simulated a theater of operations. It not only encompassed a huge expanse of territory, it included every type of unit that would be required in an actual theater of war. Along with the combat units themselves, the DWB, IV Air Support Command, and countless service units took part in the operations.

The commanding general of the army, Lt. Gen. Leslie J. McNair (1943), expressed the overall concept: "An underlying idea is to make your organization and experience a guide or yardstick in connection with our many overseas establishments which appear at this distance to involve a tremendous and unwarranted overhead." The simulated theater of operations was to be extremely instructive for the army, as General McNair went on to congratulate the commanding general of the DTC/C-AMA, Gen. Walton Walker, in the following way:

As you near the end of your tour, I want to express my appreciation of all you have done out there, of the fine morale and spirit which pervades the place, and of course, above all, the training progress achieved. I feel the Center which you are leaving is really an organized affair, as contrasted with the improvised, Topsy-like array which you found on your arrival. I say this, of course, without criticism of Patton, who was the pioneer and who made a fine start [McNair 1943].

The training that the soldiers received at the DTC/C-AMA proved valuable in combat situations across the globe. According to the War Department, the DTC/C-AMA “offered the very best training possible for the various units of the United States Armed Forces” (as quoted in BLM 1998). The soldiers were
taught how to survive the elements, which often were their worst enemies in combat, and several commanders remarked on the top physical condition of the men at the DTC/C-AMA.

Mobility lessons were learned, as well as equipment limits. Unfortunately for the U.S. armored force, German tanks had greater firepower. The 88-mm guns on the German tanks could hit American tanks from 2,000 yards, whereas the Americans had to be within 600 yards of a target to hit it (LVRJ, 24 March 1985:4A). The first large armored engagement that the Americans took part in was a humiliating defeat at Kesserine Pass.

The DTC/C-AMA also provided unparalleled experience for the top commanders. Almost all of the commanding officers of the facility went on to lead either armies or corps in the European Theater. Many of these generals maintained that the experience at the DTC/C-AMA was the best they received. General Patton maintained that, except for his World War I experience, that in the DTC/C-AMA was unsurpassed. General Walker stated that his experience at the DTC/C-AMA was unparalleled.

Gen. George S. Patton, Jr., and Gen. Walton Walker

The DTC/C-AMA was associated with several important figures in American history. Although Patton's legacy and contribution are well publicized, many other top commanders from World War II served at the facility. Gen. Walton Walker, another icon of the American military, trained and conducted maneuvers at the DTC/C-AMA and contributed greatly to the success of the facility.

Postwar BLM Ownership and Memorial

After the official closure of the DTC/C-AMA, the facility operated nominally for several years as equipment and materials were collected and shipped to other locations. Italian prisoners of war (POWs), captured in North Africa, were used to assist in dismantling some of the camps, including Camp Young. Explosive ordnance disposal (EOD) squads also scoured portions of the facility during these immediate postwar years (BLM 1984). Following the cleanup, the entire facility became surplus property; the army's responsibility for it ended. The BLM assumed the responsibility for the immense area, and still has jurisdiction over a vast majority of it.

Because of the large amount of unexploded ordnance remaining, the army sent a team of EOD experts into the area between 1951 and 1954. The EOD team searched known areas of explosive materials, although they clearly could not dispose of all explosive ordnance across the entire desert. One of the primary areas searched was the sand dunes along the Southern Pacific Railroad from Yuma to the Salton Sea. For several years after the army's departure from the DTC/C-AMA, large wooden signs that stated, "Danger. Entering abandoned U.S. maneuver area," stood sentinel throughout the desert. Most agree that substantial amounts of unexploded ordnance dating from the World War II era remain in the Mojave Desert (MWD 1973:7; RP-E, 28 January 1973:C-1-C-8).

Several decades passed before the historical importance of the facility was realized. Individuals and groups unsuccessfully lobbied to have portions of the DTC/C-AMA area set aside as a national monument. Local groups, including the American Legion and the Native Sons of the Golden West, lobbied to set aside portions of the DTC/C-AMA as early 1946. These requests were eventually presented as a bill by Senator William Knowland, but it received a negative response from the War Department. Later, Congressman Harry Shephard introduced a similar bill, but it received the same negative response from the War Department. Other unsuccessful efforts centered on establishing a state park at Cottonwood Springs Road, to encompass Camp Young (Weight 1977). A 1957 movement by the American Legion sought to name two sections of land encompassing Camp Iron Mountain as a national monument. This effort met with many obstacles, as Congress refused to act on it, sending it back to the State of California, which also refused to act for many years (Ward 1957:6).

During the 1960s, the U.S. Army again used the desert for large-scale training of its troops. This later round of training, known as "Operation Desert Strike," however, used 13 million acres, compared with the 35 million acres used by the DTC/C-AMA (Weight 1977; see Figure 27 and Chapter 4).

Because of their isolated nature, the remains of the DTC/C-AMA were used for some rather unsavory activities after the army's departure. Drug smugglers, at least according to one newspaper, used the old airfields for bringing such drugs as marijuana
and cocaine into the country. According to the same account, toxic waste was also dumped on some of the camps by unknown entities after the area's abandonment by the army (LVRJ, 24 March 1985:4A).

After years of effort, monies were finally made available to make portions of Camp Iron Mountain a preserve in 1973. An environmental assessment (EA) for Camp Iron Mountain was written in the same year by the BLM. The EA recommended that the camp be fenced (RP-E, 25 March 1973:B-2). In 1979, an environmental analysis record was completed, and a fence and interpretive sign were erected around the relief map. Unfortunately, the sign was soon thereafter vandalized. BLM managers by this time realized the need to protect the relief map at the camp, as the effects of sheet wash were damaging the resource. Rainwater followed camp roads creating drainage channels, one of which drained directly onto the relief map. After several proposals, a diversion channel was dug uphill of the map to deter erosion. Because funding was limited, a solution was found through the help of volunteers in a variety of capacities. In 1979, the Los Angeles MWD agreed to dig the channel, with the volunteer labor of one of their employees. Later, a cyclone fence was built around the entire relief map (BLM 1984).

In 1977, the remains of Camp Iron Mountain were nominated to the NRHP by the BLM. The nomination package, however, was returned by the keeper of the NRHP in order that a few changes be made. The requested changes included the development of a historic context and a more explicit description of the property's boundary. The changes were not made when the package was resubmitted in 1981, and the nomination was rejected. Follow-up nominations were never made, and Camp Iron Mountain was not listed in the NRHP (BLM 1981).

Because of greater publicity of the DTC/C-AMA sites in the early 1980s, vandalism also increased. Collectors began scouring most of the divisional camps, as well as some of the more ephemeral sites. In response, the BLM decided to take action to better protect and interpret the resources. One of the first steps in this procedure was the designation of Camp Iron Mountain as an Area of Critical Environmental Concern (ACEC). Designation of the camp as an ACEC was part of a larger California Desert Conservation Area plan finally implemented in 1980. In 1976, Congress passed the Federal Land Policy and Management Act, which established the California Desert Conservation Area. It was hoped that the ACEC designation would help protect the sites from further vandalism. At roughly the same time, Camps Young, Coxcomb, Granite, Iron Mountain, Clipper, and Ibis were closed to artifact collection.

In 1983, the BLM began a two-year historical study of the DTC/C-AMA. The BLM contacted various archives, conducted limited field research, and issued press releases to publicize the project. As a result, more than 450 letters were received from veterans of the DTC/C-AMA. Important anecdotes were recorded from the letters, offering a more personal touch to the story of the training center. In addition, hundreds of photographs and memorabilia were donated. Future plans by the BLM included the development of a computerized database of veterans, conducting additional archival research, and publishing a newsletter (RP-E, 27 January 1985:B-1-B-4). It is unclear if any of these tasks were ever completed. The BLM also hoped to have a monument and interpretive plaque placed at each divisional camp (BLM 1986). The BLM was assisted in this effort by the fraternal order E Clampus Vitus. The Clampers, as their members are known, erected monuments at most of the divisional camps. The signs described the history of the DTC/C-AMA and were generally located at main access roads to the camps. During the mid-1980s, the BLM undertook additional protection measures, which included the fencing of the relief map at Camp Coxcomb.

By 1985, a substantial amount of public interest was generated for the DTC/C-AMA, particularly as it related to the personage of General Patton. A memorial for Patton and the DTC/C-AMA was established in May of that year near the site of Camp Young (San Bernardino Sun, 16 February 1985). The memorial consisted of a triangular monument, built to resemble the triangular patch worn by the men of the armored divisions (RP-E, 9 May 1985). In 1986, a museum was established at the tiny hamlet of Chiriaco Summit to honor the men who served at the DTC/C-AMA, particularly General Patton. The General Patton Memorial Museum currently houses countless artifacts, as well as documentary and photographic resources from the DTC/C-AMA and from General Patton's life.

Unfortunately, the other DTC/C-AMA camps and resources have not received the same attention that Camps Young and Iron Mountain received. Other divisional camps and countless other sites have largely been ignored from an official standpoint since the departure of the army. There is a great deal of public interest in these historical resources, and it can be assumed that there would be far greater interest if these resources were brought to the attention of a broader spectrum of the public.
4

Property Types, Condition Assessments, and NRHP-Eligibility Recommendations

It must be stressed that the DTC/C-AMA consisted of far more than simply the divisional camps. Because training was the primary role of the facility, numerous activities took place throughout southern Arizona and southern California. Depots, airfields, ranges, bivouacs, maneuver areas, camps, and hospitals all must be considered as parts of the facility. Perhaps most important, it must be remembered that there were many facilities in southern Arizona. Three divisional camps were located in Arizona, and several other support and training facilities were spread across the state’s western desert.

This chapter presents a discussion of the different property types relating to the DTC/C-AMA era and information on the current condition of the known resources within these property types. Because the purpose of this project was to provide a historic context for DTC/C-AMA resources and provide the background for a multiple property nomination, this report contains only brief discussions of the NRHP eligibility of various resources. These should not be construed as final assessments. Full eligibility assessments of the individual resources found on the DTC/C-AMA should be made using the historic context and multiple property format presented here. Applicable National Register criteria for the multiple property nomination are provided in Chapter 5.

Divisional Camps

Divisional camps form the most lasting resource from the DTC/C-AMA period. The camps were extensive in size and were the locations of the most intensive activities during the life of the training facility. Camps were laid out in orderly, rectangular shapes, generally 3 miles long and 1 mile wide. Roads were bulldozed and often lined with rocks (Figure 46). Rocks decorated individual company or unit areas, and different varieties were used to spell out unit numbers or symbols (Figures 47 and 48). The divisional camps were the location of some of the few permanent structures built on the DTC/C-AMA. Relief maps were constructed in at least three of the camps, and these were designed to be a scale representation of the entire training facility. These features contained mounds of earth formed to represent mountain ranges, labeled with small wooden signs (Figure 49). Each map’s surface was generally lined with a protectant to keep out the elements. Although these maps have deteriorated, they are still visible today. In addition, stone-and-mortar altars were constructed in at least two of the divisional camps. The altars were simple structures, serving as places of worship for the soldiers. Thanks
Figure 46. Headquarters circle of an unknown divisional camp (likely Coxcomb; from Solarz [n.d.]).

Figure 47. Company area at Camp Coxcomb. Note rock-lined walkways, unit symbols, and plant outlines. Photograph by Leo Panattoni. Courtesy BLM Needles Field Office, Needles, California.
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Figure 48. Leo Panottoni in company area at Camp Coxcomb. Courtesy BLM Needles Field Office, Needles, California.

Figure 49. Unknown soldier constructing relief map at either Camp Coxcomb, Iron Mountain, or Rice (from Solarz n.d.).
to efforts by volunteers to maintain the altars, they remain intact today.

It is expected that most divisional camps will be potentially eligible for listing in the NRHP. Because the current project is not designed to be an intensive archaeological survey, not all of the camps could be fully assessed for their potential eligibility. Certainly, some of the camps are clearly eligible, whereas others must be more intensively examined to determine their eligibility status.

To be considered eligible for listing in the NRHP, camps must convey their historical associations. More specifically, the basic outlines of the camp should be discernible. This means that rock-lined roads and walkways should still be in existence, along with outlines for tents or other specific activity areas. Some idea of the size of these camps must also be discernible in order for them to truly convey their significance and be eligible for listing in the NRHP.

**Camp Clipper**

Camp Clipper was apparently a temporary camp, occupied by infantry divisions only. The 33rd Infantry Division occupied it after its construction in 1942, followed by the 93rd Infantry Division. The temporary facility was used as a transition camp for the more permanent Camp Essex to the west. When Camp Essex was completed, Camp Clipper was closed. Camp Clipper was used when one division was moving out and another was moving in, so that both units could be accommodated (as was the case with the 33rd and 93rd Divisions) (Meller 1946:41; Figure 50).

A private landowner, Jack Mitchell, lived in the nearby mountains. He built a road from the caverns where he lived (now known as Mitchell Caverns) to the main highway to the south. Prior to the war, the Mitchell family provided tours of the caves and had a small resort. Mitchell apparently worked out an

Figure 50. Soldiers of unknown unit (likely the 33rd Infantry Division) at camouflaged area on Camp Clipper, May 1943. Photograph by James R. Smith. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.
arrangement with the army, in which he rented some of his cabins to the families of officers stationed at the nearby camp. In addition, troops were allowed to visit the small resort, which was a 17-mile march from Camp Clipper and 2,700 feet higher in elevation. Troops from both the 33rd and 93rd Infantry Divisions visited Mitchell Caverns on several occasions (Mitchell 1964:117–126).

Camp Clipper was located east of Camp Essex, north of the Essex Airfield. While Camp Essex was built predominantly on a north-south axis, Camp Clipper had a northeast-southwest orientation (Figure 51).

**Current Condition**

Little remains of Camp Clipper today, primarily because of the short life span of the camp and the fact that it was never a heavily used facility. Interstate 40 bisects the northern portion of the camp. Roads leading to the camp are barely discernible today, as most have eroded substantially and been overgrown with vegetation.

**NRHP Eligibility**

Although little was found during a 1998 reconnaissance, Camp Clipper should be revisited and surveyed in order to better evaluate its integrity. Camp Clipper was a temporary camp. Because it was more ephemeral than the other divisional camps, it is believed that little remains to mark the camp today. Additional investigation of the camp is required prior to making an assessment of NRHP eligibility.

**Camp Coxcomb**

Located between California Highway 177 and the MWD aqueduct, Camp Coxcomb was originally constructed in the summer of 1942 (see Figure 14).
Among units known to have been stationed at Camp Coxcomb were the 7th Armored and the 85th Infantry Divisions. The 7th Armored Division was stationed at the camp during the expansion to a theater of operation in June 1943. During the XV Corps occupation of the DTC/C-AMA (July–November 1943), the 85th Infantry was transferred from Camp Pilot Knob to Camp Coxcomb, in August. The 95th and 93rd Infantry Divisions also trained at the camp, although it is not known when. Camp Coxcomb was apparently more permanent than other camps (including Camp Pilot Knob), with wooden floors and screens in the post exchange (PX; see Figure 35). Facilities at the camp included 39 shower buildings, 165 latrines, 284 pyramidal wooden tent frames, one 40,000-gallon water tank, and one combination observation and flag tower. There was also a relief map of the DTC/C-AMA and a stone altar, much like those at Camp Iron Mountain. Ranges included infiltration courses and machine gun, rifle, and pistol ranges. These ranges were located on the north side of the MWD aqueduct, at the foot of the Coxcomb Mountains (Figure 52). Some of the adjacent canyons west of camp were also used for small-unit training.

**Current Condition**

A paved road leads to the Coxcomb Tunnel off of California Highway 177. This road lies immediately south of the camp itself, and several camp roads head north off of it. The MWD aqueduct lies immediately west of the camp before it enters a tunnel through the mountains, and a road paralleling the aqueduct forms the western boundary of the camp. California Highway 177 lies to the east, less than 1 mile away. A large portion of the camp has been completely washed away, although there are many well-defined roads and walkways in other portions of the facility (Figure 53). Rock-lined insignias also remain in various portions of the camp. An altar constructed of native rock and mortar still remains, and it has been maintained by volunteers (Figure 54). I. H. S. is etched
Figure 53. Photograph of rock-lined walkways at Camp Coxcomb, 1998.

Figure 54. Altar at Camp Coxcomb, 1998.
into the altar, representing a Greek symbol for Jesus. A cross on the altar is made from a water-barrel hoop. A small relief map is near the flag circle in the southern portion of the camp, which was fenced by the BLM in 1984 (Figure 55). The relief map contains a few small sign boards.

**NRHP Eligibility**

Camp Coxcomb is a good example of a divisional camp within the DTC/C-AMA. The camp was occupied for much of the duration of the DTC/C-AMA, and a substantial portion of the camp remains today. The camp should be considered eligible for listing in the NRHP.

**Camp Desert Center**

Little is known about Camp Desert Center. Evidence for its existence includes a use permit issued by the secretary of the interior to the War Department, dated April 1942. The permit references a divisional camp, and included land within Township 5 South, Range 14 East, Sections 26, 28, 30, 32, and 34; and Township 4 South, Range 15 East, Sections 1–15, 17, 18, 22, and 30–34 (Ickes 1942:1–2). Approximately 34,000 acres were acquired by the War Department for the camp through either leases or transfers. The land is located along the north side of current Interstate 10, between Chiriaco Summit and Desert Center, and includes land immediately to the east of Eagle Mountain Road. The installation reportedly consisted of a maneuver area, as well as an encampment with temporary housing structures (U.S. Army Corps of Engineers 1993:3). An evacuation hospital, observers camp, ordnance campsite, and quartermaster truck site also were reported to have been located at Desert Center.

**Current Condition**

Little remains of Camp Desert Center today. Rock-lined roads, walkways, and tent areas are discernible in the area immediately east of Eagle Mountain Road and north of the old highway (Figures 56–59). A few of the main roads were surfaced with oil, others contained asphalt. There are also insignias formed with rocks, although their meanings are not currently known. Trash can also be found, consisting primarily of cans (e.g., oil, gas, and food). Interviews with local
Figure 56. Rock alignments at Camp Desert Center, 1998.

Figure 57. Rock-lined walkways at Camp Desert Center, 1998.
Figure 58. Rock-lined walkways and tent areas at Camp Desert Center, 1998.

Figure 59. Unknown feature at Camp Desert Center, 1998.
informants indicate that other areas of the camp can be found throughout the valley north of Desert Center. These local informants mentioned the presence of the camp’s refuse dump, as well as rock-lined walkways and roads.

Evidence of other military activity can be found throughout the general area, including 1940s-era refuse near the railroad tracks leading to the Eagle Mountain Mine. There was also a DTC/C-AMA evacuation hospital at Desert Center, although its exact location is not currently known. It is possible that the rock-lined walkways found immediately east of Eagle Mountain Road represent this evacuation hospital, not a divisional camp. Further research must be performed in order to ascertain the type, location, and extent of DTC/C-AMA–related installations in the Desert Center area.

NRHP Eligibility

Although the extent of Camp Desert Center was less than that of the other divisional camps, it retains sufficient portions to reflect its historical associations. The rock-lined walkways and roads found at the other camps are also present at Camp Desert Center, and the camp appears to retain sufficient integrity. More research should be performed to ascertain the types of activities that occurred at Camp Desert Center (e.g., it is unclear if the camp housed a full division of troops) and to determine whether or not the camp is eligible for listing in the NRHP.

Camp Essex

Established in 1942, Camp Essex (Figure 60) used the nearby Camp Clipper as a temporary staging area for divisions when one was moving in and another was moving out. The 33rd Infantry Division was first assigned to the camp, followed by the 93rd Infantry Division. The 93rd was an all-black division, at a time when segregation was still in effect in the U.S. Army. After the departure of the 93rd Division in January 1944, the camp was occupied by Italian POWs in May. By October, the POWs were gone, and the camp was closed (Mitchell 1964:126–127). Camp Essex was located close to the small railroad towns of Essex and Fenner, and was bordered on the southwest by Essex Road. Facilities at the camp included 36 shower buildings, 191 latrine

![Figure 60. Original layout of Camp Essex.](https://example.com/camp-essex-layout)

Courtesy National Archives and Records Administration, Pacific Region, Laguna Niguel, California.
buildings, 149 pyramidal wooden tent frames, an outdoor theater, and a 500,000-gallon water reservoir. There were apparently several ranges southwest across Essex Road from the camp, although no traces of them are currently apparent. The camp was also located close to an airfield, to the southeast (see “Airfields and Airports” section).

Current Condition

Camp Essex is now split by Interstate 40, which passes immediately north of the headquarters circle. Diversion features have been constructed north of the highway to prevent washouts. These structures extend across portions of the camp. An access road (Hidden Hill Road) from the paved Fenner Road extends from east to west across the northern portion of the camp (Figure 61). There are a few rock-lined walkways and roads in this area. South of Interstate 40, an abundance of well-defined roads and walkways can be found (Figures 62 and 63). A large amount of refuse is present in this portion of the camp, including cans, glass, bottle caps, nails, and areas of burned refuse. The 500,000-gallon water reservoir also remains today. An interpretive exhibit is located at the rest area along Interstate 40.

NRHP Eligibility

Camp Essex was an important divisional camp in the DTC/C-AMA and is a significant site. The camp has, however, lost some of its original integrity because of the placement of Interstate 40 through the northern portion of the camp. Portions of the camp south of the interstate are in good condition, however, and convey the historical associations of the camp well. Camp Essex should be considered eligible for listing in the NRHP.

Camp Granite

Camp Granite was established in the spring and summer of 1943. The original camp was closer to the highway but, because of flooding, was moved closer to the mountains. The date of this move is unknown. The 90th and 104th Infantry Divisions were both assigned to Camp Granite, at different times. Among the smaller units known to have been stationed at Camp Granite were the 76th Field Artillery Brigade and the 413th Infantry Regiment. The 76th Field Artillery Brigade, in fact, was stationed at Camp Granite prior to the completion of the camp and may...
have been there to assist in its construction. During the XV Corps occupation of the DTC/C-AMA (July–November 1943), the headquarters of the XV Corps’ artillery was at Camp Granite.

Facilities constructed at the camp include 40 shower buildings, 157 latrines, 191 pyramidal wooden tent frames, and one 50,000-gallon water tank. There were a total of nine ranges south of the camp, all of which faced into the Granite Mountains. The ranges were used for artillery, rifle and pistol, regimental, towed target (57- and 105-mm), and antiaircraft (.30- and .50-caliber) weapons.

Camp Granite is located south across California Highway 62 from Camp Iron Mountain, near the base of the Granite Mountains. The MWD aqueduct was located northeast of camp and supplied it with water. The camp was located near the Palen Pass area, where several large maneuvers took place.

Current Condition

The remains of numerous rock-lined roadways can still be discerned, as can several rock insignias (Figures 64 and 65). Reports of ordnance have been made south of the camp area, indicating the presence of artillery ranges in the vicinity. The majority of the eastern portion of the camp has been washed away. The western portion of the camp, particularly that lying at the foot of the Granite Mountains, is extremely well preserved. Numerous rock-lined walkways can be found in this portion of the camp, as can unit insignias, several of which have been roped off (Figures 66 and 67). Access to this portion of the camp is easy, although the road leading from the highway is extremely sandy.

NRHP Eligibility

Camp Granite should be considered eligible for listing in the NRHP. Although large portions of the site have been destroyed, enough of it remains intact to clearly reflect the camp’s historical associations.

Camp Ibis

Camp Ibis was located along U.S. Highway 95, stretching more than 2 miles north to south (Figures 68 and 69). Constructed in winter 1942–1943, Camp Ibis (Figure 70) was first occupied by the 4th Armored Division. After the departure of the 4th in
Figure 63. Rock-lined walkway in the northwestern portion of Camp Essex, 1998.
Figure 64. Rock-lined walkway in the northwestern portion of Camp Granite, 1998.

Figure 65. Rock-lined walkway in the northwestern portion of Camp Granite, 1998.
Figure 66. "MED DET" rock alignment at Camp Granite, 1998.

Figure 67. Insignia of the 413th Infantry Regiment at Camp Granite, 1998.
Figure 68. Aerial photograph of Camp Ibis, July 25, 1943.
Courtesy San Bernardino County Library, Needles, California.

Figure 69. Aerial photograph of Camp Ibis, July 25, 1943.
Courtesy San Bernardino County Library, Needles, California.
June 1943, the camp was occupied by the 9th Armored Division from July to November 1943. The 9th Armored Division was replaced by the 11th Division in winter 1943, which was the last division to occupy the camp (Meller 1946:41–42). Most of the divisions placed signs indicating their presence at the camps. The 11th Division was no exception, placing a sign over the main road into Camp Ibis.

Temporary facilities at Camp Ibis consisted of 28 shower buildings for enlisted men and 14 for officers; 173 latrine buildings; 97 single, 127 double, and 100 triple wooden tent frames; a 50,000-gallon, concrete water reservoir; and a 50,000-gallon, wooden, elevated storage tank. In addition, the camp contained 23 ranges, including ones for moving targets, pistols, rifles, and .50-caliber machine guns. There were also several combat ranges, vehicle combat ranges, and transition courses.

A POW camp, perhaps associated with Camp Ibis, was reported to have existed near Searchlight Junction, 1 mile south of Camp Ibis (Bard 1972:139). Supporting this report are indications that the largest area cleared of ordnance lies immediately west of the Dead Mountains, which are located near Camp Ibis (BLM n.d.).

**Current Condition**

Elements of Camp Ibis remain on both sides of U.S. Highway 95. That portion lying to the east of the highway is the best preserved. Many camp roads still exist, as do numerous rock-lined walkways and unit areas (Figures 71 and 72). Rock insignias can also be found, including several consisting of groupings of white quartz (Figures 73 and 74). Tank tracks have been found on the west side of the highway, along with various items of refuse. A camp dump has been reported to be north of the camp. The larger and more diagnostic artifacts (e.g., dog tags) have been removed from the site. Because the site is frequently used by people driving recreational vehicles for overnight camping, many of the rock-lined roadways are disappearing. Erosion is one of the culprits, although there is evidence that many of the rocks have been moved by visitors. Fire rings are a common end for many of these walkway stones.

**NRHP Eligibility**

In spite of the damage done to the site, Camp Ibis should be considered eligible for listing in the NRHP. It is one of the better-preserved divisional camps and reflects its historical associations well.

**Camp Iron Mountain**

Established in the spring of 1942, Camp Iron Mountain was first occupied by the 3rd Armored Division. Its 23rd Armored Engineer Battalion constructed...
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Figure 71. Rock alignments at Camp Ibis, 1997.

Figure 72. Rock alignments and rock-lined pit at Camp Ibis, 1997.
The Desert Training Center/California-Arizona Maneuver Area, 1942–1944

Figure 73. Star formed with quartzite rocks at Camp Ibis, 1998.

Figure 74. Rock alignments at Camp Ibis, 1998.
40 miles of camp roads, along with firing ranges. By late in the summer of 1942, the entire division had taken over the camp. Camp Iron Mountain was also home to the 183rd Artillery Group, the X Corps Artillery, and the 951st Artillery Battalion between mid-1942 and mid-1944 (BLM 1984; RP-E, 11 September 1984:B-1). The 54th Evacuation Hospital was at Camp Iron Mountain from October 15 to November 27, 1943.

During maneuvers conducted between August 29 and September 13, 1942, the Director Headquarters and Advisor’s Camp was located at Camp Iron Mountain. These maneuvers involved the 3rd Armored Division, 7th Motorized Division, 5th Armored Division, 75th Field Artillery Brigade, and elements of the VII Corps (BLM 1984). It is likely that many maneuvers were planned at Camp Iron Mountain, with the benefit of its large relief map (Figures 75–77).

**Current Condition**

Perhaps the best-preserved divisional camp, Camp Iron Mountain has also received the most public attention. The two outdoor chapels remain; one of these (the smaller of the two) was reportedly a Protestant chapel (Figure 78), the other a Catholic chapel. Smoke trees stood on either side of the Catholic altar, and rocks formed a kind of sanctuary in front, with a pathway leading to the altar. The pathway was reportedly lined with cacti. The Protestant chapel, at least according to an old photograph, was used by some soldiers of the 183rd Field Artillery Group. Rock inlays in the concrete could apparently be seen in 1973, forming the numbers of the 183rd and the 951st Field Artillery Battalions (MWD 1973). The Protestant chapel also had a small sanctuary in front, with rock-lined walkways. A small cross formed by the placement of rocks in the ground could also be seen in 1973 (RP-E, 28 January 1973:C-1–C-8).

Also present at Camp Iron Mountain was a large relief map (Figure 79), measuring 200 by 175 feet, built by the U.S. Army Corps of Engineers. The map represented the entire DTC/C-AMA area, from roughly Kingman to Twentynine Palms, and from Hoover Dam to the Coachella Valley. Built completely to scale, the map included a wooden walkway spanning its entire distance (Figure 80). The walkway was still extant as late as 1977, although it is gone today (Weight 1977). The map included small wooden signs indicating large topographic features, as well as divisional camps. Highways, railroads, and the MWD aqueduct were also represented (RP-E, 28 January 1973:C-1–C-8). The BLM has fenced off this feature to prevent further vandalism and has dug a diversion channel uphill to prevent erosion.

Camp Iron Mountain was laid out in the same fashion as the other divisional camps (Figure 81). Many nonnative plants were placed to accentuate particular features at the site. Plants, particularly smoke trees, barrel cacti, and ocotillos, were planted throughout the camp. Rocks were used to line walkways, company areas, tents, supply areas, latrines, mess halls, chapels, and many plants.

Reports of a grenade-throwing range near the camp have been made. Grenade-container end caps were found behind foxholes, which were located halfway between the camp and the mountains to the west. The camp dump was also reported in the same account, farther away from camp toward the mountains (Blake 1988:33). Individuals have reported finding crates containing antitank mines buried near the camp (RP-E, 28 January 1973:C-1–C-8).

Prior to the establishment of California Highway 62, the Iron Mountain area was extremely isolated. This isolation protected the camp from the level of vandalism it faces today. Even in the late 1970s, artifacts could still be found in large numbers.

Rock-lined walkways and roads are clearly discernible at Camp Iron Mountain, as are unit symbols and other insignias (Figures 82–85). The relief map is one of only three known to now exist and is by far the best example (Figures 86 and 87). The two chapels are also rare, the only other one being at Camp Coxcomb. The chapels’ altars are in excellent condition thanks to efforts to preserve them (Figures 88 and 89).

**NRHP Eligibility**

Camp Iron Mountain is considered eligible for listing in the NRHP. As part of the current project, the camp has been nominated for listing in the NRHP as a district. The nomination is part of the multiple property submission for the entire DTC/C-AMA. Currently, a large portion of Camp Iron Mountain is fenced off (Figure 90). A portion of the camp extends immediately west of the fence for approximately 100 yards. This complex of rock-lined walkways and unit areas is clearly associated with the rest of the camp (Figure 91) and has been included within the proposed NRHP district boundary.
Figure 75. Aerial photograph, ca. 1943, showing Camp Iron Mountain in upper left and Camp Granite in lower portion. The MWD aqueduct can be seen extending across the middle of the picture. Courtesy San Bernardino County Library, Needles, California.
Figure 76. Aerial photograph showing Camp Iron Mountain in lower left of picture and the MWD's Iron Mountain Pumping Plant in the top portion, ca. 1943. Courtesy San Bernardino County Library, Needles, California.
Figure 77. Close-up of Figure 76.
Figure 78. Protestant altar at Camp Iron Mountain, date unknown. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.

Figure 79. Relief map at Camp Iron Mountain. Note sign, wooden bridge, and walkway. Date unknown, although likely taken soon after the war. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.
Figure 80. Relief map at Camp Iron Mountain showing mountain ranges, wooden signs, roads, wooden walkway, and fence. Date unknown, although likely taken soon after the war. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.

Figure 81. Company headquarters area for the 826th Tank Destroyer Battalion at Camp Iron Mountain, August 1942. Photograph by William Holloway. Courtesy BLM Needles Field Office, Needles, California.
Figure 82. Rock-lined walkway at Camp Iron Mountain, 1998.

Figure 83. Rock-lined walkway at Camp Iron Mountain, 1998.
Figure 84. Unit (artillery) symbol at Camp Iron Mountain, 1998.

Figure 85. Unit symbol at Camp Iron Mountain, 1998.
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Figure 86. Portion of the relief map at Camp Iron Mountain, 1998.

Figure 87. Portion of the relief map at Camp Iron Mountain, 1998. Note portion of wooden sign.
The Desert Training Center/California-Arizona Maneuver Area, 1942–1944

Figure 88. Catholic altar at Camp Iron Mountain, 1998.

Figure 89. Protestant altar at Camp Iron Mountain, 1998.
Figure 90. Perimeter fence and relief-map fence at Camp Iron Mountain, 1998.

Figure 91. Portion of Camp Iron Mountain outside perimeter fence, 1998. Note well-defined walkways and rock alignments.
Camp Needles

Although it is not clear whether Camp Needles was a full divisional camp, it is clear that troops were stationed there in large numbers. Improvements included 14 showers, 29 latrines, and 62 administration buildings. California Highway 95 passed north to south through the eastern and southern portions of the camp. The site of the camp is apparently bordered today by Needles on the north and by Interstate 40 on the north and east. The northernmost portion of the camp has been built over by the growth of the community of Needles.

Air units were apparently stationed at the Needles airport. Two station hospitals (with 250 beds each) also existed at Camp Needles, apparently located in the northern portion of the camp, immediately south of town.

Current Condition

No remains of the possible divisional camp or hospitals could be found. There have been no reports of individuals finding camp artifacts or features.

NRHP Eligibility

Because its location could not be determined, the NRHP status of the Needles camp could not be determined. Further research must be performed to ascertain the type and extent of DTC/C-AMA activities that took place at Needles. Efforts should also be made to locate remaining portions of the camp. These efforts may be aided by aerial photographs (both historical and modern) of the Needles area.

Camp Pilot Knob

The most southerly of the California camps, Camp Pilot Knob housed a full division of troops. Land acquisition for the camp began in January 1943 and was completed by April. The camp encompassed more than 4,000 acres of land, which was obtained through permits from the Department of the Interior, the State of California, and private individuals. The core of the camp, however, was smaller than other divisional camps, consisting of approximately 700 acres. The camp was occupied by the 85th Infantry between June and August of 1943. There were troops at Camp Pilot Knob prior to the arrival of the 85th, but it is unknown which unit they represented. The 54th Evacuation Hospital was apparently stationed at Camp Pilot Knob from November 28, 1942, to February 7, 1943. Elements of the 90th Infantry Division were reported to have been stationed at the camp during the XV Corps’ occupation of the DTC/C-AMA. These elements arrived in August, following the departure of the 85th Infantry, and formed the 36th and 44th Reconnaissance Squadrons at Pilot Knob. The units spent considerable time in the sand dunes to the west, testing the capabilities of their vehicles in the field. These two units remained at the camp until February 1944 (Chamberlin 1990).

The camp extended north along Sidewinder Road (which had already been built and is still in use today) from near Pilot Knob all the way to the Cargo Muchacho Mountains. The camp’s living area was in the southern portion of the camp, near the highway and railroad (Figure 92). Artillery and rifle ranges were located somewhere against the mountains to the north and consisted of four firing ranges, along with infiltration courses where live-fire exercises took place. Located immediately adjacent to the Southern Pacific Railroad and U.S. Highway 80, the camp was close to transportation facilities. A spur line from the main Southern Pacific track was constructed to better supply the camp. The only structures erected consisted of 16 temporary latrines and thousands of pyramidal wood-framed tents (Staebel and Fausnaugh 1988: 10-11).

By June 1944, land had begun to be returned to previous owners. Today, 2,566 acres of the camp are owned by the BLM. Of the living area of the camp, only 150 of 700 acres are owned by the BLM.

Current Condition

Interstate 8 bisects the site. Remains of the camp, however, can be found on both the north and south sides of the highway.

North of Interstate 8

The living area of the camp, including the headquarters, was located here. A few roadways can still be seen. Apparently, few of the roads were lined with rocks, as was done in other camps. Instead, roads were simply bulldozed. Walkways, however, were lined in place with quartzite rocks, the remains of which can still be seen in places (Figures 93 and 94). The headquarters circle can still be seen immediately west of Sidewinder Road. North of the camp, several foxholes and cleared
Figure 92. Original layout of Camp Pilot Knob (from BLM 1986:Map 16).
areas can be found. A small amount of cans and other refuse can also be found in association with these features, which probably represent a training area or infiltration course.

**South of Interstate 8**

Large refuse deposits, appearing to date to the 1940s, exist south of Interstate 8 and north of Pilot Knob (Figure 95). A fair amount of military refuse dating to the 1940s was also found buried in curvilinear features near Pilot Knob (Figure 96). A large portion of this part of the camp is currently in private hands.

The camp was designated a California Registered Historical Landmark in 1988, and a plaque was placed near the site by the Squibob Chapter of E Clampus Vitus (Chamberlin 1990:31).

**NRHP Eligibility**

Camp Pilot Knob lacks sufficient integrity to be considered eligible for listing in the NRHP. The site, however, is still an important aspect of the DTC/C-AMA and should be recognized in some other way. Listing of the camp in the California State Register is one possibility.

**Camp Rice**

A short-lived divisional camp was constructed in early 1942 adjacent to Rice Army Air Field. The camp was occupied by the 5th Armored Division until October, when the division was moved elsewhere. Another unit apparently occupied the camp, although it is not currently known which unit it was or how long it was located at Camp Rice. Little other information could be obtained regarding Camp Rice. Historical-period photographs of the camp indicate the presence of a relief map like the one at Camp Iron Mountain, except on a much smaller scale. Camp Rice's relief map was approximately 50 by 40 feet originally but has not been relocated.

**Current Condition**

The camp's roads can be seen in several locations. Rock-lined walkways can also be found. Several of the walkways were lined with quartzite rocks, creating a vivid contrast to the drab sand of the surrounding desert. Many of these walkways still exist (Figures 97 and 98). Many of the camp's roads are lined with large pieces of basalt, as are many of the walkways (Figure 99). Lying immediately south of
Figure 94. Rock alignments at Camp Pilot Knob, 1998.
The Desert Training Center/California-Arizona Maneuver Area, 1942–1944

Figure 95. 1940s-era refuse in the vicinity of Camp Pilot Knob, south of Interstate 8, 1998.

Figure 96. Curvilinear feature in the vicinity of Camp Pilot Knob, south of Interstate 8, 1998.
Figure 97. Walkway lined with quartzite rocks at Camp Rice, 1998.

Figure 98. Metal ring surrounded with quartzite rocks at Camp Rice, 1998.
The Desert Training Center/California-Arizona Maneuver Area, 1942-1944

Figure 99. Walkway lined with basalt rocks at Camp Rice, 1998.

California Highway 62, the camp is easily accessible. The best-preserved portions of the camp are located approximately 1.5 miles east of the bend in Highway 62 and 0.5 miles south along a road extending south from the highway, marked with an E Clampus Vitus sign.

NRHP Eligibility

Camp Rice should be considered eligible for listing in the NRHP. Although short-lived compared with other divisional camps, Camp Rice still represents a significant portion of the DTC/C-AMA. Camp Rice also exhibits sufficient integrity to reflect its important historical associations.

Camp Young

As discussed above, Camp Young was the first divisional camp inhabited, and it served as the headquarters for the DTC/C-AMA (Figure 100). The camp was one of the more permanent facilities and contained the most-improved quarters of the divisional camps. Men from the 836th Engineer Aviation Battalion, for example, found Camp Young a vast improvement over Camp Rice. The tents at Camp Young had floors and half walls and were equipped with stoves. In addition, showers were available, and the battalion had its own PX furnished with beer (Merz n.d.).

General Patton lived at Camp Young most of the time during his short stay at the DTC/C-AMA (RP-E, 2 July 1975:J-1). It is thought that the 3rd Armored Division was the first to occupy Camp Young, as it was the first division in the DTC/C-AMA. The 6th Armored Division was stationed at Camp Young beginning in November 1942 and probably remained there until March 1943. Subsequent units to occupy the camp are not currently known.

Originally bounded on the south by Highway 60/70, the facility included two station hospitals. There were also several rifle and combat ranges to the south of the camp, on the other side of the highway. Most men stationed at Camp Young agreed that it was significantly more “permanent” than other divisional camps within the DTC/C-AMA. It certainly appears that there were far more temporary buildings constructed at Camp Young than at many other camps. Administration facilities consisted of 98 buildings. More than 50 warehouses of various sizes, along with bathhouses, mess halls and kitchens, PXs, and hundreds of latrines, also existed. Other specialty buildings included a post office,
radio station, coliseum, theater, garages, pump stations, officers' clubs, and various shops (Figure 101). The pyramidal tent frames totaled more than 3,000, significantly more than at the other camps. Most of the big shows put on by the USO and other entertainment groups took place at Camp Young.

**Current Condition**

Interstate 10 passes through the southwestern corner of the camp today. The construction of the highway and later, a pipeline, destroyed a large portion of the southern part of the camp. Power lines have been constructed on the northern portion of the camp, and erosion has taken a toll on camp roads and walkways. In addition, because of its relative accessibility, Camp Young has been scoured for artifacts. Numerous artifacts from Camp Young, as well as other camps, are housed at the General Patton Memorial Museum in Chiriaco Summit.

Several rock-lined walkways can still be found at Camp Young (Figures 102 and 103). A fair amount of World War II-era refuse can also be found. White-painted rocks were used as borders for entrance and service roads, some of which are still extant. Portions of concrete foundations can be found, as can a few segments of paved roads (Figure 104).

**NRHP Eligibility**

Although Camp Young was the headquarters of the DTC/C-AMA for most of the latter's existence, the camp's integrity is in question. Few of the rock-lined roadways and walkways can be seen. The roads that still exist are faint. Several intrusive elements, including the highway, pipeline, and power lines, detract from the historical feel of the camp. Camp Young may not qualify for listing in the NRHP because of integrity considerations. This does not detract from the facility's historical importance. The site should be recognized in some other way. Listing in the California State Register is one possibility. Opportunities to interpret Camp Young should also be exploited (see Chapter 5).
Figure 101. Map of Camp Young showing the locations of certain facilities, ca. 1942. Courtesy General Patton Memorial Museum, Chiriaco Summit, California.

Figure 102. Rock alignment at Camp Young, 1998.
Figure 103. Rock feature with unknown function at Camp Young, 1998.

Figure 104. Asphalt road at Camp Young, 1998.
Airfields and Airports

Many of the airfields built for the DTC/C-AMA were quite permanent in their construction. Unlike the divisional camps, the airfields often contained permanent buildings with concrete foundations. Originally under the direct command of the AGF, the airfields were transferred to the command of the Third Air Force in December 1943.

A variety of airports were used by the army, many of which were civilian. Boulder City Airport, for example, was used by elements of the 79th Service Group based at Thermal Army Air Field. A civilian airfield outside the town of Needles was also used by the army. Several other facilities were constructed strictly for use by the DTC/C-AMA.

NRHP Eligibility

Because airports and airfields played a critical role in the training and operation of the DTC/C-AMA, they are historically significant resources. Issues of integrity are of the utmost concern when evaluating the airfields. Many of these facilities have been turned over to private use, altered for other uses, or have been dismantled altogether. In order to be considered eligible for listing in the NRHP, an airfield must have been an integral part of the DTC/C-AMA operation. In addition, it must convey its historical significance. In order to be considered eligible for listing in the NRHP, airfields and air facilities must contain clearly discernible runways and aircraft utility areas. Essex Airfield, for example, contains several runways, as well as aircraft tie-down areas complete with cement inscriptions. Landing strips that no longer are visible because of vegetation growth are generally to be considered not eligible. What follows is a short description of known air facilities, with a preliminary assessment of NRHP eligibility.

Shaver’s (Now Chiriaco) Summit Airport

One of several landing strips, that at Shaver’s Summit consisted of a single runway measuring 5,500 by 300 feet. The strip was located a few miles east of Camp Young and was reportedly constructed by and for the army in 1942. The runway was paved, and several buildings existed at the strip. It is not known if these buildings were constructed on-site or moved from somewhere else. Today, the area is known as Chiriaco Summit and is no longer called Shaver’s Summit.

Today, the mile-long strip is operated by Riverside County. A few buildings from Desert Center Airport were relocated to Chiriaco Summit after the war, all of which were converted for other uses. A building reportedly dating to the DTC/C-AMA period exists immediately adjacent to the runway, behind the Patton Museum. The building was obviously moved and has been altered almost beyond recognition. It is not eligible for listing in the NRHP.

NRHP Eligibility

The Shaver’s Summit Airport has been significantly altered since the World War II era. Buildings have been removed, and other buildings have been relocated to the airfield. Although the landing strip is still in place and still occasionally used, the facility as a whole lacks integrity. There is little remaining to reflect the period of significance for this airfield. That which does remain has been greatly altered. In addition, new buildings have been constructed on both sides of the runway, greatly detracting from its integrity. Shaver’s Summit Airport is, therefore, not eligible for listing in the NRHP.

Desert Center Army Airfield

The Desert Center Army Airfield was first known as the Desert Center Airdrome and was operational beginning sometime in the winter of 1942–1943. The airfield was a subbase of Thermal Army Airfield and served as a support base for the Air Technical Services Command. A detachment of the 475th Base Headquarters and Air Base Squadron was assigned to the base in January 1943. In August 1943, the Third Airdrome Detachment was created and assigned to the airfield, which had been designated the Desert Center Army Airfield sometime prior. The detachment was made up of personnel from the deactivated 475th Base Headquarters and Air Base Squadron, and consisted of 4 officers and 53 enlisted men. Commanded by Maj. William B. Horton, the Third Airdrome Detachment was placed in charge of the operation of the airfield (U.S. Army Air Corps 1944:1; U.S. Air Force Historical Division n.d.b:2).

The airport contained two paved runways, each measuring 5,000 by 150 feet, along with taxiways and a parking apron. More than 40 buildings were

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constructed at the airfield, including an operations building, power house, control tower, pump house and well, and a 10,000-gallon water tower. Several other buildings (barracks and showers) were constructed previously by the Civilian Conservation Corps (CCC) and moved to the airfield during the war. Other buildings included officers quarters, mess hall, dispensary, headquarters, operations, recreation hall, link trainer building, hangar, and various supply buildings (Figure 105).

When the DTC/C-AMA closed in April 1944, the airfield was assigned to the Fourth Air Force, and operational activities decreased greatly. The airfield remained open, however, and was used by B-24 crews flying training missions from March Field (U.S. Air Force Historical Division n.d.b:1).

In 1946, the airfield was turned over to the U.S. Army Corps of Engineers, and the buildings were auctioned off to the public. The airport then operated under private hands, although most of the buildings were dismantled. Some of the buildings were later relocated to Chiriaco Summit. Today, the airport is owned by Riverside County and leased to private users.

**NRHP Eligibility**

The Desert Center Airfield was one of the most substantial facilities in the DTC/C-AMA. The facility, however, was largely dismantled after the war, and most of the buildings were either destroyed or moved. The roads, taxiways, landing strips, and building foundations still exist, however. Although unquestionably a historically significant facility, its integrity is in doubt. A few obtrusive buildings have been constructed, harming the airfield’s historical integrity. It is difficult today to get a feel for what the airfield was like during its period of significance. The airfield is thus considered ineligible for listing in the NRHP.

**Essex Airfield**

Although a less permanent airfield than those of Rice or Desert Center, the facility adjacent to Camp Essex consisted of several runways, taxiways, and parking areas (Figure 106). Constructed by the 835th Engineer Battalion, Aviation, the field was largely a natural surface. Some of the taxiways were constructed with a sand-and-cement mix, but most of the runways were simply cleared and compacted by watering. The main runway measured 4,000 by 150 feet.

Today, any buildings that may have existed have been removed or destroyed. The only remnants of the facility include roads, cement foundations, airplane taxiways, tie-down areas, and runways (Figures 107 and 108).

**NRHP Eligibility**

Essex Airfield, although a temporary facility, was important in the operation of air units in the DTC/C-AMA. The facility, although obscured by vegetation today, retains a high degree of integrity and should be considered eligible for listing in the NRHP. Essex Airfield is also one of the best examples of a temporary air facility in the DTC/C-AMA.

**Needles Airport**

Previously a municipal airport, Needles Airport was used by the DTC/C-AMA. The airport contained two paved runways, each measuring 5,000 by 150 feet. The type and extent of buildings that existed on the base are not currently known, nor is it clear which, if any, standing buildings date to the DTC/C-AMA period. Further research must be performed in order to assess the airport’s NRHP eligibility.

**Rice Army Airfield**

Rice Municipal Airport was acquired by the IV Air Support Command on September 29, 1942, and was operational by October 26, 1942. Rice Army Airfield, like Desert Center, was a subbase of Thermal Army Airfield. The facility was in the heart of DTC/C-AMA operations, close to Camps Iron Mountain, Coxcomb, and Granite. In order to house more than 3,000 men, the army constructed barracks, recreation and mess halls, power houses, hangars, and dormitories. Two paved runways also existed, each measuring 5,000 by 150 feet (Figures 109 and 110). During the construction of the camp, a 900-foot-deep well was dug to obtain water for the troops. Unfortunately, the well hit hot mineral water that was unfit to drink. Rice Army Airfield was located adjacent to the small railroad town of Rice, which consisted of a small cafe and store (Eberling 1997:3; U.S. Air Force Historical Division n.d.a:1).

By May 1944, the airfield was assigned to March Field as a subbase, and the Second Airdrome Detachment was disbanded. Rice Field was closed on August 2, 1944, and declared surplus in October. The
Figure 105. Original layout of Desert Center Army Airfield, ca. 1942. Courtesy National Archives and Records Administration, Pacific Branch, Laguna Niguel, California.
Figure 106. Aerial photograph of Camps Clipper and Essex, showing airfield at upper left, ca. 1943. Courtesy San Bernardino County Library, Needles, California.

Figure 107. Airplane parking and tie-down area at Essex Airfield, 1998.
airfield was maintained for a short time afterward by a detachment of Squadron H from Thermal Army Airfield (U.S. Air Force Historical Division n.d.a:1).

**Current Condition**

The main entrance to the airfield is easily located today. A lone tree immediately south of California Highway 62 marks the entrance road. Foundations can be found throughout the area, including those for barracks, mess halls, and guard shacks (Figures 111 and 112). Most of the access road to the runways and airplane parking areas were coated with oil and are, therefore, still clear today (Figure 113). Runways and taxiways can also be found, although many of them are currently covered with sand and vegetation (Figure 114). Several airplane parking areas still exist, along with an extensive apron and a firing butt for airplane stationary-target practice (Figures 115 and 116).

There appears to have been a tent camp associated with the airfield, as several rock-lined walkways and tent areas are located immediately west of the airfield (Figures 117 and 118). Roads lined with basalt rocks also exist throughout the area. Rice Army Airfield, therefore, contains elements of several types of resources found at other DTC/C-AMA sites. There are reports of aerial target ranges existing to the south, as well as to the north, of the airfield. A few old cars can be found on some of these ranges, exhibiting signs of having been extensively shot.
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Figure 110. Aerial photograph of Rice Army Airfield, 1942. Courtesy San Bernardino County Library, Needles, California.

Figure 111. Foundations for barracks at Rice Army Airfield, 1998.
Figure 112. Foundations for unknown structure at Rice Army Airfield, 1998.

Figure 113. Oil-coated access road at Rice Army Airfield, 1998.
NRHP Eligibility

Rice Army Airfield should be considered eligible for listing in the NRHP. This airfield is by far the best example of a DTC/C-AMA airfield. Rice Army Airfield was a multifaceted facility, containing many important elements. The airfield contains elaborate, improved-surface runways that are still clear today, along with an extensive apron and several airplane parking areas. In addition, Rice Army Airfield contained several “permanent” buildings. Although the buildings are gone today, their foundations remain; the airfield reflects its historical association well.

Current Condition

Today, the Thermal Airport is owned and operated by Riverside County and leased to various private organizations. Two World War II-era buildings remain at the airport, although their function is not currently known. The buildings have not been maintained and have lost integrity. Thermal Airport does not retain sufficient integrity to be considered eligible for listing in the NRHP.

Thermal Army Airfield

Thermal Army Airfield was, for at least part of the time, the headquarters of flight activity in the DTC/C-AMA. The First Airdrome Detachment was assigned to the airfield, and the airfields at Rice and Desert Center were apparently under its jurisdiction. Thermal contained two paved runways, each measuring 5,500 by 150 feet. It is unknown what types of facilities existed at the base, although it is assumed that a complete airfield was present.

Landing Strips

Several sand and gravel landing strips existed throughout the DTC/C-AMA. Many of these runways existed prior to the activation of the DTC/C-AMA, although several were constructed for army use. During maneuvers, landing strips were established in a variety of locations. The strips used in the DTC/C-AMA had the following names:

- Bagdad
- Cadiz
- Calipatria
Figure 115. Apron at Rice Army Airfield, 1998.

Figure 116. Road and firing butt at Rice Army Airfield, 1998.
Figure 117. Road in camp adjacent to Rice Army Airfield, 1998.

Figure 118. Walkways and tent areas in camp adjacent to Rice Army Airfield, 1998.
Chocolate Mountains (east end)
Chuckwalla Mountains
Connor
Coxcomb Camp
Ford Well
Freda Station
Goffs
Granite Mountains
Harveys
Heron
Hopkins Well
Hyder
Ibis
Imperial County Airport
Iron Mountain
Little Chuckwalla Mountains
McCoy Springs
Milpitas Wash
Palo Verde
Piute Mountains
Plosser
Salome
Searchlight
Smiley

Little else is known about these landing strips. It is not known, for example, if temporary buildings were constructed at any of them. It is also not known what currently exists at many of these locations. Sites of these landing strips should be visited to determine whether any DTC/C-AMA-related features or artifacts remain. In order to be considered eligible for listing in the NRHP, a landing strip must be clearly discernible, reflecting its historical association.

Bivouacs

Bivouacs were common and widespread in the DTC/C-AMA. They were essentially camps that were occupied for a short period while a unit was on maneuvers. During maneuvers, bivouacs were designed to be hidden from “enemy” aircraft and ground units. Patton’s first exercises upon arriving at the DTC/C-AMA included the formation of protected bivouacs each night.

Unlike the divisional camps, bivouacs were too short-lived to allow for roads, walkways, and plants to be lined with rocks. The bivouacs had no permanent structures associated with them. In addition, bivouacs were occupied by much smaller units of troops than were the divisional camps. For these reasons, they are much more difficult to locate today than are the divisional camps. Generally, bivouacs contained latrines, which were at least 200 yards from the camp area and consisted of several trenches with latrine boxes, with closing lids over each pit. A mess facility was set up in a centrally located portion of the camp. Within the mess facility, a soakage pit was dug for the disposal of all waste liquids. These pits varied in size but were commonly 8 by 5 by 5 feet (Turner n.d.:1). Bivouacs also contained some type of defensive position, which often consisted of trenches, foxholes, or camouflage.

NRHP Eligibility

In order to be considered eligible for listing in the NRHP, bivouacs must clearly reflect the activities that took place at them. At a minimum, eligible sites will contain some defensive features, usually consisting of trenches. Bivouac areas are known to have existed in Niland.

There were certainly many other bivouacs throughout the DTC/C-AMA area. During subsequent investigations of the DTC/C-AMA, bivouacs will undoubtedly be found, and each site must be evaluated independently.

Maneuver Areas

It is believed that a great deal of evidence for World War II-era maneuvers can still be found in the Mojave Desert. Many of the maneuvers were between full divisions, usually 15,000 men each. These operations sought to mimic real battle conditions and provide soldiers with accurate training. Paved roads were not used; instead, the units traveled overland, often creating their own roads. In addition, defensive positions were created in many isolated locations. Remnants of this kind of activity should still be visible in portions of the desert. A full armored division on the move would leave some kind of trace; at the least, tank tracks can be expected to remain in places. Sites related to maneuver areas should be extensive in size. Tank tracks found in large numbers over a broad area will most likely represent maneuver areas.

It is known that, during field maneuvers, divisions were required to “defend” a position against
an opposing force. During the defense, units placed numerous obstructions (e.g., minefields, concertina wire, tank traps, roadblocks, etc.) and built fortifications (foxholes, slit trenches, bunkers, etc.) (Headquarters Desert Training Center 1943a:4). In some commonly used areas, defensive positions contained concrete bunkers. Trenches dug by troops were often filled in after the unit left. The main exception to this was when the unit was engaged with the “enemy.” Temporary campsites with less visible remains may also represent maneuver activities. Some of the known maneuver areas include those discussed below.

Although the divisional camps are often the most visible and publicized reminders of the DTC/C-AMA resources, the purpose of the facility was to train soldiers. Troops did not come out to the desert to remain in their camps, and they spent much time in the field, training and maneuvering. Maneuver areas and their related sites represent the real “work” of the Desert Training Center, where men were taught to fight and survive in desert combat. Because the historical significance of the DTC/C-AMA lies in its preparation of U.S. troops for warfare across the globe, the remaining training sites take on important meanings.

**Archaeological Site CA-RIV-1172**

Originally recorded in 1976, this site consists of more than 150 rock features believed to represent a defensive position in the Midland–Big Maria Mountains area. The features consist of rock walls, foxholes, dugouts, and cairns and were found within a roughly 500-by-300-m area. The scant refuse noted consisted of a few ration cans. Surprisingly, there was no evidence that live firing had occurred. The site was recommended as eligible to the NRHP under Criteria a, b, and c (ASM Affiliates, Inc., 1997; Figures 119 and 120).

**Anza Borrego Desert**

Evidence of DTC/C-AMA activities have been reported in the Borrego Badlands area near Font’s Point by Norris and Carrico (1978:99), as well as in other areas by other sources. This is outside the boundaries of the DTC/C-AMA, and the reports have not been confirmed. The area should be rechecked and surveyed to ascertain the current condition of the resources present.

**King’s Throne**

A 100-foot-tall hill is located in the valley between Chuckwalla, Orocoipa, and the Chocolate Mountains, where it is reported that General Patton would observe the movements of his armored troops in the surrounding area. A roadway was bulldozed to the top of the hill to provide easy access. This road is still plainly visible (Figure 121). The top of the hill provides an unobstructed view of the valley (Figure 122). The hill is located immediately north of the Chocolate Mountains Aerial Gunnery Range. It can be accessed via the Red Cloud Mine Road, off of Interstate 10, south 10 miles along a pipeline road. The surrounding valley should also contain evidence of maneuvers.

**Palen Pass**

The site of the largest maneuvers during the life of the DTC/C-AMA, Palen Pass received heavy impacts from the army. Fortifications were constructed throughout the pass, as one unit would “defend” the area from another. These fortifications consisted of gun emplacements, barbed-wire entanglements, bunkers, minefields, and foxholes (Figures 123 and 124). Several maneuvers were held in the area. In addition, each unit that came to defend Palen Pass erected its own defenses by building on what had already been constructed by previous units. Vestiges of maneuvers can also be found in the valley east of the pass, in the form of bomb craters, cartridge cases, concertina wire, and various refuse (see below). Palen Pass can be accessed from the Arlington Mine Road, east from California Highway 177. This road is very sandy in places and should be traveled only in a four-wheel drive vehicle.

**Valley Bordered by the Palen, Little Maria, and McCoy Mountains**

This is perhaps the best preserved and most extensive maneuver area in the DTC/C-AMA. Scattered over several square miles are foxholes with
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Figure 119. Rock defensive features at site CA-RIV-1172, Midland–Big Maria Mountains area, 1998.

Figure 120. Rock defensive features at site CA-RIV-1172, Midland–Big Maria Mountains area, 1998.
Figure 121. King's Throne, 1998. Note bulldozed road at left base of the hill.

Figure 122. View from atop King's Throne, 1998.
Figure 123. Westward view from Palen Pass, 1998.

Figure 124. Rock defensive features at Palen Pass, 1998.
associated refuse, concertina wire, concrete defensive positions, and tank tracks (Figures 125–128). This area is immediately east of Palen Pass, and may have been associated with maneuvers in that area. A more extensive survey should be performed over this broad valley to ascertain the extent of the resources present and to define general boundaries.

Iron Mountain/Granite Mountain Pass

During II Corps maneuvers, a minefield consisting of 3,090 mines was placed in conjunction with gas. This area has not been scrutinized for DTC/C-AMA-related resources.

Coxcomb Mountains

The Coxcomb Mountains contain a large minefield placed between the mountains and sand dunes to the east, divided by highway 177. This area has not been examined for DTC/C-AMA-related resources.

Chuckwalla Valley

Several exercises were held throughout the flats of Chuckwalla Valley. The army believed that this valley best represented the terrain found in Libya. Small-unit training was emphasized here, in particular. This area has not been surveyed for DTC/C-AMA-related resources.

Midland Pass

A defensive position was set up in Midland Pass at least once (by the 25th Combat Team) during IV Corps maneuvers in spring 1943. This area has not been examined for DTC/C-AMA-related resources.

Styxx Pass

Styxx Pass, between the Big Maria and Little Maria Mountains, contained a defensive position during IV Corps maneuvers. This area has not been scrutinized for DTC/C-AMA-related resources.

Ranges

A variety of ranges existed at each divisional camp, as well as at other locations (Figures 129–132). Ranges included the following:

- Combat ranges: mounted, dismounted, tank, .30- and .22-caliber rifle and carbine, .45-caliber pistol, and vehicle combat
- Known distance
- Moving target
- Rifle, .30 caliber
- Machine gun, .50 caliber
- Pistol
- Transition course

There were also antiaircraft ranges of some kind, where towed targets were fired upon. Sites in this category included antiaircraft batteries (Figure 133) and trenches for .50-caliber machine guns. Anti-aircraft exercises were undertaken in several locations throughout the DTC/C-AMA. The exact locations of these ranges, however, are not currently known.

Camp Young Rifle Ranges

As was undoubtedly the case with other camps, several ranges were established near Camp Young. These ranges were located south of the camp, south of Highway 60/70, and immediately off of the Box Canyon–Mecca Road (Figure 134). The ranges today consist of extensive berms of raised dirt, with few associated artifacts (Figure 135). Located near these rifle ranges are numerous trenches and foxholes, likely indicating the presence of a training area or infiltration course. The trenches are quite extensive in size and represent more than simple foxholes (Figure 136). Some refuse can be found in and adjacent to these features, including various types of cans and shell casings. Further research should be performed on this area to determine the types of activities that occurred here during the DTC/C-AMA period. The Camp Young range area should also be subjected to a more thorough archaeological survey, in order to ascertain the extent of the features and artifacts present. Because the training of individual soldiers and small units was of utmost concern during the DTC/C-AMA era, the Camp Young range area should be considered a historically significant
Figure 125. Concertina wire in front of foxhole in maneuver area, 1998.

Figure 126. Foxhole with associated refuse in maneuver area, 1998.
Figure 127. Tank tracks in maneuver area, 1998. The Granite Mountains can be seen in background.

Figure 128. Defensive position on small hill in maneuver area, 1998.
Figure 129. Map of northern portion of the DTC/C-AMA showing locations of ranges (numbered areas), ca. 1943. Courtesy National Archives and Records Administration, Pacific Branch, Laguna Niguel, California.
Figure 130. Map of Camp Essex and vicinity showing ranges (numbered rectangles), airfield, water points, highways, roads, and railroad, ca. 1943.

Courtesy National Archives and Records Administration, Pacific Branch, Laguna Niguel, California.
Figure 131. Map of Camp Granite and vicinity showing ranges (numbered areas), MWD aqueduct, highway, and roads, ca. 1943.
Courtesy National Archives and Records Administration, Pacific Branch, Laguna Niguel, California.
Figure 132. Map of Camp Coxcomb and vicinity showing ranges (numbered areas), MWD aqueduct, highway, and roads, ca. 1943.

Courtesy National Archives and Records Administration, Pacific Branch, Laguna Niguel, California.
Figure 133. Antiaircraft demonstration, 90-mm gun operating by itself, Gunner No. 1 and ammunition crew on platform, camouflage thrown back, September 24, 1942. Photograph No. 111-SC-144031. Courtesy National Archives and Records Administration, Still Pictures Branch, College Park, Maryland.
Figure 134. Map of Camp Young and vicinity showing ranges (numbered and unnumbered polygons and rectangles), MWD aqueduct, water point highway, and roads, ca. 1943. Courtesy National Archives and Records Administration, Pacific Branch, Laguna Niguel, California.

Figure 135. Berms at the Camp Young rifle range, 1998.
resource. If this area is found to retain sufficient integrity, it should be considered eligible for listing in the NRHP.

Ranges attached to the other divisional camps should also be surveyed more thoroughly to determine the extent of remaining resources. These ranges should also be evaluated for NRHP eligibility when they have been located and inventoried.

Training Areas

During the infiltration courses, men would dig trenches from which they would attack an “enemy” position. The position was often a battery of machine guns that would fire live ammunition over their heads. The soldiers crawled toward the machine guns, being sure to stay low. The bullets were aimed such that they would pass over the soldiers, 30 inches above the ground. Reports of a soldier rearing his head to avoid a rattlesnake, only to be killed by machine gun fire, have been circulated (Chamberlin 1990:24). Several other types of training areas were present in the DTC/C-AMA. Grenade-throwing courses were established in several locations.

It is expected that many canyons near divisional camps will reveal small-unit training areas. Company- and platoon-level exercises took place often and undoubtedly left traces behind. Although more ephemeral than larger-scale activities, these small-unit training areas may still be located. Artifacts and features associated with them will most likely be shell casings, grenade containers, foxholes, C-ration cans, and other refuse.

Pilot Knob

A good example of a training area can be found immediately north of the Pilot Knob divisional camp. Less than 1 mile from the camp are numerous foxholes immediately off of the main road (Figure 137). Refuse clearly associated with military activities can be found in and among these foxholes. New roads have been bulldozed through this area, as much of the land surrounding Camp Pilot Knob is now in private hands. This alteration has damaged the integrity of the training area to an unacceptable level.
It is expected that evidence from numerous other training areas remains adjacent to the other divisional camps. Many of these training areas, located farther from centers of population, may possess higher levels of integrity than that found near Camp Pilot Knob. These other training areas should be inventoried and evaluated. The best-preserved among them, assuming they retain sufficient integrity, should be nominated for listing in the NRHP.

Campsites

Campsites relate to a broad range of activities. Temporary camps were made for various activities, including bivouacs and maneuvers. Campsites were also used for temporary staging activities for a given unit while awaiting orders to move to a more permanent duty station. They were often made adjacent to railroad sidings, while the unit waited to embark for a divisional camp. Some of the reported campsites include the 18th Ordnance campsite, Cadiz, and those at Calipatria, Coachella, 1,000 Palms, Goffs, Needles, and Wiley’s Well. Three were revisited for this study.

18th Ordnance Campsite

Located 5 miles east of Desert Center, this camp appeared to be a watering point, as the only structures reported included a capped well, a 50,000-gallon water tank, and a wooden tower. No remains of this camp could be found, although its exact location is not currently known.

Wiley’s Well

Apparently, Wiley’s Well was used as a campsite and maneuver area several times during the operation of the DTC/C-AMA. The presence of water at the site undoubtedly contributed to its importance. During maneuvers in 1943, the signal company’s pigeon detachment set up a false camp at Wiley’s Well, fooling the opposing side into thinking that there was a full headquarters at the camp.
The Desert Training Center/California-Arizona Maneuver Area, 1942–1944

Current Condition

No remains of a World War II–era campsite could be found at Wiley’s Well. Today, the area is an unimproved BLM campsite with pit toilets and nonpotable water. The well itself is still in place. Areas of tank tracks can be found in the desert surrounding the camp, which may contain further evidence of military activities that took place near Wiley’s Well. The area should be subjected to a more thorough archaeological survey.

Goffs

Goffs was apparently the temporary location of the 7th Infantry Division. Goffs was a railhead where the army leased portions of the track and built additional tracks. There were several temporary buildings used by the army at Goffs, including one at the campsite. The actual campsite could not be found, although the foundations of several buildings remain immediately east of Goffs. Goffs was the location of the 58th Quartermaster Regiment beginning sometime in 1942. The 58th, like other units, was stationed in pup tents. The unit was located somewhere adjacent to the siding.

Current Condition

Little can be found today indicating the presence of a camp at Goffs. Figure 138 is a map of the Goffs area. The remains of the siding can be seen, as can associated refuse (Figure 139). There is otherwise no trace of the tent camp that existed at Goffs.

Hospitals

Numerous medical facilities existed throughout the DTC/C-AMA. Medical detachments were generally assigned to each division; therefore, they could be found in each divisional camp. In addition, there were aid stations scattered throughout the facility, as well as evacuation hospitals and station hospitals. The station hospitals were more-permanent facilities and were generally located in towns or cities on the periphery of the DTC/C-AMA. Evacuation hospitals, on the other hand, were more temporary in nature and were found throughout the interior of the facility. Some of the known locations of hospitals include the five discussed below.

Desert Center

Camp Desert Center contained an evacuation hospital (see Camp Desert Center under divisional camps). The location of this hospital is currently unknown.

Needles

There are reports of two station hospitals (with 250 beds each) located immediately north of the Needles divisional camp, south of the town of Needles. Also present at Needles was an evacuation hospital and an aid station. The locations of these facilities have not been confirmed.

Pilot Knob

An evacuation hospital reportedly was located near Pilot Knob, but its location has not been confirmed. It is unknown if this hospital was attached to the Pilot Knob divisional camp or if it was a separate facility.

Camp Young

Two station hospitals were operated at Camp Young. Each of these had 250 beds. The locations of these hospitals are currently unknown.

Yuma

Yuma contained two station hospitals (250 beds each), along with barracks, railroad sidings, supply depots, and campsites. The location of these facilities has not been confirmed.

Quartermaster Depots

Supply was obviously crucial to smooth operation of the DTC/C-AMA. Because troops were stationed in extremely remote locations, often for extended periods, temporary depots were established. These advance depots were to receive supplies from the larger supply facilities (such as the Base General Depot) and distribute them to the appropriate units. This system
Figure 138. Map of Goffs Station grounds, including track leased by War Department. Courtesy National Archives and Records Administration, Pacific Branch, Laguna Niguel, California.
The Desert Training Center/California-Arizona Maneuver Area, 1942-1944

apparently worked fairly well. The major problem appeared to be the scarcity of certain classes of supplies. Advance depots were located at Coachella, Needles, Yermo, and Yuma.

**Freda**

A camp, complete with rock-lined walkways and roads and the insignia of the 484th Quartermaster Battalion, exists west of the Freda railroad siding, immediately south of the MWD aqueduct (Figures 140 and 141). There also appear to be several pieces of water tanks, as well as other miscellaneous metal (Figure 142). The camp is well preserved and should be considered eligible for listing in the NRHP. It can be accessed from the MWD aqueduct road extending west from California Highway 62, immediately west of where the highway bends at Freda. The camp is approximately 0.25 miles down the road, to the south.

Further archival research should be performed on this camp. It is expected that the camp represents a historically important aspect of the DTC/C-AMA, and it is likely eligible for listing in the NRHP. The site is in good condition and retains sufficient integrity.

**Goffs**

Goffs was the location of the 58th Quartermaster Regiment (see above).

**San Bernardino**

The Base General Depot was located 5 miles north of San Bernardi no; this was the largest of the base depots. It supplied the DTC/C-AMA with everything except ammunition, ordnance, and Army Air Forces technical supplies. The Base General Depot also operated a bakery, laundry, salvage, and repair facility, and all supply units assigned to the DTC/C-AMA were trained there. The depot also oversaw rail and motor traffic coming into the area and was the location of the headquarters of the communications zone by late 1943.

**Pomona**

An ordnance supply depot and repair shop was established at the Pomona Fairgrounds, outside of the DTC/C-AMA proper.
Figure 140. Campsite for the 484th Quartermaster Battalion, near Freda, 1998.

Figure 141. Rock insignia of the 484th Quartermaster Battalion at campsite near Freda, 1998.
Figure 142. Rock-lined walkways and metal refuse at the 484th Quartermaster Battalion campsite near Freda, 1998.

**Railroad Sidings**

**Cadiz**

Cadiz was a Santa Fe Railroad siding, where the army leased 600 feet of track. There are several foundations present at Cadiz, as is an abandoned siding (Figure 143). There are also several areas of historical-period refuse. Because a great deal of railroad activity has occurred at Cadiz in the past, it is unknown which of these loci represent DTC/C-AMA-related materials.

**Calipatria**

Calipatria was the location of a Southern Pacific Railroad siding, where the army leased 700 feet of track. The siding was the location of the 203rd Quartermaster Gas Supply Battalion (with XV Corps) during the operation of the DTC/C-AMA. A campsite with tents was also reported to be at Calipatria, but the location of this campsite is not currently known.

**Coachella**

Approximately 230 acres of land were purchased or leased by the army southeast of the town of Coachella. There was also a depot and campsite with tents reported at Coachella, which may have been the location of the Second Headquarters Special Troops. The location of this camp is not currently known, and any traces of it may have been removed during activities related to the town of Coachella.

**Colorado**

Located near Yuma, Colorado was a siding along the Southern Pacific Railroad where the army leased 900 feet of spur track.

**Danby**

Danby was reportedly the location of the 691st Quartermaster Laundry Battalion and Headquarters, which was a part of the XV Corps. The army leased
1,253 feet of spur track at Danby and apparently established a campsite there. Still standing at Danby today are several foundations and old buildings (Figure 144). There are also several areas of historical-period refuse. Because a great deal of railroad activity has occurred at Danby in the past, it is unknown which of these loci represent DTC/C-AMA-related materials.

**Fenner**

Located close to Camp Essex, Fenner undoubtedly served as a railhead for supply of that camp. The railhead was immediately west of Goffs and apparently contained a warehouse (96 by 40 feet) and a water point.

**Freda**

Apparenty a major supply center for the DTC/C-AMA, Freda contained several sidings and spur lines off the main railroad (Figure 145). Concrete foundations, one of which is inscribed with the date “10/19/42,” can still be seen (Figure 146). The foundations most likely represent warehouses. Rock piles for unknown purposes also exist throughout the siding area. These piles are approximately 2 feet high and may have served as entrances to certain portions of the facility (Figure 147). Rock insignias indicate the presence of the 378th Engineer Battalion. Other units known to have been stationed at Freda include the 211th Quartermaster Gas Supply Battalion of the XV Corps.

**Glamis**

Although a total of 1,000 feet of spur track was leased to the army, Glamis today is the site of much off-road activity. This is extremely difficult to discern from historical-period vehicle activity in the area. There are no obvious remains of buildings dating to the 1940s in this area.

**Goffs**

Goffs consisted of a railroad siding, ammunition storage area, and a campsite. The War Department leased an area of track from the Santa Fe Railroad
Figure 144. Danby railroad siding, 1998.

Figure 145. Line of new M4 medium tanks at either Freda or Rice, September 1942. Photograph No. 111-SC- 145015. Courtesy National Archives and Records Administration, Still Pictures Branch, College Park, Maryland.
Figure 146. Concrete foundations at Freda railroad siding, 1998.

Figure 147. Rock features at Freda railroad siding, 1998.
and constructed 2,675 feet of tracks branching off of the leased track. The site was used by the 7th Infantry Division at some time. Established in 1942, the site also included three administration buildings (100 by 20 feet), two warehouse buildings (96 by 40 feet), and two sheds (96 by 40 feet). A temporary building measuring 100 by 20 feet was located 1 mile east of the siding and represented the location of the campsite. Ten ammunition-storage igloos were located near Goffs Butte. The 198th Ordnance Battalion Headquarters with the XV Corps was stationed at Goffs for an unknown length of time.

**Current Condition**

Today, little can be found of the DTC/C-AMA facilities formerly present at Goffs. There are numerous foundations, although it is difficult to determine which of these represent army activities and which represent the railroad (Figure 148). Remains of a siding can be found, as can associated refuse possibly representing military use (see Figure 139).

An explosives dump was located at the base of Goffs Butte, on the southwest side. The site was cleared out in 1980 by an EOD team from Fort Irwin and Phillips Construction Company, of Needles. The ordnance consisted of 80 tons of materials, including rockets, grenades, and land mines.

**Ogilby**

A total of 850 feet of spur track was leased to the army by the Southern Pacific Railroad. Ogilby was located close to Camp Pilot Knob and most likely served that camp.

There were apparently no accommodations for soldiers at Ogilby, and no record of any unit being stationed there can be found. Several foundations can be found at Ogilby today (Figure 149), although an inscribed date of 1939 in one indicates that at least one of the structures predates the DTC/C-AMA. There are several areas of disturbance, including roadways and trash scatters. It is not currently known which loci represent army use of the area and which represent railroad use.

Other railroad sidings used by the DTC/C-AMA included Siam, Spadra, Stoval, and Thermal.
Tank Tracks

Tank tracks dating to the World War II era have been reported throughout California’s Mojave Desert. Obviously, tanks were a primary aspect of the DTC/C-AMA, and countless operations and maneuvers were conducted throughout the facility. In many areas, any traces of the tanks have been removed by either environmental processes or modern land use. This is largely true of the areas surrounding the divisional camps and those areas easily accessible to the public. Large maneuver areas that remain isolated today, however, frequently retain distinct tank tracks. The maneuver area between the Palen, Little Maria, and McCoy Mountains, for example, exhibits countless acres of tank tracks (see Figure 127). Other maneuver areas, particularly those that were used repeatedly, should also exhibit signs of tanks.

The M3 medium tank’s tracks were 11.5 inches wide, and the tracks could be fitted with a variety of tread materials, ranging from rubber to steel. The M4 medium tank’s tracks were generally 23 inches wide. Tank tracks are discernible from automobile tracks by not only their width, but also the way in which they make turns. When tanks make turns, they leave two tracks—unlike wheeled vehicles, which leave four tracks. Many of the tank tracks that existed throughout the DTC/C-AMA have faded. Depending on the soil type, however, some of the tracks can last as long as 100 years (Prose 1985).

Refuse Deposits

This site type covers an array of resources, from isolated artifact scatters to large trash dumps, used for long periods of time. Refuse deposits from the DTC/C-AMA period will be identifiable by the military-related artifacts present, as well as by their location in relation to other DTC/C-AMA features (see Figure 95). Large trash dumps, for example, have been found in direct association with several of the divisional camps and airfields. Smaller trash scatters have also been found in association with training areas, such as defensive positions, ranges, and infiltration courses. Reports indicate that much of the activity areas in the DTC/C-AMA were cleaned up by the departing soldiers, removing much of the surface artifacts present. This was clearly the case at many of the divisional camps, as well as in temporary
campsites and bivouacs. It may also have been the case for many of the training areas. The large trash dumps used by divisional camps and airfields, however, are clearly still in existence, as cleanup would have been impossible. They were in use for several months at a time, and large quantities of refuse accumulated.

**Elements of the DTC/C-AMA Outside of the Mojave Desert Area**

**Arizona**

Because the DTC/C-AMA included numerous square miles in Arizona, many sites exist in the state. For the purposes of this report, however, those sites are not included in the following list. It is hoped that investigations of the DTC/C-AMA sites in Arizona will be undertaken before they are lost.

**Banning**

Several facilities existed in Banning, which was located immediately outside the DTC/C-AMA. Installations included a general hospital (with 1,000 beds), a landing strip, an aid station, and a range.

**Cable Canyon**

A range of unknown type and size was established in the Cable Canyon area. The exact location of this range is currently unknown.

**Cherry Valley**

A general hospital containing 1,000 beds was established in Cherry Valley.

**Colton**

A campsite of unknown purpose was present somewhere in the vicinity of Colton. The exact location of this campsite is currently unknown.

**Fontana**

An ammunition-storage facility existed at Fontana. The facility consisted of numerous storage igloos.

**Indio**

Indio was the closest town of any size to Camp Young and was often the jumping-off point for officers and soldiers en route to the DTC/C-AMA. In addition to the Hotel Indio, which served as a temporary off-site headquarters, there were overnight camps, a laundry site, loading ramps, a military police station, and an aid station located in Indio.

**Ono**

Facilities in the Ono area used by the DTC/C-AMA included a station hospital and a reservoir.

**Palm Village**

An ordnance pool was established in the Palm Village area. Its exact location is currently unknown.

**Pomona**

Facilities in the Pomona area that were used by the DTC/C-AMA included a station hospital and an ordnance base. The locations of these facilities are currently unknown.

**San Bernardino**

Numerous facilities were established in the San Bernardino area, including a military police station, communications headquarters, an aid station, and the Base General Depot.

**Spadra**

A 750-bed hospital was established at Spadra. The exact location of this hospital is currently unknown.
Chapter 4 • Property Types, Condition Assessments, and NRHP-Eligibility Recommendations

Figure 150. Rock alignments at Camp Ludlow, 1998.

Operation Desert Strike

In 1964, the U.S. Army conducted a large-scale training operation in the Mojave Desert of California. Named Desert Strike, the operation was designed to train various units in desert warfare and improve coordination among the different branches of the army. The operation contained numerous temporary campsites and training areas. Because Desert Strike was conducted over much of the same land that previously encompassed the DTC/C-AMA (see Figure 27), care must be taken to differentiate between the two types of sites. One such example is a temporary site near the town of Ludlow.

Ludlow

Recorded as CA-SBR-6302H in 1990 (McKenna and Hatheway 1990), the campsite is located immediately off of Interstate 40, at the Ludlow town exit. Remnants of the camp can be found on both sides of the graded-dirt Crucero Road. The camp is laid out in a similar fashion to the divisional camps found within the DTC/C-AMA, with rock-lined walkways and tent locations. McKenna and Hatheway, however, incorrectly identified the site as relating to the DTC/C-AMA. Subsequent investigations by BLM archaeologist John Murray (former post archaeologist at the U.S. Army’s Fort Huachuca, Arizona) determined that the site was in fact a part of Operation Desert Strike. Murray made this determination based on discussions with several army historians who had lived in Ludlow during the 1960s, as well as an on-the-ground investigation of the site. Murray found numerous military-related artifacts dating to the 1960s, including buttons. In addition, Murray examined aerial photographs and noted that the campsite did not appear on those dating prior to 1960 (John Murray, personal communication 1998). It should also be noted that the Ludlow campsite is outside the area of operations for the DTC/C-AMA. The lines of rocks are still in place, with little erosion or vandalism affecting them. A few small concrete foundations are also present at the site (Figures 150–152).

Because of its recent origin (less than 50 years old), the Ludlow camp does not meet the age requirement for inclusion in the NRHP. Furthermore, Operation Desert Strike should not be considered exceptionally significant. For these reasons, the Ludlow camp (and other Desert Strike resources) is considered ineligible for listing in the NRHP.

Several methods can be used in order to differentiate between DTC/C-AMA and Desert Strike sites.
Figure 151. Rock-lined walkways at Camp Ludlow, 1998.

Figure 152. Rock alignments at Camp Ludlow, 1998.
Because the training exercises took place at different times, the artifacts found at each will obviously differ. Aerial photographs of the area can be examined in order to determine a terminal date for a given site (as Murray did for the Ludlow campsite). Historical-period maps can also be consulted, although this is less reliable than photographs. Maps of the DTC/C-AMA generally do not show every facility used by the army during the training period. Several facilities were used for only a portion of the time the DTC/C-AMA was in operation. The scale of sites is also helpful for matching up a site with the DTC/C-AMA or Operation Desert Strike. Only in the DTC/C-AMA were the immense divisional camps established, for example. Oral history and additional archival research can also be used to differentiate between the two classes of sites.
NRHP Eligibility

The DTC/C-AMA is a historically significant resource, and it is recommended that the facility be nominated to the NRHP using a multiple property submission format (see Chapter 2). As documented in this report, the facility comprises numerous property types. Within the context of a multiple property submission, properties can be nominated individually or as districts. Individual properties or districts that make up the DTC/C-AMA can be eligible for listing in the NRHP under Criteria a, b, c, and d.

In many cases, nominating DTC/C-AMA resources will be best accomplished using a historic district approach. This is an appropriate strategy for sites with many related features that are often distributed over a wide area. Many divisional camps, for example, have associated refuse deposits, training ranges, and other features, all of which were part of the facility regardless of their distance from one another. Nominating these resources as a historic district allows the features to be grouped together in meaningful ways.

Camp Iron Mountain, for example, has been nominated within the multiple property framework as a district. The camp itself forms the core of the district, although associated refuse deposits, training ranges, and other training ranges will also contribute to the district. These additional features are clearly linked historically to Camp Iron Mountain. As additional features belonging to these particular property types are found in the future, they can be nominated as either contributing or noncontributing elements of the already-established district. This approach will also be useful in dealing with large maneuver areas such as Palen Pass. This region between the Palen, Little Maria, and McCoy Mountains was used consecutively for divisional maneuver activities (see Chapter 4), and much remains of these activities today. The resources, which include foxholes, defensive works, tank tracks, refuse deposits, concertina wire, and other features, are spread out over a wide area. By nominating the Palen Pass area as a National Register district, resources that are identified in the future can be identified as contributing or noncontributing elements, using already-established criteria. Because the resources are spread over such a broad area but are still clearly functionally and temporally related, a discontiguous district approach should be used.

As outlined in the historic context presented in Chapter 3, the DTC/C-AMA is particularly relevant to several broad, important themes in American history. It is certainly "associated with events that have made a significant contribution to the broad patterns of our history" (NRHP Criterion a). The DTC/C-AMA was the largest training facility and the only one of its kind in American military history. The tactical, strategic, and logistical doctrines developed and refined during the facility’s life were applied overseas and undoubtedly helped to win World War II. The massive undertaking represented by the DTC/C-AMA illustrates America’s commitment to winning the war and the extent of preparations believed necessary for waging global warfare. More than
1 million men trained in the deserts of southern Arizona and California, representing more than 10 percent of those serving in World War II. The training that these men received in the desert undoubtedly left lasting impressions and contributed significantly to the fighting capabilities of the American soldier during World War II.

The DTC/C-AMA is also “associated with the lives of persons significant in our past” (NRHP Criterion b). Several preeminent figures in the American army served there and helped to mold the facility. Maj. Gen. George S. Patton, perhaps one of the best-known military figures of the twentieth century, was instrumental in the development of the training center. Gen. Walton Walker, another icon of the American military, trained and conducted maneuvers at the DTC/C-AMA; he contributed greatly to the success of the facility.

In terms of its scale and complexity, the DTC/C-AMA is unprecedented in U.S. military history. The distinctive layouts of the camps and of maneuver areas such as the one developed in the vicinity of Palen Pass also clearly “embody the distinctive characteristics of a type, period, or method of construction,” making the DTC/C-AMA eligible for listing in the NRC under Criterion c.

Most property types associated with the DTC/C-AMA exist today as archaeological resources (e.g., refuse deposits, the “footprints” of runways and landing strips, tank tracks, barracks foundations, foxholes, and bivouacs), many of which have artifactual components. Whereas these resources have the potential to be considered significant under any or all of the four criteria, more often that not they will be considered primarily eligible under Criterion d for their ability to yield information important in history. When viewing the extant resources that are related to the facility, it is important to keep in mind that the training complex was temporary. The facility was designed to emulate actual battle conditions and to harden troops to the rigors of combat; being “temporary” was part of its mission. Camps and other facilities contained only those improvements that were absolutely necessary. Few buildings were constructed, and most of those were deliberately made for short-term use. The DTC/C-AMA was not to be like a regular military post, but instead was to act as a realistic theater of operations. The ephemeral nature of the DTC/C-AMA was planned by the commanders of the facility. In addition, when the facility was closed, the sites were thoroughly policed. An amazingly small amount of refuse remains from the massive facility. These factors must be borne in mind when evaluating DTC/C-AMA resources. One cannot use standards applied to typical military installations. Each resource must be evaluated with regard to its historical significance in relation to the entire facility. The resource must reflect its period of significance, which in this case is 1942–1944, and its integrity must be weighed by looking at whether it conveys its historical associations.

To date, only one of the divisional camps has been nominated for listing in the NRHP. Camp Iron Mountain was originally nominated in 1977 by the BLM. The nomination, however, was returned by NRHP reviewers to the BLM for further clarification. The reviewers requested that a historic context for the camp be provided. The reviewers also pointed out that the camp was less than 50 years old, and a case for its exceptional significance had not been made. A figure for acreage, as well as a more explicit boundary description, was also requested. In 1980, the nomination was resubmitted, with no changes having been made, and it was again rejected, in 1981.

Renomination of Camp Iron Mountain, with the appropriate justification provided, was a part of the current project. The current report provides a historical context for the camp. The “renomination” includes a map of the camp, drawn to scale. This same procedure should be followed for other divisional camps found to be eligible for NRHP listing.

The BLM completed an interpretive plan for the DTC/C-AMA in 1986 (BLM 1986), with the objective being “to arrest historical resource damage and to provide an interpretation program for the DTC/CAMA.” This plan called for the seven main divisional camps to be considered within the interpretive plan. The plan further called for these camps to be designated ACECs and nominated to the NRHP. The report contains many recommendations for additional work. Some of these recommendations have been implemented (including the current study), whereas others remain unimplemented.

One of the major goals of the current project is to provide a framework from which to evaluate DTC/C-AMA–related sites. The historic context developed in this report will serve as one part of this framework. The second part consists of our approach to nominating the facility to the NRHP by using a multiple property submission format.

We generally concur with the recommendations in the interpretive plan, although our approach to the NRHP is slightly different. We believe that a multiple property submission will afford the greatest flexibility in future management decisions. With a multiple property submission, sites that are encountered in the future can be determined eligible and nominated, or found ineligible and left out of the
nomination. This approach will permit sites beyond the divisional camps in southern California to be evaluated for NRHP eligibility. It is our belief that many sites, including but not limited to the divisional camps, possess historical significance and retain sufficient integrity to qualify them as eligible for listing in the NRHP. It is the recommendation of SRI, therefore, that as these resources are encountered they should be evaluated within the proposed NRHP multiple property submission format, using the historic context provided in this report.

**Low-Level Aerial Photography**

Because of the ephemeral nature of the vast majority of DTC/C-AMA features, few are discernible on the ground. Because of erosion, deposition, vegetation growth, and modern activities, many of the World War II-era features are obscured. Known locations of military activities are often difficult, if not impossible, to pinpoint on the ground. Even the massive divisional camps can be difficult to locate. Aerial photography should be used to better identify the locations of sites related to DTC/C-AMA activities.

In 1986, a USGS study was made of visible land disturbances made by the DTC/C-AMA, as well as Operation Desert Strike. The study used high- and low-altitude aerial photographs of portions of the Mojave Desert contained within Maneuver Area A of the DTC/C-AMA (see Figures 17 and 27). Disturbances were mapped from these aerial photographs, then field checked by airplane and ground search. Apparently, only the divisional camps could be detected from the high-altitude (scale 1:20,000 to 1:30,000) photographs. The lower-altitude (scale 1:1,000) photographs often revealed smaller features, including individual tank tracks. A map was then generated of the entire Maneuver Area A, and those areas exhibiting signs of disturbance were shaded. A large percentage of the map is shaded, indicating the extent of army activities in the area. In places, however, ground surfaces are in a state of rapid erosion, deposition, or vegetation growth. Disturbances in these areas could not be discerned. In addition, recreational off-road vehicles create land disturbances similar to those caused by military vehicles (Prose 1986). Unfortunately, however, although “disturbed areas” are shaded on the map, it is not possible to determine the locations of specific activities and the nature of the disturbances that ensued.

It is recommended that additional, more specifically directed aerial photography of the DTC/C-AMA area be undertaken. This aerial survey should focus on areas of intensive military use. Newly identified activity areas should be visited on the ground and recorded to the extent possible. Significant sites should be photographed in their entirety from the air. Each aerial photograph should then be used as a record of conditions present at the site today. These aerial photographs should then be confirmed by a pedestrian survey and a site record generated from the aerial and ground-level recordation. Because of the nature of DTC/C-AMA sites, this is a far more accurate way of recording known resources than are traditional site-mapping techniques.

**Archaeological Survey**

It is recommended that the DTC/C-AMA sites be intensively surveyed. It is also recommended that each of the better-known, more-extensive sites be thoroughly inventoried—including all of the divisional camps. In addition, known areas of DTC/C-AMA activities should be surveyed prior to any activity that may adversely affect them. These surveys should be conducted by a qualified historical archaeologist who is familiar with the DTC/C-AMA resources. Sites should be mapped in conjunction with aerial photographs, as described above, and plotted on USGS topographic maps. A sketch map of each site should also be drawn, and photographs of the site should be taken.

There undoubtedly remains substantial amounts of buried material dating to the time of DTC/C-AMA use. A great deal of army material was buried in the camps by departing units. After taking down their tents, the units would police the area and bury their trash and unusable materials in a common area. Generally, a hole would be dug, filled with refuse, and bulldozed over with sand. Through the years, several of these areas have been uncovered by wind removing the sand. Occasionally, nearby ravines were used to bury the material. The potential for these features to occur should be borne in mind when ground-altering activities are planned on or adjacent to DTC/C-AMA resources. If required, a qualified historical archaeologist should perform excavations to retrieve data that otherwise would be lost.
Approved Trail Routes and
Four-Wheel-Drive Trails

Many of the DTC/C-AMA sites could easily be incorporated into the California Back Country Discovery Trails system, established by the State of California. The divisional camps are located throughout the Mojave Desert and could be linked via off-highway trails. Other DTC/C-AMA sites could also provide points of interest along many, if not all, of these back-country trails. A specific trail could also be established with the theme of World War II training in the California desert. This trail could provide motorists with a tour of some of the more prominent DTC/C-AMA sites, giving a better understanding of and appreciation for the cultural resources present in the area.

The DTC/C-AMA, in general, is not well known to the public. Interpretive maps, guidebooks, and displays specifically tailored to the DTC/C-AMA should be prepared to better acquaint visitors to the facility. These items would not only tell the history of the resources but also point out their fragile nature and emphasize trail etiquette and the conservation of back-country resources. The DTC/C-AMA sites can provide an interpretive theme for one or many trails, and many “discovery points” related to World War II training can be provided. In keeping with the goals of California’s Back Country Discovery Trails system, few new roads would have to be constructed to link the DTC/C-AMA sites. Many roads dating to the period of operation of the DTC/C-AMA sites still exist and could be used. As currently conceived, the discovery trails system includes several corridor alignments. The DTC/C-AMA theme can be applied to large portions of alignments 4, 6, and 9 (California Off-Highway Motor Vehicle Recreation Division 1996). Likewise, the same concept envisioned in the California Back Country Discovery Trails can be applied to the BLM’s Back Country Byway System.

Interpretive Opportunities

Interpretive Signs

Numerous suggestions have been made for placing signs on DTC/C-AMA sites in previous management plans (BLM 1984, 1986). These recommendations have largely been implemented for Camp Iron Mountain and have been particularly focused on the relief map in the camp. It is believed that appropriate signs describing the feature would deter a fair amount of vandalism. Through the volunteer effort of several groups, signs have been placed at most of the divisional camps. These signs should be supplemented with additional interpretive materials for the locations described below. In addition, other DTC/C-AMA resources found to be particularly significant should also have interpretive signs placed adjacent to them.

Brochures

Brochures should be developed and printed for the more accessible DTC/C-AMA sites, providing that the sites retain enough integrity to reflect their historical associations.

Camp Essex

A small interpretive exhibit currently exists along Interstate 40. This exhibit should be updated and expanded with material presented in the current report. Because the camps are located along a highly traveled corridor, they are likely candidates for further interpretation. Brochures specifically produced for the camp should be published, highlighting the history of the camp, providing access information, and encouraging responsible behavior. Further archival research and oral histories should be performed specifically for Camp Essex. These studies will provide more information on the activities that occurred at Camp Essex and will aid in the development of a more detailed map of the camp.

Camp Ibis

Camp Ibis should be the subject of interpretive displays and publications. Located along U.S. Highway 95, along which a large number of tourists travel every year, the camp is easily accessible. An interpretive display near the headquarters of the camp should be established. The display can be simple, with a collection of historic photographs, a short history of the DTC/C-AMA, and specific information about Camp Ibis. A map of the original camp should
Brochures should be produced for Camp Ibis. These brochures can follow the format of the interpretive display and can be distributed throughout the area. Information presented in this report can be used to produce the display and brochures.

Additional archival research, specific to Camp Ibis, should also be performed. This research should focus on obtaining the physical layout of the camp, as well as on pinpointing locations of particular activities. Historical-period maps and photographs of Camp Ibis are likely present in the National Archives in Washington, D.C., and should be consulted. In addition, veterans who served at Camp Ibis should be interviewed, which would lead to a more personalized view of the camp. This information can be incorporated into the interpretive materials, adding colorful details to the camp's story.

Camp Iron Mountain

Although Camp Iron Mountain has been the subject of substantial interpretation and preservation efforts in the past, more should be done. Iron Mountain is by far the best-preserved camp, and it affords substantial interpretive opportunities. A brochure specific to the camp should be developed, published, and distributed. The camp should also have a more involved and detailed interpretive display. The display should present a general history of the DTC/C-AMA, as well as a specific history of Camp Iron Mountain. The display should contain historical-period photographs and written material, as well as a map of the camp.

Camp Young

Located immediately north of the heavily traveled Interstate 10, Camp Young is also a likely candidate for interpretive displays. In addition, visitors to Joshua Tree National Monument pass immediately west of the remains of the camp. These visitors are likely to be interested in the camp. Although a small sign currently exists, a more detailed and visible display should be provided. This display can be simple, with a few historical-period photographs, a map of the camp, and a short history of the DTC/C-AMA and Camp Young, in particular. Brochures with similar information as that found on the interpretive display should be developed and distributed, particularly in the monument’s visitor center.

Rice Army Airfield

Currently the best example of an air facility in the DTC/C-AMA, Rice Army Airfield should be the subject of interpretation. Many visitors do not realize the important role the Army Air Corps and Air Forces played in the successful operation of the desert training. An interpretive sign, similar to those to be placed at the divisional camps listed above, should be placed at the entrance to Rice Army Airfield. The signs should describe the activities that occurred at the airfield, as well as the layout of the field. The sign should contain historical-period photographs, written descriptive material, and a map of the facility. In addition, brochures should be developed and printed for Rice Army Airfield, following the format used in the interpretive display. These brochures can be distributed from a variety of locations. Further archival research and oral histories should be conducted specifically for Rice Army Airfield, in order to aid in the development of these interpretive resources.

Additional Research

Oral History

An oral history program should be implemented by a professional historian for the DTC/C-AMA. Numerous veterans of the facility have voiced interest in participating in the interpretation of this resource. These individuals, along with new contacts, should be interviewed by a historian familiar with the facility. Transcriptions of the tapes should then be produced, leaving a more accessible record of life and activities in the DTC/C-AMA. An oral history project currently underway by SRI should be used as a model. The study involves locating those familiar with the historical-period land use of the U.S. Air Force’s Barry M. Goldwater Range in western Arizona. Press releases were issued in newspapers throughout Arizona to solicit interest in the project. Individuals familiar with the range were also contacted for potential leads on oral history sources. A list of potential interviewees was then generated and ranked in order of relevance to the project. The individuals were then contacted and interviewed about their experiences in the area of interest. The interviews were tape recorded, and the interviews were then transcribed. Following review and editing, the transcriptions provide a lasting record that is easy
to research. The Internet, including websites, can also be used as a means of eliciting and disseminating information and encouraging participation by individuals who trained and served at the DTC/C-AMA. Some materials have already been posted on the BLM’s Needles Field Office website.

Archival Research

Further archival research should be performed by a qualified professional historian familiar with the history of the DTC/C-AMA. Several archival repositories contain documentary materials relevant to the DTC/C-AMA. When funding allows, these repositories should be visited:

3rd Armored Division Archives
University of Illinois
Urbana, Illinois
The above archives contain scrapbooks, photographs, and letters in the form of donated collections from 3rd Armored Division veterans.

National Archives and Records Administration
Archives II—Textual Reference Branch
College Park, Maryland
The above repository contains the records of Headquarters, Army Ground Forces.

U.S. Army Center of Military History
Fort Lesley J. McNair
Washington, D.C.

U.S. Army Corps of Engineers, Headquarters
Office of History
Alexandria, Virginia

U.S. Army Military History Institute
Carlisle Barracks, Pennsylvania
Allen, Terry. Papers
104th Infantry Division
Gillem, Alvan C., Jr., Papers
Commanding general of the DTC/C-AMA, August–November 1942
U.S. Army. Camp Young, CA
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U.S. Army War College

U.S. Air Force Historical Research Agency
Maxwell Air Force Base, Alabama
Historical data: Rice Army Air Field, Desert Center Army Air Field
Unit histories: Headquarters Desert Center Army Airfield; Second Airdrome Detachment; Third Airdrome Detachment

Arizona DTC/C-AMA Sites

Because the DTC/C-AMA included far more than the California Mojave Desert, a focused study should be made of those sites located in Arizona. The current historic context can be built upon for study of the Arizona sites. In addition, NRHP evaluations of the Arizona sites should be undertaken, following the format used in this report. Not all resources related to the DTC/C-AMA are located on public lands managed by the BLM. We recommend that other agencies with management responsibilities for DTC/C-AMA resources cooperate and coordinate with BLM to maximize opportunities to protect, preserve, and interpret these unique resources.

Cultural Heritage Tourism

Tourism is a multibillion-dollar industry that is particularly strong in California. Countless businesses depend on tourist revenue to stay in operation, including hotels, restaurants, gas stations, tour operators, car-rental agencies, and souvenir shops, among many others.

State funding is flowing at an unprecedented rate into historical sites and heritage locations. History has become an exploitable economic resource, and government agencies foster economic development by nurturing heritage tourism.

The DTC/C-AMA facilities lend themselves perfectly to the concept of cultural heritage tourism. Planners in the southern California area should take advantage of these important cultural resources. By promoting and publicizing the historical value of these World War II-era resources, federal, state, and local governments will also be helping to promote the area’s economy. A large segment of American tourists are retired, and many are veterans of World War II. This class of tourist is particularly interested
in American history, and even more so if he or she participated in the events that make up that “history.”

**Setting Priorities**

The remaining traces of the DTC/C-AMA represent a fragile resource situated in the vast desert expanses of the southern portions of California and Arizona. If lost to the ravages of time and vandalism, it can never be replaced. No other similar resource exists. Thorough recordation and NRHP nomination of all of the resources that make up the DTC/C-AMA should be an urgent priority for the BLM and other entities responsible for portions of the facility. In this report, the multiple property submission format has been suggested as a streamlined process for evaluation and nomination of DTC/C-AMA resources. Additional research and interpretation of the facility for the public are also critical.

One of the most difficult tasks when nominating resources to the NRHP is to establish that a resource possesses integrity of location, design, setting, materials, workmanship, feeling, and association. Perhaps the most elusive or subjective categories are the latter two. This is not the case with the DTC/C-AMA. Several years ago, a colleague and I walked through the now-silent camps and observed the chapels, rock-lined walkways, and associated features. When we hiked up to Palen Pass and saw the machine-gun emplacements, we talked about how you could close your eyes and still see, hear, and smell how it must have been over half a century ago (Figure 153). We believe that preservation of this unique resource would serve as a testimonial to all those who trained there and went on to serve on one of the World War II fronts. It would also give future generations the opportunity to sense the feeling and association of this special, historically significant place.

![Figure 153. M3 Stuart tank somewhere in the DTC/C-AMA, ca. 1942–1944. Courtesy BLM Needles Field Office, Needles, California.](image-url)
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With the German Afrika Korps driving across the North African desert with impunity in 1941 and 1942, the U.S. Army realized that it might be called upon to assist its British ally in the fight against the Germans and Italians. Egypt, along with the strategic Suez Canal and the Middle East in general, was in danger of being lost to the Axis powers. It became imperative that the Axis be expelled from North Africa. The U.S. Army, however, had never fought a large-scale war in a desert environment. As a result, the Army Ground Forces designated more than 18,000 square miles of the Arizona and California desert as an armored training facility. Maj. Gen. George S. Patton, Jr., was placed in charge of establishing this facility and served as its first commanding officer. The facility would thereafter reflect his tough image and relentless training doctrines.

The facility was called the Desert Training Center (DTC), and its mission was to harden and prepare troops for the rigors of desert warfare in the forthcoming invasion of North Africa. Operating from 1942 to 1944, the DTC expanded far beyond this original scope and in 1943 became known as the California-Arizona Maneuver Area (C-AMA). The facility was truly massive in scale. Numerous divisional camps—measuring three miles long by one mile wide and housing more than 15,000 men each—were established throughout the desert. In addition, the facility contained airfields, supply depots, railroad sidings, hospitals, ranges, and maneuver areas.

Because of its hasty construction, short duration, and the army’s desire to train men under spartan conditions, the DTC/C-AMA contained few permanent structures and was quite ephemeral compared with other military bases. Nevertheless, countless reminders of this massive training facility exist throughout the California desert today. Maneuver areas, where entire divisions practiced attacking and defending huge land areas, can be seen. Small camps, where individual units were stationed, are marked with rock-lined walkways, and unit symbols are spelled out in rocks of different colors. Tank tracks can also be detected in a variety of locations.

*The Desert Training Center/California-Arizona Maneuver Area, 1942–1944: Historical and Archaeological Contexts* provides an in-depth look at the history of this massive military training ground. At the core of the report lie military historian Matt C. Bischoff’s detailed historic context and overview for this unique facility. Bischoff also provides descriptions of the remaining property types associated with the DTC/C-AMA and commentary on the significance of these resources. Included are details on the administrative history of the facility, the daily lives of the men stationed there, and the weapons, vehicles, and equipment used. The report is lavishly illustrated with historic as well as modern photographs, maps, and drawings, all of which help the reader gain an intimate sense of what took place in this portion of the Mojave Desert more than half a century ago.