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# historic resource study

a history of land use

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# JOSHUA TREE



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HISTORIC RESOURCE STUDY  
A HISTORY OF LAND USE IN  
JOSHUA TREE NATIONAL MONUMENT

by

Linda W. Greene

Branch of Cultural Resources  
Alaska/Pacific Northwest/Western Team  
U.S. Department of the Interior  
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## PREFACE

This Historic Resource Study has been prepared in accordance with the approved Task Directive for Joshua Tree NM Package No. 804. It is oriented toward the identification and evaluation of the historical resources within the park to accomplish compliance with Executive Order 11593, "Protection and Enhancement of the Cultural Environment." It also provides basic reference material for planners, managers, and interpreters to facilitate the proper care and management of cultural properties.

The historical resources of the monument are connected primarily with ranching, cattle raising, and mining activities. The first two themes are represented by Keys Ranch, Cow Camp, and numerous tanks. Mining remains are found all over the monument and comprise collapsed buildings, ore bins, mine shafts, foundations, mill ruins, and associated equipment. Several of the more dangerous mine shafts within the monument have been grated for safety reasons, and others have been fenced off. One of the primary purposes of this study was to review the remaining mining areas to determine historical significance before they were impacted by grating or filling activities.

Evaluations of significance of resources of the monument are based on the following criteria: association with events that have made a significant contribution to the broad patterns of American history; association with the lives of significant persons in the past; embodiment of distinctive characteristics of a type, period, or method of construction; or potential to yield information important in prehistory or history. Seven properties within the monument are already listed on the National Register of Historic Places: Keys (Desert Queen) Ranch, Wall Street Mill, Barker Dam, Cow Camp, Ryan House and Lost Horse Well or Spring, Lost Horse Mine, and the Desert Queen Mine. This writer has recommended enlargement of the Desert Queen Mine National Register boundary into a Desert Queen Mine Historic District to include the Eagle Cliff Mine and

the submission of forms for the Pinto Wye Arrastra, (New) Eldorado Mine and mill, and a Piñon Mountain Historic Mining District for formal determinations of eligibility.

Many people and institutions provided help and guidance during this study. Most deserving of the writer's gratitude are the staff of Joshua Tree National Monument. Superintendent Rick T. Anderson, Chief of Interpretation Bill Truesdell, Information Specialist Pat Flanagan, and others were extremely generous of their time and knowledge. Bill accompanied the writer during all field work in the monument and in addition to providing good company, was of invaluable assistance in locating sites. Cottonwood District Ranger Carol Metzger and Resources Management Specialist Bob Moon were also helpful in guiding the writer to historical sites. Thomas D. Mulhern, Chief, Division of Park Historic Preservation, and Gordon Chappell, Regional Historian, both of the National Park Service Western Regional Office, San Francisco, extended their usual gratifying moral support and research and administrative aid. Thanks go to Ruth Larison, Librarian, Rocky Mountain Regional Office, Denver, for obtaining necessary books and articles through inter-library loan, and to Robert H. Todd, Branch of Mapping, Denver Service Center, for the fine base maps that accompany this report. Jan Petrukitas, Joan Manson, Nancy Arwood, and Lou Tidd did an excellent job of typing the final document.

Repositories whose staffs aided in this research include the National Archives and Library of Congress, Washington, D.C.; Denver Public Library and U.S. Geological Survey Library, Denver, Colo.; University of Colorado Library, Boulder; Riverside and San Bernardino County Courthouses and Riverside and San Bernardino County Libraries, Riverside and San Bernardino, Ca.; A.K. Smiley Public Library and San Bernardino County Museum, Redlands, Ca.; Los Angeles Public Library, History Division Archives of the Los Angeles County Museum of Natural History, and History Center, California Historical Society, Los Angeles; Bancroft Library of the University of California, Berkeley; California Historical Society and California Division of Mines and Geology, San Francisco; California Room of the California State Library and the Bureau

of Indian Affairs Area Office, Sacramento; Federal Archives and Records Centers in San Bruno and Laguna Niguel, Ca.; and the Local History Collection of the Twentynine Palms Branch of the San Bernardino County Library, where Cheryl Erickson provided much assistance, and the Joshua Tree National Monument Library and history files at the Twentynine Palms Oasis Visitor Center, Twentynine Palms, Ca.





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I. Desert Region of Southern California

A. Setting

America's public domain was significantly increased by two important land transactions of the nineteenth century. The first was a result of the 1848 Treaty of Guadalupe Hidalgo that ended the Mexican War. By this agreement Mexico ceded to the United States the areas now known as California, Nevada, Utah, most of Arizona, and portions of Wyoming, Colorado, and New Mexico west of the Rocky Mountains and the Rio Grande. A second negotiation, rounding out America's desert parcel, involved the purchase from Mexico of lands comprising present southern Arizona and the southwest corner of New Mexico in 1853. The section of desert with which this study is concerned is found in southern California and is a magnificent scenic wonderland embracing portions of both the Mojave and Colorado deserts. The former designation applies to an extremely arid wedge-shaped section of the state extending from the eastern base of the Sierra Nevada east through the Death Valley area to southwestern Utah and the northwest corner of Arizona. This high desert spreads south over the barren slopes of the San Bernardino Mountains and up the Chuckawalla Mountains. It includes most of San Bernardino County and eastern Los Angeles and Kern counties and extends from Antelope Valley more than 200 miles east to the Colorado River and beyond. The Colorado Desert is an arid valley of about twelve million acres extending from San Geronio Pass (a natural gateway into the Los Angeles lowlands) near San Bernardino south to the Gulf of California and from the Peninsular Ranges on the west to the Colorado River on the east. It contains the great depression referred to as the Salton Sink. These two regions are divided by low ranges of rugged hills stretching from San Bernardino Mountain southeast to the mouth of the Gila River and beyond.

The San Bernardino, San Jacinto, and associated mountain ranges that form high barriers on the north and west sides of the Salton Basin intercept moist Pacific air currents and cause high aridity over a wide area to the east. North of the Salton Sea basin are many small disconnected mountain chains. The Hexie, Pinto, Cottonwood, Coxcomb, and Eagle ranges are mostly of volcanic origin and interspersed with low,

arid valleys, floodplains, and playas. This is the area of Joshua Tree National Monument. A member of the Army Corps of Topographical Engineers, Lieutenant Robert S. Williamson, who skirted this area soon after the Gadsden Purchase of 1853, recorded that

a mountain range extends from San Bernardino mountain in a southeasterly direction, nearly if not quite to the Colorado. Between these mountains and the mountains on the Mohave nothing is known of the country. I had never heard of a white man who had penetrated it. I am inclined to the belief that it is a barren, mountainous desert, composed of a system of basins and mountain ranges. It would be an exceedingly difficult country to explore, on account of the absence of water, and there is no rainy season of any consequence. . . . The country included between the mountain above mentioned, the Coast range, and the Colorado, is level, or but slightly undulating, and is known as the Colorado Desert. . . .<sup>1</sup>

Although survival in the region Williamson described was difficult, the migratory Indian bands who first inhabited it were able to live successfully off the land. A knowledge of water locations, contentment with a diet of acorns, mesquite beans, piñon nuts, and seeds of grasses and weeds, berries, wild fruits, and small game animals; and the ability to obtain fuel and medicine from desert shrubs enabled them to

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1. This description of the Joshua Tree National Monument portion of the California desert is the earliest written account of this area. United States, War Department, 33d Cong., 2d Sess., Senate Ex. Doc. No. 78, Reports of Explorations and Surveys, to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean, Made Under the Direction of the Secretary of War, in 1853-4, According to Acts of Congress of March 3, 1853, May 31, 1854, and August 5, 1854. Volume V. Report of Explorations in California for Railroad Routes, to Connect with the Routes Near the 35th and 32d Parallels of North Latitude, by Lieutenant R.S. Williamson, Corps of Topographical Engineers, 1853. (Washington: Beverley Tucker, Printer, 1856), p. 38.

fulfill their basic needs. Linguistically they were primarily of the Shoshonean group and had entered California in recent prehistoric times, ultimately spreading throughout most of southern California. The Gabrielinos occupied extreme southwestern San Bernardino County; the Serranos occupied the San Bernardino Mountains and high desert areas, as well as much of the San Bernardino Valley; the Cahuillas controlled San Gorgonio Pass and the San Jacinto and Santa Rosa mountains; and the Chemehuevis roamed the desert west of the Colorado River. Territorial divisions often overlapped, as at the Oasis of Mara (Twentynine Palms oasis).

One of the most valuable contributions of the Indian population to the early settlement of the region by whites was the establishment of trade paths, many of which later became Spanish trails, wagon roads, and later, highways or railroad routes. Trade routes through the southern California desert ran from one waterhole to another. Some of these prehistoric trails across the dry desert were still visible in the mid-twentieth century, often marked by stone piles or cairns or scatters of potsherds. A scarcity of trails in the desert areas may reflect low population density and a difficult terrain.<sup>2</sup>

Two well-known Indian trails went north and south along both banks of the Colorado River. One of these was the Yuma-Needles Trail, which began southeast of Yuma and followed a course up the western side of the Colorado River to the Needles area (Mohave Villages) where it linked with the Mojave Trail. One of the most important trade trails was made by the Mohave Indians and other Colorado River peoples who traveled to the west coast to procure seashells for barter. This Mojave Trail later became a major portion of the Mojave/Old Government Road through San Bernardino County. The Cocomaricopa Trail from Arizona to the Salton Sink and then leading northwest to meet the Mojave Trail near

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2. Robert F. Heizer, ed., Handbook of North American Indians, Vol. 8, California (Washington, D.C.: Smithsonian Institution, 1978), p. 692.

San Bernardino is thought to have been widely used for trade and travel before its utilization by Europeans in the Spanish period. A network of other minor trails spread from these major routes throughout the California desert basins and mountains, connecting water sources and leading to favorite hunting and gathering sites.<sup>3</sup>

B. Written History of the Desert Begins

1. Spanish Explorers

The first recorded European penetration of the southern California desert was by an early Spanish army officer--Pedro Fages--commander of California's Spanish forces. This gentleman, later governor of Alta California, in 1772 chased north into the desert after a band of men deserting from the presidio of San Diego; it is possible that these fugitives were actually the first to cross the desert. Although the criminals were never found, Fages continued north toward the San Bernardino Valley, crossing over the San Bernardino mountain range near Cajon Pass, a break between the San Gabriel Mountains on the west and the San Bernardinos on the east. He then made his way into the Mojave Desert, on to the southern end of the San Joaquin Valley, and ultimately home to Monterey. On the desert, but close to the mountains, Fages described passing through groves of "date palms," probably referring to the Joshua Trees. Two years later and then again in 1776 Captain Juan Bautista de Anza crossed a section of the San Bernardino Valley while opening a route overland from Sonora, northern Mexico, to Alta California. His route crossed the Colorado River at Yuma, went into the Salton Basin, and then through San Gorgonio Pass to San Gabriel and Monterey. The famous Spanish priest and Franciscan Friar Father Garces, who traveled extensively in Sonora, Arizona, and California during 1768-81 as a missionary to the Indians, accompanied Anza on his

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3. Edmund C. Jaeger, The California Deserts, 4th ed. (Stanford: Stanford University Press, 1933), p. 119; Westec Services, Inc., A History of Land Use in the California Desert Conservation Area (San Diego, 1978), pp. 6-7.

first trip in 1774. In 1775 he started with Anza on his expedition to establish a mission and colony at San Francisco. He separated from the party at Yuma, however, at the junction of the Gila and Colorado rivers. After visiting with the Indians of the Colorado, he decided to visit the Mohave nation farther north. He traveled up the California side of the Colorado River, entering the Mojave Desert on the east from the Mohave Villages near present Needles, California. Crossing evidently via the ancient Mojave Indian Trail, he became the first white man to cross the width of present San Bernardino County to Mission San Gabriel near present Los Angeles.

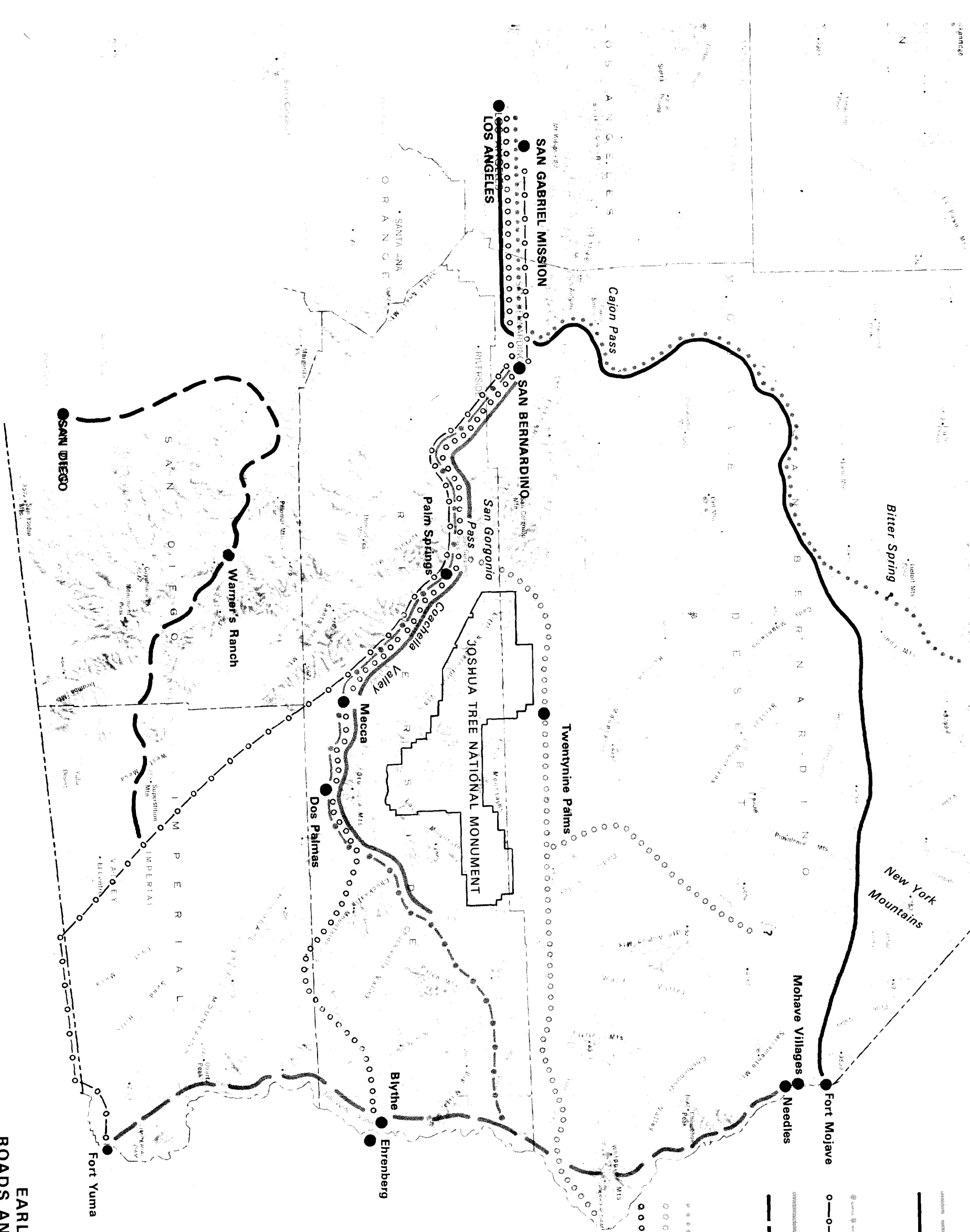
Other small-scale exploring parties went out during the early 1800s in connection with a serious problem threatening the economic life of the California missions. Runaways from the coastal missions were establishing relations with the mountain and desert tribes and leading raids on the bountiful mission, rancho, and pueblo flocks. As early as 1804 plans were underway by Spanish authorities to subdue these renegades by establishing an interior chain of presidios and missions paralleling those on the coast, whose aim would be to lessen the influence of the runaways. A mission of this second line had already been started at San Bernardino. The findings of earlier explorers ultimately became important because of the growing encroachments in California by 1821 of Russians and of British and American fur trappers and traders. It became imperative on the part of the Spanish military authorities to find a more direct land route to the Alta California missions from Sonora via the Colorado River. Except for scattered explorations by Franciscans in connection with mission labors, however, traveling was minimal until after Mexico's successful revolt against Spain, the creation of the short-lived Mexican Empire, and finally the establishment of a federal republic in 1823.

The periphery of the present Joshua Tree National Monument was briefly explored at this time during an effort by the Spanish to establish a safe, faster route connecting their settlement at Tucson with the California coastal missions and thereby strengthening their hold on California. Captain Jose Romero was directed to explore the

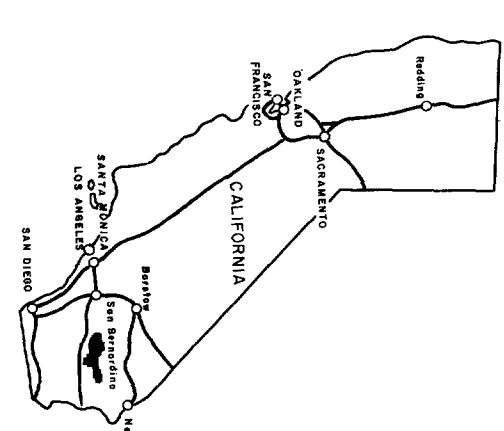
route used by the Cocomaricopa Indians to carry Spanish government dispatches between the Colorado River and San Bernardino by way of San Gorgonio Pass. The Romero-Estudillo exploratory expedition of 1823-24 traveled from San Gabriel mission to near the southeastern boundary of the monument but never reached the Colorado River. A second futile attempt to find this Indian trail resulted in a pessimistic assessment of its usefulness, and further attempts to intensively utilize the trail were abandoned. Spanish contact with the desert area was minimal and never resulted in deep familiarity with the region, but some interesting information on the desert region was acquired, providing the first descriptions of the Indians of the area and the topography. It is also possible that this data and the trails described encouraged penetration of the area by Spanish and Mexican miners beginning in the late 1820s and continuing until the 1840s and the discovery of gold in California, thus establishing some indirect contact between the natives and Spanish and Mexican adventurers prior to the American mining boom of the 1870s.

## 2. American Explorers

The first American to make an overland journey to California was the young trapper Jedediah S. Smith of the Rocky Mountain Fur Company, who in 1826 wanted to trap and explore the country between the Rocky Mountains and the Pacific Ocean. Traveling south from Salt Lake to the Mohave Villages on the Colorado River, his party spent two weeks resting and then were guided across the desert along the old Mojave Indian Trail taken by Father Garces. They followed along the Mojave River course (the Inconstant River, Smith called it) to a spot east of Cajon Pass, crossed the San Bernardino Mountains, and descended onto the San Bernardino plain. Smith returned again in 1827 and this time, though exhausted by an Indian attack, managed to cross the mountains at Cajon Pass into the San Bernardino Valley and on to San Gabriel. Two other notable Western figures, Ewing Young, a fur trapper, and Kit Carson, followed Smith's route across the desert in the later 1820s and early 1830s. For the next several years the area was apparently regarded as of no particular value except for trading purposes. In 1844 Brevet Captain John C. Frémont, with Kit Carson as guide, on his homeward trip to the Great Salt Lake after a year of



- Yuma-Needles Trail, Garcés
- Mojave Trail, Garcés, Smith, Young,
- Carson, 35th Parallel Route,
- Mojave/Old Government Road,
- Williamson Survey, Whipple Survey
- Cocomaricopa Trail (Route)
- Garcés, Anza Trail, Fages,
- Williamson Survey Party
- Romero-Estudillo Expedition
- Sonora Road, Fages, Kearny,
- Cooke And Mormon Battalion,
- Emory, Southern Emigrant Route,
- 32nd Parallel Route, Butterfield
- Overland Mail Route
- Old Spanish Trail, Frémont Route
- Weaver Road
- Bradshaw Road



**MOVIE FILM**

**EARLY SOUTHERN CALIFORNIA  
ROADS AND TRAILS IN THE VICINITY OF  
JOSHUA TREE NATIONAL MONUMENT  
CALIFORNIA**

UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
DSC / SEPTEMBER 1983 / 156-25011

exploration in Oregon and northern California, traveled south from the San Joaquin Valley and crossed the mountains into the Mojave Desert, collecting geological and botanical specimens and geographical knowledge along the way. In 1846, as the United States and Mexico battled over the future of California, a major army unit, the Mormon Battalion, was garrisoned in Cajon Pass to halt marauding Paiute Indians, and several forts were established along the Mojave Indian Trail between later Fort Mojave and San Bernardino. In 1848 Lt. William H. Emory led a military reconnaissance through southern California. This was the extent of major American involvement in the southern desert area until the gold strike of 1849 and its aftermath fully opened the Mojave and Colorado deserts.

### C. Early Southern California Roads and Trails

#### 1. Mojave Indian Trail

During his 1775-76 entrada across the desert from the Colorado River toward the Pacific Coast, Father Francisco Garces moved his party along what was referred to as the Mojave Indian Trail. Garces's diary indicates that the trail went by way of Paiute Spring to a pass in the New York-Providence Range. Crossing hills near Cedar Canyon, Garces continued west, probably across the south end of Soda Lake, until he reached the Mojave River. From there the trail led up into the San Bernardino Mountains, via Sawpit Canyon to the summit, and, in descending, crossed the mouth of Cajon Canyon to the valley floor.<sup>4</sup>

Rather than being one route, this trail was more likely a network of prehistoric trails connecting the Mohave Indian Villages with other Indian settlements, other trails, and the Pacific Ocean. Regular use of the trail by the Mohaves apparently continued to the 1850s, although use probably diminished with the increasing presence of and pressure from whites.<sup>5</sup> Jedediah Smith also crossed on this Indian trail

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4. W.W. Robinson, The Story of San Bernardino County (San Bernardino, Ca.: Pioneer Title Insurance Co., 1958), p. 8.

5. Dennis G. Casebier, The Mojave Road, Tales of the Mojave Road Number Five (Norco, Ca.: Tales of the Mojave Road Publishing Company, 1975), p. 85.



during his 1826 trip from Utah to the San Bernardino Valley. Ewing Young made two desert crossings via essentially the same route, in 1829 and 1831-32.

2. El Camino del Diablo

During his period of exploration in southern California, Father Francisco Garces made several journeys from the Sonoran missions to the Gila-Colorado rivers area. In 1771, while searching for mission sites, he made his way to the Yuma Indians on the Gila, crossed the Colorado River at Yuma, and blazed a trail across the Colorado Desert to near the San Jacinto Mountains. This was the beginning of the basic overland route of the Spanish period. A virtually waterless trail, it became known as the "Devil's Road."<sup>6</sup>

3. Anza Road (Anza Trail)

Juan Bautista de Anza, on his first exploratory journey for an overland route to the California missions in 1774, crossed the Colorado River at its junction with the Gila, and pushed across the desert to "Puerto de San Carlos" (San Gorgonio Pass) and then through "El Valle de San Jose" (San Bernardino Valley). He used the same route again in 1776, further breaking a trail with a large company of colonists, soldiers, and animals. Although this overland route by way of the Yuma Indian territory was long and dangerous, it was less perilous and much more practicable than a sea voyage. The revolt of the Yuma Indians in 1781 and their destruction of the Spanish settlements along the Colorado River gave travel over this route a setback, although it continued to be used sporadically. In 1782 Don Pedro Fages and an escort traveled the route from the Yuma crossing to San Gabriel carrying official dispatches and that same year traveled the desert stretch of it again, leaving it at San Sebastian and making their way through the mountains to San Diego

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6. Warren A. Beck and Ynez D. Haase, Historical Atlas of California (Norman: University of Oklahoma Press, 1974), p. 15.

by way of later Warner's Ranch. He was the last white man known to have used this arduous road before it fell into disuse. In fact travel across the Colorado Desert by whites virtually ceased for the next several years.<sup>7</sup>

#### 4. Cocomaricopa Route

The Spanish were still interested, however, in reestablishing a workable land route connecting their settlements near Tucson with missions on the California coast, especially to facilitate the transmittal of mail. The military commander at Tucson finally engaged the Cocomaricopas--a tribe friendly to the Spanish and hostile to the Yumas--to undertake this task. The route they established ran north of Yuma territory, crossed the Colorado River near present Blythe and Ehrenberg, continued through the mountains and over the Colorado Desert via Chuckwalla Spring, skirted the basin of the Salton Sea, and entered the San Bernardino Valley through Coachella Valley and San Gorgonio Pass, a route feasible only for foot traffic.<sup>8</sup>

The Mexican government wanted to establish this as a road over which colonists and soldiers carrying mail and supplies could travel--a route replacing the Anza Road abandoned more than forty years earlier. The expedition under Captain Jose Romero was dispatched to find the route of the Cocomaricopa Indians and determine its feasibility for overland travel. The Romero-Estudillo expedition of December 1823 and January 1824 traveled east from San Bernardino through San Gorgonio Pass, Cabazon, and Palm Springs to Dos Palmas.

From there the party traveled northeast up Salt Creek Canyon and possibly skirted the southeastern slopes of the Eagle Mountains, advancing as far north as the vicinity of the opening between

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7. George William Beattie, "Reopening the Anza Road," Pacific Historical Review (Glendale, Ca.: Arthur H. Clark Co., 1933), II, pp. 52-53.

8. George William Beattie and Helen Pruitt Beattie, Heritage of the Valley: San Bernardino's First Century (Oakland, Ca.: Biobooks, 1951), pp. 14-15.

the Eagle Mountains and the Coxcombs at Pinto Wash. Romero failed to reach the Colorado River on this trip and returned to San Gabriel to locate Indian guides for a second attempt to find the route. Returning to Tucson several months later, Romero decided that the Cocomaricopa Road was unfit for cavalry or supply trains. He successfully discouraged other government officials, and attempts to open this Indian trail to Mexican use were abandoned.<sup>9</sup>

5. Sonora Road (Emory's Trail, Southern Emigrant Route, 32nd Parallel Route, Butterfield Overland Mail Route)

Although the opening of the Cocomaricopa mail route had had a stimulating effect upon the missionaries of San Gabriel, who assumed that this would become a road for general travel between Sonora and California, such was not to be the case. Romero's expedition proved the fruitlessness of such a venture, and instead the road from Sonora via Yuma and Warner's Ranch to San Diego was made the official Spanish route to California for mail and travel while California government headquarters remained at San Diego. By means of roads connecting it with Warner's Pass, it also became the official route between Sonora and Monterey. San Gabriel was not off the road entirely, for two roads from that mission connected with the San Diego-Colorado River road: one, the "Canyon road to the Colorado," ran by way of Temescal and Temecula, and joined the San Diego-Colorado River road in Warner's Valley; the other road, by San Bernardino, later officially designated the San Bernardino-Sonora Road, crossed the summit of San Gorgonio Pass, turned south, and led through the San Jacinto Mountains to the vicinity of Aguanga on the Canyon road.<sup>10</sup> By this route the missions of Mexico, New Mexico, and Arizona were connected with those of San Diego, San Luis Rey, Capistrano, San Bernardino, San Gabriel, and San Fernando Rey.

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9. United States, Department of the Interior, National Park Service, Patricia Parker, One Hundred Years of History in the California Desert: An Overview of Historic Archeological Resources at Joshua Tree National Monument. Publications in Anthropology, No. 13 (Tucson, Az.: Western Archeological Center, NPS, 1980), pp. 24-25; Beattie and Beattie, Heritage of the Valley, pp. 18-20.

10. Beattie, "Reopening the Anza Road," pp. 67-68.

6. Old Spanish Trail

The Old Spanish Trail, used by packtrain caravans moving from Santa Fe to Los Angeles across Cajon Pass, was established in 1830. This route was an extension of the Santa Fe Trail and crossed Colorado, Utah, and Nevada before approaching San Bernardino County from the springs at Las Vegas, Nevada. It continued west to near Death Valley and then dropped south and west through present Barstow and Victorville, across Cajon Pass, and into San Bernardino.<sup>11</sup> This became the main route between New Mexico and California. To Los Angeles were brought Mexican silver and New Mexican woolen blankets, and taken to Santa Fe were California horses and mules, silks, Chinese goods, and furs. Old Spanish Trail traffic ended following the Mexican War, about 1848.<sup>12</sup>

7. Mojave Road (35th Parallel Route)

Another main route of travel started in Los Angeles, went east through the Los Angeles Basin to San Bernardino, and crossed the mountains by way of Cajon Pass. Entering the Mojave Desert, the route continued northeast for about forty miles. Near the 35th parallel of north latitude it turned east and followed close to that parallel all the way to Albuquerque, New Mexico. In early historic times this route was frequently referred to as the 35th Parallel Route. That portion of the road across the California desert to the Colorado River evolved from the ancient Mojave Indian Trail mentioned earlier.<sup>13</sup>

During the Mexican War a major army unit, the Mormon Battalion, was garrisoned in Cajon Pass to control the Paiutes. Several forts were established along the Mojave Indian Trail between the future

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11. E.I. Edwards, Desert Voices: A Descriptive Bibliography (Los Angeles: The Westernlore Press, 1958), p. xx.

12. Casebier, Mojave Road, p. 37.

13. Ibid., Foreword, p. 1.

Fort Mojave and San Bernardino. This stretch of road became known as the Old Government Road, stretching east from the Mojave River to Fort Mojave on the Colorado River, across Arizona to Fort Defiance, and on to Santa Fe.<sup>14</sup> Although traversed in part by trappers before and immediately after the Mexican War, and for some distance by Captain Lorenzo Sitgreaves in 1851 as a possible route to connect settlements on the Rio Grande with southern California, the 35th Parallel Route was first examined in its entirety from California to New Mexico by Francois Xavier Aubry in 1853.<sup>15</sup> In 1857 Edward F. Beale, a former lieutenant, U.S. Navy, laid out the 35th parallel wagon road. The prospect of trouble with Mormons in the Salt Lake area became a factor in selection of the 35th Parallel Route by California-bound emigrants in the late 1850s. The Mojave Road served as a wagon route for the next twenty years and was one of the main lifelines for development in the eastern Mojave Desert in California and northwestern Arizona. Prospectors and miners kept the level of traffic high on the road in the 1870s and it was provided with regular stage service. Herds of sheep were driven over the road to Arizona and New Mexico. It lasted as a major desert wagon road into the 1880s, until the Southern Pacific Railroad and Atlantic and Pacific Railroad (later a subsidiary of the Atchison, Topeka and Santa Fe Railroad) joined lines about twenty miles north of the Old Mojave Road trace.

8. Routes to the Goldfields

By the spring of 1849 the rush to the California goldfields was on. Although the more direct northern routes to the goldfields were more popular, they were impassable in winter, while southern routes were open all year. Several important roads entered southern California before

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14. L. Burr Belden, "Forgotten Roads . . .," San Bernardino (Ca.) Sun-Telegram, Jan. 22, 1956.

15. Ralph P. Bieber, ed., Exploring Southwestern Trails, 1846-1854, The Southwest Historical Series, VII (Glendale, Ca.: The Arthur H. Clark Co., 1938), pp. 55-56.

1850. One hosted the first wagons ever to cross the Colorado Desert, brought by Col. Philip St. George Cooke and his Mormon Battalion, in 1847, all the way from Santa Fe to San Diego. Cooke was merely following the earlier route pioneered by Pedro Fages in 1782 from the Colorado River to San Diego and recently revived by Brig. Gen. Stephen Watts Kearny and his Army of the West on their way to battle the Mexican forces under General Andres Pico. A year later Lt. W.H. Emory led a military reconnaissance from Fort Leavenworth, Kansas, to the coast along this route, which ran from present Yuma west on the north side of the Colorado River, south of Pilot Knob and the Sand Hills, across Mexican territory, turned north along the channel of the Alamo River, then west up the valleys of Carrizo, Vallecito, and San Felipe creeks to Warner's Ranch, and on to San Diego and other coastal points.<sup>16</sup> This road became the Southern Emigrant Route from Santa Fe and later the Butterfield Overland Mail Route. Another important early wagon road was the Salt Lake Trail, connecting Salt Lake City and Los Angeles and using part of the Old Spanish Trail. It was firmly established as a wagon road by California-bound emigrants during the gold rush.

9. Stage Roads

a) Butterfield Overland Stage Route

Several stage roads crossed the desert of southeast California. In 1858 the Overland Mail Company stagecoach line was established over a southern route laid out by its president John Butterfield. Within California the stage route went west from Fort Yuma for a brief distance, dipped into Mexico, reentered the state near New River, and skirted the inside edge of the mountains into Los Angeles. This was without question the most important development in pre-railroad

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16. United States, Department of the Interior, Geological Survey, The Salton Sea Region, California: A Geographic, Geologic, and Hydrologic Reconnaissance With a Guide to Desert Watering Places, Water-Supply Paper 497, by John S. Brown (Washington: Government Printing Office, 1923), p. 4.

transportation and communication for southern California. Operating between St. Louis and San Francisco, the Butterfield Route was abandoned in 1861 when U.S. troops withdrew from California, Arizona, and New Mexico at the outbreak of the Civil War, opening the way for harassment along the Overland Mail Route. When stock, equipment, and stations were seized by Confederate forces after Texas joined the Confederacy, the company was forced to withdraw farther north.<sup>17</sup>

b) Smith's Road

In the late 1850s Dr. Isaac W. Smith opened a road from San Geronimo Pass to Fort Yuma. It was referred to as the Yuma or Smith Road.

c) Bradshaw Road

This route came into existence because of the heavy traffic developing between southern California and the Arizona mines at La Paz, Wickenburg (near Prescott), and in the Castle Dome District between La Paz and Yuma. During the 1860s and 1870s vast numbers of men--Americans, Mexicans, and Chinese--passed back and forth over this area, gradually expanding the system of roads and trails near the Colorado River. A road already existed from San Bernardino through Cajon Pass to Fort Mojave; from there a trail could be followed down along the river to the mines. Another less direct stage route existed from Los Angeles through to the Colorado River that followed the old Butterfield Stage line to Yuma, Arizona. A rough sixty-mile trail led north from there parallel to the Colorado River.<sup>18</sup>

In 1862 William D. Bradshaw mapped a stage and freight line to serve the new placer goldfield at La Paz, Arizona, following what was basically a prehistoric commerce trail used by Colorado

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17. W. Turrentine Jackson, "Stages, Mails and Express in Southern California: The Role of Wells, Fargo & Co. in the Pre-Railroad Period," Southern California Quarterly (Fall 1974), pp. 240, 246.

18. Franklin Hoyt, "Bradshaw's Road to the La Paz Diggin's," Desert Magazine (February 1956), p. 4.

Valley tribes when dealing with the Indians of California. Bradshaw's route started from Los Angeles, went to San Bernardino, came through San Gorgonio Pass, over to Agua Caliente (Palm Springs), across the Coachella Valley to the Mecca area, to Dos Palmas Spring, then around along the southern edge of the Chuckawalla Mountains to the ferry on the Colorado River north of present Blythe. From there miners hurried on to La Paz and other mining centers in Arizona.<sup>19</sup> This route was discontinued with the coming of the Southern Pacific Railroad in the late 1870s. It was important because it diverted travel from the Warner's Ranch route and gave San Gorgonio Pass an importance to desert travel it never lost. Freight wagons, pack trains, and stages all began operating on the Bradshaw Road soon after it opened.

d) Fort Yuma Road

In 1855 Phineas Banning and David Alexander had inaugurated mule-drawn wagon trains to carry freight from Los Angeles to San Bernardino, over Cajon Pass, across the Mojave Desert, to Salt Lake City. Passengers occasionally hitched rides on these wagons. By the 1860s this freight wagon traffic had increased tremendously, and Banning and Company became one of the leading southern California transportation companies. In 1867 the company tried to use the route through San Gorgonio Pass for its stages to Yuma. Their route followed the Bradshaw Road to a point one mile east of Dos Palmas where the road to Yuma branched off to the south. This road later proved impracticable because of lack of water.<sup>20</sup>

e) Frink's Cutoff

This competitive road paralleled the Bradshaw route, but struck out almost straight from northeast of Dos Palmas to the Colorado River, running north of the Chuckawalla Mountains.

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19. John Hilton, "Henry Kaiser Came to the Desert for Iron," Desert Magazine (March 1949), p. 9.

20. Robinson, Story of San Bernardino County, p. 36; Hoyt, "Bradshaw's Road," p. 7.



10. Other Early Roads

a) Weaver Road

Pauline(o) Weaver, a pioneer cattleman and guide for the Mormon Battalion, trapper, army scout, and discoverer of gold at La Paz, had established himself in the San Gorgonio area by the middle 1840s. In the early 1850s he is believed to have pioneered a private road through the Morongo Basin over which he drove cattle from Cajon Pass to Arizona. He had evidently been shown the route, and watering sites, by friendly Indians, and managed to keep it a secret from the other cattle drivers who took their herds via Indio and always arrived several days later. This road has been equated with the "Old Road to the Providence Mountains" appearing on Colonel Henry Washington's 1855 land survey map. This route would have gone north before turning southeast toward Parker Dam. It has also been surmised that Weaver's road took a more direct route east, following the San Bernardino Base Line from Yucca Valley to the Colorado River which it crossed at the present site of Parker Dam before ascending the Bill Williams River.<sup>21</sup>

b) Clark's Pass and San Diego Branch

Other routes in the general area were one leading from the oasis at Twentynine Palms east over Clark's Pass and one outlined by Col. William J. Palmer in a roadbed survey of 1867 for the Kansas Pacific Railway Company. Palmer suggested a route to San Diego from the Needles crossing inland fifty miles to the vicinity of Amboy and then south through a pass in the Bullion Mountains (old Bagdad-Twentynine Palms Road?), thence through the Morongo Basin via Bunch Grass Mountain up to San Gorgonio Pass.<sup>22</sup>

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21. L. Burr Belden, "Pauline Weaver had Own Route," San Bernardino (Ca.) Sun-Telegram, Feb. 12, 1956.

22. L. Burr Belden, "Cattlemen, Mine Operators Give Way to Tourists," History in the Making series, San Bernardino (Ca.) Sun-Telegram, May 24, 1959.

#### D. Railroad Surveys

Although the establishment of wagon roads had been a great boon in opening up new sections of the American Southwest to settlement and mining, by the 1840s and 1850s railroads were seen as the necessary adjunct to further successful westward expansion. The vast area of land acquired after the Mexican War began attracting ever-increasing numbers of settlers, cattlemen, and merchants. The additional stampede of goldseekers to the Mother Lode region and to gold camps along the Colorado River and in Arizona during the late 1840s emphasized the need for better communication and transportation systems to guarantee the cohesiveness of these sections with the rest of the country and to ensure their proper control by military authorities.

As early as the summer of 1848, the subject of a railroad to the Pacific was being discussed in Congress, with the primary topic being what route such a road should take. Geographical information on the new territories acquired by the war with Mexico was relatively scant, augmented only slightly by the activities of early Spanish explorers whose ventures into the area have just been discussed. In the early 1850s the great public interest in the subject suddenly resulted in the approval by Congress on March 3, 1853, of a Military Appropriations Bill that included funds for several detailed and extensive Pacific Railroad surveys. This measure authorized Secretary of War Jefferson Davis to cause surveys to be made by the U.S. Army Corps of Topographical Engineers to ascertain the most practicable and economical route for a railroad from the Mississippi River to the Pacific Ocean. These explorations constituted the federal government's first attempt at a comprehensive, systematic, and integrated geographical and geological examination of its new Western domain. By the time the surveys were over, four east-west lines had been examined and detailed explorations made of passes through the Sierra Nevada. The possible lines examined ran between the 47th and 49th parallels, between the 38th and 39th parallels, along the 35th parallel, and along the 32nd. Only two of these surveys affected the area of Joshua Tree National Monument--that of Lt. Robert S. Williamson, who surveyed passes through the Sierra Nevada, and the one conducted from Fort Smith west, approximately along the 35th parallel, by

Lt. Amiel Weeks Whipple. These two surveys coincided somewhat in San Bernardino County in the area between the Mojave River sink and San Francisco.

1. Williamson Survey

In 1853 Williamson was sent to explore the southern part of the San Joaquin Valley, the passes leading from it to the Mojave Desert, those connecting the Mojave with the valley of southern California, and those connecting that valley with the Colorado Desert.<sup>23</sup> After examining the southern Sierra passes, Williamson was instructed to locate a route across the desert connecting the 32nd Parallel Route (Southern Emigrant Trail) or the 35th Parallel Route to the newly discovered passes. For this reason Williamson entered the eastern Mojave Desert. As was usual during this period, a naturalist--in this case, Prof. William P. Blake, a geologist and mineralogist--accompanied the expedition to report on interesting scientific matters along the way. Blake's report on his trip to the Colorado Desert between November 13 and December 19, 1853, published after the survey disbanded, presented the most scientific and complete account of the physical features of that desert area that had been written to date. According to Lieutenant Williamson's notes, the Joshua Tree National Monument region was still uninhabited by and basically unknown to whites. Professor Blake and the surveying party, under one of Williamson's engineers, Lt. John G. Parke, entered the desert from San Bernardino through San Gorgonio Pass and descended into the Coachella Valley toward Salton Basin, stopping on the way at Palm Springs and then at Indian Well. They also visited the springs at Toro and Agua Dulce around which Indian habitations were clustered. The expedition encountered difficulties in attempting to reach the old stage road that followed Carrizo Valley from the desert floor to the base

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23. United States, Department of the Interior, Geological Survey, Ground Waters of the Indio Region, California with a Sketch of the Colorado Desert, Water-Supply Paper 225, by Walter C. Mendenhall (Washington: Government Printing Office, 1909), p. 6.

of the Peninsular Range due to a lack of potable water along the west side of the Salton Sea.<sup>24</sup> Finally finding water at McCain Springs, the party continued on to the Southern Emigrant Road, or Emory's Trail, at New River and followed this to Warner's Ranch. They later crossed the desert to Yuma from there and ultimately returned to the coast via this Warner's Ranch road.<sup>25</sup>

Professor Blake's contributions to knowledge of this region were many. In addition to important notes and sketches, much valuable geologic and scientific data was obtained. The first accurate knowledge of the physical aspects of the Salton Sea region was obtained and the name "Colorado Desert" first applied to the area.

## 2. Whipple Survey

On July 14, 1853, Lt. Amiel Whipple began the formal survey of the 35th Parallel Route at Fort Smith, Arkansas; he completed his work in March 1854. The Whipple party crossed the Colorado River near Needles, followed up the Mojave River to northwest of the Spanish Trail, and on to Barstow; from there they proceeded south through Cajon Pass, then west to Los Angeles and San Pedro.<sup>26</sup> Whipple's survey did not produce nearly as much new valuable geographical data as did that under Williamson.

## 3. Railroad Construction

Railroad construction, strongly encouraged by the federal government and long desired by western expansionists and settlers, ultimately resulted in three transcontinental lines that, among other benefits, drastically increased the accessibility and thus the development of the California deserts: in 1869 the Central Pacific and Union Pacific

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24. Ibid.

25. USGS Water-Supply Paper 497, 1923, p. 5.

26. Grant Foreman, ed., A Pathfinder in the Southwest (Norman: University of Oklahoma Press, 1941), p. 20.

met at Promontory, Utah, completing the first transcontinental railroad in the U.S.; by 1883 the Southern Pacific Railroad had a main line stretching from New Orleans to San Francisco along the 32nd parallel; the Atchison, Topeka and Santa Fe Railroad by 1883 ran to Los Angeles via Needles over a combination of its own and leased tracks, along the 35th parallel.

Construction of the San Pedro, Los Angeles, and Salt Lake Railroad southwestward from Las Vegas to Barstow provided a second route into the desert in 1905. Extensive wagon travel ceased, and railroads dominated traffic through the Mojave and Colorado deserts until the 1920s. They provided an important measure of economic support that not only permitted successful settlement but also reduced transit costs and thereby encouraged mining development.<sup>27</sup>

#### E. Land Surveys

In another branch of the federal government--the General Land Office--appropriations were obtained to commence a survey of California. One aspect of this project involved letting contracts to survey township lines throughout the desert country. Contracts for work on the eastern Mojave Desert were let to private individuals, designated Deputy Surveyors, beginning in late 1854. During the next few years small surveying parties wandered over the desert erecting mounds, markers, stakes, and other signs as required by the GLO. As a result of this work, further detailed knowledge of the desert region was acquired. Part of this information resulted from closer contact with the desert Indians encountered along the way.

In preparation for survey work, it was necessary to establish independent initial points to serve as a base for surveys. Principal

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27. David W. Lantis in collaboration with Rodney Steiner and Arthur E. Karinen, California: Land of Contrast (Belmont, Ca.: Wadsworth Publ. Co., Inc., 1963), p. 36.

meridians and base lines were then surveyed from these. One of the private desert surveyors, Colonel Henry Washington, in 1852 erected such a point on the top of Mt. San Bernardino, at 116°55'17" west longitude and 34°07'20" north latitude. From this base line, which passes through the center of present San Bernardino, are derived all sections, townships, and official surveys in southern California. During his trip into the desert in 1855, Washington stopped at the Oasis of Mara (Twentynine Palms). This visit resulted in the first written account of that spot. Interest in the area was increasing, as evidenced by the enthusiasm generated upon Washington's arrival in Los Angeles after his survey trip in the summer of 1855. According to one early writer, the colonel was overwhelmed with questions concerning the lands between the San Bernardino Mountains and the Colorado River.<sup>28</sup> A year later another surveyor, Alex P. Green, visited Twentynine Palms and, in addition to surveying and describing Section 33 more fully, bestowed upon the place its first recorded name--Palm Springs.

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28. Lulu Rasmussen O'Neal, A Peculiar Piece of Desert: The Story of California's Morongo Basin (Los Angeles: Westernlore Press, 1957), p. 28.



## II. Development of the Desert

### A. Mining

#### 1. Southern California Districts

The California Gold Rush of 1849, about which so much has been fantasized and romanticized, was only the initial manifestation of a long and varied mining history in California. East and south of the Mother Lode remnants can still be found today of a much longer and broader era of Western mining activity. This region was thought to contain gold for many years before it was actively worked during the American mining rushes of the 1870s. It is highly probable that Spanish and Mexican miners and possibly Chinese worked the area sporadically much earlier. Possibly mission padres gathered some placer gold with the aid of Indian labor, but this sort of activity was kept as quiet as possible. They evidently found no deposits of great significance and ultimately traces of their activity largely disappeared. Very few of these mining operations were ever documented.

Gold is widely scattered over the desert, occurring either as placer gold or in veins in granitic rocks and mineralized zones in schist.<sup>1</sup> In many of the mountain ranges that rise above the desert washes, metalliferous veins carrying gold, copper, and silver-lead have been exposed. Indians and Spanish explorers probably produced small quantities of gold in the region around the Salton Sea in the 1700s. Gold was first recovered in California sometime around 1780 on the lower Colorado River. These early operations were of small scale and sporadic. Activity spread west and north into the Cargo Muchacho and Picacho districts in later Imperial County, where mining was conducted on a large scale at various times beginning in the mid-1800s. Some promising gold mines were opened at Julian, forty miles northeast of San Diego, in 1870. Most of the metal obtained in the early days of desert mining was laboriously recovered from dry placers, where small rounded grains of gold could be found in the loose sand in streambeds of gulches or canyons where the gold had been carried after eroding from veins or

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1. USGS Water-Supply Paper 497, 1923, p. 61.



stringers on the mountain side. These deposits, because of the lack of water, were worked on a small scale by dry washing, which involved putting the gravel through a machine that blew the dirt away with fans or bellows and caught the gold on dry riffles.

Later, between the 1820s and 1840s, placer gold was recovered near San Diego and in the San Gabriel Mountains, but production was not very significant statewide. During the decade between 1850 and 1860 a number of rushes took place to new diggings reputed to be rich in precious metals. At the beginning of 1855 sensational reports concerning gold in the Kern River region precipitated a rush to southern California. The boom quickly collapsed due to limited amounts of gold, difficulties in reaching the area, meager returns for strenuous labor, and the high cost of essential supplies.<sup>2</sup>

With the discovery of gold at Sutter's Mill on the American River, thousands of people braved the parched desert solitudes to reach the bonanza fields. Many perished due to insufficient equipment, unfamiliarity with the geography of the region, and hardships inflicted by heat and lack of water. Despite the awesome reputation the desert acquired during that time, most prospectors remained undaunted in their continual search for wealth.

In San Bernardino County there were gold finds on the Amargosa River by 1850, and later in the Leach Lake district north of Barstow and at Lytle Creek. In 1859 the silver mines of the Washoe were discovered and a great rush commenced to the Comstock lodes. A rush to the San Bernardino Mountains began in 1860 due to gold discoveries in Bear and Holcomb valleys. For two or three years, until the shallow diggings petered out, a mining camp in Holcomb Valley attracted considerable attention. During this decade prospectors who spread out looking for another Comstock Lode or La Paz goldfield discovered ore in

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2. Jackson, "Stages, Mails," pp. 234-35.

the Clark, Providence, New York, Whipple, Turtle, and Sacramento mountains, and in the Slate Range. Prospectors kept penetrating inaccessible canyons and finding more ore. During the 1860s and 1870s the Panimint mines were productive. In 1865 the Cerro Gordo silver-lead deposits were discovered. Ivanpah, in the northeast corner of the county, became the chief silver-producing district in the 1870s. The Providence Mountains yielded silver in the 1870s and 1880s. Other silver districts were the Grapevine, north of Barstow, and the Vanderbilt, to the east. Gold claims were located in 1880 in the Oro Grande area. The county's biggest boom was set off in 1881, resulting in formation of the Calico silver mining district. In Riverside County gold was discovered in 1886 in the Chuckwalla Mountains. The Rand Mining District was the scene of several big booms between 1895 and 1919, and the Bagdad-Amboy Mining District was a rich producer of gold between 1900 and 1910. A description of southern California mining in 1899 stated that

the area in which the greatly diversified mineral wealth chiefly exists is the desert region to the east of the coast mountains. It is an area of rugged mountains and bare and forbidding hills and sandy plains, divided by a series of mountainous elevations into the Mohave and Colorado deserts. Mines are scattered all over this area, which includes a large number of recognized mining districts. . . .

The climatic conditions present the most formidable difficulties to mining and prospecting. Of wood there is practically none. Streams and springs are few and far apart, as are the wells that have been developed here and there, and the intense heat of the desert makes water as precious as it is scarce. Transportation is difficult and costly. These conditions have retarded the mineral development, as active and extensive as it has been in recent years. Lines of transportation are the great need of the important mining districts scattered over these many thousands of square miles, and it is the supplying

of this need over railroads and highways that will do most to cheapen production and stimulate development.<sup>3</sup>

All of this activity drastically changed the desert. Burro trails developed into freight roads to service the various mining camps; ultimately railroad lines encouraged settlement and industry. By the early 1900s the Southern Pacific Railroad crossed the Colorado Desert, the Santa Fe crossed the Mojave, and the Randsburg Railroad stretched from Kramer and served several mining districts. The ability to transport ore cheaply to mills and smelters made even the mining of low-grade ores worthwhile.

## 2. Mining In the Joshua Tree National Monument Area

The Twentynine Palms Mining District came into prominence in the early 1870s, although gold had possibly been mined there as early as 1860. Activity began soon thereafter in the Virginia Dale, Piñon, Monte Negras, Eagle Mountain, and Cottonwood mining districts. These will be discussed in more detail in a later chapter.

## 3. General Economic Trends

Although desert prospecting was simplified by the lack of dense vegetation and a light soil cover that made it easier to trace veins and correlate formations, after all the placer gold had been removed it was necessary to turn to more involved mining processes. The sophisticated technology that evolved for quartz mining involved tremendous capital investment and therefore required involvement by mining companies as well as individual prospectors. Several factors, however, tended to discourage investment in desert mining operations, such as the scarcity of wood for construction and fuel, the lack of water, and the intense heat prevailing at certain seasons. Even more important to companies considering investment in the early days was the great

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3. A. Ekman, I.H. Parker, W.H. Storms, et al., Old Mines and Ghost Camps of California (Statewide for 1899) (Fort Davis, Tx.: Frontier Book Co., 1968, pp. 134-35.

difficulty in reaching many of the mines and the high cost of transporting ore to mills or smelters.

A revival of interest in mining began immediately after the Civil War and lasted until the panic and depression of 1873, which severely curtailed speculative capital. The 1880s brought prosperity with the coming of the railroads and the attendant stimulation to mining provided by having local railheads from which ores could be shipped to reduction works. Gold dominated the 1890s and many prospectors roamed the high desert in its pursuit. The Panic of 1893 again affected mining trends, especially silver producers, by repealing the Silver Purchase Act. By 1902, however, the cyanide process for the treatment of gold was being introduced on a large scale, enabling the successful working of old dumps and tailing beds. The Panic of 1907, a brief crisis in the New York financial district, did not severely affect all mining districts in Southern California. The price of silver held steady, and considerable prospecting was still carried on.

In the years preceding World War I, mining in the desert experienced a revival as old dumps were searched for manganese, copper, lead, zinc, talc, tungsten, and other new and desirable products. By 1918, however, most active mines had almost stopped operations. Gold production in the entire West dropped due to high mining costs, delays in receiving supplies and materials, reductions in the labor force and its decreased efficiency--a trend that had begun about 1915. Investment in gold properties became almost negligible.<sup>4</sup> High operating costs forced many operators to close down or suspend operations for a time. As time passed, the cost of reconditioning some of these closed mines and plants increased so tremendously that many properties had to be abandoned. Into the 1920s, post-war economics severely affected the mining industry. Low metal prices and the high cost of labor and materials due to the inflationary economy of the 1920s made severe inroads on this industry. The Depression of the 1930s tended to encourage mining again, as lower operating costs and the chance for a steady job prompted people to begin prospecting. This rise was accelerated in 1934 by the increase in the

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4. Engineering and Mining Journal 106, no. 9 (Aug. 31, 1918): 426.

price of gold from \$20.67 to \$35.00 per ounce. Many mines in older established districts were reopened and further exploration resulted in significant new discoveries in the southern California counties. The development of the flotation process for recovering gold ore also boosted the trend by making the reopening of old properties even more profitable.

The region around Barstow, Vanderbilt, Stedman, and Dale were the principal centers of mining activity up to World War II. This promising state of affairs ended abruptly in December 1942 when, in accordance with War Production Board Limitation Order L-208, all gold mining in the county was stopped, with the exception of one or two properties whose ores carried a little copper and whose high silica content made them desirable in the smelting of copper ores. The purpose of this law was to make gold miners available for work in strategic metal mines. The order was lifted in 1945 and gold production increased slightly for four years. Several properties that had operated successfully before being closed down, however, were unable to meet reopening costs that had to be added to current high operating costs. The fact that the U.S. Treasury ultimately stabilized the price of gold at \$35.00 an ounce meant that, with rising mine operating costs, some domestic mines had to close and others curtail operations. Leasing, prospecting, and small-scale operations proceeded, but appreciable production of gold and silver had to wait on either lower costs or an increased price that would allow profit. In 1950 this decline was accelerated by the Korean War.

## B. Settlements

### 1. San Bernardino Area

During the period of Spanish and Mexican rule of California--from the 1770s until around 1847--the southern part of the state was a slowly developing agricultural province characterized by large ranchos. With the discovery of gold in the Sierra Nevada in 1848 and the ensuing migration of thousands to the coastal areas, profound changes were wrought. Los Angeles became an important trade center, new settlements were founded, and as opportunities for staking claims on the Mother Lode dwindled, prospectors began fanning out into other parts of the region. All of this ultimately resulted in division of the large ranchos.

As early as the 1830s immigrants were coming to southern California in ever-increasing numbers, their entry facilitated by the opening of the Spanish Trail. These first pioneers turned toward the coastal plain after coming through Cajon Pass. The earliest inland agricultural settlements tended to be placed along the trail and the Mojave River. Used as stations, they were located where lands were moist and the river's flow could support the growing of hay to feed cattle and supply freighters. Other choice locations were in the vicinity of Victorville and near the San Bernardino Mountains.<sup>5</sup>

In 1851 the first Anglo-Saxon settlement in Southern California was established--by a colony of Mormons sent out from Utah by Brigham Young. Coming through Cajon Pass, the Mormons purchased the already cultivated areas of the San Bernardino Rancho in a region long occupied by the Spanish. In 1870 settlers largely from New England established a colony at Riverside. The growth of the area was detrimentally affected, however, by the withdrawal of the Mormons in 1857 and 1858 and by the outbreak of the Civil War in 1861. When U.S. troops were withdrawn from Forts Tejon and Mojave, the frontier was left unprotected from Indian attack. For several years raids were frequent upon stock ranches, freighters, and miners. In 1868 Camp Cady was established on the old Mojave Road as a military post to protect the Mojave region. Manned by 100 U.S. troops, it was maintained until about 1870.

## 2. Morongo Valley, Yucca Valley

In 1873 the de Crevecoeur brothers with their families moved into the Morongo Valley. The first known white settlers in the valley, they ran cattle and sheep on the open range and into the Twentynine Palms area. Another early white settler was Mark (Chuck) Warren, who had established his main ranch in Little Morongo Valley

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5. State of California, The Resources Agency of California, Department of Water Resources, Desert Areas of Southeastern California, Land and Water Use Survey, 1958, Bulletin No. 101 (Sacramento, Ca.: Dept. of Water Resources, 1963), p. 19.

(present Morongo) by 1878. In 1881 he and his two sons leased grazing land from the federal government and bought eighty acres of school land in Big Morongo Valley (present Yucca Valley) on which to graze his herefords. In this area, about nine miles from his ranch, he dug a well that would play an important part in the valley's history. Here he established a small outpost where he built a bunkhouse and barn and a large corral. He also erected a windmill to pump water from the well, which he contained in a large reservoir. The main trail through the valley passed by Chuck Warren's well, and the complex here soon became a wayside station for travelers and later a stage stop. It was also used as a watering place for Indians, prospectors, miners, freighters, and of course, cattlemen. As a result of the well, the Big Morongo Valley became known as Warren's Valley for many years.

While digging for gold in the southwest part of their valley, the family hit water, and this also became a main water supply for cattle and residents of the area. Other water sources were found in the region, and with the resultant availability of this commodity the cattle era began on the open range.<sup>6</sup> Warren's well was the focus of life in Yucca Valley for many years, functioning as a permanent stock watering place and as a social center. Here calves were branded, mail was left, and freight wagons and mine stages watered and rested. Later, homesteaders washed their laundry there and filled their water tanks from the reservoir. Chuck Warren died in 1917 and his ranch was taken over by a neighbor, William V. Covington, who ran cattle in the area.

### 3. Impact of Homesteading

Early homesteads, comprising one-quarter section each, were begun in the Yucca Valley area about 1910 and farther east, near the present town of Joshua Tree, by 1913. During the Depression of the 1930s, many people moved to the deserts in an attempt to escape the worst of the hardships. By the late 1930s many people had homesteads

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6. May Lillian Clark and Twila G. Couzens, "Yucca Valley and its History," a paper providing research material to be used to supplement the social science program of the Yucca Valley Elementary School, 1966, p. 8.

in the region, existing on what they could procure from the country around them supplemented by some income from relief sources.<sup>7</sup> These desert dwellers took up, for "agricultural" purposes, either the normal 160-acre homesteads or 320-acre desert homesteads. Around Twentynine Palms, however, the land was not really suitable for farming and had been filed upon by people, such as returning veterans, who were more interested in the health benefits of the area. For this reason land officials determined that this area was probably better suited for the restoration of mental and physical health than for raising crops.<sup>8</sup> Because larger homesteads were not necessary for this purpose, the federal government ended filing on 160-acre claims. In its place was instituted a radical plan for disposing of public lands, referred to as the Small Tract Act of 1938. Under this act small five-acre "jackrabbit" homesteads on vacant, surveyed public land, which were intended for health and/or recreation, were passed out. Settlers filed in the U.S. District Land Office in Los Angeles and were extended leases for five years at one dollar an acre per year. Deeds were available for a minimal price per acre after a substantial habitable structure, costing \$300 or more and conforming to county building laws, had been built.<sup>9</sup> Tracts were carved out of almost every visible acre of land. Most had at least a minimal desert dwelling, a few had outhouses and water tanks, but many were more primitive. In the late 1950s the policy was changed, and the Bureau of Land Management decided to sell the land outright at public auctions. A poorly conceived idea from the start, the Small Tract Act all

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7. Geo. L. Collins, Actg. Chief, Land Planning Div., Memorandum for the Files, Nov. 21, 1938, Central Files, 1907-49, Record Group 79, National Archives, Washington, D.C.

8. Ed Ainsworth, Five Acres of Heaven (Los Angeles: Homer H. Boelter, Lithography, 1955), pp. 5, 7.

9. Randall Henderson, "Cabin in the Hot Rocks," Desert Magazine (March 1949), p. 10; W. Storrs Lee, The Great California Deserts (New York: G.P. Putnam's Sons, 1963), p. 14; Randall Henderson, On Desert Trails, Today and Yesterday (Los Angeles: Westernlore Press, 1961), p. 32.



too frequently nurtured speculation and the quick erection of flimsy, unsightly structures, many of which were never occupied and fell victim to vandalism and disuse.<sup>10</sup>

Despite the many detrimental effects of this land act, it stimulated growth in the region by opening the public domain to a whole new generation. The first survey of desert watering places in the Mojave Desert was made during 1917-18. At that time detailed logs were made of roads and maps drawn showing the roads and watering places. When it was found that water could be located far beneath the desert's sandy soil, agricultural development began after the First World War. When wells were sunk, water became plentiful for limited irrigation, resulting in a spurt of desert farming and the growth of alfalfa and wheat; in poultry raising; and in the beginnings of small pear, peach, and apple orchards.

#### 4. Military and Recreational Growth

During World War II the military discovered the desert. Its vast expanse of cheap, unoccupied, dry land and its clear sky were ideal for all kinds of land and sky maneuvers to test new planes, guided missiles, and rockets. War games could be staged in almost complete privacy. Varied geographic conditions also made it possible to train troops for desert fighting, mountain climbing, or survival in snow and cold. Additional assets included inexpensive open-air storage of battle paraphernalia and quick delivery of supplies to and from the coast via either rail or plane. Edwards Air Force Base, Fort Irwin, the Naval Ordnance Test Station, and the future Marine Corps Training Center all came into being with great rapidity. The last-mentioned installation was first operated by the U.S. Army for training glider pilots in World War II. It was acquired by the Marines in the mid-1950s. The California aircraft industry, which after the war needed to move some of its operations out of the congested metropolitan areas, also found the desert an ideal spot for relocation.

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10. Jaeger, California Deserts, p. 191.

Although wartime restrictions on building supplies had prevented many homesteaders from building weekend cabins or homes in the desert, after the war the availability of building materials and of gas for traveling revitalized the growth process. Veterans afflicted with respiratory ailments in search of a healthful atmosphere became a major part of the population. Also after the war a reawakening of interest in the desert for recreational purposes--sightseeing, rockhounding, and dude ranching--stimulated a new pattern of land use. Better transportation facilities and improved highways, the availability of air conditioning, combined with more affluence and leisure time, spurred migration to the desert after World War II. All this activity resulted in a remarkable rate of population growth and a rise in commercial and industrial enterprises to support the growing military and related aircraft industrial installations and recreational development. This last boom in desert growth took place on the "High Desert" (above 2,000 feet elevation) and stretched from the military and industrial complexes near Lancaster and Palmdale east through Hesperia and the Apple and Lucerne valleys into the Morongo Valley and the Twentynine Palms area. While the recreational developments farther south around Palm Springs and Desert Hot Springs were mostly seasonal, in the Morongo and Yucca valleys and over toward Twentynine Palms, people settled in for permanent living.

### C. Indian Populations

#### 1. Mojave Desert

The hot, dry, often intimidating Mojave Desert of today has not always been so. The evidence of man's early and continuing presence in the area--in Pinto Basin in Joshua Tree National Monument, for example--would seem to indicate that the Mojave was once an attractive home for primitive people whose seasonal migrations from the hot basin floors enabled them to survive an often harsh and unproductive environment. In early historic times, during the Spanish period, sparse populations of three major Indian groups inhabited this desert: The Serranos and Chemehuevis of the Uto-Aztec language family, and the Mohave, a Hokan people. Only the first two are closely associated with the Twentynine Palms area, their territories overlapping at the Oasis of

Mara. Although that lush spot was primarily in Serrano territory, a group of Chemehuevis seeking asylum after a war with the Mohaves ended up there in the 1880s.

a) Serranos

The Serranos were named from a Spanish term meaning "mountaineer" or "highlander." The name was originally bestowed by the Spanish on all Indians living in the highlands that were not named for a mission or known under their own name. It later referred only to that group of nomadic people that originally occupied the territory in the San Bernardino Mountains east of Cajon Pass and on the high desert stretching from Victorville eastward to Twentynine Palms and south to the Yucaipa Valley and possibly over to Cottonwood Spring in the monument.

Primarily hunters and gatherers, the Serranos lived in small villages whose location was determined by the availability and accessibility of water. It is not known precisely when contact with Europeans occurred, but it may have been at least as early as 1772 when Pedro Fages entered the area. Between 1819 and 1834 most of the western Serranos were forced to the missions. Only in the region northeast of San Gorgonio Pass did any semblance of Serrano native cultural patterns survive.<sup>11</sup>

b) Chemehuevis

This tribe was first mentioned by the priest Father Garces who describes in some detail his 1776 entrada from the Colorado River to San Gabriel and his experiences with the Chemehuevis in southeastern San Bernardino County.

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11. Lowell John Bean and Charles R. Smith, "Serrano," in Heizer, Handbook of North American Indians, Vol. 8, pp. 570-71, 573; Francis J. Johnston, The Serrano Indians of Southern California, Malki Museum Brochure No. 2 (Banning, Ca.: Malki Museum Press, 1973), p. 1.

The Chemehuevis were closely related, if not identical, to the Southern Paiutes, but the name is used by anthropologists to distinguish the Southern Paiute of the high desert of California from their brethren in Nevada, Arizona, and Utah, and thus is used basically in a geographical rather than an ethnic sense. Aboriginally the territory covered by their small itinerant groups stretched from south of Death Valley through the Providence Mountains to roughly the present southern San Bernardino County line, thereby covering the eastern half of the Mojave Desert. Some sort of division line apparently existed in the southern Mojave Desert between the Chemehuevis and the Serrano groups to the west. Part of the Chemehuevi territory also lay west of the lower Colorado River. Sometime after 1776 the Chemehuevis began to settle near the Mohave and Yuma Indians on the Colorado River, at Cottonwood Island, Chemehuevi Valley, and elsewhere on both the east and west sides of the river. About 1867 the Chemehuevis and Mohaves fought, with the former heavily outnumbered. They were forced to flee into the desert toward Twentynine Palms. Although some returned, a small group remained at the oasis.<sup>12</sup> A small tribe, the Chemehuevis were also migratory hunter-gatherers.

## 2. Colorado Desert

### a) Cahuillas

The Colorado Desert also required special techniques on the part of aboriginal peoples to combat the seasonal extremes of heat and lack of rainfall and the scarcity of foodstuffs. The desert Cahuillas, also of Uto-Aztecan stock, resided in south-central California. A nonagricultural food-gathering people, they occupied a wide area including the inland basin between the San Bernardino Mountains and the range extending southward from Mount San Jacinto, with some expansion

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12. A.L. Kroeber, Handbook of the Indians of California (New York: Dover Publications, Inc., 1976), pp. 593-95. Republication of work originally published by GPO in 1925 as Bulletin 78 of the Bureau of American Ethnology of the Smithsonian Institution.

westward toward Riverside and south from there along the headwaters of the coast drainage. They also occupied the area around the north end of the Salton Sea, extending south as far as Borrego Springs and the Chocolate Mountains. A migratory lifestyle enabled survival when water and food availability were uncertain or insufficient. The Cahuillas interacted regularly with other nearby people by means of the major trade route, the Cocomaricopa Trail, that bisected their territory. They interacted most closely with the Serranos, and in later years some of the Chemehuevis began drifting across the San Bernardino Range into Cahuilla territory.<sup>13</sup>

### 3. Indians In Joshua Tree National Monument

It is thought that all three of these Indian groups periodically passed through the lands now composing Joshua Tree National Monument. Ethnologists are quick to point out that tribal boundaries are often uncertain, and such would certainly be the case in sparsely settled, vast desert areas. The extent of Chemehuevi use of the monument is not known with any certainty, though they might have wandered through Pinto Basin, the Pinto Mountains, and the Coxcombs in the eastern section of the monument. The Cahuilla may have worked over the west slope of the Little San Bernardino Mountains into the monument during their migratory wanderings for food and water. No ethnographic records of permanent occupation of the area by these groups exist. The Serranos, however, had occupied the village of "Marah" at Twentynine Palms much earlier than their documented presence there. They could easily have drifted down into the present north and western monument areas periodically.<sup>14</sup> Sites found within the monument were used for food collecting, food processing, hunting, and possibly religious activities.

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13. Lantis et al., Land of Contrast, p. 59; Lowell John Bean, "Cahuilla," in Heizer, Handbook of North American Indians, Vol. 8, pp. 575-76; Kroeber, Indians of California, pp. 693-94.

14. United States, Department of the Interior, National Park Service, Thomas F. King, Fifty Years of Archeology in the California Desert: An Archeological Overview of Joshua Tree National Monument (Tucson, Az.: National Park Service, Western Archeological Center, 1975), pp. 21, 23-24.

D. Beginnings of Twentynine Palms

1. Early Indian Occupation of the Oasis of Mara

The oasis at Twentynine Palms was variously referred to by the Indians as Maru, Mar-rah, Marah, or Mara. A.P. Green, on his survey trip to the oasis in 1856, noted the fine large palm trees in Section 33 from which the springs took their name of "Palm Springs." This makes it unclear whether he named the site or whether the appellation was already in use. This name persisted into the 1880s, although "29th Palms," "Twenty nine Palm(s) Springs," "Twenty nine Palms," and "29 Palm Spring" were frequently used when recording mining or homestead claims in the 1870s. The California fan palm reaches its northernmost natural limit at this oasis. There were originally twenty-nine of these very tall fan palms of the variety known as W. filifera var. robusta. This is thought to have been in prehistoric times a fertile, lush area, rich in vegetation and animal life.

The oasis at Twentynine Palms was first inhabited by clans of the Serrano Indians, who had probably lived here for centuries before white penetration. A good trading spot--the hub of several Indian trails--the small oasis was often visited by the neighboring Mohave, Paiutes, Chemehuevis, and Cahuilla. The presence of fine springs, large palm trees, and mesquite, cane, and greasewood was an added incentive. Apparently the resident Serrano had visited an asistencia--probably the one built by the Spanish near Redlands in 1819--and learned some simple agricultural techniques, for they appeared to be cultivating the land around the oasis when first visited by whites. Colonel Henry Washington, on his Land Office survey in the summer of 1855, did not elaborate on the appearance of the oasis, merely noting that "from this corner an Indian Wigwam (near a spring of good water, supposed to be permanent) bears N 51°W, and a small cluster of Cabbage Palmettos bears N 27°W."<sup>15</sup> Washington did, however, note on his survey map a road

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15. Ronald Dean Miller, Mara: The Desert Oasis of Twenty-Nine Palms, Brand Book No. 15 (Los Angeles: Los Angeles Corral, The Westerners, 1978), p. 41.

leading east from the oasis, which he labeled "Old Road to the Providence Mountains." This might have been an early trail used by tribes trading back and forth between the Colorado River and the coast. (It might have been portions of this road that were later used by Pauline Weaver.)

A year later Deputy Surveyor Green reached the oasis while running interior lines for Washington's corners. He left a much more detailed description of the area:

In Section Thirty-three there are a number of fine springs. There are some large palm trees from which the springs take their name. . . . Near the springs the land has the appearance of having been cultivated by the Indians. There are Indian huts in Section Thirty-three. The Indians use the leaf of the palm trees for making baskets, hats, etc. Around the springs there is a growth of cane of which the Indians make arrows for their bows. There is some mesquite and a considerable quantity of greasewood bush in this township. The mesquite . . . is said by the Indians to be always a good indication of water, which generally can be obtained in a pure state by digging a short distance, say four to twelve feet.<sup>16</sup>

The Indians used the palm fronds for houses, the seed for food, and its fibers for clothing and moccasins.

The Serranos seem to have had sole interest in the oasis until 1867 after a war along the Colorado River between the Chemehuevis and Mohaves. As the former were beaten back, they were forced into remoter desert areas and a small group of them moved as far south as the oasis. Whether this was their first visit there or not is unknown. Here the Shivawach band found a deserted refuge, for the Serranos had left

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16. Ibid.

the area during a smallpox epidemic. Accepted by the returning Serranos, a group later known as the Twentynine Palms band of Chemehuevis decided to settle at the oasis permanently when most of their tribesmen later returned to the Colorado. Water at the oasis made it possible to farm and the area abounded in food plants and game. These Indians later attained dominance so that by the 1900s all the Serrano family names were thought of as Chemehuevi. These people, because they were more clearly influenced by tribes in this area--the Cahuillas and Serranos--became culturally different from their tribesmen who were influenced by the Mohave. They lived a migratory lifestyle, spending only one-third of the year at the oasis and the rest of the time near Bear Valley in the piñon season and at Banning and Indio during fruit harvests.<sup>17</sup> A desert visitor at the oasis in the early 1900s recalled that during his trip

. . . we stop for a short time at Captain Jim's kan and chat with the old Indian and his squaw. Here they live a solitary life, contented and happy, for their needs are well provided for by the little garden, the cattle he owns and the natural gifts of the desert, such as the fruit of the prickly pear, pinion nuts, chia seeds, and the like. He was born here and has seen his native place occupied in turn by white men and Mexicans.<sup>18</sup>

## 2. Establishment of an Indian Reservation

As early as 1856 a tract of 161 acres was set aside for the Serrano Indians. Soon thereafter had ensued considerable controversy with the Southern Pacific Railroad over which section had actually been

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17. Ronald Dean Miller and Peggy Jeanne Miller, The Chemehuevi Indians of Southern California, Malki Museum Brochure No. 3 (Banning, Ca.: Malki Museum Press, 1967), p. 4.

18. George Wharton James, The Wonders of the Colorado Desert (Southern California), 2 vols. (Boston: Little, Brown, and Company, 1907), II:480.



reserved and who owned the oasis. The land had never, therefore, officially passed into Indian hands, though Serranos were settled on it, pursuing small farming activities, their numbers slowly decreasing through accidents, disease, and old age. Beginning in the 1860s the Chemehuevis, due to their war with the Mohaves and to their gradual displacement by white settlement farther north, began coming to the oasis. Though undergoing acculturation, they still retained many of their old customs. Their stock slowly attained dominance in the village.<sup>19</sup> In 1825 and again in 1862, smallpox hit the Morongo Basin, forcing the Indian residents of the oasis to flee until the scourge passed.<sup>20</sup>

This tract of land was also set aside for a reservation by an Executive Order of December 27, 1875, but for a long time thereafter evidently was still regarded as a holding of the Southern Pacific Railroad Company. During the administration of Ulysses S. Grant, the Department of Indian Affairs was reorganized and in December 1875 Grant began ordering the establishment by executive order of several small Indian reservations throughout southern California. The Mission Agency in San Bernardino was established in 1877, and one of the areas placed under its control was the Twentynine Palms Reservation. According to an early white settler in the area, about forty Chemehuevis lived at the oasis in 1888, though whether all were residents or some visitors is conjectural. Friendly neighbors at that time, they subsisted on mountain sheep, rabbits, mesquite beans, and seeds. On their game hunting trips they reportedly also found several mineral deposits in the area.<sup>21</sup>

This tract was one of several parcels of generally poor land that were set aside for the use of remnant Indian bands under the

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19. Johnston, Serrano Indians, pp. 2-3.

20. Clark and Couzens, "Yucca Valley," p. 6.

21. Statements made by William H. ("Bill") McHaney in March 1933 about the Twentynine Palms region to W.E. Ketcham and W. Egbert Schenk. Transcribed in March 1952. Denver Service Center history files, p. 1.

authority of the Mission Relief Act of 1891. Under this act the Secretary of the Interior appointed three commissioners to settle the Mission Indians of California on reservations. As far as practicable they were to select reservations for each band that included the villages or lands they already occupied.<sup>22</sup> This action came so late, however, that little land of any real value remained in the public domain to be given to the Indians. The Mission Indian commissioners--Albert K. Smiley, Joseph B. Moore, and Prof. Charles C. Painter--the "Smiley Commission," found that the condition of the southern California Indians was indeed unfortunate. Whites had encroached on many Indian lands and the Southern Pacific also claimed certain sections. The commission's final report was approved on December 29, 1891, and the Twentynine Palms Reservation was established by Executive Order of that same date. The Smiley Commission recommended that this reservation consist of the following lands:

The South-west quarter of Section thirty-three (33) in Township one (1) North, Range Nine (9) East, S.B.M.; and also the North-west quarter of Section four (4) in Township one (1) South, Range nine (9) East, S.B.M. There are three families here having three houses and some cultivated fields: the head man is Chimehueva [sic] Mike. They have plenty of water and can be very comfortable here. There is sufficient tillable land for their needs; the balance of the land in the proposed reservation is valuable grazing land. The Indians were in possession of these lands as shown by the field notes as long ago as in 1852.<sup>23</sup>

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22. Jan. 12, 1891, 26 Stat., p. 712 - Chap. 65, An Act for the relief of the Mission Indians in the State of California, in United States, Department of the Interior, Bureau of Indian Affairs, Sixtieth Annual Report of the Commissioner of Indian Affairs to the Secretary of the Interior, 1891 (Washington: Government Printing Office, 1891), p. 612.

23. Smiley Commission Report and Executive Order of Dec. 29, 1891, in Bureau of Indian Affairs files, Sacramento Area Office, p. 5.

In this same year Mike Boniface, the tribal leader, filed claim to the oasis water.<sup>24</sup> The twenty-five-year trust patent of November 11, 1895, was issued to the Twenty-nine Palms Band of Mission Indians for only the northwest quarter of Section 4, T1S, R9E, SBM, containing 160.21 acres, more or less.<sup>25</sup> The Indians living there were referred to as the Chemehuevi Indian Band and as the Twenty-nine Palms Band. The earliest census of the group is dated August 1894 and contains thirteen names. A report describes the reservation as containing "very few people. They have reasonably good houses, and are quiet, law-abiding people; their lands are all that they require." This same report mentions two dwellings and states the residents were of the Cahuilla tribe.<sup>26</sup> A report of 1899 lists twenty-seven residents of the "Piute" tribe in six dwellings.<sup>27</sup> During the turn of the century these Indian residents were hunting, collecting food, and perhaps prospecting in the general area of the monument, but how deep or often their penetration of its lands is unknown. Another early settler recalled that the Serranos frequently visited Cottonwood Spring to trade game for flour, coffee, and other staples during the 1880s to 1890s. Bill McHaney stated that the Serranos at the oasis told him about the spring at Pinyon Well sometime prior to 1881, so they apparently had visited that area also.<sup>28</sup>

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24. Miller, Mara: The Desert Oasis of Twenty-Nine Palms, p. 43.

25. Area Director, BIA, to Regional Solicitor, Sacramento Region, June 2, 1966, BIA files, Sacramento Area Office.

26. "Report of Mission-Tule River Consolidated Agency," August 31, 1894, in Annual Report of the Commissioner of Indian Affairs, 1894 (Washington: GPO, 1895), pp. 119, 123.

27. "Report of Mission-Tule Agent, August 21, 1899," in United States, Department of the Interior, Bureau of Indian Affairs, Annual Reports of the Department of the Interior for the Fiscal Year Ended June 30, 1899 - Report of the Commissioner of Indian Affairs. Part I. (Washington: GPO, 1899), p. 175.

28. Parker, One Hundred Years of History in the California Desert, pp. 31, 34; McHaney interview, March 1933, p. 1.

Due to an error in surveying the land for the Indians, a wrong description had been furnished, the land set aside for them--the southwest quarter of Section 33--being worthless and not actually occupied by the Indians. They lived instead on the northwest quarter of Section 33, which was later patented to the Southern Pacific Railroad Company. To adjust the situation, in 1908 eight sections of land in T2N, R8E, SBM, were withdrawn from entry and settlement, with the intention of patenting them to the Twenty-nine Palms Band. However, the order was revoked in 1911, following an investigation to determine Indian use and occupancy. This study revealed that the few Indians living on the tracts at the time of withdrawal had moved to lands adjacent to the Cabazon Reservation where there was sufficient land and water. In 1908 the Washington office had authorized the transfer of fifteen Chemehuevis from the Twenty-nine Palms Reservation to Section 30, T5S, R8E, SBM. On June 6, 1910, Section 30 was jointly patented in the name of the Cabazon and Twentynine Palms bands. From this time on, census rolls in the Mission Agency files indicate that no separate roll was made of the Twentynine Palms Indians. All who had moved to Cabazon, at least, were included on their rolls.<sup>29</sup>

From 1908 to 1910 Clara D. True, headquartered at the Morongo Indian Reservation in Banning, was in charge of the Morongo and several other small reservations in Riverside and San Bernardino counties--among them that at Twentynine Palms. The first Indian Service employee to visit the reservation, she quickly found it to be improperly surveyed. The railroad company was claiming the land on which the water was located and the Indians claimed the water and would not relinquish the land. She tried during her tenure to establish the proper legal boundaries. True kept the first official records of the Indians at the oasis, and her letters are a wealth of information. Unfortunately many of her official reports were loaned by National Archives to the

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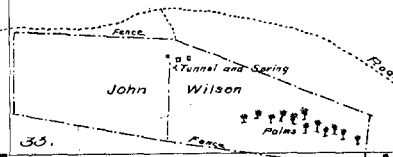
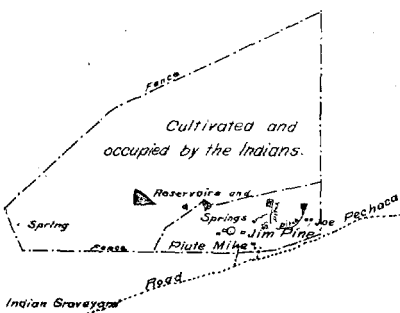
29. James E. Offcia [?], Assoc. Comm., BIA, to Leonard M. Hill, Area Dir., Sacramento, Ca., July 7, 1966, BIA files, Sacramento Area Office, pp. 1-2.

Illustration 1.

Twenty Nine Palms Indian Reservation, Showing Buildings, Cultivated Fields, Springs, and Adjacent Property Belonging to the Whites. October 10, 1908. D. D. Graham, Special Allotting Agent. Map No. 5073, Tube No. 612, Record Group 75 (BIA), Courtesy National Archives, Washington, D.C.

29 28  
32 33

28 27  
33 34



TWENTY NINE

S.W. 1/4 Sec. 33.

PALMS

32 33  
5 4

Base Line

33 34  
4 3

INDIAN RESERVATION

N.W. 1/4 Sec. 4.

Rough Mountains

### TWENTY NINE PALMS INDIAN RESERVATION

Showing  
 BUILDINGS, CULTIVATED FIELDS, SPRINGS,  
 AND  
 ADJACENT PROPERTY  
 Belonging to the Whites

Twenty Nine Palms, California.

Scale 1 in. = 500 ft.

October 10, 1908.

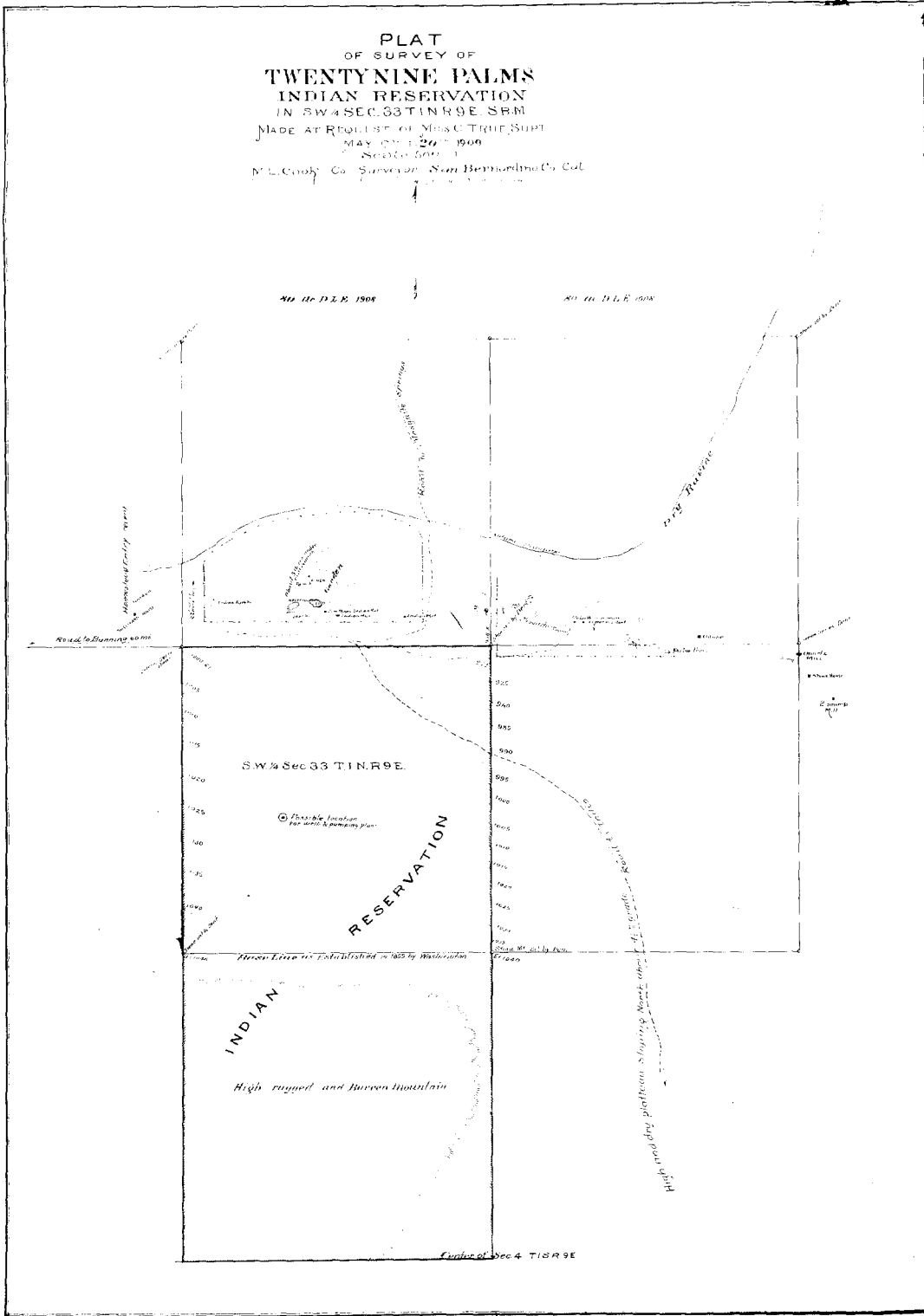
D. D. Graham.  
 Special Allotting Agent.

Sec. 4.  
 T. 1 S. R. 9 E.

Illustration 2.

Plat of Survey of Twentynine Palms Indian Reservation in S.W. 1/4 Sec. 33 T.1N. R.9E. S.B.M. Made at Request of Miss C. True, Supt. May 17th to 20th 1909. M.L. Cook, Co. Surveyor, San Bernardino Co., Cal. Map No. 6558, Tube No. 686, Record Group 75 (BIA), Courtesy National Archives.

PLAT  
OF SURVEY OF  
TWENTYNINE PALMS  
INDIAN RESERVATION  
IN SW 4 SEC. 33 T. 1 N. R. 9 E. S. 8 M.  
MADE AT REQUEST OF MISS C. TRICE SUPT.  
MAY 20<sup>th</sup> 1900  
SECTION 33  
M. L. Cook, Co. Surveyor, San Bernardino Co. Cal.





Bureau of Indian Affairs many years ago and their whereabouts are unknown.

The days of the Serranos and Chemehuevis at the oasis were numbered. After centuries of occupation of the area, they fell victim through the years to decimation through disease, old age, and white encroachment. Their final withdrawal from the oasis was hastened by an event in 1909 that captured headlines across the country. In the fall of that year Captain Mike Boniface led the Twentynine Palms Band to the Gilman Ranch near Banning to harvest fruit. Also at the ranch was a Paiute cowboy named Willie Boy, who several months previously had been rejected in his attentions toward Mike's daughter Isoleta. Ordered by her father to stay away from the girl, Willie Boy nurtured an intense hatred for the old man. One evening during the harvest Willie Boy, having imbibed a large amount of whiskey, decided to kidnap the girl. Creeping up on the Boniface family as they slept together under a tree, Willie Boy shot the father and fled into the desert with Isoleta. Newspapers had a field day, with rumors of a general Indian uprising finding prominent coverage. The life of President William Howard Taft, who was then touring California, was rumored to be threatened. An almost 600-mile chase involving a mounted state posse following an Indian youth on foot ended many days later with Willie first murdering the girl and then taking his own life. The chase had ranged from Banning through the Morongo Valley up north to the Bullion Mountains, back down to Twentynine Palms, northwest to Mesquite and Surprise springs, and finally ended at Saddlerock Spring in the Ruby Mountains.

Clara True was ultimately forced to resign as superintendent of the Banning Agency. Apparently businessmen had long been angered by her defense of Indian land claims, and the negative publicity of the Willie Boy episode provided Indian Bureau officials with an excuse to get rid of her. Old Mike was buried in the oasis tribal cemetery. Disheartened by this episode and believing the oasis to be inhabited by evil spirits, most of the remaining Indians left after burning their huts. Some went to Morongo near Banning, others to Torres-Martinez near the Salton Sea, and some to Mission Creek, west of

the monument. Only Jim and Matilda Pine, who refused to leave the graves of their children, and a few others stayed behind. Pine assumed ceremonial leadership of the remaining Indians and tried to oust the whites who were already settling nearby. True's successor did not continue her efforts to keep the reservation under Bureau control. The Southern Pacific Railroad took over the oasis, but worked out an arrangement by which the Pines could continue to live there. By warranty deed of July 31, 1911, title to the reservation was revested to the United States from the Southern Pacific Railroad Co. This brought the total area of unallotted Indian land to 480 acres--including the southwest quarter of Section 33, the northwest quarter of Section 4, and a quarter section of land about six miles north of the oasis. The reservation as finally set aside comprised 161 acres of rocky, arid land, not including the oasis, plus the cemetery in the southwest quarter of the northwest quarter of Section 33, T1N, R9E.<sup>30</sup>

This cemetery has been designated the Twenty Nine Palms-Chemehuevi Indian Burial Grounds. Although there are few physical indications of burials, such as markers, mounds, or depressions, or any known records of burials here, supposedly the land has contained at least 50 to 60, perhaps as many as 111, Serrano and Chemehuevi Indian graves. As far as this writer knows, only four--those of Jim Boniface, two sons of Jim Pine, and Mrs. Waterman--have ever been identified. There were no burials in the cemetery in later years, and in 1967 the band voted to convey the cemetery to the Twenty-Nine Palms Park and Recreation District, which had been improving the site.<sup>31</sup>

Jim and Matilda Pine finally moved to Mission Creek in 1910 or 1911, and later to Agua Caliente. For a while, despite the legal

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30. Miller, Mara: The Desert Oasis of Twenty-Nine Palms, pp. 48-49; Harry Lawton, Willie Boy (Balboa Island, Ca.: Paisano Press, 1960), p. 189.

31. Branch of Real Estate Appraisal, Hemet Appraisal Office, to Supt., So. Calif. Agency, Apr. 6, 1973, BIA files, Sacramento Area Office; letter of June 10, 1971, BIA files, Sacramento Area Office; Offcia [?] to Hill, July 7, 1966, BIA files, Sacramento Area Office.

boundaries of the reservation, Indians continued to occupy the oasis, where in 1912 at least five families were still cultivating the land, growing peach trees and vegetables, possibly in the area at the western end of the oasis referred to by the local whites as "Indian Meadows" or "Indian Gardens."<sup>32</sup> According to H.E. Delamare, who visited the area in 1912, about thirty Indians still lived under the palms:

Most of them are very old and have been at some time renegades or outlaws who have left the Indian reservations and never returned to them. They are nearly all Apaches or Paiutes, cultivating an acre or two of moist soil, but their chief food is the mesquite bean.<sup>33</sup>

Delamare also states that only fifteen palms remained at the oasis. The only water available was acquired from small springs whose seepage was stored in basins. The remaining Indians finally began migrating into the Coachella Valley. The census for 1913 reported only one couple still living at Twentynine Palms.<sup>34</sup> This last family left soon after. Ultimately the Indians' water rights were revoked for nonresidence and the reservation today is deserted. Many of the Twentynine Palms Indians were consistently recognized as members of the Cabazon Band and their names were carried on official Cabazon census records through 1940. They intermarried, participated in tribal affairs, and shared in tribal assets and resources. In 1963 only seven adults and three children constituted the Twentynine Palms Band. Most of them lived in the Indio-Palm Springs area.<sup>35</sup>

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32. Miller, Mara: The Desert Oasis of Twenty-Nine Palms, p. 49; Parker, One Hundred Years of History in the California Desert, p. 35. (This spot was in the northwest quarter of Section 33) O'Neal, p. 145.

33. H.E. Delamare, "The Desert Lands of California," Travel (October 1912), p. 35.

34. "Indian population of the United States . . . June 30, 1913 (by tribes)," in United States, Department of the Interior, Bureau of Indian Affairs, Report of the Commissioner of Indian Affairs to the Secretary of the Interior for the Fiscal Year Ended June 30, 1913 (Washington: GPO, 1914), Table 3, pp. 48-49.

35. Offcia [?] to Hill, July 7, 1966, p. 4, BIA files, Sacramento Area Office.

### 3. Whites Find the Oasis

Although a "Jeff Davis" mining claim was recorded in the monument as early as 1865, white habitation of the oasis did not really begin until the 1870s when prospectors became seriously interested in the mineral possibilities of the region. On March 17, 1873, J. Voshay filed a homestead claim there, and a year later a Mr. Hoff claimed another 160 acres "in a square piece of land bounded on the west by the east line of 160 acres claimed by Joseph Voshay or the Blue Jay Co."<sup>36</sup> The presence of water and shade made the oasis a "jumping-off" place into the desert--the natural focal point for activity in the area--and soon it was serving as a base camp for the Palms Mining District, which experienced a short flurry of activity for the next few years. In 1879 the cattleman William (Bill) McHaney arrived at The Palms (Twentynine Palms), to become the first permanent white settler in the region. In his early years there he learned the location of water, trails, and mines from the Indians. He stayed in the area off and on until about 1933.<sup>37</sup>

Increased mining activity during the 1880s at the camps of Gold Park and Dale brought in more miners and teamsters. In 1886 a mud and stone assay office was built east of The Palms, but the first permanent house, of adobe, was not built until 1890 (possibly as early as 1888) by a Mr. Aldridge (sometimes spelled Baldrige) of Santa Ana. It

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36. Miller, Mara: The Desert Oasis of Twenty-Nine Palms, p. 42.

37. William McHaney was born near Gallatin, Missouri, on March 25, 1859. He was involved in the cattle business when he arrived at Twentynine Palms in 1879. He lived in or near the monument for the next fifty-eight years, supporting himself mainly by prospecting. He divided his time between a camp at Music Valley near Gold Park and the oasis. McHaney became very close to the Keys family, who watched over him as he became older. In 1933 Keys installed him on a homestead near Barker Dam. When he became seriously ill, he was taken to the Keys Ranch where he died on January 5, 1937. He was buried in the Twentynine Palms cemetery. McHaney discovered several of the earliest mines in the area and was a wealth of information on the early history of the monument and its inhabitants.

stood until 1947 when its condition became so hazardous it had to be removed. Because it was the only building in the area for many years, the Old Adobe was occupied for short periods by a great number of people. Aldridge spent time here for health reasons, but the structure also served as a home for itinerant miners, as a base of operations for cattlemen, as a temporary shelter for homesteaders, and around 1898 as a horse-changing station for the stage running from Garnet to Dale. Over many years freighters stopped at the oasis on their way from Amboy, Banning, Garnet, and Indio over roads that converged at or near the Oasis. The Old Adobe was used as a supply store and station for these wagons. As late as 1928 the structure housed the office of the Pinto Basin subdividers. Another adobe was built in 1890 about 150 feet west of Aldridge's by another Santa Ana resident, Mr. Parks. It disappeared at an early date.<sup>38</sup>

Another early resident was Jonathan W. Wilson (often referred to as "Dirty Shirt Wilson" or "Hard-rock Wilson"). He came to the oasis in January 1883 and lived in the area until 1914. By 1884 he had an adobe and dugout under the eastern palms, in an area known as Wilson Cove (present headquarters area of the monument). In 1886 he located the North Star Mine in Gold Park, and was involved in working several other properties.<sup>39</sup> In 1905 he built an arrastra at the oasis to mill ore from nearby mines.

In 1896 Billy Neaves, who had helped build the Old Adobe, aided by John Thurston, built a rock house for use as a mining and assay office near Wilson Cove, which became the first school in the area about 1922-23. In 1897 John Lang ran a saloon near Wilson's house. At

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38. File on Proposed Interpretive exhibits at Visitor Center: Old Adobe, in Federal Archives and Records Center, Laguna Niguel, California.

39. McHaney interview, March 1933, p. 2. Wilson's 1884 adobe and dugout might have some relation to the assay office mentioned in Miller, Mara: The Desert Oasis of Twenty-Nine Palms, p. 43.

Sneakeye Spring at the west end of Indian Cove was a still run by a John Stull.<sup>40</sup> In 1897 miner Phil Sullivan and his family homesteaded a quarter section just west of the oasis on which they built an adobe house. Mrs. Sullivan, as far as is known, was the first white woman to live at the oasis. In 1910 Sullivan and McHaney built an arrastra in the area to work ore from Sullivan's Contact Mine.<sup>41</sup>

By the early 1900s cattlemen were coming into the area. J.C. Laurence, who worked for the Shay outfit, used the Aldridge adobe as headquarters. From there he ranged his cattle around Stubbe, Quail, Mesquite, and Coyote Hole springs.<sup>42</sup> Another cattleman who came at this time was Bill Keys, who was hired as a cowboy at Surprise Spring in 1910.<sup>43</sup>

George Wharton James visited the oasis in 1906, reporting that

a number of the palms have been cut down, but the old name still remains. . . . Twenty-Nine Palms is the home of "Charley" Wilson. . . . Mr. Wilson takes us out to show us an old Mexican arrastra, a primitive ore-crushing machine and mineral-separating mill. Only a part of it remains. . . .<sup>44</sup>

J. Smeaton Chase visited Twentynine Palms over the Fourth of July. There he found only two persons--a miner and a tuberculosis sufferer--and the remains of shacks and dugouts. One structure had

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40. McHaney interview, March 1933, p. 2.

41. Ibid.

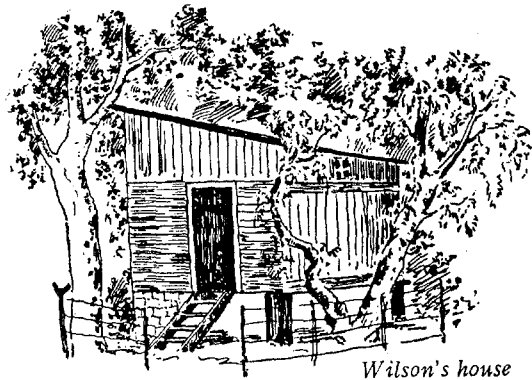
42. Miller, Mara: The Desert Oasis of Twenty-Nine Palms, p. 44.

43. Helen Bagley, Sand in My Shoe (Twentynine Palms, Ca.: Calico Press, 1978), p. 217.

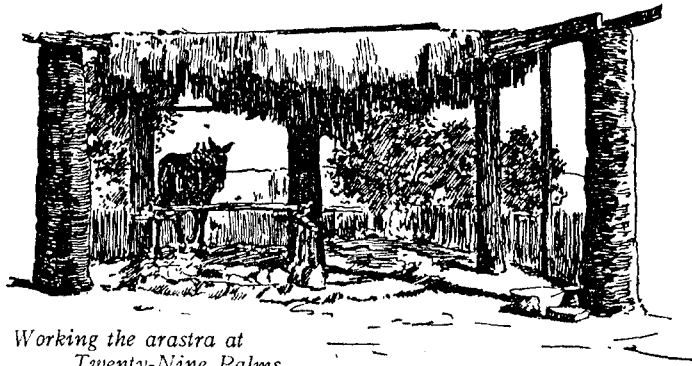
44. James, Wonders of the Colorado Desert, II:480.

Illustration 3.

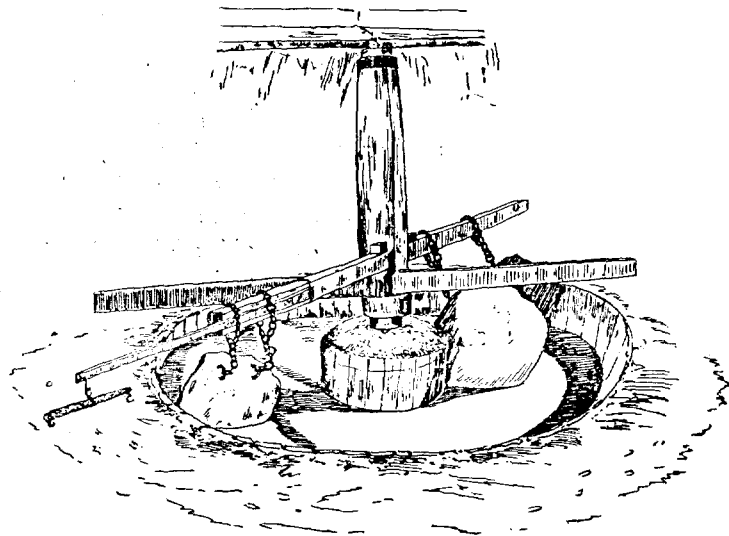
Early scenes at Twentynine Palms. Top: Jonathan W. Wilson's house;  
Middle: working the arrastra; Bottom: old arrastra at the oasis. From  
James, Wonders of the Colorado Desert, II:481, 486.



*Wilson's house*



*Working the arastra at  
Twenty-Nine Palms*



*Old arastra at Twenty-Nine Palms*



been the home of Wilson, who Chase states was forcibly removed by the county authorities. Also visible was the hut of Jim Pine who a few years earlier had been one of the last of the Twentynine Palms Band of Indians to leave. There was still activity at the oasis, however, for Chase stated it was a prospecting base and a water stop on the freight road to Dale.<sup>45</sup> Usually the population of Twentynine Palms was small, with short-lived increases during periods of mining activity in the adjacent desert.

The modern growth of Twentynine Palms did not begin until about 1922, when Dr. James B. Luckie, a Pasadena physician, after scouring the desert country for a favorable climate, began recommending this spot to World War I veterans who had been the victims of poison gas and who had later developed respiratory ailments. Its high elevation of 2,100 feet plus its dryness and lack of fog appealed to the Pasadena American Legion, which erected a campground with facilities for twenty-eight members. When the health of these ex-servicemen began to improve almost miraculously, the federal government allowed veterans, most of them subsisting on disability compensation, to homestead there. An American Legion Post was established in 1929 and functioned as the unofficial Welfare Department, Chamber of Commerce, and community improvement association. It maintained cabins, medical supplies, and other facilities to help incoming homesteaders. In fact, members of the American Legion constituted the bulk of the founders of the present community and played a large part in its development. The health advantages of the area in the treatment of arthritis, rheumatism, tuberculosis, and asthma attracted a multitude of people, many living on small retirement payments or pensions. The period from 1920 to 1941, between the two world wars and dominated by the Great Depression of the 1930s, was a time of great adjustment for many people in the United States. In then-remote desert regions, existence during this time

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45. J. Smeaton Chase, California Desert Trails (Boston: Houghton Mifflin Company, 1919), p. 152.

was a throwback to an earlier period.<sup>46</sup> "Roads" were wagon tracks--two ruts with an appallingly high hump between; mail took at least ten days, often longer, to reach the addressee; the area was a den for bootleggers during Prohibition; at other times cowmen, miners, prospectors, and caravans of Indians passed through.<sup>47</sup> There was no refrigeration or electricity, phones were lacking, and adaptation and ingenuity were the only means of survival.

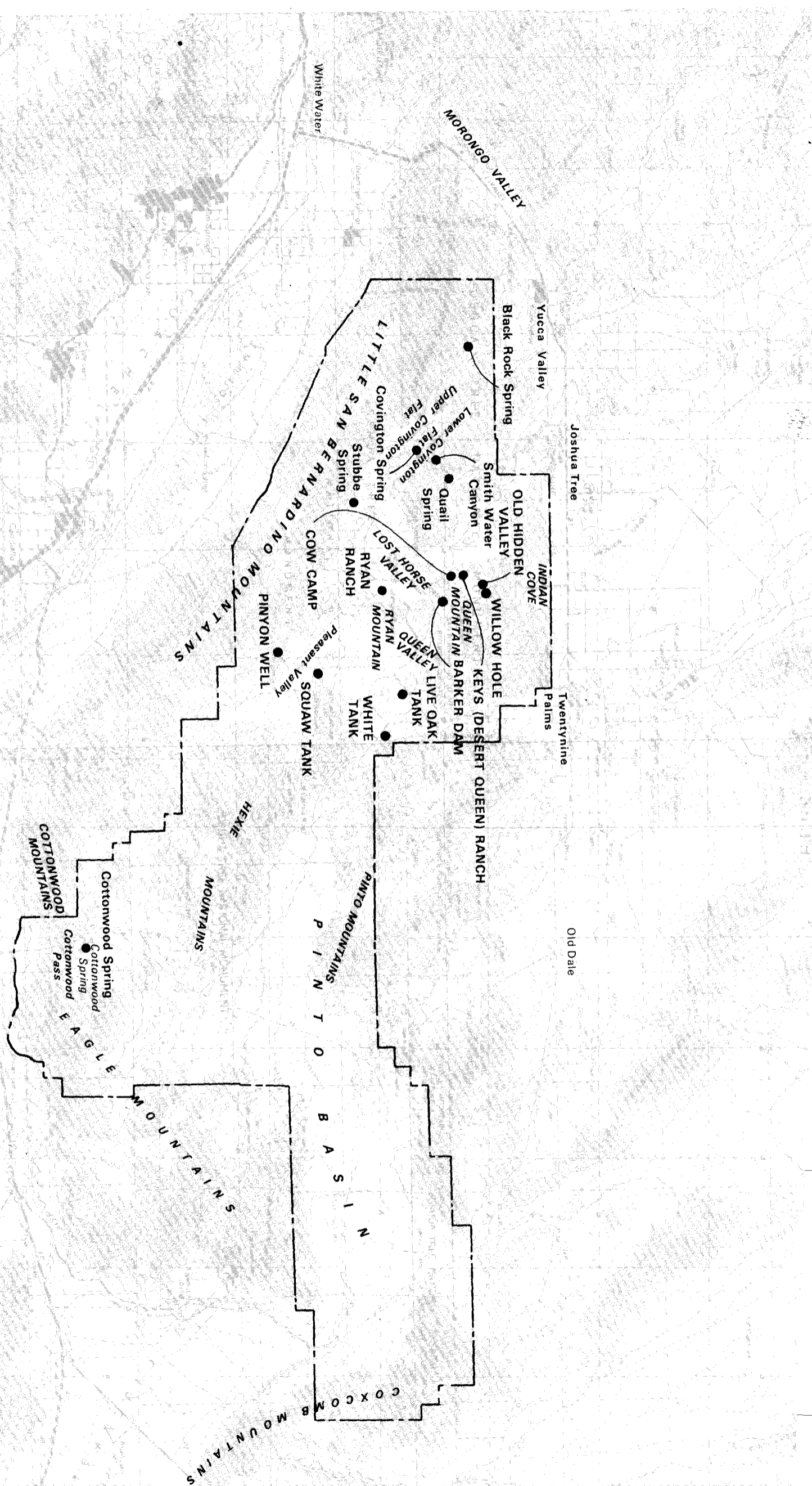
The even climate of Twentynine Palms ultimately led to its large-scale development as a weekend resort area and also to the establishment of many permanent homes. It also encouraged investment in recreational facilities and businesses. The construction nearby of the U.S. Marine Corps Training Center--the largest Marine base in the United States and the largest known training installation in the world--has encouraged an increase in the number of permanent residents and businesses. The only industrial development in the region has been connected with mining, primarily of iron ore deposits. Twentynine Palms, northernmost oasis in the United States, is also enhanced by being the main entranceway to Joshua Tree National Monument.

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46. Bagley, Sand in My Shoe, p. i.

47. Elizabeth W. Crozer Campbell, The Desert was Home (Los Angeles: Westernlore Press, 1961), pp. 23-27.





**ON MICROFILM**

**SITES ASSOCIATED WITH CATTLE RAISING**

JOSHUA TREE NATIONAL MONUMENT  
 CALIFORNIA  
 UNITED STATES DEPARTMENT OF THE INTERIOR  
 NATIONAL PARK SERVICE  
 DSC / SEPTEMBER 1983 / 186-25014

### III. Cattle Raising in Joshua Tree National Monument

#### A. Origins

##### 1. Rustlers

The first major group of Anglo-Americans to settle in the Mojave Desert region were farmers and stockmen rather than miners. The first attempts at stockraising took place on the Mojave in the early 1860s. Several ranches were located there and large numbers of animals grazed in the desert in the winter and fattened on the river bottoms in the summer. The lower desert areas became quite appealing for cattlemen when heavy rains brought forth vast quantities of grass covering the sand. The high desert became recognized for even more reliable grazing land. Here galletta grass and succulent saltbushes provided good browsing in the winter and spring and provided an alternative feeding ground when snow or drought hit the Big Bear or Whitewater country. According to Bill Keys the first stockman to graze his cattle in the monument was Oliver Smith, whose Texas longhorns grazed in the Quail Spring area from about 1870 to 1876.<sup>1</sup>

Beginning in the mid-1870s ranchers in the region discovered good spring grazing as well as winter feed for their sheep and cattle in Lost Horse, Queen, and Pleasant valleys. The higher monument elevations are thought to have then received more than ten inches of rain and snow per year, resulting in a tall, lush grass cover. Water could be found all year at several springs. According to Bill Keys, Bill McHaney started running longhorns in the area of Keys Ranch as early as 1879.<sup>2</sup> By the mid-1880s certain areas of the monument were being utilized by a group known as the "McHaney gang." The extent of Bill McHaney's participation in their illegal activities is unclear, but brother Bill seems

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1. "Historical notes, Joshua Tree National Monument, As told to Superintendent King by Bill Keys on November 9, 1954," Western Regional Office files, NPS, San Francisco, Ca., p. 1.

2. Ibid.

definitely to have been a leader of this local cattle rustling ring. Headquartered in a section of the monument appropriately referred to as Hidden Valley,

the operations of these gentry were simple and lucrative. From the ranges of southern Arizona [they] would gather choice cattle and drive them westward into California. Making their way by easy stages through the desert country from spring to spring, their destination was a monoclinal range that appears on the map as the Little San Bernardino Mountains, ascending on a gentle slope from Twentynine Palms Valley southward, and falling away in abrupt barrancas and badlands to the floor of Coachella Valley. Between the desert and the summit was a region where stolen cattle could be concealed, grazing in rock-bound valleys under the watchful eyes of other men whose business was that of directing them from time to time into channels of commerce. Upon their return trip to Arizona, the "rustlers" would drive back a band of horses, recruited in a like manner from the ranges of California, to be sold in the Arizona market.<sup>3</sup>

Hidden Valley, surrounded by perpendicular granite walls and rock piles carved by wind and water erosion into fantastic faces and animals, would have been an ideal place for holding cattle. Corrals could be built across box canyons, and entrances into the fifty-acre valley were hidden from casual view. The chances of being caught were negligible, for the nearest law enforcement officials were at Banning. According to Mr. Seeley, who worked as a cowboy for the Stocker and Shay cattle interests, the cowboys in those early days were held responsible for any

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3. Philip Johnston, "California's Garden of the Gods," Westways (April 1934), p. 13. According to Bill Keys the original Hidden Valley used by McHaney was in an area called "Seven-Mile Pasture," possibly north of present Keys Ranch. Keys stated that he used the present Hidden Valley to corral his horses. He also claimed to have dynamited the rear opening into the valley in 1921 so that he could run stock there. Keys interview, Dec. 9, 1966, in JTNM Fact File.

cattle that became lost. For that reason they kept an unbranded supply in Hidden Valley to use to replace cattle found missing from their herds.

A couple of routes were used by the cattle thieves to move their stock from the Colorado River into the monument. One trail went via Cibola, another went upriver from Blythe near the site of the old La Paz mining camp. One trail came into the monument at Cottonwood Spring, another followed the old Bradshaw Road west to Cahuilla Spring, skirted the Chocolate Mountains, and entered the monument via Berdoo Canyon, Pinyon Well, and Pleasant Valley.<sup>4</sup> The cattle brands were changed at a spot still referred to as "cow camp," in a valley between rocky hills near the Desert Queen Ranch. The site was chosen because of the presence of a natural pond fed by a spring. Wells were dug to provide water and at least two adobe cabins--a cookhouse and bunkhouse--and a barn were built in 1894. (According to Bill Keys's daughter-in-law, the present Keys ranchhouse was built in 1913 when the two adobe buildings were dismantled.)<sup>5</sup>

By the late 1800s use of the monument in stock rustling activities was on the decline. This might have been due to the formation of Riverside County in 1893 and the resulting presence of lawmen as close as Riverside, but its demise probably resulted mostly from pressures and encroachment by legitimate cattlemen in the area and by prospectors, more of whom were being drawn to the region by the discovery and operation of new mines.

## 2. Cattle Outfits North of the Monument

The Morongo Valley was the scene of legitimate cattle operations beginning about 1873, when the de Crevecoeur brothers began

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4. L. Burr Belden, "Cattle Thieves Cause Victim to Find Rich Mine," San Bernardino (Ca.) Sun-Telegram, Apr. 26, 1959.

5. Gwen Keys, "A Brief Sketch of the Life of Wm. 'Bill' Keys," Rockhounds Journal, September 1962, p. 12.

running cattle and sheep. They left the valley in the early 1880s and the de Crevecoeur ranch in Big Morongo Canyon was taken over by Mark Warren in 1884. He ran cattle through Yucca Valley, where in 1881 he had dug Warren's well. The corrals and fenced land around this watering spot were used by cattlemen as a roundup point for cattle drives from the monument area. During the fall roundup, herds were brought in from Barker Tank, Quail Spring, Black Rock, Coyote Hole, and other grazing areas and corralled at Warren's Well for branding. The three-year olds would be driven to the railroad at Victorville for market and the rest retained to replenish next year's herds.<sup>6</sup>

The Talmadge brothers--Will, John, and Frank--purchased Warren's Well in 1909 when the stage service from Garnet to Dale was discontinued and the site was no longer used as a stage stop. They used it as a holding corral for spring roundups. Three years later they bought out the Jim Smart outfit. While the Talmadges owned the well, the bunkhouse burned, and a larger log cabin was built to replace it. The brothers added reservoirs called "the Tanks" to water cattle and further improved the spring at the Tunnel, developed earlier by the Warrens. The Talmadge cattle grazed on the desert in the winter from Yucca Valley up through Mission Creek to Seven Palms (Garnet), five miles north of Agua Caliente, and wherever else the grass was green. The end of May the herd was taken to Big Bear Valley where there was plenty of grass and water for summer grazing.<sup>7</sup>

William V. (Bill) Covington was another cattleman, owning a homestead adjacent to the Warren Ranch and running stock on the open range. Before coming to the Morongo Valley he had been foreman for

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6. "Cattle Brands Part of Hi-Desert Lore," Roadrunner Magazine, June 1976, p. 10.

7. Clark and Couzens, "Yucca Valley," p. 9; Crotsenburg, M., "Picture Frame for Morongo Valley," Hi-Desert Star, p. ?



Chase and Law, an outfit in Banning whose stock ranged around Covington Flat within the monument. (Bill had lived at the flat for some time--hence the area's name.)<sup>8</sup> Covington acquired the old Warren Ranch in 1917.

B. Activity in the Monument

1. Persons Involved

While the cattle industry centered primarily along the broad mesas from Old Woman Springs through the valleys where numerous high desert towns have now been located to as far west as Whitewater, owners soon began ranging their cattle further and further into the desert. The heavier rains and snows of the late 1870s produced a lush grass covering that attracted cattlemen to the high mountain valleys of the monument. Bill McHaney, who had started his Texas longhorn cattle operations in Queen and Lost Horse valleys in 1879, sold his interests about 1894 to George Meyers.<sup>9</sup> Sometime prior to the turn of the century, C.O. Barker, a prominent Banning resident, entered the region. He was involved in mining to some degree and also had horse and cattle interests in Twentynine Palms.<sup>10</sup> He may have been grazing some of his cattle in the monument's upper valleys in the 1890s. Meyers sold his cattle interests to Barker in 1905, the latter merging soon thereafter with Will Shay, a longtime sheriff of San Bernardino County. The firm of Barker and Shay operated in the monument locality from about 1905 to 1923, running generally from 300 to 800 head of cattle. Probably only

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8. Carolyn Evans, ed., A Glimpse into the History of Yucca Valley, Morongo Valley, Palm Wells and Yucca Mesa, California (Yucca Valley, Ca.: Artcraft Print Shop, 1965), p. 14.

9. Keys, "Historical notes," Nov. 9, 1954, p. 1.

10. Reino Clark interview with Mrs. W.R. Shay, May 2, 1975, on file in Local History Collection at Twentynine Palms Branch County Library, Twentynine Palms, California.

about 200 to 400 animals actually grazed in the monument.<sup>11</sup> The Whitewater Ranch west of the park, once a stage station on the Bradshaw Road, was a major base of operations for the firm, whose winter range stretched from Whitewater to the Dale Mining District east of Twentynine Palms.<sup>12</sup> According to Bill Keys, the firm of Carpenter and Hamilton ran cattle in the vicinity of Stubbe Spring from 1896 to about 1899, when J.D. Ryan, later a developer of the Lost Horse Mine, bought their interests. A government report of 1938, however, states that the Ryan brothers already had 100 head of cattle in Lost Horse Valley in 1895. Ten years later they sold the herd, amounting then to only 53 animals.<sup>13</sup>

The Swarthout Cattle Company operation started about 1900, with a headquarters at the Twentynine Palms oasis by about 1909. This complex consisted of sheds, corrals, three adobe shacks, and a cookhouse. The Swarthout cattle apparently grazed around the Old Woman Springs and Lucerne Valley areas, but sometimes strayed over onto what is now monument land.<sup>14</sup>

Barker and Shay took over Warren's Well in 1918, and the Talmadge Brothers established their winter headquarters at the old Whitewater Ranch in 1920, about the year cattle raising in the region reached its peak. The Talmadge Brothers also ran cattle in the western

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11. A.A. Wilhelm, Memorandum concerning the grazing Use of Lands involved in the Joshua Tree National Monument in San Bernardino and Riverside Counties, California, May 6, 1937, RG 79, NA, p. 1.

12. "Cattle Brands Part of Hi-Desert Lore," p. 10.

13. Keys, "Historical notes," Nov. 9, 1954, p. 1; "Report on Field Inspection of Merriam, Apr. 14-15, 1938," Central Files, 1907-49, RG 79, NA, p. 22.

14. Reino Clark interview with Jim Hester, Feb. 8, 1975, on file in Local History Collection at Twentynine Palms Branch County Library, Twentynine Palms, California, pp. 1, 9, 22; Keys, "Historical notes," Nov. 9, 1954, p. 2.

part of the monument through the late 1920s.<sup>15</sup> To continue the history of Warren's Well, Jim Dever and John Berry owned the site in the 1930s and ranged cattle in the area for about three years, possibly running some cattle in the monument. The well then reverted back to the Talmadge Brothers who reportedly still had cattle in the area as late as 1944. Around World War II the cattle and land were purchased by James W. Stocker to be used as headquarters for his winter range near Yucca Valley. In 1950 he sold his cattle business to the Hamilton Brothers and the land to developers.<sup>16</sup>

Down near Cottonwood Spring, in the southeastern section of the monument, James Cram of San Bernardino grazed approximately 250-350 head of cattle from about 1915 to 1930. His general grazing range was from Cottonwood Spring to the Colorado River. Jerry Wolford, Sr., of Blythe also ran cattle there about 1916. John P. Coy utilized part of this area and a John C. Brinton of Banning may also have grazed stock there in the early 1940s. In 1925 the Talmadge Brothers purchased the Shay and Barker interests and grazed about 450 cattle in the monument until 1929 when they sold out to a "Captain" (Katherine?) Barry for \$5,000. From 1929 to November 1936, "Captain" Barry ran about 300 head in the monument. Jim Stocker, a San Bernardino County sheriff, and Harry Stacey of Morongo Valley, reportedly later purchased the Barry interests.<sup>17</sup> Some of the details in this account vary from an earlier government investigative report, which states that about 1923 the Talmadge Brothers of San Bernardino purchased the Shay and Barker interests, operating until 1929. Although they claimed to run about 900 cattle altogether, only about one-half that number used monument land for

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15. Evans, History of Yucca Valley, p. 16; Keys, "Historical notes," Nov. 9, 1954, p. 1.

16. Clark and Couzens, "Yucca Valley," p. 9; Evans, History of Yucca Valley, p. 17.

17. "Report on Field Inspection of Merriam, Apr. 14-15, 1938," p. 21.

grazing. In 1929 a "Katherine" Barry of Los Angeles purchased the Talmadge interests. A consideration of \$5,000 was involved for improvements made on the range.

Barry and Harry W. Stacey, the latter either a partner or simply her representative, operated in the same territory with about 500 to 700 cattle until about November 1936. Actually only about 350 head grazed in the monument. In November 1936 the Barry cattle were sold, and although nobody succeeded to the use of this territory, Stacey reported that he purchased the Barry interests and paid \$7,000 for improvements, including waterholes and water development on the range, which was estimated to be worth \$4,000. Reportedly Stacey had for some time past been grazing cattle on a summer range taking in Quail Spring country, Barker Tanks, and Lost Horse Valley.<sup>18</sup> Further confusing the picture is a statement by Stocker in the 1940s that Shay did not sell to the Talmadge Brothers until about 1928. This might be more accurate, because in 1927 Vera Seely, a cowman's wife, was living in the Old Adobe at Twentynine Palms while her husband oversaw the C.O. Barker cattle herd. In the summer her family moved to the Ryan adobe in Lost Horse Valley to pasture the herd. Stocker may have been in partnership with Will Talmadge for awhile. He said that he purchased all rights from the Talmadges in 1936.<sup>19</sup> He also leased grazing land from the Southern Pacific Railroad Company.

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18. Wilhelm, Memorandum concerning the grazing Use of Lands, May 6, 1937, pp. 1-2; Sam L. Collins [?] to Arno B. Cammerer, January 27, 1937, Central Classified Files, 1933-49, RG 79, NA; James E. Cole, an early superintendent of Joshua Tree National Monument, stated that Stacey did not buy the Barry interests. Stocker also claimed to have purchased them, but the park was informed he had not. Instead Stocker and the son of Will Shay simply moved in on the range, as did Talmadge. "Report of Pertinent Factors Relative to Grazing in Joshua Tree National Monument, Aug. 22, 1942," Federal Archives and Records Center, San Bruno, California, p. 3.

19. Jas. W. Stocker to Congressman Harry R. Sheppard, Feb. 26, 1943, Central Files, 1907-49, RG 79, NA, p. 1; Lucile Weight, "They shared work, pleasures and dangers," "Women in the Mines" series, Desert Trail, Jan. 19, 1978.

Two people living in Lost Horse Valley tried to run cattle as a sideline to mining. The first was Ryan, mentioned earlier, a former Montana cattleman who claimed to have stocked the valley with 500 cattle early in the century. He finally sold off his herd when he found he was losing cattle. Probably the best known rancher in the monument was William F. Keys who, because of his contributions to the area and the importance of his Desert Queen Ranch in the homesteading history of the region, will be accorded a separate section later in this report. In this chronological overview of early cattle raisers in the area, he will be treated only briefly. According to his wife, Keys filed on a stockraising homestead around 1918 (probably earlier), first having the land designated as stockraising land, and later received a patent on it. Prior to this time he had been raising burros, horses, and goats, but now he turned to cattle.<sup>20</sup> Keys usually ran only a few animals, ranging from twenty to fifty or sixty head. In 1937 he had only about twenty cattle.<sup>21</sup> His herd roamed all through the Queen Valley and Lost Horse Valley and over around Quail Spring. Keys tried for a long time to build up his herd. As long as the big cattle interests controlled the range and the waterholes he fared badly. Because he was primarily a miner and homesteader, friction often developed with the cattlemen. Although Keys was frequently in court, he was never jailed in the early years.

The main source of trouble was a waterhole Barker had improved. In 1912 Barker and Shay had this and several other holes set aside as Public Watering Places or Reserves. Keys and his family started filing additional homesteads in the area until finally they controlled the only entrances to Barker Dam. In retaliation the cattlemen cut his fences.

On August 10, 1936, Joshua Tree National Monument was established by Presidential proclamation. The Barry interests, which had

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20. Mrs. W.F. Keys to United States Land Office, Sept. 14, 1944, Central Files, 1907-49, RG 79, NA, p. 1.

21. Wilhelm, Memorandum concerning the grazing Use of Lands, May 6, 1937, p. 2.

been using the monument range, sold their cattle. By the late 1930s Keys, Stocker, and Stacey were all still running cattle in the monument: in late 1937 Keys was reported to be running approximately 30 head, while Stacey had about 100 near Earker Dam, with plans to add more young stock.<sup>22</sup> Keys decided that this would be a good time to expand his operations. He tried first to buy 150 more cattle, until informed by the superintendent of the new monument that animals could not run at large. In the fall of 1939 Keys arranged with a Mr. Lawrence to bring in 80 more cattle from Oceanside to Lost Horse Valley, but the partnership soon broke up. Lawrence, whose cattle were denied access to Barker Dam by Keys, kept the cattle in the monument for only a short while. Having no prior grazing rights, he was ordered to remove the herd from government land, and did so.<sup>23</sup>

Keys became bitter enemies with both Shay and Stocker, the Keys family strongly resenting the influence exerted in the area by the Shay family primarily as a result of their control of the sheriff's office in San Bernardino County. Stocker and Keys competed hotly for grazing rights and dominance within the monument area. Most stockraising activities were finally eliminated about 1940. Keys's cattle, however, continued to graze illegally on monument lands, further fueling the controversy between Stocker and Keys. In the fall of 1940 W.L. Lawrence was grazing about eighty head of cattle and a few horses in Lost Horse Valley and a Mr. Hunt had two cows and a horse on his homestead there.

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22. George W. Borden, Assoc. Engineer, Memorandum to the Superintendent: Subject: Report on Investigation of complaint of William F. Keys, Desert Queen Ranch, Whitewater, Calif. relative to conditions near his ranch in Joshua Tree National Monument, October 25, 1937, Central Files, 1907-49, RG 79, NA, pp. 1, 5. In 1936 about 400 head of cattle were reported to have grazed part of the year in the monument. This was down from counts of the early 1930s showing that about 800 head grazed per year. A few horses, donkeys, and sheep were also in evidence.

23. Cole, "Report of Pertinent Factors Relative to Grazing in Joshua Tree National Monument, Aug. 22, 1942," pp. 3-4.

By Proclamation No. 2487, dated May 27, 1941 (55 Stat. 1647), President Franklin D. Roosevelt proclaimed that an unlimited national emergency existed and called upon all loyal citizens engaged in production for defense to give precedence to the emergency needs of the nation. Both Keys and Stocker became interested in producing more beef to aid in the national defense and applied to the National Park Service for permission to graze cattle on the public lands within Joshua Tree National Monument. The Park Service thereupon sent a grazing expert to the area to ascertain the number of cattle that could feasibly be grazed within the monument. It was determined by this study that because of the limited grazing in the monument only one of the parties could be granted a license, and it was decided Keys should be given the first opportunity. About a year and a half of negotiations ensued with Keys over the matter. Before it was settled, Keys was convicted of manslaughter and sent to San Quentin prison. At that point Stocker received the permit to graze cattle in the monument, beginning in 1943 until the end of the war. His range at this time began nine miles west of Twentynine Palms and bordered the monument all the way to Morongo Canyon, then west as far as Big Bear Lake in some places. The nearest headquarters was at Warren's Well.<sup>24</sup> Stocker later sold out in the 1950s when the heavy population growth of the high desert made widespread grazing infeasible.

## 2. Extent of Grazing

Large-scale grazing began in the national monument possibly as early as 1895, and it is said that as many as 800 head of cattle might have browsed the upper valleys where water was accessible. For many years cattle used the area during the winter when snow and a lack of feed drove them from the San Bernardino Mountains. With the development of Twentynine Palms and adjacent areas, accompanied by the appropriation by homesteaders of watering places that the cattlemen had always used but to which they had obtained no rights, grazing withdrew

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24. Duane D. Jacobs, Acting Custodian, Memorandum for the Regional Director, Region Four Office, Mar. 22, 1943, Central Files, 1907-49, RG 79, NA, p. 1.

to two regions west of Twentynine Palms--Coyote and Yucca valleys. In the spring, when the lower desert became too dry and before the mountains were open, cattle were driven into the upper valleys of the present monument. Any cattle missed in the summer roundup might stay in or around Lost Horse Valley until the next summer.<sup>25</sup> Natural feed consisted of galletta and bunch grasses supplemented with cacti and shrubs such as saltbush, cat's claw, scrub oak, mesquite, and sagebrush as grass became scarcer. In 1927 and 1929 Texas longhorn cattle were using the Twentynine Palms area as a winter range, and the annual roundup and branding were taking place in the monument area.

A special report on the grazing situation in the late 1930s found that a few cattle had been grazed in Lost Horse Valley and on adjacent lands and in the vicinity of Cottonwood Spring, but otherwise there were no range animals in the park. It was estimated in this document that only fifty percent of the monument was adapted to livestock grazing--the rest lacking water or forage grasses.<sup>26</sup> Special Agent A.A. Wilhelm concluded that the grazing value of the land in the monument was rather limited. Only the higher and cooler western portion of the monument, and only about fifty percent of it--the rest being rough, mountainous, and almost barren of forage--had been used as a cattle range. There several waterholes had been developed at considerable expense and rights to them established by usage.<sup>27</sup> The number of cattle grazed varied from year to year, depending upon the amount of rainfall. Several people living in the monument when it was established had been residents for many years. Because they owned very little land, they had always used the public domain for grazing. If they were required to keep their cattle and horses on their own property, they would probably

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25. Cole, "Report of Pertinent Factors Relative to Grazing in Joshua Tree National Monument, Aug. 22, 1942," p. 2.

26. S.E. Guthrey, Special Agent, Div. of Investig., Dept. of Int., to Dir. of Investig., May 6, 1937, Central Files, 1907-49, RG 79, NA, p. 5.

27. Wilhelm, Memorandum concerning the grazing Use of Lands, May 6, 1937, p. 1.



have to sell their animals. Due to the pressure for grazing privileges on NPS land, a study was made of range and forage conditions by Ecologist Harold M. Ratcliff during November 1942. The results of this study showed possible year-round grazing for only 153 head of cattle.<sup>28</sup> In addition to Queen Valley, Lost Horse Valley, and the Quail Spring area, Ratcliff pointed out that on the western end of the monument were two small areas known as Upper and Lower Covington Flats that could be utilized by a few head of cattle. Small seeps in adjoining areas furnished water in wet weather. Probably not over 30 head could be grazed in that section.<sup>29</sup>

### 3. Watering Places

#### a) Outside the Monument

The major disadvantage of the high desert for grazing was that it lacked a large number of good waterholes, which are necessary when running large herds of cattle. There were, however, several watering places that were utilized. These included Mesquite Spring, Surprise Spring, and others found up Burns and Pipes canyons and down in Morongo Valley. By digging wells, improving springs, and constructing small dams of rock and cement (tanks) and other types of catch basins in natural drainages in canyons or rock formations in critical areas to supplement natural water sources, cattlemen were usually able to provide enough water for their stock, and the country soon became a regular seasonal range. One early cowman recalled making a reservoir by hooking three horses to a scraper and building a dirt dam across a ravine to catch the rainwater. He also mentioned blister holes--large rocks eroded by sand and wind that would fill with water. Water from behind a dam could be funnelled into these blister holes where it would be held for about two months.<sup>30</sup>

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28. Custodian's Annual Report for Joshua Tree National Monument, June 30, 1943, Central Files, 1907-49, RG 79, NA, p. 2.

29. Harold M. Ratcliff, Memorandum for the Regional Director, Region Four, Dec. 3, 1942, Central Files, 1907-49, RG 79, NA, p. [3].

30. Hester interview, Feb. 8, 1975, pp. 13-14.

Prior to the mid-1920s when the first homesteaders began entering the area, the entire Twentynine Palms region was open rangeland. Ownership of water was the major consideration in the cattle business. Warren's Well was an important waterhole of the early cattle days; the oasis at Twentynine Palms was another. Between the two were more than twenty miles of sandy, hot desert. Sometime around 1915 Barker and Shay sank Coyote Well near Coyote Holes near the present town of Joshua Tree as an interim watering spot for their cattle. Elizabeth Campbell, an early homesteader of Twentynine Palms, was camped with her husband at the oasis in the early 1920s and recalled that

every two or three days range cattle, compelled by thirst, came in to the springs to drink. Those days we stayed close to our tent, chasing the white faced cows out of our camp and roping the dog so he couldn't stampede the herd. There were droves of cattle then, for the whole district was open range, with enough water holes to support many of them. When the cattle "came in," they stood around the springs all day and into the next. Then they would be gone to scatter and munch desert growth for a few days.<sup>31</sup>

At the oasis a well was dug, possibly about 1900 by the Barker and Shay outfit, primarily for human consumption. Stock was watered in a sump under the palms several feet to the east. The well was also used by miners and homesteaders.

Farther east, at Old Dale, range cattle could be watered at the Lyon's (Wilson and Lyon's) Well. This was about 2¼ miles northeast of Old Dale. Its windmill supplied water for cattle in 1918.

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31. Campbell, Desert was Home, p. 21.

b) Inside the Monument

Only about four dependable watering places existed in the higher valleys of the present national monument. These were Pinyon Well at the southern edge of Pleasant Valley, Stubby Spring on the southwest side of Lost Horse Valley about ten miles from Pinyon Well, Barker Dam at the north end of Lost Horse Valley, and Quail Spring, southwest of Keys Ranch. To supplement these sources, several catchment basins or "tanks" were scattered throughout the area, as were several privately owned wells and a few springs.

In an interview in 1933, Bill McHaney mentioned a few of the springs used by cattlemen. One was Stubbe Spring, four miles northwest of present Keys View, which was used by McHaney as early as 1891-92. Keyes Barrel was located one mile north of this spring. Other sources for water were Quail Spring, a natural site; Smith's Water, a half mile west of Quail; another spring (Pine?) 1½ miles north of the Desert Queen (Ranch or Mine?); and Rattlesnake Tank, built by cattlemen.<sup>32</sup> Quail Spring was one of the main waterholes and was utilized by all cowmen in the area, from Barker and Shay up to Jim Stocker, the last one to legally run cattle in the monument and who had a rental lease on land around the spring. During the late 1920s when cattle were driven into the monument in May for the summer grazing, headquarters were set up in Lost Horse Valley. The cows watered at Quail Spring and Barker Dam. The main headquarters in the wintertime, to which the cattle were taken the latter part of October, was at Sunfair, as the area in the Morongo Basin near Coyote Well was known.<sup>33</sup>

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32. McHaney interview, March 1933, p. 3.

33. Harold Weight and Cheryl Erickson interview with Bill Seely, Feb. 3, 1975, on file in Local History Collection at Twentynine Palms Branch County Library, Twentynine Palms, Ca., n.p.

By 1937 several waterholes were mentioned as serving the cattle interests:

Barker Tanks--a reservoir in the N $\frac{1}{2}$  NE $\frac{1}{4}$ , Sec. 4, T2S, R8E. An 80-acre permanent hole protected by withdrawal. A dam was constructed here at considerable expense, probably \$1,500. The reservoir ordinarily covered about two acres of land.

Quail Spring--a reservoir had been built here on railroad land in the S $\frac{1}{2}$  NE $\frac{1}{4}$ , Section 33, T1S, R7E. The water had been used since about 1900. This was a permanent water place. Water was piped from the cement reservoir to watering troughs.

Stubby Spring--this spring was on railroad land in the SW $\frac{1}{4}$  SE $\frac{1}{4}$ , Section 27, T2S, R7E. Had been used for fifteen or more years.

Within a fifteen-mile radius of Barker Reservoir were several springs that had been developed and used by cattlemen. These included Covington Spring, Smith's Canyon, Coyote Hole, Dove Springs, Willow Hole, Squaw Tanks, Live Oak Tank, and White Tank. Another waterhole was Cottonwood Spring in Section 14, T5S, R11E, a permanent waterhole also protected as a public waterhole withdrawal.<sup>34</sup>

A government field inspection a year later stated that there was a record of some grazing in Pinto Basin, but decided it was probably confined to the region near Cottonwood Spring. Except for small water tanks at the mouth of Placer Canyon, there was no water available in the basin for stock.<sup>35</sup> In 1942 the superintendent of the monument stated that two springs, four wells, and two reservoirs were then used by cattle. The water from Black Rock Spring and Quail Spring

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34. Wilhelm, Memorandum concerning the grazing Use of Lands, May 6, 1937, pp. 2-4.

35. "Report on Field Inspection of Merriam, Apr. 14-15, 1938," p. 22.



Illustration 4.

Ivanpah Tank. Water catchment typical of those built by cattlemen in desert areas to capture rainwater for stock. Courtesy JTNM.

was piped to water tanks. Quail Spring was on Southern Pacific Land Company property and was available to stock; Black Rock Spring was on government land and fenced off from cattle. Barker Dam was the principal source of water for livestock and wildlife in the Lost Horse Valley area.<sup>36</sup>

4. Sites Associated with Cattle Raising

Historical remains associated with cattle raising in the national monument consist of numerous tanks, the few building remains at Cow Camp, and the Ryan ranchhouse. Another area associated in legend with cattle-rustling operations is Hidden Valley, although it may not be the one in the NW $\frac{1}{4}$  of Section 8, T2S, R8E, but be another site north of Keys's ranch in the Wonderland of Rocks area.

a) Tanks

None of the tanks are considered significant enough to warrant nomination to the National Register. Barker Dam, an important early waterhole for stock, has already been added. The tanks do not appear to interfere with the natural history of the area and are not detrimental to visitor safety. All those seen by this writer were structurally sound. It is recommended that they be left intact.

b) Cow Camp

Cow Camp was entered on the National Register of Historic Places on October 29, 1975. Located one-half mile south of Keys Ranch, in Section 32, T1S, R8E, the campsite contains today the ruins of one building in the form of a crumbling rubble stone chimney and the stone outline of a house foundation. William F. Keys erected a curved concrete dam 105 feet long and 30 feet high. A rock-lined circular well lies west of the cabin remains. The well was supposedly dug and rock lined in the 1880s by members of the McHaney "gang"--Charlie Martin, Willie and Charlie Button, Diamond George, Ike Chestnut, and

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36. Cole, "Report of Pertinent Factors Relative to Grazing in Joshua Tree National Monument, Aug. 22, 1942," p. 6.



Illustration 5.

Cow Camp lake. Photo by Lynn Loetterle, February 1973.  
Courtesy JTNM.

Illustration 6.

Chimney and cabin foundation,  
Cow Camp. Photo by Lynn Loetterle,  
February 1973. Courtesy JTNM.



George Meyers. Martin reportedly constructed the cabin, troughs, and tanks at the site. The small tank (reservoir) northwest of the cabin tended to back up water to the cabin, so it was partially destroyed by Martin to alleviate the flooding problem.

Cow Camp was determined to be of local historical significance under the category of Agriculture in relation to livestock raising and rustling. It was active as an outlaw headquarters during the late 1880s and early 1890s. Bill Keys probably took over Cow Camp when he filed on the Desert Queen Ranch and used it for stock-raising purposes. Keys built the Cow Camp dam to increase the amount of water available for his stock sometime after his return from prison.

c) Ryan Ranch

The Ryan Ranch at Lost Horse Well was connected with both mining and stockraising efforts within the national monument. The ranch complex was established by Jepp and Tom Ryan. The large adobe home is thought to have been built in 1896 and was lived in into the 1930s and beyond. Mine tailings were said to have been used to make the adobe bricks for the structure. The walls supposedly assayed \$8 a ton in gold. Sam Temple was the builder. Later frame additions were made to the main house, enlarging it substantially. It at one time had a wooden kitchen wing attached to the back. The ranch complex included a two-room bunkhouse; one half was built of adobe, the other was wood frame covered with chicken wire and stucco. Off the adobe end of the bunkhouse are the remains of a root cellar, consisting of a hole in the ground filled with brush. Originally the structure is thought to have had timber supports with an infilling of brush and an earth covering.

Around the Ryan home and Lost Horse Well were erected some houses and buildings that developed into a small community sometimes referred to as Langville, which has long since disappeared. It was probably concerned with the assaying of the Lost Horse Mine ore and its final production into gold bricks. A small mill there worked the mine ore before the larger ten-stamp mill was built at the mine. There were said to have been three houses at the well built of Joshua Tree logs.



Illustration 7.

Back of Ryan ranchhouse,  
Lost Horse Well, June 21, 1932.  
Courtesy JTNM.

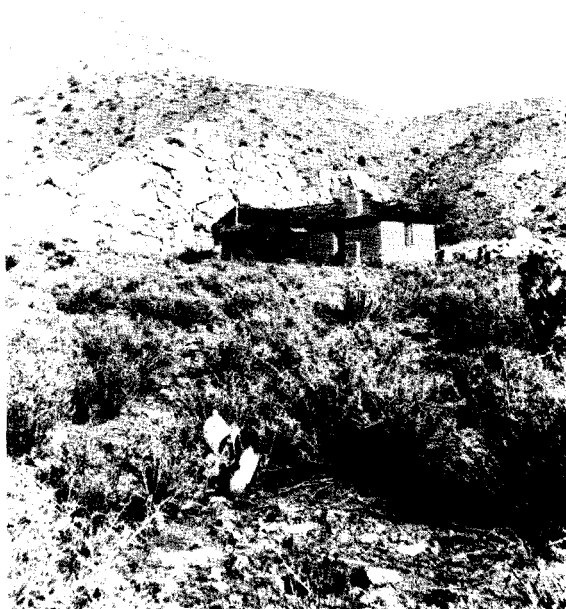


Illustration 8.

Front of Ryan ranchhouse, 1983. NPS photo by Linda W. Greene.

Bill Keys mentioned five structures at the ranch site in his December 1966 interview. These included a horse barn, weigh station, an underground cellar and house, the big house, and an assaying cabin. The Calico Print of November 1953 mentioned a large stable and corral, a small adobe brick tool house, and other buildings used by miners. Also according to Keys in 1966, the well where the tank is now was referred to as the Johnny Lang Well. Ryan Well was dug later by the spring where the windmill was placed (now fallen over). Keys states that pumping here dried up the spring.<sup>37</sup> The Ryan adobe was used as a summer headquarters for cattle grazing in Lost Horse Valley well into the 1920s. Members of the Ryan family (Addie and Jephtha DeGarret) lived there for various periods, even while in their seventies. District Ranger Matt Ryan lived at the Ryan home for a short time in the late 1930s and early 1940s.

On June 5, 1975, the Ryan House and Lost Horse Well or Spring, a small one-room adobe structure, and the two-room bunkhouse were entered on the National Register at the local level of significance. They were thought to exhibit desert life as well as being associated with a famous mine of the area. At that time the smaller building, in front of the main house and off to the west near the entrance road, had two standing walls and portions of the other two. This building is now gone, as are the wooden kitchen of the main house and its roof, and major portions of the bunkhouse. The Ryan ranchhouse burned during the night of August 12, 1978. Arson was suspected. The main house was destroyed completely, except for the adobe walls. Just east of the house is a stone-enclosed reservoir. Further southeast on the hillside are the collapsed windmill, some stone-ringed foundation levels, and a large stone well covering. Vandalism in the form of initials carved in the adobe and the recent fire are manifestations of the ongoing denigration of the site. Its proximity to the Ryan Campground and its visibility from a main monument road assure it of steady visitation by park visitors. The lack of roofing over the adobe walls makes it

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37. JTNM Fact File.

impossible to retard erosion. Because it no longer exists, it is recommended that the one-room adobe be removed from the LCS. Due to their present lack of integrity, it is also suggested that the opinion of the National Register be obtained as to whether the ranch and bunkhouse still meet the criteria of the National Register. Although the ranch complex and its occupants were important in the local history of the area, the site has disintegrated to such a degree that its integrity of ten years ago has been lost. The main house is not considered eligible for the National Register for this reason. It is recommended, however, that the site be allowed to naturally decay and serve as a reminder of the early cattle and mining days and of personages important in the monument's history.



Illustration 9.

Front of Ryan ranchhouse, Lost Horse Well, July 1935.  
Courtesy JTNM.



Illustration 10.

Front of Ryan ranchhouse, ca. 1975, structure no longer occupied.  
NPS photo.

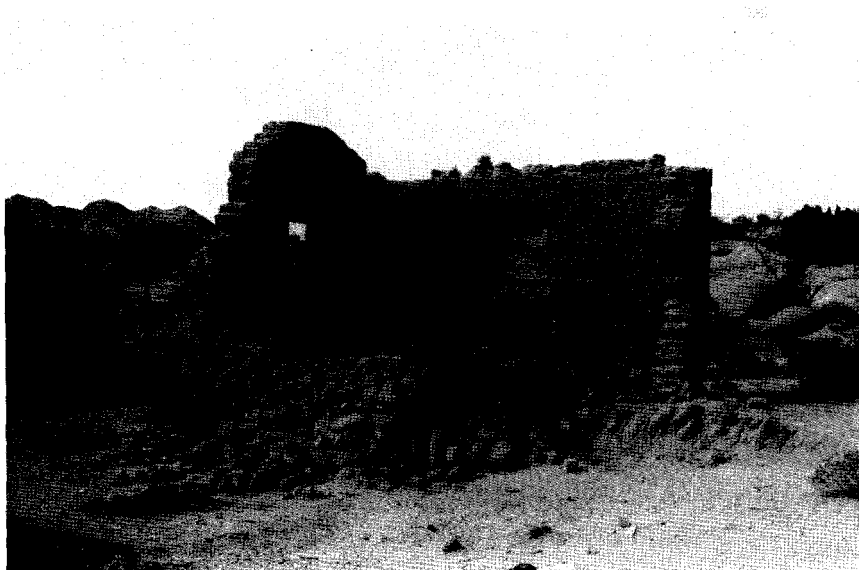


Illustration 11.

Small, one-room adobe structure at Ryan Ranch that has since fallen down, ca. 1975. NPS photo.

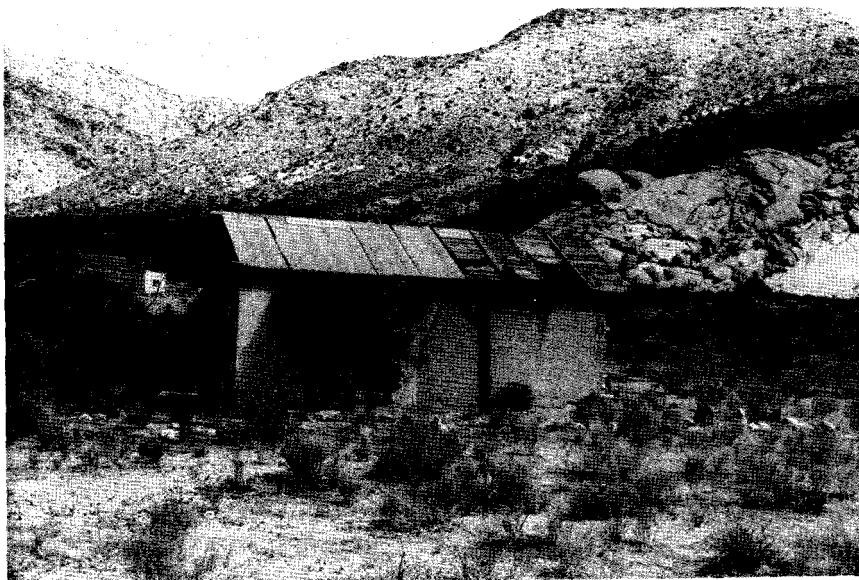


Illustration 12.

Bunkhouse, Ryan Ranch, ca. 1975. NPS photo.

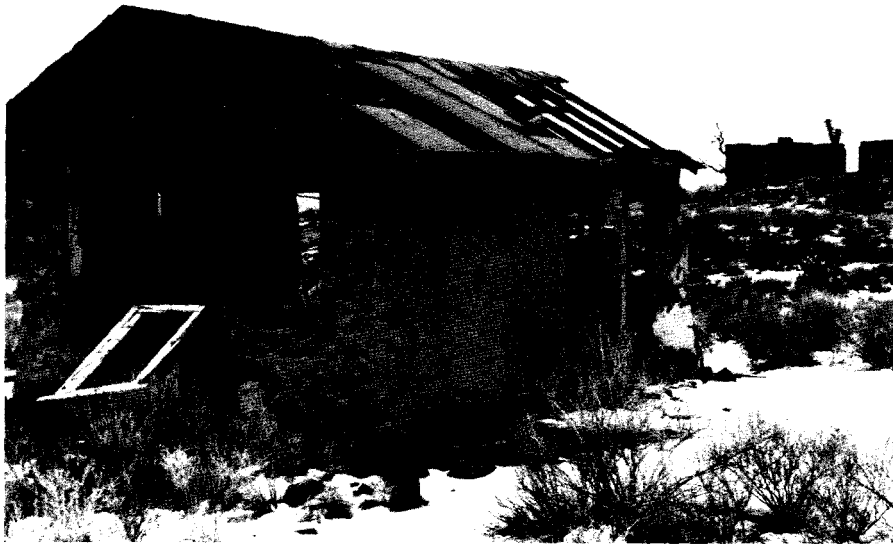


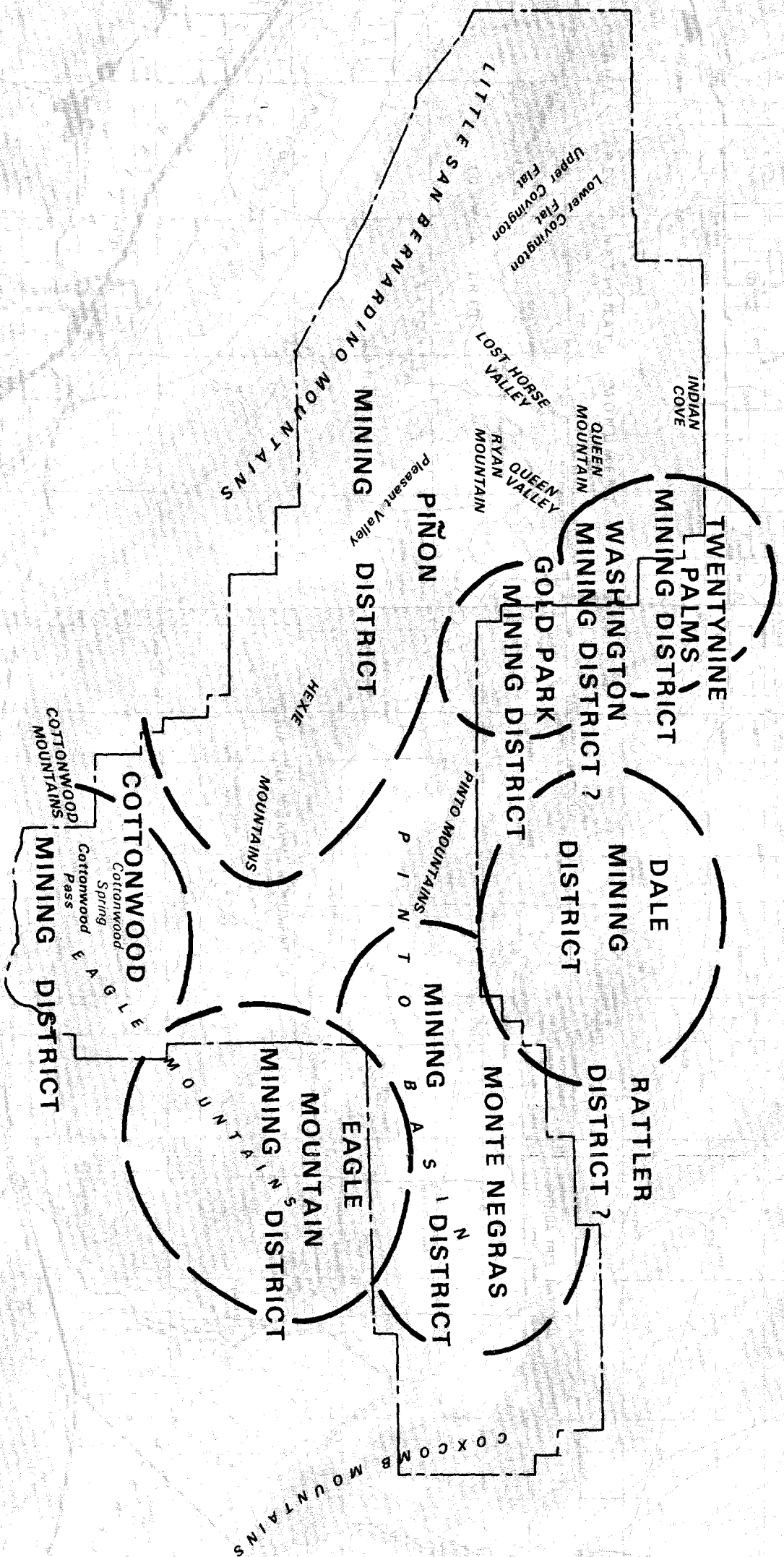
Illustration 13.

Bunkhouse, Ryan ranch, 1983. Main house in background. NPS photo by Linda W. Greene.



Illustration 14.

Interior of bunkhouse, 1983.  
NPS photo by Linda W. Greene.



**ON MICROFILM**

**MINING DISTRICTS**  
**JOSHUA TREE NATIONAL MONUMENT**  
 CALIFORNIA  
 UNITED STATES DEPARTMENT OF THE INTERIOR  
 NATIONAL PARK SERVICE  
 DSC / SEPTEMBER 1983 / 156-25012

#### IV. Mining in Joshua Tree National Monument

##### A. Twentynine Palms Mining District

###### 1. History

About the time cattlemen were moving into the monument, prospectors also entered. Bypassed by the Forty-Niners heading for the Mother Lode country, the desert regions of southern California offered a rich new field to later arrivals. In 1865 the first claim within the monument was filed--the Jeff Davis in Rattlesnake Canyon, then referred to as Lone Valley. The first known discoveries near Twentynine Palms were made by Dave Gowen and Joseph Voshay in early 1873. The Gowen Mine was south of Twentynine Palms and the Blue Jay north of town, supposedly in T2N, R9E. Several other mines were located south of the Gowen Mine in an area that later developed into the Gold Park mining camp. By October 1873 two arrastras were operating near the oasis. A stamp mill was installed a year later. Because of its water supply, the oasis at Twentynine Palms served as the base camp for the Palms Mining District. Other claims in the district were the Valentine, Hornet, Peru, Eagle, Cora, California, Frying Pan, and the Poor Man.<sup>1</sup> By 1883 activity at the oasis had waned as miners moved on to other locations. Abandoned mills and equipment remained in the area for several years afterward as evidence of its brief mining flurry.

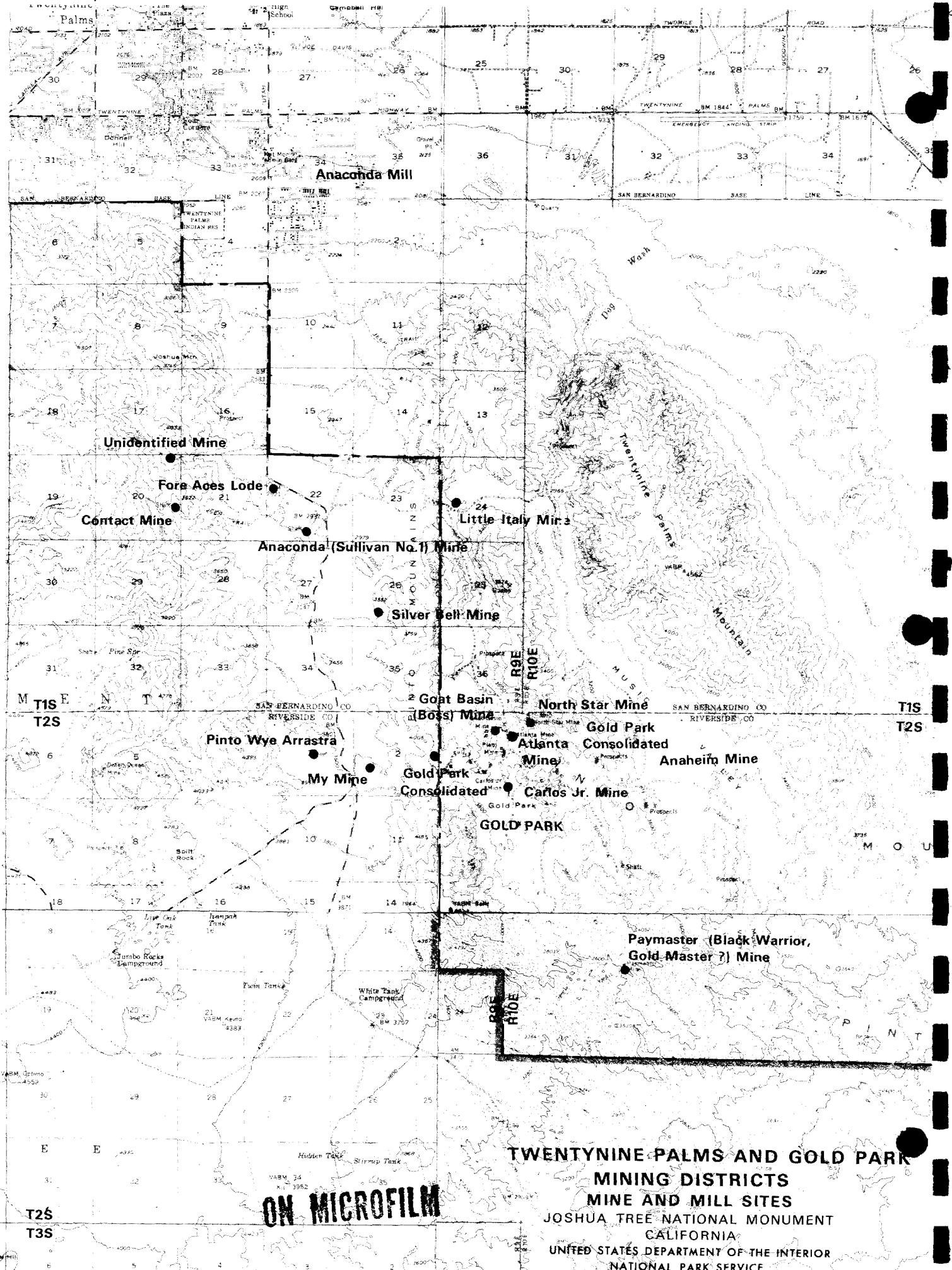
The California state mineralogist in 1890 described the Twentynine Palms Mining District, adjoining the Morongo District on the east, as including

the greater portion of T 1,2, and 3N., R.8,9, and 10 E. . . .  
There are many metalliferous lodes in this district, the most of them gold-bearing. They are rather narrow, ranging from one

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1. Larry M. Vredenburg, Gary L. Shumway, and Russell D. Hartill, Desert Fever: An Overview of Mining in the California Desert (Canoga Park, Ca.: Living West Press, 1981), pp. 138-40; Ronald Dean Miller, Mines of the High Desert (Glendale, Ca.: La Siesta Press, 1968), p. 9.





**ON MICROFILM**

**TWENTYNINE PALMS AND GOLD PARK  
 MINING DISTRICTS  
 MINE AND MILL SITES**  
 JOSHUA TREE NATIONAL MONUMENT  
 CALIFORNIA  
 UNITED STATES DEPARTMENT OF THE INTERIOR  
 NATIONAL PARK SERVICE  
 DSC / SEPTEMBER 1983 / 156-25009

to three feet in thickness. While a good many of these lodes have been somewhat prospected, but little deep work has been done. Some of the ore worked by arrastras yielded as high as \$100 per ton, and nearly all of that worked by the two small mills in the district has been of high grade.

This district being well out in the desert, neither wood nor water is in large supply. There are, however, several large springs in the vicinity. . . .

Although mineral-bearing lodes are known to exist east of this locality, no mining districts have as yet been organized in that direction.<sup>2</sup>

By this time gold production had started in the Dale Mining District farther east, but owners of claims near Twentynine Palms were also still at work developing their properties.<sup>3</sup> In 1895 mention was made of the Pinther, Price & Burnap Mining and Milling Company, which, with a paid-up capital of two million dollars, owned the San Bernardino, Two Gilberts, Ellery, Sophia Pinther, Going, Price, and other mines near Twentynine Palms within ten miles of the Desert Queen Mine. "Arrangements are being made to bring water on the properties when the mills purchased will be erected and work commenced. There are several

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2. California State Mining Bureau, Tenth Annual Report of the State Mineralogist, for the year ending December 1, 1890 (Sacramento: State Office, 1890), p. 526. The Ninth Annual Report of the State Mineralogist, for the year ending December 1, 1889 (Sacramento: State Office, 1890) states that the district comprised T1N, R8E; T1N, R9E; T1N, R10E; T1N, R11E; T2N, R9E; T2N, R10E; T2N, R11E; T3N, R8E; T3N, R9E. (Sacramento: State Office, 1890), p. 222. Probably T2N, R8E should have been included in this description.

3. Engineering and Mining Journal 49, no. 14 (Apr. 5, 1890): 390.

hundred tons of rich ore now on the dump."<sup>4</sup> The oasis area continued to support low-scale mining activity through the 1890s. The Sam Temple Mine, 2½ miles from the mill at Twentynine Palms, was said to be a rich find with a three-foot-wide vein and high-grade ore. Other prospects in the vicinity also appeared promising.<sup>5</sup>

The most productive period for this district was during the 1890s and early 1900s, though it would again show activity in the 1930s. In many of the reports of the California State Mining Bureau and in the mining journals, the Twentynine Palms Mining District often encompassed the gold mines just south of town that were also often included in the Gold Park and Piñon districts. In this report the later mining activities at Gold Park camp, situated about eight miles south of the oasis, will be described in a separate section on the Gold Park Mining District. Despite promising locations found in this area south of the oasis as early as the 1870s, prospecting first moved farther east, to the barren hills flanking Pinto Basin on the north, as activity around The Palms lessened.

The following are mining properties in the Twentynine Palms District whose location is known and which have been examined and/or evaluated for historical significance.

2. Mine Sites

a) Anaconda Mine (Sullivan No. 1)

According to Bill McHaney, a member of the Washington survey party, Drinkwater by name, first worked the Anaconda

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4. Ibid. 60, no. 11 (Sept. 14, 1895): 256.

5. Ibid. 64, no. 20 (Nov. 13, 1897), p. 585; Ibid. 65, no. 4 (Jan. 22, 1898): 110.

Mine. McHaney states it was later owned and worked by Mr. Parks.<sup>6</sup> In the spring of 1907 the Anaconda Mine was owned by the Taylor-Sullivan Mining Company, which was negotiating a lease for the claim, on which considerable work had already been done, with Edward M. MacDermott, a Los Angeles mining promoter and stockbroker. The five-year lease was for three claims, three mill sites, and a well.<sup>7</sup> MacDermott and associates evidently comprised the Mohawk-Herald Mining Company. C.W. Roach would be superintendent of operations at the Anaconda, where in the past a small two-stamp mill on the site had been used to process its ore.<sup>8</sup>

A newer mill was deemed necessary, however. By the end of 1908 there was a quartz mill at Twentynine Palms (see Illus. 15), but how complex an operation it was is uncertain. By the fall of 1910 the Anaconda had been developed by a 100-foot-deep shaft. Ore recovered was being sent to the small mill at Twentynine Palms, where about \$1,000 per week was being obtained by milling. The mill was being managed by the Mohawk-Herald Company and was a Bryan roller mill capable of treating around twenty tons of ore per day. Plans were being made to add a cyanide capability.<sup>9</sup>

Chase visited the mine camp there around 1919 on his way to Twentynine Palms. Late in the day he describes coming upon

the grouped shanties of a small mine. . . . I was welcomed heartily by the three men on the place. . . . their supply [of water] must be replenished at Twenty-nine Palms, four miles away. . . .

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6. McHaney interview, 1933, p. 2. Whether this is the same mine is unknown. Interview with E.J. Hunt, Mar. 24, 1981, in JTNM Fact File.

7. San Bernardino (Ca.) Daily Sun, Apr. 6, 1907.

8. Ibid., July 12, 1907.

9. Engineering and Mining Journal 90, no. 13 (Sept. 24, 1910): 600. See picture of Anaconda mill in 1916 in Miller, Mines of the High Desert, p. 28.

The six men who were concerned in developing the mine had formed themselves into two shifts of three a side, taking alternate spells at the works and "inside" (the term used by desert men to signify the cities and the coast country). . . .

Evening was coming on, so I soon took the road. Tracks led off to other small mines, reminders of the lively days of the seventies, when this Twenty-nine Palms district was a "camp" of renown. . . .<sup>10</sup>

By 1922 the Anaconda Gold Mining Company had been issued a permit by the Corporation Commission to sell 24,995 shares of stock at 50¢ per share. The company held six unpatented claims in the "29 Palms Mining District." Principal workings consisted of an old shaft 185 feet deep, and 185 feet of tunnel on the Anaconda claim. Ore was found in small lenses. The company hoped to open up enough commercial-grade ore to justify erection of a (larger?) milling plant.<sup>11</sup>

In 1930 P.T. Sullivan of Twentynine Palms was listed as owner of the Anaconda Mine. Sullivan owned four claims on which were two shafts, one 100 feet deep and the other 185 feet. Although idle at that time, the mine had produced \$10,000 worth of ore.<sup>12</sup> Harry Boling may have worked with Sullivan on this property.

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10. Chase, California Desert Trails, p. 149.

11. California State Mining Bureau, Report XVIII of the State Mineralogist covering Mining in California and the Activities of the State Mining Bureau During 1922 (Sacramento: State Printing Office, 1923), p. 265.

12. State of California, Department of Natural Resources, Division of Mines, Report XXVI of the State Mineralogist Covering Activities of the Division of Mines Including the Geologic Branch (Sacramento: State Printing Office, 1930), p. 222. Phil T. Sullivan homesteaded in the Twentynine Palms region, arriving about 1897 or 1898.

A 1953 report mentioned the Sullivan No. 1 (Anaconda) Mine in Sections 22 and 27, T1S, R9E, SBM, owned by E.M. Reimiller of Twentynine Palms. The two shafts on the idle property were 100 and 212 feet deep.<sup>13</sup>

b) Contact Mine

Bill McHaney stated that in 1910 he and Phil Sullivan built an arrastra near The Palms to work ore from Sullivan's Contact Mine. A June 25, 1941, report of the Division of Investigations stated that the Contact and Contact No. 2 lode mining claims had been located July 1, 1923, that the property had been active for several years, and that gold and silver ore was being mined, shipped, and milled at a substantial profit.<sup>14</sup> In 1953 the Contact Mine, in Section 20, T1S, R9E, SBM, was owned by E.M. Reimiller of Twentynine Palms. It had been explored by a 50-foot open cut and a 150-foot shaft, with a drift on the 50-foot level. Selected ore was treated by amalgamation and reportedly yielded seventy dollars per ton. Idle then, it had been operated from 1933 to 1935 and in 1940.<sup>15</sup>

c) Fore Aces Lode

Nothing is known about the early history of this apparently minor operation.

d) Silver Bell Mine

Phil Sullivan was also involved with this mine, whose legal history and descriptions are confusing and full of discrepancies, due primarily to the fact that this township was not surveyed until 1933. On

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13. State of California, Department of Natural Resources, Division of Mines, California Journal of Mines and Geology 49, nos. 1 and 2 (Jan.-Apr. 1953): 58.

14. McHaney interview, March 1933, p. 2; JTNM Fact File.

15. California Journal of Mines and Geology, Jan.-Apr. 1953, p. 30.

July 1, 1923, Sullivan and Albert Vivian filed on the Silver Bell, "1½ miles South Easterly from Anaconda Mine," in Sections 27 and 34. This location was later declared null and void. Then on September 20, 1930, Sullivan and H.Y. Boling located a Silver Bell Mine (or Lode) in Section 34. According to the owners there was only one Silver Bell with several relocations. This mine was located as a quartz claim and operated in hopes of finding gold. It was leased from Sullivan and Boling about 1933-34 by a man named Rowland. In the 1940s it was operated as a lead mine. The Silver Bell Mine was found not to be in either Section 27 or 34, but in the SW¼ of Section 26, T1S, R9E, SBB&M. A Silver Bell Mine, in Section 21, was first filed on on July 10, 1913, by F.W. Fox. A last location notice, for both the Phyllis Lode and Silver Bell Lode, both in Section 34, was filed on March 7, 1932, by P.A. Kennedy, C.H. Shepard, and Earl Forrey.<sup>16</sup>

e) Mymine (My Mine)

This mine, in the NW¼, Section 2, T2S, R9E, was filed on on May 9, 1936, by Dr. John J. Smith of Santa Monica, California. The claim is a few hundred yards east of and overlooking the main Twentynine Palms entrance road and one-half mile northwest of the Pinto Wye utility area. Development at the gold mine consisted of little beyond an eleven-foot shaft.<sup>17</sup> It was still being worked in December 1950.

3. Mill Sites

a) Pinto Wye Arrastra

Construction history of this millsite in Section 3, T2S, R9E, is unknown. Willis Keys, when asked if he knew the arrastra's origin, declared his unfamiliarity with it, but stated that

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16. Frank R. Givens, Custodian, JTNM, Memorandum for the Regional Director, Region Four, Dec. 3, 1947, WRO files, NPS, San Francisco, Ca.

17. Frank R. Givens, Custodian, JTNM, Memorandum for the Regional Director, Region Four, June 9, 1948, Central Files, 1907-49, RG 79, NA.

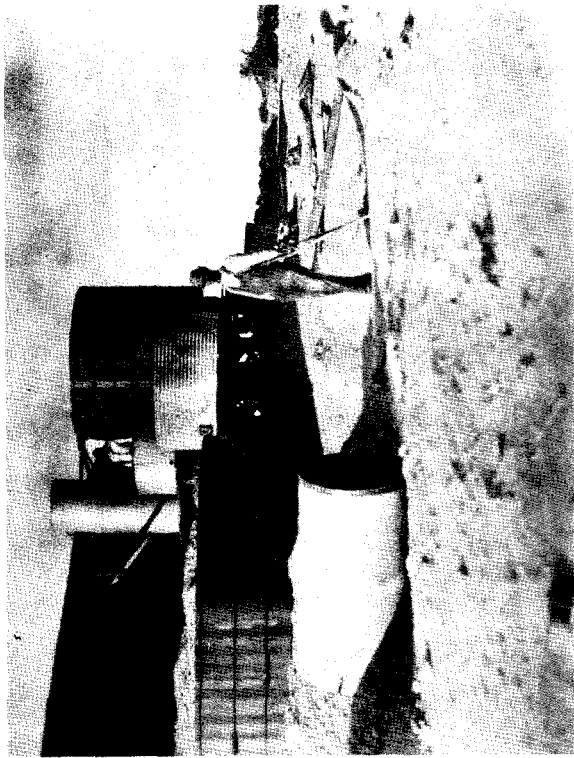


Illustration 15 (left).  
Anaconda mill at Twentynine Palms,  
1916. Courtesy JTNM.

Illustration 16 (bottom left).  
Anaconda (Sullivan No. 1) Mine. Note  
road leading to workings from Utah  
Trail.

Illustration 17 (bottom right).  
Anaconda Mine. Shaft on ridge  
northeast of main working that has  
been sealed with a metal grate. NPS  
photos by Linda W. Greene





"Big Johnny Wilson" had an arrastra back in that area somewhere "years ago."<sup>18</sup> The arrastra is possibly associated with a nearby prospect hole, located on the hillside above. A claim marker on the site identifies this as the AED lode mining claim, located May 16, 1954, and filed on by Arnold M., Edna (Ed?), and Don M. Benito of Twentynine Palms.

4. Evaluation of Resources and Recommendations

a) Mine Sites

(1) Anaconda Mine (Sullivan No. 1)

This mine area is about 1½ miles south of the monument boundary and about ¼ mile west of the monument road that leads south from Twentynine Palms. Visible from Utah Trail Highway are dumps associated with several filled and roped-off shafts on the east side of a small ridge. Above these shafts are some concrete machinery pilings. It appears as if this entire area, including the ridge and a small knoll about 1/8 mile northeast have been prospected, although whether all this work was done at the same time is not known. An ore shaft on the knoll was grated during mine safing operations. In addition to shafts and prospect holes, an archeologist investigating the site found a semi-dugout habitation or office ruin near the main mining area. The structure had apparently burned.

Although the archeologist investigating this site felt it was eligible for nomination to the National Register, this writer disagrees.<sup>19</sup> There are not enough significant artifacts, structures, or other features on site to warrant detailed or extensive physical analysis. While it is true that any mining site has the potential to yield some interesting information on lifestyles or technology, some discrimination has

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18. Reino Clark and Don Black interview with Willis Keys, while touring Keys Ranch, March 1975, transcript on file at JTNM, p. 25.

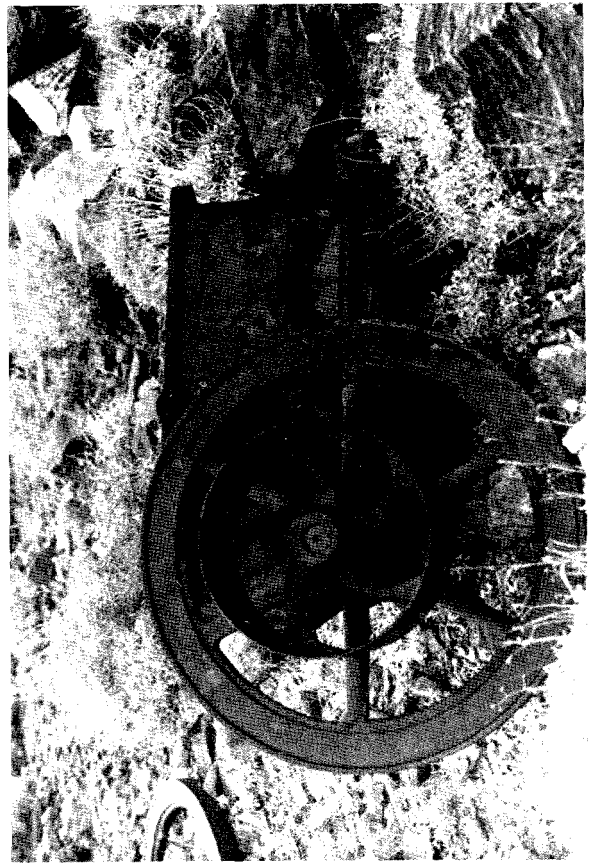
19. United States, Department of the Interior, National Park Service, Kay Simpson, The Joshua Tree Road Improvements Project (Tucson: Western Archeological Center, 1981), p. 44.



Illustration 18 (left).  
Winch at Contact Mine, 1983.

Illustration 19 (bottom left).  
Site of generator, Contact Mine.

Illustration 20 (bottom right).  
Pulley and flywheel; generator cover  
that has fallen down hill at Contact  
Mine. NPS photos by Linda W.  
Greene.



to be made in selecting sites for investigation, especially in an area that offers several such opportunities. This mine does not have historical integrity or significance. Any machinery that might have been left on site when operations ceased has since been carted off. The mill associated with this operation was not located at this site. Documentation on the mine's operation is also sketchy, with no indication that varied technological processes were ever introduced here. The property was only an intermittent producer. It is recommended the site be left to benign neglect.

(2) Contact Mine

The Contact Mine was visited during inspections of hazardous mines in the monument made in the early 1970s. Found at the site were old mining and hoisting equipment and sloping shafts in excess of twenty-five feet dug along the ore vein. Another survey trip was made by this writer in February 1983. The road to the mine area takes off to the west about  $\frac{1}{2}$  mile south of the Twentynine Palms entrance. A jeep trail that is barely discernible in its early stages through the flats, the access road is shored with rock walls as it curves for about  $1\frac{1}{4}$  miles along the east-facing slope of the ridges. Little is left from the mining operations, although there is some machinery on site, consisting of a winch above one vertical shaft, and a generator. Vestiges of a tram track remain in place on the tailings dump. Located just below the workings, the wooden mine cabin has collapsed.

The Contact Mine is not considered to be of historical significance. Although hoisting equipment is still in place, it is not considered to be of particular technological importance or interpretive value. The machinery left on site has been photographed and recorded. The one open shaft and the exploratory cuts made along the vein pose a potential safety hazard. The main shaft is timbered, which might aid escape if a careless visitor fell in. It is doubtful that visitation is frequent, because the unimproved dirt track leading from the main monument road is very difficult to find and the better road through the mountains is hidden from view from the paved road unless one knows



Illustration 21.

My Mine. Tunnel and covered shaft in background, stone-walled shelter with collapsing roof to right, 1983. NPS photo by Linda W. Greene.

exactly where to look. It is recommended the site be left to natural decay.

(3) Fore Aces Lode

This open shaft near the Anaconda Mine is in the northeast quarter of Section 21, T1S, R9E.

(4) Silver Bell Mine

This mine was not visited by the writer. Faint traces of a trail can be seen leading east into the mountains from the main monument road although no access is shown on the U.S.G.S. Twentynine Palms quad map.

(5) Mymine (My Mine)

Mymine is located at the top of the north-facing slope of the small knoll about one-eighth of a mile northeast of the Pinto Wye intersection. When it was visited in connection with mine safing operations in 1967, several pieces of mining equipment that were thought to be of historical interest were found. Miscellaneous tools and supplies were stored in the small shack near the main shaft and an ore cart was still in place on the tram track system. The cabin, used for living and storage, was in reasonable shape. Another survey of the mine area was made in February 1983. The main tunnel was closed with a wooden door while an iron drop door covered the shaft. Tram tracks leading from the shaft or tunnel to the tailings dump were still in place. The ore cart was gone. North-northeast of the main shaft about fifty feet is a smaller one that has been filled in. The cabin outside the tunnel entrance on the north is rapidly falling apart. Its walls are composed of rock, wood, and chickenwire; its roof was covered with a layer of dirt and stone several inches thick, but is now falling through. No tools or artifacts of any significance were found.

This site appears to have no historical significance. Its proximity to the Pinto Wye arrastra poses some question as to whether ore from this site might have been processed there, but no data has been found to substantiate such a theory. No mining artifacts

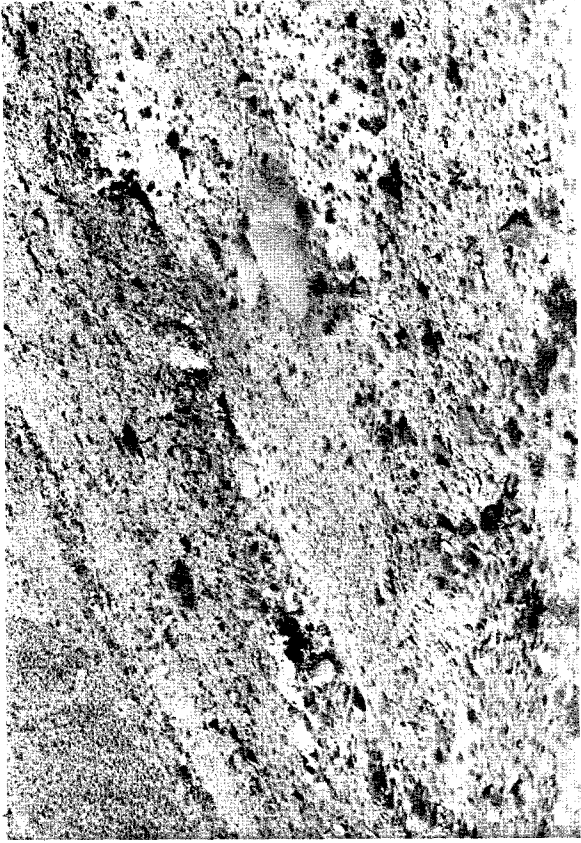


Illustration 22 (top left).  
Shored rubble road leading from Utah  
Trail to unidentified mine in Section  
17, T1S, R9E, 1982.

Illustration 23 (top right).  
Adits on hillside to right, building  
ruins lower down.

Illustration 24 (left).  
Rock wall foundations for cabins, two  
levels. NPS photos by Linda W.  
Greene.



of interpretive significance were found. The site's proximity to the road and the fact that one cut associated with the mine is visible to passers-by has undoubtedly led to exploration of the area and probably some removal of items. No danger exists at the site due to mine safetying operations. It is recommended the site be left to natural deterioration.

(6) Unidentified Mine in SE $\frac{1}{4}$ , Section 17, T1S, R9E

This site is located at the end of a 1 $\frac{1}{2}$ -mile-long road taking off west into the mountains from Utah Trail Highway about 1/8 mile north of the Twentynine Palms entrance to the monument. It would appear the mine was worked seriously for some period of time because of the physical efforts exerted in building the road and shoring it up in many places. (This road is not passable by vehicle.) The wagon road ultimately turns into a trail following along the side of a wash. Up in the hills at the end of the wash is a two-level cabin or tent site. The amount of wood lying around strongly indicates there were wooden structures there. Much tin can and metal refuse lies strewn around, as well as thick purple glass fragments and remains of pottery dishes. Above the habitation site are large dumps and two adits, one caved in and the other going back about 300 feet into the hillside. Outside the latter tunnel a platform area has been cleared and outlined with rocks. It is bare and measures about twenty-six feet across. Neither the name of this mine operation nor its ownership record or dates of operation are known. A general guess as to the time period involved would be 1890 to 1917.

Because no historical information has been found relevant to this mine, the writer can only say it has no known historical significance. No artifactual material was seen of scientific or historical worth. The site does not appear to warrant investigation by historical archeologists due to the small size of the site and lack of complexity of its mining operation. It is recommended the site be left to natural deterioration.

b) Mill Sites

(1) Pinto Wye Arrastra

The arrastra structure near Pinto Wye is in excellent physical condition. The center wagon wheel--the main pivot mechanism for the operation--shows little deterioration from weather or vandals. Contributing to the site's lack of visitation is the fact that no visible trail exists to the site and its existence is known by very few people. The mill's one-foot-high rock walls, chinked with a crude cement mortar, are intact. Some floor stones appear to be missing or covered with sand. The drag channel is about 2½ feet across. In the edge facing the wash on the west is the exit hole where the gold-carrying slush was conveyed through a square wooden drain pipe (still in place) into what appears to be a concrete basin settling pond, measuring about twelve by four feet. Four dragstones are present that hung from the four wooden timbers that rotated on the pivot. It is probable the arrastra was mule or horse operated, there being no evidence of mechanization.

Only one other "wagon wheel" arrastra is known to have been found on a National Park Service property, and that was at Arrastra Spring in Lake Mead National Recreation Area. The use of arrastras in the nineteenth-century West is well documented, the Western Regional Office possessing a good compilation of materials from mining journals and other historical sources on the subject to which NPS examples may be compared as they are found and recorded. Several arrastras were used in the Joshua Tree National Monument area, but this is the only one of this type found. Several arrastras are known now to exist in parks in this region, ranging from small, crude mills in which the ore was crushed by dragstones probably pushed around by human labor, to larger ones such as that at Pinto Wye probably run by animal power, a mechanized one at the site of the Desert Queen Mill at Keys Ranch, and a 1930s example run by steam power in Warm Spring Canyon, Death Valley National Monument.

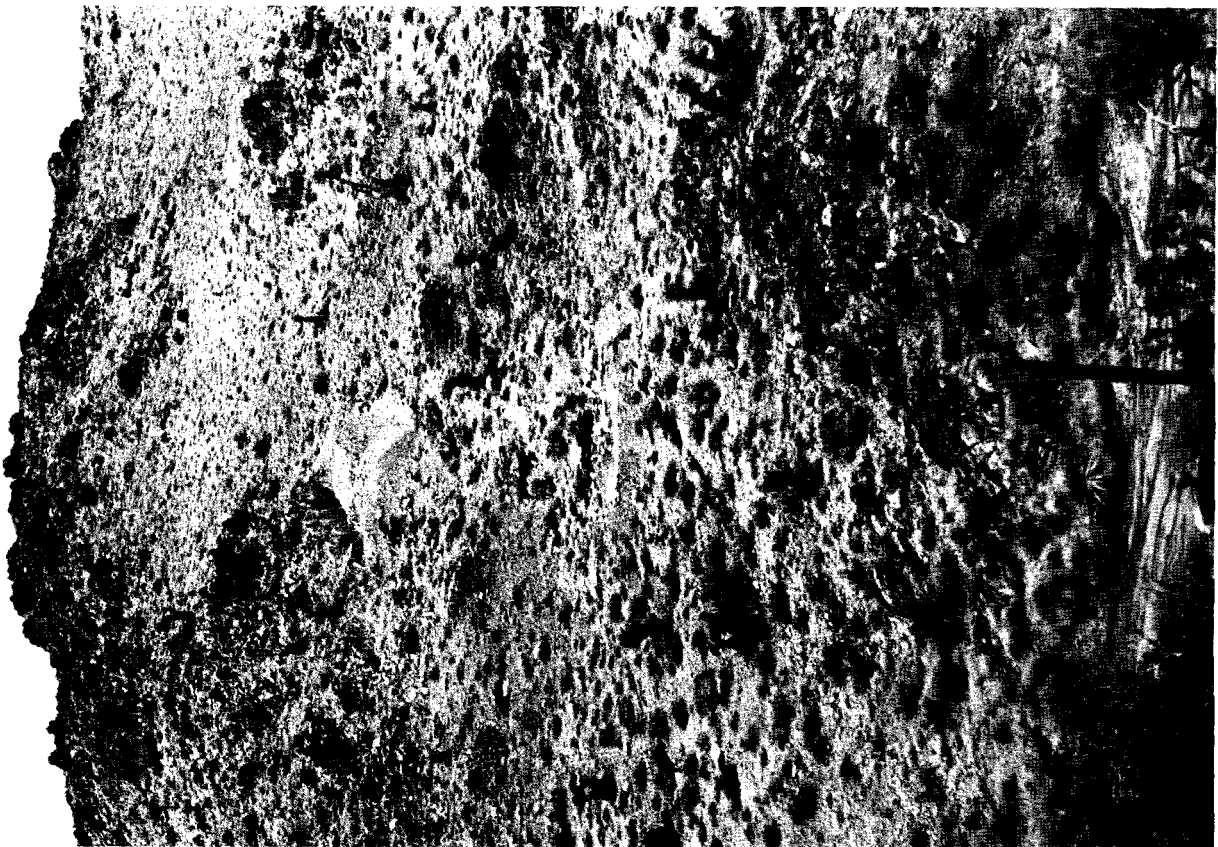
This arrastra is considered to be regionally significant as the only wagon wheel arrastra yet found possessing





Illustration 25 (left). Pinto Wye arrastra is in center of picture, mine and waste dump on hillside above, 1976, view to northeast.

Illustration 26 (above). Pinto Wye arrastra, looking down toward wash, 1976. NPS photos by Gordon S. Chappell.



integrity of location and construction. The wheel arrastra at Lake Mead was not as elaborate a design and was badly eroded in its original location, similar to this one, on the side of a wash. That mill, however, was later dug up and ultimately reconstructed at the visitor center. This is an important example of a nineteenth- and early twentieth-century milling technique and would be a valid subject for both historical and industrial archeology. Several questions relevant to the site still need to be answered. The only nearby water source to supply the arrastra is the wash at the bottom of the hill, which is now dry. Was water transported in? What was the source of ore treated here? Little mining appears to have been carried on in the adit on the hillside above. Was this a custom mill operation, serving perhaps Mymine, the Anaconda, or the Silver Bell claims? Data was found that C.A. Benito of Twentynine Palms leased (or owned) the Golden Bell (Blue Bell) Mine farther south off the Pinto Basin Road from 1954 to 1957 and evidently performed some cleanup work. Assuming he was related to the AED claim locators, possibly he brought ore up to this arrastra to be worked during those years. The excellent condition of the mill might suggest the builder had high hopes for rich discoveries but ultimately barely used the arrastra. Archeologists should be able to determine if other structures existed in the area, making this a more complex operation than it now appears.

Preservation of the wheel requires treatment of wood and metal parts with preservative. The site should be protected by monument staff and checked periodically for signs of vandalism or severe weathering. An interpretive sign could be placed near the tunnel uphill from the arrastra. The site will be nominated to the National Register of Historic Places.

B. Dale Mining District

1. History

Around 1883 Lew Curtis discovered placer gold east of Twentynine Palms and started a rush that for a while drew attention from the Twentynine Palms oasis. The deposit he found lay near the south

boundary of San Bernardino County within the canyons that drained into the northern end of Pinto Basin. At Burt's Dry Lake (later Dale Dry Lake), about fifteen miles east of Twentynine Palms, John Burt dug a well and built an arrastra to mill the cemented gravel. Placer operations proved profitable, and soon the town of Virginia Dale, later abbreviated to Dale, grew up at this spot, near the present intersection of Highway 62 and the Gold Crown Road. Its population reportedly reached close to one thousand people, most living in tents that could be easily moved. As placering gave out and lode deposits were discovered in the Pinto Mountains, the miners moved closer to them, and another town called Dale the Second, about 4½ miles farther south on the Gold Crown Road, replaced the earlier community. By 1915 Old Dale had almost disappeared.

The first major quartz mine in the new district was the Virginia Dale, discovered in 1885 by Tom B. Lyons and John (Chuckwalla) Wilson. The Virginia Dale Mining Company began operating in 1886. Water was piped to the mine from the well at Old Dale and both mining and milling operations were established. A five-stamp mill was erected on the property in 1887, but due to the high costs of mining and milling, operations were suspended in 1889. By 1894 the mine was idle. The first five-stamp mill at the mine was buried in a sandstorm in 1896;<sup>20</sup> that summer another five-stamp mill was moved there from the oasis and work actively commenced on six claims.

The Supply Mine, richest and most extensive in the district, was located about two miles farther south along the Gold Crown Road. Its discovery around the turn of the century caused the area's population center to move even farther southeast, off the Gold Crown

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20. Engineering and Mining Journal 61, no. 13 (Mar. 28, 1896): 308.

Road about one-half mile from the Supply Mine side road, and then east one mile. This spot became Dale the Third (New Dale). This town probably had the largest population of the three, for the Supply Mine was a big producer, operating until about 1915. Extensive mining facilities were set up on the mountain overlooking the town. The most profitable operations took place during 1914, when the mine was operated by the United Greenwater Copper Company, headed by financier Charles Schwab. In 1931 the Supply had a 100-ton-capacity mill including a crusher and cyanide plant. Both the Supply and Virginia Dale were worked intermittently until shortly before World War II. By 1942 the Supply Group had produced about one million dollars in gold.

The Brooklyn Mine, on the border between San Bernardino and Riverside counties, and the O.K. Mine were discovered in the early 1890s by John Burt, who, along with F. Botsford, worked them until 1899. In 1896 the O.K. (McKinley Bill) quartz mine had been developed by two shafts sunk on the vein. By 1898 the operators had a two-stamp mill at Dale and were erecting a cyanide plant.<sup>21</sup> (The mill was moved in 1900 to the mine to decrease expenses of hauling ore.) In the early 1900s the O.K. was taken over by the Seal of Gold Mining Company. The Brooklyn Mining Company was formed in 1901 and was active until 1916. Water for milling purposes was hauled to the mine from Cottonwood Spring until a pipeline was finally laid from Dale Lake. In 1905 the Brooklyn had two three-stamp mills. In 1912 the United Greenwater Copper Company took out a forty-nine-year lease with an attached option price of two million dollars for the O.K. and Supply groups of mining claims.<sup>22</sup>

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21. Ibid. 66, no. 21 (Nov. 19, 1898), p. 615; California State Mining Bureau, Thirteenth Report (Third Biennial) of the State Mineralogist for the two years ending September 15, 1896 (Sacramento: State Office, 1896), p. 313.

22. "Landwehr Figures in \$2,000,000 Deal," Riverside (Ca.) Daily Press, Oct. 28, 1912.

Schwab hired large crews with the full intent of spending several hundred thousand dollars opening up his properties, and it was planned that Dale would become a substantial mining town. By 1914 considerable progress in mining activity had been made in the district as a direct result of Schwab's interest in the area. The Brooklyn was operated intermittently into the 1930s. In 1931 it had a three-stamp mill; by 1934 its operations were confined to treating tailings.

The Virginia Dale District, centered in T1S, R12E, although discovered in the 1880s, was not very productive until the 1890s. In 1894 the Engineering and Mining Journal reported that

there are a number of mining districts in that region lying between the Atlantic & Pacific and the Southern Pacific roads, which require capital and energy, with experienced management. The mines are there, but wood and water are absent. Water can usually be obtained by sinking in the dry washes, and petroleum is looked to for fuel. . . . All of the mines will be worked in the future and a large amount of gold produced. The districts are Twenty-nine Palms, Virginia Dale, Monte Negras and Eagle Mountain. The veins are from one to four feet wide and the ore is high grade. . . .<sup>23</sup>

In 1899 the Dale District was described as producing over six thousand dollars a month despite the current high cost of operating. A milling center, ore was hauled there from a number of mines within a few miles radius.<sup>24</sup> By 1902 the miners of the area had abandoned the name Virginia Dale Mining District and formed the Dale District, with the same boundaries. The town and post office of Dale were moved to near

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23. 57, no. 19 (May 12, 1894): 445.

24. Ekman et al., Old Mines and Ghost Camps of California, p. 141.

the O.K. Mine. Stages ran from Palm Springs once a week. The district saw moderate activity in the early 1900s and 1920s. In early 1910 there were four producing mines in the district and thirty-five stamps at work.<sup>25</sup> Roads were a major impediment to progress in this mining district. In the early days four- and six-horse teams and mule outfits hauled lumber, machinery, and supplies to the mines, a long and arduous trip. Even when trucks were being used later, the roads were primitive and often caused breakdowns. A major part of this problem was that at first the roads were not maintained by the county and depended for repair on those who used them.

The state mining report for 1915-16 stated that during the previous five or six years more active and systematic mining work had been carried on. Several properties were operating, extending over eight or ten square miles. The main properties being worked, however, were confined to an area of about four square miles. Principal mines were the Supply Group, O.K. Group, Brooklyn, Virginia Dale, Ivanhoe, Carlisle, Leota(i), and Bon Ton. Since cessation of work by the United Greenwater Copper Company in 1915, very little actual mining had been done in the district other than assessment.<sup>26</sup> A visitor to the Twentynine Palms area in 1926 was told that the old ghost town of Dale was again being populated, "that the Aladdin mine in a nearby canyon has been reopened, and the old buildings at Dale are being moved to this new location."<sup>27</sup> In 1927 it was reported that satisfactory progress was being made in the development and operation of the Supply Mine of the

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25. Engineering and Mining Journal 89, no. 9 (Feb. 26, 1910): 485.

26. California State Mining Bureau, Report XV of the State Mineralogist, Mines and Mineral Resources of Portions of California, Chapters of State Mineralogist's Report, Biennial Period 1915-16 (Sacramento: State Printing Office, 1919), pp. 801-3.

27. Fred R. Archer, "Monuments of the Gods," Touring Topics (December 1926), p. 20.

Arrowhead Development Company in the Dale District. Drifting in the Jean shaft was opening up quantities of gold ore.<sup>28</sup> Most properties in the Dale District fared badly during World War II. Few watchmen remained on duty, leaving valuable mill properties vulnerable to scavenging by scrap metal collectors.

## 2. Mine Sites

Mining activity increased in the 1930s when the Great Depression hit. When Joshua Tree National Monument was established on August 10, 1936, it was noted that this newest national monument included within its boundaries the principal mineral sections of Riverside County. At the time of the park's establishment, the Virginia Dale Mining District was very active. A number of properties were being developed because of the fifty-ton cyanide plant of the Gold Crown Mining Company, on the boundary line of San Bernardino and Riverside counties, that was then operating at full capacity. In the latter part of the 1930s (ca. 1938), after the monument had been established, several properties were still operating. A synopsis of these sites and their status at that time is presented below. Although most of them are north of the monument boundary, many of their owners and their milling facilities were involved with mining operations farther south.

### a) Gold Crown Mine

Situated in Sections 15 and 16, T2S, R12E, this group included twenty-five claim locations. It is in Riverside County, about nine miles south of New Dale and twenty-seven road miles from Twentynine Palms. This property was equipped with a sixty-ton ball mill in 1937 and thirty tons of ore per day were being mined and milled from the Lureman (Lorman) Mine in T1S, R12E. Ores from other adjacent mines were also being treated on a custom basis at the Gold Crown mill.<sup>29</sup> In the 1930s the owner of the property was the Gold Crown Mining Company, based in Los Angeles. The same company had a lease and

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28. Engineering and Mining Journal 124, no. 5 (July 30, 1927): 186.

29. Guthrey to Dir. of Investig., May 6, 1937, p. 11.

bond on the Nightingale Group of six claims and on the Supply Mine, comprising nine patented claims in Section 35, T1N, R11E. This mining company had been operating this particular property since 1929. The Gold Crown Group of claims had been developed by four shafts from 100 to 600 feet in depth. The Supply Mine had been developed by a shaft 1,100 feet deep with 10,000 feet of underground workings. Its production record so far was \$500,000. The Nightingale Group had a shaft 250 feet deep. About 20,000 tons of ore had been developed carrying an average value of \$18 per ton in gold.

The Gold Crown Mining Company had installed a fifty-ton modern cyanide plant by 1936. Water was brought in a four-inch pipeline from the company's well at New Dale to the mill. Total investment by the company in machinery and development work was more than \$150,000. The mill was also operating on a custom basis, which increased mining activity in the district. The property was described at this time as a steady producer of gold bullion that was shipped to the U.S. Mint in San Francisco. Thirty men were employed. The Gold Crown mill was still operating in 1940 (though at a different location, evidently) and employing thirty-five men. By 1943 the mine, which had been operated by the Gold Crown Mining Company from about January 1930 to December 1942, was idle and the fifty-ton cyanide plant had been dismantled. In 1946 a report on the Gold Crown Mine stated that it was operated intermittently from 1926 to 1938 by the Gold Crown Mining Company. The fifty-ton plant had been installed on the property in early 1935 and treated ore from the Gold Crown and Nightingale mines until 1938, when the mill was moved to the Supply and Nightingale mines, the Gold Crown ore bodies having been depleted. The claims held by the Gold Crown Mining Company were abandoned in 1938 and all equipment moved to the Supply Mine.

In 1953 a further report on the Supply (Gold Crown, Jean, Luhrman, Nightingale, and Supply claims) Mine Group appeared. These properties were located in Sections 21, 22, 27, and 28, T1S, R12E, SBM. This report confirmed that the Supply Group, in the course of its operations, had yielded gold ore valued at about one million dollars,



becoming the largest producer in the Dale District. Nearly half this amount came from the Supply Mine when it was operated by the Seal of Gold Mining Company and later the United Greenwater Copper Company, both prior to 1915. The mine was then idle until 1928. The Nightingale became active when its properties were leased by the Gold Crown Mining Company in 1930. Operating until 1942, this mine reportedly yielded over \$500,000. Except for minor leasing operations, all these properties had since been idle.<sup>30</sup>

b) Heely & Cross Mine

This property was described as located two miles north of the Gold Crown Mine, and comprised five claims. Development work consisted of an adit 700 feet long. Its ore was being milled at the Gold Crown plant.<sup>31</sup>

c) Star Mine

This group of four claims was situated 3½ miles west of the Gold Crown Mine in T1S, R12E. (The location references for several of these mines are inaccurate). A shaft 100 feet deep had produced ore that was processed in a small mill and crusher.<sup>32</sup>

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30. "Notes on Mining Activity in Dale Mining District which is Located Partly in San Bernardino and in Riverside Counties, in the Joshua Tree National Monument," no date (probably late 1936 or early 1937), Central Classified Files, 1933-49, RG 79, NA, p. 2; State of California, Dept. of Natural Resources, Division of Mines, California Journal of Mines and Geology (Quarterly Chapter of State Mineralogist's Report XXXVI) (Sacramento: State Printing Office, 1940), p. 63; State of California, Dept. of Natural Resources, Division of Mines, California Journal of Mines and Geology (Quarterly Chapter of State Mineralogist's Report XXXIX) (Sacramento: State Printing Office, 1943), pp. 449-51; State of California, Dept. of Natural Resources, Division of Mines, California Journal of Mines and Geology 41, no. 3 (July 1945) (Quarterly Chapter of State Mineralogist's Report XLI) (Sacramento: State Office, 1946?), p. 130; California Journal of Mines and Geology, Jan.-Apr. 1953, p. 81. According to Lester Spell, the Nightingale and Luhrman mines were the same property. "History of Dale Mining District, California," as told to Susan Moore by Lester Spell, no date, typescript in JTNM files, p. 1.

31. Guthrey to Dir. of Investig., May 6, 1937, p. 18.

32. Ibid.

d) Big Bozo Claim

This location was made March 9, 1937, by Florence Hall Ebert and was situated about one mile south of the Star Mine, in T1S, R12E. A 200-foot-long adit was producing ore averaging \$15 per ton in gold.<sup>33</sup>

e) Meek Group

One mile east of the Gold Crown property in T2S, R13E, this mine was developed by an 80-foot-deep shaft.<sup>34</sup>

f) Frank Hill Group

The location of this mine is given as three miles west of the Gold Crown Mine, in T1S, R12E (?). The claims in this group were located April 1, 1933, by Frank Hill. A 130-foot-deep shaft was developed on one of the claims.<sup>35</sup>

g) McKeith Mine

These eight claims, located in 1932 by Roger Dalton and A.V. Zamorano, are described as three miles west of the Gold Crown Mine in T1S, R12E.<sup>36</sup>

h) Lena Mine

This property, one mile south of the McKeith claim, in T1S, R12E, was also located by Dalton and Zamorano in 1932. Development consisted of a 210-foot-deep shaft and two 100-foot-long drifts.<sup>37</sup>

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33. Ibid.

34. Ibid., p. 17.

35. Ibid., p. 19.

36. Ibid.

37. Ibid.

i) Ivanhoe Mine

Comprising thirteen claims twelve miles east of New Dale, this property was owned by Denny B. Pardo of San Bernardino, California, and under lease and bond to the Sunbeam Mining Company of the same city. The company was installing a twenty-five-ton cyanide plant at New Dale to treat the Ivanhoe ore. The finished plant would employ twenty men. The mine had been developed by a 215-foot-deep shaft with 1,000 feet of lateral development. The average grade of ore was reported to be \$15 per ton in gold.<sup>38</sup>

j) Carlyle Mine

These eight claims were located seven miles northeast of New Dale, in Section 11, T1S, R12E, and were owned by the Carlyle Mining Corporation of Beverly Hills, California. Development at the mine consisted of two tunnels--the upper following 1,200 feet along the vein, the lower 1,500 feet long--with 5,000 feet of crosscuts, drifts, and raises. The average grade of ore was \$15 per ton in gold and silver. The company had invested about \$150,000 in mining and a milling plant. A 2,680-foot-long aerial tram connected the mine and mill. A pumping plant was built on the southwest shore of Dale Dry Lake with a three-inch pipeline to the mill--a modern flotation plant with a capacity of sixty tons every twenty-four hours. Concentrates were produced with a value of \$800 to \$1,000 per ton. Thirty men were employed. The mine's most active period was between June 1936 and March 1939. It was last operated by a lessee in 1941.<sup>39</sup>

k) Jupiter Mine

These five claims were located seven miles northeast of New Dale, adjoining the Carlyle Mining Company's property. Development consisted of a 200-foot-long tunnel on the vein, with 500 feet

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38. "Notes on Mining Activity in Dale Mining District," p. 1.

39. Ibid.; California Journal of Mines and Geology, Jan.-Apr. 1953, pp. 73-74.

of drifts, crosscuts, and raises. Some of its ore had been milled by the Carlyle Mining Company and showed a value of \$20 per ton. The lessees were planning to ship twenty tons of ore per day to the Gold Crown Mining Company's mill. Ten men were working the mine.<sup>40</sup>

l) O.K. Mine

These five patented claims adjoined the Supply Mine. It had been developed by an 800-foot-deep shaft, with 5,000 feet of underground workings. Six men were employed in extracting the ore, which was shipped to the Gold Crown mill for treatment. Past production from the property amounted to \$200,000.<sup>41</sup>

m) Los Angeles-Brooklyn Mines

This group of fifteen claims was owned by the Campbell Gold Lease Company of San Bernardino, and was under lease. The Los Angeles was developed by a 750-foot-deep shaft, with 2,500 feet of underground workings. The Brooklyn group was developed by a 550-foot-long tunnel and 200-foot winze. The two properties had a production record of over \$200,000. Ore was hauled to the Gold Crown mill for treatment. Six men were employed.<sup>42</sup>

n) Sunrise Mines (for more detail, see Monte Negras Mining District, Section D)

These forty-four claims were owned by Sunrise Mines, Inc., of San Diego, California. The Sunrise Group was developed by a

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40. "Notes on Mining Activity in Dale Mining District," p. 1.

41. Ibid., p. 2. This O.K. Mine was patented on Aug. 1, 1936, as the Storm King Group. L.E. Graner to Harold Ickes, Sec. of the Interior, Apr. 11, 1938, Central Classified Files, 1933-49, RG 79, NA. According to Lester Spell, there were two O.K. mines in the Dale Mining District, one about three miles south of the Supply Mine, the other on the north side of Pinto Basin, also referred to as the Goldenrod. "History of Dale Mining District, California," p. 11.

42. "Notes on Mining Activity in Dale Mining District," pp. 2-3.

300-foot-deep shaft. The Zulu Queen Group was developed by a 100-foot-deep shaft with 500 feet of drifts. A twenty-five-ton mill had been built on the Sunrise property. The company drilled a well to a depth of 600 feet, equipped with a pump and 1½-inch (later 4-inch) pipeline running one mile to the mill and camp. The company had invested \$50,000 to \$75,000 on the property. Ten men were employed on development work.<sup>43</sup>

o) Goldenrod (Golden Rod) Group

This property comprised two lode claims and a mill site and was under lease and bond to the O.K. Mining Company. Development consisted of a 200-foot-deep shaft with 500 feet of drifts. Ore was treated in a mill with a capacity of ten tons per twenty-four-hour period. The company planned installation of a twenty-five-ton cyanide plant. Three men were employed. By 1940 the O.K. Mining Company owned the property and was leasing it to the Pinto Basin Mining Company. Ore was shipped to the Gold Crown Mining Company's mill for treatment. The ten-ton mill on the property consisted of a six-inch by eight-inch jaw crusher, a three-foot by nine-foot Straub ball mill, and two three-foot by five-foot amalgamation plates. Water was hauled from the Lane (Mission) Well in Pinto Basin.<sup>44</sup> The mine was idle in 1945.

p) Mission Gold Mine (Huff and Lane) (for more detail, see Monte Negras Mining District, Section D)

These twenty-one claims in T2S, R12E, were owned by E.C. Huff of Los Angeles. The mine had been developed by shafts,

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43. Ibid., p. 3. Guthrey also reported on the Sunrise Mine, situated in T3S, R13E. He reported that sixteen claims were being developed. The Sunrise property had a Chilean mill with a capacity of twenty-five tons of ore per day. Guthrey to Dir. of Investig., May 6, 1937, p. 12.

44. "Notes on Mining Activity in Dale Mining District," p. 4; California Journal of Mines and Geology, 1940, pp. 49-50. Guthrey noted that the claims in this group were located July 1, 1931, by E.M. Campbell, Adele Campbell, and John L. Campbell. Guthrey to Dir. of Investig., May 6, 1937, p. 17.

the deepest being 570 feet, with 600 feet of drifts. Mill equipment consisted of a ten-foot arrastra. Three men were employed.<sup>45</sup>

q) Virginia Dale Mine

This property consisted of one mining location and one mill site. The mine had been developed to a depth of 300 feet and operated intermittently since about 1896. A small mill and cyanide plant had been built. The property was reported to have produced more than \$200,000.<sup>46</sup> The Virginia Dale was also reported on in the 1950s. At this time seven claims in Section 20, T1S, R11E, SBM, were owned by Harry Hess of Morongo Valley, California. The mine's principal periods of activity had been 1908, 1928-29, and 1934-37. Development consisted at this time of a shaft and drifts. A forty-ton mill on the property treated the ore by amalgamation and cyanidation. Water was pumped five miles from an Old Dale well.<sup>47</sup>

r) Other Mines

Slight information has been found on the

Sunset Group--seven claims one mile west (actually southeast) of Gold Crown Mine. Elevation 2,000 feet. Owned by Jack Meek of Twentynine Palms. Several shallow shafts sunk. Idle in 1929.<sup>48</sup>

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45. "Notes on Mining Activity in Dale Mining District," p. 4.

46. Guthrey to Dir. of Investig., May 6, 1937, pp. 11-12.

47. California Journal of Mines and Geology, Jan.-Apr. 1953, pp. 83-86.

48. State of California, Dept. of Natural Resources, Division of Mines and Mining, Report XXV of the State Mineralogist Covering Mining in California and the Activities of the Division of Mines and Mining (Sacramento: State Printing Office, 1929), p. 488.

Gypsy Mine--quartz claim four miles west of Virginia Dale. Elevation 1,800 feet. Shaft sunk 115 feet. Drifts. One-stamp mill built on dry lake. Owners in San Bernardino.<sup>49</sup>

Gold Standard Mine (Standard-Duplex)--four claims on south slope of Dale Hills. Tunnels and shafts. Installing two-stamp mill in 1940.<sup>50</sup>

Gold Rose Mine--six claims adjoining Los Angeles Group on southwest. On south slope of Dale Mountains. Elevation 1,700 feet. Mine equipment consists of twenty-five-ton ore bin, Blake crusher, Wheeler ball mill, amalgamating jig and plates, cone tank, and two settling tanks. Six men.<sup>51</sup> Idle in 1943.

Top Nest Mine--Section 7, T1S, R13E. Six claims on east slope of Dale Mountains, three miles northeast of New Dale. Elevation 3,000 feet. Owner, Hayward Lumber Co., Palm Springs, Ca. Adjoins Ivanhoe Group on northwest. Ore loaded into trucks and hauled to Sunrise mill in Pinto Basin for treatment.<sup>52</sup> Idle in 1943.

Additional mines in the area were the Exchequer, Jim Boy Group, June Group, Star King, Iron Age, Capital, Pardo, and North Star Group.

### 3. Evaluation of Resources and Recommendations

No recommendations are made because all sites are outside the boundaries of Joshua Tree National Monument.

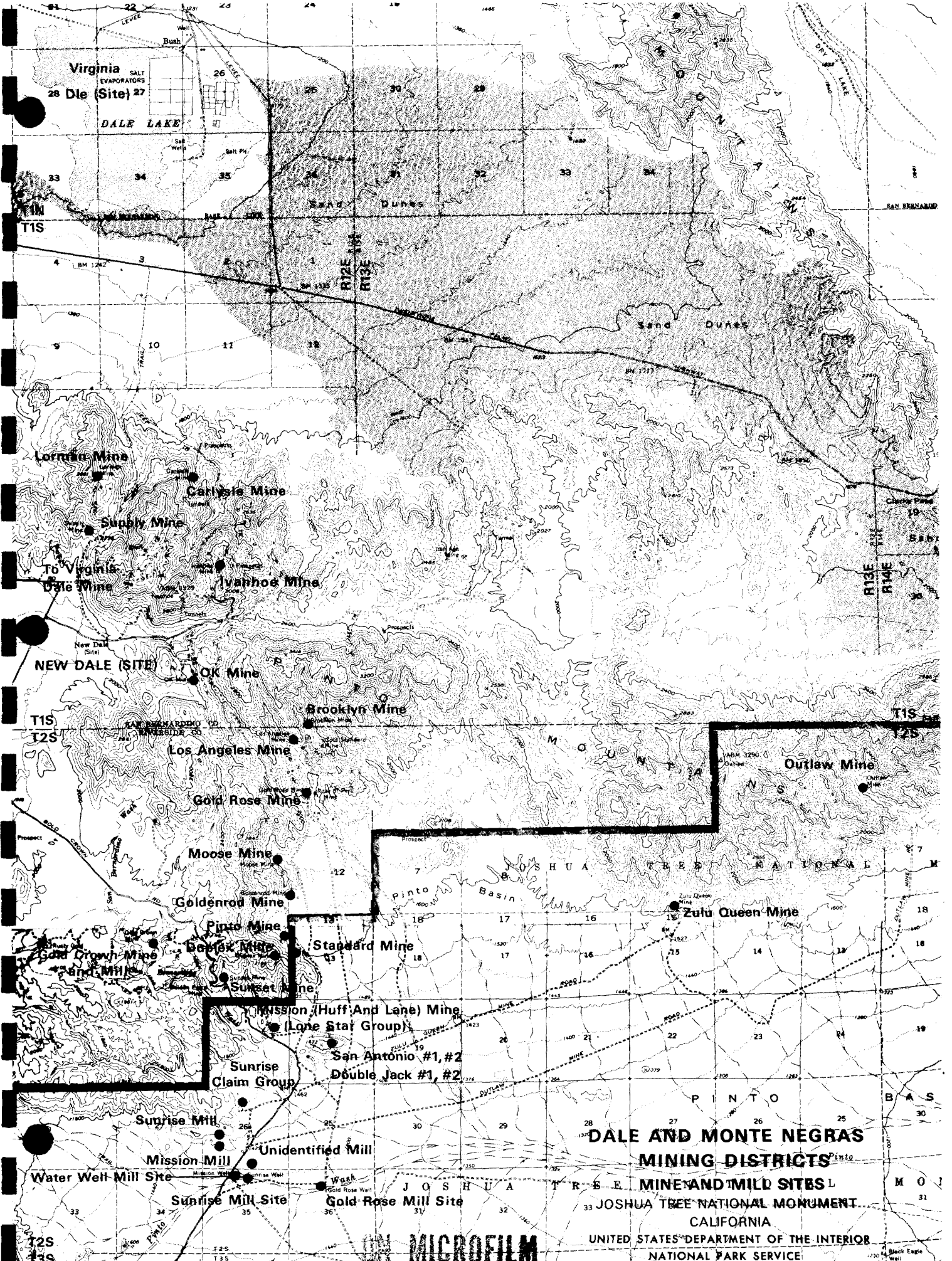
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49. Thirteenth Report of the State Mineralogist, 1896, p. 311.

50. California Journal of Mines and Geology, 1940, p. 50.

51. Ibid., p. 67.

52. Ibid., p. 79.



**DALE AND MONTE NEGRAS  
MINING DISTRICTS**

**JOSHUA TREE MINE AND MILL SITES**  
**JOSHUA TREE NATIONAL MONUMENT**  
**CALIFORNIA**

UNITED STATES DEPARTMENT OF THE INTERIOR  
 NATIONAL PARK SERVICE

**MICROFILM**



C. Rattler Mining District

1. History

The exact boundaries of the early Rattler Mining District were not found by this writer, although it would appear from the few times the name was used that it either included or once designated both the Twentynine Palms and Dale mining districts. An area by this name was referenced in the 1880s:

Lying off in the desert that occupies the southeastern angle of San Diego County are a number of mining districts, of which the following are the most notable: the Rattler, situated twenty miles east from the locality, on the Southern Pacific Railroad, known as the "Twenty-nine Palms" . . . the Ogilby . . . and the Poorman. . . . These districts contain numerous auriferous veins, some of which have, under extensive working, shown large values. The most of the ore here is, in fact, high grade and easy of reduction. . . .

Further confusing the location of this district, the writer continues:

Along several of the arroyos here tributary to the Colorado, placers have been worked for many years past. In some of these diggings, dry washing is still practised by the Mexicans. . . . In this part of San Diego County, probably in the Rattler District and near, if not on the very site of, what is now the Cargo Muchacho Mine, was obtained the first gold ever found in California. . . .<sup>53</sup>

The above descriptions suggest that the Rattler District started east of the oasis and stretched east and south along the Colorado River.

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53. Henry De Groot, "The Mining Resources of Southern California," Overland Monthly IX (Second Series), no. 53 (May 1887): 457-58.

2. Mine Sites

Mine sites possibly once referred to as being in the Rattler District have been discussed here under their later district designations.

3. Mill Sites

On January 15, 1886, a Rattler Mill Site, said to be connected with the Rattler Mine situated in the Rattler District of San Bernardino County, California, was located. It was described as adjoining the Virginia Dale Mill Site and about three miles north of the Virginia Dale Mine and about twenty miles east of Twentynine Palms.<sup>54</sup>

The California state mineralogist, in discussing the mill erected by the Virginia Dale Mining Company in 1887, described the property as located in the Rattler District.<sup>55</sup>

D. Monte Negras Mining District

1. History

The Monte Negras District, in the eastern portion of Joshua Tree National Monument, was organized between 1890 and 1892. It was described as being

22 miles northeast of Cottonwood Springs, 16 miles north of Eagle Mountain, and about 6 miles south from Virginia Dale. The belt is about 1½ miles in width and 5 miles in length. The veins trend north and south.

This new district, which has been named the Monte Negras, or Black Mountain District, has attracted considerable attention by

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54. Book B, Mining Records, San Bernardino County, Hall of Records, San Bernardino, Ca., p. 403.

55. Ninth Annual Report of the State Mineralogist, 1890, p. 238.

the discovery in one of the claims of nuggets of gold and quartz of extreme richness.<sup>56</sup>

The state mineralogist visited the new district in May 1892 and carefully examined the claims and adjacent country. He described the camp as being at an elevation of 1,520 feet on the south side of a range of hills forty-five miles northeast of Walters Station, a stop on the Southern Pacific Railroad. A "fair" desert road led from there to the camp. The report pointed out that wood was not obtainable near the mines and water very scarce, although a well had been sunk in a basin at Virginia Dale, a few miles north.

Principal mines of the district were listed as the Great Eastern, Venus, Columbus, Summit, Porcupine, Schiller, Hillerman, Annie Rooney, Ethel, Republican, Ramona, McKinley Bill, and Revenue. Their ores ranged in value from \$20 to over \$100 per ton.<sup>57</sup>

Work in the district progressed slowly. By 1894 little had been accomplished. A few tons of ore had been processed in a small stamp mill at Virginia Dale, with unknown results. Assessment work was delinquent in most cases and several claims had been relocated.<sup>58</sup>

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56. California State Mining Bureau, Eleventh Report of the State Mineralogist, (First Biennial,) Two Years ending September 15, 1892 (Sacramento: State Office, 1893), p. 368.

57. Ibid., p. 369.

58. California State Mining Bureau, Twelfth Report of the State Mineralogist, (Second Biennial,) Two Years Ending September 15, 1894 (Sacramento: State Office, 1894), p. 224.

Within the next couple of years two mills were built in the Virginia Dale area that presumably were used to process some of the Monte Negras District ores. Claims on the south side of the district--the Columbus, Porcupine, Republican, Summit, and Venus--which had been developed by shallow shafts and short tunnels, were hauling their ore to an arrastra at Cottonwood Spring for treatment.<sup>59</sup>

By 1915-16 what were described as the principal mines of the district were idle: The Ramona (Ingersoll) Mine, developed by shafts of forty and eighty feet; the O.K., mined through shafts of thirty and forty feet; and the S.S., four miles south of Virginia Dale and discovered by T.B. Lyon in 1894. The O.K. Mine, owned by Esler and Ingersoll of San Bernardino, hauled its ore to the mill at Virginia Dale. (Strangely, the O.K. was described as an old forgotten property in 1929.) Two of these mines, at least, were actually in the Dale District. Also listed as being in the Monte Negras District were nine claims in Sections 4, 8, and 9, T3S, R9E, owned by the Gold Galena Mining Company (Gold Coin Mine), and a property in Section 17, T3S, R10E, being operated by a relatively new Los Angeles-based firm--the New El Dorado Consolidated Mining Company.<sup>60</sup> These, however, will be treated in more detail in the Piñon Mining District section.

## 2. Mine Sites

### a) Ingersoll (Ramona) Mine

Few details were found regarding this mine site. In 1896 it was reported as having two shafts, forty and eighty feet deep, on the property. Because this was the same condition reported in 1915-16, it is reasonable to assume little development ever took place there. In

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59. Thirteenth Report of the State Mineralogist, 1896, p. 312.

60. Report XV of the State Mineralogist, 1919, p. 538. The Thirteenth Report of the State Mineralogist, 1896, mentioned an O.K. quartz mine eighteen miles northeast of Indio, at 3,000 feet elevation, with a thirty-foot shaft, owned by Tingman and Holland, p. 313.

Illustration 27.

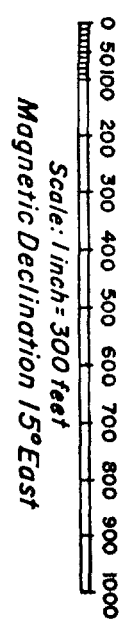
Mineral Survey No. 6295 A & B, Claim of E.H. McHann, Known as the Sunrise Claim Number One, Sunrise Number Two, Sunrise Number Three Amended and Sunrise Southern Extension Lodes, and Sunrise Mill Site Number One, Surveyed May 28 to June 3, 1942. From Western Regional Office, NPS.

# MINERAL SURVEY No. 6295 A & B

CLAIM OF  
E. H. MCHANN

KNOWN AS THE  
SUNRISE CLAIM NUMBER ONE,  
SUNRISE NUMBER TWO, SUN-  
RISE NUMBER THREE AMENDED  
AND SUNRISE SOUTHERN EXTEN-  
SION LODES, AND SUNRISE MILL  
SITE NUMBER ONE

SITUATE IN  
Secs. 26 and 35, T.2 S., R.12 E., S.B.M.  
RIVERSIDE COUNTY, CALIFORNIA  
Monte Negro Mining District  
Los Angeles Land District

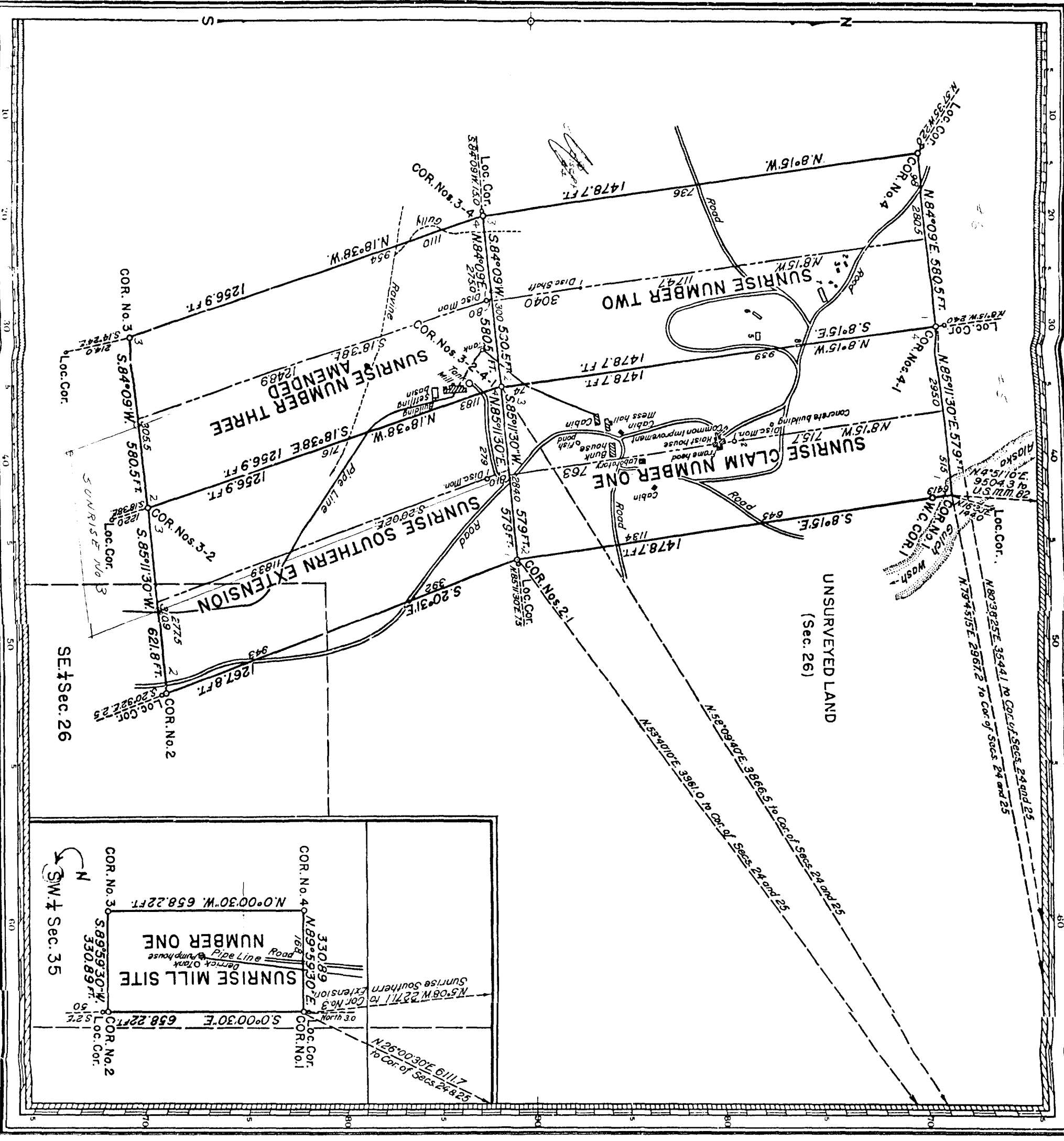


Surveyed May 28 to June 3, 1942  
by Frederic Thomasson, Mineral Surveyor

UNITED STATES DEPARTMENT OF THE INTERIOR  
GENERAL LAND OFFICE

Public Survey Office  
Glendale, California, September 9, 1944  
I hereby certify that this plat of Mineral Survey  
No. 6295 A & B, California, is strictly conformable to  
the field notes of said survey which have been exam-  
ined and approved.

*F. W. B. [Signature]*  
Acting Office Cadastral Engineer.



1929 Elser, Ingersoll, and others of San Bernardino were listed as former owners, with the present ones unknown.

b) S.S. Mine

This property south of Virginia Dale was said to have produced some very high-grade ore in the late 1890s. In 1896 its location was described as near Lyon's Well. By 1929 it was forgotten.

c) Sunrise Mine

The Sunrise Mine has been variously listed in mining records as being in the Dale, an Unorganized, the Pinto Basin, and the Monte Negro mining districts. When Monte Negras became Monte Negro (or Montenegro) is not known. A brief summary of the status of this mine group at the time the national monument was established is found in the section on the Dale Mining District. A fuller discussion of the mine's history will be presented here, where the writer feels it more appropriately belongs.

The Sunrise Mine lode might have been discovered as early as 1900, but the earliest location notices date from 1927. It was intermittently active until the mid-1930s. Around 1929 it was acquired by Sunrise Mines, Inc., of San Diego. In 1933 the Sunrise Group consisted of fifteen claims and was being operated by Sunrise Mines along with the Zulu, Moose, and Cortez groups. The main camp was located just south of the Sunrise shaft in Section 26, T2S, R12E, and included an office, mess hall, assay office, bunkhouses, and mill. Sixty-five gallons of water per minute were pumped to the camp and mill from Sunrise Well, one mile to the south in Section 35. In 1939 the Sunrise Mine was under lease to the Pinto Basin Mining and Milling Company of Pasadena, California, which was remodeling the mill for custom work. Four men were employed. The lessee treated custom ore until closed by War Production Board Order L-208 in 1942. The mine was idle in 1945 and by 1958 all buildings and equipment had been removed from the campsite vicinity. In the 1970s the Sunrise Group of nineteen unpatented claims and a millsite, located between 1927 and 1932, in the Montenegro Mining District, covered approximately 285 acres in unsurveyed Sections 23, 26, and 35, T2S, R12E, SBM, of Riverside County.

Illustration 28.

Mineral Survey No. 6294, Claim of E.H. McHann, Known as the Standard Lode, Surveyed June 3 to June 6, 1942. From Western Regional Office, NPS.



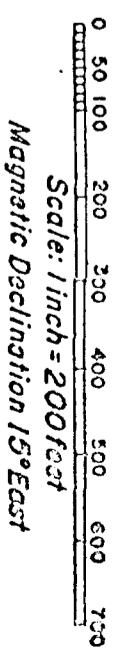
# MINERAL SURVEY

No. 6294

CLAIM OF  
E. H. MCHANN

KNOWN AS THE  
STANDARD LODE

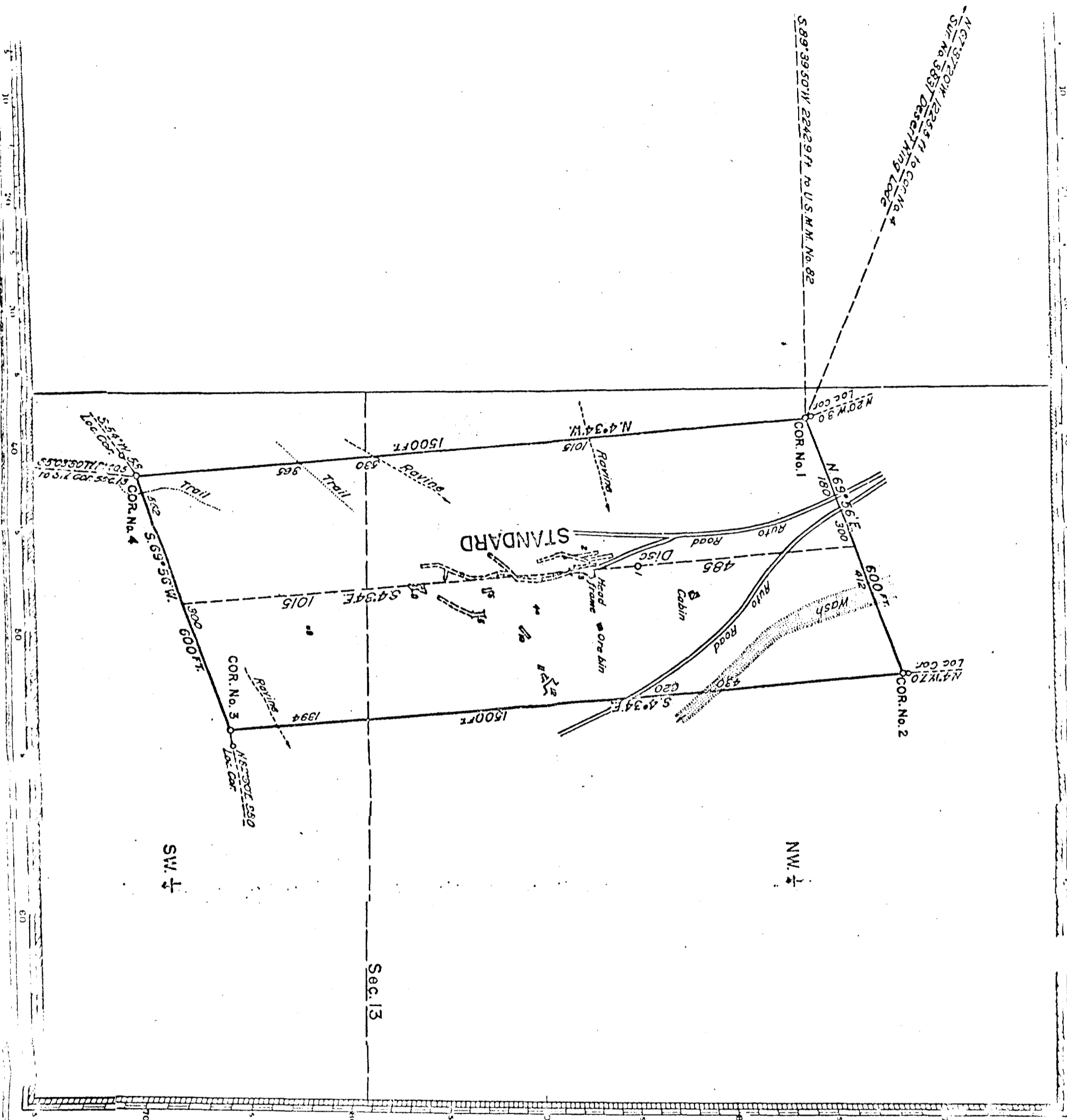
SITUATE IN  
Sec. 13, T. 2S., R. 12E., S. B. M.  
RIVERSIDE COUNTY, CALIFORNIA  
Monte Negro Mining District  
Los Angeles Land District



Surveyed June 5 to June 6, 1942  
by Frederic Thomasson, Mineral Surveyor

UNITED STATES DEPARTMENT OF THE INTERIOR  
GENERAL LAND OFFICE  
Public Survey Office  
Glendale, California, October 30, 1942  
I hereby certify that this plot of mineral survey  
No. 6294, California, is strictly conformable to the  
field notes of said survey which have been examined  
and approved.

*Frederic Thomasson*  
Mineral Surveyor



The U.S. Bureau of Mines credits Sunrise Mines, Inc., with 67.51 ounces of gold and 28 ounces of silver from 218 tons of ore in 1933, and 71 tons in 1941 yielding 15 ounces of gold. Which specific orebody yielded this ore is not known. The only surface evidence of facilities visible now are a few dirt access roads and remains of concrete foundations at the millsite, shaft, and campsite. No buildings remain. In the 1970s workings consisted of an adit and two shafts, both of which were partially boarded over. Several open cuts were noted.<sup>61</sup>

d) Standard Mine

The Standard Mine property is located in Section 13, T2S, R12E, SBM, about 2-3/4 miles north-northeast of the Mission and Sunrise wells. Little is known about the mine's earliest ownership. It was reputedly owned and operated by Willard Allen and Joe Geiger of Twentynine Palms from 1938 to 1941. By 1942 it was owned by Emilus H. McHann and was in his possession until 1950. After that time it went through at least three more owners: William C. O'Connor (Pinto Basin Mining and Milling Company), Frank D. Bronson, and Howard and Rose Fox (Sunrise Group).

e) Zulu Queen Mine

This property, near the northern boundary of the monument, in Sections 10 and 15, T2S R13E, SBM (proj.) was one of three mines owned by Sunrise Mines, Inc., in the 1930s. In 1933 the property consisted of the Zulu Group of eleven unpatented claims. The mine was worked intermittently from 1933 to 1938. Water was obtained from Sunrise Well, about six miles southwest.

f) Outlaw Mine

This property, in Section 1, T2S R13E, SBM (proj.), is about 2½ miles northeast of the Zulu Queen Mine. Ownership

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61. Paul H. Knowles, "Report on the Validity of the Sunrise Group of Claims, Joshua Tree National Monument, Riverside County, California," Jan. 18, 1974, file L3023, Office of Mining and Minerals, WRO, NPS, San Francisco, Ca., pp. 1, 7-10, 18.

of the property has not been determined. It may have been another holding of Sunrise Mines, Inc., though no mention of it has been found in records so far examined. In 1949 on the Outlaw Group, owned by W.P. O'Connor and J.P. Hayes, only assessment and road work were done.<sup>62</sup>

g) Mission Mine (Huff and Lane, Lone Star Group)

Some discrepancy exists as to the exact location of this mine. In the late 1920s it was reported that the Huff and Lane or Lone Star Group consisted of twenty-one claims in the Pinto District in T2S, R12E, at an elevation of 1,200 feet. Its owners were E.C. Huff of Los Angeles and George Lane of Mecca. The mine had been discovered by Lane in 1887. A sixty-foot shaft with drifts had been sunk on the ore vein. A twenty-ton ball mill and amalgamation plates had been set up on the property. Water came from a 600-foot-deep well lined with seven-inch casing. Six men were employed.<sup>63</sup>

In the 1930s the Mission (Huff-Lane) gold mine of twenty-one claims in T2S, R12E, was described as developed by shafts, the deepest being 570 feet, with 600 feet of drifts. Mill equipment consisted of a ten-foot arrastra. Three men were employed, the property being under lease to Messrs. Henderson, Foulkes, and Ake.<sup>64</sup> In 1940 the Lone Star Group comprising seven claims and two millsites was described in this same location. The owner, E.C. Huff, had the property under lease and bond to Mission Gold Mines, Inc. Development consisted of a 600-foot shaft, drifts, and a raise. Ore from one stope was reported to average \$25 a ton in gold. Other ore sent to the Gold Crown Mining

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62. State of California, Dept. of Natural Resources, Div. of Mines, California Journal of Mines and Geology 47, no. 2 (April 1951) (Sacramento: State Printing Office, 1951), p. 352.

63. Report XXV of the State Mineralogist, 1929, pp. 481-82.

64. "Notes on Mining Activity in Dale Mining District," p. 4.

Company's mill averaged \$43 a ton.<sup>65</sup> In 1945, however, the Mission Gold Mine (Huff and Lane, Lone Star Group) was reported as being located in Section 5, T3S, R12E. It was idle at this time. During 1949 development work carried out included a two-compartment shaft 600 feet deep, drifting on the 100-, 300-, 400-, and 600-foot levels, and a raise to the surface. Five to ten thousand tons of ore had been blocked out.<sup>66</sup>

h) San Antonio #1 and #2; Double Jack #1 and #2

These properties are located in Section 24, T2S, R12E, on a rise (Mint Hill) about 1½ miles north-northeast of the Mission Well. Shredded documents found by mine safety investigators in one of the corner markers indicated the claim was located in 1934. Notices of Intention to Hold were found for 1936 through 1938.

3. Mill Sites

a) Mission Mill

Little is known about this mill other than its location. On a claim map of the Sunrise Group of mining claims compiled from available data and field work, Mining Engineer Paul H. Knowles in 1973 designated a mill site about one-quarter mile north-northwest of the Mission Well as the old Mission Mill. At the site of the Mission Well itself he located an arrastra just south of the well and pump building. This might be the ten-foot arrastra associated with the Mission (Huff and Lane) gold mine. The exact location of the ball mill and amalgamation plates "on the property" of the Huff and Lane (Lone Star Group) claims is uncertain, but possibly they were on this site in the southwest quarter of Section 26, T2S, R12E. The mineral survey for the Sunrise Group of claims, conducted in 1942, stated that the Sunrise Number Three Amended

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65. California Journal of Mines and Geology, 1940, p. 51.

66. California Journal of Mines and Geology, 1945, p. 139; Ibid., 1951, p. 352.

Mine was "directly North of what is known as the Huff Lane Mill which is located on the North edge of the Pinto Basin about 18 miles from Cottonwood Spring."<sup>67</sup>

This same document refers to the Sunrise Southern Extension Mine as being about 3/8 mile from the Huff Lane water well in Pinto Basin.<sup>68</sup>

b) Sunrise Mill

The quartz mill owned by Sunrise Mines, Inc., was located on the Sunrise No. 3 claim. By late January 1939 the Sunrise Mill was bankrupt and newly leased to a three-man partnership (Swartout, Soske, and Swartzwalder). Because the Gold Crown had ceased custom ore milling, the success of the Sunrise Mill venture was critical to other small mines still operating in the area. The new partners were converting the mill to a cyanide operation and had bought some of the Gold Crown's old equipment.<sup>69</sup> By 1940 then, while the Sunrise properties were under lease and bond to the Pinto Basin Mining and Milling Company, the mill had been remodeled for custom work. The twenty-five-ton plant operation consisted of: an eight-inch by ten-inch Blake crusher elevated to a fine-ore bin; a belt-type feeder from the bin to a ten-foot Lane mill, then to a Wilfley concentrator; pulp went from concentrator to sump; then pumped to two twelve-foot by twelve-foot

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67. Notice of Location, Sunrise Number Three Amended Mine, in "Mineral Survey No. 6295 A and B . . . Field Notes of the Survey of the Mining Claim of E.H. McHann . . . Surveyed under instructions dated May 8, 1942, by Federic Thomasson," file L3023, Office of Mining and Minerals, WRO, NPS, San Francisco, CA.

68. Notice of Location--Quartz, Sunrise Southern Extension Mine, in ibid.

69. Hugh d'Autremont, West of Dawn (New York: Exposition Press, 1971), pp. 157-58. According to the author the mill was later robbed (probably in the 1940s). Big moving vans took the power plant, pumps, motors, rod mill, classifier, and loose steel, leaving only the race mill and conveyors. P. 184.

Deveraux agitators; then to two ten-foot by twelve-foot Dorr thickeners; then to an eight-foot by ten-foot solution tank.<sup>70</sup>

A mining report in 1951 stated that during 1949 the Pinto Basin area enjoyed considerable gold mining activity. W.C. O'Connor, owner of the Sunrise, Mission, and Standard mines, was engaged in building a 100-ton custom cyanide mill to serve his three properties.<sup>71</sup> (See section below on "Unidentified Mills.")

An unpublished ca. 1959 study by Clifton H. Gray, Jr., James R. Evans, and Richard Saul of the California State Division of Mines stated that the main Sunrise camp included two Straub ten-stamp mills.<sup>72</sup> Water was pumped from Sunrise Well, one mile southeast.

c) Gold Rose Mill

Little information was found on this mill, located near the Gold Rose Well in the northwest quarter of Section 36, T2S, R12E, about one mile east of Sunrise Well. It served the Gold Rose Mine in the southwest quarter of Section 1, T2S, R12E, in the Dale Mining District, south of the Los Angeles Mine. The California Mining Journal of July 1949 mentioned that Dale Holmes had a crew of five men installing a mill for his Gold Rose Mine in Pinto Basin. (See below under "Unidentified Mills.") The Gold Rose Mill Site consisted of forty acres on two patented claims owned by Oehls and Holmes. Buildings and a mill on the property were removed by early 1973.

d) Unidentified Mills

By the end of 1946 a 150-ton mill was being constructed in Pinto Basin for the treatment of gold ore in that vicinity. No further information was found as to its location. In December 1950

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70. California Journal of Mines and Geology, 1940, p. 53.

71. California Journal of Mines and Geology, 1951, p. 352.

72. Knowles, "Report on Validity of Sunrise Group," p. 9.



Illustration 29 (top left).  
Sunrise Mine camp, looking south.  
Cement floors visible in cleared area.  
Mill is on cleared slope to the right  
beyond camp, 1983.

Illustration 30 (top right).  
Fish pond at camp.

Illustration 31 (left).  
Sunrise Mine shaft north of camp site.  
NPS photos by Linda W. Greene.



two concentrating plants about one mile apart were noted inside the monument, but their exact locations were not given. One, a cyanide mill, was under construction but would be able to treat about sixty tons of ore per day. The other plant, a flotation process, could treat twenty-five tons a day. Ore for both plants came from mines outside the boundaries. Both plants were probably in the Pinto Basin area near the Dale District.<sup>73</sup>

4. Evaluation of Resources and Recommendations

a) Mine Sites

(1) Sunrise Mine

The claims are reached by driving south for thirty-two miles from Twentynine Palms via the main monument road and the Pinto Basin Road to its intersection with the Old Dale Road. From there one proceeds northeasterly for twelve miles on the Old Dale Road to Mission Well. The Sunrise millsite is 900 feet east of the Mission Well, in Section 35, and the Sunrise Group extends northerly from there through Sections 26 and 23. The Sunrise shaft, by 1933, was 300 feet deep with levels at 100, 200, and 300 feet. By 1961 the shaft was boarded over and timbered. All surface equipment had been removed.

In 1942 the Sunrise Claim Number One, Sunrise Number Two, Sunrise Number Three Amended, and Sunrise Southern Extension Lodes, and the Sunrise Mill Site Number One, owned by E.H. McHann, were surveyed. According to this lengthy document, the Sunrise mine camp was erected on the Sunrise Number One lode claim. A well (Sunrise Well) to be used by the mine operation was being drilled in the center of the Sunrise Mill Site Number One claim in 1932. The purpose of claiming the mill site was to obtain water for working the

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73. "150-Ton Mill Being Built In Pinto Basin," Desert Views (Joshua Tree, Ca.), Nov. 27, 1946; Edward N. MacKenett and Edward J. Matson, "Mineral Production and Mining Activities" (portion of mineral report), in United States, Department of the Interior, National Park Service, Samuel A. King, "History of Joshua Tree National Monument," 1955, pp. 23-24.



Sunrise Nos. 1-12 and 14-15, the Joyce Nos. 1-3, and the Green Parrot claims, and for milling purposes.<sup>74</sup>

Improvements listed in the Sunrise mine camp complex consisted of, on the Sunrise Claim Number One, a small concrete building, a frame hoist house, a wooden headframe, three frame cabins, a frame laboratory building, a frame bunkhouse, a frame messhall, and a concrete fish pond; on the Sunrise Number Three Amended, a seven-foot-diameter water tank, a twenty-foot-diameter water tank, a frame mill building, a twenty-by-thirty-two-foot concrete settling basin, a frame building, and a two-inch steel water pipeline intersecting the Sunrise Southern Extension lode; on the Sunrise Mill Site Number One, a twelve-foot-diameter water tank, a frame pumphouse building, a frame pump derrick, and a four-inch steel water pipeline.<sup>75</sup>

The mine and camp site were visited by this writer in February 1983. The mine camp is over a small ridge northwest of the Old Dale Road, nestled along the base of a north-south-trending ridge. All that remains today of the little settlement are concrete floor slabs, the concrete fish pond with a fountain in the middle, and what appear to be caved-in root cellars. All the streets and some of the shrubs are lined and encircled by decorative rockwork. On a bench above the camp to the north is the timbered vertical shaft and concrete floor of the hoist house. A little to the west of that building is a small concrete structure that might have been connected with the dispensing of fuel. A metal gasoline drum was found buried in the ground just east of it with a pipe leading toward the hoist house.

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74. Notice of Mill Site Location, Sunrise Mill Site Number One, in Mineral Survey No. 6295 A and B.

75. Other Improvements, in *Ibid.* pp. 9-10.

This mine's greatest productivity occurred in the 1930s and early 1940s. Although the mine itself was not a particularly rich proposition, the site should be of interest to the monument's interpretive division because of the extent of remains--including a cyanide mill and campsite--and because its operators were heavily involved in mining activities in the Pinto Basin area. The Sunrise Mine functioned for only a brief period and did not have any significant impact on the economic life of the area. The site does not warrant nomination to the National Register due to lack of integrity and significance. The camp poses no safety hazards and might be of interest to park visitors. It is recommended it be left to natural deterioration.

(2) Standard Mine

According to the 1942 mineral survey of this property, the lode claim was cut by two auto roads and contained a cabin, headframe, and an ore bin. In the 1960s a drift adit about 300 feet long comprised the main workings. Other development was of relatively minor extent and consisted mainly of shallow shafts and prospects. The mine was then idle.

The mine site was not visited by this writer. On reviewing the scanty data available on the property, the writer does not believe it possesses historical significance, and it is not deemed eligible for nomination to the National Register. It is recommended the site be left to benign neglect. If any work is projected by the monument that will impact this area, the site should be visited and its current condition assessed by a qualified historian. The presence of any important technological or other interpretive artifacts should also be noted.

(3) Zulu Queen Mine

On this property a vertical two-compartment shaft was sunk 100 feet, with drifts on the 50- and 100-foot levels. Directly south of the headframe of the shaft a 110-foot adit with winzes was driven. The mine is at an elevation of 1,700 feet and low on the northeast slope of a small hill near the mouth of a wash that drains the

Pinto Mountains from the north. A visitor to the park in 1968 noted that there was little left at the site to make the trip worthwhile, although the headframe over a vertical shaft was intact. He also mentions that the mine had an elevator to haul up loaded ore cars.<sup>76</sup> All that remained on the property in 1976 were a rock powder house, an ore tibble, some concrete slab foundations, an adit, and a couple of vertical shafts, one with a headframe.

The site was not visited by this writer but was inspected and evaluated by the LCS crew in 1976. This regional team determined that the site was not eligible for the National Register. Because additional information was found indicating the possible existence of an elevator in the Zulu Queen shaft, the site should be inspected by a historian for possible significance as a site "representative of a type." It is recommended the site be left to natural deterioration.

#### (4) Outlaw Mine

This property is on top of a small, outlying hill on the northeast side of a southeast-trending wash draining the Pinto Mountains from the north. A 100-foot shaft was sunk in the ore zone. Water was obtained from Sunrise Well. In 1968 it was reported that two shacks and a variety of disintegrating machinery were found at the mine. The headframe had fallen into the shaft.<sup>77</sup> In 1976 investigators found at the mine camp a parking site lined with stones, two pit toilet sites, a dump containing 1930s-period garbage, and a masonry shell surrounding a concrete slab.

The LCS crew that visited the site in 1976 determined it not to be eligible for the National Register. No significant remains were found on site. An archival search turned up no historical

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76. George Service and Kent Werges, "Exploring Dale Mine District," Desert Magazine, March 1968, p. 23.

77. Ibid.

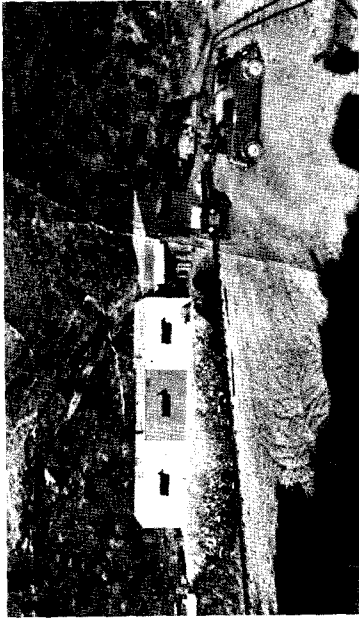
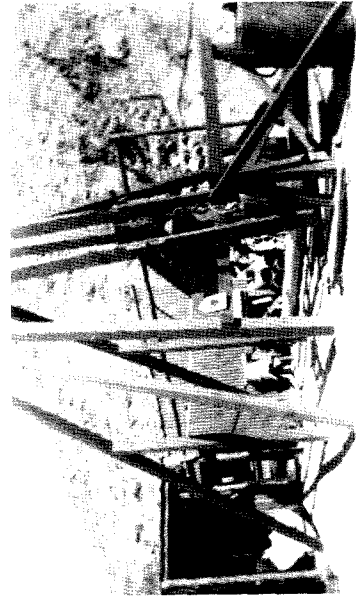
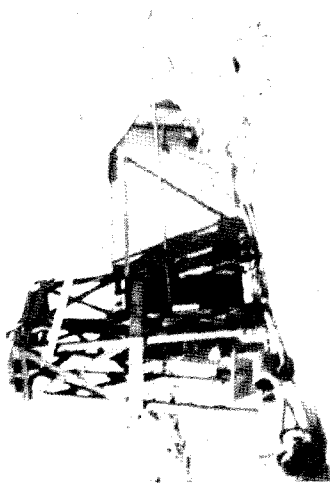


Illustration 32 (top left).  
Mission Mine, 1933.

Illustration 33 (top right).  
Mission Mine, 1934.

Illustration 34 (left).  
Mission Mine, 1937-38. Photos from  
Tom Ake, Jr., Collection. Courtesy  
JTNM.



significance for the mine. The state of potential safety hazards there, such as the shaft, is not known, but visitation is probably extremely infrequent. It is recommended the site be left to natural deterioration.

(5) Mission Mine

Mine equipment at this operation consisted of a six-horsepower gasoline hoist and a compressor driven by an automobile engine. During mine inspections in the early 1970s, investigators tentatively identified the Mission Mine as being in Section 23, T2S, R12E, about one-fourth to one-half mile north of the Old Dale Road. Four mine shafts were found there. Ownership of the property was uncertain, although a Palm Springs man claimed part ownership in a "Mission Mine" just outside the monument at the end of the road along which these shafts were located.

The site was not visited during this writer's field trips. The mine is not considered historically significant and because no structures other than shafts exist within the monument it was not deemed necessary to personally inspect it. The section of the Mission Mine just outside the north monument boundary is being worked occasionally. Three trailer homes and a tall metal headframe are visible there. The site in the monument is recommended for natural deterioration.

(6) San Antonio #1 and #2; Double Jack #1 and #2

Workings here consist of two mine shafts. The site is not historically significant and should be left to natural deterioration.

b) Mill Sites

(1) Mission Mill

The old Mission Mill ruin comprises the remains of a cyanide operation. Two large metal vats, several levels still supporting concrete machinery pillars, and a large dump site visible off the point of the ridge southwest of the mill attest to its having been a good-sized operation. No description of the mill setup has been found by the writer. In 1941 T.J. Ake, operator of the Mission Mine, was in the

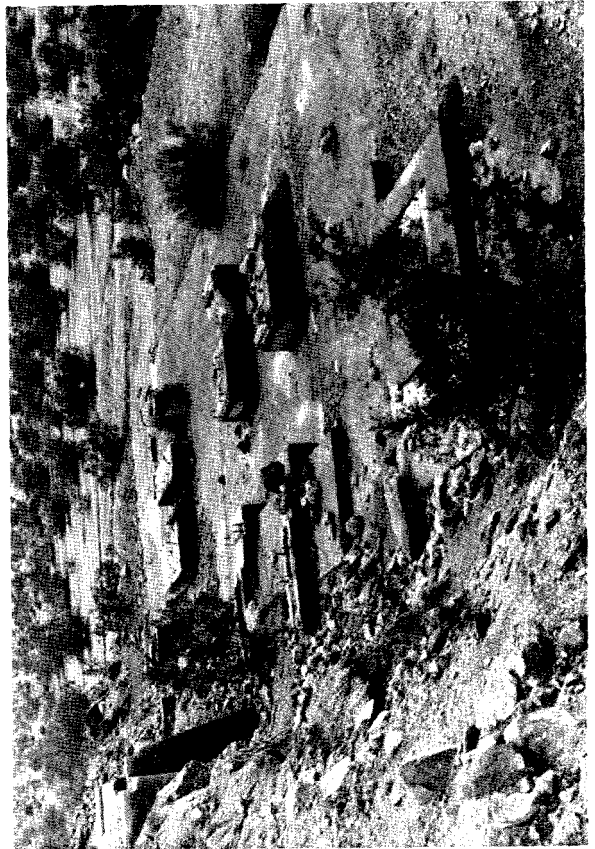
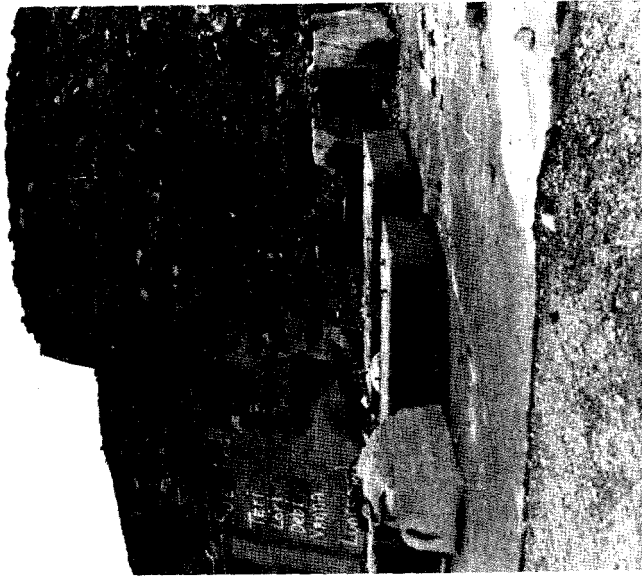


Illustration 35 (top left).  
First mill for Mission Mine, 1932.  
Difficult to tell if this is the present  
mill ruin or not. Note circular stone  
structure in background, however.  
Tom Ake, Jr., Collection. Courtesy  
JTNNM.

Illustration 36 (top right).  
Remains of what is known today as old  
Mission mill.

Illustration 37 (left).  
Another view of Mission mill ruins,  
1983. NPS photos by Linda W. Greene.

process of rebuilding a mill on the Lone Star Mill Site, located about 1927. He planned to pipe water from the Huff and Lane Well. The precise location of this mill is unknown.

Because of the lack of any mill machinery onsite, the dearth of information on the mill operation here, including the processes used, builders, and the mines it served, the Mission Mill is not deemed eligible for nomination to the National Register. It is recommended for natural deterioration.

(2) Sunrise Mill

The ruins of the Sunrise Mill are about five-eighths of a mile northwest of Sunrise Well. The concrete foundations of a medium-sized cyanide mill are hidden behind a small ridge just west of the Old Dale Road. It is assumed the mill performed custom work for several other mines. One customer was the Top Nest Mine in the Dale District adjoining the Ivanhoe Group of claims on the northwest. In 1940 its ore was being trucked to the Sunrise mill for treatment.<sup>78</sup>

North of the Sunrise Well about one hundred yards are what appear to be the remains of yet another small mill operation, consisting of concrete foundations and what might be a heavy metal crusher or roller. A road leads from the structure north toward the Mission Mill. There is some evidence of burning here. No information on this mill has been found. The possibility exists that it is one of those referred to earlier under "Unidentified Mills." The ruin should be left as is.

(3) Gold Rose Mill

The Gold Rose Mill is reached via the Old Dale Road, turning east on Gold Rose Mill Road and continuing past the

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78. California Journal of Mines and Geology, 1940, p. 79.

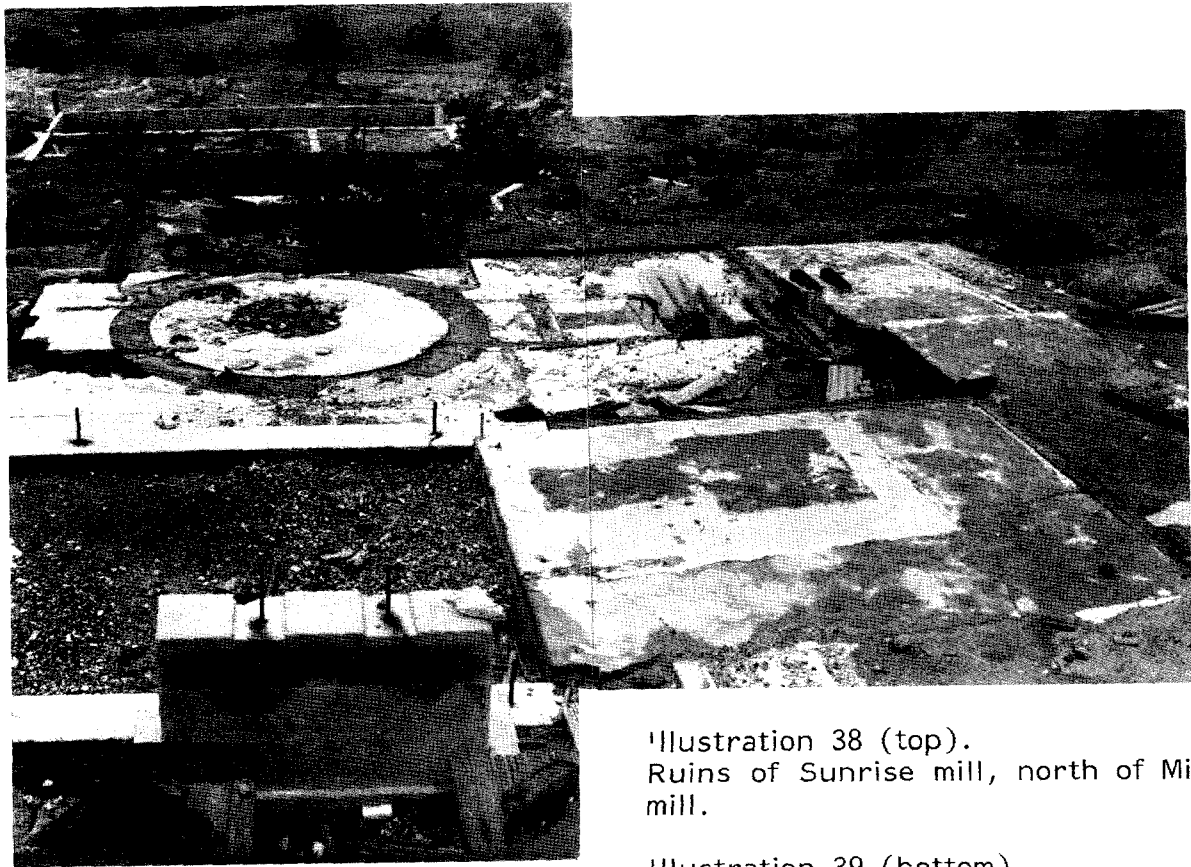


Illustration 38 (top).  
Ruins of Sunrise mill, north of Mission mill.

Illustration 39 (bottom).  
Close-up view of settling basin,  
Sunrise mill. NPS photos by Linda W.  
Greene.

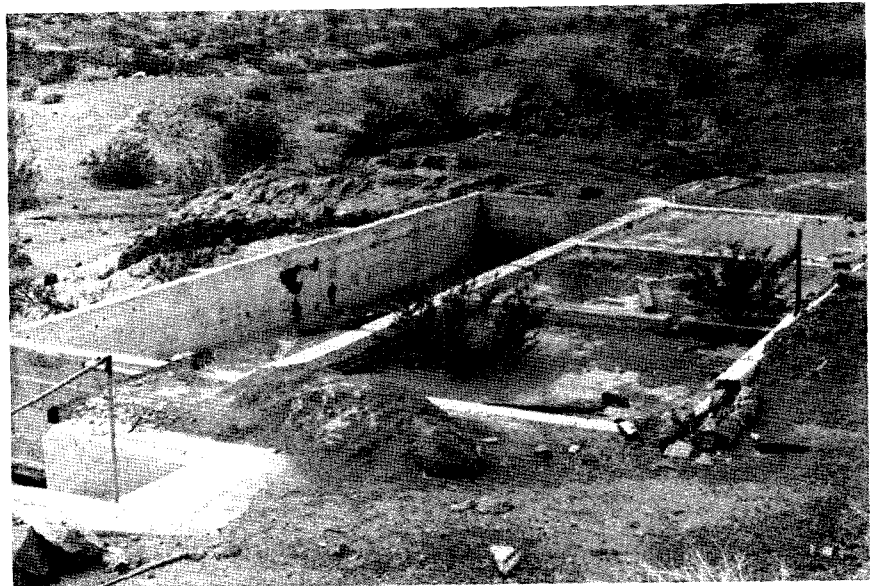






Illustration 40. Unidentified mill ruin north of Sunrise Well. NPS photos by Linda W. Greene.



Mission and Sunrise wells. The mill was torn down in the early 1960s.<sup>79</sup> Lester Spell, in his history of the Dale Mining District, mentioned that the locator and first owner of the Gold Rose Mine was a Tom Holmes. After he passed away, his heirs were Dale Holmes, his son, and Herbert Oehls. "While they knew the mine could not work at a profit because of the inflation," Spell noted, "they did build a flotation concentration mill in Pinto Basin." No date was given. This is probably the flotation mill mentioned under "Unidentified Mills," because Dale Holmes was reportedly erecting a mill in Pinto Basin in 1949. Because these two men owned the Gold Rose mill site, that is the probable location of their mill. In 1940 the Gold Rose Mine milling operation consisted of a Blake crusher, Wheeler ball mill, amalgamating jig, amalgamation plates, a cone tank, and two settling tanks.<sup>80</sup> Nothing is known of this mill's production record or its exact location, although what appears to be the remains of a cone tank were found at the Gold Rose mill site in 1983.

The present structure at the mill site is not considered to be eligible for the National Register, but should be left in its present condition. On site are a truck ramp and three relatively shallow metal vats--the largest with a fifteen-foot diameter and three-foot-high walls, the two smaller ones of five-foot diameter with two-foot-high walls. The campsite is about one-eighth mile southwest of the mill, and contains a well and a profusion of miscellaneous plumbing fixtures, appliances, utensils, and machinery parts. In the camp, behind it, and strung along a wash are almost two dozen 1950s-era junked cars, most of them buried in silt or turned upside down. This site could be cleaned up under a monitoring process so that only the well site and pump remain. The place is an eyesore in its present condition. The writer did not find any items of historical or technological interest in making a cursory inspection of the area, but if such a cleanup effort is undertaken, it should proceed carefully and with discrimination so that no important artifacts are lost.

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79. Observation card on Gold Rose Well; Observer, Alsen Inman, Park Ranger, Dec. 18, 1965, in JTNM Fact File.

80. Spell, "History of Dale Mining District, California," p. 12; California Journal of Mines and Geology, 1940, p. 67.



Illustration 41.

Gold Rose Mine mill ruin, 1983. NPS photos by Linda W. Greene.



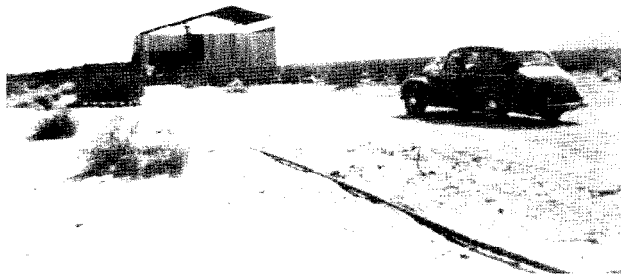


Illustration 42.

Mill for Gold Rose Mine, located in Pinto Basin, 1948-49. Tom Ake, Jr., Collection. Courtesy JTNM.



Illustration 43.

Gold rose mill camp site, 1983. NPS photo by Linda W. Greene.

## E. Eagle Mountains Mining District

### 1. History

The Eagles are one of several bare ranges of rocky mountains in the Mohave and Colorado deserts. Its highest peaks rise between three and four thousand feet above sea level. Gold prospectors probably entered the area from the Colorado River in the 1860s. Lead, zinc, and silver were found along the iron belt. As railroading became more important in the southwest, the value of iron deposits grew. The first official account of activity in the Eagle Mountain area appeared in 1892 when it was reported that rich placers had been found in the dry gulches of the Eagle Mountains and that more diligent searching had led to the discovery of rich gold-bearing quartz deposits. Because of the scarcity of water in the area, a cement basin had been built with the proceeds of dry washing to catch the winter rains so that the placer mines could be worked more easily and profitably.<sup>81</sup> To what extent properties had been staked in the area earlier is not known, although as early as 1890 a sales transaction was reported involving the Iron Chief Mine in San Bernardino County.<sup>82</sup> One assumes from the name that the existence of iron in the area had already been established, but the first operations in the range centered around gold extraction.

### 2. Mine Sites

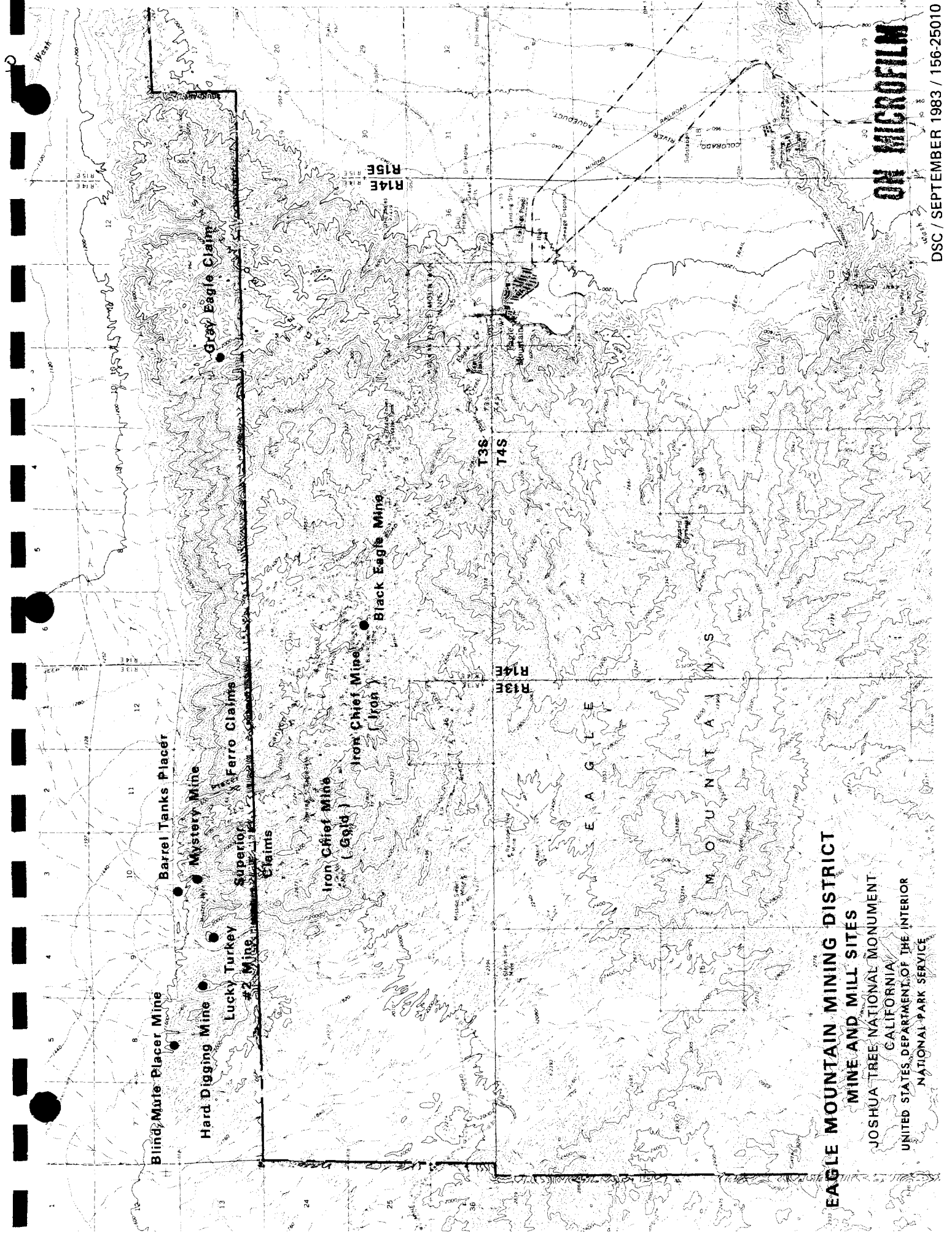
#### a) Iron Chief Mine

Initially a producer of copper and gold ores, this property in T3S, R13E and R14 E, quickly became the principal source of gold in the Eagle Mountains. Located in the northern part of the Eagle Range at an elevation of about 2,500 feet, this deposit was originally discovered by William Stevens and Thomas Dofflemeyer of San Bernardino. In 1897 Charles Lane of San Francisco bought the mine and installed and

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81. Eleventh Report of the State Mineralogist, 1893, p. 386.

82. Engineering and Mining Journal 49, no. 6 (Feb. 8, 1890): 182. It is assumed that the journal was referring to the mine in the Eagle Mountains even though the county designation is misleading. This would still have been San Diego County.



**EAGLE MOUNTAIN MINING DISTRICT**  
**MINE AND MILL SITES**  
 JOSHUA TREE NATIONAL MONUMENT  
 CALIFORNIA  
 UNITED STATES DEPARTMENT OF THE INTERIOR  
 NATIONAL PARK SERVICE

**ON MICROFILM**

DSC / SEPTEMBER 1983 / 156-25010

operated a small mill, producing about \$50,000 worth of gold. Lane became delinquent on his payments and the original owners regained the property, installing a fifty-ton cyanide plant. In 1898 it was reported that the Iron Chief was being successfully developed. Ore was assaying from \$10 to \$100 per ton. A twenty-five-horsepower gasoline engine was used for hoisting and another twenty-five-horsepower engine drove the mill plant--a dry roller and cyanide process. A pipeline was supplying the camp and plant with water from Cottonwood Spring. About sixty tons of ore were reduced each day.<sup>83</sup> The mine and mill were run until 1902, reaping a reported \$150,000 profit. In 1902 the property was sold to J.F. Collins of Pittsburgh, Pennsylvania.

A popular story is that a miner named Joe Torres first found iron ore in the Eagle Range. Not recognizing this type of ore he left some samples at a store in Mecca that were eventually seen and identified by a mining engineer named L.S. Barnes. However he found out about them, Barnes secured an option on nineteen claims of the Iron Chief Mine in 1909. In 1912 he offered E.H. Harriman, president of the Southern Pacific Railroad, these same claims, convincing him that the railroad should not be totally dependent on the East for steel for its rails. Because Harriman did feel that the steel trust was overcharging the railroad for rails, the sale was made. Harriman then bought a steel mill site near San Pedro, and proceeded to survey for a spur railroad route to the mine. But then the price of rails dropped, and Harriman died before a mill could be erected. Without Harriman's energy backing its development, the mine lay idle.

In 1924 the state mineralogist reported on the status of six patented claims of the Iron Chief known as the Gray Eagle Group (Section 15, T3S, R14E). Development consisted of a 140-foot-deep vertical shaft cut from the west by a tunnel. Mill

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83. Engineering and Mining Journal 66, no. 24 (Dec. 10, 1898,): 705.

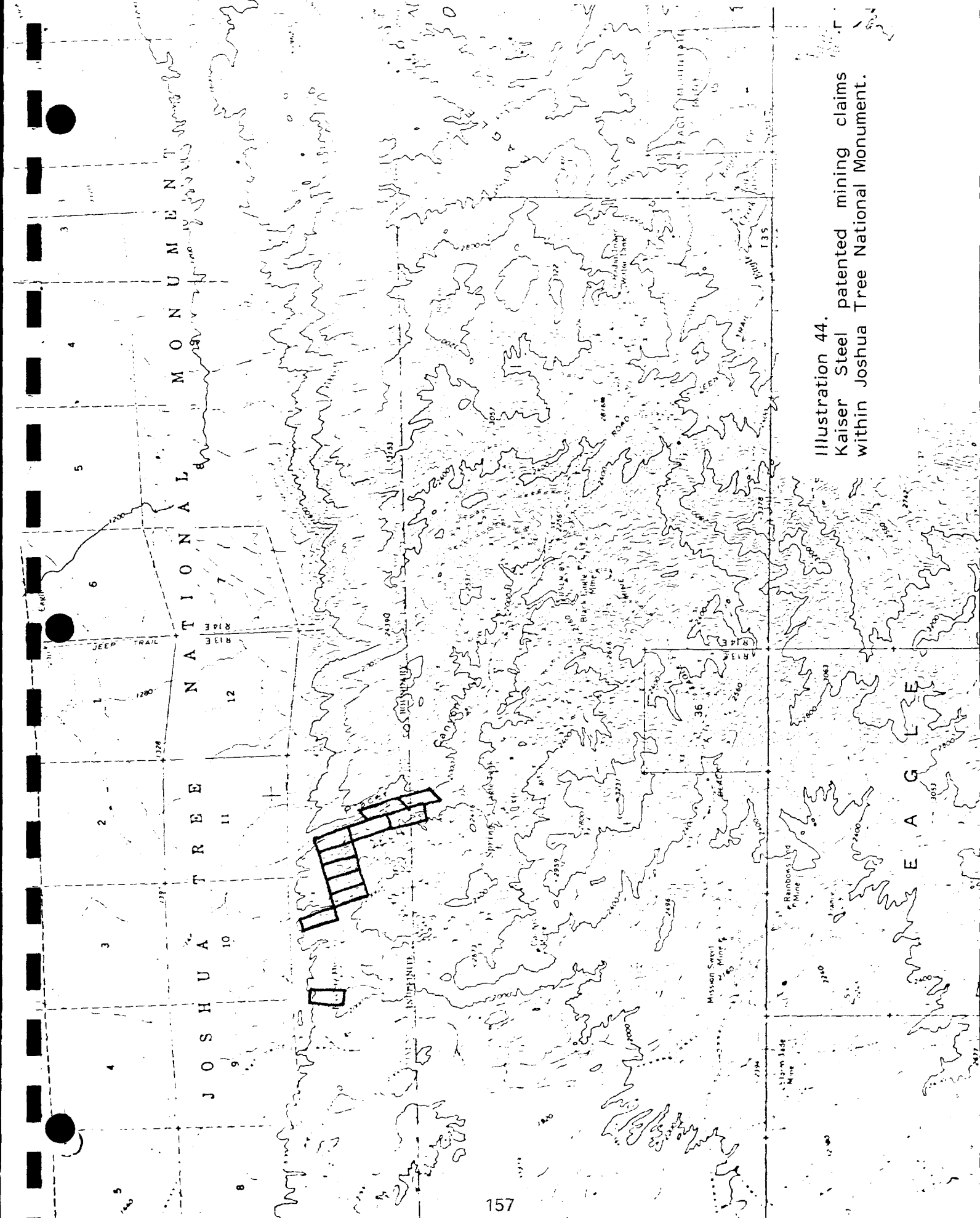


Illustration 44.  
 Kaiser Steel patented mining claims  
 within Joshua Tree National Monument.



equipment consisted of two Blake crushers, Gates rolls, and eight four-by-eighteen-foot steel cyanide tanks. Water was secured from Cottonwood Spring, eighteen miles to the south. The mine operation was then idle. The same publication described the Eagle Mountain iron ore deposits as extending over an area about eight miles long and from one-quarter mile to two miles wide, running generally east-west across the summit of the mountains. Total holdings of the Iron Chief Mining Company, controlled by the Southern Pacific Railroad, were 187 patented claims. Development work was minimal, characterized by several shallow shafts and tunnels on the different claims.<sup>84</sup>

In 1929 the Iron Chief Mine (Gray Eagle Group, probably) was still idle. A few more details on the extent of development and on mine structures appear. The 140-foot vertical shaft was intersected at the 100-foot level by a 500-foot crosscut tunnel. There 500 feet of drifting had been accomplished. The ore-shoot was stoped to the surface over a length of 300 feet. On site were a twenty-five-horsepower gasoline hoist, a headframe, a blacksmith shop, an assay office, a twenty-five-ton ore bin, two jaw crushers, one set of rolls, and eight cyanide vats, 18 by 4½ feet. Another section of the Iron Chief Group mentioned at this time was the Messenger Mine, also idle.<sup>85</sup>

The Henry J. Kaiser Corporation bought the Iron Chief property (more than 2,000 acres) from the Southern Pacific Land Company in 1944 for a reported one million dollars. A year later it was under option to the Riverside Iron and Steel Company of St. Paul, Minnesota, and under lease to Mineral Metals Company of Alhambra, California. During this time some of the ore was shipped to the Los

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84. California State Mining Bureau, Chapter of Report XX of the State Mineralogist Covering Mining in California and the Activities of the State Mining Bureau (Sacramento: State Printing Office, 1924), pp. 191-92, 196.

85. Report XXV of the State Mineralogist, 1929, pp. 482, 484.

Angeles area for ship ballast during World War II. Forty thousand tons of ore had been shipped by 1945.<sup>86</sup> Kaiser built a steel mill at Fontana, California, and in 1947 started construction on a fifty-one-mile railroad to tie in with the Southern Pacific at Ferrum Junction adjacent to the Salton Sea. By 1959 the Eagle Mountain site held more than 1,000 people. The plant was producing six to seven million tons of ore a year, and underwent a major expansion in 1964. By the 1960s there were 3,000 employees with their families at the site.<sup>87</sup> The operation has since closed down.

b) Black Eagle Mine

This mine was being actively worked by 1924. A producer of lead, silver, copper, and gold, the property was situated at an elevation of 2,100 feet. It was owned by Edward Harmon of San Bernardino and under option to A.W. Scott and George Hayden of Los Angeles. The property comprised three unpatented claims known as Maleta No. 1, No. 2, and No. 3. Development at that time consisted of adits, winzes, drifts, and stopes. Equipment included two gas engines driving a compressor and a blower, plus one hoist. Water was hauled from Cottonwood Spring in a 450-gallon tank. Six men were employed.<sup>88</sup> Five years later the total production of the mine was said to have been \$30,000. The property was equipped with a six- by eight-inch compressor driven by a semi-diesel engine that furnished air for drills and for running an air hoist at the shaft. The property also held a twenty-ton dry concentration plant with a Blake crusher, bucket elevators, trommel screen, rolls, and two Cottrell tables. The property was said to have been under operation from 1923 until the end of 1928. It was idle in 1929.<sup>89</sup>

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86. Vredenburg et al., Desert Fever, p. 30.

87. Russ Leadabrand, A Guidebook to the Mojave Desert of California (Los Angeles: The Ward Ritchie Press, 1966), p. 167.

88. Report XX of the State Mineralogist, 1924, pp. 193-96.

89. Report XXV of the State Mineralogist, 1929, p. 476.

By about 1937 total production was stated to be \$50,000. Operations were being carried on by the Imperial Smelting & Refining Co. of Los Angeles, which requested permission to dig a well in T3S, R13E, Section 11 or 12, in the northeast part of the monument. If an immediate supply of water could be acquired, the company anticipated employing forty to fifty men at their mine and 150-ton concentration plant. Operating from 1939 to 1940 the plant yielded more than \$53,000 worth of lead-copper concentrates that were shipped to Midvale, Utah. During this time the mine was getting its water from Black Eagle Well in Pinto Basin, five miles away.<sup>90</sup> In November 1940, however, the mine ceased operating. The claims were not abandoned and a watchman was left to protect the machinery and buildings. Although the mine had produced \$250,000 during the previous three years, the company had expended \$750,000 to obtain that gold.<sup>91</sup>

c) Blackbird Group

This group of five claims in the Eagle District was operated in 1907 by the Crescent Company.<sup>92</sup>

d) Eagle Mountain Placer

This property was located in a gulch by John McGrath, probably in the late 1880s.<sup>93</sup>

e) Grassy Hill Lode

This claim was eighteen miles easterly from Cottonwood Wash and about four miles south of the Iron Chief Mine, in

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90. "Notes on Mining Activity in Dale Mining District," p. 3; S.B. Mosher, president, Imperial Smelting & Refining Co., to Sec. of the Int., Sept. 15, 1938, Letters Received by the Office of the Secretary of the Interior, RG 79, NA; Vredenburg et al., Desert Fever, pp. 30-31; California Journal of Mines and Geology, 1940, p. 47.

91. Superintendent, JTNM, Memorandum for the Director, Aug. 12, 1941, FARC, San Bruno, Ca.

92. Engineering and Mining Journal 84, no. 18 (Nov. 2, 1907): 843.

93. Ibid. 57, n. 10 (Mar. 10, 1894): 229.

T4S, R13E. The property was located for semi-precious minerals (vesuvianite and marble) on December 17, 1934, by Chester Morten and Edith Hopper.<sup>94</sup>

f) Rainbow Lode

This property was located in 1935 by Chester Morten and Edith Hopper and was situated about two miles south of the Iron Chief Mine, in T4S, R13E. Development consisted of one shaft on the quartz vein. Ore recovered was milled at the Hopper (Moorten) mill in Cottonwood Wash.<sup>95</sup>

g) Mule Shoe Lode

This property is about sixteen miles east of Cottonwood Wash in T4S, R14E. Two claims on a quartz vein were located in 1935.<sup>96</sup>

h) Diane Lode

Located about 1934 by R.A. Theobald, this mine is in T4S, R14E. Sixty tons of ore from the quartz vein were milled at the Hulsey mill at Cottonwood.<sup>97</sup>

i) Desert Star Lode

At this site a quartz vein containing gold, silver, and copper was developed. It was four miles west of the Iron Chief in T3S, R12E.<sup>98</sup>

j) Mystery Mine

This property was situated about two miles north of the Desert Star Mine. Gold and silver ores were found, the vein being

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94. Guthrey to Dir. of Investig., May 6, 1937, p. 16.

95. Ibid.

96. Ibid.

97. Ibid., p. 14.

98. Ibid.

developed by a shaft.<sup>99</sup> It was reportedly a small-scale gold placer operation conducted from 1933 to 1936 by L.L. Benthall of Indio, California.

k) Barrel Tanks Placer

This property was located in Section 15(?), T3S, R13E, along the north slope of the Eagle Mountains in the vicinity of (or the same as) the Mystery Mine. This site is about six miles southeast of the Mission Well. William S. Wayne operated and prospected the property from 1936 to 1960. This was reported to be a small-scale hand-operated dry-washing operation.<sup>100</sup>

l) Lucky Turkey #2 Mine

No data was found by the writer concerning the history of this property.

m) Hard Digging Mine

This mine was located on December 23, 1935, by Mrs. Bill Walch of Beaumont, California. It was about five miles southeast of the Sunrise Mine and about three miles northwest of the Black Eagle Mine.

n) Swastika #1-7 Mine

This group of seven claims was located about 1931 in the Eagle Mountain area by William T. Little, J.M. (or W.) Bundschuh, and Thornton C. Taylor. No location information was found.

o) Storm Jade Mine

This jade deposit was discovered in the late 1940s by Barry Storm. Building a small cabin, he lived there from 1956 until about 1967.<sup>101</sup>

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99. Ibid., pp. 14-15.

100. C.H. Gray, Jr., J.R. Evans, and Richard Saul, "Mines and Mineral Resources of Riverside County, California," [1961], in JTNM library.

101. Vredenburg et al., Desert Fever, p. 31.

3. Mill Sites

No mills other than those mentioned in the previous section were noted.

4. Evaluation of Resources and Recommendations

a) Mine Sites

No mining sites in the Eagle Mountain Mining District were visited by this writer. Those mining operations of the most consequence in the area (Iron Chief, Black Eagle) were once included within the monument boundaries but were later excluded so that intense mining activity could take place. Most of the mine sites left inside the monument were small placer operations of little historical or economic significance.

(1) Kaiser Steel Corporation Properties in the Placer-Mystery Canyons Area

This property consisted of eight patented mining claims and portions of three patented claims within the boundaries of Joshua Tree National Monument. These included the Ferro and Superior claims on which were found small deposits of iron minerals. In the 1970s these claims were inspected and appraised by mining engineers. They were located in Sections 14 and 15, T3S, R13E, north of and adjacent to the boundary of the northeast portion of the monument. The claims were on the northern flank of the Eagle Mountains and extended from Placer Canyon (Superior No. 17) on the east northwest to the edge of Pinto Basin (Superior No. 12). Ferro No. 40 was about 3,000 feet west, separate from the other claims. All of these were patented by the Iron Chief Mining Company in 1915-16.

These small iron deposits were about five miles from the westernmost mining activity of the Eagle Mountain operations at the Black Eagle Mine. The deposits contained some test pits and short

adits, but otherwise were undeveloped. Only a few old foot trails were noted on some of the slopes overlooking Pinto Basin.<sup>102</sup>

(2) Mystery (Mirtru) Mine

This mine is located in Section 15, T3S, R13E, at the base of the north slope of the Eagle Mountains, about six miles southeast of Mission Well. Mine workings consist of vertical shafts, trenches, and adits. The mine was idle in 1959. In 1976 the site was visited by the LCS crew, which determined it to be ineligible for the National Register. The remains of a campsite were found in the canyon between Kaiser's Ferro No. 40 and Superior No. 12 claims. Well-marked foot trails led to workings in the upper canyon. Several level building sites were found as well as a small metal cabin. The mine possesses no historical significance and should be left to natural deterioration.

(3) Mystery Canyon Ruin

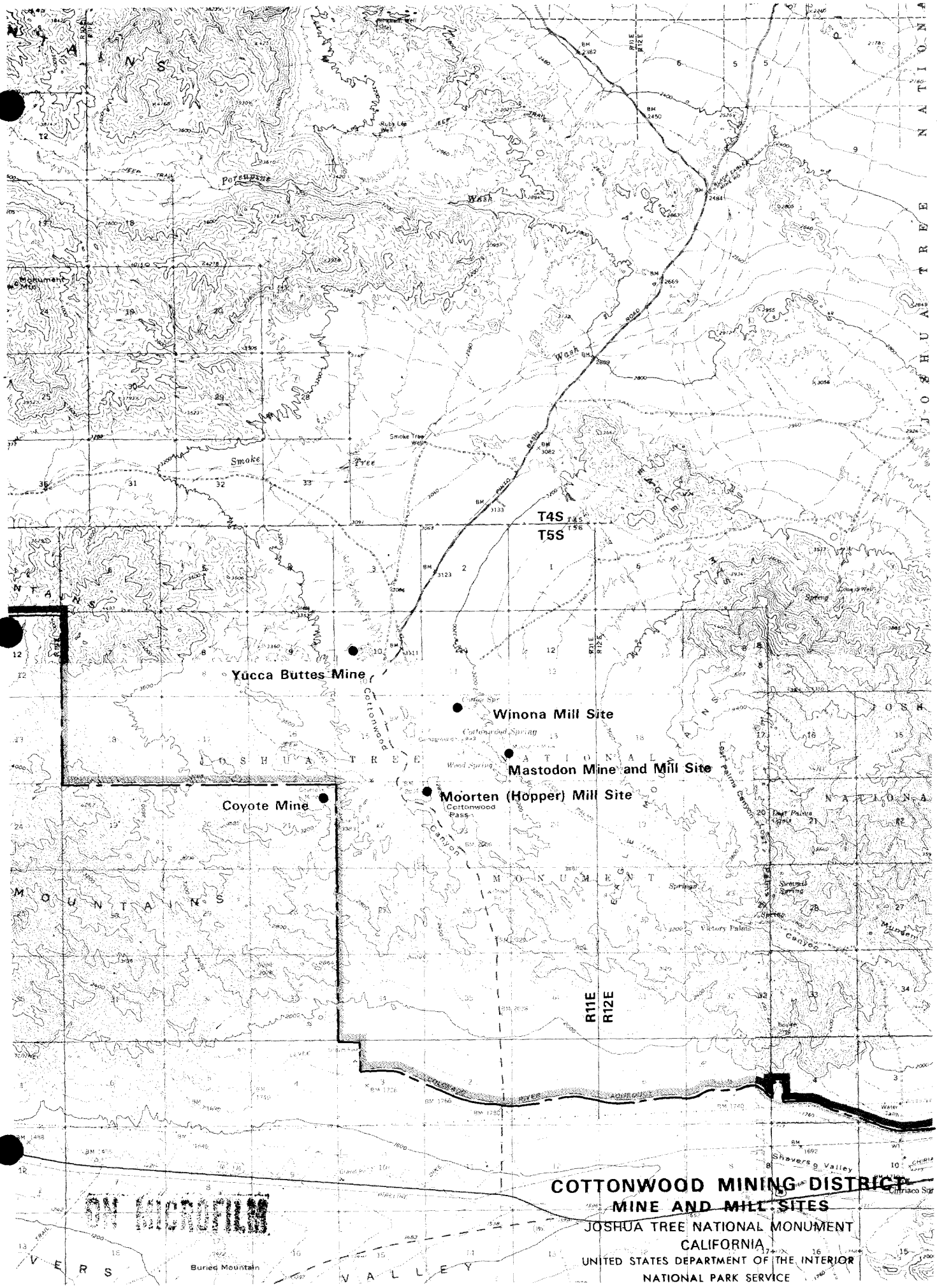
The LCS crew also visited a ruin in Mystery Canyon. Two level building sites and a roofless stone building shell were found. Its exact location cannot be determined by this writer. No further information has been found on this site. It is not historically significant.

(4) Blind Mule Placer Mine

This site is located in the southeast quarter of the southwest quarter of Section 8, T3S, R13E. A claim marker in an arroyo provided the name to the LCS crew and a location date of 1932. Another small metal cabin identical in its details to that at the Mystery Mine was found. The arroyo above the cabin had been placer mined.

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102. Charles T. Weiler, "Appraisal of Mineral Interests Inherent in the Kaiser Steel Corporation Properties in the Placer-Mystery Canyons Area within the Joshua Tree National Monument, Riverside [County], California, January 1975," file L3023, Div. of Mining and Minerals, WRO, NPS, San Francisco, Ca., pp. 2-3, 5, 7, 11-13.



**COTTONWOOD MINING DISTRICT  
MINE AND MILL SITES**

JOSHUA TREE NATIONAL MONUMENT  
CALIFORNIA  
UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE



Magazines found in the cabin dated from the mid-1950s. This was another small placer operation that does not possess historical significance.

(5) Lucky Turkey #2 Mine

When this site was inspected in 1973, a timbered vertical shaft about 150 feet deep terminated at the end of a 270-foot-long adit. The mine is not considered significant.

b. Mill Sites

No mill sites were visited by the author and none of significance in the Eagle Mountain Mining District are known to be within the monument boundaries.

F. Cottonwood Spring Mining District

1. History

Cottonwood Spring lies in the southernmost part of the monument. The oasis was inhabited historically and now supports a campground and ranger station. The Cottonwood Spring Oasis is the smallest of the four oases in the monument area--the others being at Twentynine Palms, Fortynine Palms, and Lost Palms. It is the only one that is largely man-made, having been developed from a flowing spring supporting a scattering of small desert shrubs and plants that thrived on moisture.

Despite its isolated location, the Cottonwood Spring area was destined to become heavily utilized. The presence of a dependable source of surface water and of economically viable mineral deposits drew cowmen, homesteaders, and prospectors. The oasis did not see large-scale white utilization until the nineteenth century. As activity in the Dale Mining District commenced, profound changes were wrought at Cottonwood Spring, especially from about 1870 to 1910. Both Cottonwood and the Twentynine Palms oasis became overnight stops on the freight wagon roads to Dale from Mecca and Banning. As one of two water sources between Dale and Mecca (the other being Shaver's Well), Cottonwood became a popular stopover for cowboys, miners, teamsters, and other desert travelers. The area was homesteaded, although few

names connected with this use have been found. A Williams Homestead near the oasis was mentioned in one archeological study that surveyed Sections 13 and 14, T5S, R11E.<sup>103</sup> Teamsters may have planted some of the trees at Cottonwood that gave the oasis its name. Homesteaders and miners living in the wash near the Winona mill planted many exotic trees and shrubs, such as eucalyptus, cottonwoods, pomegranates, and palm trees.

At one time water from the spring was pumped about twenty miles to the Iron Chief Mine in the Eagle Mountains. According to Cactus Slim Moorten, an early inhabitant of the spring, a pumphouse was built by the mine company at the spring about 1890 or 1895. A large reciprocating engine pumped the water through a one-inch pipeline that followed almost a straight line to the mine. A man on a burro rode the pipeline to check it during both extremely hot and cold weather. After the Iron Chief abandoned the pumphouse, it was utilized as living quarters by various people.<sup>104</sup> When J. Smeaton Chase stopped at Cottonwood around 1918 he found a man living in a rock cabin at the spring who ran the pumping plant. This fellow had also planted a garden for radishes, beans, and tomatoes. Chase also mentions an arrastra and scattered rock samples. This is probably where ore from some of the Monte Negras mines was milled.

The output of the spring was as much as 3,000 gallons a day in the early 1900s. When Moorten lived there in the early 1930s, Cottonwood Spring, Cotton Spring, and Wood Spring were all government water reserves. The water from Cottonwood Spring was not piped or contained. Excess water simply sank into the ground. The spring was just a flow from a cleft in the rock. It was later cemented up by the

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103. Ronald D. Douglas, "The Cottonwood Springs Archaeological Reconnaissance: Preliminary Report" ([Fullerton: California State University]?, 1978), n.p.

104. H. Sansum interview with Cactus Slim Moorten, Oct. 28, 1969, JTNM files, pp. 3-4.

government and a door put across it. Three or four cracks seeped water all the time.<sup>105</sup> The decline in mining operations during the 1930s resulted in reduced freight traffic along the old routes, causing Cottonwood Spring to become relatively quiet in the early 1930s.<sup>106</sup> It was then, however, that many mining locations were made in the area, causing more activity.

## 2. Mine Sites

### a) Coyote Mine

The Cottonwood Spring Mining District was in operation by 1892, though only one mine, the Coyote, was being described. It was a quartz deposit developed by two shafts and was idle at that time.<sup>107</sup> The property is immediately outside the monument boundary, about 2 miles southwest of Cotton Spring, in T5S, R11E. In 1933 the mine was being worked by a family that was living in the old Iron Chief pumphouse at Cottonwood Spring. By the late 1930s several tons of ore from the claim had been milled at the Hopper mill, recovering \$12 per ton. The mine was owned at this time by Chester Morten and Edith Hopper.<sup>108</sup>

### b) Snow Cloud Lode

This property, also outside of the national monument, about fifteen miles west of Cottonwood Spring in T4S, R10E, was considered part of the Cottonwood Mining District. It was located August 9, 1934, by Alfred A. Bell of Thermal, California. Development

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105. Ibid., pp. 5, 10-11.

106. Jerry A. Moore, "A Day at Cottonwood Spring," published by the Joshua Tree Natural History Association in cooperation with the National Park Service, revised 1973; Steve Nelson, "Palm Oases of Joshua Tree National Monument," pamphlet published by the Joshua Tree Natural History Association in cooperation with the National Park Service, 1974.

107. William H. Storms, Old Mines of Southern California (Toyahvale, Tex.: Frontier Book Co., 1965), pp. 90-91.

108. Moorten interview, Oct. 28, 1969, p. 3; Guthrey to Dir. of Investig., May 6, 1937, p. 15.

by the late 1930s consisted of an inclined shaft sixty feet deep and adits. Ore had recently been shipped and several tons were still in the ore bin at the time the claim was investigated.<sup>109</sup> Bill Keys operated the mine at one time.

c) Southern Cross Lode

This property was situated about 2½ miles southwest of Cottonwood Spring, in T5S, R11E. It was located in 1931 by N. E. Hopper, C. E. Wilson, and others. Development by 1937 consisted of two shafts on a quartz vein. Several tons of ore had been milled at the Hopper mill with a net recovery of \$24.85 per ton.<sup>110</sup>

d) Yucca Butte Lode

This claim, located in 1934, was about 2½ miles northwest of the Hulsey property (Winona mill), in T5S, R11E. Ore from this quartz deposit was processed both at the Hulsey mill in Cottonwood Wash and at the Gold Crown mill.<sup>111</sup>

e) Eureka Mine

Notice was found of a mineral location by this name in section 14, T5S, R11E. This was a prospect held by George W. Hulsey in connection with his mill site in that same area.<sup>112</sup>

f) Snow White Mine

The exact location of this property is unknown, so it is unclear if it was part of the Cottonwood Spring Mining District. The only reference to it mentioned that it lay in an unsurveyed township

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109. Guthrey to Dir. of Investig., May 6, 1937, pp. 17-18.

110. Ibid., p. 15.

111. Ibid.

112. Central Files, 1907-49, RG 79, NA.

south of Pinto Basin and mostly west of the south entrance road through Cottonwood Pass, in T4S, R11E. It was located by Spell and Warner in 1941.<sup>113</sup>

g) Mastodon Mine

This quartz claim, named for a nearby peak shaped like a prehistoric elephant's head, operated during the 1930s. The original location was recorded November 11, 1934. Approximately in Section 13, T5S, R11E, the twenty-acre property consisted of one claim and one millsite. The original assay was reported in one article at \$744 a ton, but the mine was worked only sporadically after faulting severed the main vein. By the late 1930s the vein had been developed by a forty-five-foot shaft.<sup>114</sup> The mine was owned by George W. Hulsey of Indio. Labor was kept up by the Hulsey family until 1971 when the property was obtained by the National Park Service.

3. Mill Sites

a) Winona Mill (Cotton Spring)

The date that plant operations first started at the old Winona mill site are uncertain. Although one article states that a five-stamp mill to process ore from the Mastodon Mine and other nearby claims was built in the 1920s,<sup>115</sup> this is doubtful, because little mining activity was going on there during this period. It is more probable that the mill did not enjoy large-scale production, at least, until the mid-1930s. Cactus Slim Moorten, who operated a small custom mill south of Cottonwood during the 1930s, stated that George Hulsey moved into the

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113. J. Volney Lewis, Reg. Geologist, Memorandum for Regional Director, July 22, 1941, FARC, San Bruno, Ca.

114. "Cottonwood Spring--Where Man and Nature Interact," Roadrunner Magazine (March 1977), p. 9; Guthrey to Dir. of Investig., May 6, 1937, pp. 13-14. The California Journal of Mines and Geology, July 1945, reported an average value of ore milled at \$40 a ton in gold--a more reasonable figure. P. 138.

115. "Cottonwood Spring," Roadrunner Magazine (March 1977), p. 9.

Cottonwood Spring area after working a placer on the east side of the monument in the Eagle Mountains. Hulsey settled at a spring that was a government water reserve, which became the Winona mill site. Moorten said a mill was definitely operating at Winona during the period from 1934 to 1939.<sup>116</sup> In 1936 a custom plant was reported in operation in the Cottonwood Mountains treating ore from different small properties in the area, but its name was not mentioned.<sup>117</sup> By 1945 a large mill, then idle, was described at Cottonwood Spring in Section 14. The owner was R. A. Theobald (Theobold?) of Los Angeles:

The mill has a capacity of 40 tons per day. Ore to coarse ore bin, capacity 20 tons, then by belt feeder to 9-inch by 8-inch Fulton jaw crusher to 20-ton fine-ore bin. From fine-ore bin to 4-foot by 4-½-foot ball mill, in closed circuit with drag classifier, overflow from classifier to amalgamation plates to amalgamation trap. Water from trap pumped by 2-inch centrifugal pump to cone classifier; overflow from cone to feed from ball mill. Product from bottom of cone to Universal concentrator, or to 2-cell Groch flotation machine; tailings from concentrator to settling tank, and water from settling tank returned to ball mill. The mill is driven by 40 horsepower Buick motor. Recovery is reported to be 85 percent of gold values.<sup>118</sup>

b) Mastodon Mill

The Mastodon Mine property is said to have been equipped with a ball mill having a capacity of twenty-five tons in twenty-four hours by the late 1930s. Ores milled had a value of \$60 per

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116. Moorten interview, Oct. 28, 1969, pp. 4-5, 25.

117. Walter W. Bradley, State Mineralogist, to Harry R. Sheppard, House of Representatives, Dec. 15, 1936, Central Files, 1907-49, RG 79, NA.

118. California Journal of Mines and Geology, 1945, p. 129. Moorten said the ball mill at Winona was put in about the time he left the area, which would have been late 1939. Interview, Oct. 28, 1969, p. 24.

ton with a recovery of \$40 per ton. The mill was operated by the mine owner, George W. Hulsey.<sup>119</sup>

c) Hopper Mill (Moorten Mill?)

This plant is mentioned frequently as operating on ore from mines in the area during the 1930s. Mrs. Hopper had developed water for a mill site she held in Section 22.<sup>120</sup> This will be discussed further under the Moorten Mill Site.

d) Desert Star Mill Site

This writer found no information on this site, but it was mentioned by an archeologist of the California State University at Fullerton as being tentatively identified during an archeological survey of Sections 13 and 14, T5S, R11E.<sup>121</sup>

e) Moorten Mill

During the 1930s a five-stamp mill was erected in Cottonwood Wash in Section 23, T5S, R12E, by Chester Moorten (Morton, Morten) and Edith Hopper. This plant, frequently referred to as the Hopper Mill, not only treated ore from the Coyote claim and several of their mines, but also performed custom work on ore from other mining claims.<sup>122</sup> According to an oral interview with Moorten in 1969, he actually filed on the mill site in 1934. The small gold mill he erected housed five stamps weighing about 200 pounds apiece. Moorten lived there alongside his car. He first arrived in the area around March 1934 and finally discontinued the mill operation in about October 1939. He

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119. Guthrey to Dir. of Investig., May 6, 1937, p. 14.

120. S.E. Guthrey, Special Agent, Div. of Investig., Dept. of Int., to B.B. Smith, Dir. of Investig., June 16, 1938, Central Files, 1907-49, RG 79, NA, p. 20.

121. Douglas, "Cottonwood Springs Archaeological Reconnaissance," May 17, 1978, n.p.

122. Guthrey to Dir. of Investig., May 6, 1937, p. 15.

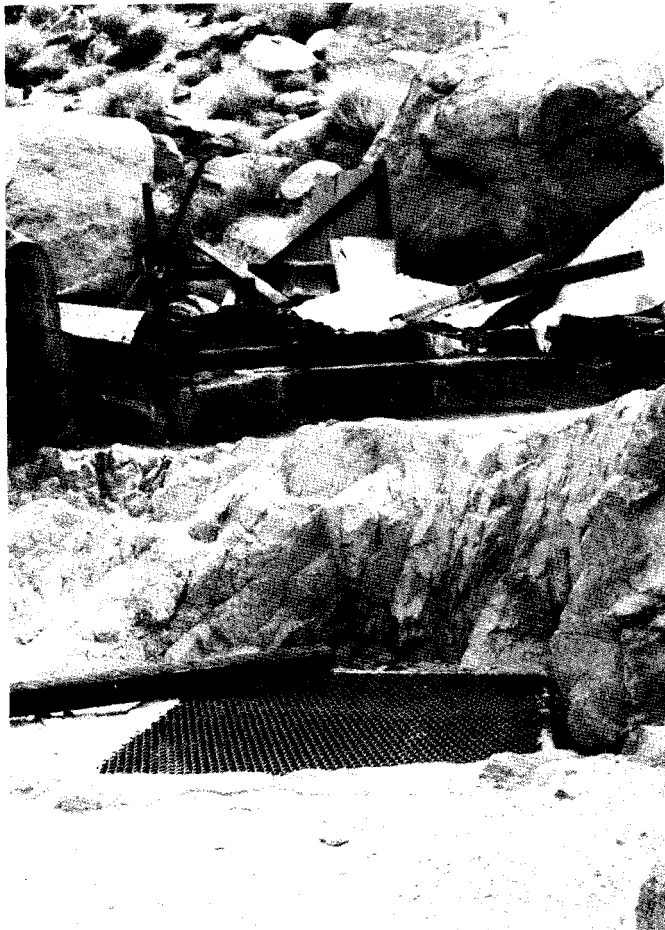
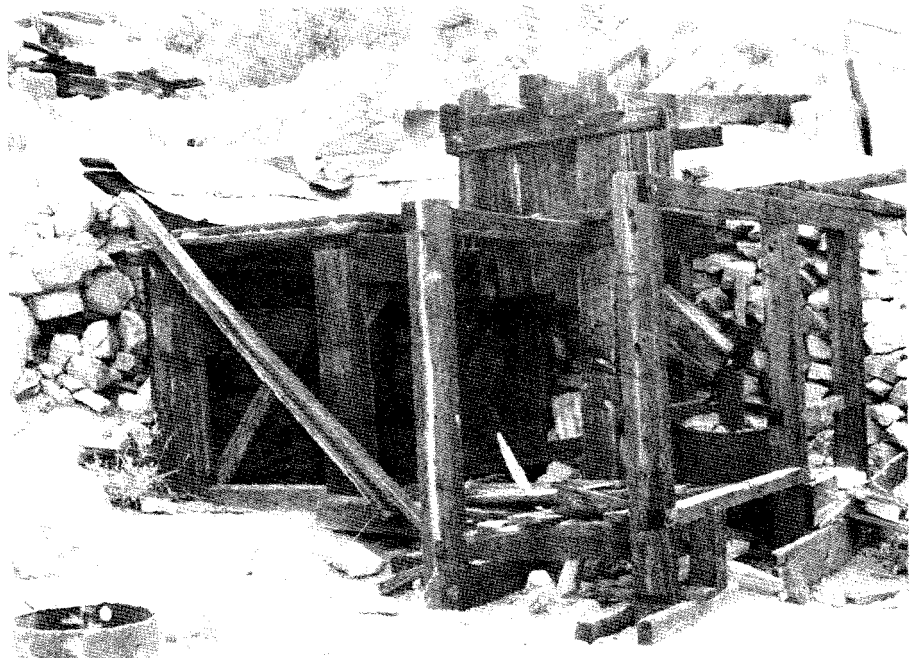


Illustration 45 (left).  
Mastodon Mine. Collapsed office  
and grated vertical shaft.

Illustration 46 (below).  
Ore bin and superstructure over  
second vertical shaft. Note  
crusher in section to right. NPS  
photos by Linda W. Greene.





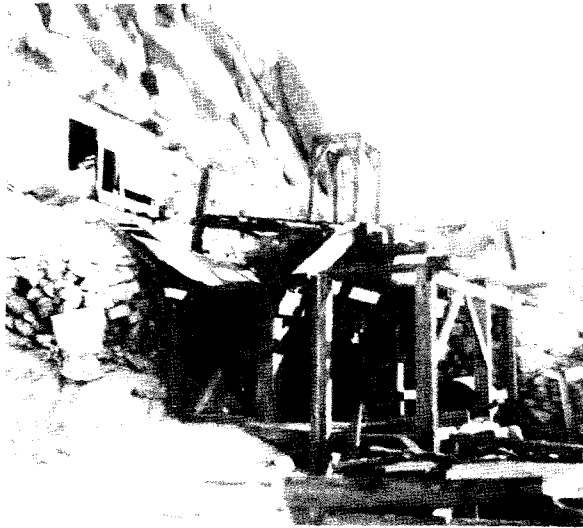


Illustration 47 (top).  
Mastodon Mine, n.d. Note  
revolving crusher on right-hand  
side of middle structure. Photo  
courtesy JTMM.



Illustration 48 (left).  
Close-up view of iron crusher  
filled with concrete, now lying on  
its side. NPS photo by Linda W.  
Greene.

held mining properties east of Cottonwood Spring and near the old Iron Chief Mine on which he kept up assessment work until 1950.<sup>123</sup>

4. Evaluation of Resources and Recommendations

a) Mine Sites

(1) Mastodon Mine

This is the only mine property with workings visited by the writer in the Cottonwood Spring area. The mine is in the SW $\frac{1}{4}$  of Section 13 and the NE $\frac{1}{4}$  and SE $\frac{1}{4}$  of Section 14, T5S, R11E. This gold mine is at the western base of a large geologic formation of quartz monzonite that was reportedly named by miners for its resemblance to a mastodon's head and trunk. The site can be reached by a three-mile hike from the Winona mill site to Mastodon Peak and back to Cottonwood oasis via the Lost Palms trail.

In the early 1970s the Mastodon Mine was investigated by mine safetying personnel. On site they found two shafts, an open inclined one approximately seventy-five feet deep, and another about twenty feet deep, covered with old wood. The Mastodon Peak Trail crosses between these two workings and through the middle of the mine area. The mine office stood on a ledge above the easternmost shaft. By the time this writer visited the site ten years later, the one hazardous shaft had been grated and the building had collapsed. Extant is a structure comprising the wooden framework that encloses the other shaft, a one-chute ore bin, and what appears to be the remains of a crushing operation. The claim owner was reported to run a small, homemade twenty-five-ton-capacity ball mill in conjunction with his mining operation.

The Mastodon Mine is not considered to have historical significance. It is, however, an interesting stop for people hiking the Mastodon Peak trail. The property contains no safety

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123. Moorten interview, Oct. 28, 1969, pp. 8, 10, 14, 20, 22-23.



Illustration 49.

Winona mill site residence, 1930-31, Harold Hulsey, Sr., seated.  
Courtesy JTNM.



Illustration 50.

House site along wash near Winona mill, 1982. NPS photo by Linda W. Greene.

hazards now that the one deep shaft next to the trail has been grated. The ore storage and crushing area connected to the other shaft is in good shape. Its condition has changed little in the past several years. The mine office above the trail has collapsed. The elimination of some of the corrugated metal and bits of loose lumber on the building foundation would not detract from the historical interest of the site. It is undoubtedly a tempting place for visitors to explore in its present state, but it also offers cool shelter for snakes. Illustration 47, showing the site with the office building standing, could be used on an identifying marker.

b) Mill Sites

(1) Winona Mill (Cotton Spring)

The wash passing north-south in front of this mill site in the north half of Section 14, T5S, R11E, contains evidence of early habitation probably of some duration. Found were two wells covered by cement slabs. Numerous building foundation levels, marked by low rock walls, can be seen along the edges of the dry wash. The inscription "G. W. H. 10/12/37" was found, indicating the presence, and possibly the living quarters, of George W. Hulsey, owner of the Mastodon Mine and Winona mill. By 1963 three acres of the Winona mill site had been developed with three old shacks, two concrete mine buildings, and other miscellaneous structures. The buildings were razed in that year, the refuse cleaned up, old water lines removed, and retaining walls mostly knocked down. A bench below the millsite was the former location of a house connected with the operation.

Today the only evidence of the Winona mill operation remains in the form of building foundations and cyanide-stained waste dumps. Ruins on site consist of a large roofless concrete platform enclosed on three sides by seven-foot-high walls and with pipes leading from it, indicating it probably housed a water tank; a second concrete building foundation whose use is unknown; and the mill ruins themselves, consisting of concrete machinery pilings and foundations.

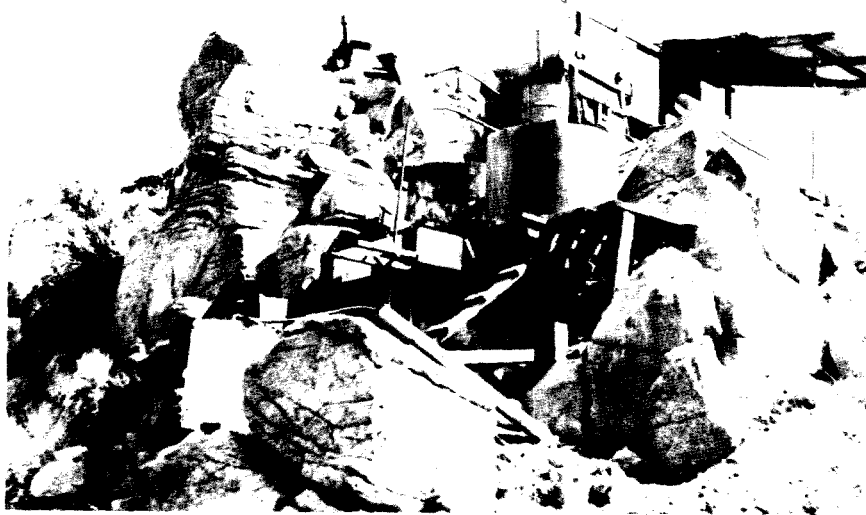


Illustration 51.

Winona mill, probably before 1930-31. Courtesy JTNM.



Illustration 52.

Winona mill, n.d., looking north up wash near Cotton Spring. Courtesy JTNM.



Illustration 53 (left).  
Cast-iron and concrete vats,  
Moorten mill in Cottonwood Wash.

Illustration 54 (bottom).  
Rock walls and L-shaped concrete  
building platform, Moorten mill.  
NPS photos by Linda W. Greene.



For about five years the Winona mill performed custom milling for small mines around Cottonwood Spring. Because the Eldorado Mine to the northwest is being nominated to the National Register, partly on the basis of representing a custom mill of the 1930s, the Winona mill will not be nominated. The ruin should be left to natural deterioration.

(2) Moorten (Morton, Morten) Mill

This mill site is reached by a trail that follows the wash south from Cottonwood Spring. Following Cottonwood Canyon for about a half mile brings the hiker to Moorten's mill site, lying on the western slope of the canyon. All that remains of this milling operation are a concrete building slab, some stone retaining walls, and four round sheet-metal vats. Purple glass fragments were found there and several rusted car parts were scattered over the flat wash.

This mill ruin of the Cottonwood Mining District is not considered to be historically important. The Moorten site should be left to natural deterioration.

A 1930s-period custom mill in the monument will be represented on the National Register by the Eldorado Mine and mill, which is considered significant because of its size and the presence of more documentary data.

c) Other Historical Sites

(1) Cary's Castle

This one-room prospector's house was adapted from a sheltered cave formed by very large adjoining rocks. Walls of stone masonry and concrete were built among large monzonite boulders that formed portions of the walls and roof. The south wall was almost entirely stone masonry and contained a wooden door and screen-covered window well. A masonry retaining wall and a firepit were west of the dwelling. It is assumed that a miner lived there because a road leads from the "house" to a vertical shaft. This "house" was still furnished in 1945, with a cot and other rough, makeshift furniture. No one at the

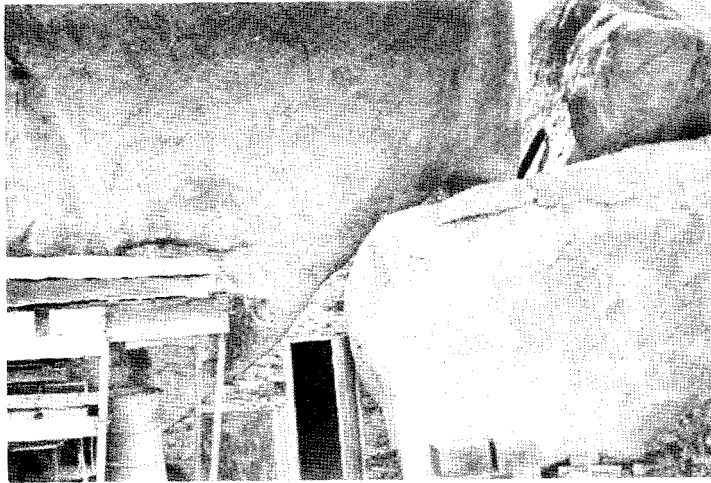


Illustration 55.

Exterior view of Cary's rock "castle" near Lost Indian Tank, 1945.  
Courtesy JTNM.

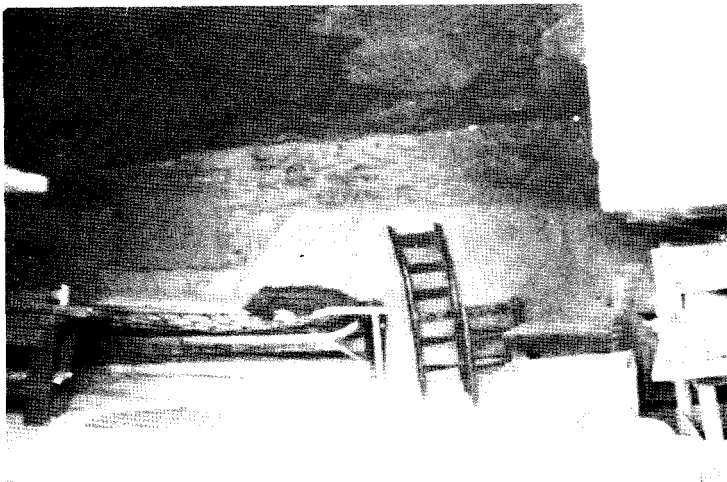


Illustration 56.

Interior view of "castle," 1945. Courtesy JTNM.



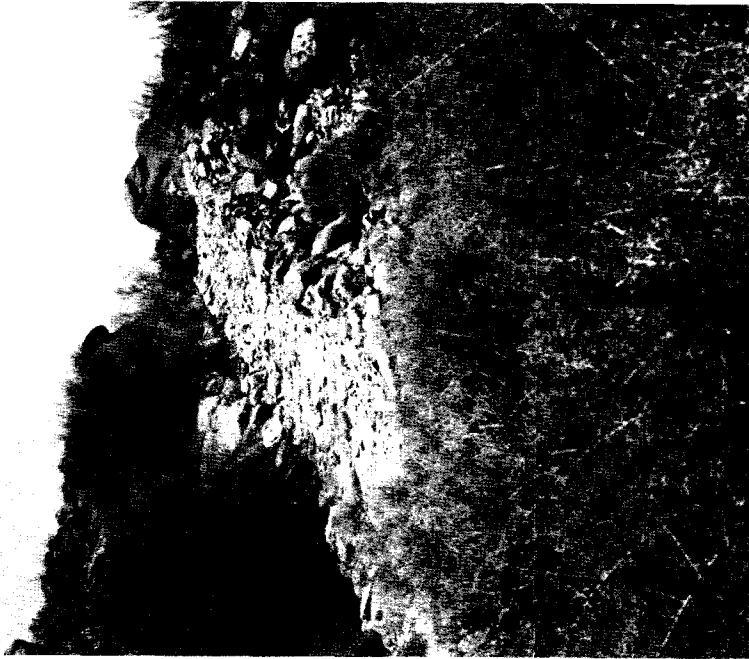
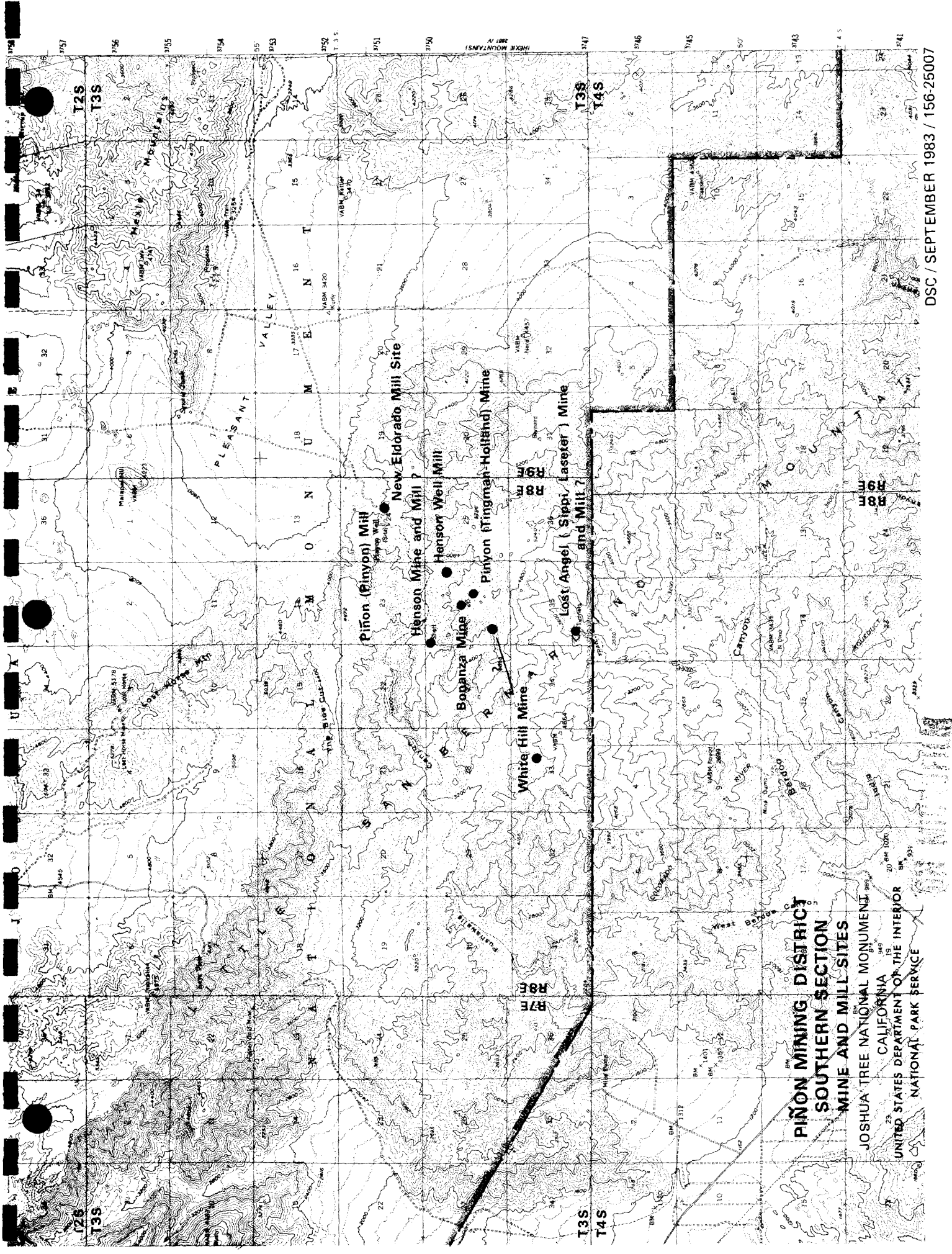


Illustration 57 (top left). Cottonwood Wash. Rock waterfall to right of picture, Little Chilcoat Pass at upper left.

Illustration 58 (top right). View showing composition and width of road.

Illustration 59 (bottom left). Road bed coming down out of pass. NPS photos by Linda W. Greene.





**PIÑON MINING DISTRICT**  
**SOUTHERN SECTION**  
**MINE AND MILL SITES**  
 JOSHUA TREE NATIONAL MONUMENT  
 CALIFORNIA  
 UNITED STATES DEPARTMENT OF THE INTERIOR  
 NATIONAL PARK SERVICE

Cottonwood Ranger Station knew the exact location of this shelter, so its current condition is not known. It was not considered by the LCS evaluation team to be of National Register significance, but if still in existence should be left to natural deterioration as an interesting example of vernacular architecture.

Interpretively this site is interesting as an example of how man can secure a comfortable home without much effort by taking advantage of existing natural conditions. Such adaptation is a necessary part of wilderness living.

#### (2) Little Chilcoot Pass

This old freight road, built possibly in the 1880s to bypass a dry waterfall in Cottonwood Wash, will be discussed in the section on Roads and Trails in the Pre-Monument Period.

#### G. Piñon Mining District

##### 1. History

The Piñon Mining District started taking shape in the late nineteenth century. It was organized around claims in the Piñon Mountain area of the Little San Bernardino Mountains, but eventually grew to encompass far more. Its western boundary ran by the Lost Horse Mine north as far as the Desert Queen Mine and included several claims in that vicinity. The district spread southeast to the Golden Bee Mine and embraced several properties bordering Pleasant Valley. Fargo and Berdoo canyons were also included in this district. Because of its size, the writer will discuss it in terms of Southern, Northern, and Middle sections.

##### Southern Section

Activity in the southern end centered around Pinyon Spring (later developed into a well), which became a focal point for miners entering the monument from the Coachella Valley. By 1890 a small mill had been established at the spring site. In 1892 the miners named the district Piñon (Mountain).<sup>124</sup>

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124. Lucile Weight, "Century old landmark-preservation [needed?], Desert Trail (Twentynine Palms, Ca.), Feb. 25, 1982.

## 2. Mine Sites

### a) Pinyon (Tingman-Holland) Mine

This property is in the south half of Section 26, T3S, R8E, 1½ miles southwest of Pinyon Well along the crest of the Little San Bernardino Mountains. The mine was worked in the 1890s by Alfred G. Tingman, a Southern Pacific Railroad agent, and Ed Holland, a mining engineer, both of Indio. These men were reportedly operating two mills in The Blue Cut, northwest of the mine, by 1891. In 1894 it was reported that "some very high-grade rock has been taken from several claims of this group, which was crushed in a 2-stamp mill a mile from the mine. The deepest work on these veins is 70 feet from the surface."<sup>125</sup> Two years later L. B. Woodworth of Los Angeles was owner of the Piñon Mountain quartz mines, where he had a small force at work on several claims. Ore was still being crushed at the Pinyon Well two-stamp mill.<sup>126</sup> In 1900 the property was purchased by Ertel and Glove of Los Angeles, who intended installing machinery and working the large tailings body before continuing development. The old works at this time consisted of two shafts--one 75 and the other 100 feet deep, in addition to about 400 feet of tunnels.<sup>127</sup> In 1902 W. F. Sherwood of Los Angeles purchased from Dr. Mary S. Erth (Ertel?) a two-thirds interest in this and the Golden Calla Mine in the Piñon District.<sup>128</sup> In 1903 the current owners reported a 4½-foot-wide vein of good ore in a claim adjoining the old Piñon Mine, "which was worked 10 or 12 years ago."<sup>129</sup> As late as 1907 the mine was operated by W. F. Wilkinson of Indio. After being inactive for many years, the property was relocated by William F. Keys in the 1920s, but little or no work was performed. The Keyeses held the Pinyon

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125. Twelfth Report of the State Mineralogist, 1894, p. 224. The mill mentioned is believed to be the machinery now in the Wall Street mill.

126. Thirteenth Report of the State Mineralogist, 1896, p. 313.

127. Engineering and Mining Journal 70, no. 24 (Dec. 15, 1900): 707.

128. Ibid. 73, no. 8 (Feb. 22, 1902): 286.

129. Ibid. 75, no. 26 (June 27, 1903): 980.

Group of claims (White Hills, Mountain View, Pinyon, and Grand View) in Section 26.<sup>130</sup>

b) Bonanza Lode Claim

The Bonanza claim was located in 1905, amended in 1921, and patented by the New Eldorado Mining Company on July 12, 1923.<sup>131</sup> At the time of patent the map showed a road to the property, a cabin, a well, and a ten-foot discovery shaft. The mine was located in the northeast quarter of Section 26, T3S, R8E. This location covers Henson's Well, a spring used for many years for the milling and reduction of ores from mines in the vicinity.

c) Lost Angel (Sippi, Laseter) Mine

This property, in the southwest quarter of Section 35, sits in a narrow canyon high on the southwest slope of the Little San Bernardinos, 2-3/4 miles southwest of Pinyon Well. In 1945 it was erroneously reported as being in Section 22. The Sippi Mine, probably the Lost Angel, is said to have been worked by a Mr. McFarland in the 1890s. The Lost Angel was owned many years ago by W. H. Laseter of Twentynine Palms. From 1937 to 1945 the mine's eight claims were leased to C. L. Woods of Indio. A. F. Perry acquired the property in 1945 and sold it to Clyde Jones of Indio in 1956. The mine has apparently not been worked since about 1937.<sup>132</sup>

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130. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.

131. Record of Patent, Bonanza Lode Mining Claim, #911384-7-12-1923, file L3023, Joshua Tree Patented Mining Claims, Office of Mines and Minerals, WRO, NPS, San Francisco, Ca; Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.

132. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.

d) Henson (Hansen, Hensen, Hanson) Mine

This mine is in the northwest quarter of Section 26, about 1½ miles southwest of Pinyon Well, on the north slope of the Little San Bernardinos. The early history of the property is unknown, but it may have been part of the Pinyon Mine operations about half a mile to the southeast. By 1960 William F. and Frances M. Keys held the Grand View claim as part of the Pinyon Group. Keys stated that the "Hansen shaft" was on the Grand View claim.<sup>133</sup>

e) White Hill Mine

On August 3, 1923, Wm. F. and Mrs. F.M. Keys located the White Hill Mine. It was said to be situated about 3½ miles southwest of Pinyon Well, and yet about one-half mile southwest of the Bonanza Mine. The property is thought to be either in Section 26 or 33, T3S, R8E.<sup>134</sup>

3. Mill Sites

a) Pinyon Well Mill (Piñon Mill)

Pinyon Well began as a spring, where water could be obtained anytime of year by digging in the ground. The site was a natural activity center for mining in the area because of the presence of water for milling and domestic purposes. So a well was sunk and a pump installed and a small camp arose. A steam-powered two-stamp mill was erected in 1890 or 1891 by the mining company (Tingman and Holland) working the Piñon Mountain area. Each stamp weighed 850 pounds. The mill had a capacity of four tons per twenty-four-hour period.<sup>135</sup> Ore from several small mines was crushed in both the stamp mill and a nearby arrastra. In 1895 Jim McHaney hauled in ore from the Desert Queen Mine farther north to be milled. In 1907 George Wharton James described the Pinyon Well camp: "There are a few cabins and a stamp mill situated in a

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133. Ibid.

134. Location Notice, White Hill Mine, Book 53, Mining Claims, Records of Riverside County, California, p. 460.

135. Thirteenth Report of the State Mineralogist, 1896, p. 315.



Illustration 60.

Pinyon (Tingman-Holland) Mine, waste dumps, 1982.



Illustration 61.

Rock-walled structure at base of mine dump. NPS photos by Linda W. Greene.

cozy nook in the mountains, and--pleasing fact--the homes of families, where the voices of women and children are heard."<sup>136</sup> By 1918 the mill site was abandoned. All that remained were two old buildings, the old wells and a rusty pump, the wrecked mill, and miscellaneous tools and pipeline parts. In 1921 the New Eldorado mill site of 4.13 acres was located at Pinyon Well, for which a patent was issued in 1923. Water from the wells was supplied to the Eldorado Mine to the east through a pipeline nine miles long. The wells have probably not been used since the Eldorado closed in the late 1930s.<sup>137</sup> In 1923 the United States Geological Survey inspection of water holes in the monument noted that the wreck of an old two-stamp mill, two deserted cabins, and some abandoned shafts still marked the well site.

b) Henson (Hansen, Hensen, Hanson) Well Mill

Henson Well is in the northwest quarter of Section 26, T3S, R8E, about 1.3 miles from Pinyon Well. Near the well are the remains of an old arrastra and some small stone buildings. Water from here was syphoned to the Eldorado Mine along with that of Pinyon Well.<sup>138</sup>

4. Evaluation of Resources and Recommendations

a) Mine Sites

(1) Pinyon (Tingman-Holland) Mine

This property was reached by following a wagon road from Henson well up toward the crest of the Little San Bernardino Mountains. Development consisted of a drift adit driven on the principal ore vein that may have connected with two vertical shafts lined with pinon logs. In addition there are several adits and prospect holes. All the workings are largely caved in today. The large waste dumps indicate

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136. James, Wonders of the Colorado Desert, II:484.

137. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.

138. USGS Water-Supply Paper 497, 1923, p. 273.





Illustration 62.

Area of mining activity adjoining Pinyon Mine. NPS photos by Linda W. Greene.



that underground workings must have been extensive. At the base of the waste dumps are the remains of a small stone structure with crumbling rock walls, measuring seven to eight feet across. It was probably an assay or watchman's office or a blacksmith shop. There are also prospect pits on a south-facing hill across from these main workings. The vertical shaft at this site is uncovered, rather deep, with timbers and other debris at the bottom. It could be a safety hazard. Over another ridge southeast of the Pinyon Mine another small area of activity was found. Excavations consisted only of an adit and a filled-in shaft at its entrance. An interesting mechanical apparatus of some kind was found several hundred yards away, whose purpose was not clear. It is in ruins, but consists of a wooden platform on metal pipe legs, to which a metal funnel was attached. Other pieces of the contraption lying around on the ground consisted of scoops fashioned from motor lubricant cans, large square-cut spike nails, and a circular wooden wheel, 2½ feet in diameter, with a pipe protruding through the center. The machinery had been positioned over a rocky area at the head of a wash.

The road leading downhill toward Pinyon Well from the Pinyon Mine is steep and rough, much too difficult for trucks to negotiate. Willis Keys, in a 1975 interview taped at Keys Ranch, pointed out to monument rangers some heavy steel plates used in steep country where brakes would not hold when hauling ore from mines like the Pinyon. These items were chained to the heavy ore wagon and run under both rear wheels like a skid. The wagon would then slide on them like a sled down the hill. When not in use, the plates were carried in the wagon bed.

The U.S. Bureau of Mines credits the Pinyon Mine with 483.75 ounces of gold in 1896 and with producing twenty tons of ore yielding 7.74 ounces of gold in 1907.<sup>139</sup>

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139. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.



Illustration 63.

Henson Mine and what might be a mill ruin, 1982. NPS photo by Linda W. Greene.

The Pinyon Mine was one of the earliest mines in the monument area, although information on development, ownership, and production is scanty. Because its shafts were lined with piñon logs, it is considered by Western Regional Historian Gordon Chappell to be locally significant--representative of a type of early shaft construction prior to the time milled planks and beams became accessible. Because of that, its early discovery date, and its probable association with the Henson Well milling site, it will be included within the boundaries of the proposed Piñon Mountain Historic Mining District.

(2) Bonanza Lode Claim

The exact location of this claim is not known to the writer.

(3) Lost Angel (Sippi, Laseter) Mine

By 1945 development at this site consisted of a 75-foot-deep shaft and a 150-foot adit on the vein. A five-stamp mill also stood on the property, which was idle. In June 1957 the shaft was not found, an adit on the west side of the canyon was only about 50 feet long, and the mill was gone. The U.S. Bureau of Mines records that in 1937 two tons of crude ore yielded two ounces of gold and one of silver.<sup>140</sup>

The site was not visited by this writer but was seen by the LCS crew in 1976. At that time the site consisted of three vertical shafts, two adits, two building foundations, some low masonry walls with a fireplace, and a cement well dated 1937.

The site is not significant in the mining history of the monument and is not considered eligible for the National Register. It should be left to benign neglect.

(4) Henson (Hansen, Hensen, Hanson) Mine

The Henson vertical shaft was sunk in the northwest quarter of the northwest quarter of Section 26, T3S, R8E. To the east in the northeast quarter of the northwest quarter of Section 26,

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140. Ibid.

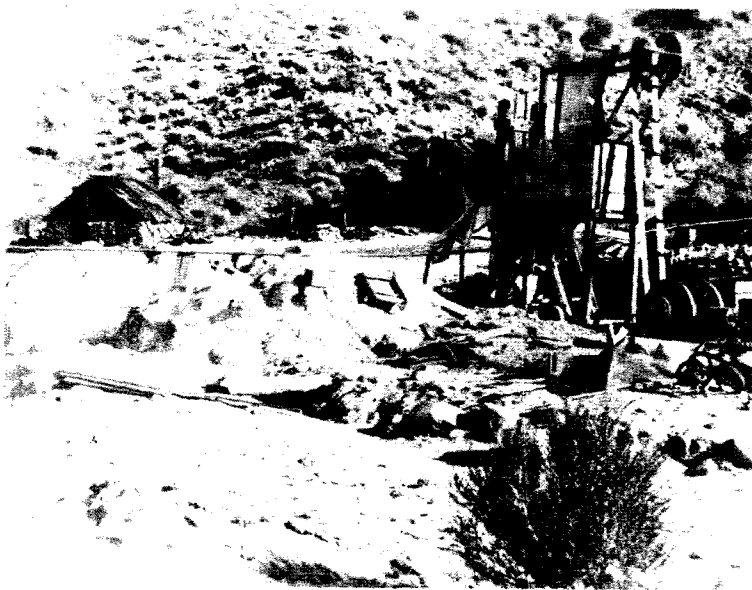


Illustration 64.

Pinyon Well mill, ca. 1911 or 1912. Courtesy JTNM.

a second quartz vein has been explored by several short adits. The mine's production is unknown.

The Henson Mine was visited by this writer in 1982. The mine area is reached by a rough four-wheel-drive road leading from Pinyon Well down Pushawalla Canyon. On a north-facing slope is what appears to be a mill site, consisting of a twelve-foot-high masonry wall with some concrete machinery pilings on the flat area in front of it. There is also a block of wood imbedded in the ground, measuring about four feet by two feet, that must have been a support post. Above the stone wall is a deep vertical shaft. About fifteen feet down, a tunnel veers off to the west. A concrete block and a bolt were placed behind the shaft--possibly part of a hoisting mechanism. This shaft is a potential safety hazard.

The Henson Mine was evidently not a significant producer, because no figures have been found nor any information on its developers or early history. No description of the type or extent of milling operations has been found. The site is not considered eligible for the National Register, but should be left to natural deterioration.

b) Mill Sites

(1) Pinyon Well Mill (Piñon Mill)

The Pinyon well mill site is in the north half of the southeast quarter of Section 24, T3S, R8E, on the south side of the Pushawalla Canyon trail east of the Little San Bernardino Mountains. In 1923 patent plats indicated three wells, two cabins, and a mill building on the site. Three shafts within a distance of about 400 feet indicate exploration for water.

Remains on site today consist of a water trough, some low masonry walls, and building foundations. Concrete tanks are extant that were presumably used as water reservoirs when the well area was the mill site for the Eldorado Mine. During the historical period the site has been an important source of water in the western part of the monument for mining, milling, and domestic purposes. The most



Illustration 65.

Two stone structures at the Henson Well mill site. NPS photos by Linda W. Greene.

important aspect of the mill site was the two-stamp mill, which serviced mines in the area from about 1891 to 1933. It is assumed it was not moved from this location until the 1930s. The mill is no longer there, however, now being housed in the Wall Street mill building, which is on the National Register. Pinyon Well was an extremely important early water location and mill site in the monument. It was the hub of mining activity for the southern and middle sections of the Pinon Mining District, first providing crushing services and then water that was either piped or hauled to neighboring mines. Without this water mining activity in the south would have been severely curtailed, especially at the Eldorado Mine, which is being nominated to the National Register. The well and mill site was also important as a crossroads in the southwestern section of the monument.

For these reasons the Pinyon Well mill site will be nominated with the neighboring Henson Well mill site and the Pinyon (Tingman-Holland) Mine as the Piñon Mountain Historic Mining District.

(2) Henson (Hansen, Hensen, Hanson) Well Mill

Henson Well is about three-quarters of a mile south of the Pinyon Well-Indio (via Pushawalla Canyon) Road at a point 1.3 miles from Pinyon Well. It was accessible by burro and possibly wagon, being situated on a small flat in a narrow canyon near the summit of the Little San Bernardino. Nearby an arrastra and a few small stone buildings were constructed.<sup>141</sup>

This site remains almost intact today, probably due to its isolated location and the fact that no distinct trail leads to it. Along the sides of a wash are the remains of three or four drywall masonry structures of unknown function. Also standing, behind a large boulder, is a stone fireplace with a tall chimney. It is in excellent condition. Whether or not a structure existed on the flat area in front of

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141. USGS Water-Supply Paper 497, 1923, p. 273.





Illustration 66.

Henson Well mill site. Stone cabin to right. Note crushing wheel of Chilean mill embedded in sand.



Illustration 67.

Rock chimney at Henson Well mill site. One of the cabin ruins is visible just beyond the large boulder in the middle of the picture. NPS photos by Linda W. Greene.

it is not clear. Two rock crushing wheels of cement banded with iron were found on site. One is lying in the lower part of the complex in conjunction with a gear part; the other is still in place in the channel of a small stone arrastra further up the wash. A photo of this latter Chilean mill with its revolving grinding stone was taken around 1914 and is reproduced as Illustration 70. This mill performed early custom grinding for neighboring mines. Upstream (south) from the arrastra a few yards is a stone and cement-walled semi-subterranean structure (water reservoir?) about three feet square. Possibly this was Henson Well, now filled in. Sticking up in the center of the wash are several small-diameter metal pipes whose function is unknown. An intact crucible was found in the bank of the wash.

This is an interesting mill site and appears fairly old. It is not known with any certainty who lived or worked there or if this was a habitation and/or work site. These might have been mine buildings (offices, tool sheds) associated with the Pinyon Mine farther up toward the summit. The walls and floor of the arrastra are not in as good shape as are those of other small stone arrastras within the National Park System. A portion of the channel and walls has been covered with silt so that only about half the structure remains visible. The crushing wheels are present, however, and a good picture exists of the mill in operation. The presence of probably late nineteenth-century or early twentieth-century mill buildings adds to its importance. Around 1913 W.A. Sherwood bought the Tingman and Holland properties around Pinyon Well, including the stamp mill and primary rights in the Pinyon and Henson wells. The Chilean mill was probably processing ore for the Dewey Mine at the time the 1914 picture was taken. This mill is perceived to have historical and interpretive significance as an example of an "improved Chilean mill"--a structure as simple in construction as an arrastra, but using large cast-iron wheels to grind rather than drag stones. During a study similar to this one conducted in Death Valley National Monument by Park Service historians, no similar structure was found with crushing wheels intact. A brief inspection of this site turned up an intact crucible, and it is quite possible that other items connected with the mining or processing of ore could be found.



Illustration 68.

Rock-enclosed structure (well site?) just up wash from Chilean mill, the crushing wheel of which can be seen to the left of the large bush.



Illustration 69.

Remains of Chilean mill at Henson Well. Two of these large cement-filled, iron-bound wheels revolved around the channel seen in foreground. NPS photos by Linda W. Greene.

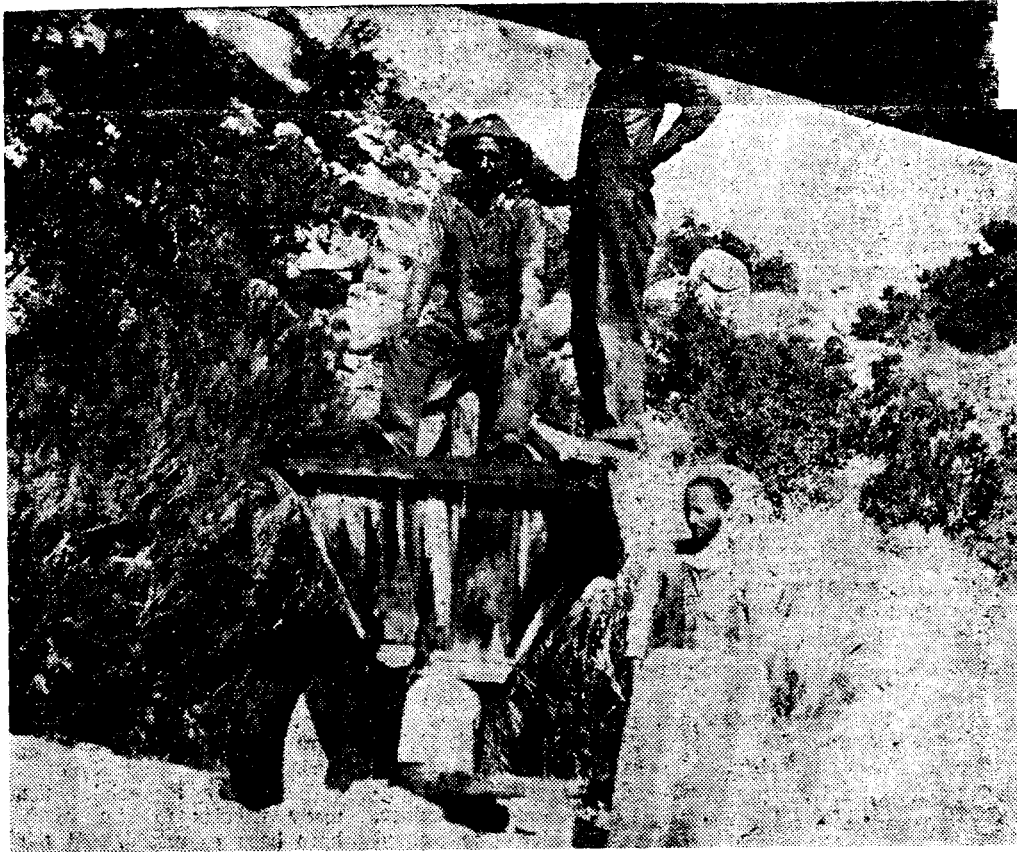


Illustration 70.

Picture of Chilean mill at Henson Well during its period of operation, ca. 1914. From Beldon, "Lizard Hunter Uncovers Rich Hoard of Gold," San Bernardino (Ca.) Sun Telegram, Jan. 15, 1961.

Because of the presence of the Chilean mill and the potential of the site for yielding data important to historical and industrial archeology, this site will be nominated to the National Register along with Pinyon Well as the Piñon Mountain Historic Mining District.

### Northern Section

Mines as far north as Queen and Lost Horse valleys were considered part of the Piñon Mining District. For a short time following the discovery of the Desert Queen lode, however, this area was often referred to as the McHaney Mining District. Properties discussed in this section are those located in T1-2S, R7-9E.

#### 2. Mine Sites

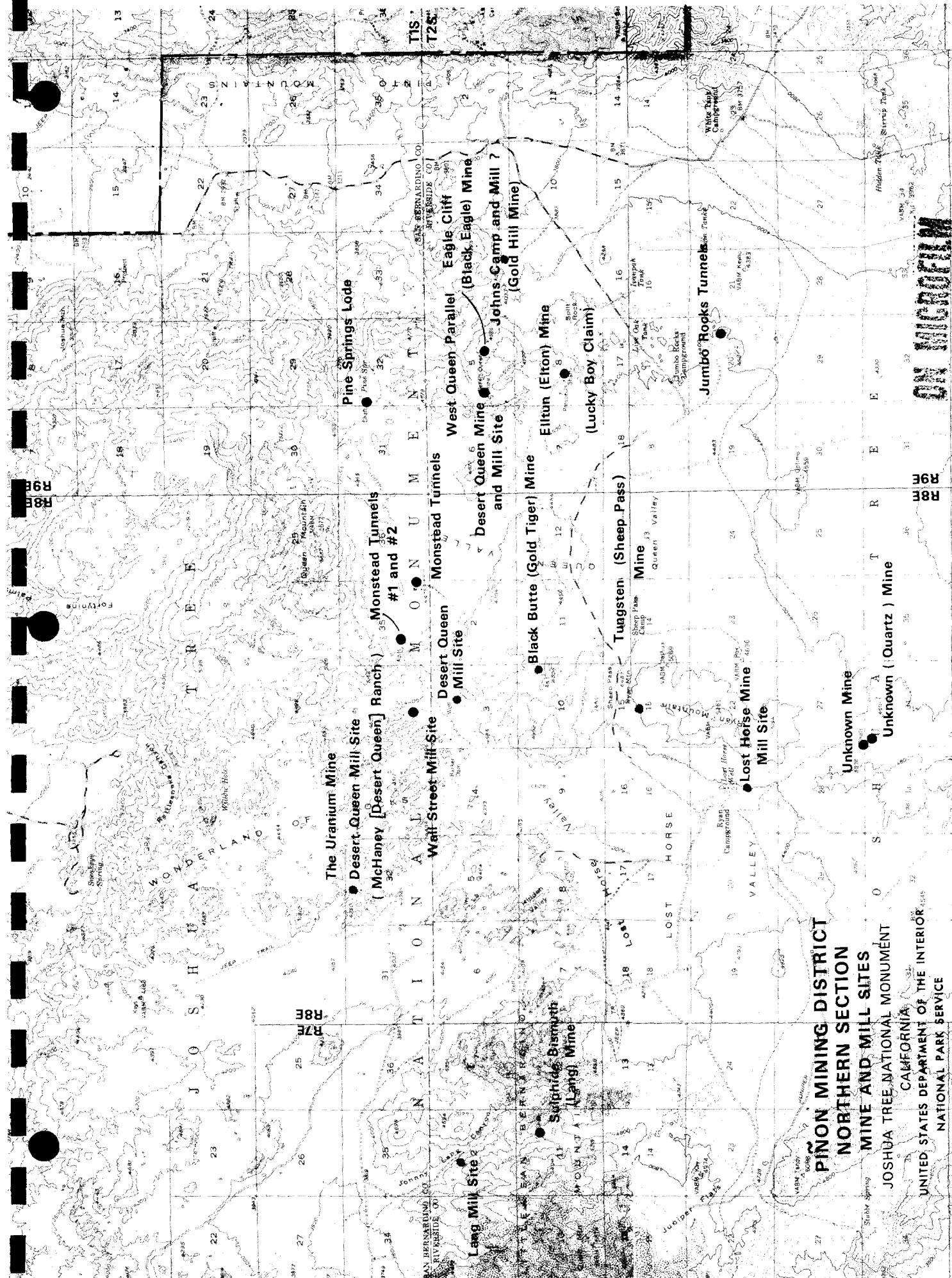
##### a) Desert Queen Mine

##### (1) General History

The early history of this property is clothed in confusion and discrepancy, so that much of the sequence of events and ownership becomes speculation. The most popular story of its discovery centers around an individual named James, who is said to have explored the Desert Queen Mine area around 1892 or 1893. Shortly after he began working the mine, trouble arose with some local cowboys. One version states that James got into an argument with members of this "McHaney gang," one of whom reportedly erected claim markers in the area of James's discovery. According to the Riverside (Ca.) Enterprise, James met Charles Martin, the alleged claim jumper, on the disputed ground in the presence of George Meyers and one of the McHaney's. James attacked Martin with a knife after the latter refused to remove his monuments, badly cutting him. Somehow Martin got hold of a gun and shot James. The body was buried immediately, because of the extreme heat. It might also be asked whether this was done to forestall some embarrassing questions about where James was shot!<sup>142</sup> It was said by

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142. Harold O. Weight, "Legends of the Lost Horse Mine," Desert Magazine (January 1979), p. 11.



**PIÑON MINING DISTRICT**  
**NORTHERN SECTION**  
**MINE AND MILL SITES**  
 JOSHUA TREE NATIONAL MONUMENT  
 CALIFORNIA  
 UNITED STATES DEPARTMENT OF THE INTERIOR  
 NATIONAL PARK SERVICE

some that James had been forced to sign a quit-claim deed to the mine before he was murdered.<sup>143</sup>

Bill Keys once added further details to the story. He stated that James worked at the Lost Horse Mine and went prospecting on Sundays. On one of these forays he found the Desert Queen lode. Eventually cowboys (George Meyers, Jim McHaney, and Charley Martin) in the area noticed his monuments and the rich deposits nearby and decided they wanted the mine. Luring James into their presence by the ruse of having him check out another possible strike, they shot him, and to make their plea of self-defense look legitimate, McHaney superficially stabbed Martin eighteen times.<sup>144</sup> An inquest was held at the McHaney Ranch in April 1894 and a verdict of self-defense arrived at, although the degree of honesty with which these proceedings were carried out is questionable.

The McHaney's have also been mentioned as discoverers of the mine. One version of the McHaney's acquisition of the property recounts that Mike Boniface, an oasis Indian, showed Bill McHaney the mine.<sup>145</sup> According to Lucile Weight, in later years Bill said he found the mine and filed on it in January 1895; other accounts say both brothers found it.<sup>146</sup> Bill McHaney said in 1933 that the mine was found on January 24, 1895, by his brother, who took \$10,000 in gold ore off the surface. Bill received one-half interest and gave one-quarter of it to his sister.<sup>147</sup> According to Chester A. Pinkham, an old-timer in the

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143. "Joshua Tours Lead Over Historic Area," Daily Sun (San Bernardino, Ca.), Aug. 8, 1960.

144. Steve Smith interview with Bill Keys, Oct. 29, 1966, on file, JTNM(?).

145. Carol Evans, Remembrances of the High Desert (Yucca Valley, Ca.: Artcraft Print Shop, 1966, p. 32.

146. Weight, "Century old landmark," Feb. 25, 1982.

147. McHaney interview, March 1933, p. 3.

area, the mine was discovered by Jim McHaney, who first noticed the gold deposit while running cattle in the area. The deposit had long been known to the Indians at the Twentynine Palms oasis.

First recorded production from the "McHaney" or "Desert Queen" Mine was in the spring of 1895. At that time Bill McHaney hauled the first load of ore in a four-horse wagon to the two-stamp mill at Pinyon Well.<sup>148</sup> Seven tons of ore milled yielded ninety-seven ounces of gold, which, at \$17 per ounce, amounted to almost \$1,700. This was an average of \$240 per ton.<sup>149</sup>

Hauling ore over a rough wagon road to Pinyon Well proved time-consuming and probably unsatisfactory because of the limited capacity of the mill. It was reported in 1895 that Jim McHaney had sent for a five-stamp mill from the Baker Iron Works of Los Angeles. The mill was set up at the McHaney ranch where there was water and was running by August 1895. (Bill McHaney also packed water to the Desert Queen Mine from a well at Pine Spring.) The first run of forty hours produced \$3,400. The second run of thirty-eight hours yielded \$3,600, and the third run of forty-two hours gave \$4,400 in gold. There was

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148. Steve Smith interview with Bill Keys, Jan. 20, 1967.

149. Mining and Scientific Press 70, no. 17 (Apr. 27, 1895): 266. The U.S. Bureau of Mines gives the production of gold from the Desert Queen Mine in 1895 as 1,209 ounces. Ray G. Brown, Mineral Report, Mineral Patent Application of Wm. F. and F. M. Keys for the Desert Queen, West Queen Parallel, Desert Queen No. 1, South Queen Parallel, South Queen Extension, and Desert Queen No. 2 Lode Mining Claims, and Wall Street Mill Site, July 30, 1959, p. 1. Bill Keys said that with part of this money, Charley Martin's interest in the mine was bought out by the McHaney's, while Meyers was given a herd of cattle in exchange for his share. This left Jim and Bill as sole owners. But Bill gave his sister Carrie McHaney Harrington a third interest. Keys said she ran Jim off the mine and got the banker, Zambro, to pay off the indebtedness and she took over the operation. The five-stamp mill was put up by the Baker Iron Works people who ran it till they were paid off and then gave it to the Desert Queen owners. Bill Keys interview, Oct. 29, 1966.



reported to be enough on the dump to run the mill at full capacity for a month.<sup>150</sup>

The record of ownership over the next few years is unclear. The initial gold find at the mine proved extremely rich, but the wealth was spent as soon as it was procured. Jim, especially, took this opportunity to indulge himself, and his high-flying lifestyle ultimately became his ruin. His lavish spending on fast women and cheap booze, plus the high costs of mining and milling in the desert, quickly exhausted all available funds.

Pinkham recalled that the McHaneys, low on both mining know-how and development money, enlisted the aid of S.F. Zambro, a San Bernardino banker, but when this occurred is speculative. According to Pinkham it was after the bank moved in to oversee their investment that water was developed and the mill erected. This means that the bank would have become a partner at least by the summer of 1895. Pinkham also recalled that soon after the mine was discovered, mining experts offered \$80,000 cash for the property but were turned down by Jim, who assumed the deposit extended a considerable distance further into the ground. The engineers, however, declared that the deposit, in a barren granite formation, could not go much deeper and based their offer on what lay on the ground, allowing a reasonable profit on the investment. He also states that due to Jim's continued reckless spending, Zambro was compelled eventually to foreclose on the property.<sup>151</sup>

Somewhere around this time Jim and Bill drifted apart. Bill moved back to the oasis at Twentynine Palms, dividing his

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150. Engineering and Mining Journal 60, no. 8 (Aug. 24, 1895): 180; Ibid. 60, no. 13 (Sept. 28, 1895): 304. Each stamp weighed 850 pounds and the mill capacity was ten tons per twenty-four hours. Thirteenth Report of the State Mineralogist, 1896, p. 315.

151. Chester A. Pinkham, "The Desert Queen Mine and Vicinity," Central Files, 1907-49, RG 79, NA.

time between that place and a cabin at Music Valley, where he was prospecting as late as the 1920s. Jim eventually turned to counterfeiting at Seven Palms for a livelihood, which landed him in the federal penitentiary for seven years. After that he is said to have worked for the Los Angeles street cleaning department.<sup>152</sup>

The Desert Queen Mine appears to have been involved in much litigation during the last few months of 1895. According to Bill Keys, Zambro had several people running the mine, probably under some type of lease/option arrangement. The bank evidently installed supervisors to guard its interests in the claims and to watch over all operations pertaining thereto. In the fall of 1895 it was announced that the bond for the sale of the Desert Queen Mine had been filed along with bonds for five other claims bought by W. M. MacMillen of Denver for a reported \$120,000. The new owner would take possession in October.<sup>153</sup> A month later it was reported that the owners of the mine had adjusted their "differences" and the mine and mill would soon be in operation again. H. B. Adsit of Colorado was taking over as superintendent.<sup>154</sup> The property then went to C. M. Thompson of Pasadena as owner in 1896, at which time it was reported that the mine had been "superficially worked quite extensively during the past two years. Some of the quartz has been so rich in gold as to cause the most extravagant reports of the value of the mine."<sup>155</sup> H. C. Steele, of Banning, was the mine superintendent. According to Bill Keys, the ore at this time was hauled to the railroad station at Palm Springs for shipment to a smelter in El Paso, Texas. Zambro at one point discovered that Steele and Adsit, his supervisors, were embezzling from the company

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152 "Joshua Tours," Aug. 8, 1960.

153. Engineering and Mining Journal 60, no. 15 (Oct. 12, 1895): 352.

154. Ibid. 60, no. 21 (Nov. 23, 1895): 496.

155. Thirteenth Report of the State Mineralogist, 1896, pp. 310-11.

and dismissed them. From that time on, he and Carrie McHaney Harrington (sister of Bill and Jim) ran the mine.<sup>156</sup>

By 1898 it was reported that Jackson Steele had bought the cyanide tanks of the Old Virginia Dale Mine and would cyanide the Queen tailings. The mine had been in litigation for a long time and was about to be reopened. A new shaft would be sunk and a cyanide plant added. By November the plant was "running successfully."<sup>157</sup> An entry for 1902 stated that the Desert Queen, owned by S. F. Zambro, had not been worked for some time but was now being developed again.<sup>158</sup> The mine was still operating in 1907. The Zambro bank reportedly had milled over two million dollars worth of ore that was shipped to the smelter.

Sometime around 1905 to 1910, the mine passed to a mining engineer named William Morgan, who reportedly invested almost half a million dollars in the mine's development. The new shafts opened did not produce as high quality ore as the original find. Morgan hired young Bill Keys about 1910 as supervisor and later assayer of the mine. Keys remained on the job several years, drilling, blasting, mucking, and taking care of the mine, machinery, and millsite, but he was never paid after the mine ceased to be a profitable operation. After Morgan's death in 1917, his wife left the desert. Through Morgan's attorney, a property-wage settlement was agreed upon, and Keys, in lieu of back wages, became owner of the Desert Queen Mine and its property.

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156. Bill Keys interview, Oct. 29, 1966.

157. Engineering and Mining Journal 66, no. 2 (July 9, 1898): 45; Ibid. 66, n. 5 (July 30, 1898): 135; Mining and Scientific Press 77, no. 19 (Nov. 5, 1898): 458.

158. Engineering and Mining Journal 73, no. 15 (Apr. 12, 1902): 530.

The Desert Queen was active from 1912 through 1914 and again in 1923. From 1932 to 1941 the mine was in nearly continuous operation. The ore was free milling and most of the gold was obtained by amalgamation. From 1912 to 1915 period, Keys processed the Queen ore in the five-stamp mill that he said was put up in 1894 by the Baker Iron Works for McHaney and Co. In the 1930s and early 1940s the ore was processed in a two-stamp mill built by W. F. Keys. According to his son Willis, Keys had a two-stamp mill at the ranch run by a steam engine. After the ore was ground in the mill the mixture was turned out into a nearby slow-turning arrastra for amalgamation.<sup>159</sup>

The U.S. Bureau of Mines gives a total production from the Desert Queen of 3,845 ounces of gold.<sup>160</sup> It is said to have produced several million dollars. The first production was reported in 1895 and the last in 1941. From about 1948 to 1961 the mine was operated for only brief periods of time. In 1961 the Dessert Queen ore was assayed and its value per ton estimated to be about \$210 to \$215.

(2) Bill Keys Ownership

William Keys purchased an interest in the Desert Queen Mine in 1911. He also operated the five-stamp mill, processing ore from the Desert Queen, West Queen Parallel, and other mines. The original claims on the Desert Queen property were located in 1895, according to Keys, and he obtained title to them in 1917. Prior to 1925 he gave a quit claim deed to another party in order to borrow money and received a mortgage back on the claims. Sometime in the early 1920s a Mr. Geils leased the mine and made a small killing from a little section of almost pure gold found in a pocket that had been overlooked.<sup>161</sup> Rather

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159. JTNM Fact File.

160. Brown, Mineral Report, p. 2.

161. Willis Keys interview, March 1975, p. 7.

than foreclose the mortgage, Keys and his wife relocated the claims in 1925 and 1932. Keys ran the mill only two or three days a year and took a day or two to clean up and melt in order to get around \$1,000. What he took out of the claims usually paid his expenses and exploration.<sup>162</sup>

In 1929 the Desert Queen Mine comprised five claims in Section 5, T2S, R8E. Development consisted of several tunnels from 50 to 300 feet in length, driven at different elevations, and an open cut 200 feet long by 50 feet wide and 15 feet deep. The total amount of drifts and crosscuts was about 2,000 feet. The property was operated last in 1921.<sup>163</sup>

In the mid-1930s a Charles Phelps came over to the Desert Queen Mine after having leased the Lost Horse for a while. In September 1935 he and others started working the Desert Queen Mine Group, consisting of seven claims: the Desert Queen, South Queen Extension, South Queen Parallel, North Queen Extension, North Queen Parallel, West Queen Extension, and West Queen Parallel.<sup>164</sup>

Keys owned several claims in connection with the Desert Queen Mine. There is much discrepancy in the names of these various claims because Keys claimed numerous properties under different names at several different times. Properties owned and improved upon by Keys included:

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162. Summary of Testimony, Pt. III, United States of America v. Wm. F. Keys, F. M. Keys, Contest No. 6897, Involving the Desert Queen No. 1, Desert Queen No. 2, South Queen Parallel, South Queen Extension Lode Mining Claims in Sections 5, 6, 7, 8, T.2 S., R.9 E., S.B.M., Calif., Recorded in Books 54, 84, 85, Pages 572, 132 and 129, Official Records of Riverside County, dated Nov. 3, 1961.

163. Report XXV of the State Mineralogist, 1929, p. 477.

164. Proof of Labor, Received for record June 30, 1936, Book No. 286, pp. 282 et seq., Official Records, Riverside County, Ca.

The Desert Queen Claim: contained several thousand feet of underground workings, consisting of drifts, crosscuts, winzes, and raises. (Keys stated under oath that he relocated the Desert Queen claim on July 1, 1925.)

The West Queen Parallel Claim: comprised several small shafts that later caved in.

Desert Queen No. 2 Claim: located July 1, 1925. Has concrete dam across the dry wash near north end of claim. Excavation at discovery point was two feet deep. Discovery point was on Section 7, which was patented to Southern Pacific Railroad in 1910.

South Queen Extension Claim: located mostly on Section 7, with north end overlapping on Section 6. Shaft on north end, about 100 feet deep. Located July 1, 1932.

South Queen Parallel Claim: located July 1, 1932. About half of claim is on Section 7, half on Section 6.

Desert Queen No. 1: located July 1, 1925. Mostly situated on Section 6, about 1/3 of southern part on Section 7. Supposedly contained some uranium.

Wall Street Mill Site: located July 9, 1930. This will be discussed in section entitled "Mill Sites."<sup>165</sup>

b) Eagle Cliff (Black Eagle) Mine

Few details are known about this mining property about one-half mile east of the Desert Queen Mine. On May 27, 1895, a lead ledge to be known as the Eagle Cliff Mine, about three-fourths of a mile east of the Desert Queen Mine, was located by Robert Muir. For the year ending December 31, 1897, \$200 worth of labor was performed on

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165. Brown, Mineral Report, pp. 3-4.

"the contiguous locations belonging to the same owners known as the Eagle Cliff and Free Gold Claims. Said work consisted of sinking one shaft 75 ft. and sinking one shaft 40 ft." Owners were listed as M. Metcalf, W. S. Forrest, S. Guyot, R. W. Keiler, Jos. Mort, J. D. Thompson, and Rufus W. Keeler. The only other mention of this property found in mining records was dated December 16, 1899, in association with the name R. W. Keeler.<sup>166</sup> Only two references to the property were found in mining journals. In 1896 it was reported that "at this mine, in the McHaney district . . . at a depth of 75 ft., a 20-in. vein of rich ore has been struck."<sup>167</sup> Two years later it was noted that

At the Eagle Cliff mine, in the Colorado Desert, ore which, in a milling test of a ton turned out \$125 has been struck. Originally the shaft went down on a fairly good vein of ore, a vein of talc running with the ore. At a depth of twenty five feet the ore petered out, but the owners continued to follow the talc until a depth of eighty feet was reached. Last week the talc again opened into a vein eighteen inches wide.<sup>168</sup>

According to Willis Keys, his father held the mine for many years, during which time it was known as the Black Eagle. He suggests his father kept up assessment work from about 1916 on. Willis recalled going to the mine with his father, beginning about 1927 or 1928. He further stated that his uncle Albert Lawton and a partner extracted some ore from the mine in 1933 and had Bill Keys process it at the Wall Street Mill. The ore averaged about \$35 a ton in gold, but the inaccessibility of the property made operating it difficult. Ore was packed out on a burro. Lawton and his partner were living in a small cabin "about ½ mile south of the Desert Queen Mine" at this time. Bill

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166. Location Notice, Eagle Cliff Mine, Book S, p. 311; Proof of Labor, Eagle Cliff Mine, Book V, p. 253; and Book 17, p. 203, Mining Records, San Bernardino County, in Hall of Records, San Bernardino, Ca.

167. Engineering and Mining Journal 61, no. 19 (May 9, 1896): 452.

168. Mining and Scientific Press 77, no. 19 (Nov. 5, 1898): 458.

Keys periodically took out small amounts of ore from the Eagle Cliff property.<sup>169</sup>

In 1980 Lucile Weight wrote an article on the Eagle Cliff Mine that contained some interesting information that might pertain to this property. She found that during the flurry of prospecting activity immediately following the discovery of the Desert Queen Mine, a Los Angeles attorney J. B. Bledsoe and associates located several claims in the area. One of these was the Desert Rose, sold in 1895 to Henry W. Spencer, a Los Angeles mining man. In January 1896 Spencer relocated the property, described as being about a mile from the Desert Queen. Whether or not this was an earlier name for the Eagle Cliff Mine is conjectural. In late April 1896 mention was made of the Eagle Cliff Mining Co. in the McHaney District.<sup>170</sup>

c) Johns Camp (Gold Hill Mine)

This property is in the southeast quarter of the southwest quarter of Section 4 (proj.), T2S, R9E, eight miles south of Twentynine Palms. Little information was found on the ownership of this mine, its dates of operation, or its production record. An inscription on a concrete block in what appears to be a mill foundation reads "A. B. J. April 1, 1931." Mention is made that in 1929 the Gold Hill Mine, comprising five claims about six miles east of Keys Ranch, was owned by C.H. Wiser and Anvil B. Johns of Rialto, California, and J.A. Johns of San Bernardino. Mine development, consisting of shallow shafts, was idle.<sup>171</sup>

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169. Willis L. Keys to writer, Jan. 17, 1983.

170. Lucile Weight, "Forgotten trails and mysterious ruins," Desert Trail (Twentynine Palms, Ca.), Mar. 6, 1980.

171. Report XXV of the State Mineralogist, 1929, pp. 479-80.



d) Elltun (Elton) Mine (Lucky Boy Claim)

This lode mining claim of approximately twenty acres was situated in the west half of Section 8, T2S, R9E. The property was originally filed on on July 7, 1922, and amended on August 14, 1937, and February 3, 1942. The last two amendments were filed after the establishment of the monument in 1936 when filing of mining claims was prohibited. There is no recorded production from the mine. The claimant at one time stated that about twenty tons were shipped to the Stuebner Mill at Barstow, but the rock was too low grade to enable recovery of any profit over and above the mill cost.<sup>172</sup>

e) Jumbo Rocks Tunnels

The Jumbo Rocks Tunnels are in the northeast quarter of Section 20, T2S, R9E. Nothing is known about their developers or their production.

f) Pine Springs Lode

This mining claim in Section 32, T1S, R9E, was located by William F. Keys and Frances M. Keys on July 1, 1923. According to Keys, two brothers worked the mine earlier, but never extracted ore of value. He said they were procuring hematite but thought it was silver. Workings found on site in the late 1960s consisted of a 100-foot-deep vertical shaft shored with timbers.

g) Monstead Tunnels

No information was found on the mining activity at this site. In the early 1970s two twenty-acre patented claims were owned by a Boy Scout representative who kept the site for Boy Scout field use.

h) Black Butte (Gold Tiger) Mine

This mining property is in the northeast quarter of Section 10, T2S, R8E, one mile north of Sheep Pass in some low hills

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172. Paul H. Knowles, "Report on the Validity of the Lucky Boy Claim, Unpatented Lode Claim, Joshua Tree National Monument, Riverside County, California," May 18, 1973, Office of Mining and Minerals, WRO, NPS, pp. 1, 7-8.

between Lost Horse and Queen valleys. The mine workings are old and possibly date from the 1890s. The property was located by W. F. Keys on April 21, 1936, and known as the Gold Tiger, but apparently he never operated it. The vein was explored by shallow open cuts, shafts, and drift adits, largely collapsed now. The principal workings were the "Gold Tiger Tunnel" and the "Ironclad Shaft." The production record is unknown.<sup>173</sup>

i) Tungsten (Sheep Pass) Mine

No historical data was found on this property in Section 15, T2S, R8E.

j) The Uranium Mine

Little is known about this claim located by W. F. Keys. It comprised about twenty acres in the northwest quarter of Section 32, T1S, R8E.

k) Sulphide Bismuth (Lang Copper) Mine

This property, in the northeast quarter of Section 11, T2S, R7E, was reportedly first located by Johnny Lang about 1900 and known as the Lang Copper Mine. Development was performed mostly by Lang during the early 1900s. In 1925 the claim was relocated by W. F. Keys.<sup>174</sup>

l) Unidentified Mine

This property is in the northeast quarter of the northeast quarter of Section 33, T2S, R8E, 1-3/4 miles south of Ryan Campground and Lost Horse Well, on the northeast slope of the Lost Horse Mountain. Its history, ownership, and production are not known. Development consists of a narrow trench, a shaft, and an adit. The dump size suggest large underground workings. The mine can be reached by a quarter-mile foot trail from the end of the jeep road in the

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173. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.

174. Ibid.

valley to the east.<sup>175</sup> Monument records indicate this property may have been later owned by Kaiser Steel Corporation.

m) Unidentified Mine

This quartz property in the northwest corner of Section 34, T2S, R8E, 1-3/4 miles southeast of Ryan Campground in a valley between Lost Horse Mountain and Ryan Mountain, was apparently a Kaiser Steel Corporation possession also. Its original owners are unknown, but it appears to be an old working. Development consists of one vertical shaft of unknown depth and a tunnel.<sup>176</sup> Its production is unknown.

3. Mill Sites

a) Desert Queen Ranch and Mine Mills

Bill Keys operated the five-stamp mill at the Desert Queen Ranch that was brought in to process the Desert Queen Mine ore when the McHanays were developing that property. Baker Iron Works built the mill, set it up at the ranch, and ran it until the firm was paid off. According to Willis Keys, his father ultimately removed the mill, leaving only the timbers and a few bolts to mark the original mill site. This was done sometime after 1948 when Keys was released from prison.<sup>177</sup> Bill Keys erected another small two-stamp steam mill alongside the five-stamp one. Adjacent to it was a mechanized arrastra built by Keys that further processed the ore crushed by the steam mill. This arrastra might have been constructed by Keys using parts of an earlier arrastra, perhaps the one reportedly built near the present Wall Street mill site by Tully sometime between 1900 and 1905, or the one Keys stated had been built near the Desert Queen Well.

There is strong evidence that a crusher existed at the Desert Queen Mine prior to the 1930s. In addition to a Blake-type

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175. Ibid.

176. Ibid.

177. Art Kidwell interview with Frank Kiler, Jan. 13, 1978, on file at JTNM.

crusher, according to the state mineralogist, the site contained a twenty-ton Herman ball mill and a Wilfley table. The plant was driven by a twelve-horsepower gas engine.<sup>178</sup>

b) Wall Street Mill

The present Wall Street mill site was the scene of much activity during the monument area's early years. The first well was supposedly sunk on the site in 1896 by Bill McHaney to water his cattle. After he left, about 1898, another cowboy, George Meyers, moved there briefly to camp and water his cattle. He built a corral nearby at the Little Reservoir (Bagley Well?) site to the west, but left in the summer of 1900. Next to arrive was a preacher from Colton, California, named Tully. He built an arrastra and milled ore there for five years. Another cowboy, Joe Reynolds, camped and watered his cattle there from about 1905 until the fall of 1911. He was followed by a man named Duncan and then by Bill Thornton and U.C. Wirtz, owners of the nearby Gold Tiger Mine. All had moved away by 1911 or 1912.

The property was idle until 1929 when Orrin Booth and Messrs. McGinnis (Earl E.) and Tulsey located on the property. They built a cabin and cleaned out the abandoned well, planning to mill gold ore from their nearby mine at this mill site. (According to Willis Keys, Booth and his partners had a mine in the south end of Queen Valley that they called the Wall Street Mine. He further said that the Wall Street mill site had originally been the mill site for the Louise Mine, a tunnel around a hill east of the mill site. The owners of that mine dug an earlier well in a clump of trees on the mill site.) Trouble arose between the partners, however, and the property was offered for sale. Bill Keys bought it in 1930. His relocation of the mill site was recorded July 9, 1930. Except for a short period during that first summer when the property was leased to Ober (Oberer?) and Son, Keys owned the mill site.<sup>179</sup> The Obers milled ore from the Gold Tiger Mine. This mill site

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178. Report XXV of the State Mineralogist, 1929, p. 477.

179. Michael Perkins Papers, in JTNM files.

was referred to as the "Treasure Queen Millsite and Well" in the 1930s and in one survey was confused with Stubbe Spring, which was also referred to as the "Treasure Queen Mill Site." The name "Wall Street Mill" was possibly bestowed by Booth in the late 1920s.

The two-stamp mill Bill Keys set upon this site was first made in Los Angeles for E. Holland & Co. by the Baker Iron Works about 1891 and was used at Pinyon Well. It was shipped to Indio, California, and freighted up Blue Cut Canyon to Pinyon Well, where it stood until 1933, serving several mines in the area. After Keys bought this mill site from Booth and McGinnis about 1930, he cleaned the well and fixed up the house. In 1933 Keys moved the Pinyon Well mill, which he had purchased from the New Eldorado Mining Company. White and the New Eldorado Company had used it from 1918 to 1930, after purchasing it from the Dewey Mine, run by Sherwood & Co., which had purchased the mill from Holland around 1912 or 1913. Willis Keys stated that the lessee Oberer moved the mill from Pinyon Well to the wash near the old arrastra site near the present Wall Street mill and that his father moved the mill a couple of years later to its present location and rebuilt it. The present site of the mill is not the original one, which was down by the wash near the present road. Orrin Booth worked for Keys at the mill and remembered helping haul it up from Pinyon Well. Keys erected the building that housed the mill machinery.

Keys periodically milled his ore and performed custom work for other mines in the area up to 1943. Willis L. Keys & Co. came to the site around 1947-48 and used it until 1949, when it shut down. Willis Keys stated that at one time, probably in the late 1930s, somebody came in and cyanided the mill tailings. The mill was not operated again until the summer of 1966, and then only briefly. The Wall Street Mill was relinquished to the National Park Service by Keys's estate on September 24, 1971.

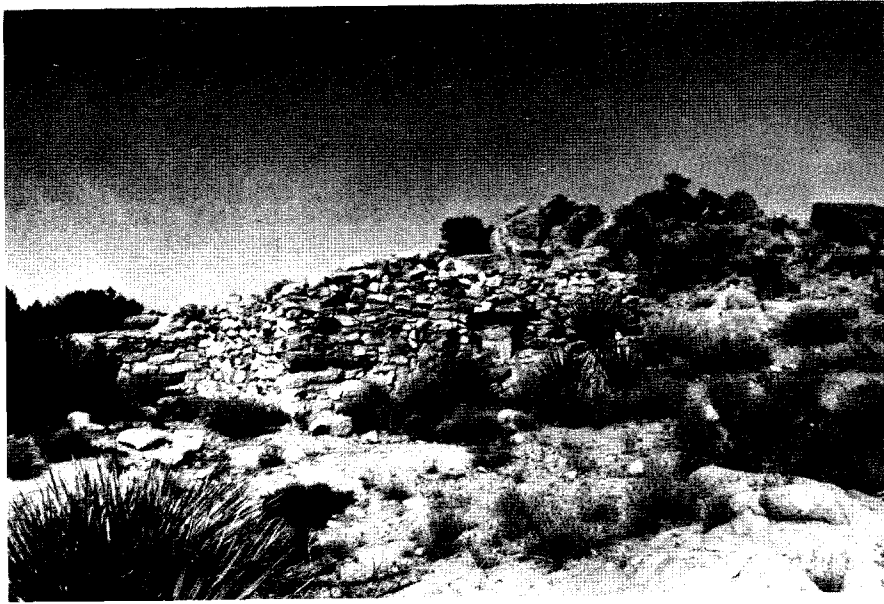


Illustration 71.

Desert Queen Mine cabin ruins, 1982.

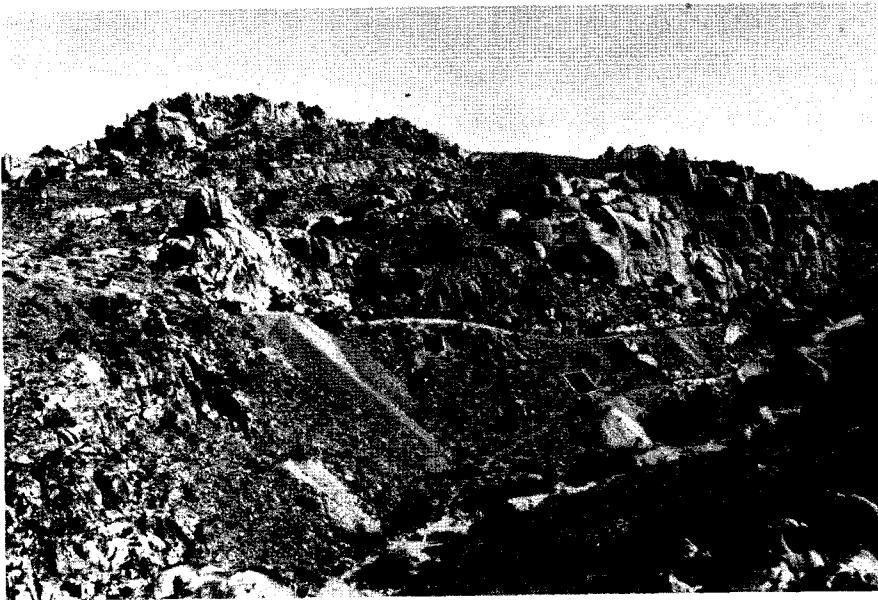


Illustration 72.

Desert Queen mining area. NPS photos by Linda W. Greene.

4. Evaluation of Resources and Recommendations

a) Mine Sites

(1) Desert Queen Mine

The Desert Queen Mine group of claims is in the southwest quarter of Section 5, T2S, R9E. It is approximately 14½ miles south of Twentynine Palms. About 13 miles of the road is paved and 1½ miles are unimproved desert road.

The main mine area consisted historically of several tunnels and inclined and vertical shafts. During a detailed mine survey in 1976, four large vertical shafts, five inclined shafts, and ten adits, five of which had started caving, were found. Tailing piles dot the hillside, but were generally small except for the one below the main adit that formed a mound sixty-five feet high spilling into the wash below. One-half mile northwest of the main mining site were six more tailings piles and additional workings. The stone ruin of a blacksmith shop was found in these upper workings. The mine area was littered with historical wooden and scrap metal debris as well as several sections of pipe. Also present on the slope near the mine workings were two cyanide tanks, lengths of cable, some mine tramway track in the main tunnel, several concrete pads, and an air compressor and reservoir mounted on large wooden beams. Most of the sheet metal, timbers, and equipment were located near the main adit and tailings pile. Cement pads and other equipment stood just above the canyon floor. On the opposite hillside was a winch and the remains of a stone house with crumbling walls.<sup>180</sup> A close inventory was not taken by this writer, so it is uncertain how many of these items are still on site.

The stone and cement three-room structure on the hillside across the gulch from the main Desert Queen tunnel is extant. Only a few details are known about living arrangements at the mine. When Keys first visited the Desert Queen Mine around 1911, there were

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180. National Register of Historic Places Inventory-Nomination Form, Desert Queen Mine, dated June 10, 1975.

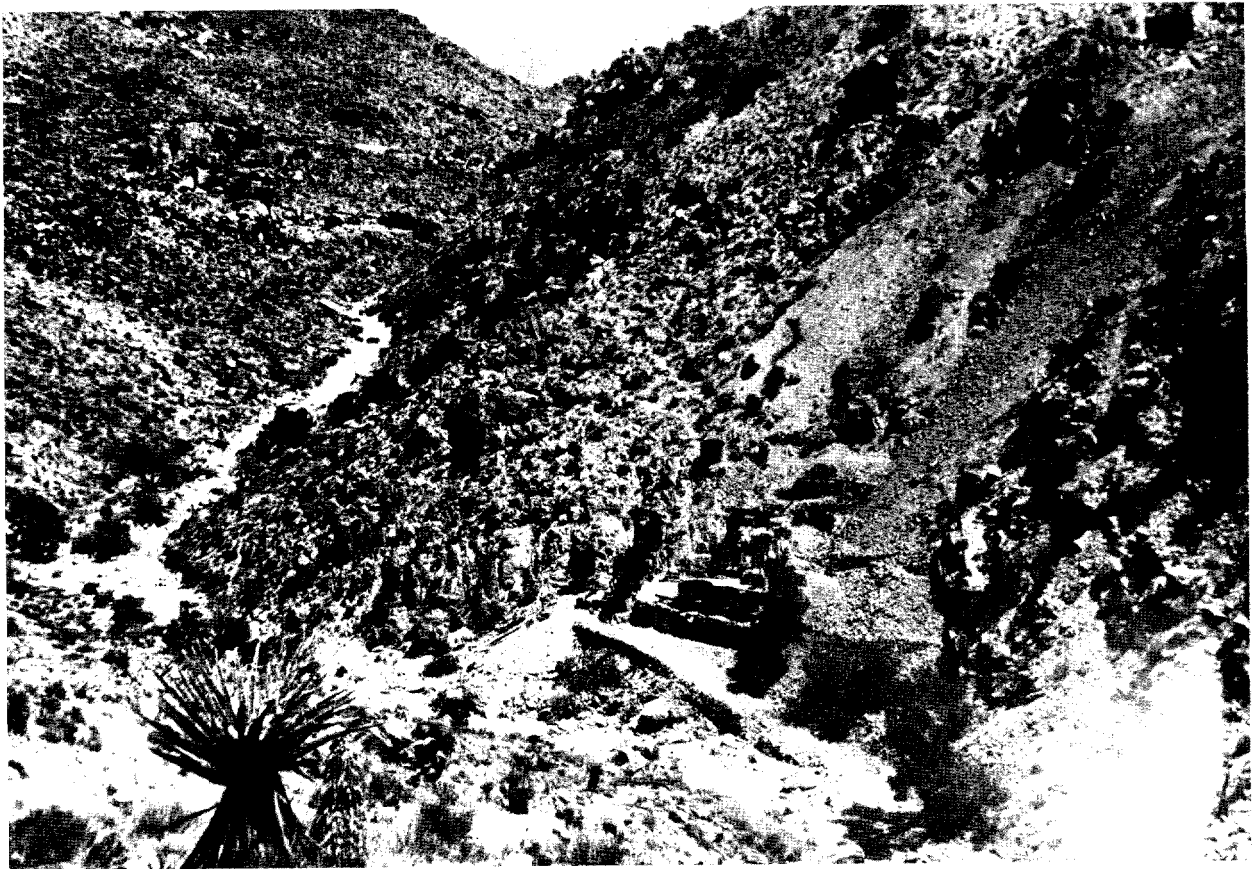


Illustration 73.

Mill (Phelps/Saunders?) at Desert Queen Mine, n.d. NPS photos.



three redwood cabins, one of which belonged to William Morgan. Keys tore the cabins down in 1918. Morgan's cabin was reassembled at the Keys Ranch and used as a kitchen.<sup>181</sup> When Charles and Della Phelps worked the Desert Queen Mine tailings, Della kept house in one of the buildings on a small flat strip above the mine.<sup>182</sup> According to Willis Keys, a cabin was built by his uncle, Albert Lawton, and George Legates to live in while working the mine. It was a one-room bunkhouse with a dirt floor.<sup>183</sup>

Around 1935-37, Phelps and a Robert Saunders built a cyanide plant on the floor of the wash below the mine. Above, on a cement foundation, they had a pump with a small one-cylinder engine for circulating water. They built three leaching tanks and had a slimes tank down lower, a little above the area where the old tunnel penetrated the base of the hill. They then screened the entire hillside. Water was obtained from Barker Dam by tank truck and hauled to the buildings on the opposite side of the canyon from the mine. The circular concrete base of the old water tank is extant. From the tank a one-half-inch pipeline went down the canyon and up the other side to the plant. Saunders and Phelps received a percentage of the values they leached out. According to Saunders there had not been any actual mining at the Desert Queen for years prior to that time. Saunders said there was no mill there when they arrived, but there was evidence of a crusher. The mine was a high-grade surface deposit. The owners would throw the ore down the hill, sack it up in the bottom of the canyon on a leveled-off area, and pack it out on mules. "There was a tunnel going in from the bottom of the canyon [about five feet below the level where the tanks were situated], and there was a base where the crusher had been. They had some kind of a diversion coming down to collect the ore that they threw over the hillside, so it would come in to the crusher. But they

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181. Park Naturalist, Joshua Tree NM, to Park Historian, Cabrillo NM, July 25, 1968, JTNM files.

182. Weight, "They shared work, pleasures," Jan. 19, 1978.

183. Willis Keys interview, March 1975.



Illustration 74 (left).  
Outside wall of rock house, Eagle  
Cliff Mine. Note tin can roof and  
six-light window. NPS photo by  
Gordon S. Chappell, 1976.

Illustration 75 (below).  
View from inside shelter, showing  
roof deterioration. NPS photo by  
Linda W. Greene, 1982.



didn't have any mill."<sup>184</sup> Saunders said they did not grind any rock there at the mine, but screened it. They ran it through a trommel, then a riffle box, then into two false-bottom tanks where they leached the material with cyanide.

Saunders said there were two buildings at the camp on the hill. There was also a tent platform and tent in which he and another fellow slept. "This was next to the old Desert Queen buildings which were fairly intact."<sup>185</sup>

Bill Keys's daughter stated that her father built the road from the cabin at the Desert Queen down into the canyon and back up again to the mine so that the ore could be taken out by truck.<sup>186</sup> Willis Keys states that he and his father put a cable line across the canyon in 1948 after he returned from the service. The ore was then winched across the canyon so that they did not have to repair the road, which evidently had deteriorated. The cable was later taken down and used at Barker Dam to haul up cement when Keys was rebuilding it.<sup>187</sup>

The Desert Queen Mine was entered on the National Register on January 17, 1976. It was determined to be of local significance in the category of Industry and the sub-category of Mining. It was one of the most successful and longest-running mines in the Joshua Tree National Monument area. It is also significant because of its associations with Jim McHaney, a notorious outlaw and cattle rustler in the area, and with Bill McHaney and Bill Keys, whose lives are an integral part of the monument's history. It is recommended, however,

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184. Harold Weight and Cheryl Erickson interview with Robert Saunders, Feb. 27, 1975, on file in WRO, NPS, San Francisco, Ca., p. 6. Preceding information from pages 3-6.

185. *Ibid.*, p. 10.

186. Cheryl Erickson interview with Pat Keys Garry, Mar. 3, 1976, on file at JTNM, p. 29.

187. Willis Keys interview, March 1975, p. 7.

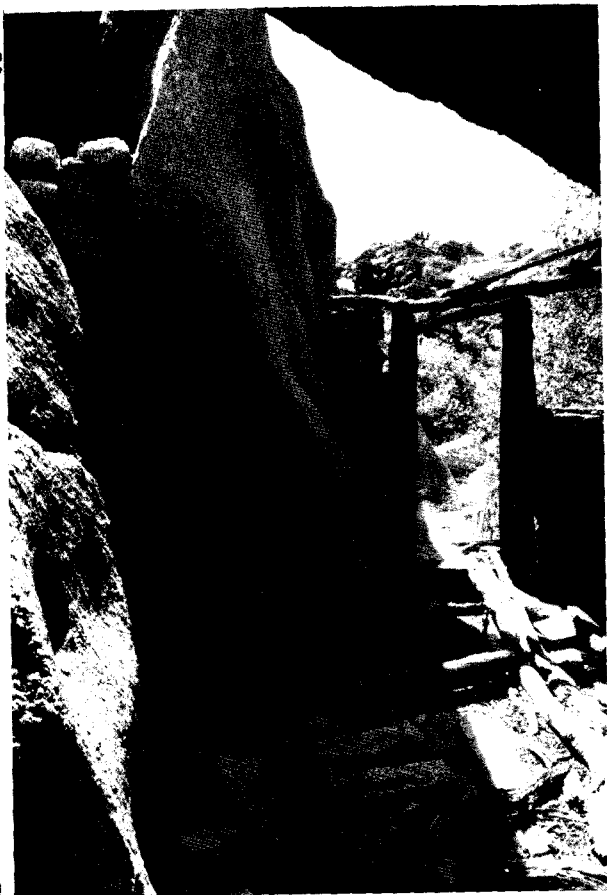


Illustration 76 (top left).  
View from inside rock shelter toward front door. Fireplace to left. Roof on this end has completely collapsed.

Illustration 77 (top right).  
Remains of what might have been a blacksmith shop, Eagle Cliff Mine. Hole in rock face probably held structural member supporting roof.

Illustration 78 (left).  
Improvised blacksmith forge outside above structure. NPS photos by Linda W. Greene.

that the boundaries of the Desert Queen Mine area be revised to include the Eagle Cliff Mine (see below). The area would be known as the Desert Queen Mine Historic District.

(2) Eagle Cliff (Black Eagle) Mine

The Eagle Cliff Mine complex is in Section 5, T2S, R9E, about one-half mile east of the Desert Queen Mine. It can be reached by climbing above the Queen workings and continuing on east over the ridge until reaching an old wagon road that meanders in and out of side gulches, eventually meeting an old foot trail. Much of the route has to be guessed at, because its traces are becoming more and more faint. The writer approached the mine via an obscure trail to the south that can be found by hiking north off the Elltun (Lucky Boy) Mine access road. Soon after turning off the Pine City road onto this latter mine road, one comes to a small parking area on the left near some large rocks. Off to the left are some stone steps leading up to what might once have been a well. It is a circular masonry-walled tank with a cement cover containing a metal access door. This might have been an early homestead site. Willis Keys mentions a Harman family briefly living in this area. From this spot a wash trends northeast until the faint traces of the old Eagle Cliff wagon road can be seen on the hillside above. This road, whose route is sometimes difficult to discern, eventually arrives at the top of the south side of a ridge from which one can descend toward the north into the upper level of workings of the Eagle Cliff property. In this area is evidence of both habitation and mining activity in the form of an inclined shaft with timber shoring on the sides almost covered by a spreading oak tree, four cave shelters and a cave house, a tent site lined with stones, a small blacksmith forge or stone hearth, and a crude ore furnace. Several interesting historical objects were found by the LCS crew in 1976 in these rock shelters. Finds included a portable metal oven with 1887 patent dates, bellows, a checker or chess board drawn on a wooden box top, an iron mercury bottle, a gold pan, a candle box, a lard pan, and a pickle bottle.

The main rockshelter cabin in this upper complex is formed from a narrow crevice in massive granite boulders. The

irregularly-shaped chamber measures about ten feet wide by thirty feet long. Drywall masonry with a six-light window forms the west wall of the shelter, which is roofed with flattened tin cans over boughs of brush. A door and another window were inserted in a short section of masonry wall facing south. This front wall and the piñon pine log door frame are rapidly crumbling. The roof over this section has collapsed. A fireplace stands near the front door. A masonry and iron stove is built into the northern end of the cave and several shelves and cupboards are attached to the walls.

From this upper complex one reaches the lower area via a steep foot trail through a boulder field down the middle of the canyon. Down below are two inclined shafts and a blacksmith shop. This last is tucked into a turn in the bluff, which forms two sides of the structure. A large granite boulder forms another wall. The fourth side is a dry masonry wall about six feet tall. Pinon pine logs that formed the roof have long since fallen in. In one end of the room is a small stone platform that may have been a hearth. Near this structure is a pine trunk and limb stuck in the ground. It is forked and shows signs of use of fire. Inset in the fork of the wood is a metal plate that might have been used as a pounding surface. This also might indicate that forging activities went on here.

From the two shafts and forge site an old foot trail leads down the water course and around the north side of a ridge to eventually meet the old wagon road.

Little documentary evidence has been found to shed light on the early owners or periods of development of this mine. Its interest for historians and interpreters today rests on the tangible remains of human habitation of the site. The presence of several rock shelters and a tent site, forges, and a rock shelter developed to the extent of being roofed and furnished with glass-paned windows, a built-in stone counter/drainboard/stove and fireplace, and shelving for storing goods indicates that at some time in the mine's development a small group of men lived there for an extended period of time. Whether this was the

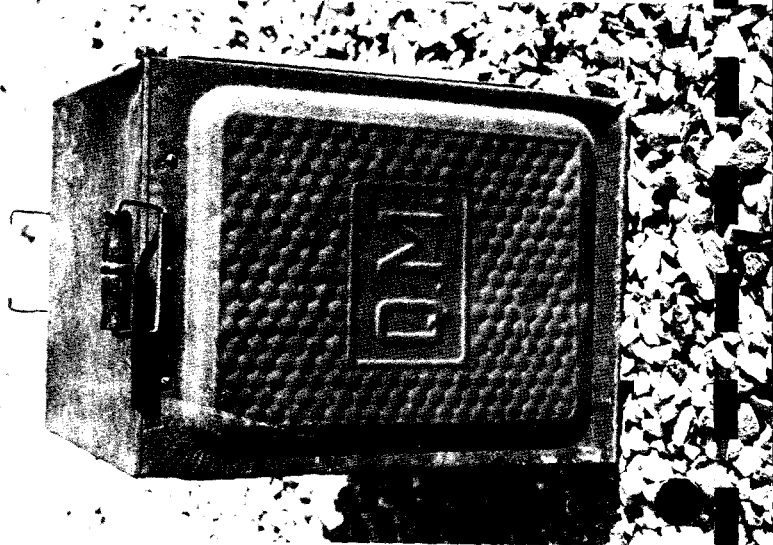
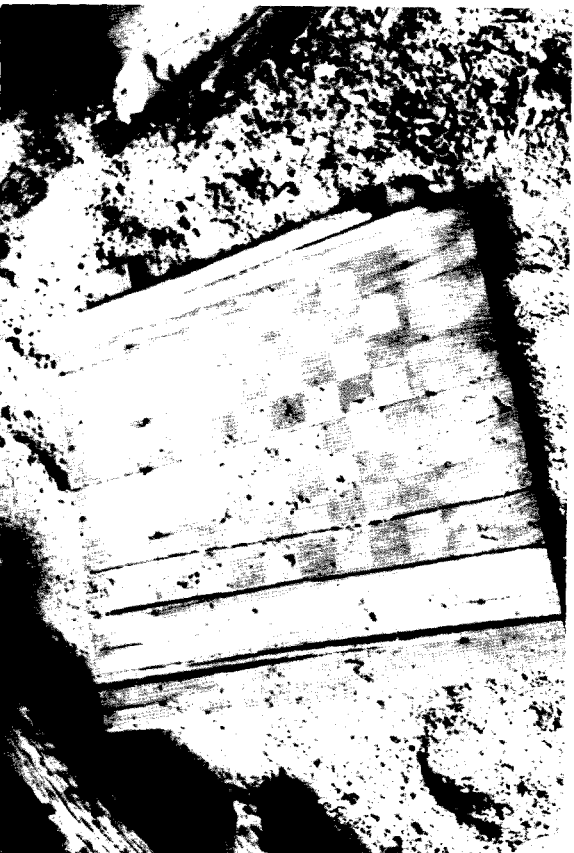
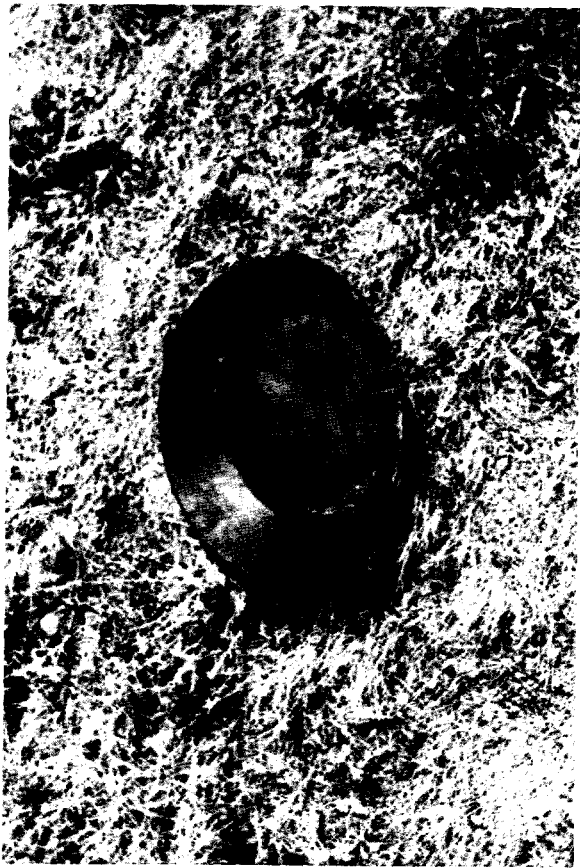


Illustration 79.

Artifacts found at Eagle  
Cliff Mine. Clockwise  
from left edge:  
checkerboard, gold  
pan, portable oven with  
1887 patent date,  
bellows. NPS photos  
by Gordon S. Chappell,  
1976.

Eagle Cliff Mining Co. operation mentioned by Lucile Weight is not known, but it seems plausible.

The property was not significant in the mining history of the monument in terms of production. Its association with Bill Keys apparently was minimal and periodic. It has, however, yielded several interesting artifacts of the 1890s-early 1900s mining era and, because of its remote location and remaining structures, retains a flavor of the early mining days in the monument. The main rockshelter at the site is an interesting and perhaps unique example of man's adaptation to a hostile environment and illustrates how a comfortable existence can be found in the desert. The structure is slowly crumbling, but stabilization efforts would be costly and difficult and would turn the home into a more stable structure than it was originally. Most of the artifacts of interpretive value on the site were removed by the LCS crew, who carefully photographed and described artifacts and structures they found at the site in 1976.

The Eagle Cliff Mine appears from available data to be an early mining property in the monument. A location date of 1895 suggests activity there took place during the heyday of the McHaney Mining District. The most significant structure on site is the roofed rock shelter. Because it is an interesting example of vernacular architecture, illustrating a type of late nineteenth- or early twentieth-century miner's home, it is recommended that the Eagle Cliff Mine site be included within the Desert Queen Mine National Register boundaries as part of a Desert Queen Mine Historic District.

The significance of the Eagle Cliff Mine lies in its being representative of a type of High Desert mine complex. It also possesses an integrity lacking in similar sites. Its significance also lies in its examples of vernacular architecture. In addition, the Eagle Cliff Mine has provided artifacts related to mining technology that complement the Desert Queen's examples of mining techniques as exemplified by shafts, adits, and tunnels and both crushing and cyanide milling processes. Together the two sites illustrate various aspects of activity of





Illustration 80 (top left).  
Grated vertical shaft at Gold Hill Mine,  
1982.

Illustration 81 (top right).  
Mill ruin, Gold Hill Mine.

Illustration 82 (bottom left).  
Water storage reservoir in wash near  
Johns Camp. NPS photos by Linda W.  
Greene.



the late-nineteenth and early-twentieth century mining period in the monument, including tools, processes, and habitations. Other artifactual items found at the Eagle Cliff shed light on recreational pasttimes and household furnishings of early desert miners.

The Eagle Cliff site will be included on the revised Desert Queen Mine National Register form converting the nomination to a contiguous historic district. This revised district will include the old wagon road to the Eagle Cliff as well as all buildings, structures, sites, and objects of historical or potential historical archeological value.

(3) Johns Camp (Gold Hill Mine)

This property is reached by hiking about a mile north from the main east-west monument road from a point about 1¼ miles west of the Pinto Wye junction. Very faint traces of an old road can be seen entering the main highway at that point, and it is presumed this provided access to the mine area. It seems strange that no records of development have been found, for this appears to have been an extensive operation supporting a mill.

The mine workings are on the west-facing slope of a range of hills above a wash. Development was by several drift adits, shallow pits, and minor trenches. A vertical shaft was also found at the site. All shafts and tunnels have been grated or filled in. The mill foundation consists of a concrete pad and machinery pilings. Across the canyon to the west is another adit, and there are several caved adits in the area. Down the wash south of the mine and toward the main road, but still within the hills, a campsite was found on the west bank of the wash. It contained a small metal water reservoir protected by a masonry wall, a trash dump containing bottles, springs, and old tin cans, a caved-in outhouse, and a twenty- by ten-foot concrete pad.

Because of the lack of information on this site, its importance in the mining history of the area can only be surmised. One has to assume a lack of information denotes a lack of significance.



Illustration 83.

Jumbo Rocks tunnels, 1982. NPS photo by Linda W. Greene.

All that is known is that it apparently was worked in the 1920s and early 1930s and was of sufficient size or at least promise to warrant construction of a mill and establishment of a camp. The site does not appear to meet the criteria of significance or integrity for the National Register. All potential mine hazards have been minimized by covering the holes and tunnels with metal grates. Unfortunately the metal was not rustproof and has turned a bright orange. Several of these shining in the desert sun are a sight to behold. Fortunately some of them are becoming overgrown with shrubs and their glaring ugliness lessened. It is recommended the site be left to natural deterioration.

(4) Elltun (Elton) Mine (Lucky Boy Claim)

The mine area can be reached by driving south from Twentynine Palms about nine miles on the paved monument road to the intersection with the Geology Tour dirt road. From here a road is followed north for one mile, then east on the Elltun Mine access road for 1.5 miles. Facilities on the site in 1973 consisted of an old wooden structure near the center of the claim. About 200 feet south of this was an old stone and concrete foundation reported to be the remains of a house. Four old vertical shafts were noted and were reported to be at least 50 feet deep with some lateral workings.<sup>188</sup> The mine workings were filled in by bulldozers, the waste dumps flattened, and the site naturalized before the mine could be evaluated for National Register eligibility.

Despite attempts at development, the Ellton Mine never turned into a paying proposition. Willis Keys stated that some dry washing was carried on there in connection with placering. There was no water on the claim. The mine was never significant in the mining history of the monument. Now no trace of the mine remains. Because it lacks significance and integrity, the Elltun Mine site is not considered eligible for inclusion on the National Register.

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188. Knowles, "Report on the Validity of the Lucky Boy Claim," 1973, p. 15.

Illustration 84.

Three views of Monstead property,  
1967. Courtesy JTNM.



(5) Jumbo Rocks Tunnels

The Jumbo Rocks site consists of prospect holes and adits. Two connected tunnels driven into a rock cliff are each only about thirty feet long. The site is not significant.

(6) Pine Springs Lode

The LCS crew in 1976 determined that the site did not possess historical significance. Somewhere in a rocky area near Pine City, one of the McHaney brothers (probably Jim) reportedly had a hideout.

(7) Monstead Tunnels

In the southwest quarter of Section 35, T1S, R8E, is the old Monstead Tunnel No. 1. It is about 6 feet high and driven about 300 feet into the hillside. The old Monstead Tunnel No. 2 is nearby, extending over 500 feet into the hillside. A shaft is about 100 yards around the hill to the east from the tunnel entrance and is only about 6 feet deep. In the southeast quarter of Section 35, about 100 to 150 yards northeast of the Monstead cabin site, are remains of tunneling and shaft work. The cabin had been removed by 1973, before it could be evaluated under criteria for the National Register of Historic Places. Only a concrete (trailer?) platform and a house foundation remain, plus a pit containing trash (pipe, bedsprings, and other metal parts), and a stone loading platform. The site has no significance and no integrity.

(8) Black Butte (Gold Tiger) Mine

This property is in the northwest quarter of the southeast quarter of the northeast quarter of Section 10, T2S, R8E. It is reached by a dirt road (blocked) originating in Section 3 and is about one-half mile south of the back road connecting Hidden Valley Campground and Queen Valley. The property was examined in 1972. Four open shafts and four closed ones were observed. The largest shaft, a vertical one, was located on top of a ridge and covered with old decaying wooden doors.<sup>189</sup> There were also tunnels on site.

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189. District Ranger Irwin C. Cowley to Superintendent, JTNM, Sept. 18, 1972, file in Div. of Mining and Minerals, WRO, NPS, San Francisco, Ca.

It is not known whether this mining property was worked prior to Bill Keys's location in 1936, although this writer found an undocumented reference to ownership of a Gold Tiger Mine by Bill Thornton and U.C. Wirtz prior to 1911-12. The probabilities are that this mine had been worked earlier and Keys filed on an abandoned claim. Unfortunately no early records of production, development, or ownership have been found. On the basis of existing information, the mine site is not considered eligible for the National Register because of a lack of historical or associative significance.

(9) Tungsten (Sheep Pass) Mine

This property is in the northeast quarter of the southeast quarter of the northwest quarter of Section 15, T2S, R8E. It is about 350 yards up the north slope of Ryan Mountain and can be reached by foot from the Sheep Pass road. A small tailings dump and sloping adit are the only evidence of activity here. The mine is not considered historically significant. If actions affecting the site are anticipated, it should first be inspected by a qualified historian.

(10) The Uranium Mine

No information was found on this property's exact location or productivity. It may be the one just south of Keys's ranch house. It would appear that some uranium was detected here, but whether any was extracted is uncertain. The mine is not considered eligible for the National Register due to a lack of historical or associative significance.

(11) Sulphide Bismuth (Lang Copper) Mine

This property is in the northeast quarter of the southwest quarter of the northeast quarter of Section 11, T2S, R7E, 2-3/4 miles west of Hidden Valley on the west side of Johnny Lang Canyon. By jeep road it is about two miles south of the Quail Spring road in Lang Canyon and then about 1½ miles farther south by foot. It was an iron-rich deposit developed by adits and a 100-foot-deep vertical shaft equipped with an old windlass and a wooden ladder. Production of the mine is not known, although Keys stated that twenty tons of bismuth

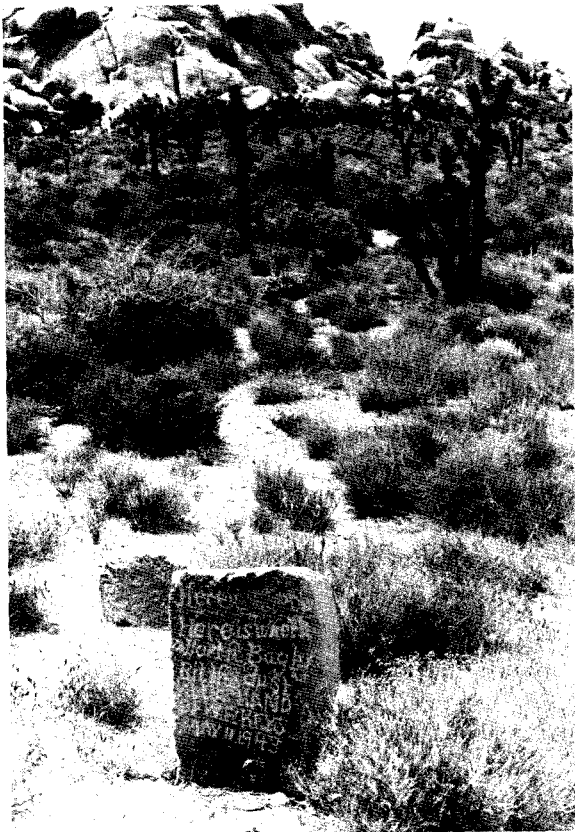
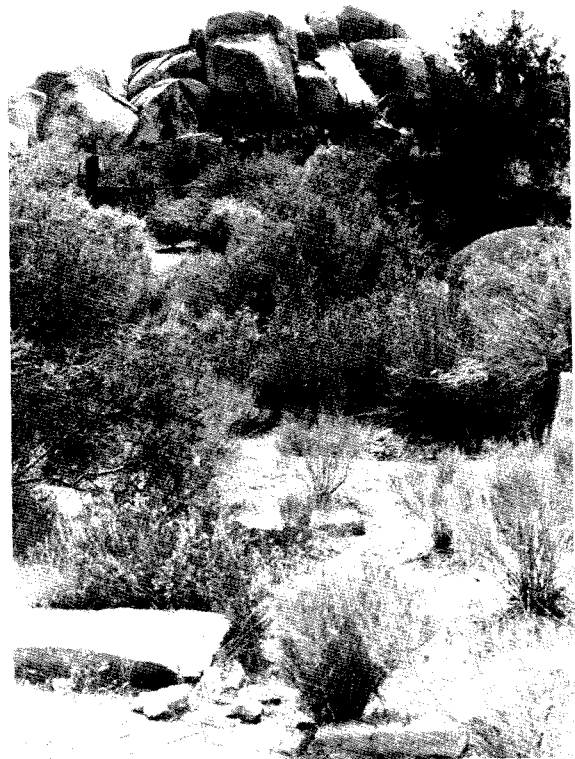


Illustration 85.  
Monument along road to Wall Street Mill. Erected by William F. Keys on site of Worth Bagley killing. NPS photo by Linda W. Greene.

Illustration 86.  
Gravestone quarry site used by William F. Keys. In background is Wall Street mill. NPS photo by Linda W. Greene.





reportedly produced in 1904 from the Lost Horse Mine actually came from this property.<sup>190</sup>

(12) Unidentified Mines

Neither of the old Kaiser Steel Corporation properties was visited by this writer and little data on their present condition was obtained. They are not considered significant in the mining history of the monument.

b) Mill Sites

(1) Desert Queen Ranch and Mine Mills

The McHaney five-stamp Desert Queen Mine mill was dismantled from its original location at the Desert Queen Ranch by Bill Keys sometime after 1948. Only the timbers and a few bolts remained on site. The mechanized arrastra is still in place, however, at the site of the old Queen mill. (The steam-powered mill was transferred by Keys to another location.) This arrastra is considered to be historically significant and useful for interpretive purposes.

No machinery exists at the Desert Queen Mine from that milling operation.

(2) Wall Street Mill

The Wall Street Mill Site is located in the southwest quarter of unsurveyed Section 34, T15, R8E, about 3½ miles west of the Desert Queen Mine. The well on site is covered with a frame superstructure and a boxed-in wellhead cover. An overhead pipe supplied water to a storage tank near an outside shower and the kitchen of the bunkhouse that used to exist on site. The well was twenty-five to thirty feet in front of the building and about fifty feet deep. Water was pumped from the well by a gasoline engine and reciprocating pump. This well and pump were an important part of the mill's technology and are considered historically significant.

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190. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.

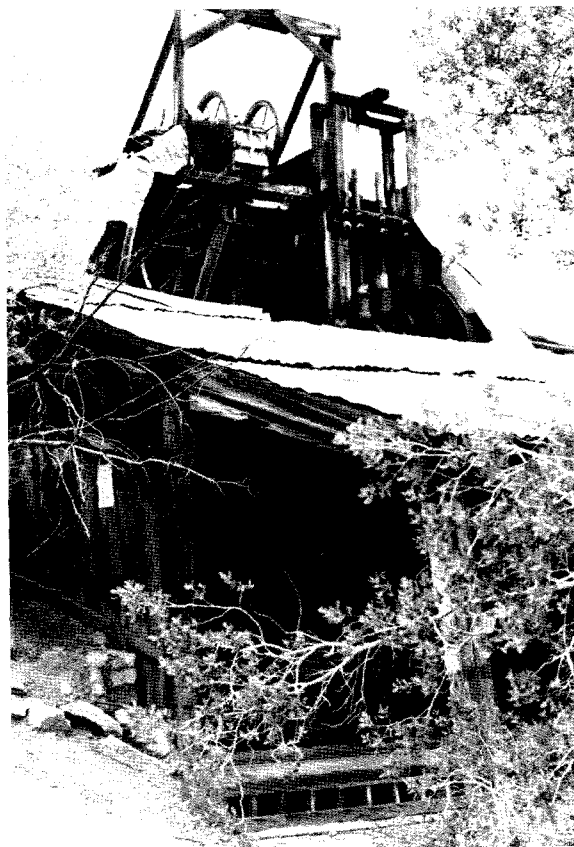
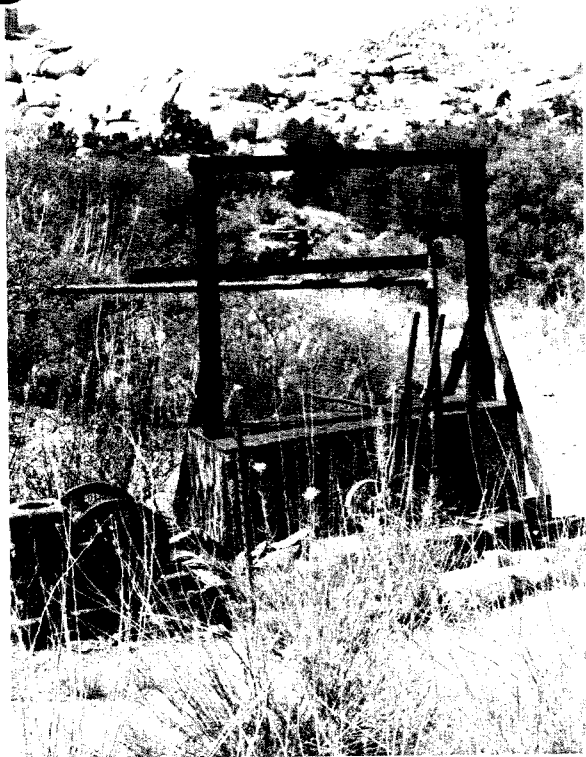


Illustration 87 (top left).  
Well that supplied power to mill.  
Bunkhouse stood in open area behind  
well.

Illustration 88 (top right).  
Exterior of Wall Street mill.

Illustration 89 (below left).  
Interior of Wall Street mill. NPS  
photos by Linda W. Greene.

The Wall Street mill complex consisted of three other structures in addition to the well: the mill building housing the stamp machinery; a bunkhouse, now gone; and an outhouse, now collapsed. The stamp mill building is framed with heavy timber and built on a sloping hill to enable gravity feed in the milling process. Supposedly much of the timber framing on the mill was done by a woman millwright, Mrs. Hopper. This might be the Edith Hopper who was involved in mining and milling activity in the Cottonwood area. The roof and parts of the exterior walls are covered with corrugated metal. A long wooden ramp supports an ore tramway erected on top of the building to carry the ore unloaded from trucks to the crusher. A twelve-horsepower Western gas engine powered the two-stamp mercury amalgamation mill.

A 1939 inventory of the Wall Street mill plant described the mill machinery contained in a corrugated iron and frame mill building thirty feet long and twenty feet wide as: a Myer concentrating table; a twelve-horsepower gas engine; a Fulton jaw crusher; amalgam plates; a 1,000-gallon galvanized iron tank; a 1,500-gallon galvanized iron tank; almost 200 feet of pipe; an ore loading platform; a ½-ton ore car; and a platform scale.<sup>191</sup> This is slightly confusing because the Perkins papers indicate the mill was not enclosed until 1966. If it was done in the late 1930s it might have been built by Mrs. Hopper, because this was the period she was active in monument mining. Maybe the later Keys work was replacing an earlier enclosure. The mill building is still generally in good repair.

The bunkhouse on site, which may have grown from the cabin built by Booth and McGinnis, was a two-story structure of wood frame construction. It was in such a decayed and dangerous condition that it was removed by the National Park Service. It was not considered significant or essential to the integrity of the mill site.

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191. United States, Department of the Interior, National Park Service, Western Region, Historic Preservation Team, "Wall Street Mill, Joshua Tree National Monument, Preservation Study," n.d. [ca. 1974], p. [4].

The Wall Street mill was added to the National Register on November 12, 1975. It is considered to be of local technological/mechanical significance under the general category of Industry. It is significant as a complete and operable (with a small investment of time and labor) gold-ore crushing mill featuring late-nineteenth-century stamp mill machinery.<sup>192</sup>

### Middle Section

Mines in the middle section of the Piñon Mining District are sometimes referred to as being in the Pinto Basin Mining District. These properties will be discussed from east to west.

## 2. Mine Sites

### a) Gold Point Mine

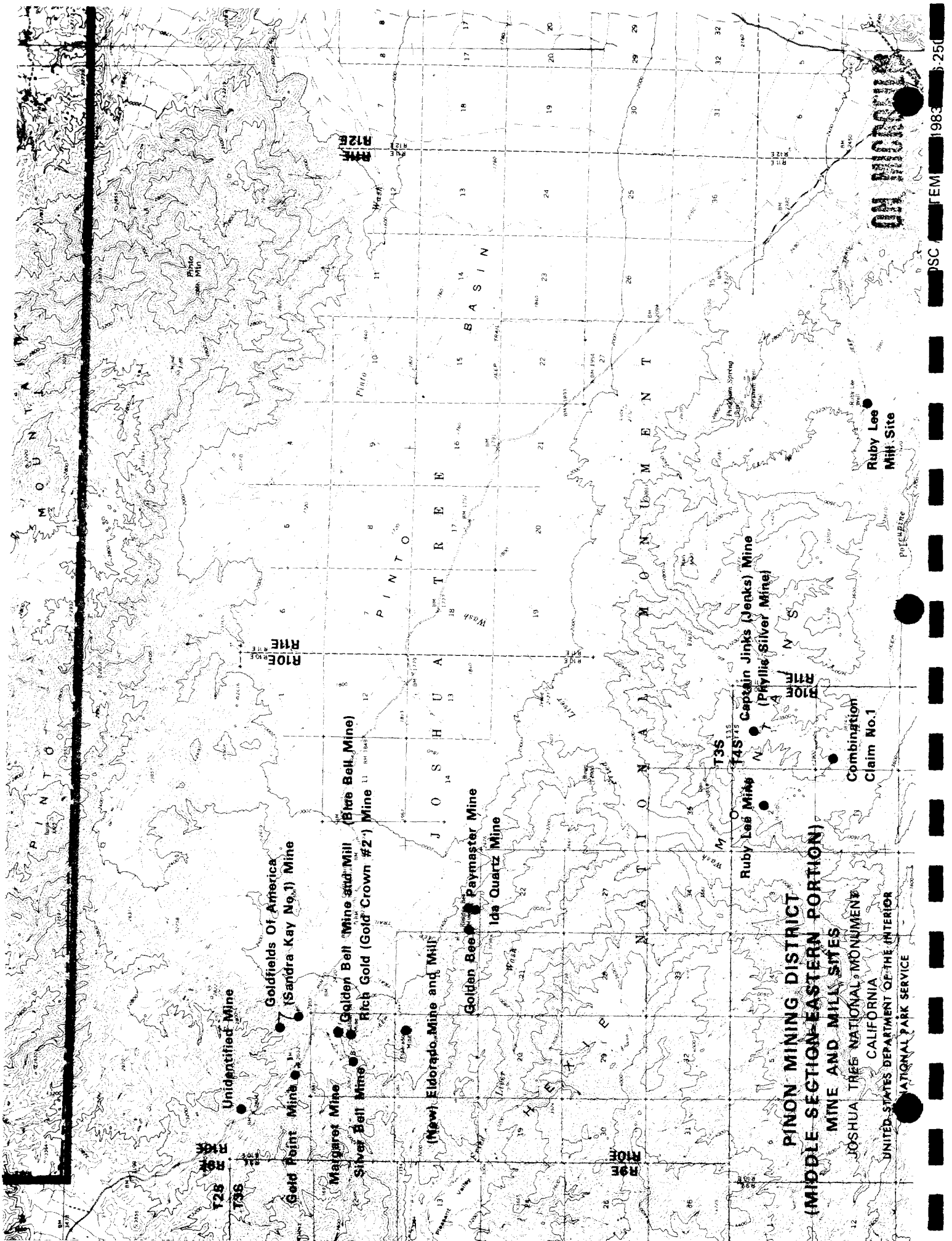
This property is in the southwest quarter of Section 5, T3S, R10E. A Gold Point lode mining claim was located on January 1, 1934, by Frank and Otto Notterman and Irene and David Workman. In 1935 the mine was being worked by Leon Campbell and a crew of five. The claim was declared null and void by the General Land Office in March 1944. Bill Keys claimed ownership in 1959 and filed notices of assessment work. According to Keys, Notterman and Campbell had been taking out vanadium and lead. Keys later relinquished the mine to the monument.

### b) Rich Gold (Gold Crown #2) Mine (Blue Bell Mine) (Also see Golden Bell [Blue Bell] Mine)

The location of this property was not determined by the writer. It is supposedly in Section 8, T3S, R10E. It was originally located as the Gold Crown #2 and then relocated as the Rich Gold Mine on July 1, 1931, by S. B. Trujillo and Loyd E. Kinder of San Bernardino. Periods of development and production records are not known. According to government reports, the Rich Gold No. 1 and No. 2, Gold Bell, and Golden Trumpet claims situated in Section 8, T3S, R10E, comprised the Blue Bell Mine. They were located in 1933 by George W. Dooley of San

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192. Chappell, Gordon, National Register of Historic Places Inventory-Nomination Form, Wall Street Mill, June 10, 1975.



**PINON MINING DISTRICT  
(MIDDLE SECTION-EASTERN PORTION)**

**MINE AND MILL SITES**  
 JOSHUA TREE NATIONAL MONUMENT  
 CALIFORNIA  
 UNITED STATES DEPARTMENT OF THE INTERIOR  
 NATIONAL PARK SERVICE

Bernardino and others. A quartz-iron vein was developed on the Rich Gold No. 1 claim. Gold ore from this vein was taken to the Gold Crown and Eldorado mills for treatment.<sup>193</sup>

Robert Saunders recalled leasing a level of the old Blue Bell Mine with a partner Dave Carroll from a man named Rodgers (Rogers?). A German fellow and his son were leasing and operating another level of the mine at this time, which was probably in the early to mid-1930s, at which time the Blue Bell was described as a consistent producer. The ore taken out of the mine was milled by a man named Campbell. This is probably H. W. Campbell who lived at the Eldorado Mine and ran the mill there. Saunders said that both copper and gold were taken from the Blue Bell. Ore brought out of the mine by an old auto engine with a hoist on it was stored in a bunker and then Campbell hauled it to his mill for processing. The shaft was two or three hundred feet deep.<sup>194</sup>

c) Unidentified Mine

This property in Section 8, T3S, R10E, has not been identified by the writer. James Evans mentions it in his 1961 study, but had no information on its ownership, history, or production.

d) Silver Bell Mine

This Silver Bell Mine is in Section 8, T3S, R10E. There exists some confusion in the records between this property and the Silver Bell Mine east of the north monument entrance road. Evans states that this Pinto Basin property was originally owned by W. F. Keys. It was prospected for gold in the 1930s and then lay idle for several years. In the mid-1950s the area was explored for copper and several tons of ore

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193. "Report on Field Inspection of Merriam, Apr. 14-15, 1938," p. 51; Guthrey to Dir. of Investig., May 6, 1937, p. 13.

194. Saunders interview, Feb. 27, 1975, pp. 2, 13.

were processed at a mill in Section 16, T1N, R9E, about 2½ miles north of Twentynine Palms on Utah Trail. The concentrates produced were not marketed.

e) Golden Bell (Blue Bell) Mine

The Golden Bell Mine is contiguous to the Rich Gold claims on the south-facing slope of a ridge in Section 8, T3S, R10E. The Golden Bell lode mining claim was located on July 1, 1931, and the Golden Trumpet lode on November 18, 1934.<sup>195</sup> The Golden Bell claim was patented in 1959. The mine was active from 1934 to 1937 and from 1939 to 1941. During those years it was owned by M. A. Rogers of Twentynine Palms. C. A. Benito of Twentynine Palms owned or leased the mine from 1954 to 1957. There is no production record after cleanup work in 1954. In 1960 one unpatented claim was owned by George W. Dooley. James L. Dooley inherited the Golden Bell claim from his father.

f) Eldorado (New El Dorado) Mine

Legend tells that about 1901 James M. "Chuckawalla Jim" Wilson discovered gold stringers in a boulder in a canyon of the Hexie Mountains about six miles east of Pinyon Well. Breaking up the rock and taking it to the Piñon mill, Wilson obtained around \$500 after processing. He called the lode from which he took the rock the "El Dorado." Wilson did not perform much development work, and about 1903 sold the claim to John N. White, a former clergyman turned mine promoter. At the Eldorado White erected a camp and filed on more than thirty claims in the area. Before he could build a mill, however, he ran out of cash.

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195. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.; Charles T. Weiler, "Appraisal of Mineral Interests Inherent in the Golden Bell Lode Mining Claim, Tract 22-121, Joshua Tree National Monument, Riverside County, California," April 1975, file L3023, Div. of Mining and Minerals, WRO, NPS, San Francisco, Ca., p. 6.

In 1907 some of the biggest investors in the property got together and reorganized into the New Eldorado (El Dorado) Consolidated Mining Company of Los Angeles. L. D. Johnson of Whittier was president and his son Charles became superintendent. Charles, a mining engineer, concentrated work on Claim 14, Wilson's original discovery. A shaft was sunk 300 feet with 100-, 200-, and 300-foot levels, and was later extended to 500 feet. The camp at this time consisted of white tents, a house, and a few other buildings. The mine closed in 1910, but two years later it reopened with Fred Vaile as superintendent. The first record of production of gold-silver ore was in 1911.

Vaile started milling ore at the mine in 1913 and continued into World War I. This was one of the few desert gold mines operated as late as 1918. Gold production amounted to \$100,000. Although gold was the primary mineral obtained, also found were galena, wulfenite, and molybdenite--critical ores in great demand during wartime. Often special trips were made to get these materials to Indio for shipment.

Water shortages were always a problem for mining operations because no close dependable water source could be found. The Eldorado operators completed a nine-mile pipeline paralleling the road to Pinyon Well in 1918. A pump tender lived at the well site. At the foot of the grade leading to the mine was a public faucet for use by travelers. The New El Dorado (Eldorado) Mill Site in Section 24, including Pinyon Well, and three of the more important lode mining claims in Sections 16 and 17, were issued a patent on October 10, 1923. The claims had been located on April 5, 1906, and the mill site on August 31, 1921.<sup>196</sup>

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196. James E. Cole, Custodian, JTNM, memorandum for the Regional Director, Region Four, Mar. 5, 1945, Central Files, 1907-49, RG 79, NA, p. 1.



The property was closed in 1922, but was reopened in 1924 under lease. When the property was visited in 1923, the shaft and workings extended to a depth of about 400 feet. In addition to the elements mentioned earlier, vanadinite and vanadium were being recovered. The ore was treated on amalgam plates and cyanided. There was a large camp house in the canyon as well as other mine buildings.<sup>197</sup> The state mining bureau reported that in 1923 the White Mines Corporation, John M. White, president, was developing a group of claims (unnamed) thirty-five miles north of Indio. On the property were a 150-foot-deep shaft and a 300-foot tunnel. Three men were employed.<sup>198</sup> In 1929 the mine's three claims were owned by Vaile and under lease to John White. The shaft was 500 feet deep, with development confined to the 450- and 500-foot levels. Mine equipment consisted of a fifteen-horsepower gas engine hoist and a stamp mill. Three men were employed.<sup>199</sup>

Leasing continued until around World War II. Older mill tailings were reprocessed during the Depression. By 1937 one operator had increased the mill size to ten stamps.<sup>200</sup> The mine was operating in 1938 when its owners requested permission from the government to drill a well in Section 8, T3S, R10E, for water to use at the New Eldorado Mine.<sup>201</sup> The mines were not worked after 1939, and in the fall of 1940 the pipeline from Pinyon Well was removed.

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197. USGS Water-Supply Paper 497, 1923, p. 266.

198. California State Mining Bureau Report XX, 1924, v. 20, no. 1, p. 45.

199. Report XXV of the State Mineralogist, 1929, pp. 485-86.

200. Much of the early history of this mine was taken from L. Burr Belden, "Lizard Hunter Uncovers Rich Hoard of Gold," San Bernardino (Ca.) Sun-Telegram, Jan. 15, 1961.

201. Walter S. Clute to Director, NPS, June 13, 1938, Central Files, 1907-49, RG 79, NA.

Principal periods of development for the Eldorado (El Dorado) appear to have been from 1911 to 1916, and from 1936 to 1938. About 2,000 ounces of gold were recovered.

g) Golden Bee Mine

No detailed information about the discovery of the Golden Bee claims has been found. Ore was evidently first observed on the Dickey Boy lode in June 1934.

In the late 1930s E. "Frenchy" Auclair worked two claims, the Dickey Boy and the Mabel lodes, in Sections 21, 22, and 15, T3S, R10E. Ore was shipped to various custom mills in the district, the milling ore having a value of \$50 per ton in gold. It was reported at this time that the mine had netted a profit of \$20,000. Adjoining the Golden Bee Mine, in Sections 22 and 15, were the two lode claims of the Murphy property, known as the Yellow Jacket Nos. 1 and 2. These were located in December 1934. Their ore contained free-milling gold, silver, vanadium, and manganese (see Paymaster Mine).<sup>202</sup>

The Golden Bee was reportedly a small producer in 1938-39. It was leased by the State Lands Division for gold-mining operations in the late 1930s and early 1940s. Returns were marginal. In two years of operation only \$123.20 in royalties was recovered by the state. Often smelter returns were less than the charges for smelting. According to a mining report, the older workings that had been mined previously were not extensive and were poorly mineralized.<sup>203</sup>

Principal development work in 1940 was confined to the Golden Bee vein and consisted of a tunnel, crosscuts, a shaft, drift, and

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202. Guthrey to Dir. of Investig., May 6, 1937, pp. 12-13.

203. N. L. Harvey, State Lands Division, to D. J. Everitts, Apr. 27, 1976, in "Joshua Tree National Monument, Mineral Appraisal Report, Lands Included in Proposed Exchange with the State of California in Riverside & San Bernardino Counties, California," Aug. 19, 1976, Division of Mining and Minerals, WRO, NPS, San Francisco, Ca.

stope. Ore shipments were made by Golden Bee Mines, Ltd., (Eloge Auclair, president and manager) to Burton Bros., Inc., at Rosamond, in Kern County, and to the Gold Crown Mining Company's mill at Dale. Total production to date had been \$40,000. Two men worked the mine, aided by a twelve-horsepower gas-driven hoist, a portable compressor, and air drills.<sup>204</sup> The property was idle in 1945.

At some time Auclair sold the mine to a former government mining engineer.

A 1959 survey of the mine area noted a main shaft about 150 feet deep. About 80 feet southwest were two minor shafts to the 10-foot level. The area adjacent to the main shaft, from the surface down to at least 30 feet, was honeycombed with narrow, irregular passageways. Also present were adits, shafts, drifts, crosscuts, and stopes.<sup>205</sup>

Other workings nearby, known as the Ida Quartz Mine, may be on the same claim.

h) Paymaster Mine

As mentioned in the previous section, a man named Murphy owned two lode claims adjacent to the Golden Bee Mine. In 1945 the Paymaster Mine was reported to consist of three claims in Section 15, T3S, R10E, at an elevation of 3,000 feet. They were owned by P. O. Murphy and E. Leith of Twentynine Palms. Development consisted of a shaft and drifts. Ore had been shipped to the Burton Bros. mill in Kern County and returned \$35 a ton in gold. The property was idle at that time.<sup>206</sup> Bill Keys may have held an earlier interest in the mine (see Dams and Reservoirs, Grand Reservoir Site).

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204. California Journal of Mines and Geology, 1940, p. 48.

205. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.

206. California Journal of Mines and Geology, 1945, p. 141. (Note that there is also a Paymaster Mine in Section 20, T2S, R10E.)

i) Goldfields of America (Sandra K[ay] #1) Mine

One other mining property is found near this group of mines on the northeast slope of the Hexie Mountains, but is across the road (northeast) from the Gold Point Mine. It comprises twelve claims on the southern slope of the Pinto Mountains in Section 4, T3S, R10E. In 1945 it was owned by Goldfields of America, Ltd., of San Bernardino. Development consisted of an inclined shaft about 100 feet deep and several other shafts from 50 to 75 feet in depth. Workings totalled 720 feet. It was idle at that time.<sup>207</sup>

j) Ruby Lee Mine

The Ruby Lee unpatented quartz lode claim is in the center of Section 2, T4S, R10E. It was originally filed on in February 1936 by Ruby Lee Rule and acquired by Mr. and Mrs. A. A. Dietemann in 1948. Mr. Dietemann stated that he had been involved in claim activities here prior to that time. Located in March 1936 in connection with the mine was an unpatented property known as the Ruby Lee millsite, in Section 10, T4S, R11E.

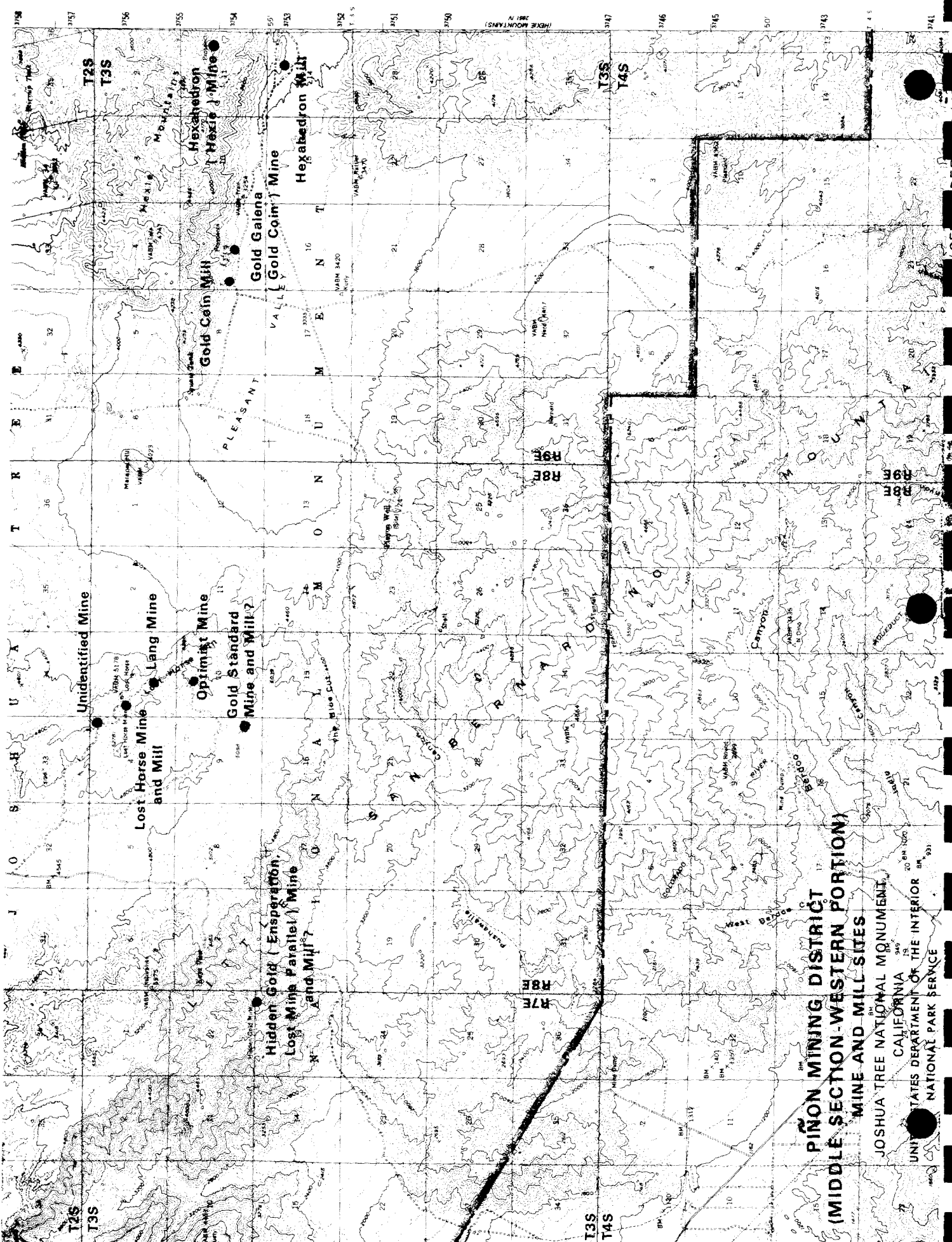
k) Combination Quartz Mining Claim No. 1

This property reportedly was in the northwest quarter of Section 12, T4S, R10E, at the north edge of upper Porcupine Wash. The claim was located by Chester A. Pinkham and Charles W. Landford in July 1935. Development work in the 1930s consisted of a vertical shaft fifteen feet deep joined at the bottom to a drift. Two shallow pits were opened uphill from the shaft. No production has been recorded.<sup>208</sup>

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207. Ibid., p. 131.

208. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.



**PIÑON MINING DISTRICT  
(MIDDLE SECTION - WESTERN PORTION)  
MINE AND MILL SITES**

JOSHUA TREE NATIONAL MONUMENT,  
CALIFORNIA  
UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

SEPTEMBER 1963 / 150-2500

l) Captain Jinks (Jenks) Mine (Phyllis Silver Mine)

This property is in Section 1, T4S, R10E, in the hills north of upper Porcupine Wash. The mine was supposedly discovered and worked by a Captain Jinks or Jenks in 1874. Chester A. Pinkham held it about 1900. In 1951 W. F., Frances M., and Phyllis Ann Keys relocated it as the Phyllis Silver.<sup>209</sup> No record of development or production was found.

m) Hexahedron (Hexie) Mine

L. Burr Belden suggested in an article on the Lost Horse Mine that Jep Ryan and his partner Kelsey bought the Hexahedron Mine about the time they bought the Lost Horse Mine (ca. 1894).<sup>210</sup> In 1896, however, the property was said to be owned by Tingman and Holland of Indio. Some prospecting and development work had been done showing a good grade of gold-bearing rock.<sup>211</sup> The property was active in 1907 with a crew of twelve men. The mine was mentioned in 1915-16 as being owned by the Indio Mining and Milling Company, J.S. Garrison of Victorville, Ca., president, and Roy Garrison mine superintendent.<sup>212</sup> By 1929 the mine was abandoned and a mill on site had been dismantled.<sup>213</sup>

Some of the blank spaces in the mine's history may have been filled in by Ronald Dean Miller, who stated that Al Tingman discovered rich gold ore in some hills north of the eastern end of Pleasant Valley around 1900. He subsequently sold these claims to Bill and John Garrison, who formed the Hexahedron Mining Company. Miller states that the company dug a well at the mine, but it never produced

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209. Ibid.

210. L. Burr Belden, "Cattle Thieves Cause Victim to Find Rich Mine," San Bernardino (Ca.) Sun-Telegram, Apr. 26, 1959.

211. Thirteenth Report of the State Mineralogist, 1896, p. 311.

212. Report XV of the State Mineralogist, 1919, p. 536.

213. Report XXV of the State Mineralogist, 1929, p. 481.

sufficient water for mining operations. The company also erected a five-stamp mill, although most of their ore was sent to the New Eldorado mill.<sup>214</sup> Bill Keys stated in 1959 that the Hexie mill did the last of the milling for the El Dorado.<sup>215</sup>

Clifton Gray wrote that the Hexahedron Mine was being developed as early as 1894 under Ed Holland and A.G. Tingman. The mine, he says, was still active in 1914 and owned by the Indio Mining and Milling Company, but was inactive by 1918 and the mill dismantled.<sup>216</sup>

n) Gold Galena (Gold Coin) Mine

Information on this property is scanty. Gray states that the mine, located primarily in the western half of Section 9, T3S, R9E, was discovered about 1900. The property was operated by the German-American Mining and Milling Company in the early 1900s. That company had been organized in Los Angeles to open certain mines at "Indian Camp" in the Piñon District. Directors were F.C. Longnecker, S.L. Kistler, and A.N. Hamilton.<sup>217</sup> By the fall of 1908 it was reported that the company was working three mines--the Texas Chief, Lone Star, and Apex--"just south of the San Bernardino county line." These may be claims of the Gold Coin Mine. In December it was reported that new machinery would shortly be installed at the mine in Pleasant Valley.<sup>218</sup> A Mrs. Stead said that her husband owned and worked the Gold Coin in

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214. Mines of the High Desert, p. 49.

215. JTNM Fact File.

216. "Mines and Mineral Resources of Riverside County, California," [1961], n.p.

217. Engineering and Mining Journal 84, no. 10 (Sept. 7, 1907): 461.

218. Ibid. 86, no. 16 (Oct. 17, 1908): 782; 86, no. 23 (Dec. 5, 1908): 1122.

1911. The couple lived at the mine, hauling water from Pinyon Well. She said they used three lengths of pipe, on tripods, to transport the water from the well to their barrels in the wagon.<sup>219</sup> By 1916 the Gold Galena Mining Company of Los Angeles, F. C. Longnecker president, owned nine claims in Sections 4, 8, and 9. Workings ranged in depth from 70 to 100 feet on a vein containing galena carrying gold. The property had no mill and as yet there had been no production.<sup>220</sup>

The mine was closed in 1918. Gray states that in 1920 W.F. Keys located two claims--Pleasant Valley and Jackson--covering the areas most extensively explored. Keys did only intermittent development. In 1929 the Gold Coin Mine, owned by Longnecker, was reported to comprise five claims. Average value of its ore was \$12 per ton. Two men were employed on development, which by then consisted of a shaft fifty feet deep.<sup>221</sup>

In the late 1930s a Mrs. Dodge was reportedly part owner of the mine.<sup>222</sup> A government report at that time stated that the property consisted of six claims located October 6, 1933. Development had resulted in an inclined shaft 100 feet deep. No record of production had been found.<sup>223</sup>

o) Gold Standard Mine

It is reported that this mine in Sections 9 and 10, T3S, R8E, was originally located in 1896 by the Burns Brothers. Joe Reynolds took over the mine and worked it from 1900 to about 1912 or 1914. W.F. and Frances Keys relocated the property, but when is

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219. Mrs. C. D. Crawford to Supt. James E. Cole, Mar. 8, 1945, in JTNM Fact File.

220. Report XV of the State Mineralogist, 1919, p. 538.

221. Report XXV of the State Mineralogist, 1929, p. 478.

222. Weight, "They shared work, pleasures" Jan. 19, 1978.

223. Guthrey to Dir. of Investig., May 6, 1937, p. 13.



uncertain. Keys developed the mine by three open cuts and pushed some drifts from the shaft about thirty feet down. About \$2,000 worth of improvements were made. Keys built a stone cabin on the claim and a mill. Also on site were a reservoir five feet high and ten feet in diameter, with a water trough and a tent camp. A Dr. Henry (?) last held the property.<sup>224</sup>

Gray states that the mine was first located by Johnny Lang in 1902 before being relocated by Keys and later sold to Dr. H. W. Milo of Vallejo, California, around 1955. Development work at the property was only intermittent for several years.

There is another Gold Standard Mine in Section 1, T2S, R12E, about one-half mile south of the Brooklyn Mine and about three miles southeast of the New Dale townsite, in the Dale Mining District.

p) Optimist Mine

This property is about one mile south of the Lost Horse Mine, in Section 10, T3S, R8E. Nothing is known about the mine's discovery, ownership, history, or production. It was owned by Kaiser Steel Corporation in the 1970s.

q) Lang Mine

No information was found on this property identified by the mine inspection crew as being in Section 3, T3S, R8E. It is possible it was explored in conjunction with the Lost Horse Mine operation by Johnny Lang.

r) Unidentified Mine

This property in Section 4, T3S, R8E, is on a ridge half a mile northwest of the Lost Horse Mine. Its discovery, ownership, history, and production are unknown. In the early 1970s it was owned by Kaiser Steel Corporation.

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224. Excerpt from letter from Mike Perkins, Nov. 18, 1971, in JTNM Fact File.

s) Lost Horse Mine

As with the Desert Queen, there are several versions of the story of this mine's discovery. One relates that the deposit was found by Johnny Lang who came up from Texas in the early 1890s with his father George and brother Billy. George Washington Lang was an Arizona cattleman who brought large herds of cattle into southern California to sell. On one trip to the coast the younger son was left with part of the cattle herd in New Mexico while the father and Johnny took the others on west. George entered the Coachella Valley with the intention of moving the stock to what later became Lost Horse Valley to graze on its lush meadows.

After arriving in the Lost Horse area, young Lang met "Dutch" Frank Diebold at Witch Springs (now Lost Horse Well). Diebold, a prospector, had discovered what looked like a rich gold-bearing seam several miles north of Piñon Mountain, but had been driven off the land by the McHaney gang. Lang was no doubt sympathetic because he also had been threatened by the gang while looking for a lost horse. Lang offered Dutch one thousand dollars for the claim if it proved out, whereupon Lang and his father went out to inspect it. They were pleased with what they saw. Young Lang began working the property, but under the ever-present threat of being killed or at the least run off by the nearby outlaws.

Johnny's father had meanwhile located at Witch Springs, trading some cows to Jim McHaney for the privilege of using this area as a summer watering and grazing place. He advised his son to take in partners in his mining venture, and Lang did in order to protect his claim. Despite other variations in the story, it is known that on December 29, 1893, George W. Lang, John Lang, Ed Holland, and James J. Fyfe filed a notice of location on a gold-bearing lode "adjoining the Peoples Party Mine on the East."<sup>225</sup>

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225. Notice of Location, Lost Horse Mine, received for record Jan. 3, 1894, Mining Claims Book No. 1, Official Records, Riverside County, Ca., p. 88. Whether Al G. Tingman was another early partner is uncertain, though many sources state this as a fact.

When operations started, the ore was processed in a two-stamp mill at Lost Horse Spring. In 1895 the partners sold their interest to Thomas and J. D. Ryan, who organized the Lost Horse Mining Company. The mine was patented on August 7, 1897, to Thomas C. Ryan, Jepp (D.D.) Ryan, Matthew Ryan, Jr., Ethan B. Ryan, and Samuel N. Kelsey. Matthew, a rich Montana rancher, financed the operation. The new company, with this backing, was able to erect a ten-stamp mill and install a water line from Lost Horse Spring. A shipment of ore was made from the mine to Banning every week, a five-day trip for two wagons, a water tank, and feed rack. Intermittent stops between the two places were made at Whitewater, Warren's Ranch, Warren's Well, and Quail Spring.

It has been said that \$350,000 was extracted from the Lost Horse, mostly before the turn of the century. From 1896 to 1899 the company processed about nine thousand ounces of gold and some silver. These four years produced eighty percent of the wealth made in the first sixteen years of the mine's production. The Ryans later leased the mine to a succession of people who did not realize a profit. A fault was struck in the original tunnel and the gold seam lost. But several further attempts were made to work the mine. In 1915 Sam Ryan and Lon Migs went up to the mine. It is said by some that they installed gasoline-powered equipment to replace the steam-driven machinery. Their operations never amounted to much. About 1923 a Dr. Ward took supplies and equipment up to reopen the mine, but he eventually gave up. The property was idle until 1931 when, due to a rise in gold prices, General Mining and Development Company mined the upper level ore pillars and processed the ore in the ten-stamp mill. (It has also been said that this company installed the gasoline engines.) The last work apparently was done by J. D. Ryan in 1936, when he cyanided approximately six

hundred tons of tailings. It is said that all of the work done in the 1930s produced only a few hundred ounces of gold.<sup>226</sup>

A version of the mine's discovery given by Chester A. Pinkham differs slightly in regard to some of the earlier details. Pinkham agrees that Dutch Frank originally found the lode, but states that at the time of the ledge's discovery, Dutch was prospecting under a grubstake from parties with whom friction had developed. Diebold decided to leave the find alone until his grubstake had expired and then locate it in connection with someone else. Before this happened, however, along came Johnny Lang searching for a horse that had wandered off from his camp at Pinyon Well. While searching for the animal, Lang stumbled across this gold outcropping.

According to Pinkham, the first rich surface ore was run through the Piñon mill. Later water was developed close to the surface several miles north of the mine (Lost Horse Spring), and a small mill was installed there. It became too expensive to haul the ore, so a ten-stamp mill was erected at the mine, with water eventually piped in from several shallow wells at the former mill site. A crew of Mexicans and Indians was kept busy chopping juniper and piñon pine for fuel to run the mills, hoist ore, and pump water. Supplies came from Banning, sixty-five miles away.

After Lang died, Ryan acquired his interests. At depth the pay ore played out. A vein was followed for a short while

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226. David Stephens, "The Lost Horse," Pioneer Days Souvenir Edition, 1974, suppl. to the Desert Trail (Twentynine Palms, Ca.), pp. 5-7. This writer has not found evidence that J. D. Ryan processed tailings by cyanide. A Mr. Phelps, however, is mentioned in several sources in connection with such an operation. J. D. Ryan transferred his interest in the Lost Horse to Daniel Stafford and Sam Ryan in 1930 and they formed the General Mining and Development Company. Benjamin Levy, Historic Structures Report, Lost Horse Mine, Joshua Tree National Monument, Part I, Historical Data (Washington, D.C.: Div. of History, Office of Archeology and Historic Preservation, NPS, 1969), p. 11.

until Ryan gave orders to stop work. The mining crew was so certain of striking pay ore again, however, that the men offered to donate their labor for a time to see if the vein could be found if Ryan furnished the food, tools, and other necessities. Just as the men were about to give up, after driving eighty feet farther down, they cut into a pay shoot that produced \$75,000. After that was worked out, development stopped.<sup>227</sup>

Other versions say that Lang took in as partners Ed Holland and Alfred Tingman. They built the arrastra (Henson Well?) over at Pinyon Well to crush the ore, which was hauled by wagon. The partners sold to Jepp Ryan and Kelsey, who owned a well (or spring) closer to the mine (Lost Horse Spring) where they had erected a mill. With the money from the mine sale Johnny opened a saloon at the Twentynine Palms oasis.<sup>228</sup>

Clifton Gray agrees that Lang, Holland, and Tingman were owners of two claims comprising the Lost Horse Mine and that in 1894 ore was hauled to the Piñon Mountain mill. He reports that in 1897 a patent was issued to Nathan (Matthew?, Ethan?) Ryan and others, and that the mine was in practically continuous operation from 1895 to 1908, but under several operators: 1896-98, Thos. C. Ryan; 1899-1900, Lost Horse Mining and Milling Company; 1901, 1905, S. M. Kelsey; 1906, 1908, Lost Horse Mining and Milling Company. By 1896 a two-stamp mill had been built several miles north (at Lost Horse Spring). Workings at that time included an 80-foot drift adit, a 50-foot winze, and a 50-foot drift from the bottom of the winze. A 235-foot vertical shaft had been sunk with a horse-whim. In 1929 the shaft was 500 feet deep and a ten-stamp mill was present. Water was piped to the mine from Lost Horse Well.<sup>229</sup>

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227. Chester A. Pinkham, "Pinkham Gives History of Lost Horse Mine," Central Files, 1907-49, RG 79, NA.

228. Belden, "Cattle Thieves Cause Victim to Find Rich Mine," Apr. 26, 1959.

229. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.

Harold Weight wrote that although throughout most of 1894 the Lost Horse ore was hauled to the Pinyon Well mill, this soon proved unproductive because of the small capacity of the mill and scarcity of water. He states that Johnny Lang and J. J. Fife (Fyfe) constructed a larger two-stamp mill at Lost Horse Spring. The stamp battery was made by Baker Iron Works in Los Angeles, the six-h.p. gas engine by L. A. Windmill Co. The mill was in full operation by November 1894.<sup>230</sup> Weight also states that according to Keys, when the original owners sold out early in 1895 to J. D. and Thomas Ryan, John Lang retained an interest. The Ryans improved the property after they took it over. Water was piped 3½ miles and raised 750 feet to the mine by a steam pump at Lost Horse Spring. The steam operated a hoist, skip, and the new ten-stamp mill that was bought at a mine in the Chuckwalla Mountains and freighted to the Lost Horse in April 1897. It took four six-horse wagons and three eight-mule teams to pull it through Wilson Canyon and up to the mine.<sup>231</sup>

There is a story connected with an argument between J. D. Ryan and Lang that might be true if Lang did indeed retain an interest in the mine. Supposedly two shifts were operated at the mill, with Lang taking the night one and Ryan's brother the day crew. It soon became apparent that the day shift was turning out more raw amalgam than Lang's crew. Upon investigation it was found that Lang was stealing amalgam, and he was given the choice of selling his interest or going to jail. Lang sold out for \$12,000 but did not move far away. He settled in an old cabin formerly occupied by a John Law and a man called Chase in what is now referred to as Johnny Lang Canyon. (These men were mentioned earlier in connection with cattle raising around Covington Flat.) Returns at the mine dropped in the early 1900s, and the owners never resumed full-scale operation. At that point Lang returned, evidently to retrieve amalgams he had stolen and buried around

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230. Weight, "Legends of the Lost Horse Mine," p. 11.

231. Ibid.

the mill site. Lang started bringing raw bullion to Bill Keys twice a year, according to Keys the same amount each time--about \$980 worth. Lang claimed this gold was being scraped from the mill's amalgamation plates, but Keys did not believe him. Keys estimated that Lang sold him nearly \$18,000 worth of gold between 1917 and 1926.

Mining journals provide sketchy details on the Lost Horse Mine's operation, beginning in 1894. At that time the rock was being hauled eight miles to the Piñon Mountain mill. Owners were said to be Lang, Holland, and Tingman.<sup>232</sup> By the summer of 1895 a two-stamp mill operated by a gasoline engine was at work, probably the one at Lost Horse Spring.<sup>233</sup> In 1896 the mine was owned by Ryan and Kelsey. The Lost Horse mill was described then as steam powered, with two 850-pound stamps and a capacity of four tons every twenty-four hours.<sup>234</sup>

The Lost Horse Mining and Milling Company was incorporated in 1897, with a capital of \$500,000.<sup>235</sup> In 1900 the property was reported bonded to U. S .G. Todd of Los Angeles for \$200,000 from the current owners, Ryan and Kelsey.<sup>236</sup> By 1904 the mine had been closed down for several years, but was being reopened. The property was possibly still being developed as late as 1907.<sup>237</sup> In 1912 notice appeared in the newspaper that the Lost Horse Mine would be sold to

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232. Twelfth Report of the State Mineralogist, 1894, p. 223.

233. Mining and Scientific Press 71, no. 2, (July 13, 1895): 30.

234. Thirteenth Report of the State Mineralogist, 1896, pp. 312, 315.

235. Engineering and Mining Journal 64, no. 8 (Aug. 21, 1897): 224.

236. Mining and Scientific Press 80, no. 18 (May 5, 1900): 494.

237. Engineering and Mining Journal 84, no. 4 (July 27, 1907): 182.

satisfy a judgement in the amount of several thousand dollars for Addie B. Ryan (wife of Jephtha DeGarret) who apparently had loaned the mining company large sums for development work.<sup>238</sup> Otherwise little is heard about the mine for several years.

In the early 1930s Charles R. Phelps, an insurance salesman for the Northwestern Mutual Life Insurance Company in San Francisco, came out to the desert, just after the price of gold rose to thirty-five dollars an ounce. He leased the old Lost Horse Mine and built a cyanide plant there to leach the tailings pile. He evidently ran into financial problems because of the delay in receiving payment for the gold extracted due to regulations of the Federal Reserve Bank. Without adequate capital, it was difficult to continue operations when payment did not come quickly enough to satisfy one's creditors.<sup>239</sup> An article in 1933 stated that the Ryans and a Mr. Stafford had reopened the Lost Horse and were working two shifts, milling the ore at the mine mill.<sup>240</sup>

The National Park Service acquired title to the Lost Horse Mine from the Ryan descendants in 1966. The mine shaft was sealed with a concrete slab, the mine road closed to vehicles, and the mill largely restored as a prime interpretive exhibit of the gold-mining era in the monument.

t) Hidden Gold (Enspiration, Lost Mine Parallel) Mine

Conflicting location data was found for this mine. Gray stated the property is in the southwest quarter of Section 7, T3S, R8E, and in the southeast quarter of Section 12, T3S, R7E. It was reportedly discovered by the Sellers brothers, who referred to it as the

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238. "To Sell Once Famous Mine," Riverside (Ca.) Daily Press, Jan. 6, 1912.

239. Saunders interview, Feb. 27, 1975, p. 3.

240. Lou Jacobs, "Mining Notes," The Outpost (Twentynine Palms, Ca.), Sept. 28, 1933.





Illustration 90.

Daniel Stafford in front of the Lost Horse Mine stamp battery, June 21, 1932. Courtesy JT NM.



Illustration 91.

Cabins for the workers, Lost Horse Mine, July 1935. Courtesy JT NM.

Lost Mine Parallel. Bill Keys stated he worked the property in 1925, packing the ore on burros up the steep face of the Little San Bernardino Mountains to Keys View and then trucking it on out the road he built to Keys Ranch where it was milled in a two-stamp mill. Willis Keys stated in his 1975 interview that his father moved a small two-stamp steam mill from the Desert Queen Ranch to Pushawalla Canyon (he must mean the next canyon west) to be used in connection with the Hidden Gold Mine. Superintendent James Cole said the property was worked by Milton L. Knapp in 1930 or 1931. The mine was then taken over by John (Johan) and Margaret Samuelson around 1934. Les Earenfight remembered a trail used by Samuelson leading from the mine to Keys View. A cable also traversed this distance. Samuelson stated in 1939 that he had over 700 feet of tunnel work.<sup>241</sup>

u) Hersey and Dewey Mines

Two other mining properties are mentioned in early accounts of travel in the monument. One was the Hersey Mine, visited by George Wharton James in 1906: "we reach a little rock-house and tent four miles from El Dorado. It belongs to the Hersey Mine, and a little well of water, with a slight sulphurous taste, explains the location of the house."<sup>242</sup> The other was mentioned by J. Smeaton Chase: "At a point [in Pushawalla Canyon west of Pinyon Well] where a side cañon ran off to the west I noticed a weather-beaten sign-board showing that the Dewey Mine lay up there. This 'mine,' it seems, was a notorious case of 'salting,' . . . a fraud that nearly came off, but not quite."<sup>243</sup> Two properties stated by O'Neal to have been in the Hexie and Gold Coin region, to have used Pinyon Well water, and to have been filed on by Tingman and Holland were the Homestake (Hersey?) and Dewey.<sup>244</sup>

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241. Johan Samuelson to Bureau of Mines, Dept. of Interior, January 1939, Central Files, 1907-49, RG 79, NA.

242. Wonders of the Colorado Desert, II: 483.

243. California Desert Trails, p. 141.

244. Peculiar Piece of Desert, p. 67.

3. Mill Sites

a) Eldorado (New El Dorado) Mill

By 1918 the Eldorado Mine was receiving water from Pinyon Well to run its mine and mill operations. By the 1920s the property had an amalgamation and cyanidation plant plus stamps.

b) Hexadredron (Hexie) Mill

Little is known about this mill. Supposedly a five-stamp mill was erected near the mine, but the date of construction is not known.

c) Gold Galena (Gold Coin) Mill

No details on this mill operation were found by the writer.

d) Lost Horse Mill

This ten-stamp mill was erected at the Lost Horse Mine by the Lost Horse Mining Company soon after 1897. Water to run the plant was piped in from Lost Horse Spring and later from several wells near the spring site.

4. Evaluation of Resources and Recommendations

a) Mine Sites

(1) Gold Point Mine

The Gold Point Mine is about 4.5 miles southeast of White Tank and adjacent to the Pinto Basin Road. Development at the property consisted of one shaft about 100 feet deep, a smaller one about 30 feet deep, and a small open cut. The U.S. Bureau of Mines reported in 1935 that forty-six tons of ore had been processed and twenty-three ounces of gold and about nine of silver recovered.<sup>245</sup> Because of this mine's proximity to the main monument road, the open shafts presented a

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245. Paul H. Knowles, mining engineer, Office of Mining and Minerals, WRO, NPS, to Supt., JTNM, Mar. 7, 1973, file L3023, WRO, NPS, San Francisco, Ca.

potential safety hazard. One shaft opening was grated and other workings filled in. This site possesses no historical significance or integrity.

(2) Rich Gold (Gold Crown #2) Mine (Blue Bell Mine)

This property is about four miles southeast of White Tank and about  $\frac{1}{4}$  mile south of the West Pinto Basin Road. Development work consisted of three shafts--15, 25, and 100 feet deep--and a shallow open cut.<sup>246</sup> As stated earlier, this claim was once part of the Blue Bell Mine, a property occasionally mentioned in the early mining records.

According to Bob Michels, an early miner in the area, the old Blue Bell Mine workings lie on the same ridge but on the opposite (south-facing) slope from the two wooden ore bins visible from the West Pinto Basin Road. These workings were inspected from the top of the ridge. Visible are a shaft or tunnel, some dumps, and possibly some structural ruins. The LCS crew visited the site in 1976. Their sketch map of the area shows a vertical shaft with a dry washer, a collapsed house, and another vertical shaft with a cyanide tank nearby. (See Golden Bell Mine.)

The property does not appear to have been significant in the mining history of the area. The 1976 LCS team determined that the site did not merit inclusion on the National Register. The site should be left to natural deterioration.

(3) Unidentified Mine

This property about  $4\frac{1}{2}$  miles southeast of White Tank and about  $\frac{1}{2}$  mile south of the West Pinto Basin Road was developed by a 100-foot-long drift adit. A 20-foot vertical shaft was also sunk.

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246. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.

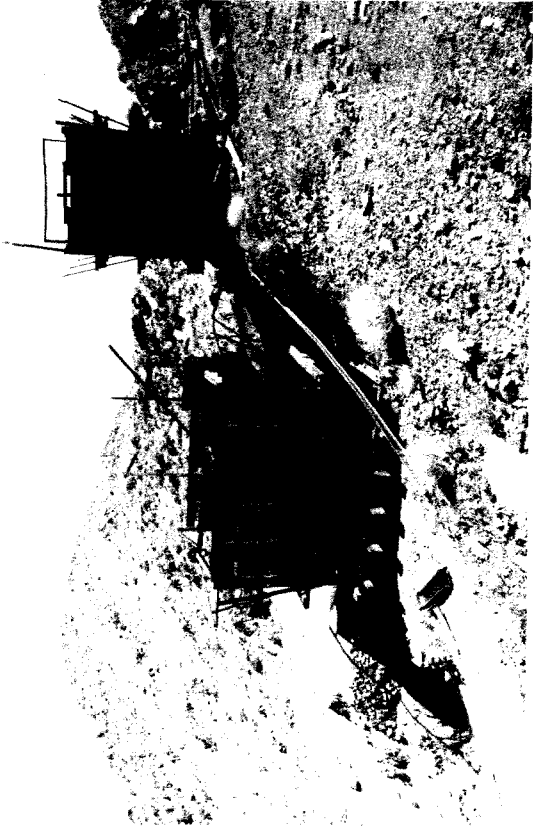


Illustration 92.

Structures in Silver Bell-Golden Bell mines area. Clockwise from left edge: building site on flat between main monument road and Silver Bell area, ore bins and loading dock, dynamite storage bunker. NPS photos by Linda W. Greene.



The property was not inspected by the writer. It has no apparent historical significance. There are some indications that this was another Kaiser Steel Corporation holding in the early 1970s.

(4) Silver Bell Mine

This property is about four miles southeast of White Tank and about  $\frac{1}{2}$  mile southwest of the West Pinto Basin Road. Early work there consisted of two shallow shafts. Mining for copper-bearing material involved shaving off the east slope of a small knob-like hill. This area of activity is probably the terraced slope just above (west of) the two wooden ore bins. Much copper-bearing rock is visible on the terraces formed by bulldozing activity. The two large ore bins visible from the monument road are probably associated with this operation. There is also a small semi-subterranean structure on top of the ridge that might have been used to store explosives. At the point where the rough road leading up to the ore bins hits the flat land west of the Pinto Basin Road were found what appeared to be the remains of a living site. Flagstone floors, wooden timbers, and stove parts were found there. The Silver Bell property has no historical significance.

(5) Golden Bell (Blue Bell) Mine

The Golden Bell claim is located near the center of Section 8, T3S, R10E. It is on the southeast side of a low mountain on the north flank of the Hexie Mountains, at the extreme west end of Pinto Basin, about  $\frac{1}{2}$  mile south of the Pinto Basin Road.

The Golden Bell lode patented mining claim includes the shaft and adit originally on the unpatented Golden Trumpet claim and the shaft and mine workings on the unpatented Golden Bell claim. Mine workings consisted of a steeply dipping one-compartment shaft, a drift, and an inclined untimbered shaft. Open stopes extend to the surface irregularly between the two shafts. A small mill once operated near the vertical shaft.

Illustration 93 (left). Hillside at upper left has been bulldozed in connection with Silver Bell mining activity. Powder storage shed is to right, built into ridge.



Illustration 94 (below). View down hill from Silver Bell Mine toward Golden Bell (Blue Bell) and Rich Gold mining areas. NPS photos by Linda W. Greene.



In 1975 no improvements were in place on site except for the timbered collar of the vertical shaft. A small steel bin had fallen downslope. A steel trommel and pan conveyor deck lay at the bottom of the draw near the inclined shaft.<sup>247</sup>

In the northeast quarter of Section 8 is an open shaft near the Golden Bell that is the Margaret Mine.

The Golden Bell has no apparent historical significance in the mining history of the monument. It was determined to be not eligible for the National Register after its inspection by the LCS crew in 1976.

(6) Eldorado (New El Dorado) Mine

This property is on the north wall of a small canyon at the southeast corner of the Hexie Mountains in the northeast quarter of Section 17. In 1959 the workings consisted of 2,000 feet of drifts, shafts, and minor crosscuts. A very faint jeep road led west about five miles into Pleasant Valley and then turned southeast about four miles to the Pinyon Well mill site. The mine site is best reached by veering southwest around the next ridge from the jeep trail to the Golden Bell Mine. About one-half mile west up this canyon, mill ruins are visible on the north slope and the remains of a mine camp on the south side of the wash. At the latter, remains of at least three buildings can be seen--only one is still standing but it is on the verge of collapse. A fallen outhouse and a dump were found, as well as some stone foundations. Across the wash and near a large cyanide tailings pile are two double-compartmented metal and concrete vats.

On the hillside above the mill ruins are a shaft and a caved prospect hole or tunnel. West of the shaft are some stone

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247. Weiler, "Appraisal of Mineral Interests Inherent in the Golden Bell Lode Mining Claim," 1975, pp. 6-9.



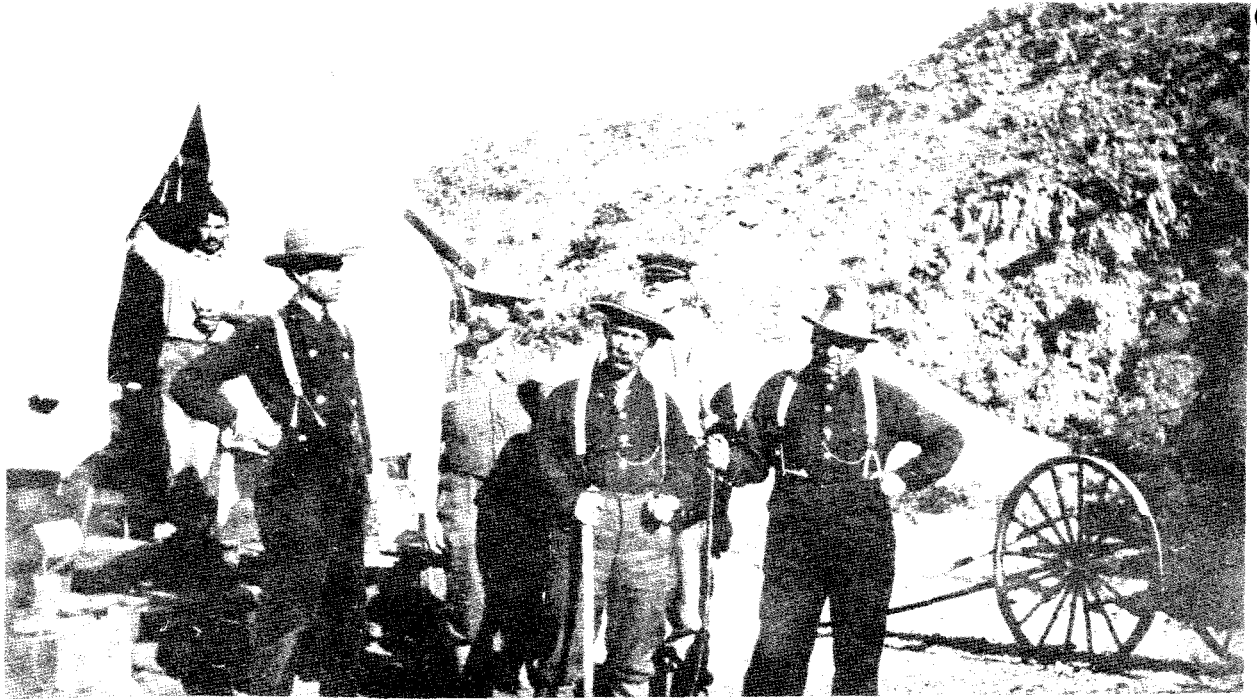


Illustration 95.  
Board of Directors, New Eldorado Mine, 1908. Photo from Fred Vaile.  
Harold and Lucile Weight Collection, Courtesy JTNM.



Illustration 96.  
New Eldorado Mine, 1913. Photo from Fred Vaile. Harold and Lucile  
Weight Collection. Courtesy JTNM.



Illustration 97.  
New Eldorado Mine, 1928. Photo from Fred Vaile. Harold and Lucile  
Weight Collection. Courtesy JTNM.



Illustration 98.  
New Eldorado Mine, 1983. NPS photo by Linda W. Greene.

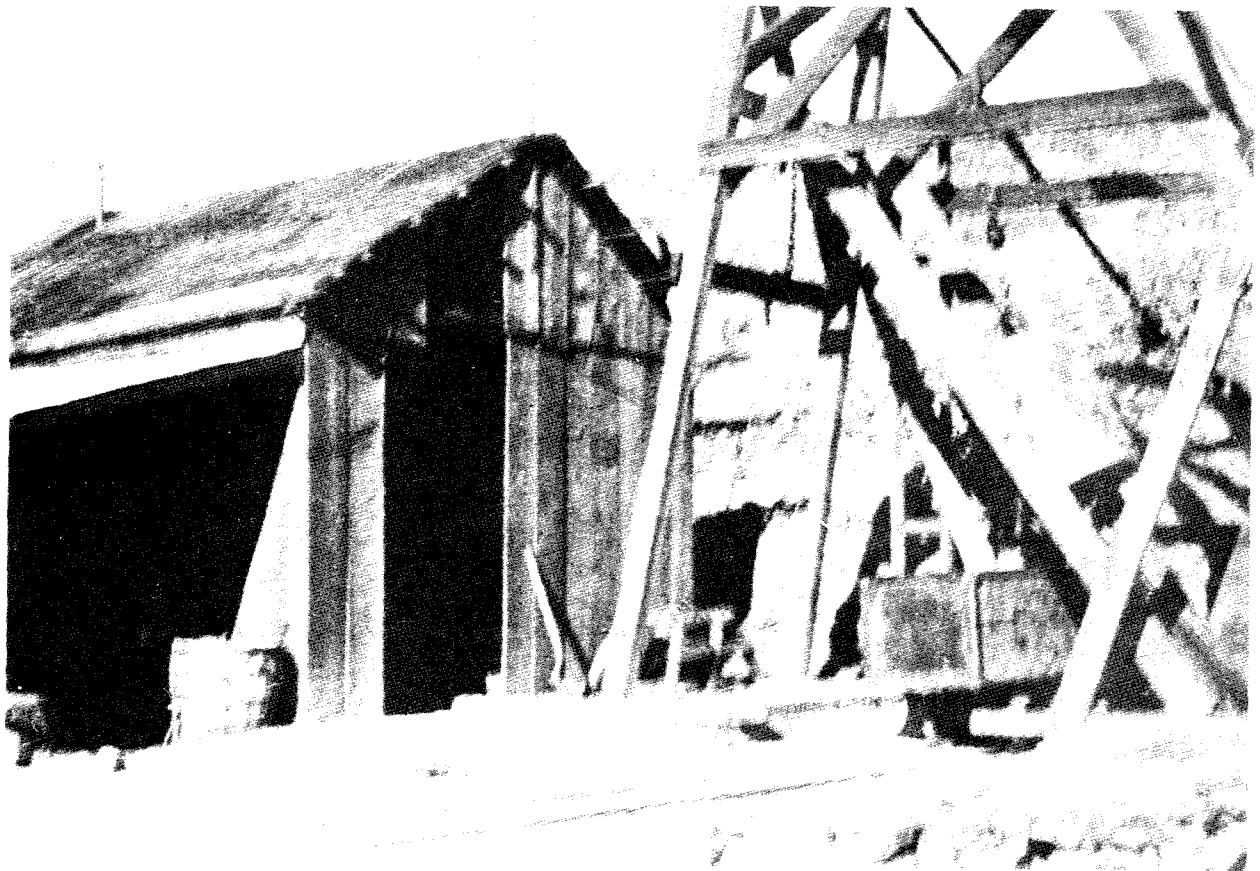


Illustration 99.  
New Eldorado hoist house, 1911. Photo from Fred Vaile. Harold and Lucile Weight Collection. Courtesy JTNM.

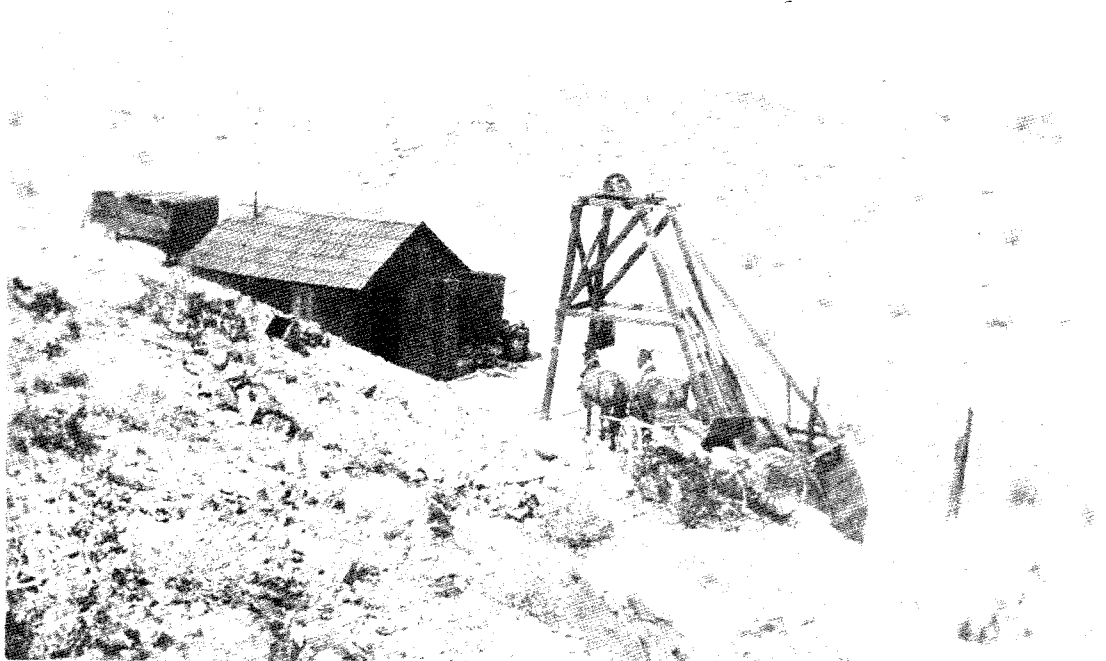


Illustration 100.  
"At the El Dorado. One of the other claims--1908." Photo from Fred Vaile. Harold and Lucile Weight Collection. Courtesy JTNM.



Illustration 101.

Views of the Eldorado Mine today. Clockwise from left edge: top level of mine workings, cast-iron and concrete vats and slag pile in bed of wash below mine, and the only remaining standing building. NPS photos by Linda W. Greene.



platform walls that look like part of some aerial tram framework to transport ore down to a large circular tank on the mill level. Only two corrugated-metal circular tanks, some concrete pilings, and one large tank foundation remain from the mill.

The Eldorado Mine functioned basically during the same time period as the Lost Horse and Desert Queen mines, although it was discovered about seven years later. Not only was its production high, at more than \$100,000, but it also supplied a wider variety of minerals than any other mine in the monument--gold, galena, wulfenite, vanadium, vanadanite, and molybdenite. Production of several of these ores was especially critical during the First World War and special shipments of them were made. The Eldorado was also important locally because it performed custom milling for smaller mining operations in the area up until the late 1930s. By providing a nearby custom milling plant and thus enabling savings on haulage costs, it probably enabled many small operations, such as the Blue Bell, to survive during that time. Because it contained both a stamp and cyanide operation, the Eldorado mill undoubtedly could get good returns on its milling jobs. Although most of the mill was removed in 1941-42, enough machinery is left on site to indicate the positions of its various components. The entire site, including the mine, mill, and camp, is considered locally significant and will be nominated to the National Register.

Adding to the site's historical and interpretive significance are several pictures in the monument files copied from the Harold and Lucile Weight Collection. These photos by Fred Vaile, manager and part owner of the mine, show the mill, mine workings, housing area, and teamsters hauling to the mine. It is recommended that the monument interpretive staff try to secure copies of other photos in the Fred Vaile Collection pertinent to mining at that site and in the general area of the monument.

(7) Golden Bee Mine

This property of two claims is on the north slope of the Hexie Mountains in Sections 15 and 16, T3S, R10E, at



Illustration 102.

Lower level of workings, Golden Bee Mine, 1983.

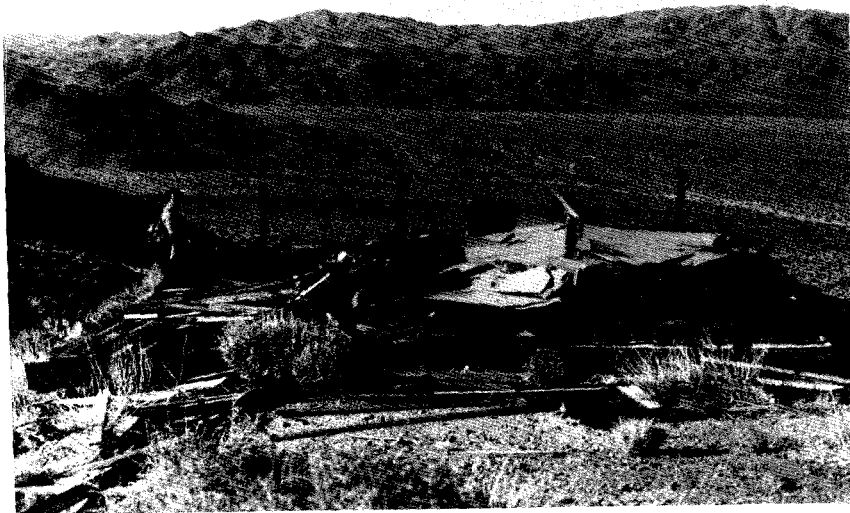


Illustration 103.

Remains of mining office, upper level of workings, Golden Bee Mine. NPS photos by Linda W. Greene.

an elevation of 3,500 feet. A rough trail leads to the mine area from the West Pinto Basin Road. Just before the road enters the canyon it forms a circle drive, around which are scattered the remains of the Golden Bee mining camp. Foundations of at least five frame buildings, all collapsed, can be seen there. About one-quarter mile up the road are the lower mine workings, distinguished by a corrugated-metal ore bin and a short wooden headframe. Several holes and tunnels are visible along the ridge where miners followed the quartz vein. They are supported by shoddy wooden timbering. The upper workings consist of a large one-chute ore bin and a timbered vertical shaft. The entire hillside there has been prospected, but the workings have caved in. Stone foundations and wooden debris indicate where other mine buildings and equipment stood. Out on a point overlooking the valley is debris from a collapsed building--wooden with a corrugated-metal roof. This might have been the mining office. Visible from there to the west are some tunnels into another ridge across a ravine. According to Daniel Leahy, who worked with Frenchie(y) Auclair in the mine, equipment was sparse, consisting only of a hoist and compressor.<sup>248</sup>

Evans states that production at the Golden Bee consisted of only about 800 tons of ore between 1935 and 1942, from which 0.6 to 0.7 of an ounce of gold per ton and about 0.1 of an ounce of silver per ton were recovered.<sup>249</sup>

The Golden Bee Mine was one of the later mines to operate in the monument but was not one of the most productive. Little has been found out about its owner Frenchy Auclair or about other people involved in operations there. The entire Golden Bee Mine complex

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248. From interview with Daniel Leahy, Jan. 6, 1975, in JTNM Fact File. Leahy also stated that honey bees almost drove him and Auclair out. They were attracted by a big tank of water near the mine. They were all killed when someone dropped a cyanide tablet in the water. This may be the origin of the mine's name.

249. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.



Illustration 104.

Golden Bee Mine and mill, Eloge (Frenchy) Auclair, proprietor, October 6, 1941. Courtesy JTNM.



Illustration 105.

Golden Bee Mine and mill, 1983. NPS photo by Linda W. Greene.



area contains several hazardous shafts and tunnels. Because of its poor production record, relatively short period of operation, and lack of associative or historical significance, the Golden Bee Mine is not considered eligible for the National Register. It is recommended that the site be left to natural deterioration.

(8) Paymaster Mine

The specific location of this property in Section 15, T3S, R10E, was not found by the writer. The mine is not deemed important in the mining history of the monument.

(9) Goldfields of America (Sandra K[ay] #1) Mine

In 1959 James Evans stated that this mine was in Section 5, T3S, R10E. He also said that two shafts, approximately 45 and 100 feet deep, had been sunk one-quarter mile northeast of the Gold Point Mine in the millsite area. Another deep shaft and an intersecting adit were found elsewhere on the property. Production of the mine was undetermined.<sup>250</sup>

This property is possibly the same one designated the Sandra Kay #1 by the mine inspection crew in the 1970s. They located that site in the southwest quarter of the southwest quarter of Section 4, about one mile north of Cholla Garden and about  $\frac{1}{4}$  mile east of the West Pinto Basin Road. Before the access road was closed, the site was easily reached by a dirt road going to within 400 yards of the mine. The mine has two entrances, one at the top of a vertical shaft on the top of a ridge where there is a large slag pile. About thirty feet below the surface the vertical shaft intersects a horizontal one before continuing down for at least 100 more feet. This was one of the most dangerous sites visited by the inspection team and was one of the sites selected for closure.

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250. Ibid.

The Goldfields of America (Sandra Kay?) Mine is not considered significant in the mining history of the monument. Now that the shafts have been closed off, it is recommended that the site be left to benign neglect.

(10) Ruby Lee Mine

The Ruby Lee Mine was not visited by this writer. It lies about five air miles northwest of the Ruby Lee Mill Site in Section 2, T4S, R10E. There is no water on the claim. The property contains only two small, shallow open cuts. Of the approximately seventy-five tons of selected mineralized rock piled at the mill site, only a portion came from the Ruby Lee claim. There is no record of any production at the mine. It appears that only a few tons of ore have ever been removed. A poor dirt road, sometimes lost in Porcupine Wash, extends west from the mill site to the lode claim. By the 1970s the owner, A.A. Dietemann, had not visited the claim in several years.<sup>251</sup>

This site is not considered significant in the mining history of Joshua Tree National Monument but is recommended for field examination by a qualified historian before any action affecting it is implemented.

(11) Combination Quartz Mining Claim No. 1

This site was not visited by the writer. It is not considered historically significant.

(12) Captain Jinks (Jenks) Mine (Phyllis Silver Mine)

This site was not visited by the writer. All of the mining properties located along Porcupine Wash are extremely difficult to reach. They are only accessible via an old jeep road, now closed to vehicles, that passes through the Ruby Lee Mill Site at Ruby Well. Development at this mine consisted of several deep, steeply inclined

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251. Paul H. Knowles, "Report on Validity of the Ruby Lee Lode Claim and Millsite Claim, Joshua Tree National Monument, Riverside County, California," Jan. 18, 1974, file L3023, Division of Mines and Minerals, WRO, NPS, San Francisco, Ca., pp. 7, 9, 17.

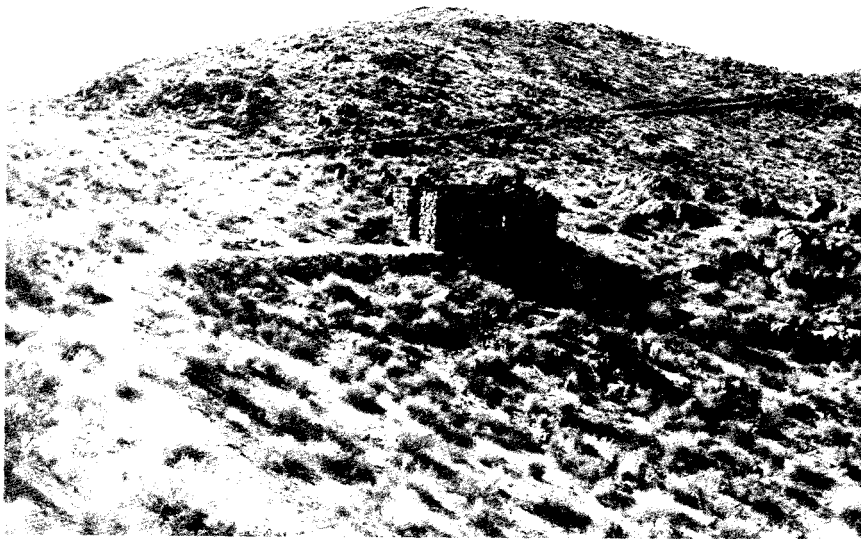


Illustration 106.

Road into Hexahedron Mine and cabin ruin, 1983.

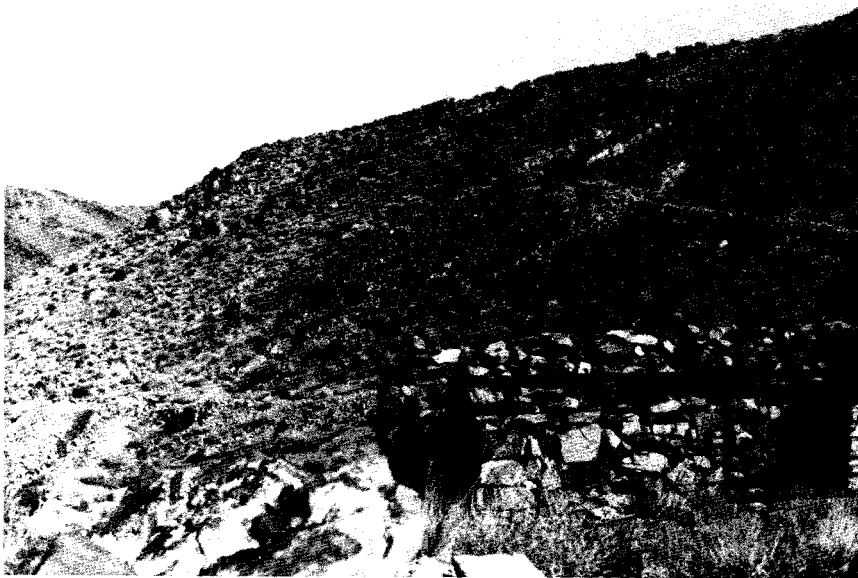


Illustration 107.

Rock cabin in foreground. Visible in background on slope are two levels of mine workings. NPS photos by Linda W. Greene.

shafts, a caved drift adit, several pits, trenches, an open cut, and two vertical shafts.<sup>252</sup>

Nothing more is known about Captain Jinks (Jenks?) or his purported early discovery of this mine. No structures were ever reported on site. The property is recommended for on-site evaluation by a qualified historian prior to any action affecting it.

(13) Hexahedron (Hexie) Mine

This mine is in the southeast quarter of the northeast quarter of Section 11, T3S, R9E, near the crest of the Hexie Mountains and about 4¼ air miles east of Squaw Tank. The Geology Tour Road can be followed south, past Squaw Tank, to the ruins of the Gold Galena (Gold Coin) Mine and Mill. Beyond this point south vehicular traffic is prohibited. About three miles further along this road that hugs the southern base of the Hexie Mountains, a wagon road is visible zigzagging north up over the top of a high ridge. A further 1.5-mile hike into the Hexie Mountains leads to the Hexahedron Mine.

Principal working at the mine was a 300-foot drift adit with one 30-foot crosscut. Above the adit level were three open cuts. Several shallow prospect pits were also opened in the area. Gray states that although no written description of the mill has been found, tailing debris and old foundations in the north half of the northeast quarter of Section 14, T3S, R9E, mark a former mill site.<sup>253</sup>

This writer found on the mine site the ruins of an old rock house diagonally northwest of the mine workings. Constructed of dry stone masonry and wooden timbers, the structure had

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251. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.

253. Ibid.

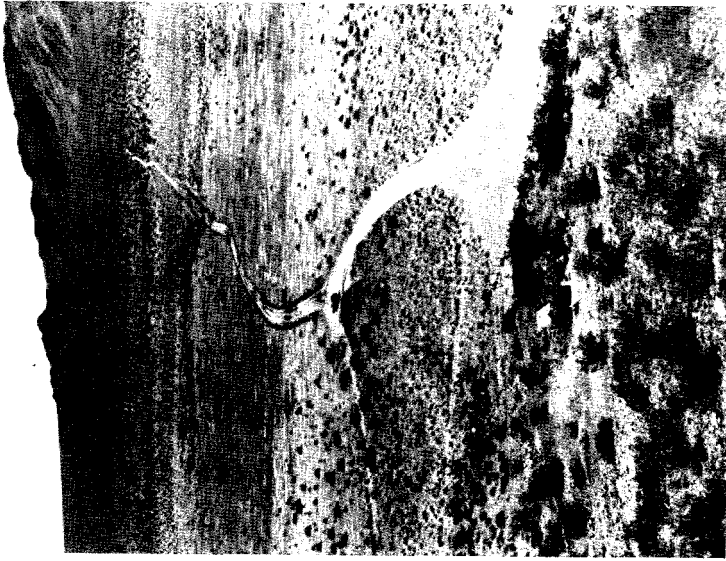


Illustration 108 (top left).  
Mine workings on hillside in Pleasant  
Valley, Gold Galena (Gold Coin) Mine.

Illustration 109 (top right).  
Junction in Pleasant Valley. Road goes  
straight to Berdoo Canyon and Pinyon Well,  
right to Queen Valley, and left to the  
Hexahedron and Eldorado mines and  
Cottonwood Spring. Gold Coin mill ruin is  
at bottom of picture.

Illustration 110 (bottom).  
House foundations east of mill ruin. NPS  
photos by Linda W. Greene.

six-foot-high walls and measured about twelve by fourteen feet. Inside were remains of a wooden cot and much wood and metal debris. Some of the rocks were chinked with earth and gravel. (A picture of this cabin can be seen on p. 56 of Miller, Mines of the High Desert.) The mine diggings are on several levels. Of the two adits on the upper level, only one goes back into the hillside any appreciable distance. The adit on the lower level that opens onto a sizeable dump and in which there are wooden tram tracks appears to be the main tunnel.

The U.S. Bureau of Mines lists placer production from the Hexahedron of 116.68 ounces of gold in 1893 by H. E. Fallant of Indio. Otherwise no record of production is known. The Hexahedron is not considered to be significant in the mining history of the monument. Although the mill was reportedly a good-sized, active operation, the dearth of information on it in mining journals and other documentary sources would indicate that this aspect of the Hexahedron operations was only of minor importance. It is recommended that the Hexahedron rock house be left to natural deterioration.

#### (14) Gold Galena (Gold Coin) Mine

The Gold Coin Mine workings are primarily in Section 9, T3S, R9E. They are reached by taking the Geology Tour Road into Pleasant Valley. The road farther east along the north edge of Pleasant Valley toward the El Dorado Mine is barricaded at the Gold Coin mill site. From the mill the road turns south and then southwest toward Pinyon Well about three miles away.

When Gray examined the mine site in 1957 he found workings stretching about half a mile east-west. They consisted of eight inclined shafts, several shallow pits and cuts, and two vertical shafts.

When this writer visited the site, workings consisted of cuts, prospect holes, and a filled-in adit. At the base of the hills where the road to Pinyon Well turns south from the Pleasant Valley Road are mill foundations. A shored road heads northeast from

here up the hillside toward various exploratory holes. East of the mill ruins on some level ground near the base of the hills are what appear to be the remains of man-made stone walls and possible building sites. Metal can refuse indicates habitation here over a period of time.

The Gold Coin Mine is not considered significant in the mining history of the monument. The property evidently was worked primarily in the early 1900s and then again in the 1930s. The lack of production information indicates little ore was taken out. No hazardous mine workings were found at the site. It is recommended that it be left to natural decay.

15) Gold Standard Mine

The Gold Standard Mine workings are thought to be in the southeast quarter of Section 9 and the southwest quarter of Section 10, T3S, R8E, on the southwest edge of Lost Horse Mountain. In 1957 Gray noted that the quartz veins had been explored primarily by a forty-foot vertical shaft with a windlass, by six open cuts, and by several shallow pits and trenches.

The mine safing crew identified workings in the northeast quarter of the southeast quarter of Section 9, T3S, R8E, as belonging to the Gold Standard. It was 2.15 miles by dirt road southeast of the Lost Horse Mine road junction, then about  $\frac{1}{4}$  mile down a wash on an old jeep road past a Joshua Tree log cabin. At the site was a thirty-five-foot-deep shaft with a tunnel possibly leading away at the bottom. A caved-in tunnel was also found on site. No mention was made of a mill site.

The Gold Standard does not appear to be a significant property. It was apparently never commercially profitable, and even its exact location is somewhat uncertain. The origin or condition of the log cabin mentioned by the mine safety crew and its relationship to the mine site is not known at this time. It is recommended that if the log cabin is extant, it be photographed and recorded by a professional historian to resolve questions of architectural significance

before any action affecting it is taken. The mine site is recommended for natural deterioration.

(16) Optimist Mine

The Optimist is in the northeast quarter of the northwest quarter of Section 10, T3S, R8E, near the crest of Lost Horse Mountain. It is about 3.5 miles southeast of the Lost Horse Mine road junction via a dirt and then four-wheel-drive road. In 1957 Gray found a vertical shaft 100± feet deep, an adit, and shallow pits and trenches. The mine safety crew found a 60-foot tunnel and a 45-foot-deep shaft.

The Optimist Mine is not considered historically significant. The shaft and tunnel on the site are especially hazardous because of the unstable rock in the tunnel and lack of shoring in the shaft.

(17) Lang Mine

This property is in the northeast quarter of the southwest quarter of Section 3, T3S, R8E, and is reached by jeep road about one-half mile southeast of the Lost Horse Mine. On site are a ten-foot-long tunnel and a fifty-foot-deep inclined shaft. The site was not visited by this writer and therefore its current condition is not known. The property holds no significance on its own but is undoubtedly part of early exploration activities at the Lost Horse Mine. It is included within the Lost Horse Mine National Register boundary as significant in association with that mine.

(18) Unidentified Mine

This mine in the northeast quarter of the northeast quarter of Section 4, T3S, R8E, was not visited by the writer. It is assumed that development there was performed in connection with exploratory work at the Lost Horse Mine in the 1890s. In the late 1950s development work consisted of a caved adit and an inclined shaft. The nearby Lost Horse Mine is of National Register significance. This small exploration area does not have enough importance to warrant inclusion



within the National Register boundary. The site should be left to natural deterioration.

(19) Lost Horse Mine

This mine site is in the south half of the northwest quarter of Section 3, T3S, R8E, SBM. It comprises eighty acres and is three miles southeast of the Ryan Campground and Lost Horse Well, on the east slope of a small valley high in the central part of Lost Horse Mountain.

A survey of the development work at the mine about 1945 found that it consisted mainly of a 500-foot vertical shaft with minor drifting along the vein on the 100-, 200-, 300-, and 400-foot levels. About 100 feet west of the main shaft was an adit, probably the 80-foot-long one described in 1917. The vein had also been explored by two shallow shafts and by several pits. In 1957 a vertical headframe, several partially collapsed wood and stone buildings, and a partly dismantled ten-stamp mill remained on site.<sup>254</sup>

When the Ryans erected the ten-stamp mill at the mine, they laid a two-inch pipeline from Lost Horse Spring and pumped the water to the mill by steam engines that raised the water 750 vertical feet into an earth and stone reservoir--an engineering feat for that time and place. Levy states that by 1905 the steam apparatus had been replaced and a three-cylinder high-pressure Gould pump was driven by a twenty-five-horsepower gasoline engine. Also in 1905 a seventy-foot-deep well was dug at Lost Horse Spring and much later two more wells, forty and forty-five feet deep, were added.<sup>255</sup>

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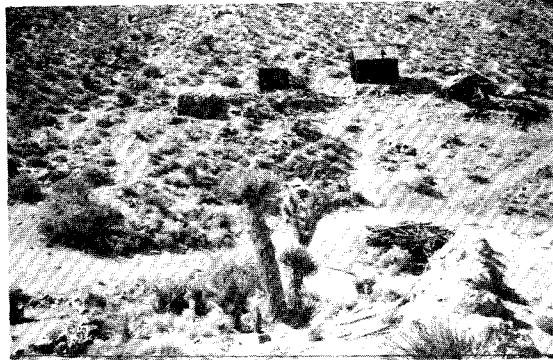
254. Ibid.

255. Levy, Historic Structures Report, Lost Horse Mine, p. 12.

Illustration 111.

Information on Ruins of Structures near Lost Horse Mine.

A B C D



Building A: Stone construction; used as bunk house; construction during 1890's.

Building B: Frame construction; used as assay office; constructed during 1894.

Building C: Frame construction; used as sleeping quarters and for a short time for cook house, also used by Johnny Lang as temporary quarters during his visits 1915-1925; constructed during 1890's.

Building D: Frame construction; used as cook house, constructed during 1890's.

James's Cabin



Stone construction; built by James about 1893.

Bill Keys visited the mine site in 1966 and made several interesting comments about remaining structures, which may be found in Levy's report in some detail. Support facilities he discussed were the mill, containing an amalgamation room; the remains of a steam hoist for raising skips loaded with ore for the crusher; two concrete and stone reservoirs in the ground above the mill for storing water pumped from Lost Horse Springs; three concrete troughs or settling basins remaining from the later cyanide leaching operation; and several corrugated-metal tanks.

In addition to the tunnels and shafts of the mining work area, the Lost Horse Mine had a camp associated with it. Four structures remaining in the late 1960s on the side of a hill across a wash and facing the millsite were identified as a stone bunkhouse built in the 1890s, a frame assay office built about 1894, a frame building used for sleeping and briefly as a cookhouse (later used by Johnny Lang, 1917-26), built during the 1890s, and a frame cookhouse also built in the 1890s. About three-fourths of a mile below the mine was the stone cabin built by James, discoverer of the Desert Queen Mine, about 1893. Also once on site were a corral and another large bunkhouse. Keys stated that twenty-five men worked the mine and ran the mill, while ten more were employed at the well and in cutting wood.<sup>256</sup> These structures have decayed to the point now that there is little evidence of their existence.

After taking over the Lost Horse Mine property, J.D. Ryan improved the access road and rerouted it from the older, shorter route followed by Lang. The present entrance trail, taking off from the Salton View Road, approximates the Ryan road route. The road to the mine is rough and winds up and down through narrow mountain washes. The last 1.8 miles are open only to foot traffic.

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256. Ibid., p. 15.

The Lost Horse Mine property has been credited with the only production of bismuth in California. Twenty tons of bismuth ore produced in 1904 were listed as being from the Lost Horse, formerly the Lang Copper Mine. Bill Keys stated that this ore came instead from the Sulphide Bismuth Mine, when that property was known as the Lang Copper Mine. The total value of gold from the Lost Horse Mine is reported as \$350,000.

The Lost Horse Mine and mill site has been determined to be of local significance as the most successful mining operation within the monument boundaries and as a monument to a significant activity (mining) in the area's history. The mine and its complex of structures comprise an excellent exhibit of a small western gold mining and milling operation. It is now the best-preserved mine complex within the National Park System and as such is a major interpretive showcase.

(20) Hidden Gold (Enspiration, Lost Mine Parallel)  
Mine

This property was not visited by the writer due to its extreme inaccessibility. Although only about one air mile southwest of Keys View, access is via a five-mile-long four-wheel-drive road beginning outside the monument boundary to the south. Development in the late 1950s consisted of numerous prospect pits, shallow shafts, and short adits.

On the basis of archival data, the Hidden Gold is thought to be ineligible for the National Register. If any action affecting the site is proposed, an on-site inspection by a historian should be made.

b. Mill Sites

(1) Eldorado (New El Dorado) Mill

Mill equipment at the New El Dorado Mine in 1929 consisted of ten 1,000-pound stamps and a Wilfley concentrator driven by

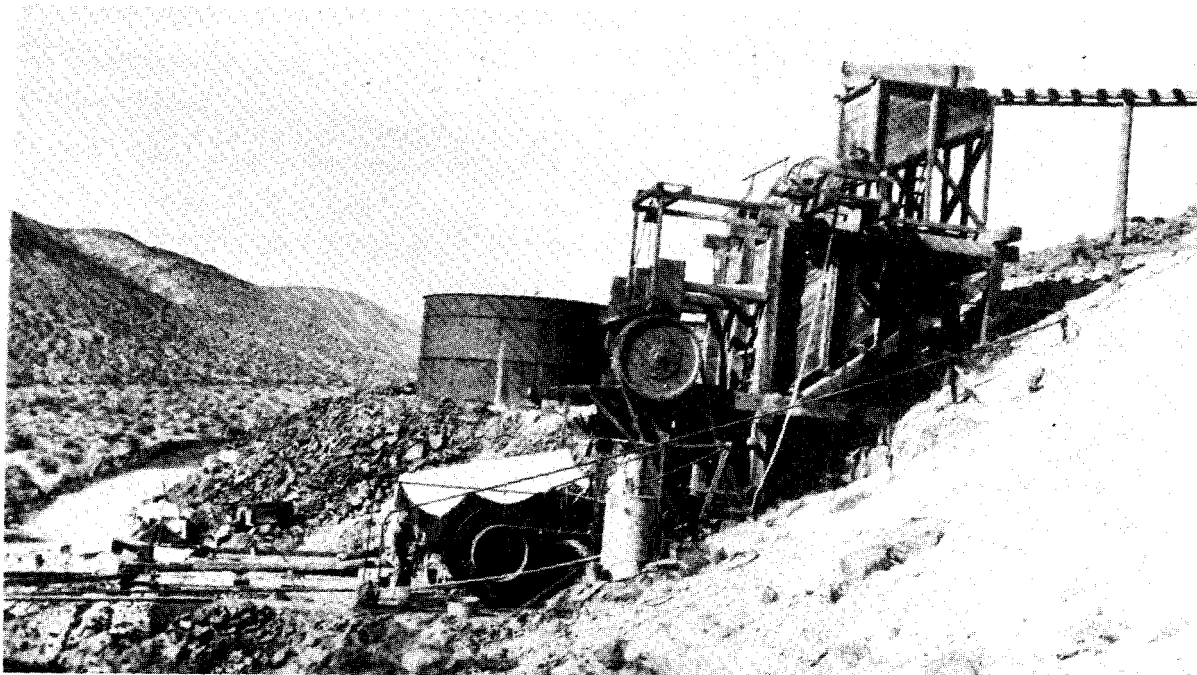


Illustration 112.

Close-up view of mill machinery, New Eldorado Mine, between 1911 and 1914. Photo from Fred Vaile. Harold and Lucile Weight Collection. Courtesy JTNM.

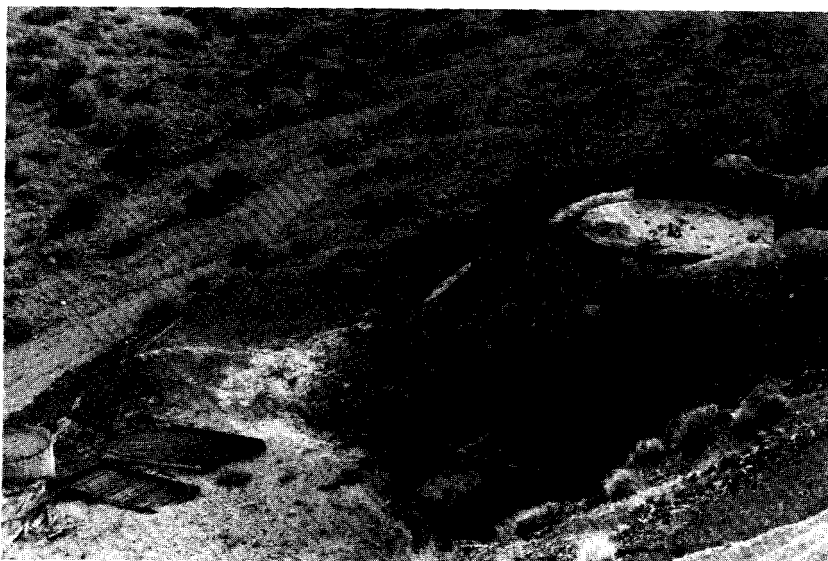


Illustration 113.

Close-up view of mill ruin, 1983. NPS photo by Linda W. Greene.

a twenty-five-horsepower gas engine.<sup>257</sup> In the mid-1930s the H.W. Campbell family lived at the Eldorado. Robert Saunders sent the ore he extracted from the Blue Bell Mine over to Campbell's mill, where custom milling was performed for any of the small mines in the area. Saunders remembered the mill as having about four or five stamps, with mercury plates. He did not think Campbell was also working the mine.<sup>258</sup>

The ten-stamp mill and cyanide plant were being operated in the late 1930s as a custom mill, working ores from adjacent mining properties.<sup>259</sup> The mill was operating in 1937, but was removed in 1941-42.

The Eldorado mill no doubt enabled many small miners in the western portion of the monument to work their claims with at least minimal profit. The duration of Campbell's enterprise there is not known, but the writer suspects it probably lasted three or four years. Not much detailed information is available on the mill layout, except what can be gleaned from the Vaile photographs. It is not known when the cyanide tanks were added or by whom, although it was sometime prior to 1923. The mill will be included in the Eldorado Mine and Mill National Register nomination. It is recommended that because of the detailed photographic record of mining operations there, the site be regarded as being of importance in the monument's interpretive program.

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257. Report XXV of the State Mineralogist, 1929, p. 486. The monument Fact File contains a comment by Bill Keys, made in 1959, that the mine had a ten-stamp mill frame with only five stamps. A Milton Knapp moved a Joshua Hendy five-stamp mill over from Pinyon Wells that he had obtained from Mr. Sherwood. The only mill at Pinyon Well this writer knows about was the two-stamp one that ended up at the Wall Street Mill. It might actually have been the five-stamp mill from the Hexahedron Mine operation that was moved to the Eldorado.

258. Saunders interview, Feb. 27, 1975, pp. 13-14.

259. Guthrey to Dir. of Investig., May 6, 1937, p. 20.

(2) Ruby Lee Millsite

The Ruby Lee unpatented millsite claim is located at the Ruby Water Well on unsurveyed land in the northeast quarter of Section 10, T4S, R11E. The claim is reached via the West Pinto Basin Road, approximately thirty-one miles south of Twentynine Palms. A dirt access road, now closed, leads west from the paved road for three miles to the millsite.

At the site is a small one-room wood frame desert cabin painted white. Two storage sheds are appended. In the yard is a pile of selected mineralized rock collected, according to the owner, from various sources in addition to the Ruby Lee claim. A well about thirty-five feet deep is just north of the house in the lee of a rocky ridge. It is dry now, reportedly drained by an earthquake.<sup>260</sup> Inscribed on a rock face above the well are the words. "Ruby Lee Millsite 1935." Also nearby are an outhouse site and a low stone retaining wall. Much wood and metal debris lies around the house and well area. The cabin is locked. A notice on the front door states that all assessment work for the Ruby Lee Mine and Mill Site had been completed and recorded for September 1976 to September 1977.

The Ruby Lee Millsite is not considered significant. The five-foot-diameter masonry well was dug evidently around 1935 and was never a prolific water source. (See section on "Wells.") It is about twenty feet deep, rock-lined, and dry. The cabin on site possesses no architectural significance. None of the furniture or packaged foods inside are of historical or interpretive interest. There is thin pine paneling on the inside walls. The wood-roofed shed on the northwest corner of the house is built against a wall of rocks and contains a masonry storeroom in the southwest corner. The main house and the shed on the south have tin roofs.

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260. Knowles, "Report on Validity of the Ruby Lee Lode Claim and Millsite Claim," 1974, pp. 7, 17.

The Ruby Lee Millsite has no historical significance, nor does the house and associated debris on site from sheds. Because the house is furnished, it may present a temptation to transients. The monument staff has been considering removing the house and naturalizing the landscape. Such an action would not interfere with or compromise any significant historical values. The well is not visually obtrusive and could serve as a repository for some of the debris on site. It could then be cemented over.

### (3) Hexahedron (Hexie) Mill

The existence of a mill at the Hexahedron Mine is implied in several sources, but no description of it other than as a five-stamp mill has been found. Gray states that there are old foundations in Section 14, presumably near where the mine road heads north into the mountains, that indicate an early mill site. Those were not seen by the writer, but their presence should be determined. Gray states that the mill is said to have been the largest in the area. If so, it would surely have been mentioned more descriptively in the sources. This writer further wonders whether the five-stamp Joshua Hendy mill Bill Keys stated was moved by Milton Knapp to the El Dorado Mine from Pinyon Wells (?) might not have been instead moved to (or from) this location. A Mr. Price of Los Angeles stated in 1958 that an old rock ruin at the end of the mine road was said to be the bunkhouse and mill for the Hexahedron.<sup>261</sup> Whether he meant a structure on the flatlands in Section 14 where the mine road joins the Pleasant Valley Road or the rock structure at the mine is not clear.

It would be extremely interesting to find a mill ruin in Section 14 to substantiate these vague references. It is recommended that any monument staff who have the opportunity try to locate, photograph, and record the site. Because of the dearth of documentary data, the mill there probably did not operate over a long period or produce much gold.

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261. JTNM Fact File.



(4) Gold Galena (Gold Coin) Mill

No information was found on the history of this mill. Mining records indicate that it had not been erected by 1916. This writer assumes the mill was a later addition, possibly in the 1930s when several attempts were being made to reprocess old tailings in the monument. The mill ruins now consist of concrete foundations and two shallow cylindrical sheet-iron water or cyanide tanks about eight feet across. The mill is not considered to have been a significant ore-treatment plant. The ruins are recommended for natural deterioration.

(5) Lost Horse Mill

The ten-stamp mill at the Lost Horse Mine was reported to be new when secured by J. D. Ryan at the Colorado River and moved to the Lost Horse property about 1895. It came from the Sterling Mine in the Chuckawalla Mining District.<sup>262</sup> The mill was remodeled several times thereafter. Minor alterations were made to the stamp blocks in 1915 and 1933. Situated on a steep slope, it consists of a framework of huge wooden timbers supporting an ore bin, an ore crusher, several ore chutes, and two five-stamp batteries. The stamp batteries are supported on two concrete footings inscribed "T.C. Ryan 1931." The mill was run by a steam engine and later a diesel engine. It was erected directly over the shaft supplying the raw ore. A mine headframe and ore tibble attached on the uphill end of the structure collapsed about 1970. The entire mill and headframe were enclosed by a frame structure that Keys recalled was referred to as the "Big House." The structure was acquired by the government in 1967.

In 1973 new wooden steps and a safety rail were added to the structure to aid visitation. Concrete foundations were also inserted under part of the structure. It is now in a maintenance state and is included within the Lost Horse Mine National Register boundary. The mill is significant because of the efficiency of its operation. Because of the mill's location over the shaft being mined, ore could be raised from

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262. Report XV of the State Mineralogist, 1919, p. 539.

the mine and fed into the crusher and stamps in one continuous motion. Usually ore was transported by ore cars to a central collection point for processing if a mine had its own mill, or, in smaller operations, was hauled by burro, truck, or other conveyance to a nearby mill for custom treatment. This sort of compact operation cut down markedly on operating costs and increased efficiency and profit. The mill is a prime interpretive exhibit of early western gold-mining practices.<sup>263</sup>

5. Miscellaneous Mines Filed on in the Pinon District

1895: Messenger Mine

1912: Golden Rod Mine; Louise Mine--David B. Wolf

(These were actually in the Dale Mining District)

Yellow Hills Mine--W.F. Keys

Planet and Planet No. 1--W.A. Fraser

1913: Side Winder Mine--William McVey et al.

Hornblende Mine--Addie Tingman

Coffee Pot and Tea Pot Mines--A. G. Tingman

Gypsum, Gypsum Nos. 5 and 6; Swan mines--

George J. Burris et al.

Dolly B.; Kentucky Belle; Red Raven mines--

F.C. Longnecker

City Hall and Quail mines--John Lang

Copper Cliff; Encinitas; Horseshoe; Claim No. 3;

Horseshoe North Extension; Horseshoe No. 4,

Lenora Bell mines--William Rush and A.G.

Tingman

Marion Nos. 1-4 and Old Windlass mines--Fred

Vaile

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263. William Tweed, Classified Structure Field Inventory Report, Stamp Mill: Lost Horse Mine, Structure No. H.S. 7-A, Feb. 6, 1976, WRO, NPS. See United States, Department of the Interior, National Park Service, Robert V. Simmonds, Historic Structure Report, Lost Horse Mine Complex, Joshua Tree National Monument, California (Denver: Denver Service Center, 1970), rev. 1972, pp. 6-9.

## H. Gold Park Mining District

### 1. History

As early as 1874 several claims were being discovered just a few miles south of Twentynine Palms. Charles and A. Hoff and Paul Pfefferle located the Last Chance seven miles south and the Little Giant six miles south of Twentynine Palms Springs. Other claims filed on in this general area, stretching anywhere from four to eight miles south, were the Little Joker, the Shoo Fly, and the Drummer Boy.<sup>264</sup> This area was generally part of the Twentynine Palms Mining District but parts of it took on a strong new identity in the early twentieth century.

Hazel Spell suggests that Bill McHaney might have been originally responsible for leading gold seekers in this general direction. Hearing that the oasis Indians were finding gold ore, McHaney decided to investigate their source for himself. Following directions given him by his Indian friends, McHaney headed for the hills southeast of the oasis.<sup>265</sup> As early as 1903 there was talk of erecting a stamp mill and cyanide plant in the Gold Park District.<sup>266</sup> Important development started in 1905 when John Edward Schweng and Associates (W.C. Winnie), known as the Gold Park Consolidated Mines Company, planned extensive operations on a group of mines about eight miles south of Twentynine Palms.

In 1906 George Wharton James visited Gold Park where a number of mining claims belonging to Los Angeles capitalists were being operated. Phil Sullivan was in charge of the camp.<sup>267</sup>

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264. O'Neal, Peculiar Piece of Desert, p. 54.

265. Hazel M. Spell, The Twentynine Palms Story (n.p., 1953), p. 4.

266. Engineering and Mining Journal 76, no. 11 (Sept. 12, 1903): 404.

267. Wonders of the Colorado Desert, 11:482.

The people who developed Gold Park were speculators rather than miners and were trying to realize a profit by developing these new mine properties. The Gold Park Company employed eighteen men and added power drills to its equipment as soon as possible.<sup>268</sup> A post office briefly served the small mining community of several frame buildings from January to July 1908. By 1910 the Gold Park Consolidated Mines Company was operating fifty-two claims in three groups. C.W. Roach, superintendent, reported that three sets of leasers had started work on the middle claim group, already developed by six shafts and about 4,000 feet of workings. The Gold Park Group No. 2 consisted of ten claims and had a one-stamp test mill driven by a five-horsepower gas engine at the mine. Ore was sent to Twentynine Palms to be run through two Nissen stamps and a Bryan roller mill (the Anaconda mill).<sup>269</sup>

The Gold Park District was considered sufficiently promising in 1910 to warrant a one-page writeup in the Engineering and Mining Journal. The area of activity was described as lying a few miles south of Twentynine Palms near the boundary line between San Bernardino and Riverside counties. The Gold Park Consolidated Mines camp was accessible by wagon roads from various places. From Palm Springs on the Southern Pacific or Bagdad on the Santa Fe Railroad, the distance was forty-five miles. From Indio on the Southern Pacific it was about thirty-five miles. The three groups of the Gold Park Company were the Warrior, No. 2, and Main. For the present, ore was being hauled to the Twentynine Palms mill for treatment. Total development on the Gold Park Company property consisted of nine shafts from 65 to 320 feet deep and about 4,000 feet of drifts. Also there were many shallow shafts and cuts.<sup>270</sup>

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268. Engineering and Mining Journal 84, no. 4 (July 27, 1907): 182.

269. Ibid. 90, n. 8 (Aug. 20, 1910): 380; State of California, Report XVII of the State Mineralogist. Mining in California During 1920 (Sacramento: State Printing Office, 1921), p. 347.

270. "Gold Park District, California," Engineering and Mining Journal 90, no. 13 (Sept. 24, 1910): 600.

In 1907 the Taylor-Sullivan Mining Company had been organized by Robert H. Swinney, C.W. Roach, Anna B. Marian, Phil T. Sullivan, and Charles T. Taylor.<sup>271</sup> The company's properties were described as being in the Twentynine Palms District. Whether some of their activities extended into Gold Park is uncertain, although they appear to have been situated west of Gold Park and centered around the Anaconda Mine area. Bill McHaney stated that C.W. Roach had claims in Gold Park.<sup>272</sup> O'Neal states that in the 1920s the Gold Park mines were being developed by Walter G. Maloney and Louis Jacobs for C.W. Roach.<sup>273</sup> Another firm mentioned in connection with the Gold Park District was the Consuela Mines Company of Los Angeles. It also had claims in the Twentynine Palms District.<sup>274</sup>

## 2. Mine Sites

The Gold Park area's greatest activity occurred between 1905 and about 1915 or 1916. It at one time reportedly supported forty to fifty claims. Roads and machinery arrived in 1905 and a year or so later the miners built a road through to New Dale. Although this area has been excluded from the monument, some of the mines are mentioned here because of their close association with people and mining activity in the monument:

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271. "Mining Company Incorporated Here," San Bernardino (Ca.) Daily Sun, Jan. 30, 1907.

272. McHaney interview, March 1933, p. 2. In 1920 McHaney and Keys helped Roach build Ivanpah Tank. From it Roach intended to pipe water to his claims in Gold Park. Roach left the area in 1921. Because Keys had not been paid, he tore down some of the Gold Park houses for scrap. Ibid, pp. 2-3.

273. Peculiar Piece of Desert, p. 155.

274. "Consuela Mines Property Bonded," San Bernardino (Ca.) Daily Sun, Nov. 5, 1907.

Gold Park Consolidated Mines Company. W.C. Winnie, president; J.E. Schweng, secretary; C.W. Roach, manager; offices: Los Angeles, California. This company owned fifty-two claims in the Twentynine Palms District, four miles south of the oasis. Some of the holdings were in San Bernardino County, others were just south of the line in Riverside County. Major groups developed were the Atlanta, Black Warrior, Boss, Caladonia, Gold Park No. 1, No. 2, and No. 27, and Oro Copio.<sup>275</sup>

a) Atlanta (North Star Group) Mine

This property was located in Section 1, T2S, R9E. In 1920 the workings consisted of a shaft and three tunnels. It contained short shoots of high-grade gold ore. By 1929 the property had been relocated as the North Star Group by J. Klugh of Pasadena, Ca.,<sup>276</sup> in Section 6, T2S, R10E. By 1945 the North Star Group comprised five claims: North Star, North Extension, South Extension, Extension No. 4, and Extension No. 5. It was owned by the Floyd Mining and Milling Company of Norco, California, and was idle.<sup>277</sup>

b) Black Warrior (Gold Master?, Paymaster?) Mine

This property is in the center of the northwest quarter of Section 20, T2S, R10E, although it has been reported as being in Section 16, T2S, R9E. Bill Keys has stated the mine was discovered before 1900 by Bill McHaney. The Paymaster Mine, which this may then be, was a center of activity in the Gold Park area and a good producer. By 1920 it was the most southerly mine of the Gold Park Consolidated Mines Company group, lying about 3½ miles south of the camp. Workings consisted of a 200-foot shaft, drifts, and crosscuts.<sup>278</sup> In 1929 W.F.

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275. Report XVII of the State Mineralogist, 1921, p. 347.

276. Ibid.; Report XXV of the State Mineralogist, 1929, pp. 472-73.

277. California Journal of Mines and Geology, 1945, p. 140.

278. Report XVII of the State Mineralogist, 1921, p. 348.

Keys owned the mine, which was idle. During the 1930s the property was leased and much of the dump material was hauled away by truck and milled. Since that time the mine has been idle, renamed the Gold Master in later years.<sup>279</sup>

c) Boss (Goat Basin) Mine

In 1920 development at this mine, in Section 1, T2S, R9E, consisted of 100- and 122-foot-deep vertical shafts, crosscuts, and drifts. By 1929 it had been located as the Goat Basin. Its one claim was owned by W.F. Keys. It was idle.<sup>280</sup>

In 1948 it was reported that a fifty-ton ball mill was slated for erection in Twentynine Palms to replace the ten-ton ball mill then in use. Ore for the mill came from the Goat Basin Mine in the Gold Park District.<sup>281</sup>

Caladonia Mine. In 1920 workings at this property consisted of two shafts, 50 and 100 feet deep.<sup>282</sup>

d) California Boy Claim

This was another property of the Gold Park Consolidated Mines Company. Vanadium was reportedly found here in 1918. A shaft was down 335 feet and 200 feet of crosscutting had been done.<sup>283</sup>

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279. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.d.

280. Report XVII of the State Mineralogist, 1921, p. 347; Report XXV of the State Mineralogist, 1929, p. 476.

281. Superintendent's Monthly Narrative Report, Mar. 5, 1948, RG 79, NA.

282. Report XVII of the State Mineralogist, 1921, p. 348.

283. Engineering and Mining Journal 105, no. 26 (June 29, 1918): 1193.

e) Oro Copio Mine

This property is in Section 6, T2S, R10E, and Section 12, T2S, R9E. By 1920 shafts had been sunk to depths of 50 and 100 feet. By 1929 the mine belonged to a private individual, had a third shaft 75 feet deep, and was idle.<sup>284</sup>

f) Gold Park Consolidated Mines Nos. 1-5

These properties, extending through Sections 1, 2, and 12, T2S, R9E, and Section 6, T2S, R10E, were developed by shafts, trenches, adits, pits, and cuts. An arrastra had been constructed on a flat downslope from a shaft on the Mine No. 5 property to pulverize quartz material.<sup>285</sup>

Properties not run by the Gold Park Consolidated Mines Company included:

g) Anaheim Group

This property in Section 5, T2S, R10E, was reported as being in the Washington Mining District. Development of the four claims consisted of several shafts from 50 to 100 feet deep in 1929. The property was idle in 1945.<sup>286</sup>

h) Golden Rule Group

These two claims in the Washington Mining District supported a 75-foot-deep shaft in 1929.<sup>287</sup>

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284. Report XVII of the State Mineralogist, 1921, p. 348; Report XXV of the State Mineralogist, 1929, p. 486.

285. Gray et al., "Mines and Mineral Resources of Riverside County California," [1961], n.p.

286. Report XXV of the State Mineralogist, 1929, p. 472; California Journal of Mines and Geology, 1945, p. 128.

287. Report XXV of the State Mineralogist, 1929, p. 480.



i) Golden Star Lode Mining Claim  
This claim was filed September 28, 1963, by J.V.  
Rys.<sup>288</sup>

j) Gold Park Mine  
This property eight miles southeast of Twentynine Palms and one-half mile southwest of the Number Nine Mine (?) was located February 21, 1886, by J.S. Moore, F. McConkey, C.L. Metzgar, and C.F. Karns.<sup>289</sup>

k) Hornet Group  
This property in Section 1, T2S, R9E, was located in May 1956. Development entailed pits, trenches, bulldozer scrapes, and a vertical shaft.<sup>290</sup>

l) Mildred-Ellen Group  
These four claims in the Washington Mining District had been developed by a tunnel and shaft.<sup>291</sup>

m) Silver Scorpion Mine (Carlos Jr. Mine?)  
This property in Section 1, T2S, R9E, was located in October 1953.<sup>292</sup>

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288. District Ranger, Central District, to Chief Park Ranger, JTNM, Jan. 7, 1964, FARC, Laguna Niguel, Ca.

289. Book B, Mining Records, San Bernardino County, Hall of Records, San Bernardino, Ca., p. 479.

290. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.

291. Report XXV of the State Mineralogist, 1929, pp. 484-85.

292. Gray et al., "Mines and Mineral Resources of Riverside County, California," [1961], n.p.

n) Miscellaneous

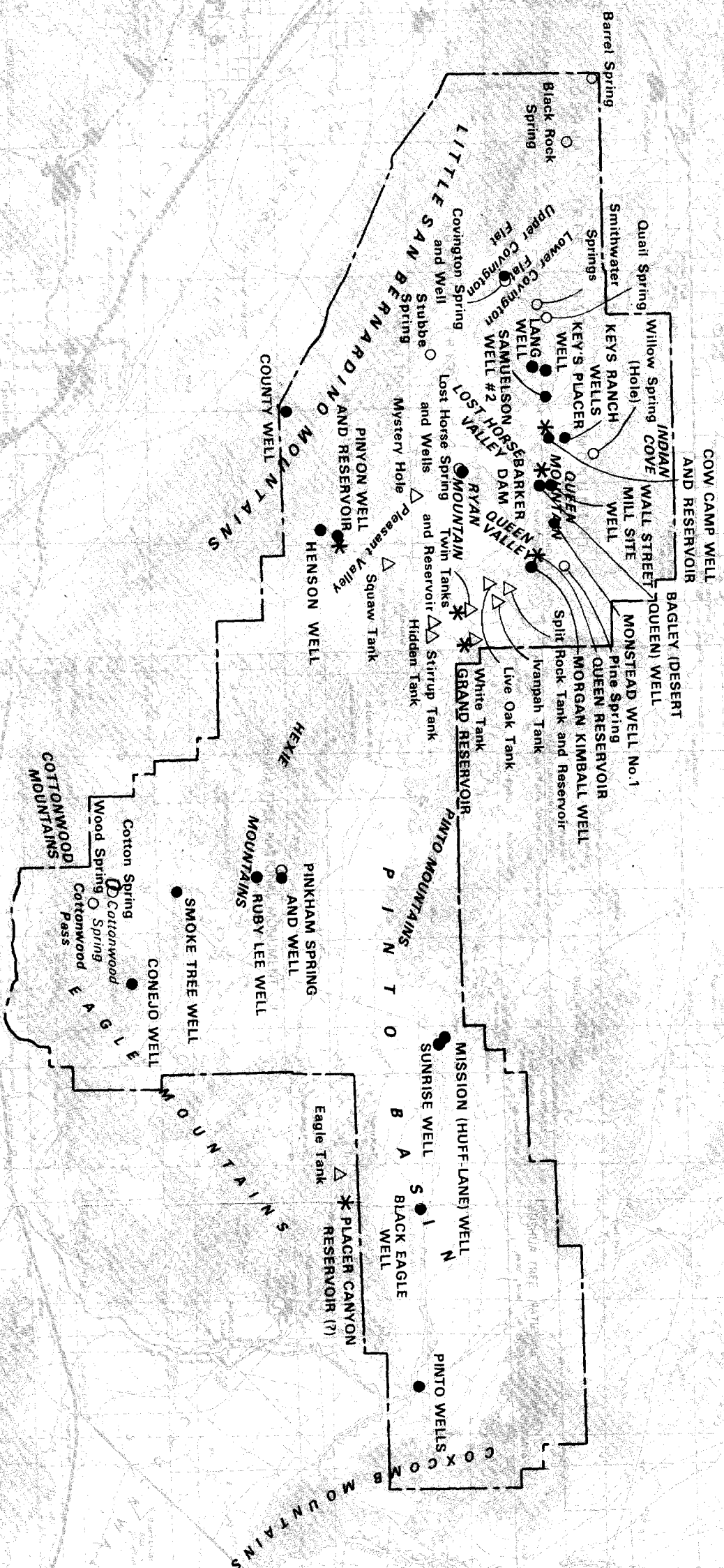
Other Gold Park properties were the Tarantula and Walled Flower mines filed on by W.S. McHaney in 1912, and the Fullerton and Elizabeth mines filed on by J.A. Stull in 1913.<sup>293</sup>

Whether the Italie (Little Italy) Mine run by the Italie Mining Company was in the Gold Park District is unclear, although it probably was. It was reported on in 1908, which was during the years of activity in Gold Park, but was said to be in the Twentynine Palms Mining District. It appears to be shown on the 1908 Twentynine Palms Indian reservation plat as being located in Section 34, T1N, R9E, or thereabouts. Another early map shows it in Section 24, T1S, R9E. No surveys or site investigations were carried out by this writer in the Gold Park area because it is not within the present boundaries of Joshua Tree National Monument.

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293. Riverside (Ca.) Daily Press, Aug. 12, 1912, and July 1, 1913.





**ON MICROFILM**  
**HISTORICAL WATER SOURCES**

JOSHUA TREE NATIONAL MONUMENT  
 CALIFORNIA  
 UNITED STATES DEPARTMENT OF THE INTERIOR  
 NATIONAL PARK SERVICE  
 DSC / SEPTEMBER 1983 / 156-25016

## V. Historical Water Sources in Joshua Tree National Monument

### A. Development of Dependable Water Sources Opens Desert

To the first Anglo visitors in the monument area, the desert surrounding the Twentynine Palms oasis seemed an arid, waterless expanse. Because of this they clustered first around the open springs shaded by towering palms, turning the oasis into a small pioneer outpost, a center of cattle and mining activity, and eventually a thriving community. The fact was, however, that within the seemingly dry and therefore terrifying desert basins around the oasis, there were several semipermanent supplies of water in the form of springs, various natural reservoirs, and some canyons and washes in which water ran for short distances during the rainy season and for a short time after.

Development of water within the monument area became necessary for the pursuance of cattle ranching and mining activities. To furnish a drinking supply for their herds, cattlemen utilized existing reliable waterholes such as Quail Spring, which they might develop slightly, and provided catchment basins whereby winter runoff and periodic rains were contained by small dams. Interspersed throughout the monument's high valleys, these proved sufficient to support large roving herds of grazing cattle. Miners, on the other hand, needing dependable and abundant water sources close to their operations, had to develop waterholes more thoroughly and sank numerous wells, such as Pinyon Well, not all of which proved either sufficient or dependable. Some mining operations therefore required the hauling of water great distances and its storage in mortar-walled reservoirs or metal tanks.

The dearth or abundance of water in the desert has always controlled the use that can be made of the land: "Water is the panacea for the desert. Where water has been found or can be made available to people, the waste lands have lost their terror."<sup>1</sup>

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1. "Early Residents Believed in Stories of Perils of Desert," Barstow (Ca.) Printer-Review, June 13, 1946.

The first survey of watering places in the Mojave Desert was made between September 1917 and March 1918. David G. Thompson compiled the results from this first reconnaissance of the desert region in a volume that was finally published in 1929. On this first survey trip, detailed logs were made of roads and maps drawn to show the roads and watering places. Samples of water were taken from every well and spring and sent to laboratories for analysis. The identification of safe drinking spots and the advent of automobiles made desert travel seem less risky. The principal permanent springs and Barker Dam became public watering places. By the 1920s the focal points of roads in the monument were the well-known mines and the numerous wells and tanks maintained by homesteaders, miners, and cattlemen. Pipelines from mine pumping plants crossed the roads at intervals and mining companies often provided faucets for the use of thirsty travelers and their cars. Whenever springs, tanks, or wells existed within two to three miles of the road, directional signs were erected providing information on the quality of the water and the condition of the trail leading to it. The road logs listed even secondary turnoffs in tenths of miles. The U.S. Geological Survey posted watering places, and the counties and the Automobile Club of Southern California maintained desert signposts.<sup>2</sup>

The historical water sources of Joshua Tree National Monument will be discussed here under four headings: "Springs," "Tanks," "Wells," and "Dams (Reservoirs)."

B. Springs

1. Barrel Spring (Dry)

This spring was in the extreme northwestern edge of the monument, in Section 22, T1S, R5E, either just inside or just outside the monument. From the northwest tip of Section 22, it was necessary to follow the electrical lines access road down the wash in a southwest

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2. L. Burr Belden, "High Desert Had Many Roads Prior to Monument," History in the Making series, San Bernardino (Ca.) Sun-Telegram, Dec. 26, 1954.

direction for about three-fourths of a mile. A narrow side road to the left was then followed for one-third of a mile to a small path leading up a small ravine in a northeast direction. The spring was located very near the monument boundary. It was developed by Bill Royal of Yucca Valley for sheep use by two small (half-gallon size) basins. The better of the two refilled in fifteen to twenty minutes. Royal claimed water ran in a stream there during the 1930s but dried up in the 1940s. The name came from barrels of an old still that once were stored there.<sup>3</sup>

2. Black Rock Spring (Dry)

This spring, in Section 30, T1S, R6E, is now dry. It was an early watering spot for cattle grazing in the Covington Flat areas.

3. Cotton Spring (Hulsey Mill Site, Winona Mill Site)

This spring in the northwest quarter of Section 14, T5S, R11E, north over the hill from Cottonwood Spring, was developed by an artificial covered tank or dam about thirty feet long and up to twenty feet wide. There was a pumphouse on site and several pipes conveyed water to a house and a reservoir. The pumphouse was still standing in 1944.<sup>4</sup>

4. Cottonwood Spring

Since the mid-1880s Cottonwood Spring has been a primary water source for mines on the north and east sides of Pinto Basin and for freighters, cattlemen, and travelers. The dependability of the water supply and the presence nearby of mineralized rock led naturally to the growth of homesteading, cattle grazing, and mining in the area. In 1906 George Wharton James described the spot as~

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3. JTNM Fact File.

4. Ibid.

a beautiful little oasis, shut in by hills, and where half a dozen glorious old cottonwoods, dignified, hoary, and majestic, give gentle seclusion. Close by, seeping out of the rocks, is a steady though small supply of water, hence this has become one of the most noted resting places of the region.<sup>5</sup>

The Iron Chief Mine in the Eagle Mountains Mining District depended on Cottonwood Spring for water to sustain its mining operations and went to some expense to conserve it. They built two stone and cement reservoirs holding about 15,000 gallons, piped the water into troughs in large feed corrals, and also built a pumping plant to force the water about eighteen miles to their mine.<sup>6</sup> An early USGS water survey noted that the Cottonwood Spring site in Cottonwood Pass on the main road to Dale was marked by a concrete reservoir and by a corral, watering troughs, and the engine house of the Iron Chief Mining Company. The water was determined to be of good quality and usually flowing. Water also always stood exposed or near the surface in canyons about 3½ miles east by a trail on the south slope of the Cottonwood Mountains under several large native palms (Lost Palms oasis).<sup>7</sup>

Jerry Wolford, Sr., of Blythe, California, ran cattle in the Cottonwood Spring area in 1916 and 1917. He remembered a mining cabin and two apple trees nearby during those years. The cabin was deserted and possibly twenty years old then. Wolford rounded up his free-roaming cattle when they came to water at the spring.<sup>8</sup> J. Smeaton Chase stopped at Cottonwood on his trip through the monument in 1919. He found a caretaker for the Iron Chief pumping plant machinery living there in a doorless cabin. He also mentions apple trees and a garden patch

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5. Wonders of the Colorado Desert, II: 430.

6. Ibid., I: 266.

7. United States, Department of the Interior, Geological Survey, Some Desert Watering Places in Southeastern California and Southwestern Nevada, Water-Supply Paper 224, by Walter C. Mendenhall (Washington: Government Printing Office, 1909), p. 78.

8. Data obtained by Bruce W. Black in 1958, JTNM Fact File.



where the caretaker grew radishes, beans, and tomatoes. Chase also noted an old arrastra and samples of mineralized rock near the cabin.<sup>9</sup>

Another water survey in 1918 noted that Cottonwood Spring supplied the only easily accessible water within a radius of ten or twenty miles. At the spring site were a prospector's cabin and the pumping plant, said to have been abandoned in 1917. No one had lived at the spring recently. The oasis consisted of two springs a few feet apart issuing from the base of a twenty-foot cliff cutting across the course of a small canyon. The springs had been developed by tunneling a few feet into the granite. A one-inch pipe joint conducted the flow from one of the tunnels. Total flow of the two springs was about twenty gallons per minute. The water sank into the sand within 200 feet. The canyon above the springs was shallow and rocky and contained local deposits of gravelly soil along its bed. These little local reservoirs, or blind tanks (granite bowls that held water but had filled with gravel), along the canyon presumably stored water during floods and then slowly fed it down through crevices in the granite to supply the springs. At one of these soil-covered areas about half a mile from the springs was a small dug well (Wood Spring?).<sup>10</sup>

Cottonwood Spring is located in the southeastern part of the monument in Section 14, T5S, R11E. The site was protected as a public water reserve.

5. Covington Spring (Dry)

This spring is located in the northwest quarter of section 7, T2S, R7E, and was developed by a tunnel or adit sunk at least eighty feet horizontally into a hill. A concrete dam about two feet high built at the mouth of the tunnel was observed in September 1945. A pipe fed a concrete watering trough. The spring could be reached from an

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9. California Desert Trails, pp. 162-63.

10. USGS Water-Supply Paper 497, 1923, p. 265.

old campground site by walking east. The trough was south of a wash and east of a rock pile about one-quarter mile from the campground.<sup>11</sup>

Covington Spring and Well are the only known attempts to develop water in the valley proper. The eighty-foot tunnel was reportedly dug into the valley wall by cattlemen around 1900. By 1961 no evidence of the adit or spring could be found.<sup>12</sup>

Willis Keys stated that one of his mother's brothers homesteaded up in Covington Flats during the late 1920s and 1930s. His homestead was marked by a small well and windmill at the head of Smith Water Canyon in Lower Covington Flat (see Covington Well).

6. Dove Spring

This spring, somewhere in T1S, R5E, was developed and used by cattle interests.

7. Lost Horse Spring

The land embracing Lost Horse Spring consists of a tract in Section 21, T2S, R8E. The area containing this small spring (earlier known as Witch Springs) was occupied possibly as early as 1890 and was used intermittently through the years to 1935 for the milling and reduction of ores from the Lost Horse Mine. The land containing the spring was occupied and claimed originally by James McHaney who transferred his rights to George Lang in 1895 by a quitclaim deed. Later in 1895 Lang transferred his right to the land to the Lost Horse Mining Company. The Lost Horse quartz mine was located in December 1893 and the Lost Horse Mining Company organized in 1895.

Prior to the transfer of the interests of the original locators of the mine, a two-stamp quartz mill had been erected (about 1894) on the land containing Lost Horse Spring and several thousand

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11. JTNM Fact File.

12. J.E. Weir, Jr., and J.S. Bader, "Ground-water and related geology of Joshua Tree National Monument, California," July 15, 1963, USGS open-file report.

dollars recovered from the Lost Horse Mine ores. Subsequent to J.D. Ryan's purchase of the mining claim, the Lost Horse Mining Company erected a ten-stamp quartz mill at the mine and expended an appreciable amount of money in developing additional water by sinking a well on the land containing Lost Horse Spring. The Lost Horse wells will be discussed further in the section on "Wells."

The land within one-quarter mile of Lost Horse Spring and wells was withdrawn as a public water reserve on February 28, 1914, by the General Land Office.<sup>13</sup> A U.S. patent to the land containing Lost Horse Spring and wells was issued in 1924 to the Southern Pacific Land Company. J.D. Ryan transferred all his interest and claim in and to the Lost Horse Mining Company and the spring and wells to Daniel Stafford and Sam Ryan in 1930, who formed the General Mining and Development Company.

8. Pine Spring

The Pine Springs Lode Claim in Section 32, T1S, R9E, was filed on by W.F. Keys and his wife on July 1, 1923. On the claim was a spring developed by excavating a tunnel 2½ feet long by 2½ feet wide by 3 feet high in a granite formation. The water was primarily used to water Keys's livestock and was evidently never used for the milling or reduction of ores.

In 1965 it was reported that the spring, which had been running for nearly fifty years, had been dried up by drought.<sup>14</sup>

Willis Keys stated that his father around 1928-29 leased this mill site claim for a couple of years to some men who built a little cabin there and set up a still.<sup>15</sup>

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13. S.E. Guthrey, Special Agent, Div. of Investig., Dept. of Int., to Dale B. Whiteside, Dir. of Investig., Apr. 15, 1941, Central Files, 1907-49, RG 79, NA.

14. JTNN Fact File.

15. Willis Keys interview, March 1975, n.p.

9. Quail Spring

This natural waterhole in Section 33, T1S, R7E, was used for many years to water livestock and as a public watering and camping place prior to establishment of the monument. The water was developed by driving a tunnel through the granite formation and piping it one-quarter mile to a stone or cement reservoir ten feet by ten feet by six feet deep, where it was used to water cattle and other livestock. This work was reportedly done by J.A. Myers (George Meyers?) who grazed cattle in the area. Various other stockmen subsequently used the spring and reservoir.<sup>16</sup> Although from the early 1900s through at least 1923 the Quail Spring water was reported to be excellent, by 1934 it was reported that a succession of arid years had caused a virtual drying up of this water hole.<sup>17</sup> The spring was designated a public water-hole withdrawal. In 1938 a small quantity of water could be obtained from a 100-foot tunnel sunk at the base of a small ravine. One informant stated at the time that the water was used by homesteaders in the area.<sup>18</sup> The spring was dry in 1957-58. For several years the remains of an old ocotillo cattle corral could be found near the spring site.

10. Smithwater (Smith's Water) Springs

These springs in Section 32, T1S, R7E, about one mile west of Quail Spring, were used in the early years by James McHaney and others in connection with cattle grazing. Improvements placed on the land during these years consisted of several sections of two-inch iron pipe and a small concrete reservoir.

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16. JTNM Fact File. J.D. Ryan stated that the cattleman Barker built the Quail Spring tank and tunnel as well as Barker Dam, White Tank, Squaw Tank, and Ivanpah Tank. "Stubby Springs," JTNM Fact File.

17. Johnston, "California's Garden of the Gods," p. 36.

18. "Report on Field Inspection of Merriam, Apr. 14-15, 1938," p. 43.

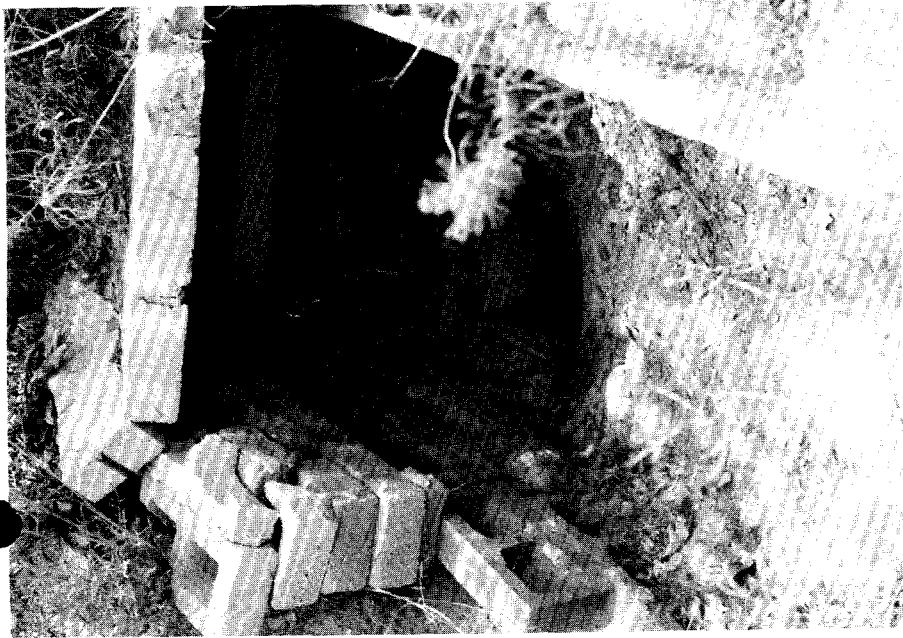


Illustration 114 (top left).  
Wood Spring, improved water hole near  
Cottonwood Spring oasis.

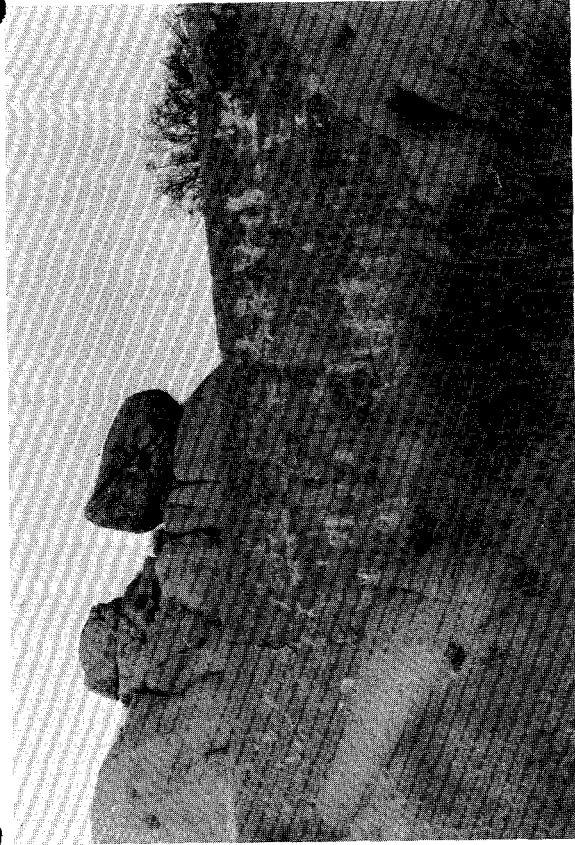


Illustration 115 (top right and bottom right).  
Squaw Tank, near Pleasant Valley. NPS photos  
by Linda W. Greene.



11. Stubbe Spring

This spring in the southeast corner of Section 27, T2S, R7E, was named for Henry Stubbe, a freighter who pioneered the trail into the canyon around 1900.<sup>19</sup> Later J.D. Ryan tunneled into the spring about 100 feet trying to obtain water to pump to the Lost Horse Mine six miles east-southeast. This effort was unsuccessful. Ryan said that Barker built the cement tank at the spring. The cattle firm of Carpenter and Hamilton ran cattle near Stubbe Spring from 1896 to about 1899 when they sold their interests to J.D. Ryan. One informant stated that this hand-dug spring was stone lined. Water was near the surface and could be dipped out by pail. Prospectors from Gold Park used it.<sup>20</sup> As recently as 1950 Stubbe Spring was held by claim as a potential mill site for the Black Butte quartz lode claim and the Gold Standard Mine.<sup>21</sup>

12. Willow Spring (Hole)

This temporary watering place, in Section 21, T1S, R8E, about two miles north of Keys Ranch, was used by the early cattle interests. The water hole held about twelve acre-feet of water but was often dry in late summer.

13. Wood Spring

From the top of Little Chilcoat Pass, looking east, a small group of cottonwoods can be seen designating Wood Spring. It was probably developed by miners or freighters.

C. Tanks

Desert tanks are natural pools of water that collect in depressions or catchments in granite rocks that are of such a shape that

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19. The teamster's name was given by one informant as W.B. (Stubby) de Crevecoeur, born in Morongo Valley. According to the monument superintendent in 1960, the correct spelling and history of the spring were thoroughly investigated and it was determined that the spring was named for H.C. Stubbe, prospector and miner in the area. Wm. R. Supernaugh, Supt. JTNM, to Regional Director, Region Four, January 18, 1960, files, JTNM. Bill McHaney said he was aware of the spring around 1891-92, and that "Keyes barrel" was one mile north of Stubbe Spring. McHaney interview, March 1933.

20. Reino Clark interview with Eve Violette, 1975, on file at JTNM, p. 4.

21. JTNM Fact File.

they hold water after a rain. Man-made tanks exist where earthen or concrete dams have been built across a natural water course or where water has been piped into a container. Some large, shaded tanks hold water year-round, others hold their supply only a few days or months after a rain. There are several tanks scattered throughout the monument. Most of them are too small to hold water for any length of time and are of little significance except historically when they provided water for livestock grazing. The reservoir behind Barker Dam is an exception because of its size and the fact that it normally contained water all year.

1. Eagle Tank

Eagle Tank is in T3S, R13E. The U.S. Geological Survey noted that

Eagle Tank is a natural rock basin about 20 feet in diameter and 10 to 15 feet deep in the bed of a gorge tributary to Placer Canyon, in the northwestern part of the Eagle Mountains. The gorge is the third large one entering Placer Canyon from the south below the old Placer Canyon reservoir, a distance of about half a mile, and the tank is several hundred yards from its mouth. It is at the base of a vertical cliff about 20 feet high in the gorge bottom. The tank is said to contain water all the year round, but during the dry season the water is stale and dirty, and even during the torrential rains it is filled with green algae and animal life, such as crustaceans, larvae, and tadpoles. When fresh the water is very good, and even during the dry season it is used by prospectors, for it is the only place within a radius of 15 or 20 miles where water can be procured, unless the pipe line from Cottonwood Spring to the Iron Chief mine is in order. Several other tanks in the Eagle Mountains hold water for several weeks or a month after the rains.<sup>22</sup>

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22. USGS Water-Supply Paper 497, 1923, p. 272.

2. Ivanpah Tank

This tank is in Section 16, T2S, R9E. A concrete and stone dam twenty-four feet long, eight feet wide on top, and thirteen feet high forms a reservoir approximately two acres in extent. It was used to trap rainwater for watering livestock. It has been reported as being built by C.O. Barker. Bill McHaney once stated that in 1920 he and Bill Keys helped C.W. Roach build Ivanpah Tank, water from which Roach intended to pipe to his claims in Gold Park. The Talmadge Brothers firm of San Bernardino that bought Barker's interests used the reservoir for several years but abandoned it and the area in the 1930s. Ivanpah is one of the largest of the manmade reservoirs in the monument.<sup>23</sup>

3. Live Oak Tank

This tank is in the northwest quarter of Section 16, T2S, R9E. A one-acre reservoir was created behind a dam fourteen feet long and eight inches wide on top, constructed of rubble masonry and concrete. It was used periodically to water livestock and reportedly was built by C.O. Barker of Banning who grazed cattle in the vicinity. The tank is in a wash about fifty yards below a live oak tree.<sup>24</sup>

4. Mystery Hole

This natural tank is in Section 34, T2S, R8E, near the east section line about 0.3 mile north of the township line. It may even be in Section 35. It could be reached by walking west from Malapai Hill or south from Rox Triangulation Station in Section 23. Mystery Hole was in the first wash south of the ridge below an old miner's cabin. The water hole was a narrow crack in the granitic rock.<sup>25</sup>

5. Rattlesnake Tank

The only information found on this tank was that it was built by cattlemen.<sup>26</sup>

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23. JTNM Fact File; McHaney interview, March 1933, pp. 2-3.

24. JTNM Fact File.

25. Ibid.

26. McHaney interview, March 1933, p. 3.



6. Split Rock Tank

This tank is in Section 8, T2S, R9E. Split Rock is a large granite boulder upturned at an angle of forty-five degrees. The lower face of the boulder is approximately fifty by twenty-five feet and comprises the roof of a cavern formed by the tilted rock and adjoining rocks. Rainwater accumulates in a basin or tank near this cavern. There is some evidence that the cavern was utilized by Indians. The tank is a small depression that could contain only a very limited supply of water. This site will be discussed further under "Reservoirs."

7. Squaw Tank

This tank is in Section 7, T3S, R9E, about one-eighth of a mile north of the junction of the Pleasant Valley-Pinyon Well road. W.F. Keys claimed to have located the property on September 8, 1934, and to have built the concrete dam, which measures forty-two feet long on top, fifteen feet long on the bottom, eleven feet high, and eight inches wide on top. The dam forms a reservoir of approximately two acres. Water was piped to a 16½-foot-long concrete watering trough for the use of livestock. J.D. Ryan once stated that Barker built this dam.

J. Smeaton Chase described his introduction to this watering place:

In a pile of rock that I skirted I had been told I should find one of those natural tanks of water . . . on which the desert traveler often has to place precarious trust--precarious because they are mere rain catchments. This one is known as Squaw Tanks. I easily found the place, being led to it by my nose. A small quantity of slimy liquid remained, nauseous with putrefying bodies of birds, rats, and lizards. A man perishing of thirst might have brought himself to drink it, but would probably not have survived the draught.<sup>27</sup>

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27. California Desert Trails, p. 145.

8. Stirrup Tank

Stirrup Tank is located 2½ miles south and a little west of White Tank on the north edge of the Hexie Mountains. It is a natural rock tank that occasionally held water. It was little visited and used only by prospectors.<sup>28</sup>

9. White Tank

This tank is located in Section 23, T2S, R9E. The tank is a natural depression from which a reservoir has been made by constructing a concrete dam across a gorge walled by granite. The dam is fourteen to fifteen feet high and the reservoir, if filled, would be about one acre in extent. It usually contained rainwater most of the year, but sometimes was dry. Cattle had open access to the pond, often fouling the water, but it was used by prospectors.<sup>29</sup>

Bill Keys stated that he took the first load of cement to White Tank in 1912 for Jep Whitney, who built the dam for C.O. Barker.<sup>30</sup> The tank was supposedly named after a Captain White who operated the Goldfields of America Mine nearby. White Tank was included in the Grand Reservoir Site.

D. Wells

1. Ate (Ake, Mission, Huff and Lane) Well

The Mission Well was referred to in the 1930s as Ate's Well. Ate operated the Mission Mine for a while.<sup>31</sup> See Huff and Lane Well.

2. Bagley Well

This well was in the northwest quarter of Section 3, T2S, R8E, and was reached by a road leading to Ohlson's property. The well

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28. USGS Water-Supply Paper 497, 1923, p. 278.

29. Ibid., p. 269.

30. R.D. Miller interview with Bill Keys, 1959, JTNM Fact File.

31. d'Autremont, West of Dawn, p. 91.

was about forty feet deep, unlined, with a wooden cover. The Bagley house covered about one-third of the well.

3. Black Eagle Well

This well was located in Section 9, T3S, R13E. Water was pumped from it to the Black Eagle Mine. When the mine was operating, both a transmission and water line extended from the well to the mine. By 1944 both lines and a pump had been removed.

4. Carnara (Caneras, Carnero, Conejo) Well

This old well was located within Section 4, T5S, R12E. It was reached by leaving the monument highway one-half mile south of Smoke Tree Wash, cutting across country in a southeast direction. The well was in a clump of mesquite in a canyon draining north from Eagle Mountain. A branch line led from the well to the main water line leading from Cottonwood Spring to the Iron Chief Mine.<sup>32</sup>

The well was about sixteen feet deep and ten inches in diameter. There was also an old cabin on the site. By 1938 the well had been abandoned for many years and was protected under a mill site location.

5. County Well

This well, in Section 31, T3S, R8E, was a watering place for freight teams transporting supplies from Mecca in the Coachella Valley to the Dale Mining District. According to a monument water source report, the well could be reached by driving about four miles up from the mouth of Pushawalla Canyon. It could also be reached by taking the Indio road past Pinyon Well. At the canyon fork where a road took off to the left to Henson Well, one took the right canyon and road to the divide, a distance of about one mile. County Well was then about one mile farther down the south slope, about 7.7 miles from Pinyon Well. County Well was reportedly forty feet deep. It later filled with sand, probably in the late 1930s.<sup>33</sup>

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32. JTNM Fact File.

33. Ibid.

Chase halted for the day at the County Well around 1919 and graphically described what he found there:

A well is maintained here, after a fashion, by the county authorities. There was the usual camp litter. . . . The place was literally alive with bees. The air was like a swarm in flight, and the well itself resounded with the buzzing of thousands down there in the dark. However, water must be got. . . . bucket after bucket came up covered with dead bees, and the liquid had a fetid smell from the myriads of decaying insects. So we hauled and skimmed and ladled till the animals had got their fill.<sup>34</sup>

The Geological Survey inventory of watering places published in 1923 mentions this well and notes that it was dug several years previously on the wagon road northeast of Indio and was used considerably for freighting to mines in the Piñon Mining District. In 1918 "it was neatly curbed and fitted with an iron pump (which would not work) and also provided with rope and bucket. There is a horse trough beside the well. The water contained some boards and other trash."<sup>35</sup>

#### 6. Covington Well

This well in Section 6, T2S, R7E, was dug in a wash bottom by either Barker or Covington. It is about twenty-five feet deep and six feet in diameter with a wooden cover. In September 1944 Stocker had a windmill (erected by Willis Keys's uncle?) and a twenty-five-foot tower holding a galvanized iron tank on the site, along with a small watering trough. The well was at the end of the Covington Flat road. In 1942 an "old well at Upper Covington Flat" was described as dry.<sup>36</sup>

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34. California Desert Trails, pp. 136-37.

35. USGS Water-Supply Paper 497, 1923, p. 268.

36. JTNM Fact File.

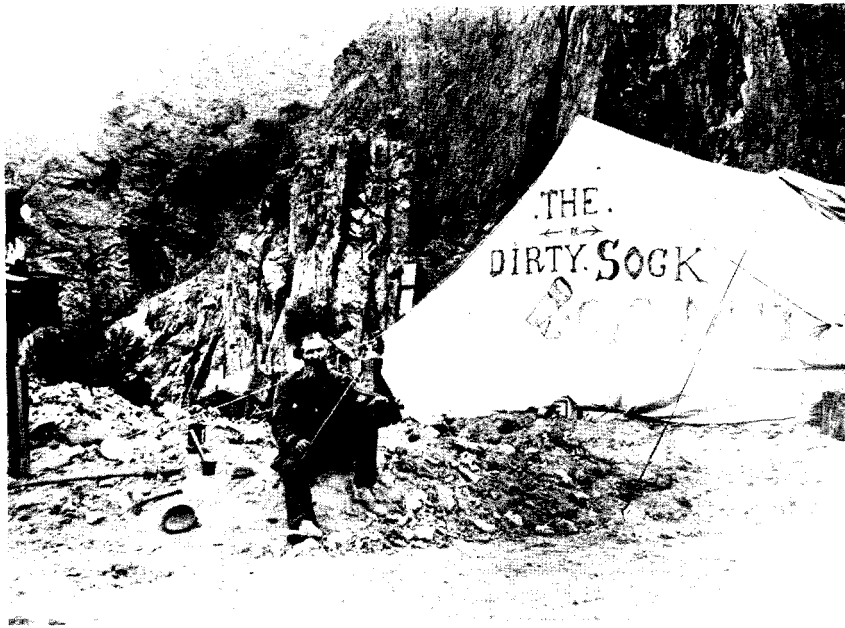


Illustration 116.  
"Eagle Eye" McFarland at County Well on the Indio-Twenty-nine Palms road, about 1912. Courtesy JTNM.



Illustration 117.  
Old Cow Camp Well. Courtesy JTNM.

7. Cow Camp Well

The well at Cow Camp is located in Section 32, T1S, R8E, and can be reached by a dirt road leading east off the Keys Ranch road. It was twelve feet deep, rock lined, and located about one hundred yards in front of Cow Camp reservoir, west of the cabin remains. It was supposedly dug and developed in the 1880s by the McHaney gang.

8. Desert Queen Well

The remains of this well are found in Section 3, T2S, R8E. The land on which it is situated was located and developed between 1905 and 1908 by William Morgan, presumably under the name of the Desert Queen Millsite. There is no spring or flowing water on the land. The well was excavated in 1908 to a depth of 116 feet. Morgan also erected a windmill and tank. The water was developed in connection with the Desert Queen Mine operation. The well was used principally for domestic purposes, and was hauled to the Desert Queen and other mines in the vicinity. It was used as a public watering place for many years. Among those who used it were J.D. Ryan and Phillip Sullivan of Twentynine Palms, Roy Bolster of Whitewater, Fred Vaile of the New Eldorado Mining Company, and Fred Pollard of Imperial Valley. It was also used for watering livestock by C.O. Barker, William F. Keys, and others. In 1912 about thirty surveyors camped at the well and used the water. Mules were also watered there, probably by Keys.

Although the Desert Queen Millsite was located originally to mill and reduce ore for the Desert Queen Mine, there is no evidence any milling machinery was ever placed on the site. On January 2, 1917, the land containing the Desert Queen Well was located by Keys under the name Treasure Queen Millsite. He once stated that a stone and concrete arrastra used to reduce Desert Queen Mine ore had been erected there. There is presently no evidence of this. Water was not obtainable at the Desert Queen Well in January 1918. The land containing the well was patented to the Southern Pacific Land Company in 1924. Subsequently Section 3, which contained the Queen Well, was sold by that company to

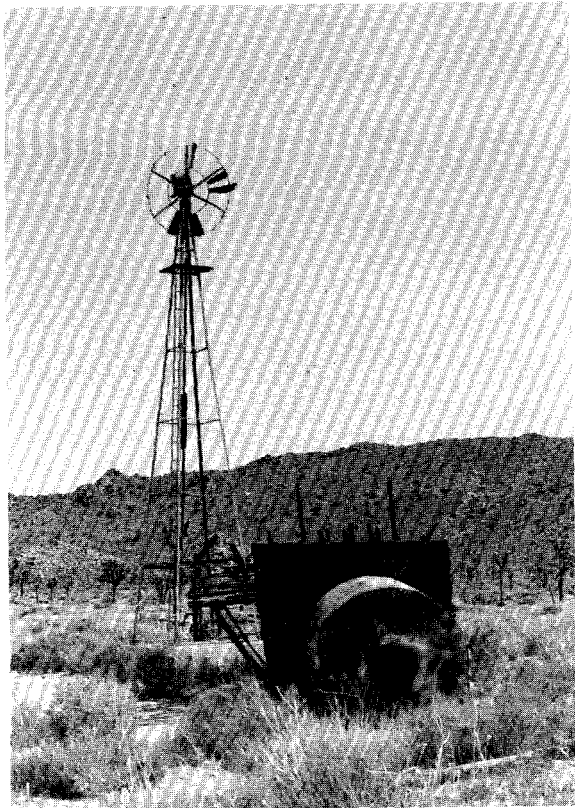


Illustration 118 (top).  
Desert Queen Mill Site well.

Illustration 119 (bottom).  
Gold Rose Well in Pinto Basin.  
NPS photos by Linda W. Greene.



Worth Bagley of Twentynine Palms.<sup>37</sup> It was sometimes referred to as Bagley Well. On site today are a windmill, a fallen platform for a water tank, and the collapsed framework of a building (pumphouse?).

9. Gold Rose Well

The Gold Rose Well is reached by the Old Dale Road, then east on Gold Rose Mill Road past the Mission and Sunrise wells. In 1965 existing development consisted of a well 450 feet deep with a pump and a 2,000-gallon storage tank. The property was privately owned and the house inhabited by a caretaker, Walt Rose. Water from the well was used domestically on the site and also hauled to other residents in the area.<sup>38</sup> It is assumed the well was built in the late 1930s or 1940s.

10. Henson (Hansen, Hensen, Hanson) Well

Henson Well was another watering place for freight teams coming from the Coachella Valley into the Piñon and Dale mining districts. It was also important to miners. Near it in 1918 were the ruins of an arrastra and several small stone buildings. Its water was siphoned to the Eldorado Mine along with that of Pinyon Well. A historical photograph exists showing the old revolving grinding stone of a Chilean mill that operated at the well site about 1914. Ruins of this can be seen today. The exact site of the well has been hard to find in recent years. It is located in Section 26, T3S, R8E, about three-quarters of a mile south of the old road, long abandoned, from Pinyon Well to Indio, and was accessible only by trail. In 1918 it was described as "a dug hole about 4 feet square and reaches water at about 10 feet. It is curbed with boards and in January, 1918, was provided with a rope and bucket but needed cleaning."<sup>39</sup>

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37. Guthrey to Dale B. Whiteside, Dir. of Investig., Apr. 15, 1941, Central Files, 1907-49, RG 79, NA.

38. Observation card on Gold Rose Well; Observer, Alsen Inman, Park Ranger, Dec. 18, 1965, in JTNM Fact File.

39. USGS Water-Supply Paper 497, 1923, p. 273.



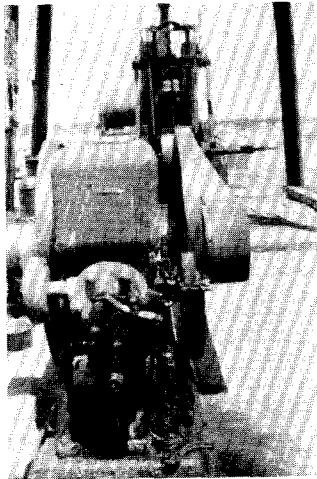
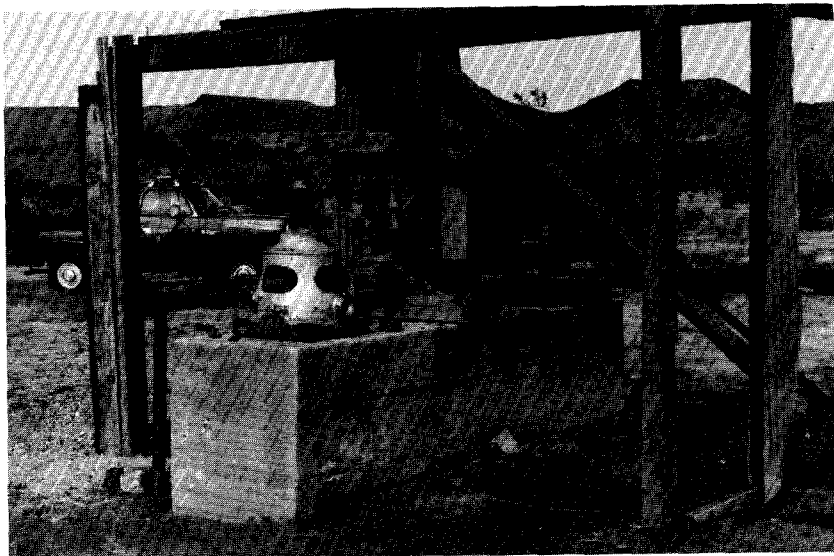


Illustration 120 (top).  
Huff and Lane (Mission) Well  
pump engine. Foundation of this  
still bears date. Tom Ake, Jr.,  
Collection. Courtesy JTNM.

Illustration 121 (bottom).  
Remains of pump house. Once  
covered by corrugated-metal  
superstructure. NPS photo by  
Linda W. Greene.



11. Huff and Lane (Ake, Ate, Mission) Well

This well in the northwest quarter of Section 35, T2S, R12E, supplied water for the Huff and Lane (Mission) Mine. In the late 1930s it was said to be owned by C.W. Ake who was engaged in working the Mission Mine. The well was about 450 feet deep. Pump equipment at the site was capable of lifting about 400 gallons of water in twenty-four hours.<sup>40</sup>

By 1941 T.J. Ake, operator of the Mission Mine, was rebuilding a mill on the Lone Star mill site (location unknown), which was filed on about 1927. He planned to pipe water from the Huff and Lane Well, on the Water Well Mill Site, which was located about 1930 by E.C. Huff. The land embraced in this mill site was used for many years to mill and reduce ore from the Mission Mine two miles north. The Huff and Lane Well on the Dale-Cottonwood Spring road in Pinto Basin was a well-known watering place in the eastern part of the monument because it was the only water available to the public in Pinto Basin.<sup>41</sup> Evidently when Ake took over ownership of the well, it was closed to the general public.

The Mission Well is about fifty yards east of the Old Dale Road. The well was measured by mine safety personnel in the early 1970s and found to be 449 feet deep. In the 1970s the Mission Well site contained a corrugated-metal pump house and machinery over the well. Today the corrugated-metal walls of the building have either blown off or been pulled off and are scattered around the site. Visible is a circular masonry-walled vat next to a small concrete settling basin, a steel water tank that has fallen off its wooden framework, and the remains of what is possibly the old arrastra--a twenty-five-foot-diameter circular structure with a metal pipe (the old pivot?) protruding in the center. The masonry

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40. Guthrey to Smith, June 16, 1938, Central Files, 1907-49, RG 79, NA, pp. 35-36.

41. James E. Cole, Supt., JTNM, Memorandum for the Regional Director, Region IV, Mar. 27, 1941, Central Files, 1907-49, RG 79, NA.



Illustration 122.

Huff and Lane (Mission) Well. Pump house in background.

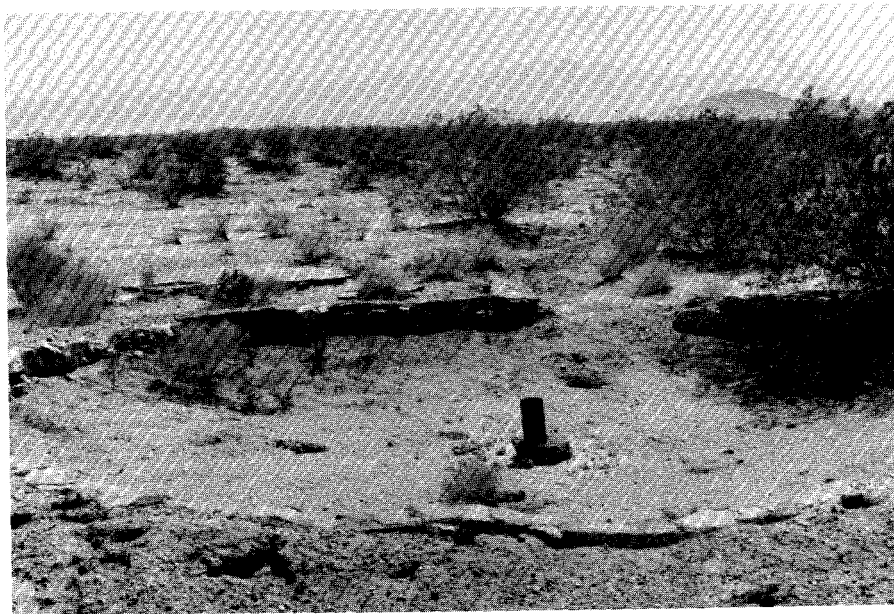


Illustration 123.

Huff and Lane (Mission) Well. Remains of old arrastra? NPS photos by Linda W. Greene.

walls, chinked with cement, are about two feet high. The floor is dirt. Other cement floor foundations were seen in the vicinity. A date of "3-29-34" was scratched into a cement slab. Original structures on the site of this drilled well consisted of a pump, tank, and two shacks.

12. Keys's Placer Well

Located in the southwest quarter of Section 35, T1S, R7E, the well can be reached by traveling on a jeep road south in Johnny Lang Canyon about two-thirds of a mile and then going east about one-quarter of a mile on foot. The well is about five feet deep and rock lined. The cover is mostly collapsed. Its construction date is unknown.

13. Keys's Ranch Wells

Three wells are at the Keys Ranch in Section 32, T1S, R8E. One is twenty-five feet deep, brick lined, and covered by a windlass and wooden cover; another is thirty feet deep, unlined, with a windlass and wooden cover; the third is twenty-five feet deep, cement lined, with a working windmill. These supplied sufficient water for Keys's family and stock.

14. Morgan Kimball Well

The Kimball Well was near the Desert Queen Mine in Section 5, T2S, R9E. Its depth was eighty-five feet.

15. Lang Well (Lang Millsite)

The Lang Millsite is situated  $2\frac{1}{2}$  miles west of Keys's Desert Queen Ranch, three miles east of Quail Spring, and five miles northwest of Lost Horse Well at Lang's Camp in Section 2, T2S, R7E. Lang lived there in an old cabin that had previously been inhabited by people mining gold in Milner Canyon (John Law and Chase?). The well was located by William and Frances Keys on April 2, 1926. The well on the property was twelve feet deep in 1939, rock lined, and partially wood covered. Keys claimed that there used to be an arrastra in the area that milled ores from the Sulphide Bismuth mining claim. Possibly some ores were milled there by John Lang, who formerly claimed the land.

16. Lost Horse Well (Millsite)

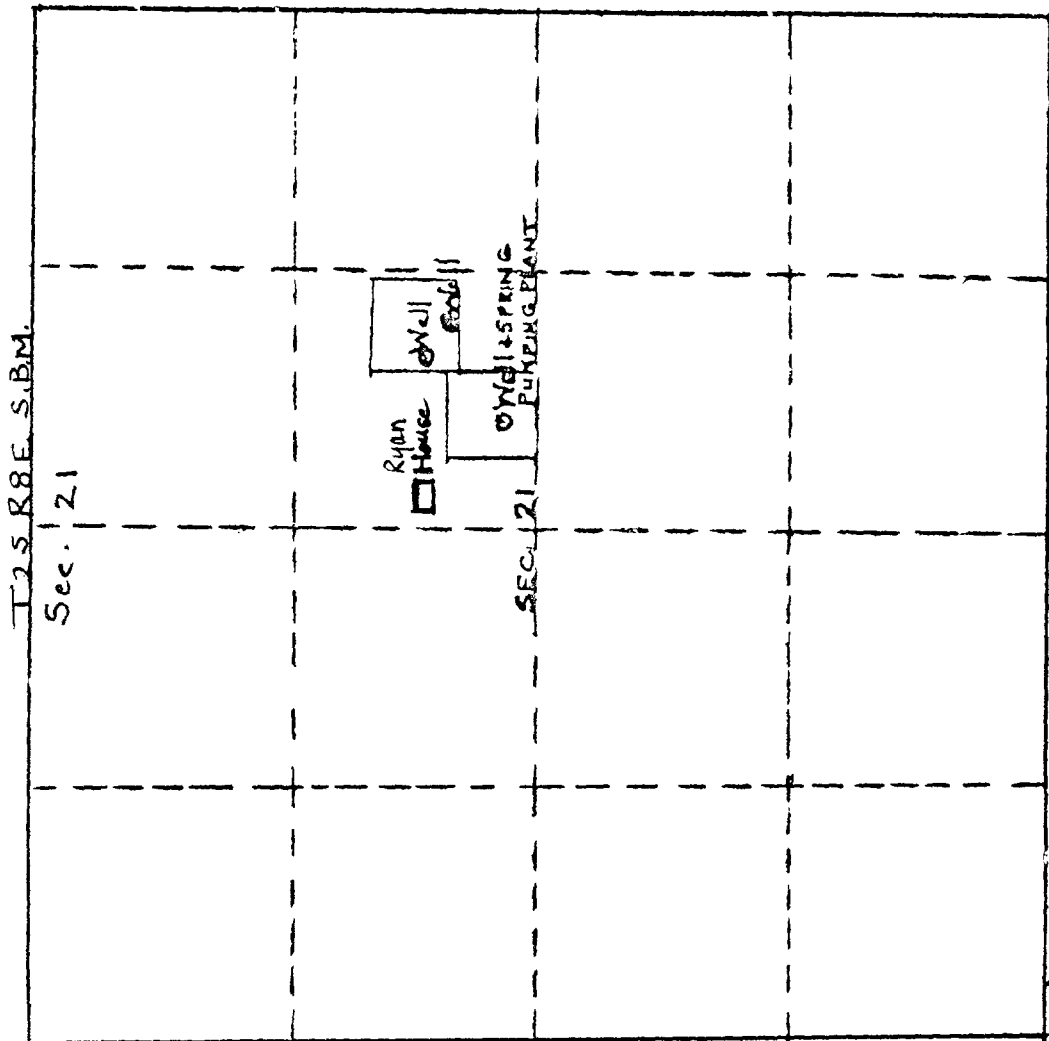
There are actually several wells in Section 21, T2S, R8E. The earliest of them was sunk by the Lost Horse Mining Company after it erected a ten-stamp quartz mill on the Lost Horse Mine property. Water from the well was pumped to the claim through a two-inch pipeline, 3½ miles long, and was stored there in an earth and stone reservoir sixteen feet by sixteen feet by twelve feet deep for use in milling ore. Pumping equipment consisted of a three-cylinder high-pressure Gould pump connected to a twenty-five-horsepower gas engine. The well to which the pumping equipment was attached was seventy feet deep and was excavated about 1905. Pipeline and pumping machinery were installed about this time also.

Later two more wells were excavated, to depths of forty and forty-five feet. These are a few hundred feet east of Lost Horse Spring and of the first well, and were used in conjunction with the original well when additional water for milling was needed. J.D. Ryan stated that he filed a mill site notice on the land containing the wells and spring in 1905 under the name Lost Horse Wells. The two wells excavated on lands adjoining the original Lost Horse Spring and wells were included in a mill site location of June 14, 1915, by Ryan.<sup>42</sup>

According to Ryan, the wells had a capacity of 5,000 gallons per day. Although private wells, water was available to other parties. These were the principal water supplies in Lost Horse Valley. Lost Horse Well later served the Lost Horse ranger station and residence. Ryan erected a substantial house at the well site in the early days and others reportedly built cabins and various shop buildings there, giving the site the air of a small "town." This Lost Horse Well complex was the nearest thing to a settlement in the park for several years.

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42. Report on water hole locations, Lost Horse Wells (DI 49157), Millsite (DI 35346), DSC history files.



68274



Illustration 124.

Location of Lost Horse Mine wells and view of new pump house at Lost Horse Well. NPS photo by Linda W. Greene.

Location of Lost Horse Wells

T2S R8E Section 21, S.B.M.

The water survey of 1918 noted at Lost Horse Well, or Spring,

a good adobe house, several outbuildings housing various kinds of machinery, and two dilapidated windmills. The place was abandoned in December, 1917, but is used as a mining camp when the Lost Horse mine . . . is being operated. The original spring consisted of an open hole dug . . . along a small arroyo. . . . A well [Ryan?] has been sunk near this spot on the south, and as a result the spring has gone dry. This well was 39 feet deep. . . . It has a board curb in bad condition, and the water appeared dirty and full of trash. The windmill was not in order, and no bucket or rope was provided. . . . North of this well is another on the opposite side of the little arroyo, also equipped with a windmill that was out of repair. This well was an open shaft 4 feet square. . . . The first well is 4 by 6 feet. . . . The total supply of water available is evidently small.<sup>43</sup>

Lost Horse Well No. 1 had a cement apron surrounding the well opening, with a windmill above it. The windmill was replaced by a metal pumphouse. Nearby are a stone and concrete water storage tank and a steel storage tank. The original Lost Horse Well is on the National Register as being of local significance. It is considered part of the Ryan Ranch complex that is associated significantly with the early history of the monument and is also considered a significant component of the Lost Horse Mine milling process.

17. Monstead Well No. 1

This well was dug in the southeast quarter of Section 35, T1S, R8E, and reached by a dirt road, about two miles north of the back road connecting Hidden Valley Campground and Queen Valley. It consisted of a twelve-inch-diameter pipe supposedly 800 feet deep. It was later used as a privy.

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43. USGS Water-Supply Paper 497, 1923, p. 275.



Illustration 125.  
Pinyon Well, 1939. Windmill is at site of patented El Dorado Mine Millsite claim. Courtesy JTNM.

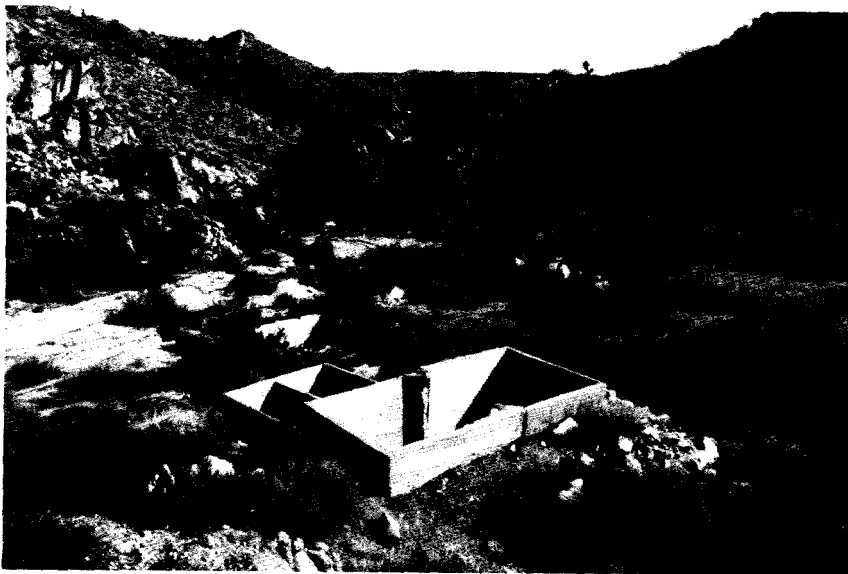


Illustration 126.  
Pinyon Well, 1982. Concrete tanks used as water storage reservoirs. NPS photo by Linda W. Greene.



18. Pinkham Well

The Pinkham Well in Section 3(?), T4S, R11E, was developed by C.A. Pinkham of Mecca who had many claims in the monument area. It was located in an arroyo drainage on the southwest edge of Pinto Basin northwest of the Ruby Lee Well. It was twenty-five feet deep and water stood within five feet of the top when it was dug. A tank stood above the well, which is now caved in. It was said to be reliable and used by prospectors.<sup>44</sup>

19. Pinto (Wash) Wells

This well is in the northwest quarter of Section 4, T3S, R15E, and was dug and used by the Metropolitan Water District. It was evidently used in the 1940s by the Henry J. Kaiser Company. The Environmental Assessment for the monument (1974) stated that Kaiser Steel Corporation leased wells at the east end of Pinto Basin from the Metropolitan Water District of Los Angeles for use at its Eagle Mountain Mine.

20. Pinyon (Pine) Well

This well is in Section 24, T3S, R8E, and was the only water source for several mines operated in this vicinity. A small community grew up there south of the wagon road between Indio and Twentynine Palms near a small spring. A two-stamp mill was erected there by Tingman and Holland and a well was sunk to aid in milling ores. By 1918 the camp had been abandoned. On site were the wreck of the mill, two deserted cabins, and some abandoned shafts (possibly efforts to dig wells rather than mining activity). At least two wells remained at that time:

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44. Ibid., p. 277; JTNM Fact File.



Illustration 127.  
Cabin at Ruby Lee Well site.



Illustration 128.  
Ruby Lee Well. Note inscription on rock in background. NPS photos by  
Linda W. Greene.

One is in front of the cabins about 20 feet from the road and was covered in January, 1918, by a low curb about 1 foot high. A rope and bucket were provided for obtaining water. This well is 3 to 4 feet in size, and was walled with plank. It measured 27.7 feet in depth. . . . The second well is 200 feet south of the other. . . . It is dug in the mountain side beside the canyon. . . . Its depth . . . was 41 feet. . . . It is walled with 2-inch plank.<sup>45</sup>

Water was piped from Pinyon Well to the Eldorado Mine for milling purposes. By Executive Order of January 24, 1914, all lands within one-quarter mile of Pinyon Well were withdrawn as a Public Water Reserve.

21. Ruby Lee Well

This well in Section 10, T4S, R11E, was described earlier in connection with the Ruby Lee lode claim. Water was brought to the surface by a hand pump and was sufficient only for domestic use. This might earlier have been referred to as Landford's Mill Site.<sup>46</sup>

22. Samuelson Well #2

This well is in the southeast quarter of Section 36, T1S, R7E, and is reached by a dirt road about two miles north of the Lost Horse ranger station generator house. It is thirty to thirty-five feet deep. Its construction date is unknown.

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45. USGS Water-Supply Paper 497, 1923, p. 267.

46. Guthrey to Smith, June 16, 1938, Central Files, 1907-49, RG 79, NA, p. 19.

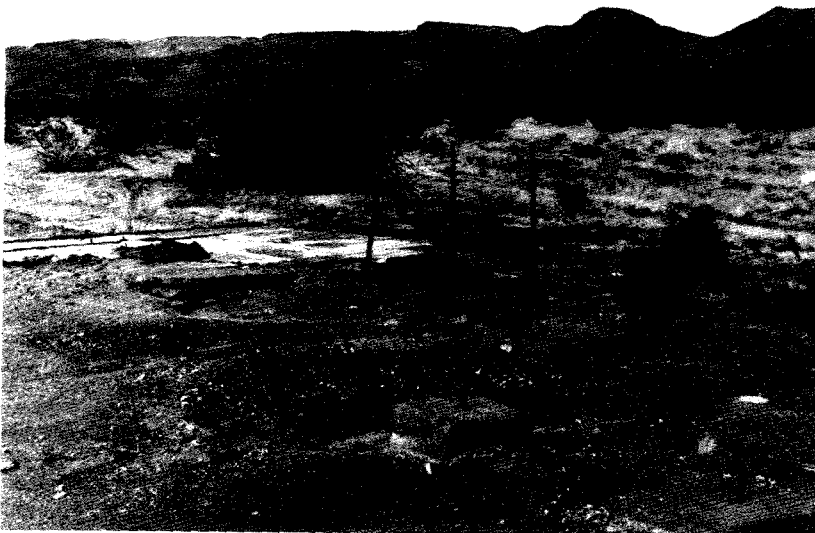


Illustration 129.

Sunrise Well in Pinto Basin, 1983. NPS photo by Linda W. Greene.

23. Sunrise Well

Sunrise Well is located in the northwest quarter of Section 35, T2S, R12E, about one-quarter mile east of the Old Dale Road and the Mission Well. The well was found to be 480 feet deep in 1973, reached from a cement platform, and with a 16-inch-diameter casing. The well is covered by an easily moved thin square metal cover. Nothing remains on site except a cement slab and some imbedded timbers.

24. Wall Street Millsite Well (Keys Well #3)

This well is in Section 34, T1S, R8E, and is reached by the Wall Street mill road. It was supposedly dug in the summer of 1896 by Bill McHaney for watering cattle. George Meyers took it over from McHaney and also used it for livestock. Meyers also constructed a corral on a site referred to as "Little Reservoir" to the west. The well was later used in connection with milling operations at the Wall Street mill, several yards to the northwest. The well was 31 feet deep. Its top 2½ feet are rock lined and the rest unlined earth walls. It has a wooden cover and windlass and was fitted with an early model gas engine pump. The water was used in later years for both domestic and milling operations. The Wall Street Mill National Register boundary includes the well and pump.

E. Dams and Reservoirs

Artificial reservoirs within the monument were made by damming canyons or ravines to impound streams or catch rainwater or were built to catch and hold the product of a spring or well.

1. Barker Dam

This sizable reservoir in Section 4, T2S, R8E, was created during the livestock grazing days of the monument and served many cattlemen over the years. A low earth and stone wall upstream from the concrete dam may have been an earlier dam on the site. Built only a few feet high across the water channel, it is usually submerged under the reservoir formed by the later dam. C.O. Barker probably built the later



Illustration 130.  
Barker Dam. In foreground, almost covered by water, is the rubble wall that functioned as the original dam on the site. NPS photo.



Illustration 131.  
Lake created by Barker Dam (dam is to left outside picture). NPS photo by Linda W. Greene.

dam, because Bill Keys once stated that George Meyers and William McHaney built the original structure.<sup>47</sup> The purpose of the dams was to increase the size of an already existing pool or natural tank of water to make it a permanent water hole that would support large herds of cattle. Stacey declared that Barker and Shay sold such interest as they had in the dam to Talmadge, another cattleman, from whom Stacey later secured the rights. The lower portion of the concrete dam was built about 1902 when the surrounding land was all public domain. Its construction required several long trips of hauling cement, wooden forms, and other material from Banning. Evidently it was not formally located as a reservoir site. The structure originally measured about 150 feet long by 9 feet high.

On December 12, 1914, the north half of the northeast quarter of Section 4, including the Barker Dam, was withdrawn as Public Water Reserve No. 14. On September 13, 1932, Bill Keys located the Big Chief Millsite claim that included Barker Dam. This was later declared null and void because the land was part of a public water reserve. When full, the lake impounded behind the dam in a narrow canyon comprises approximately twenty acre-feet, covering nearly six surface acres. It is reached by a one-quarter-mile trail from the Hidden Valley Campground.

Barker Dam became a source of conflict between Bill Keys, a homesteader, and cattlemen in the area. After Keys and various members of his family obtained homestead titles to the land surrounding the dam, on all but the inaccessible north side, Keys fenced the land and threatened to deny access to the dam to the public. Keys stated that the land was originally assessed to Bill McHaney, who had willed the property

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47. W.F. Keys to Major O.A. Tomlinson, July 18, 1942, FARC, San Bruno, Ca.



Illustration 132 (top).  
Barker Dam. Lower portion is that  
built by Barker. Top is later addition  
by Keys. NPS photo.



Illustration 133 (bottom).  
View of dam from south. NPS photo  
by Linda W. Greene.



to him.<sup>48</sup> This threat of closure caused considerable friction between Keys and the Stocker-Shay interests. Keys then proceeded to further improve the dam. The lower nine-foot portion of the present structure that was built in the early part of the century is of cement faced with native stone. Keys later raised the dam three feet with concrete forms. There is another lower retaining dam below this large one, to the west. On the end of the main dam is inscribed "Bighorn Dam, Built by Willis Keys & Wm. F. Keys - Phyllis Ann Keys - F.M. Keys, 1949-50."

A corral by the dam was sometimes used by Keys for branding. Bill McHaney lived at the back end of Bighorn Dam, but his cabin is long gone. Another corral that Keys used was located on that McHaney homestead. Two drinking troughs fed by a 1½-inch pipe were set out on the flat wash below Barker Dam, one a wooden wagon box and one of cement. The latter, a double-ring watering trough that Keys built in 1939, is an unusual item. Willis Keys stated that the pipe from the dam fed into the center part where there were float valves to regulate the flow of water into the trough. The inner wall prevented the cattle from damaging the valves. The big wooden box nearby used as a trough was placed by Keys before he built the rock circle one. The original watering situation on the site consisted of a small concrete trough below the dam that caught and impounded leakage.

Barker Dam is considered locally significant under the category of Agriculture as a vitally important permanent water hole in Joshua Tree National Monument. By impounding rainwater, it permitted

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48. According to Willis Keys, his father had bought a relinquishment in the area from a man named Smith, who had never proven up on his homestead. Bill Keys had Bill McHaney homestead the property, which contained a couple of buildings, in order to ensure that he kept the title. This homestead was at the back entrance to Barker Dam, where the parking lot is today. There was an old corral right at the mouth of the narrow canyon there. McHaney later supposedly willed the property to Keys, but the will was never probated.



Illustration 134.

Keys family marker commemorating "Big Horn Dam" construction, 1949-50. Located on top wall of dam.



Illustration 135.

Concrete stock-watering trough built by Keys below Barker Dam. NPS photos by Linda W. Greene.

extensive livestock raising, which is an important theme in the development of the area. The site was entered on the National Register on October 29, 1975.

2. Cow Camp Reservoir

On July 1, 1921, Bill and Frances Keys located what they called the Cow Camp Reservoir for the purpose of catching and storing rainwater for irrigation, domestic, and other purposes. The site was located in Section 32, T1S, R8E. Keys built a dam there after he was released from prison in 1948. The reservoir later reverted to the monument.

3. Grand Reservoir Site

This site was located September 5, 1913, by Bill Keys in Section 34, T1S, R8E. It is actually in or near Section 23, T2S, R9E, below White Tank and including it. In 1939 Keys transferred by quitclaim his interest in this site and in several mining claims in the Paymaster Group to O.L. (P.O.?) Murphy.<sup>49</sup>

4. Keys Ranch Reservoir

Associated with Keys Ranch are three dams. The large concrete one near the house is in good condition. The wooden catwalk used during its construction is still in place. A concrete secondary dam lying upstream from that one prevents water seepage from the reservoir. A third smaller concrete dam is also in good condition.

5. Pinyon Well Reservoir

This site has been covered in detail in previous sections. It will only be noted here that concrete tanks, one of them roofed, were built at some time at the well site and pipes installed so that they could be used as reservoirs. Field inventory reports compiled by the National Park Service in 1976 referred to the three rectangular concrete tanks on site as cyanide tanks, but no data supporting this statement were found.

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49. James E. Cole, Supt., JTNM, Memorandum for the Director, Feb. 11, 1941, Central Files, 1907-49, RG 79, NA, pp. 1-2.

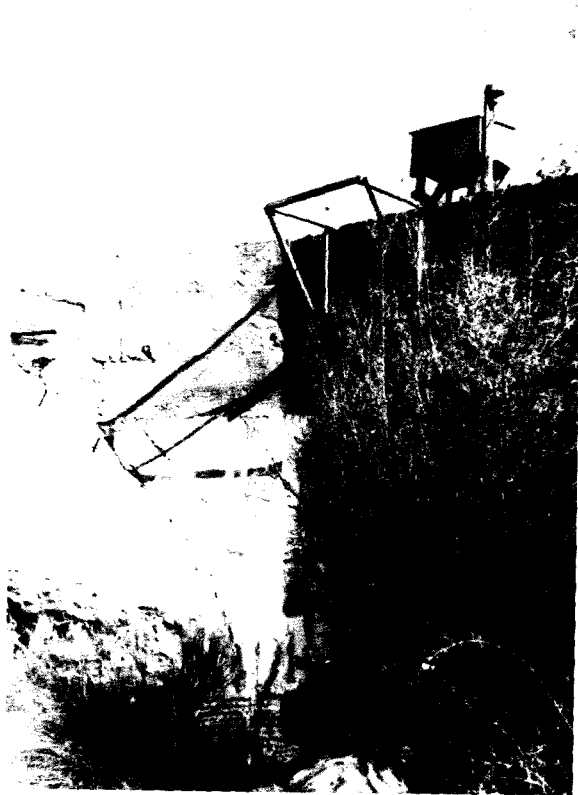


Illustration 136.

Cow Camp dam. Photo by Lynn Loetterle. Courtesy JTNM.

6. Placer Canyon Reservoir

A cement and stone dam eight to ten feet high was built around 1900 across the Placer Canyon gorge two or three miles from its mouth, in T3S, R13E. Part of the dam was later torn down because it obstructed the passage of pack animals up the canyon. Several natural tanks above and below the dam held water for a month or more during rainy seasons.<sup>50</sup>

7. Queen Reservoir

The Queen Reservoir site was in Section 6, T2S, R9E, and was recorded on August 27, 1921. Bill Keys presumably constructed the dam, fifty feet wide by five feet high. The reservoir was on lands included within the Desert Queen Mine group. The reservoir created by the dam later filled in with sand.

8. Split Rock Reservoir

Although there is no legal evidence that the land there has ever been included in a reservoir or mill site location, a small concrete dam was installed at some time. Keys stated that it was built by a Roy Lowe to collect water. A small reservoir has been formed by the dam and by a small depression in the rocks and measures 35 feet long, from 3 to 6 feet wide, and 2½ feet deep. The 3-foot-high dam was built at the north end of the reservoir and northwest of Split Rock.

9. Twin Reservoir Site

The Twin Reservoir Site No. 1 was located August 26, 1915, by Wm. F. Keys. It is situated approximately one-quarter mile west of the Grand Reservoir Site.

F. Public Water Reserves in the Monument

In 1945 Custodian James E. Cole compiled a list of Public Water Reserves within the monument. These included:

1. No Name [Barrel Spring?]--"T.1S., R.5E., S.B.M., Sec. 22." Withdrawn for Public Water Reserve No. 14 by Executive Order of January 24, 1914.

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50. "Report on Field Inspection of Merriam, Apr. 14-15, 1938," p. 48.

2. Quail Spring--"T.1S., R.7E., S.B.M., all land within one-quarter mile of Quail Spring. . . ." Section 33. Withdrawn for P.W.R. No. 14 by E.O. of January 24, 1914.
3. Stubbe Spring--"T.3S., R.7E., S.B.M., Unsurveyed. All land within one-quarter mile of Stubby Springs. . . ." Actually located in T.2S., Sec. 34. Withdrawn for P.W.R. No. 14 by E.O. of January 24, 1914.
4. Lost Horse Spring--"T.2S., R.8E., S.B.M., Unsurveyed. All land within one-quarter mile of Lost Horse Spring. . . ." The Lost Horse Wells, one of which was the old Lost Horse Spring, are located in Section 21. Withdrawn for P.W.R. No. 14 by E.O. of January 24, 1914.
5. Stirrup Tanks--"T.2S., R.10E., S.B.M., Unsurveyed. All land within one-quarter mile of Stirrup Tanks. . . ." Stirrup Tank is located in T.2S., R.9E. Withdrawn for P.W.R. NO. 14 by E.O. of January 24, 1914.
6. Cottonwood Spring--"T.5S., R.11E., S.B.M., Unsurveyed. All land within one-quarter mile of Cottonwood Springs. . . ." Section 14. The northwest and southwest quarters of Section 11 were withdrawn as Public Water Reserve No. 14 by Executive Order of December 12, 1914. This reserve did not include Cottonwood Spring but might include a spring to the west known locally as Hulsey [Cotton?] Spring. The northeast quarter of Section 14 was withdrawn as P.W.R. No. 65 by E.O. of July 10, 1919, and the southeast quarter was withdrawn as P.W.R. No. 107 by E.O. of September 14, 1936. Parts of the southwest quarter and of the southeast quarter of Section 11 were withdrawn as P.W.R. No. 65 by E.O. of August 12, 1919.

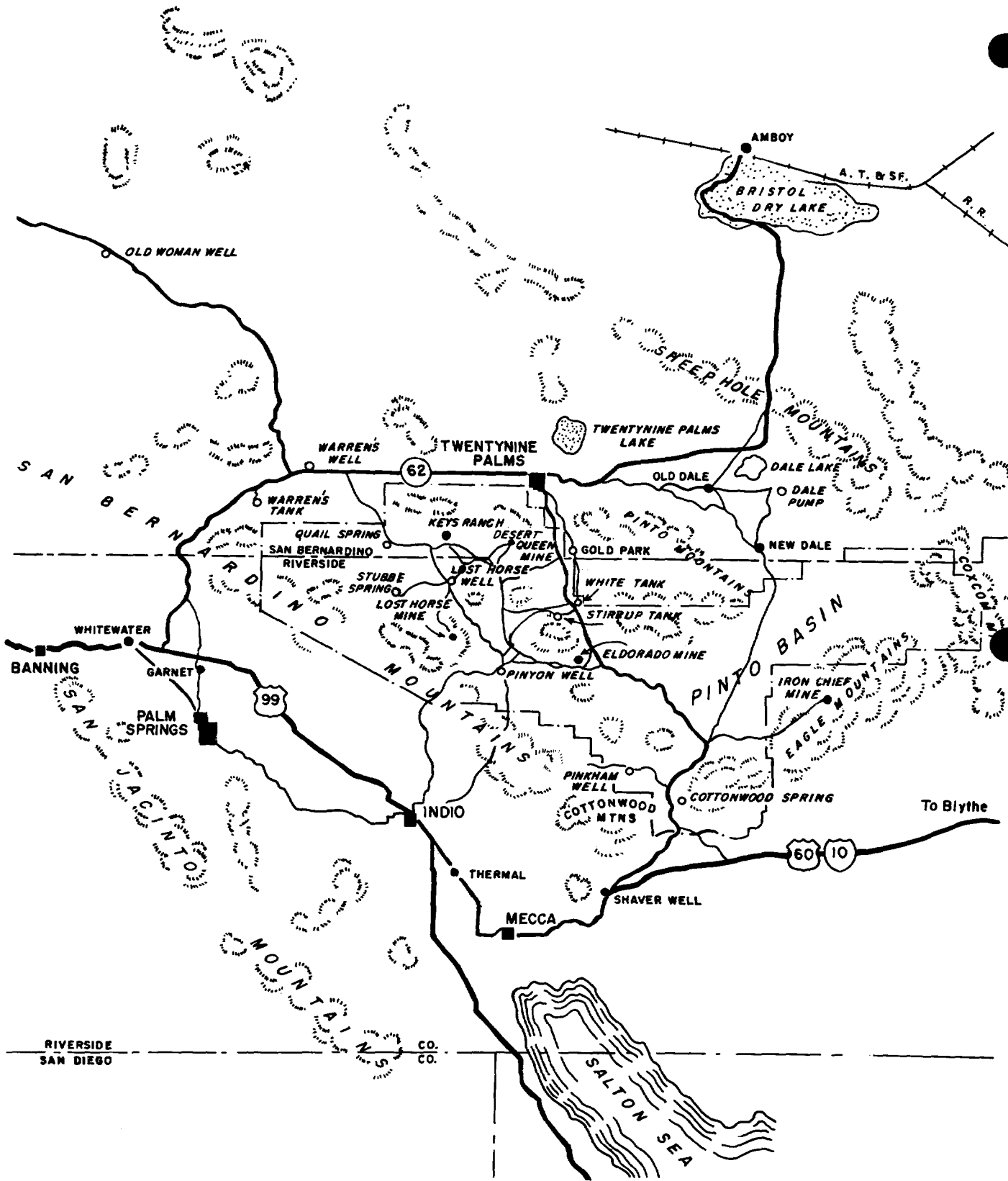
7. No Name--"T.5S., R.13E., S.B.M., Sec. 28 and 30."  
Withdrawn as P.W.R. No. 145 by E.O. of August 18, 1932.<sup>51</sup>

G. Recommendations and Evaluations

All of the monument's water sources were important locally in the early days of livestock raising, mining, and freighting. Without their presence, even these limited industries would have been impossible. Several watering places and associated structures such as wells and dams are considered significant enough to be included within National Register boundaries. These are Lost Horse Well or Spring (Ryan House and Lost Horse Well or Spring nomination), Wall Street Millsite Well (Wall Street Mill nomination), Keys Ranch reservoir (Keys Ranch nomination), and the Cow Camp Well and Reservoir (Cow Camp nomination). Henson Well and Pinyon Well will be included within the Piñon Mountain Historic Mining District National Register nomination because they provided water for early milling operations there. Barker Dam is already on the National Register. Cottonwood Spring was nominated, but deemed ineligible.

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51. "List of Public Water Reserves in Joshua Tree National Monument Submitted by Custodian James E. Cole, April 19, 1945," Central Files, 1907-49, RG 79, NA.



**ROADS AND TRAILS  
IN THE PRE-MONUMENT PERIOD: MAP A**  
JOSHUA TREE NATIONAL MONUMENT  
CALIFORNIA

UNITED STATES DEPARTMENT OF THE INTERIOR/NATIONAL PARK SERVICE  
DSC / SEPTEMBER 1983 / 156-25006

ON MICROFILM



## VI. Roads and Trails in the Pre-Monument Period

### A. Establishment of Trails and Wagon Roads

#### 1. Development of Mines Leads to Freighting Activity

The earliest routes of travel within the monument area were Indian trails leading from campgrounds to water holes and eventually to trading and village sites in other areas. It is doubtful that cattlemen utilized these early paths to any great degree, but prospectors undoubtedly did in their search for promising mineral locations. Wandering slowly and leading their burros, they were dependent on Indian trails that would lead them to lifesaving water supplies. As mines were located and developed, trails became roads that were forged indelibly by heavy freight wagon wheels. By the late 1890s and early 1900s large wagons were hauling supplies and ore for miners in the area. According to one old teamster, as many as sixteen horses were sometimes harnessed to two wagons pulled in tandem, with a lighter feed wagon hitched behind. Within the monument area smaller teams were probably used because of the steep grades and tight curves often encountered. Oxen were not used to pull wagons because they were slow and could not pull as much weight as a horse. The trip from Banning to Twentynine Palms with a full load took three days or longer. Some of the early freight roads within the national monument were the following:

#### a) Pleasant Valley Via The Blue Cut

The Blue Cut was a teamster's highway that supplied several mines in Pleasant Valley from the railhead at Indio. On their way north after loading up at the Indio freight depot, teamsters in caravans passed the Berdoo Canyon turnoff and the major route to Pinyon Well via Pushawalla Canyon and then in another four miles cut sharply up a broad canyon leading east into the easy grade of The Blue Cut.

#### b) Eldorado Mine from Mecca Via Cottonwood Spring

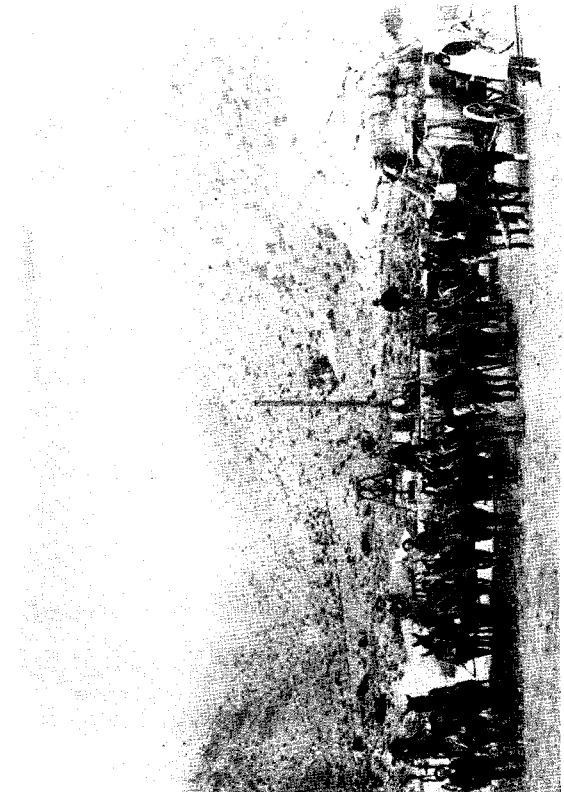
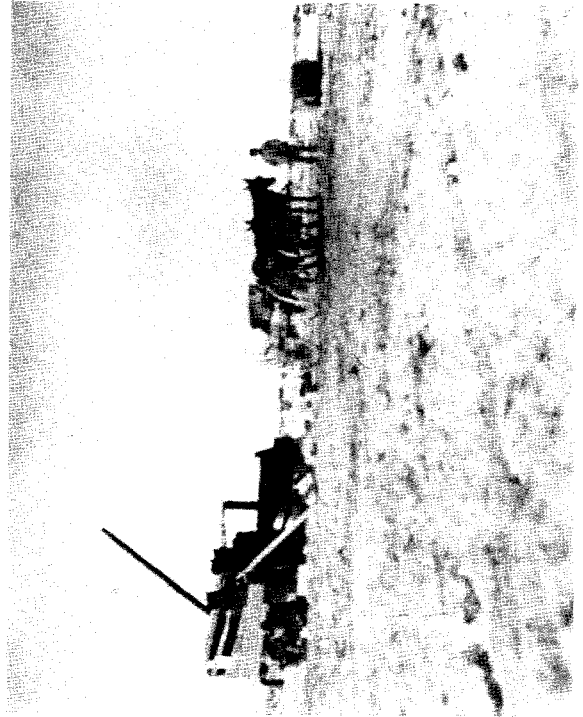
Herman Price, who hauled from Mecca to the Eldorado Mine, recalled stopping at the end of the first day at Schaeffer's (Shaver's) Well. About 2:00 P.M. on the second day he would stop at Cottonwood Spring for water and then continue north to the vicinity of Old Dale junction for the night. Via Fried Liver Wash, it was about



Illustration 137 (top left).  
Freight wagon, Amboy to Dale mines.

Illustration 138 (bottom left).  
Freight wagons at Lost Horse Well,  
1893?

Illustration 139 (bottom right).  
Dale-Amboy stage, 1911 or 1912.  
Photos courtesy JTNM.



another half day trip to the Eldorado. Price usually used six mules and hauled three tons at ten dollars a ton.<sup>1</sup>

c) Eldorado Mine from Indio Via Pushawalla Canyon

Price recalls spending the first night up Pushawalla Canyon (then called Dirty Sock Canyon because of the Dirty Sock Mine there) at the county well, sixteen miles from Indio. Six head of horses were used to pull two tons of freight. The second night was spent at the Hexahedron Mine mill site. Each trip cost twenty dollars per ton of freight.<sup>2</sup>

d) Other Routes to the Eldorado Mine

L. Burr Belden outlines several routes by which freight was brought in to the Eldorado Mine during its heyday. These are outlined below:

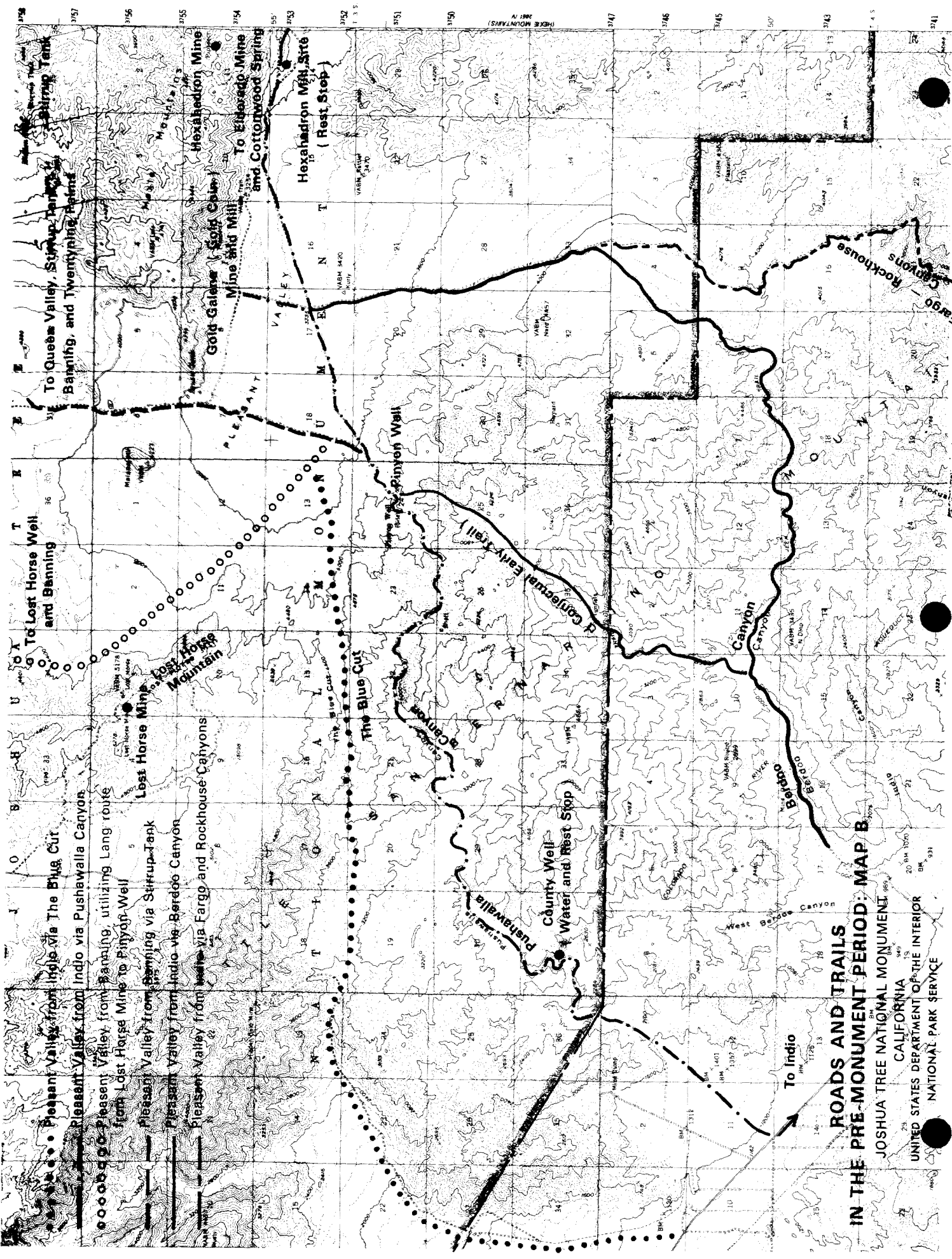
1) A six-day trip from Banning to the mine involved Banning to Whitewater up to the Morongo Valley, over to Warren's Well, south to Quail Spring, and then to Lost Horse Well and the Lost Horse Mine and over a sharp ridge to Pinyon Well (Lang route). That route was not feasible for heavy freight wagons, which usually went by way of Stirrup Tank and south to Pleasant Valley.

2) A four-day route from Indio ascended Berdoo Canyon, continued up a steep side canyon, crossed a ridge, and descended into Pinyon Well. This could only be used by light wagons and four-horse teams. Later the northern portion was rerouted to eliminate crossing the steep hogback above Pinyon Well. In the early 1920s the Berdoo Canyon road followed a wider draw and entered Pleasant Valley two miles east of Pinyon Well.

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1. JTNM Fact File.

2. Ibid.



**ROADS AND TRAILS  
IN THE PRE-MONUMENT PERIOD: MAP B**

JOSHUA TREE NATIONAL MONUMENT  
CALIFORNIA  
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NATIONAL PARK SERVICE



3) Another route connecting the Eldorado Mine and Indio went south from Indio to Mecca, ascended Box Canyon, turned north at Shaver Summit, reached Cottonwood Spring oasis by way of a canyon east of the present highway (Little Chilcoat Pass?), veered up through Pinto Basin to the Blue Bell Mine, and then turned west to the Eldorado.<sup>3</sup>

e) Fargo Canyon

At one time this was also a freight road used by miners.

f) Fan Hill Canyon

This route, via Keys View, was sometimes used by Johnny Lang between the Lost Horse Mine and Thousand Palms.

During the pre-monument freighting days, Pleasant Valley and Pinyon Well were important parts of the road system. Pleasant Valley, the main travel route in the area, was an important desert crossroads. From the Gold Coin Mine and mill site, roads went south to Indio via Berdoo Canyon, north to Banning or southeast to Cottonwood Spring. Pinyon Well was also a triple fork. One sketchy trail went northwest to the Lost Horse Mine, one northeast to Squaw Tank and Banning, and one west to Indio via Pushawalla Canyon.

2. Signing the Desert

Not until about 1906 did Riverside County become businesslike about erecting signposts pointing to wells and water holes. William Covington was directed to determine where the signboards should be placed, to compute the distances to mines, water holes, and towns to be marked on the signs, and to set up the posts. These were of thick piping, anchored to the ground to iron crosspieces. The signs were of perforated zinc.<sup>4</sup> Although this was a step in the right direction, not

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3. Belden, "Lizard Hunter Uncovers Rich Hoard of Gold," Jan. 15, 1961.

4. James, Wonders of the Colorado Desert, II: 333-34.

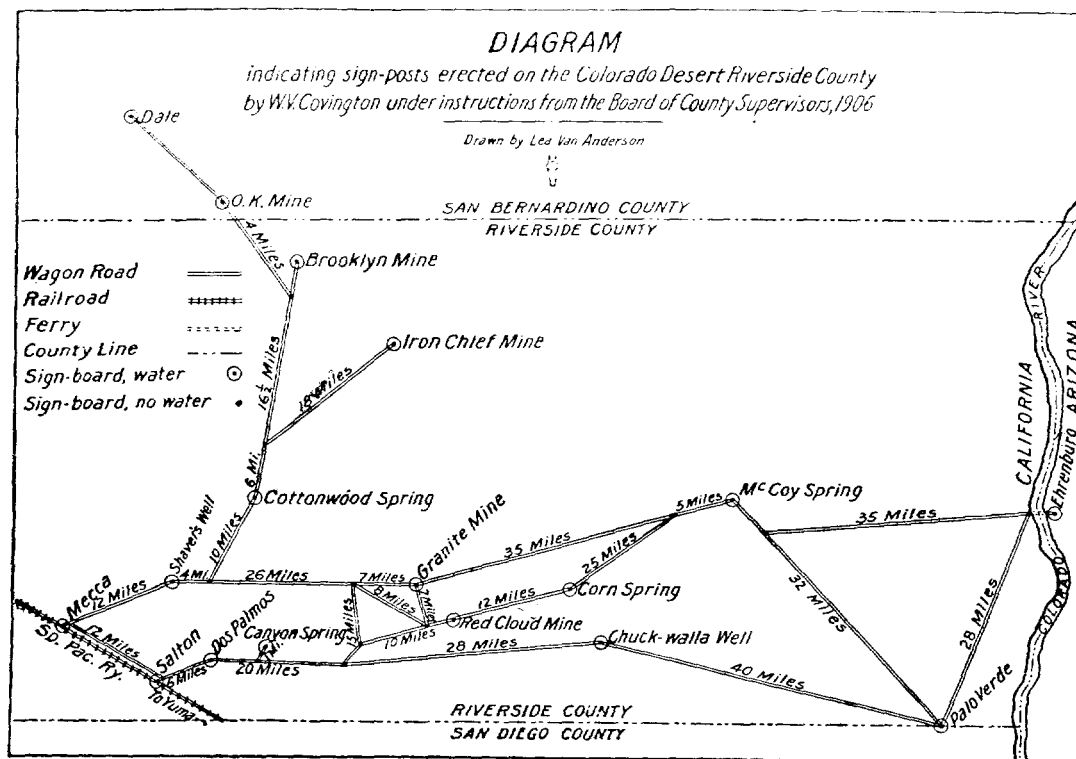


Illustration 140.

Sites in Joshua Tree National Monument and vicinity where signposts erected by W.V. Covington under orders of Riverside County Board of Supervisors, 1906. From James, Wonders of the Colorado Desert, 11:330.

enough signs were erected. Those that were often became objects of vandalism, primarily being used as rifle targets. By 1912 the Automobile Club of Southern California, in conjunction with state authorities, began the work of making clearly defined pathways through those desert sections most likely to be traveled by motorists. This project consisted of placing adequate steel signs every five miles.

### 3. Condition of Roads

Despite this aid, traveling in the desert remained risky due primarily to inadequate "county" and "miner's" maps. The 1918 "Road Map of the State of California," for instance, showed only one route in the monument--the trail from Cottonwood Spring to Dale. Into the 1920s nearly all roads through the desert region were unimproved. Rather than being laid out along definite lines, they followed the course of least resistance, avoiding sandy spots and hills as much as possible. Generally they consisted of two wheel ruts with high centers, winding in every direction and connecting mines and homesteads with water holes and the outside world. Whenever an original set of tracks became too deep, a new pair was started around them. The only attractions off the main roads were mines or water sources. As mine camps were established and then abandoned, their access roads were made and then fell into disuse. Where wagons or cars could not go, pack animals were still used. Pioneer motorists had ingenious ways of improving their vehicles' traction and engine cooling abilities. An extra transmission and oversized tires could be of help in negotiating desert trails and treacherous sandy spots.

### 4. Banning-Twenty-nine Palms-Dale-Amboy Roads

By the early 1880s, when mining in the Twenty-nine Palms District was on the wane, a new field was being opened up farther east in what would later become the Dale District. Originally centered around placer claims, mining activity there soon turned to lodes in the surrounding mountain ranges. Because the mines there continued to be productive, miners settled in for a long stay and made plans to develop their operations. Such development depended on negotiable roads into the district and a steady supply schedule.



The first stage service in the area, in the late 1890s, operated from Twentynine Palms to Garnet. When there were no passengers, it hauled ore. Regular freight service from Banning to Dale through Twentynine Palms began in 1898 and continued until 1902.<sup>5</sup> The route from Twentynine Palms to Dale was long and tedious, interrupted occasionally by junctions with tracks leading off to nameless mines. It took about six hours by horseback to reach Old Virginia Dale, at the junction of three roads. One led forty miles northeast across the desert to Amboy on the Atchison, Topeka & Santa Fe Railway, one led east to the Dale pumping plant, and the other led southeast to New Dale, about six miles away.<sup>6</sup>

A Desert Map Miners' Guide dated 1905 shows a road leading across country from Banning to Warren's Well. From there to Twentynine Palms was another long journey over twenty miles of sandy road. Travel from Banning to the oasis required 2½ days for horses and a buckboard and at least 3 days for a freight wagon. The stage line between Banning and Dale stopped at Warren's Ranch and Well and at the Old Adobe at Twentynine Palms. This line was discontinued around 1912 and from then until 1916 a stage ran from Amboy to Dale, which was an easier trip for the teams. The fare was five dollars. The usual charge for freight to the Dale District was twenty dollars per ton.<sup>7</sup> During the era of mining activity in the section bordering the monument on the north, traffic from farther west came via the county road from Victorville, through Old Woman Springs, Mean's Well, Surprise Spring, Twentynine Palms, to Dale. Three roads led north from the Twentynine Palms area. One went from the oasis to Deadman Lake (now within the Marine Corps Base), Morgan's Well, the Bagdad Chase mines, and Ludlow. Another route, the Bagdad Road, headed north a few miles east of the

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5. Parker, One Hundred Years, p. 47.

6. O'Neal, Peculiar Piece of Desert, p. 58.

7. Ibid., p. 60.

oasis and crossed the Bullion Mountains to Bagdad. East of this was the Amboy Road that took off from Old Dale. Other traffic came from the east via Clark's Pass on to Twentynine Palms.

In 1937 John Hastie started an auto stage line to Banning, hauling supplies and passengers from Dale to points west. The Twentynine Palms surfaced highway was opened that same year.

5. Banning to Quail Spring, Keys Ranch, Pinyon Well, and the Eldorado Mine

This road branched from the Banning-Dale route 43 miles east of Banning and 4.7 miles east of Warren's Well. At this junction a road turned south toward Quail Spring. The following excerpts from the 1918 Geological Survey road log describe this route and the various branch roads leading off of it. By following these logs on Illus. 141 and on the relevant USGS quadrangle maps, one can locate various old roads that no longer exist.

43.0 miles from Banning (4.7 miles east of Warren Well). Road forks. . . . Take the right-hand road to Quail Spring.

50.5 Geological Survey sign. Branch road goes south (right) to Quail Spring. Good water in a reservoir 0.1 mile away. For Keys ranch and Eldorado mine turn east (left) over main road.

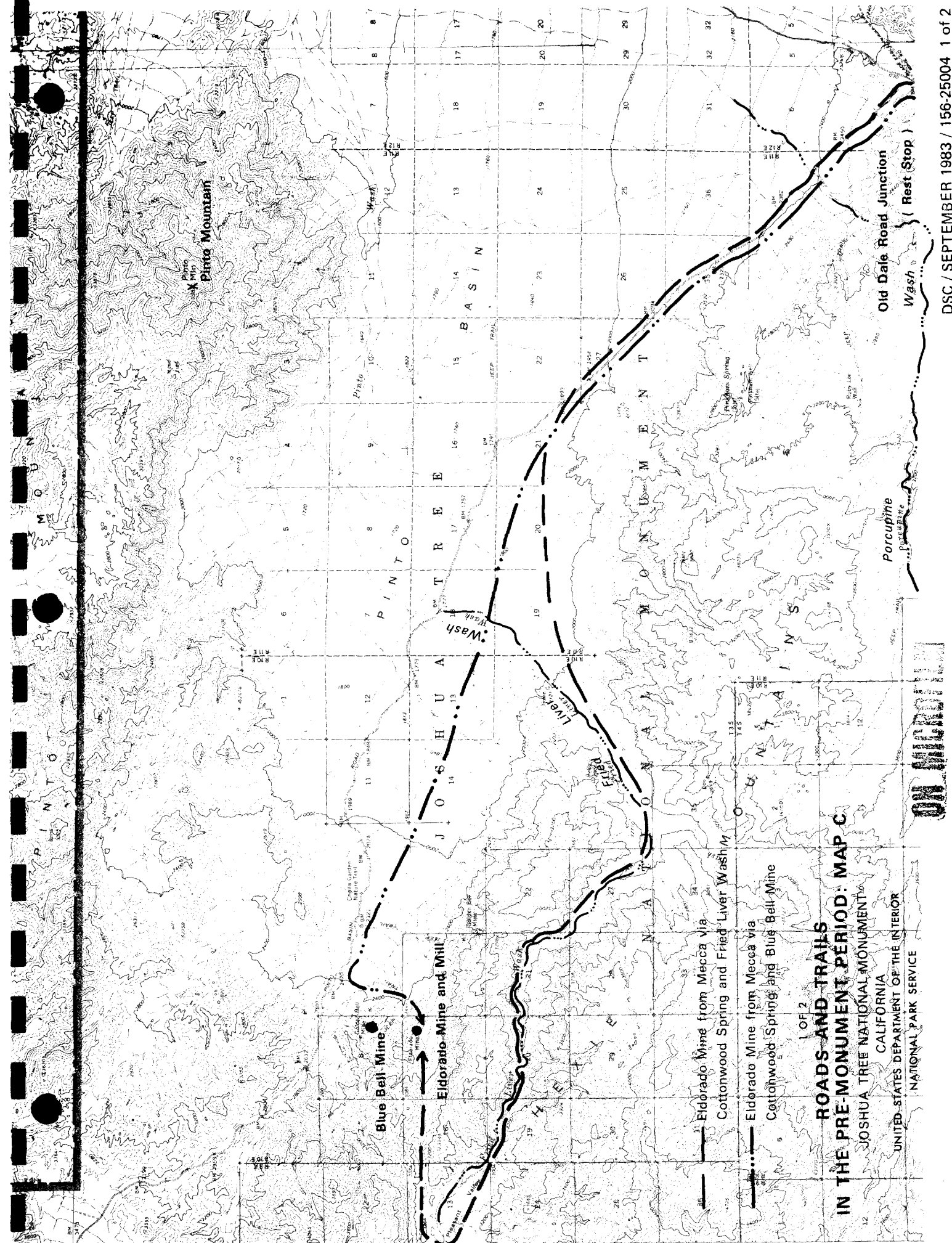
51.5 A plain but little-used road leads south (right) to a cabin about 2 miles away. Continue east.

53.3 Geological Survey sign. A plain road leads to the right, going to Lost Horse Well and Lost Horse mine. Continue east (left).

55.7 A plain road branches to the left, going to Keys ranch, half a mile away. There is another branch a little farther on. Continue to the right.

Illustration 141.

Relief Map of Part of Mohave Desert Region, California, Showing Desert Watering Places (Sheet III). Plate XI from USGS Water-Supply Paper 490-B.



Blue Bell Mine

Eldorado Mine and Mill

- 1 Eldorado Mine from Mecca via Cottonwood Spring and Fried Liver Wash Mine
- 2 Eldorado Mine from Mecca via Cottonwood Spring and Blue Bell Mine

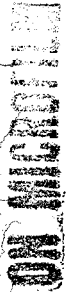
OF 2

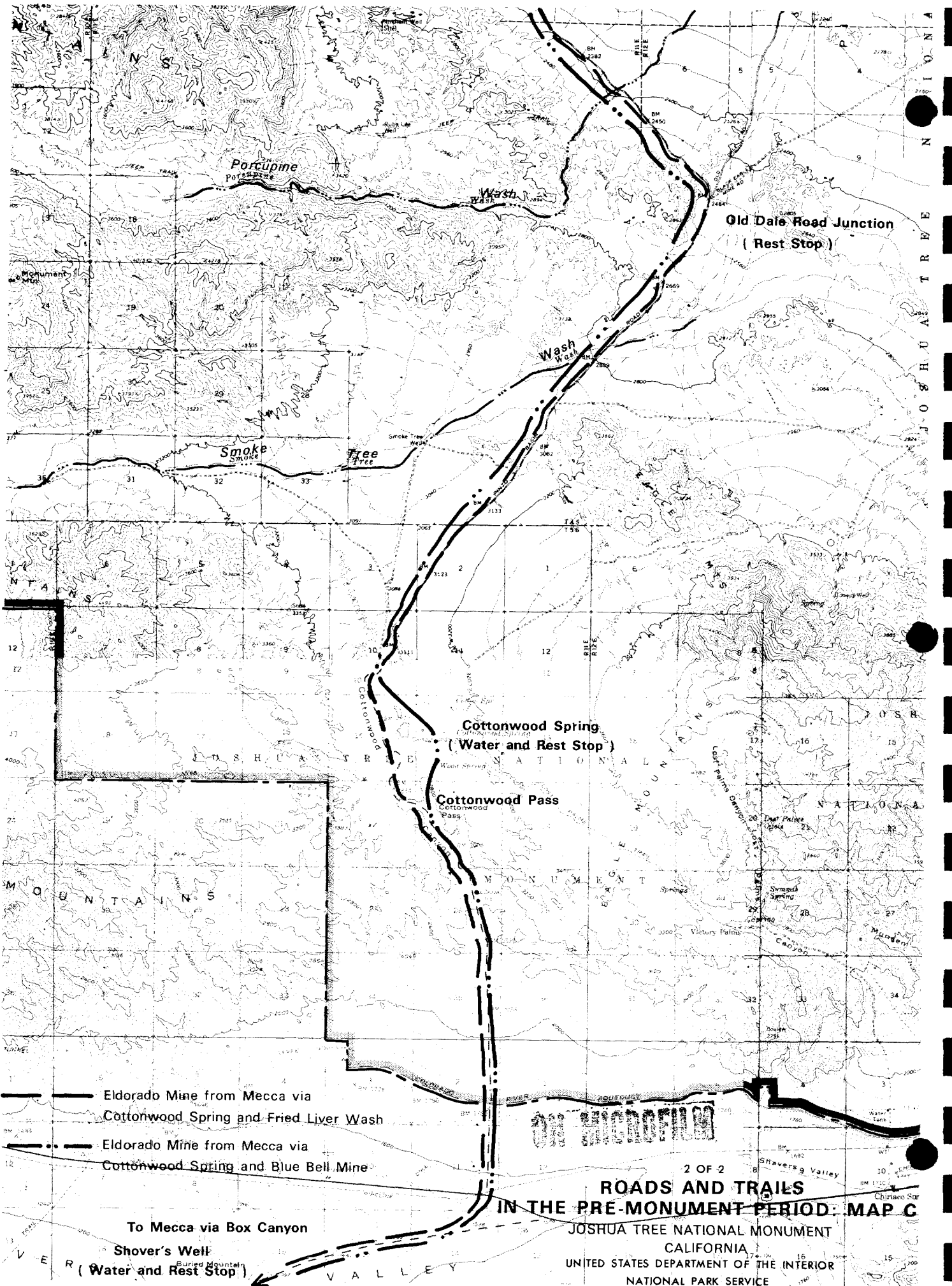
**ROADS AND TRAILS  
IN THE PRE-MONUMENT PERIOD: MAP C**

JOSHUA TREE NATIONAL MONUMENT  
CALIFORNIA  
UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

Old Dale Road Junction  
Wash (Rest Stop)

Porcupine





Old Dale Road Junction  
( Rest Stop )

Cottonwood Spring  
( Water and Rest Stop )

Cottonwood Pass

— Eldorado Mine from Mecca via  
Cottonwood Spring and Fried Liver Wash

-•- Eldorado Mine from Mecca via  
Cottonwood Spring and Blue Bell Mine

To Mecca via Box Canyon

Shover's Well  
( Water and Rest Stop )

**ROADS AND TRAILS  
IN THE PRE-MONUMENT PERIOD MAP C**

JOSHUA TREE NATIONAL MONUMENT  
CALIFORNIA  
UNITED STATES DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

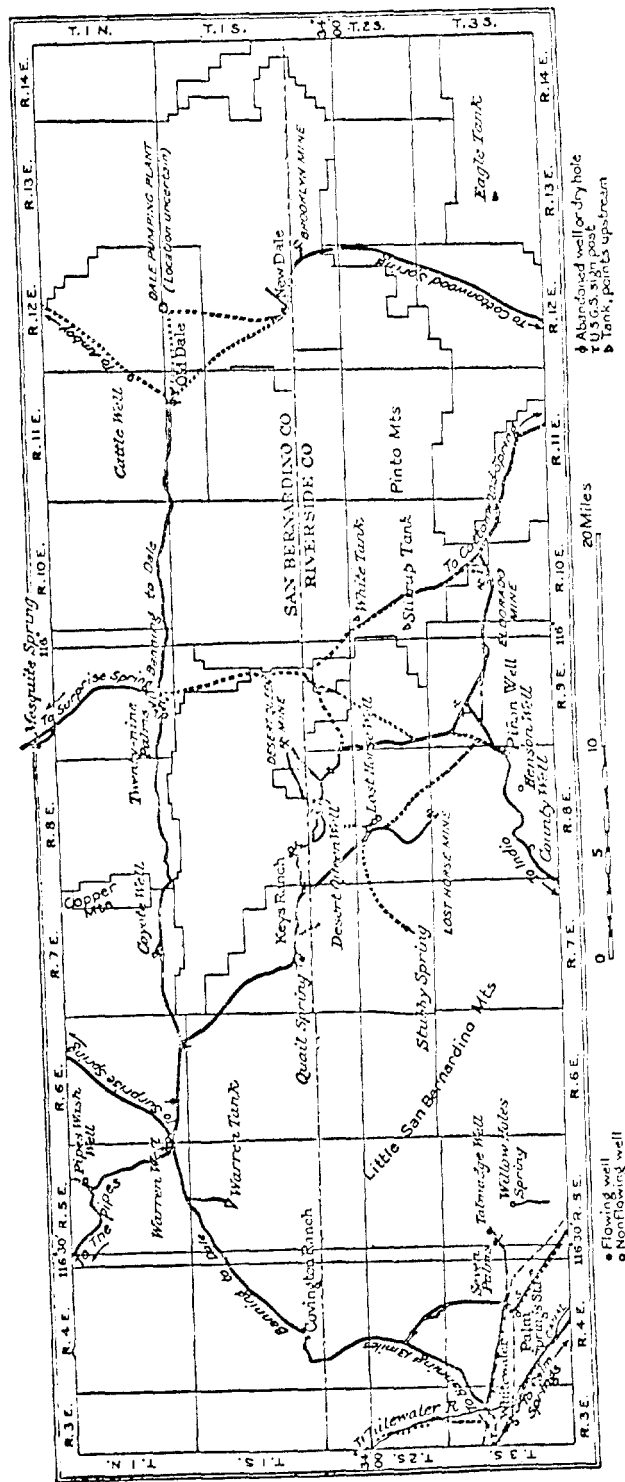


FIGURE 12.—Sketch map showing roads in vicinity of Dale, Twenty-nine Palms, and Piñon (Piñon) Well, Calif.

Illustration 142.

Map of roads in the vicinity of Dale, Twentynine Palms, and Piñon Well. From USGS Water-Supply Paper 497, p. 188.

- 55.9 Geological Survey sign. A branch road goes north to Keys ranch. . . .
- 56.0 Road forks. . . . Take the southeast (right) branch. . . .
- 57.0 A dim road goes south to Lost Horse Well. . . . Continue on plain road to left.
- 58.2 Branch road noted at 56.0 enters from the west. At nearly the same place a branch turns northeast (left) to a windmill which can be seen about half a mile away. This is the Desert Queen Well. . . .
- 60.0 A branch road leads east to the Desert Queen mine, 2 miles away. Turn to the right and go southeast. The road is not much used and is rather sandy at places in the next few miles.
- 61.8 County sign. A branch road leads east to Twenty-nine Palms. Go southeast (right).
- 63.2 County sign. A branch road leads east (left) to Cottonwood Spring. Continue south (right).
- 65.7 County sign. A branch road coming from Twenty-nine Palms enters on the left. Continue south.
- 67.5 The main road swings east (left) into a little basin called Pleasant Valley. A very faint trail may be seen leading south. It is a short cut to Pinyon Well and is probably passable. . . . Continue east, as there is a good road not far away.
- 68.7 Point is on a small playa in the center of Pleasant Valley. . . . Abandoned buildings of the Gold Coin mine are conspicuous 0.1 mile east. The road continues east to the Eldorado Mine. . . . To reach Pinyon Well turn southeast (right). . . .

69.9 Going southwest on road to Pinyon Well. A branch road enters from the east, coming from the Eldorado mine. Continue southwest.

71.0 The road enters a canyon in the Little San Bernardino Mountains.

71.7 Pinyon Well. Two tumble-down cabins and the wreck of a stamp mill identify the spot.

#### Road to the Eldorado mine

68.7 Geological Survey sign on playa in Pleasant Valley, near Gold Coin mine. From this point . . . continue east to reach Eldorado mine.

68.8 Pass by buildings of Gold Coin mine, which was abandoned in 1918.

70.3 A plain road enters from the west (right), coming from Pinyon Well. Continue east, down a sandy wash.

71.2 Road forks. A plain road leads to the left over a hill. It is a small cut-off but is rocky and little traveled. Continue to the right, down the wash.

71.8 Pass an abandoned cabin [Hersey Mine?] and mine building and turn north (left), out of the wash. [or connected to Hexie mill?]

72.1 The branch road noted at 71.2 enters from the west. Road turns abruptly east. About 20 feet north of the road at this turn there is a faucet in a pipe line which is buried near the road. The pipe line leads water from Pinyon Well to the Eldorado mine. . . . Continue east over a hilly country, later going down a small canyon leading east.



74.8 Eldorado mine. House and mine buildings are conspicuous in canyon. . . . A road goes east to Cottonwood Spring and another goes north to Twenty-nine Palms.<sup>8</sup>

6. Mecca to Cottonwood Spring, Iron Chief Mine, Dale, Eldorado Mine, Pinyon Well, and Indio

As early as 1870 Cottonwood oasis and its good water supply was a focal point of the region. During the late 1800s and early 1900s Cottonwood Spring was a refreshing stop for freighters, miners, and other travelers on their way from the railhead at Mecca in the Coachella Valley to the Dale Mining District. The road, starting in Mecca, ran northeast to Shaver's Well, then along the west flank of the Eagle Mountains and the east side of Pinto Mountain to Dale. The first twelve miles was over the same route as the Mecca-Blythe road and was well traveled; beyond that the road was used chiefly by miners. It was a fair wagon road that was satisfactory for autos except for portions that might become impassable because of sand or washouts.

Selected portions of the 1918 log of the Geological Survey describe the route:

0.0 Mecca. Start east.

6.0 Enter Shaver Canyon [Box Canyon]. . . .

12.1 Shaver Well, on north side of road. . . . Continue northeast, up canyon. . . .

12.6 Road forks. Right-hand road goes to Blythe. Take left-hand road for Cottonwood Springs and Dale. For several miles it leads up a rather sandy wash.

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8. USGS Water-Supply Paper 497, 1923, pp. 190-92.

20.4 The road enters a canyon at the edge of the mountains, crossing the very sandy canyon bed at this point.

20.8 County sign. The road turns north up the east side of the canyon avoiding the deep sand in its middle.

22.0 The road takes the center of the very sandy canyon bed. Autos may have difficulty here. Continue up the canyon between low granite walls. At one place the road goes over a short steep cut in rock at the side of the canyon [Little Chilcoot Pass?--Moorten related in 1969 that the road around the rockfall in Cottonwood Wash was kept in shape by area people so that they would not have to take the long way (presumably up Cottonwood Canyon) to the spring.]

23.5 Branch road leads east (right) to Cottonwood Spring. . . . Near spring is a house. . . . Road to Dale continues up the canyon until it emerges from the mountains upon a rolling upland.

25.0 County sign. A dim branch road leads northwest (left) to Pinkham Well. Take right-hand road for Dale.

31.3 Branch road turns west (left) to Twenty-nine Palms, Pinyon Well, etc. About 100 feet farther north another branch road turns east (right) to the Iron Chief mine. . . . Use the center road to reach Dale.

The road from this point to Dale . . . is known to pass first over a long, broad desert basin. About 15 miles from this fork it reaches the Brooklyn mine. . . . From the Brooklyn mine the road goes northwest through the mountains to New Dale. . . . From New Dale a road leads northwest across a sandy desert basin to Old Dale, 6 miles farther. It is probable that a road also leads north from New Dale to a pumping plant 6 miles away. . . . A road leads northeast [from Old Dale] to Amboy. . . . A road leads west from Old Dale into Banning. . . .

## IRON CHIEF MINE.

At 31.3 miles from Mecca a branch road goes east (right) to the Iron Chief mine. . . . This road is reported to be passable by automobile. . . .

## ROAD WEST FROM COTTONWOOD SPRING.

At 1½ miles north of Cottonwood Spring (25.0) a branch road marked by an old Riverside County sign goes west (left) to various portions of the Cottonwood Mountains [and Pinkham Well] and is reported to end somewhere about 10 miles west. . . . It serves prospectors in the region west of Cottonwood Spring. . . .

## COTTONWOOD SPRING TO ELDORADO MINE AND PINYON WELL (31 MILES).

0.0 Cottonwood Spring. Go north, up a sandy canyon, emerging in an upland region.

7.7 A county sign marks a road fork turning to the left, and another marks one leading to the right about 100 feet away. Turn left on a dim road at the first sign. The road straight ahead leads to Dale, and the right-hand road goes to the Iron Chief mine.

17.7 A dim trail comes in from the east. In January, 1918, it was marked by a small board sign that pointed along it to the Brooklyn mine and Dale. . . . The road to Eldorado leads nearly west, across a rather sandy basin.

20.2 Road fork. The right-hand branch leads northwest to Twenty-nine Palms and does not pass the Eldorado mine. . . . could probably be used as a cut-off to Twenty-nine Palms. It intersects the road from Eldorado to White Tanks and Twenty-nine Palms, about a mile away. . . . Take left-hand road for Eldorado mine.

21.3 A road leads north, around the mountain, to White Tanks and Twenty-nine Palms. For Eldorado mine continue west, entering a canyon.

21.8 Eldorado mine. House and other buildings in canyon. . . . To reach Pinyon Well continue west. The road leads up a small narrow canyon and crosses a low divide.

24.8 The road turns west, up a wash, around an abandoned cabin and mill [Hexie?].

25.4 The branch road noted at 24.1 enters from the east. Continue west, up the wash.

26.3 Road fork. The right-hand road is the best route to Banning. One may also follow it to the Geological Survey sign at the Gold Coin mine 1.6 miles from this fork, and there turn southwest to Pinyon Well.

28.8 Road from Gold Coin mine enters from northeast. Continue southwest.

29.9 Enter canyon in Little San Bernardino Mountains. . . . Continue up the canyon, which is sandy at places.

30.6 Pinyon Well.

#### PINYON WELL TO INDIO (21.7 MILES).

NOTE.--The road from Indio to Pinyon Well was originally made to connect Indio with mining properties in the vicinity of Pinyon Well and Pleasant Valley, but in 1918 it was almost unused for any purpose. It is practically impossible for automobiles to travel from Indio to Pinyon Well on account of sandy grades and very steep hills; but they can safely go from Pinyon Well into Indio, as the road is nearly all downhill.

0.0 Pinyon Well. Start southwest, up a sandy canyon.

1.3 A large tributary ravine enters the main canyon, which swings west at this point, and a dim trail leads over the hill between the two canyons to Henson Well, about three-fourths mile south. Continue west, up the main canyon.

1.7 Summit of the pass over the Little San Bernardino Mountains. Continue west, down a very steep hill along a deep canyon with sandy bed.

6.8 County well, on south (left) side of road. . . . Continue down the canyon.

10.5 The road emerges from the canyon upon a rocky slope and turns southeast, down a sandy wash, passing between the base of the Little San Bernardino Mountains on the east and an isolated mountain ridge on the west.

17.9 The road turns suddenly southwest, ascending a very sandy slope, passing through a gap in the clay hills . . . and emerging upon Coachella Valley in sight of Indio.

19.1 The road branches at about this point, and a fork leads to the right, directly toward Indio. Use the road to the left (south), which is probably better.

ELDORADO MINE TO TWENTY-NINE PALMS  
BY WAY OF WHITE TANK.

0.0 Eldorado mine. Go east, down the canyon.

0.5 Road fork. Right-hand road leads east to Cottonwood Spring. Turn left, crossing about 3 miles of very rocky alluvial slope.

2.0 A branch road enters from the south, coming from Cottonwood Spring. Continue north, up a wide pass between the Hexie and Pinto mountains.

4.0 A dim branch road leads west (left) toward Keys ranch. Continue northwest, up the main pass. . . .

7.5 The road here has reached a high upland plain. . . . About half a mile east is White Tank. . . . Continue north for Twenty-nine Palms. . . . About 4 or 5 miles beyond the vicinity of White Tank [the road] joins a road from the west that comes from Quail Spring and Keys ranch.<sup>9</sup>

Another interesting road at Cottonwood Spring is the "Little Chilcoot Pass" trail, visible by hiking down the wash from Cottonwood Spring toward Moorten mill. To circumvent a dry waterfall in the wash, a bypass road was built up out of the wash on the west. James states that it was built by a local politician with county money and was a grade over which only wagons with strong teams or light buggies could pass because of its steepness and ruggedness. Moorten, on the other hand, said that the road around the dry rock fall, "the one with all the rock work," was one of the original Iron Chief Mine roads into Cottonwood.<sup>10</sup>

#### 7. Roads from Gold Park Mining District

This mining center's greatest period of activity was between 1905 and about 1915; during this time several routes of travel radiated from the camp:

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9. Ibid., pp. 184-87.

10. Wonders of the Colorado Desert, 11:430; Moorten interview, Oct. 28, 1969, p. 7.

a) Gold Park-New Dale

Soon after serious mining activity started at Gold Park, probably about 1906, miners hewed a trail east from the Paymaster Mine five miles to the Groover Mine in the Dale District. This route, following along the crests and through the canyons of the Pinto Mountains, is not shown on modern maps. Remains of it are probably almost nonexistent.

b) Gold Park-Twenty-nine Palms

From Gold Park a road went north to the oasis. Another trail to the oasis led north from White Tank, thereby avoiding the steep climb to Gold Park in the Pinto Range. By the time the Gold Park mines became inactive, the White Tank-Twenty-nine Palms road was the main one from the south.

c) Gold Park-Pleasant Valley

Another trail went southwest from Gold Park to White Tank. It then headed south toward the El Dorado Mine. Near the Blue Bell Mine the trail forked, one branch heading south to Cottonwood Spring, the other veering west to the El Dorado and Gold Coin mines and Pinyon Well.

## VII. Establishment of Joshua Tree National Monument

### A. Need Seen for Preservation of Desert Areas

#### 1. Twentynine Palms Area Attracts Visitors

The desert around Twentynine Palms remained relatively untouched until the 1920s. Because of its lack of good roads, inaccessibility, and isolation, it had few visitors. The real estate boom in the area beginning in the 1920s, however, and provocative motorlogues appearing in Los Angeles newspapers, began to direct attention toward the area. Health resorts and communities began springing up in the desert, which became popular for weekend stays out of Los Angeles. As exotic desert plants for cactus gardens became the rage, dealers came to the desert and hauled truckloads of native plants back to the city where they were used for landscaping Mission-style homes. Because of this practice, the Devils Garden west of Desert Hot Springs was stripped of cacti, yuccas, and ocotillos, and other areas north and east were threatened. This growing practice was abhorred by conservationists who became intent on convincing people that the American desert was not a vast wasteland to be exploited, but an important part of our national heritage.

#### 2. Minerva Hamilton Hoyt Organizes the International Deserts Conservation League

Joshua Tree National Monument probably owes its existence primarily to one South Pasadena conservationist, Mrs. Albert Sherman Hoyt. Mrs. Hoyt was born on a cotton plantation in Mississippi in 1866 amidst wealth and prestigious social surroundings. Educated in fine schools, she eventually married a wealthy New York surgeon and moved to California in the late 1890s. In addition to organizing many civic and cultural activities in Pasadena, Mrs. Hoyt gained a growing admiration for the desert and began studying its flora and fauna. Following the death of an infant son, and later of her husband in 1918, she found solace and comfort in the desert's isolation. As the auto made the desert more accessible to people and as signing of roads and better maps made desert travel safer, more and more people ventured into it. Mrs. Hoyt became dismayed to see some of these individuals carting off cacti for their rock gardens.



To publicize the dangers of indiscriminate collecting of desert plants, Mrs. Hoyt designed a desert conservation exhibit at the Garden Club of America's flower show in New York City in 1927. Her southwestern desert habitat group, with special lighting, live native cacti, backdrops, and stuffed birds and animals, created a sensation. Mrs. Hoyt followed this up with similar exhibits elsewhere, culminating in a show in England in 1929, that acquainted the public with the desert and stimulated interest in preserving desert landscapes.

In March 1930 the International Deserts Conservation League was organized with Mrs. Hoyt as president to attract further attention to the dangers of despoliation of the desert and champion protection of its beauty spots. The group was immediately supported by women's groups, civic organizations, and the scientific community.

Mrs. Hoyt particularly liked Joshua trees, which she felt symbolized the beauty, uniqueness, permanence, and vulnerability of the desert. The Mormons gave this giant yucca its name, seeing in its extended branches a symbol pointing them to the promised land they were seeking. Unfortunately the wood of the Joshua tree was coveted for surgical splints, because it was not as likely to split as woods with definite grains, and also for making strips to protect fruit trees from rabbits and rodents. In desert areas where wood was scarce and fuel difficult to obtain, local residents hauled away the Joshua trees and pinyon pine for fuel. The need for protection was real and it was thought important to set aside stands of these trees for protection.

### 3. A Desert Park is Proposed

Sometime during the 1920s Minerva Hoyt began expressing the need for an extensive federal desert park in southern California. She suggested an area of over one million acres stretching from the Colorado Desert to the Mojave. This encompassed an area east of Palm Springs from the Salton Sea north to Twentynine Palms. When Mrs. Hoyt proposed this park to the Director of the National Park Service, Horace Albright, stressing the scenic beauties, distinctive flora and fauna, and unusual geological formations, there were two other projects involving

proposed desert areas that were in the mill, prohibiting Albright's active participation in yet another project.

All three of those areas proposed for park status were difficult situations due to the disorderly state of their land titles. Death Valley had mining interests, the proposed saguaro cactus area near Tucson was almost completely held by the University of Arizona, and in the future Joshua Tree National Monument a Southern Pacific Railroad land grant extended over the portion containing the best trees. Elsewhere in a checkerboard pattern over this last proposed area were federal lands interspersed with homestead and mining claims. Complicating the situation was a deteriorating relationship between President Herbert C. Hoover and Congress. Hoover's secretary of the interior, Ray L. Wilbur, had proposed in 1929 that remaining public lands be returned to the states. Congress opposed this, but refused to pass legislation allowing federal purchase of private lands or the exchange of federal lands for those within proposed park boundaries.

The prospects for a southern California desert park improved with Franklin D. Roosevelt's election in 1932. Under his New Deal, conservation programs and especially the National Park Service would prosper. Harold L. Ickes, the new secretary of the interior, welcomed new park proposals as a means of expanding park and recreational resources. Ickes proposed to reserve areas first and work out land ownership problems later. Hoover's establishment of Death Valley and Saguaro as national monuments brightened prospects. Before Roosevelt took office in March 1933, a group of real estate men anxious to promote the Twentynine Palms area as a tourist attraction, persuaded Assemblyman John P. Phillips of Riverside County to introduce a bill in the California assembly for establishment of a "California Desert Park" including many of the scenic attractions Mrs. Hoyt wanted in the federal park.

Hoyt persuaded Governor James Rolph, Jr., of California to give her more time to push her cause and he cooperated by vetoing the state park bill. Roosevelt was interested in Hoyt's idea and Ickes said he would take the necessary steps for preliminary withdrawal from

entry of the public domain in question. This withdrawal, the first concrete realization of the park, took place by executive order on October 25, 1933. The area involved comprised 1,136,000 acres. It was withdrawn for consideration as a national monument, but advocates requested its establishment as a national park. On January 22, 1934, the Board of Supervisors of the county of Los Angeles adopted a resolution approving the proposed establishment of a national monument upon certain desert lands in Riverside and San Bernardino counties, saying that

said public lands include areas of great beauty and support many unusual forms of plant life characteristic of the American desert which should be fostered and preserved for the use and benefit of the general public, and the establishment of a national monument upon the said lands would be of inestimable value, particularly to the great centers of population in the County of Los Angeles, in that the establishment thereof would permanently preserve the flora and fauna of the desert and make available for recreation and study a desert area unequaled close to great urban centers. . . .<sup>1</sup>

One of the principal reasons for the enthusiastic support many gave to the proposed monument area was its accessibility from Los Angeles. Trips to the desert were becoming increasingly popular in the 1930s, which added to the danger of injury from thoughtless and often destructive visitors.

Roger W. Toll, superintendent of Yellowstone National Park, inspected the area for the National Park Service in March 1934. In a report submitted afterwards he said that the Joshua tree *did merit national protection as a representative desert plant.* He felt that the area

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1. General File, July 25, 1927, to Feb. 28, 1934, Central Classified Files, 1933-49, RG 79, NA.

was not suitable for a national park because it was not an outstanding desert habitat and that, although it was interesting and valuable for local and state use, the area lacked any

distinctive, superlative, outstanding feature that would give it sufficient national importance to justify its establishment as a national park. It is believed that a part of the area would justify the establishment of a national monument, with the Joshua trees as its primary feature, and other sources of interest as secondary features. While the groves of Joshua trees are not the finest in the state, their surroundings are scenically interesting. The area is available to two million people of the Los Angeles district, and taken all together, it is as suitable for a Joshua tree national monument as any area I have seen.<sup>2</sup>

Toll recommended that the original withdrawal be reduced to 138,240 acres featuring the best stand of Joshua trees in Lost Horse Valley. In June 1934 he proposed this as "Joshua Tree National Monument," and it was approved by National Park Service Director Arno B. Cammerer. Hoyt violently opposed a reduction in boundaries and a month later Dr. Harold C. Bryant arrived for a second field inspection. The Park Service biological specialist, Bryant favored enlarging the proposed monument to include a wider variety of desert life zones. Impressed with the contrast between the Joshua tree forests of the high desert and the creosote flats of Pinto Basin, he recommended inclusion of the basin, which Toll had excluded from the proposed boundaries. Preventing further extension south to the Salton Sea was the Los Angeles Metropolitan Aqueduct leading from the Colorado River through Coachella Valley to Los Angeles. The final boundaries followed the lines Bryant recommended.

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2. Roger W. Toll to Arno B. Cammerer, Dir., Office of National Parks, Buildings, and Reservations, Apr. 7, 1934, Central Files, 1907-49, RG 79, NA.

Mrs. Hoyt's friends suggested that the proposed reservation be called the "Minerva Hoyt National Park," but stopped pushing for this after being told that it would place unnecessary difficulties in the way of the project because it was an established policy of the Department of the Interior to refrain from naming national parks and monuments after individuals. It was thought more fitting to choose a name reflecting the area's natural features or early history. (At one point the name "Desert Plant National Monument" had been proposed.) The California legislature, however, did pass a joint resolution asking Congress to erect in the monument some form of memorial to Mrs. Hoyt in recognition of her tireless efforts to establish a national desert park.

Conner Sorensen, evaluating Mrs. Hoyt's tireless conservation efforts, concluded that

viewed in retrospect, Mrs. Hoyt's crusade for desert preservation charts an important shift in American attitudes toward the desert. Her generation was the first to view the desert in positive terms, worthy of preservation, rather than as a barrier to be crossed or a wasteland to be reclaimed. When faced with the paradoxical implications of the automobile revolution which enhanced the desert's appeal but threatened its destruction, Mrs. Hoyt and others pressed for recognition of desert values by a means much in vogue in the 1920s and 1930s--the creation of a national park. The establishment of Joshua Tree National Monument signaled a new recognition, not only of the Joshua tree, but of the desert environment.

The story of Joshua Tree National Monument highlights two important facets of conservation history: it demonstrates the activities of a representative type of environmental activist, and it illustrates the larger cause in which she became involved. For in her role as promoter, organizer, publicist, and philanthropist, this energetic, determined, and at times cranky

society matron both reflected and contributed to a heightened appreciation of America's desert heritage.<sup>3</sup>

B. The Monument Is Established

On August 10, 1936, President Roosevelt signed a proclamation establishing Joshua Tree National Monument. Approximately 825,340 acres of desert were officially set aside as a desert reserve. No administration was established on site until September 1940, when James E. Cole, the first superintendent, transferred from Yosemite National Park. Headquarters of the monument were established at Twentynine Palms.

The area included in the Joshua Tree National Monument withdrawal was situated in San Bernardino and Riverside counties, California. Its approximate boundaries were the San Bernardino baseline on the north, the right-of-way of the Metropolitan Water District Canal on the south, Morongo Creek on the west, and the Coxcomb Mountains on the east.

The monument was established by a presidential proclamation issued under the authority contained in the act of June 8, 1906, which provides for the preservation of "historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States."

1. Geological Features

The Joshua Tree National Monument area is California desert country representative of both the Colorado and Mojave deserts, which merge within its boundaries. It is typical of that portion of the

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3. Conner Sorensen, "Apostle of the Cacti: The Society Matron as Environmental Activist," Southern California Quarterly LVIII, n. 3 (Fall 1976): 423-24. Much of this background material was taken from this article, encompassing pages 407 to 424.

desert region of the southwest known as the Basin and Range Province. For this reason, it has great geological interest. The relief of the area is due to extensive block faulting by which large sections of the earth's crust have been broken, tilted, and raised. The area is notable as an example of basin and range physiography and as a type of relief formed by block faulting and subsequent extensive erosion under desert conditions. The resulting remarkable rock formations, deep canyons, and broad basins provide magnificent scenic beauty.

## 2. Flora and Fauna

The monument embraces a wide variety of biological environments, with both Great Basin and Sonoran life zones represented. Three ecosystems exist--in the two desert environments and the oases. The area is rich in a variety of plant species, some being rare and endangered. The monument was established primarily to preserve not only a typical Joshua tree forest, but also a wealth of other desert flora that seemed to occur in greater abundance in the monument than in other comparable desert ranges. In addition to the Joshua tree, the monument includes the California native fan palm, the pinyon pine, California juniper, manzanita, desert willow, scrub oak, smoke tree, cottonwood, palo verde, sagebrush, and mesquite. Other plants include the Mojave yucca, bladder-pods, catsclaw acacia, barrel cactus, several chollas, ocotillo, nolina, creosote bush, and many others.

Most of these plants are essential to desert wildlife, which use them as food or water sources, for cover, or as residences. Animal life includes migratory creatures such as the coyote, bobcat, kit and grey foxes, and birds. Various reptiles--a wide variety of snakes and lizards and the desert tortoise--are present. Smaller rodents include the desert chipmunk (antelope ground squirrel), the white-footed mouse, the pack rat, and the kangaroo rat. Larger animals such as jackrabbits, ringtail cats, badgers, bobcats, and mountain lions are also found. The two largest animals are the California mule deer and the desert bighorn, which are seldom seen but inhabit the remote mountain regions of the monument.

### 3. Points of Interest

This unspoiled desert area was seen to be rich not only in scientific and biological data, but in scenic and recreational values as well. Although no development specifically aimed at promoting tourism had occurred, several scenic spots already were luring people into the monument, which was divided naturally into two major units. Pinto Basin to the east, bordered by mountains, comprised about two-thirds of the area. In contrast to the higher western section, Pinto Basin seems most characteristic of the true desert. In the basin vegetation is sparse and the encircling mountains are practically devoid of vegetative cover. It is an area of extreme temperatures and little water. To the west, separated from Pinto Basin by the Hexie Mountains and an extension of the Pinto Range, lies a group of valleys about 2,000 feet higher in elevation. In these upper valleys are huge outcroppings and boulder piles of eroded granite. On the summit of one of the peaks of the Little San Bernardino Range, at 5,185 feet elevation, is an outstanding scenic auto viewpoint--Keys View (Inspiration Point, Salton View).<sup>4</sup> From the crest a spectacular view unfolds encompassing the Coachella Valley, the Salton Sea, and Mounts San Jacinto and San Geronio. On clear days it is possible to see Signal Mountain in Mexico, some ninety miles south.

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4. A 1942 map of Riverside County published by the Automobile Club of Southern California referred to this spot in Section 7, T3S, R8E, as "Inspiration Point." It was earlier referred to as Keys View because the road to it was built by William F. Keys. Because Keys was still living at the time discussion of a formal NPS name for the site began, the use of his name in any official designation of the spot was precluded by established procedure. "Salton View" was the preferred alternative of the Park Service and was instituted in 1948. In an interview with Art Kidwell, Frank Kiler recalled working on this road with Keys and Jeff Peeden. Straight Joshua trees were dragged behind wagon wheels to produce a track. Small brush was pulled out of the way and rocks pitched aside to make the road. Kiler thought that Keys had built it as a way to make some money from tourists, because he set a locked cable across the road with a sign telling people the rate to go through and see the view after picking up a key at Keys Ranch. Kiler interview, Jan. 13, 1978. In 1974, several years after Keys's death, the point was renamed Keys View.



#### 4. Prehistory and Archeological Sites

Early archeological work was conducted within the monument by Mr. and Mrs. William H. Campbell, who made their home at the Twentynine Palms oasis in 1925. They became interested in the history and artifactual remains of the former aboriginal inhabitants of the area through their friendship with Bill McHaney, who had a thorough knowledge of the country and of the customs, living habits, and migrations of its last Indian inhabitants. McHaney's statements aroused in the Campbells a deep interest in local archeology. Although the Campbells had little formal training in archeological or ethnological methodology, they were extremely enthusiastic and conducted their fieldwork under the auspices of the Southwest Museum in Los Angeles. Through their avid research and close observation, much information on the early inhabitants of the monument was revealed. Involved not only in research and preservation, they maintained a desert branch of the Southwest Museum at Twentynine Palms where they displayed a varied collection of Indian artifacts that had been assembled, cleaned, repaired, and properly catalogued. Through public awareness they hoped to teach local residents the importance of leaving remains undisturbed until they could be properly studied in place. The Campbells investigated numerous late aboriginal caves and campsites near Twentynine Palms and found arrow points, pottery, beads, metates, manos, petroglyphs, and pictographs left behind by the Serranos, Chemehuevis, and Paiutes who occupied the oasis area until about 1913. Their first monograph was An Archaeological Survey of the Twenty Nine Palms Region, authored by Elizabeth W. Crozer Campbell and published in 1931.

The Campbells then turned to the study of the Pinto Basin, which turned out to be a rich archeological site. There, in prehistoric times (Pleistocene Epoch), a moist climate existed and a small stream once flowed, ending in a lake about whose borders a primitive people lived four to five thousand years ago. There the Campbells discovered split prehistoric camel and horse bones and chipped artifacts. Later evidence has shown that prehistoric animals definitely were killed and eaten here. Fossilized bones of camels, horses, antelope, and ground sloths have been found imbedded in shore deposits. Pinto

Man, as the early inhabitant of this basin is called, represents one of the first "early man" areas located in California. He hunted with atlatls, and his distinctive crude flint arrow points, as well as other evidences of a simple culture (drills, knives, pestles, hammerstones, scrapers), are still found in the clays and gravels of the old lakeshore. After the last ice age, as rainfall lessened and the stream and lake dried up, these early inhabitants left. A second desert monograph, co-authored by Elizabeth and William H. Campbell and entitled The Pinto Basin Site: An ancient aboriginal camping ground in the California desert, was published by the Southwest Museum in 1935.

Following this pioneer work, the archeology of the monument was neglected until 1957. In that year the National Park Service engaged the Department of Anthropology of the University of Southern California, Riverside, to institute a research program and through field surveys to compile concise information regarding the archeological resources of the region and supply additional information on the lifestyle of the prehistoric peoples of Joshua Tree National Monument.<sup>5</sup> From 1957 to 1959 William Wallace supervised survey work in the Deep Tank-Squaw Tank area. Twenty-three campsites apparently belonging to the last phase of aboriginal occupation were found. Wallace also surveyed the Sheep Pass region. Two more surveys, in 1959 and 1961, produced sixteen sites. A reconnaissance survey of Indian Cove in October 1965 found four more, and another six were located during additional fieldwork in the area. In the spring of 1968 the Barker Dam region was examined and twenty sites discovered. Other areas, including the Keys Ranch and the Oasis of Mara, were surveyed in 1973. The only excavation that has taken place in the monument was carried out by Wallace at a rock shelter at Squaw Tank in 1958.<sup>6</sup>

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5. William J. Wallace, "An Archaeological Reconnaissance in Joshua Tree National Monument," Journal of the West, v. III, n. 1 (January 1964): 90.

6. United States, Department of the Interior, National Park Service, Environmental Assessment, Natural Resources Management Plan, Joshua Tree National Monument, California (Denver: Denver Service Center, 1974), pp. 24-25.

Archeological remains within the monument represent two major periods of aboriginal occupation separated by a period of several thousand years. The oldest period is represented by Pinto Man. More recently, nomadic groups of Shoshonean and occasionally Paiute peoples occupied the monument area, living around water holes and springs until the land became settled by whites in the early 1900s. Serranos occupied much of the monument, including the higher west end. Chemehuevi territory lay in the mountains to the east. During the warm summer months these Indian groups migrated up to the pine forests of the San Bernardino Mountains to the west, returning to the desert for the colder months. Because mobility was essential to finding sufficient food and water, these early inhabitants did not build permanent structures, but utilized rock caves, overhangs, and other natural shelters as homes. They subsisted on local plants and seeds that they gathered, supplementing that diet with small game. Water was scarce, found in a few springs or natural rock basins or tanks. Most campsites were established at some distance from water sources so that game would not be frightened away. Although the Indians in this district had to work hard for a living, it was possible for them to live in relative comfort.

The types of archeological resources recorded in the monument include shallow middens, rock shelter and cave sites, and petroglyph and pictograph sites. The Indians that lived several hundred years ago in the middle and western portions of the monument left behind much visible evidence of their activities. Artifacts such as flints, pottery, beads, metates, and manos have been picked up. Petroglyphs have been found hammered into canyon walls and boulders along washes in the Hexie and Cottonwood mountains. Pictographs in red, black, and white have been found on the ceilings and walls of rock shelters. At some campsites there are deep mortar holes in small boulders or bedrock mortars in the main rock formation. Often campsites are marked only by pieces of wood or charcoal, broken metates and manos, a few scattered flint flakes and potsherds, or simply by smoked ceilings. Because it was inconvenient for migratory peoples to carry all their possessions with them, they often left heavy cooking pots and ollas near a campsite for their return, and these have been found in shelters where they were stored.

Portions of Indian trails may be found in a few places, visible on hillsides. Used chiefly as food/migration routes, linking water holes, they were marked by blazes or stones. Campsites have been found at Mystery Hole, Sneakeye Spring, Rattlesnake Canyon, Willow Hole, Barker Dam, Hidden Valley, Juniper Flats, Squaw Tank, White Tanks, Twentynine Palms oasis, Pinkham Spring, Conejo Well, Lost Indian Tank, Cottonwood Spring, Ivanpah Tank, and Mano Spring. Pictographs are located at Stirrup Tank, Hidden Valley, Hidden Valley Campground, and Barker Dam. Petroglyphs are found at Porcupine Wash, Smoke Tree Wash, Lost Indian Tank, and Stirrup Tank.<sup>7</sup>

In 1981 some archeological survey work was undertaken in connection with a road improvements project within the monument. Twelve historic sites were surveyed. Six of them related to activities predating the establishment of the monument and were associated with mining and refuse dumping. The other six sites related to modern littering and vandalism or to National Park Service construction and surveying activities.<sup>8</sup>

There are no archeological sites listed on the National Register of Historic Places for Joshua Tree National Monument. As archeological sites are identified and evaluated in the future, those that appear to meet the criteria of significance will be nominated to the National Register in accordance with Executive Order 11593, Section 2(a), and the National Historic Preservation Act of 1980. In the meantime, the Park Service is exercising caution in accordance with Section 2(b) to ensure that archeological resources are not destroyed or altered.

C. Problems with Landownership

The proclamation of August 10, 1936, established Joshua Tree National Monument "subject to existing rights and prior withdrawals." This meant that all valid private rights existing in lands within the

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7. "Master Plan Development Outline, Joshua Tree National Monument," Apr. 3, 1957, FARC, Laguna Niguel, Ca., n.p.

8. Simpson, Road Improvements Project, p. 57.

monument on that day were recognized and preserved and that prior withdrawals of public land within the monument for purposes not in conflict with the new reservation were to remain effective until revoked.<sup>9</sup>

The most difficult and yet the most pressing problem facing the proper administration and development of the new monument was the private land situation. Until private land holdings were diminished or abolished, little could be done to develop the area. Improvement of roads or drilling of wells, which would be necessary before large numbers of people could comfortably visit the monument, would have the unfortunate effect of increasing the value of private lands, thus hindering and making more costly their eventual acquisition.<sup>10</sup> When the monument was established, there were approximately 295,000 acres of alienated land--more than in all the rest of the National Park Service put together, except Boulder Dam, said the first superintendent.<sup>11</sup> Studies of the land situation in 1937 showed that the Southern Pacific Railroad Company controlled 231,000 acres, the California State School Lands consisted of 43,000 acres, and the remainder was made up of homesteads and other patented lands. There were also an estimated 11,000 mineral locations, including mining claims of twenty acres each and mill sites of five acres.<sup>12</sup>

#### 1. Railroad Lands

In 1862 an act of Congress gave the builders of the Union Pacific and the Central Pacific (parent of the Southern Pacific Railroad) alternate odd-numbered sections of land for ten miles on each

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9. Oscar L. Chapman, Asst. Sec. of the Dept. of the Interior, to Mrs. William F. Keys, Dec. 16, 1944, Central Files, 1907-49, RG 79, NA.

10. "Report on Field Inspection of Merriam, Apr. 14-15, 1938," p. 18.

11. James E. Cole, Supt., JTNM, Memo for Regional Director, Region Four, July 28, 1942, Roads 1938-43, RG 79, FARC, San Bruno, Ca., p. 2.

12. Superintendent's Annual Report, 1941, Central File, 1907-49, RG 79, NA, p. 3; A.W. Burney, Asst. Chief Engineer, NPS, Branch of Engineering, to The Director, NPS, July 16, 1937, Central Classified File, 1933-49, RG 79, NA.

side of the railroad line, plus a right-of-way 400 feet wide. (This accounts for the checkerboard pattern of landownership in many areas.) The Railroad Act of 1864 extended the grant to include lands for twenty miles on each side of the track. The government's purpose was to have the companies sell the land to settlers to help pay the cost of railroad construction. Although it was assumed that the sale of these lands at low prices on easy terms would bring in settlers rapidly, often it did not. Settlers were slow to buy and the railroads had to mortgage grant lands to remain solvent. Also, the land could not legally be sold until it had been surveyed, and this was a slow process, especially in the desert regions.<sup>13</sup> The railroads had originally been granted 190 million acres of public land, more than 500,000 of which were later included in several national parks and monuments. The Transportation Act of 1940 released about 350,000 acres. Much of the remaining 150,000 acres were in Joshua Tree National Monument.<sup>14</sup>

In February 1935 Minerva Hoyt had met with Park Service Director Cammerer, Dr. Harold Bryant, and Henry I. Harriman, president of the U.S. Chamber of Commerce, to discuss possible ways of gaining title to the Southern Pacific lands in the proposed monument. Harriman agreed to ask if the railroad would donate the parcels. The railroad replied that making a gift of the lands would be impossible, but that an exchange for federal lands might be arranged. This was attempted shortly after the monument was established, but by then the company professed disinterest. Further complicating the situation was the fact that the Taylor Grazing Act of 1934 had converted most public lands into grazing districts and so there were few opportunities for exchanging

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13. Robert W. Durrenberger with Robert B. Johnson, California: Patterns on the Land, 5th ed. (Palo Alto, Ca.: Mayfield Publishing Co., 1976), p. 61; Beck and Haase, Historical Atlas of California, p. 67.

14. John Ise, Our National Park Policy: A Critical History (Baltimore: Johns Hopkins Press, [1961]), pp. 482-83.

large blocks of land. As a result, the status of the railroad lands remained in limbo for several years after the monument's establishment.<sup>15</sup>

By 1938 much of the railroad land in the Pinto Basin had been acquired by private individuals but not developed. In the upper portion of the monument where living conditions were better, some railroad land had been acquired by settlers, with limited development work done.<sup>16</sup> By 1941 Southern Pacific holdings had been reduced somewhat due to congressional action by which the company relinquished its rights on unselected lands. By 1952 a total of 53,110 acres of Southern Pacific lands in the monument had been acquired over the previous three years by exchanging public domain for the privately owned land.<sup>17</sup>

## 2. State School Lands

The General Land Office around the turn of the century set aside every section numbered 16 and 36 of every township in the state for schools. During the time she was negotiating with Southern Pacific officials, Mrs. Hoyt persuaded the California legislature to grant 22,000 acres of school lands within the proposed monument boundaries. The grant was unacceptable to the federal government, however, because the state reserved mineral rights on the ceded lands. The question of school lands eventually was settled by federal legislation authorizing an exchange of state land for federal lands in California.<sup>18</sup>

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15. Sorensen, "Apostle of the Cacti," p. 421; Superintendent's Annual Report, 1941, Central File, 1907-49, RG 79, NA, p. 3.

16. Inspector P.T. Primm and Junior Park Naturalist James E. Cole, "Report on Joshua Tree National Monument," Dec. 27, 1938, pp. 3-4.

17. Superintendent's Annual Report, 1941, p. 3; "Monument Acquires More Private Land," Desert Trail, Mar. 27, 1952.

18. Sorensen, "Apostle of the Cacti," p. 423.

### 3. Homestead Lands

Willis Keys recalled that people started moving into the monument area when the Great Depression hit and the stock market fell in 1929. Desperate for some place to go where they could scratch out a living, many people came to the desert to homestead. Most of them soon found they could not succeed, even in the central part of the monument. Crops could not be grown in the sandy loam without irrigation or even by dry farming. Continued drought conditions eventually forced many settlers to give up and move on after they had ploughed the land, fenced, and often built small houses. When the monument was established, it contained eleven homesteads of 160 acres each, which were eventually bought by the government.<sup>19</sup> The deplorable condition of the roads at that time probably kept many people from acquiring property and building homes in the area. A special investigation of the monument during 1935-36, however, stated that several homesteaders had filed on lands in the monument, although they had neither established residences nor cultivated the land. The investigator pointed out that there was no way to make a living on a homestead except by raising stock and that required additional lands exceeding the limit of 640 acres. Most homestead entries were made, the investigator continued, for mineral development or for health reasons because the area was excellent for consumptives and asthmatics. Most of the homesteads were occupied by claimants only on weekends. Therefore, most entries could probably be cancelled because of noncompliance with residence requirements.<sup>20</sup>

By 1938 it was noted that private individuals had acquired railroad land in Pinto Basin and that in the western portion of the monument some government land had been homesteaded. Development work had been limited. Most settlers were dependent on government watering places, although a few wells had been dug that supplied enough water for domestic purposes. The holdings acquired by purchase and

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19. Wm. R. Supernaugh, Supt., JTNM, to Tom Vale, Jan. 14, 1960, RG 79, FARC, Laguna Niguel, Ca.

20. F.O. Martin, Special Agent, Div. of Investig., to Dir. of Investig., Mar. 18, 1936, Central Files, 1907-49, RG 79, NA, p. 2.



patent were selected in the most desirable parts of the monument. None of the owners had performed enough development to make a livelihood from their holdings, and were probably hoping to benefit financially from the area's designation as a national monument.<sup>21</sup>

As development of an improved road system began in 1941, the superintendent feared that more people might try to acquire private property in the cooler scenic part of the monument. By the mid-1940s it was becoming more and more clear that no further development of the monument could be made until the privately owned lands were acquired. Planning, therefore, would be at a standstill for awhile. By that time great strides had been made in eliminating thousands of invalid mining claims, but little had been accomplished with regard to acquisition of bonafide private land titles. The longer that situation continued, the more monument resources--natural and historical--remained in danger of being destroyed. Needed reasonable development was being delayed. It was hoped that by constantly pointing out these facts, sufficient support would arise for a comprehensive land acquisition program.<sup>22</sup>

Acquisition of private landholdings in the monument was a frustrating project that extended over a long period of time. During World War II even budget requests for small amounts of money for critical land acquisitions were not granted. Helping the situation to some degree was the fact that the Southern Pacific Company made an effort to retain the greater part of its holdings until the federal government was in a position to negotiate for their purchase. Attempts of the government to obtain private lands were made by cancelling homestead entries for noncompliance with requirements, trading private lands in the monument for government lands outside, acquiring by exchange with the state

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21. Primm and Cole, "Report on Joshua Tree National Monument," 1938, pp. 3-4.

22. Conrad L. Wirth, Chief of Lands, to John L. Duck, Mar. 15, 1945, Central Files, 1907-49, RG 79, NA.

tax-deeded lands that had been reimbursed to the state through condemnation proceedings, and finally, by outright purchase.

The status of landownership in the mid-1940s was as follows: of the monument's gross area of 838,559.85 acres, 655,961.33 were in United States ownership. In nonfederal status were the remaining 182,598.52 acres of which 135,515.30 were owned by the Southern Pacific Land Company; 25,637.92 were in other private holdings; and 21,445.30 acres were state school lands. A current threat to the monument was the reported proposal of a prospective purchaser to acquire from the railroad company some of its sizable holdings in Lost Horse Valley to subdivide into ranch estates and thereon to build a hotel, golf course, and swimming pool. This would, of course, have greatly diminished the public value of the most important part of the monument.<sup>23</sup>

In the mid-1950s there were about one thousand five-acre tracts in the Pinto Basin,<sup>24</sup> and by January 1960 the superintendent noted six or more landowners with title to one to five sections each, mostly in the west half of the monument. In all, about 20,000 acres still remained in private ownership at that time.<sup>25</sup>

#### 4. Mineral Lands

At the time of the October 1933 executive order for withdrawal of land for the proposed Joshua Tree National Monument, mining was in progress in the region. It was reported that seven mines within the boundaries were producing and numerous prospects were being worked. Opposition began to mount quickly against monument status for the area if it meant this activity would have to stop. It was

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23. Newton B. Drury, Director, NPS, to the Hon. Will Whittington, House of Representatives, July 9, 1945, Central Files, 1907-49, RG 79, NA, p. 2.

24. Jim Saulsbury, "The Battle of Joshua Tree: Mining Vs. Recreation," Daily Sun (San Bernardino, Ca.), Oct. 14, 1954.

25. Supernaugh to Vale, Jan. 14, 1960.

suggested that if the area were designated a national park, the right to file mining claims not be withdrawn. As the city engineer of San Bernardino argued, "this is an area richly mineralized and in which much prospecting and development work is being done at the present time, and to withdraw this land from mineral entry will work an injustice to the mining industry as well as to the two interested counties, San Bernardino and Riverside."<sup>26</sup>

The presidential proclamation of August 10, 1936, establishing the monument reserved the lands therein described from all forms of appropriation under the public land laws, including mineral lands and deposits, subject to valid existing rights. No new mining claim locations could be made after that date nor could claims covering the extension of orebodies then being worked in existing claims. Any valid claims made prior to that day were not affected by establishment of the monument. The new area included the principal mineral sections of Riverside County. The Twentynine Palms and Virginia Dale mining districts were very active and several properties were being developed. The Gold Crown Mining Company on the San Bernardino-Riverside county line had a fifty-ton cyanide plant operating at capacity. There was also considerable activity and prospecting in the Piñon and Eagle Mountain districts. A custom plant was operating in the Cottonwood Mountains treating ore from several small properties in the area.<sup>27</sup>

Records of the U.S. Bureau of Mines showed that in 1936 there were seven mines operating in T3S, R10E, and adjacent townships.

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26. Gordon Stewart, U.S. Mineral Surveyor, City Engineer of San Bernardino, Ca., to Department of the Interior, Feb. 20, 1934, Central Classified Files, 1933-49, RG 79, NA.

27. State of California, Department of Natural Resources, Division of Mines, California Journal of Mines and Geology, Quarterly Chapter of State Mineralogist's Report XXXII 32, no.1 (January 1936): 382.

Fifteen hundred tons of gold ore were milled, netting approximately \$22,000 (in 1937 production dropped to 1,400 tons netting \$10,090).<sup>28</sup>

The unrest in the mining community left uncertain the question of final boundaries for the monument. Because it was not known whether mining was economically important, it was recommended that no action be taken to change the situation during the next few months until concrete facts could be secured. In December 1936 the superintendent of Yosemite National Park requested the Division of Investigations of the General Land Office in San Francisco to investigate mining locations and unauthorized grazing within the monument boundaries. During March 1937 an investigation of the monument was made, and among the topics addressed were minerals and ore deposits.

The investigator noted first that ores of economic importance occurred over the major portion of the monument. At the time of his field studies there were more than forty groups of mining claims (150 locations) being actively developed, and commercial ores had either been blocked out ready for milling or were being milled. Most of the ores on these properties had been discovered and developed since 1932 and prospecting was still active at the time of withdrawal of the area from mineral entry. Commercial ores being mined contained principally gold, silver, copper, and iron, but there also occurred some secondary minerals valuable chiefly for their varied coloring and smoothness when polished. Gold was the principal mineral being mined and was being recovered by amalgamation and cyanide processes.

Several mills having a capacity of from two or three tons to sixty tons in twenty-four hours were in operation. The mine run of the ores was reported to have a value of \$10.00 to \$100.00 per ton but upon examination . . . it was determined that the average value of the ore milled was approximately

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28. Frank A. Kittredge, Reg. Dir., Region Four, Memorandum for the Director, Apr. 11, 1939, Central Files, 1907-49, RG 79, NA.

\$18.00 per ton, with a recovery of from 65% to 70%, mining and milling costs varying from \$5.00 to \$10.00 per ton. Production of ore from the different mines varied from two or three tons per day to thirty tons per day, the average production of ore per day from the entire area of the Joshua Tree National Monument amounting to approximately one hundred tons per day at the time of this investigation. . . .<sup>29</sup>

Investigator S.E. Guthrey noted that practically all of the ores being produced and developed occurred in the easterly two-thirds of the area, east of R8E. To the west economic minerals had been developed in only three mines--the Lost Horse, Desert Queen, and D.C. Mine (location unknown)--which were idle in 1937. It was the investigator's opinion that sufficient amounts of gold and other valuable minerals had been produced and developed in the eastern portion of the monument to warrant its being considered valuable for minerals.

During the investigation it was estimated that 250 people were employed in the various mines and mills, with a payroll of about \$40,000 per month. Because the mines were all lode or underground ones and no open cut or placer methods were used, the investigator felt that the location of mining claims and of mining and milling operations within the area would not detract from or destroy scenic or recreational values. A large number of mine owners, operators, prospectors, and others were protesting the withdrawal of land in the monument from mineral entry and location, Guthrey noted, in addition to protests from the Los Angeles Chamber of Commerce, the Mining Association of the Southwest, and the California State Mining Bureau.<sup>30</sup>

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29. Guthrey to Dir. of Investig., May 6, 1937, p. 9.

30. This data pertaining to mining operations in the monument was taken from Guthrey to Dir. of Investig., May 6, 1937, pp. 8-10, 20-22.

A comparison of the number of working mines and of the amount of ore handled by the mills in both the western and eastern portions of the monument showed that the latter was definitely the active mining region. Although gold in the mines of the upper valleys existed in pockets that would always attract prospectors and spasmodic mining activity, the gold in the eastern portion was found in extensive mineralized ore deposits that offered inducements to large operators and investors.

By 1941 the superintendent noted that considerable headway was being made toward decreasing the number of mineral claims in the monument. Of all those examined by the Division of Investigations, 3,170 claims were being adversely reported to the General Land Office, 600 more cases were almost complete but not yet reported, and notices of cancellation had been sent to 2,170 claimants with only nine appeals. (As closely as can be determined, there were about 8,800 purported claims in the area when the monument was established. Of the 3,782 claims in the western half, only 28 were found to be valid. Of the 5,000 claims checked in the eastern part, 405 were valid.)

Mining interests still were agitating through the Mining Association of the Southwest to reopen the monument to prospecting and claim location. Due to efforts of this association, resolutions favoring mining in the monument were adopted by several southern California organizations and sent to Congressman Harry R. Sheppard who in February 1939 introduced a bill to extend the mining laws of the United States to the monument. Soon after the administrative office at the monument was established, the superintendent contacted many of these organizations and persuaded several of them to reverse their actions. Sheppard thereupon reversed his stand and the bill was not reported out of committee. Then the Mining Association of the Southwest attempted to organize miners and interested groups to agitate for a congressional bill to open the monument for mining for strategic defense minerals.<sup>31</sup> That bill would have permitted prospecting and mining in the monument for a

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31. Superintendent's Annual Report, 1941, pp. 3-4.

period of ten years. The argument of its proponents was that "gigantic deposits of mineral and metal are being held out of the channels of the national defense program while this country imports tungsten and other wartime necessities from foreign countries." The miners claimed that if they were allowed to work the monument "they could make untold quantities of strategic materials available to the country."<sup>32</sup> That attempt to penetrate the monument under the guise of assisting in national defense also failed.

By 1942 there were only a few mills in the monument and none were active. Mining activity continued to taper off during the war years due to several factors: Limitation Order L-208 of the War Production Board, suspending gold-mining operations in the United States; a wartime shortage of men and materials; and the lack of strategic minerals in the monument. In 1946, after L-208 was repealed, Representative Sheppard introduced another bill, H.R. 4703 (79th Congress), which provided for reducing the boundaries of the national monument while retaining the scenic western portion and for the purchase by the government of private lands. It would delete the eastern portion of the monument that held the more important mineral and ore deposits and that was considered less scenic. Even this compromise met strong opposition, from people who had spent time and money building homes and developing water in the western part of the monument and did not want to have to sell, and from groups such as the Western Mining Council which felt that mineralized ores were scattered over the entire monument and that therefore the whole area should be reopened to mining. An example that was continually thrown forward of the feasibility of this type of arrangement was Death Valley National Monument, where mining had been first restricted and then permitted. Mining interests felt that similar legislation, allowing a combined mining and recreation area, was called for at Joshua Tree.

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32. "Strategic Metal Search Proposed," Los Angeles (Ca.) Times, June 23, 1941.

In response to H.R. 4703, the National Parks Association undertook to secure more definite information on the mineral and ore deposits within the monument. Their report noted first that there had been considerable gold prospecting in the monument area with many claims located and a few actually showing a profit. Most of the claims, however, were of marginal importance and similar in value to those made anywhere else in the southern California desert. A few mines were still operating after the monument was established, but all were idle during the war. Iron was the only other commercially important ore--the Iron Chief deposit being the most important in southern California and of increasing importance after establishment of the Kaiser plant at Fontana. Two copper mines and one lead-silver mine were located within the area to be excluded by H.R. 4703. Twenty-five gold mines were situated within the part of the monument that would remain in that status under the Sheppard Bill. Most of the important gold strikes had been made in the Pinto Mountain Range in the north-central region, while the other ore deposits were in the Eagle Mountains to the southeast.<sup>33</sup>

Sheppard's bill to delete the eastern end of the monument remained in committee for a long time, rigidly fought by various mining groups endeavoring to secure a law whereby the entire reservation would be opened to prospecting and mining. Because he felt it was impossible at that time to come up with a coalition of interests, Sheppard decided not to refile the bill he had proposed originally to change the boundary lines. On March 26, 1947, Sheppard introduced H.R. 2795 to revise the boundaries of the monument. It would eliminate and open up over 300,000 acres of mineralized land. Specifically, the bill would delete from National Park Service control fifteen sections of good hunting country on the west end and large mineralized portions in the north and southeast of the

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33. Fred M. Packard, National Parks Association, "Report on the Mineral and Ore Deposits within the Joshua Tree National Monument, California," Dec. 17, 1946, Central Files, 1907-49, RG 79, NA.

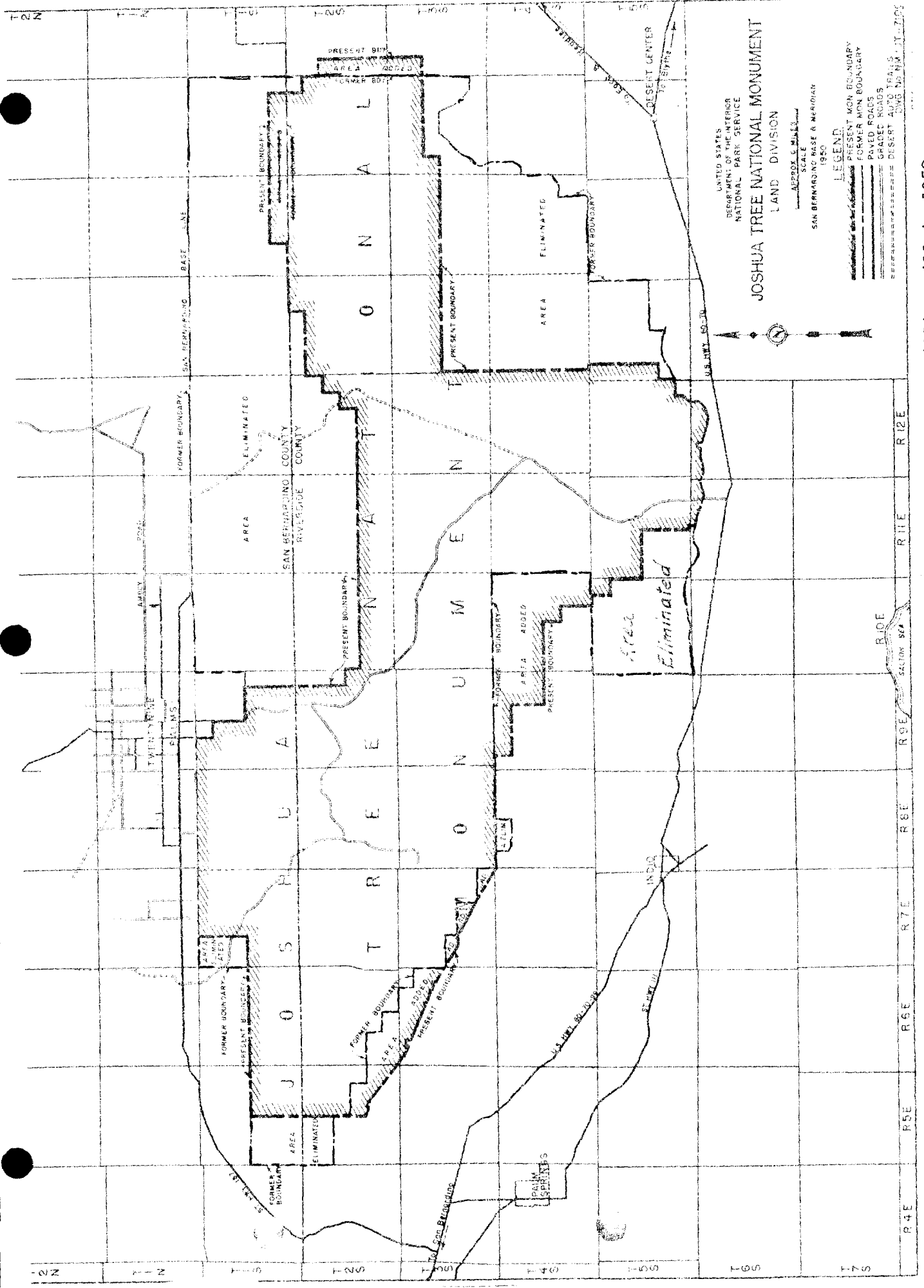


monument. That legislation also authorized an appropriation of over \$200,000 to acquire private lands in the monument.<sup>34</sup> It also was defeated.

On April 8, 1949, John Phillips, representative to Congress from the 22nd District, in which about three-fourths of the monument is located, introduced a bill, H.R. 4116, reducing the boundaries almost to those in the Sheppard Bill. It was defeated. Finally, H.R. 7934, entitled "A Bill To reduce and revise the boundaries of the Joshua Tree National Monument in the State of California, and for other purposes" (Phillips Bill), was passed on September 25, 1950. By Public Law 837 of the 81st Congress, some 318,112 acres were deleted from the monument and returned to the public domain, while 37,788 were added. The areas eliminated were those in which it was thought that minerals in commercial quantities could be developed. The monument was thereby decreased from 838,258 acres to approximately 557,934, resulting in a net loss of 280,324 acres. The National Park Service, from numerous studies and the experience it had so far gained in administering the monument, had concluded that the land remaining after the reduction would be sufficient for the proper care and management of the resources requiring protection. The boundary revision eliminated most of the mineralized areas around Pinto Basin, but retained the basin in the monument and the rim of mountains bordering it. The National Park Service believed that the deleted lands had been adversely affected by mining and it would best serve the public interest, simplify administrative problems, and reduce road maintenance costs if these sections were deleted. Greater protection could then be given to the more unspoiled parts of the monument. Lands, largely public domain, added to the monument would result in a more natural boundary, give greater protection to wildlife, and simplify administration. A joint survey by the U.S. Bureau of Mines, the U.S. Geological Survey, and the National Park Service decided which lands were mineralized and should be

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34. "The Shepard [sic] Bill," Joshua Journal (Joshua Tree, Ca.), Sept. 17, 1947.



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
LAND DIVISION  
JOSHUA TREE NATIONAL MONUMENT  
APPROX. 5 MILES  
SCALE  
SAN BERNARDINO BASE & MERIDIAN  
1980

LEGEND:  
 ——— PRESENT MON. BOUNDARY  
 - - - - - FORMER MON. BOUNDARY  
 ..... PAVED ROADS  
 - - - - - GRADE ROADS  
 REFERENCE TO DESERT AREA PLANS  
 AND DEVELOPMENT OUTLINES

Illustration 143. Map showing former monument boundary and boundary after passage of Phillips Bill in 1950. From Master Plan Development Outline, JTMM, April 3, 1957, FARC, IN.

returned to the public domain. Some sections in the west and southwest were deleted because of private ownership of land.<sup>35</sup>

It is interesting to note that subsequent activity in the deleted portions did not disclose any substantial yield of precious metals. Mining in the 1950s was minimal, both outside and inside the revised monument boundaries. Much of this was due to the fact that during the wartime scrap drives of the 1940s, dormant mine and mill plants were stripped of scrap metal, making them inoperable. Labor shortages had prohibited the employment of regular watchmen and properties were often left unattended. Much mine machinery, many ore cars, and other metal items had been taken. Also most of the mining in the area had been done in vertical or inclined shafts, and the long period of idleness had left them in bad condition. The rehabilitation necessary before new operations could start in the mines was too costly for many.

In 1952, due to press publicity that radioactive and other strategic minerals might exist in the monument, a portion of it was included in an airborne scintillometer survey undertaken as part of a Geological Survey search for radioactive minerals. There were no indications of occurrences of such materials that were considered significant enough to warrant ground checking. Thus another threat to the monument's integrity was averted.

Again in 1954 attempts were made to force opening of the monument to prospecting and mining. The pro-mining forces were spearheaded by the powerful Western Mining Council that stated there were strategic and precious minerals in the area. It was opposed by the Sierra Club and various local and national conservation groups.<sup>36</sup> Other than continual invasion by uranium prospectors, however, the national monument was not again threatened by mining interests.

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35. Wm. R. Supernaugh, Supt., JTNM, to Tom Vale, Jan. 14, 1960; Secretary of the Interior to the Hon. J. Hardin Peterson, Chmn., Comm. on Public Lands, House of Representatives, Apr. 28, 1950, Central Files, 1907-49, RG 79, NA.

36. Saulsbury, "Battle of Joshua Tree," Oct. 14, 1954.

## VIII. Roads After the Establishment of the Monument

### A. Road Conditions in the Late 1930s

The roads south of Twentynine Palms were in no better condition when the national monument was established than they had been for the last twenty years. This was not perceived as detrimental however:

Although the present roads by no means can be considered good, still they seem quite fitting to the spirit of this desert area. Although the greatest speed that can be made on the present roads is about twenty-five miles per hour, no greater speed is needed. . . . In general, all that is needed is to eliminate some of the kinks, to widen sufficiently to allow passing, and enough cutting of vegetation along the road to prevent the sides of the car from being scratched.<sup>1</sup>

Another assessment of the road system in the monument at that time noted that no roads had been constructed and only a small portion of the area was accessible by desert wagon trails. The principal route traversed the monument in a south/southeasterly direction from Twentynine Palms to Cottonwood Spring. Several short trails to mining properties branched off it, some passable by auto and some not. The more scenic area of the park was accessible from Twentynine Palms or Warren's Well. The roads in that area, however, were also sandy, narrow, crooked, and rough, leading to Lost Horse Valley, Quail Spring, and adjacent areas.<sup>2</sup>

The monument was accessible from U.S. Highways 99, 60, and 70, at Indio, Whitewater, and Cottonwood Pass. Grading and widening were seen as necessary for the roads before they could be used safely.

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1. Merel S. Sager, Park Planner, Memorandum for the Regional Director, Sept. 16, 1937, Central Files, 1907-49, RG 79, NA, p. 18.

2. Guthrey to Dir. of Investig., May 6, 1937, pp. 6-7.

The westernmost northern entrance road, the one most traveled by early visitors, entered the monument in the vicinity of Quail Spring and connected with the Twentynine Palms entrance road in the northeastern portion of Queen Valley. From this intersection a road ran south into Pinto Basin where it met the third northern entrance road from Old Dale leading through Cottonwood Pass and out of the monument to the south. From the Keys Ranch a branch road headed into Lost Horse Valley. It divided several times and provided adequate access to the area. Several roads also crossed Queen Valley. Pinto Basin and vicinity, comprising two-thirds of the monument, was served by an inadequate system of roads.

Two old mining roads impassable in the 1930s entered the monument from the south. The most westerly crossed the Little San Bernardino Mountains at The Blue Cut and led into Lost Horse Valley near Keys View. Its southern end was U.S. Highway 99 about ten miles northwest of Indio. Another road a few miles east led up Pushawalla Canyon into Queen Valley. The Pushawalla Canyon route passed three watering places--County Well, Henson Well, and Pinyon Well. At that time many of the Automobile Club of Southern California directional signs erected in the monument within the previous two years had already been badly mutilated.<sup>3</sup>

The only road going through the Pinto Basin from north to south was originally used to freight supplies from the Coachella Valley into the mining districts in and north of Pinto Basin. It was felt that if the National Park Service improved this route it would receive heavy use by mining interests hauling supplies and ore, compounding maintenance problems. The fact that the New Dale road served only commercial needs and could not be justified from the standpoint of recreational purposes also mitigated against its being repaired or reconstructed. From this one

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3. "Report on Field Inspection of Merriam, Apr. 14-15, 1938," pp. 15-18.



Illustration 144.  
Road to Keys View, 1940.



Illustration 145.  
Road between White Tank and Pinto Basin, n.d. Photos courtesy JTNM.

main road, trails branched off to small mining operations and watering places. From the Pinto Basin road a branch led into the upper valleys of the monument through Wilson Canyon and connected with a branch to Twentynine Palms and with another across the upper valleys past Keys Ranch and Quail Spring to the highway, about eighteen miles west of Twentynine Palms. Many other roads crisscrossed the park that were difficult to travel for one unfamiliar with the area.<sup>4</sup>

Although it was realized that some improvement would have to be made to some of the monument roads to provide at least one loop drive in the area, the land ownership problem in the early days was so involved because of private property and mining claims that it was almost impossible to plan any definite program of road improvement. In the beginning, other than a nominal amount of maintenance, officials would only provide road informational and warning signs. The maze of mining and cattle roads were a lure to some drivers who would find themselves in dire trouble when their car broke down in a deserted area during the long hot summer. Actually this approach tended to be thought of as the proper one because it avoided over-development at the expense of wilderness values.<sup>5</sup>

#### B. Development of a Better Road System

The National Park Service intended eventually to provide sufficient good roads so that visitors could traverse the scenic parts of the area without danger to themselves or damage to their cars. The development of a road system in the monument began early in 1941. By March stretches of the desert road between Twentynine Palms and Indio had been improved. A branch road led from this road into the Pinto Basin and circled back through Old Dale to Twentynine Palms, connecting with the Amboy road near Old Dale. A second loop used a portion of the

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4. Primm and Cole, "Report on Joshua Tree National Monument," 1938, p. 4.

5. A.E. Demaray, Acting Director, National Park Service, to Edmund C. Jaeger, Dec. 11, 1940, Central Files, 1907-49, RG 79, NA.

main road and swung west in a wide semicircle, returning to the Twentynine Palms highway at Joshua Tree Ranch. Side roads led to Keys View and Split Rock Tank. From the Keys View road--the principal scenic route--short spurs reached several points of interest. Another side road from the Twentynine Palms highway reached the foot of Rattlesnake Canyon in Indian Cove. Agitation in Riverside County for a road connecting Palm Springs with Twentynine Palms via Berdoo Canyon, The Blue Cut, or one of the other canyons tributary to the head of Salton Basin was continual.<sup>6</sup>

Construction work on monument roads was minimal through the early years because of lack of appropriations, because of an attempt to maintain a near wilderness condition, and because the law precluded any permanent improvement of roads unless the United States had complete title to them. Road improvement in 1941 centered primarily on those roads that were to become principal routes and consisted only of what was sufficient to permit safe travel: cutting down high centers and grading, widening out wheel tracks so that two cars could pass, removing rocks, filling sandy and rutted portions with crushed rock, and improving several water channel crossings and making the dips more pronounced to divert flood waters from the road. It was hoped that the idea could be maintained that a secondary type of road was sufficient for the monument. Existing roads with a little oil for erosion control were considered ample. Without oil, the roads would develop into troughs and canals. It was suggested early in the monument's development, however, that the northern entrance from the state highway west of Twentynine Palms be closed, providing only one access from Twentynine Palms and one from Indio. Only two entrances would simplify protection and add to the sense of entering the desert. All that was really seen as essential at this time were additional parking areas and overlooks at Keys View.<sup>7</sup>

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6. Goodwin, T.R., Supt., Death Valley NM, transmittal letter of "Report on Joshua Tree National Monument," Mar. 18, 1941, Central Files, 1907-49, RG 79, NA.

7. Vint, T.C., "Notes on Joshua Tree National Monument Trip, May 9-12, 1941, in accompany with Superintendent Cole, Messrs. Davidson & Lange," Central Files, 1907-49, RG 79, NA, p. 2.



Confining the number of road entrances to one on the north boundary and one on the south was still a future aim in 1943, as was elimination of several little used roads. It was further suggested that the primary roads be constructed to a standard similar to those in Death Valley National Monument, which was somewhat below the standard of primary roads in areas such as Yosemite and Sequoia. The secondary roads could conform to a somewhat lower standard of gradient and alignment with oiled surfaces.<sup>8</sup>

By 1945 the minimal actions taken on monument roads back in 1941 because of limited appropriations were causing problems. At that time the monument had been authorized only to improve existing roads. All those roads had been developed by use. When they encountered large rocks they went around them. Many of these the staff had moved with a power grader, but many were either too large, embedded, or bedrock that could not be moved. Some were covered over and had since been uncovered by erosion. Others were left and the road merely improved around them. As a result, by 1945 there were many sharp radius turns that were difficult to maintain and were hazardous because of their short radii and loose sand. Maintenance on them was difficult and expensive.

By 1948 there were 78.5 miles of minor primary roads that were kept in good condition, except for a 5-mile stretch through Pinto Basin; 36.8 miles of minor secondary roads that were just passable for drivers familiar with the desert; and 88.5 miles of administrative and protection roads receiving little attention other than keeping them passable for monument equipment.<sup>9</sup> In 1949 it was noted that a total of twenty-two roads crossed the monument boundaries, mostly of a good desert type.

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8. Newton B. Drury, Director, NPS, Memorandum for the Regional Director, Region Four, Feb. 19, 1943, Central Files, 1907-49, RG 79, NA.

9. Custodian's Annual Report, transmittal letter of May 19, 1948, Central Files, 1907-49, RG 79, NA.

By the end of 1949 road signs of heavy redwood with routed letters were being erected and received with favorable comments. On November 19, 1950, a twenty-one-mile strip of paved highway from the Twentynine Palms entrance to the 5,185-foot summit of Salton (Keys) View was formally dedicated. This road passed through the Split Rock area and Queen and Lost Horse valleys. It was pointed out at this time that campgrounds and new roads in the area had resulted in 72,600 visitors to the monument in 1949 compared with only 9,000 five years earlier.<sup>10</sup> In September 1950 entrance signs were constructed at the four main entrances.

C. Agitation for a Blue Cut Access Road

In 1952 the Baseline Highway Association and the city of Indio encouraged support for a proposed road through the monument from Indio to Twentynine Palms. In response the Desert Protective Council organized to oppose these efforts by commercial interests to build a shortcut through the heart of the monument via The Blue Cut and thereby channel trade from the U.S. Marine Base at Twentynine Palms to the Coachella Valley. In 1954 the California legislature requested the federal government to construct The Blue Cut road. By April of that year a large percentage of the main roads in the upper portion of the monument were paved. There were now 92 miles of primary roads and 106 of secondary roads and fire trails. In 1955 the Bureau of Public Roads reported on the proposed Blue Cut road and indicated that both proposed routes (Blue Cut-Fan Hill and Blue Cut-Pushawalla Canyon) were economically unfeasible. Both would also require excessive maintenance costs.

D. Agitation for a Berdoo Canyon Access Road

In 1958 L. Burr Belden wrote articles about the monument road improvements. He noted that the usual tour for visitors roughly

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10. "Joshua Tree Road to be Dedicated," Los Angeles (Ca.) Times, Nov. 18, 1950; "Ceremony Opens New Desert Road," Los Angeles (Ca.) Times, Nov. 20, 1950.

paralleled the Twentynine Palms-Joshua Tree highway in an arc dipping south through the northern border of the monument. It was a scenic drive but failed to give visitors a true idea of the variety of resources in the monument. Most of that drive was surfaced as was the side road to Keys View. No other road surfacing existed in the monument. The road from the Twentynine Palms entrance to Cottonwood Spring was a graded and maintained dirt road. The Dale Road had not been well maintained but was passable to cars except when the soils were very dry and cars dug in. Brief side excursions could be made to Split Rock, Split Rock Tank, Ivanpah Tank, and Salton View. West of Split Rock a side road veered north into the Jumbo Rock area. This side road also went to the Desert Queen Mine, the Keys Ranch, and Cow Camp. On the side trip to Salton View one could go west to Stubby Spring or east to the Lost Horse Mine. A longer side trip starting near Split Rock Tank followed a road south to Squaw Tank, where modern cars had to stop. To the south a jeep trail continued to Pinyon Wells. Another road turned east to the Gold Coin Mine and continued south from there to Indio via a county road down Berdoo Canyon. The Dale entrance road took off south about twenty miles east of Twentynine Palms via the Base Line Extension road.<sup>11</sup>

By 1958 partisans requested that the portion of the Berdoo Canyon Road within the monument be improved by the National Park Service. A few miles south of the proposed Blue Cut route, Berdoo Canyon was perceived as a quick connecting road between the Coachella Valley communities and Twentynine Palms. The paved county portion already joined the government dirt road in the Pleasant Valley area that continued on to the oasis. The Berdoo Canyon Road was not sanctioned by the National Park Service. It had been improved in 1958 despite earlier government protests to Riverside County. The county work done was on the old right-of-way established during the late 1800s. The

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11. L. Burr Belden, "Wonderland of Rocks and Superb Desert Vistas Abound Nearby," San Bernardino (Ca.) Sun-Telegram, Apr. 29, 1958, and L. Burr Belden, "Visitors Will Find Ghost Towns, Fantastic Rocks, Rare Plant Life," San Bernardino (Ca.) Sun-Telegram, Dec. 26, 1958.

National Park Service did not plan to grade the part of the old road within the monument, but could not legally prohibit travel on it because the route was a public right-of-way through the monument to Squaw Tank sanctioned by its long history of use since early mining days.<sup>12</sup> It was finally decided in 1958 that the Blue Cut road would not be built. The cost would far exceed its limited use and in addition would open up a wilderness area that needed to be maintained for wildlife protection.

E. New Roads in the 1960s and 1970s

A few new roads were built during the 1960s and 1970s. In 1963 a new Fortynine Palms Canyon road access was established to replace the old winding wagon track. By 1965 116 miles of road were maintained. The Geology Tour Road (Squaw Tank Motor Trail) was new in February 1970. This eighteen-mile tour with sixteen stops meets the Hidden Valley Road just west of Jumbo Rocks.

F. Recommendations and Evaluations

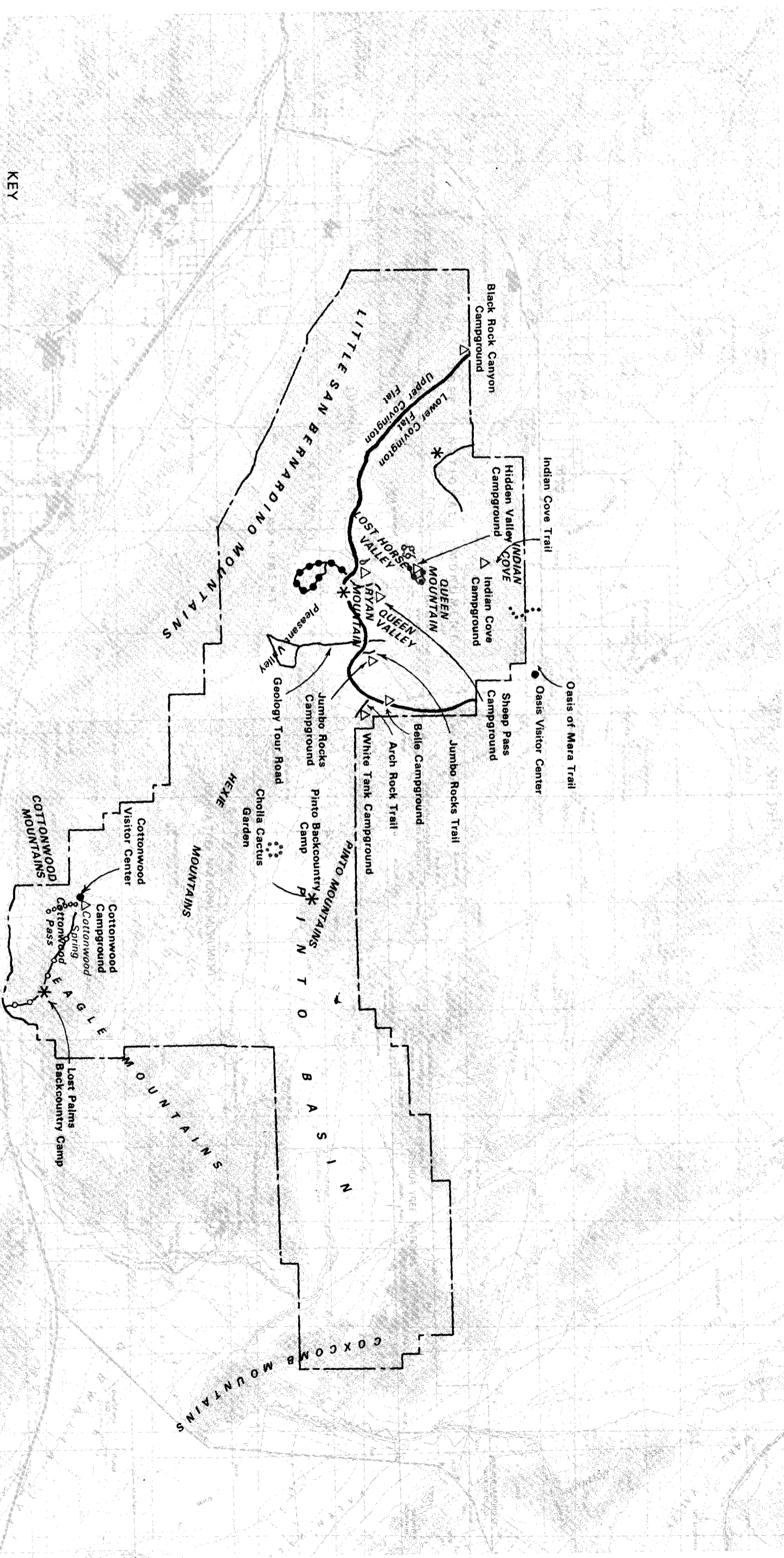
None of the roads in Joshua Tree National Monument are considered eligible for the National Register due to modernization and/or lack of integrity and historical significance.

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12. "Berdo Canyon Road Wanted," Riverside (Ca.) Daily Press, Nov. 11, 1958; Supt., JTNM, to E.C. Bower, Pres., Ramblers, Inc., Aug. 17 and 26, 1959, and Actg. Dir., NPS, to Mr. and Mrs. Arthur G. Morley, Mar. 30, 1959, FARC, Laguna Niguel, Ca.



- KEY**
- Barker Dam Trail
  - California Riding and Hiking Trail
  - Cap Rock Trail
  - Cholla Cactus Garden Trail
  - Fortynine Palms Oasis Trail
  - Hidden Valley Trail
  - Lost Horse Mine Trail
  - Lost Palms Canyon Trail
  - Moorten's (Morton's) Mill Site Trail
  - Ryan Mountain Trail
  - △ Campground
  - \* Backcountry Camp



**TRAILS AND CAMPGROUNDS**

JOSHUA TREE NATIONAL MONUMENT  
 CALIFORNIA  
 UNITED STATES DEPARTMENT OF THE INTERIOR  
 NATIONAL PARK SERVICE  
 DSC / SEPTEMBER 1983 / 156-25015

## IX. Trails of Joshua Tree National Monument

The 1949 Museum Prospectus for Joshua Tree National Monument pointed out that the monument was not a trail area as the term is commonly used. Most places were reached either by desert wheel tracks or not at all. Occasionally traces of primitive Indian trails could be seen, but no purely recreational trails were available to the public. It was noted that if the Twentynine Palms oasis were selected as a headquarters site, a loop nature trail should be created through it. Other sites where nature trails would be desirable were Indian Cove, Split Rock, Hidden Valley, Cholla Garden, and Smoke Tree Wash (petroglyphs).<sup>1</sup>

By 1957 four self-guiding natural history trails were in use and much enjoyed by the public. The establishment of trails at several other locations was then being studied. The four trails already in use were: the Indian Cove trail identifying the plant life and giving a short dissertation on the geology of the rock formations; the Oasis Nature Trail near the visitor center, teaching about oasis plants and animals and some human history associated with that spot; the Cholla Cactus Garden Nature Trail in Pinto Basin, explaining the significant plants of that locality and including a naturally occurring exhibit of a pack rat nest; and Cap Rock Nature Trail, identifying plants indigenous to that section of high desert country and containing an account of the geology of the White Tank quartz monzonite rock formations. Another self-guiding trail was proposed for the Split Rock area.<sup>2</sup>

Many of the monument's trails were added during the 1960s. At this time a system of surfaced trails was constructed through the valley to confine the public to established routes and prevent devastation of

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1. Museum Prospectus, Joshua Tree National Monument, June 7, 1949, FARC, Laguna Niguel, Ca., p. 3.

2. "Master Plan Development Outline, Joshua Tree National Monument," Apr. 3, 1957, pp. 9-10.

natural features. Previously visitors had scattered at will, inadvertently destroying plants. By 1965 the park contained 43.3 miles of maintained trails. In 1973 several trails were available: for short hikes--Jumbo Rocks, Cholla Cactus Garden, Cap Rock, Twentynine Palms Oasis, Hidden Valley, and Barker Dam; for medium-distance hikes--a 1.5-mile trail to Fortynine Palms oasis on the north boundary, a 4-mile trail to Lost Palms Canyon, and a two-mile trail to the Lost Horse Mine stamp mill.<sup>3</sup>

A brief rundown of the monument trails follows:

A. Nature Trails

1. Arch Rock (White Tank)

This trail is located in the White Tank Campground. During its 0.3-mile-long course through rock formations, it describes the geology of the area. The White Tank Trail leading to a natural bridge or arch was graded and ready for use by June 1953.

2. Barker Dam

Taking off from the Hidden Valley Campground area, this four-mile roundtrip trail points out evidences of human habitation and identifies plants and animals used and eaten by Indians. A shorter one-mile trail leads to the dam from the Barker Dam parking area.

3. Cap Rock

This 0.4-mile trail was laid out in June 1953 and opened to the public in October. It winds through a variety of high desert vegetation.

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3. United States, Department of the Interior, National Park Service, Environmental Statement, Proposed Wilderness Area, Joshua Tree National Monument, California (Denver: Denver Service Center, 1973), p. 10.



4. Cholla Cactus Garden

This 0.1-mile trail was opened to public use in August 1953. It is a natural cactus garden featuring plants and animals of the Colorado Desert.

5. Cottonwood Spring

The trail system at Cottonwood consists of five major trails, from one-half to eight miles in length. A self-guiding nature trail 0.5 mile long runs between the campground and Cottonwood Spring. The other four trails will be discussed under "Hiking Trails."

6. Hidden Valley

From the Hidden Valley picnic area leads a trail system 1.4 miles long winding its way through the jumbled rocks. Short and long loops of the trail interpret plant life and history of the area.

7. High View

This one-mile loop trail at Black Rock Canyon interprets the natural history of the pinyon juniper habitat.

8. Indian Cove

The original trail was completed in 1957 for public use. This has since been modified and slightly rerouted.

9. Jumbo Rocks

This signed 1.7-mile trail deals with high desert plants and geology.

10. Oasis of Mara

In 1950 construction started on the walks around the Twentynine Palms oasis area. In March 1951 the oasis footpaths were completed and oiled. This half-mile trail at park headquarters interprets the cultural and natural history of the Oasis of Mara.

11. Geology Tour Road

By February 1970 this motor nature trail had been established--an eighteen-mile round-trip dirt road winding south from west of Jumbo Rocks toward Squaw Tank.

## B. Hiking Trails

### 1. Fortynine Palms Oasis

The oasis is accessible via a 1.5-mile trail. Washingtonia fan palms grow here around a natural watering place hidden in the mountains extending across the north side of the monument. It was undoubtedly a perfect campsite for the early Indian inhabitants of the region because of the presence of a cool spring and a food supply from the fruit of the palms and from the pinyon trees on higher elevations.

In 1922 Mrs. Bernice Tucker of Twentynine Palms decided the oasis would be a good place to live. As a sideline she would sell water to miners in the area. After filing on the spring, she and her children packed in cement and tools, camped at the spring, and worked when possible between 1923 and 1933 to build a dam and clear the area for an access road and house. Running out of funds, Mrs. Tucker finally relinquished the water rights to the National Park Service.<sup>4</sup>

During 1941 the Fortynine Palms Canyon Trail was improved and made easily passable for foot and horse traffic. At the same time the oasis was cleaned up and debris removed from the spring. In 1948 a fire started by two teenage boys encompassed approximately one acre of the oasis, consuming a large number of the palms. The area is approachable only from Twentynine Palms. The trail leaves from a parking area on Canyon Road, four miles west of Twentynine Palms, and follows an old Indian trail into the canyon.

### 2. Lost Horse Mine

A four-mile round-trip trail from a parking area on the Keys View road leads to this historical site where the visitor can view a mine and stamp mill structure representing the monument's early gold mining history.

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4. Randall Henderson, "Trail to 49 Palms," Desert Magazine (December 1940), p. 26.

3. Lost Palms Canyon

The Lost Palms oasis was also burned over, during the summer or fall of 1944. By the mid-1950s, the old four-mile trail from Cottonwood Spring to Lost Palms Canyon was well marked and an inviting trip.<sup>5</sup> The Lost Palms Trail was rehabilitated in 1963. A new trail was constructed from Cottonwood Campground to Cottonwood oasis and the old Lost Palms Trail terminus. A side loop was built through the Cotton Spring area (old Winona mill site) and much new trail constructed to Lost Palms. The present trail leads through canyons and washes to the largest native oasis in the monument--over 110 California fan palms are found there.

4. Ryan Mountain

An approximately 1.5-mile hike leads to the summit of Ryan Mountain. Fine views are afforded of Queen, Lost Horse, Hidden, and Pleasant valleys. In 1963, 2.47 miles of trail were built from the parking area at Indian Cave, up Ryan Mountain, to an overlook on the highest point. Connecting trails were built between this trail and the Sheep Pass Group Campground.

5. Cottonwood Spring

a) Winona Mill

This half-mile trail leads east from the campground area to the mill site, the remains of a gold mill active in the 1930s. Because of its proximity to the campground, this trail is heavily traveled, passing through typical Colorado Desert plant and animal areas.

b) Mastodon Peak

A three-mile round trip from Cottonwood Spring, this trail leads east to Mastodon Peak via the Lost Palms Oasis Trail and then loops back west to the Winona mill site. From the peak one gains excellent views of the monument and the Salton Sea.

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5. Edmund Jaeger, "Monument of the Joshuas," Pacific Discovery 8, no. 3 (May-June 1955): 19.

c) Moorten's (Morton's) Mill

This trail basically follows an old freight wagon road down the wash south from Cottonwood Spring oasis into Cottonwood Canyon. About one-eighth of a mile down the canyon the Little Chilcoat Pass road bypasses a rock waterfall for a distance of about 300 yards. From the bottom of Little Chilcoat Pass the trail follows the canyon for another half mile to the mill site on the west hillside above the wash. The trail provides a grand opportunity to see plants unique to desert washes.

6. California Riding and Hiking Trail

Twenty-nine miles of this trail pass through the monument. Access to the trail is available at its junction with the Covington Flat, Keys View, and Squaw Tank roads, and at Ryan Campground, allowing for shorter hikes than the two to three days required to hike the entire length. The Ryan Campground is located at approximately the halfway point of the trail within the monument.

7. Recommendations and Evaluations

None of the hiking trails in Joshua Tree National Monument are considered to be historically significant.

X. Campgrounds of the Monument

A. Frontcountry Campgrounds

From the time of establishment of the monument, National Park Service officials had believed that in order to maintain the feeling of a true desert preserve, only a minimum of camping facilities should be provided. By 1949 several camping places had been designated, but there were no developed campgrounds. In June 1950, twenty-four fireplaces were placed in campgrounds and by September as many pit toilets had been completed and installed. In July 1950 eight tables were installed in campgrounds, bringing the total to thirty-eight. In late September 1950, the superintendent stated that six campgrounds had been developed that year with concrete tables and fireplaces and with pit toilets.<sup>1</sup>

By 1954 the monument had eight public camps--at Cottonwood Spring, Indian Cove, Belle, White Tank, Sheep Pass (group campground), Ryan, Hidden Valley, and Jumbo Rocks. In 1960 there were only seventy-two individual campsites and nine group sites available in the monument, and these were inadequate in view of increased visitor use.<sup>2</sup> It was still believed, however, that concession facilities were not necessary in the monument because overnight accommodations were available immediately outside the boundaries at Twentynine Palms, Joshua Tree, Yucca Valley, Indio, and other places. To retain the area's desert wilderness character, overdevelopment had to be avoided.<sup>3</sup> The monument now contains nine campgrounds. A brief description of each follows.

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1. Frank R. Givens, Supt., JTNM, to Harry C. James, The Trailfinders, Sept. 28, 1950, RG 79, FARC, San Bruno, Ca.

2. Supt., JTNM, to Regional Director, Region Four, May 5, 1960, RG 79, FARC, Laguna Niguel, Ca.

3. "Master Plan, Joshua Tree National Monument," 1960, FARC, Laguna Niguel, Ca.

1. Belle

Located about 1.5 miles south of the Pinto Wye junction, its main scenic interests are the gigantic boulders looming over the twenty campsites.

2. Black Rock Canyon

This camp contains one hundred campsites with flush toilets and running water. It is a fee area.

3. Cottonwood Spring

The original campground was established at the oasis in 1949. In 1950 concrete tables were installed, and in 1952 a water system was activated. Intense visitor use resulted in the destruction of much vegetation around the spring, where shrubs and tree limbs were chopped up for firewood. New campground construction was scheduled for 1962 in an area near the oasis with the spring being turned into a day-use nature area. The area in and around the spring was used as a campground until 1964, when that facility was relocated half a mile northwest. A comfort station, picnic shelters, and a campfire circle were finished in 1968. In 1977 the newer campground had sixty-two units with flush toilets and running water. Adjacent is the Cottonwood Group Camp. This is a fee area.

4. Hidden Valley

This campground was also established around 1949. In April 1950 concrete tables were erected there. In 1977 it contained sixty-two sites amid the picturesque rock formations of the Wonderland of Rocks.

5. Indian Cove

In 1941 the majority of winter camping in the monument was confined to Indian Cove (Rattlesnake Canyon). The area was not accessible by car to the rest of the monument except by leaving the monument and reentering by one of the northern entrance roads. This site had the benefits of isolation, an adequate water supply, numerous natural sheltered coves, a lower elevation and lower temperatures, and was in the center of an unsurveyed township so that all the land was

controlled by the federal government. No sanitary facilities were provided and no development other than road improvements had been made.<sup>4</sup> In 1950 concrete tables were added.

In 1977 Indian Cove Campground contained 114 sites on the north edge of the Wonderland of Rocks. It is reached from the Twentynine Palms highway between Joshua Tree and Twentynine Palms. The Indian Cove Group Camp contains thirteen sites, and reservations are necessary.

6. Jumbo Rocks

This campground was developed in 1950 with the erection of concrete tables. It was further expanded in 1964 so that by 1977 it was the monument's largest campground, containing 130 sites.

7. Ryan Riding and Hiking Campground

In 1977 this campground had twenty-seven sites and was the only one where horses were permitted, because of its position on the California Riding and Hiking Trail and the availability of hitching rails and feed troughs. (Black Rock Campground now also has a hitching area for horses.)

8. Sheep Pass

The layout work for the group camp at Sheep Pass was initiated in February 1954. In May seven tables and fireplaces were installed in the campground, putting it in service. About eight miles west of Pinto Wye, the camping area is nestled among large monzonite uplifts and boulders. In the 1950s it was used for camping and picnics, serving large groups of military personnel from the Marine Corps base north of Twentynine Palms, Boy Scouts and Girl Scouts, and other organized groups. In 1977 it consisted of six sites that must be reserved in advance.

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4. Superintendent's Annual Report, 1941, p. 2.

9. White Tank

This campground was in use by 1951. In 1977 it contained twenty sites.

B. Backcountry Campgrounds

Except for six major day-use areas, the entire monument is open for backcountry camping. Camping is prohibited within 500 feet of a trail or within 1 mile of an established road.

C. Recommendations and Evaluations

None of the campgrounds in Joshua Tree National Monument are considered to be historically significant.



## XI. Other Structures in Joshua Tree National Monument

### A. Development of Government Support Facilities

The development of support facilities at the monument was slow, the primary concern at the establishment of the park being improvement of the roads. "Early among these [development needs] undoubtedly will be some provision for a headquarters area, as the Superintendent is now renting office and residence in Twenty Nine Palms. We have as yet no space for warehousing nor the storage and repair of vehicles, equipment and tools."<sup>1</sup> No need was seen for overnight facilities within the monument because the entire area could be adequately seen in a day or two out of Twentynine Palms or Indio or other of the neighboring towns. Such concessions would detract from the area's sense of purity and isolation. Keys View was considered from an early date to need more surfaced parking areas and overlooks with footpaths to protect the ground cover. By 1943 there were still no government-owned buildings of any kind operated by the National Park Service in the monument. The buildings finally constructed, beginning in the late 1940s, will be discussed below.

#### 1. Utility Areas

By 1948 two 4,200-gallon oil storage tanks had been erected near the Pinto Wye road junction to store oil for repairing roads. Also erected was a temporary road equipment storage shed near the Pinto Wye road junction to protect new equipment from extreme weather conditions and thievery.<sup>2</sup> In 1952 it was noted that the monument had only one existing building, the equipment storage facility at the Pinto Wye utility area. The monument requested a maintenance shop and sheds and oil and gas storage facilities at the Pinto Wye utility area in 1954. By early 1956 there were four permanent buildings in the monument--the

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1. A.E. Demaray, Actg. Dir., to Edmund C. Jaeger, Dept. of Zoology, Riverside Jr. College, Riverside, Ca., Dec. 11, 1940, Central Files, 1907-49, RG 79, NA.

2. Custodian's Annual Report, transmittal letter of May 19, 1948, Central File, 1907-49, RG 79, NA.

shop and equipment storage building at Pinto Wye, and a shop and equipment storage building, a gas and oil storage building, and a headquarters building at the oasis. These were cinder block buildings on concrete slabs.<sup>3</sup>

A utility building in the Cottonwood District was finished by the summer of 1964. Another equipment storage building, at Lost Horse Valley, was built around 1967.

## 2. Headquarters

As early as 1937 a private business concern, the Twentynine Palms Corporation, offered to donate land at the Twentynine Palms oasis to the federal government for a headquarters site and nature study area. Four possibilities were considered for a headquarters location: 1) on donated land in Twentynine Palms, 2) on the quarter-section Indian reservation near Twentynine Palms, 3) somewhere within the monument where water had already been developed, or 4) within the monument where water could be developed.

The general opinion was that there were several advantages to having a temporary headquarters near Twentynine Palms because that was already the accepted center for the monument. It was suggested that no permanent buildings be erected until planning was further advanced. It was possible that a main entrance road might be developed from the south and Indio or Mecca be preferable as the clerical and administrative headquarters. It seemed desirable to remain uncommitted to Twentynine Palms and not accept donated land but lease property as needed.<sup>4</sup> The final completion papers in connection with the donation of

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3. Superintendent, JTNM, to Chief, Western Office, Division of Design and Construction, NPS, Dec. 6, 1955, RG 79, FARC, Laguna Niguel, Ca., p. 2.

4. John R. White, Regional Director, to the Director, NPS, Feb. 11, 1941, Central Files, 1907-49, RG 79, NA.

the oasis were not submitted and the deed recorded until May 1950. In this manner the National Park Service acquired 57.839 acres of the historical Oasis of Mara.

In November of that year construction started on the walks and walls around the oasis area. By May 1951 6,000 feet of block wall around the oasis had been constructed and by June concrete curbs around the headquarters parking area had been completed and the parking area paved. In October 1953 construction on the administration building at the east end of the oasis began with appropriate groundbreaking ceremonies. The building was completed in February 1954 and the dedication ceremony held on April 3 with a crowd of over five hundred people in attendance. An addition to the visitor center--the concrete block area now housing exhibits and offices--was completed in early 1964. The headquarters site at Twentynine Palms contains the monument administrative offices, a visitor center with exhibits and salesroom, a maintenance facility and museum storage area, and is the takeoff point for the Oasis Nature Trail.

### 3. Ranger Stations

The office and contact station in the Cottonwood District was completed by August 1964 and the Indian Cove ranger station in 1968. The Lost Horse fire guard station, built in 1953, and the adjoining residence, built in 1947, were part of an inholding that the National Park Service bought from Charles L. Stokes in 1958.

### 4. Employee Residences

Three employee residences around the Cottonwood District headquarters were completed by January 1964. A residence at the Indian Cove ranger station was finished in 1968. As of 1976 the monument contained eight quarters--five at Cottonwood Spring, one at Lost Horse, one at Indian Cove, and one at Keys Ranch. Cottonwood and Keys Ranch have mobile homes as opposed to "constructed" buildings.

## B. Miscellaneous Structures

### 1. Aircraft Warning Stations, Viewfinders, Plaques

A special use permit was issued to the U.S. Forest Service to install two aircraft warning stations in the monument for the Fourth

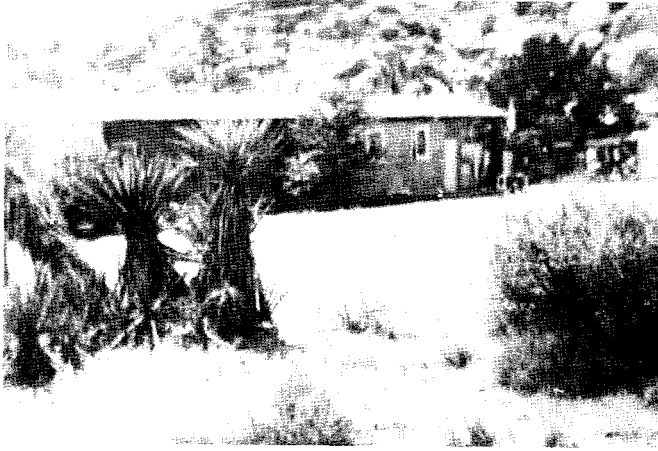


Illustration 146.

Exterior of Signe Ohlson home in monument, 1975. Courtesy JTNM.



Illustration 147.

Ohlson home, 1982. NPS photo by Linda W. Greene.

Fighter Command, U.S.A. In February 1943 the Split Rock aircraft warning station was activated and then deactivated in October. The Pinto Basin aircraft warning station was activated in March 1943 and closed and moved out in September. In 1951 viewfinders and a descriptive text were installed at Salton View. On May 30, 1955, a memorial plaque sponsored by the Joshua Tree Women's Club was dedicated at the overlook in memory of Mrs. Sherman Hoyt.

## 2. Ohlson House

In the northwest quarter of Section 3, T2S, R8E, is the Ohlson property, containing the burned-out shell of a brick house faced with pink stucco. The house ruin is filled with rubble and old metal parts. Nearby is a concrete building platform, perhaps the remains of a storage shed, around which are strewn the remains of dynamite boxes and some lumber. A cistern about 2½ feet in diameter lies south of the house and toward the wash that runs along its west side. Across the wash from the house is a bank of small caves formed by the erosion action of water flowing in the branch of the wash that runs in front of this rock cliff below a manmade dam. The Olsons made a patio out of the cave area by placing lawn chairs under the rock overhang. One of the small caves is walled in with masonry as if it had been used as a storage area. Faint pictographs can be seen on the rock wall behind the chairs and the ceiling of the overhang is fire blackened. In front of one of the caves is a bedrock mortar.

The house is not considered historically significant and is an intrusion on the natural scene and on an archeological site. It should be obliterated subject to archeological control to insure complete protection of the prehistoric resource.

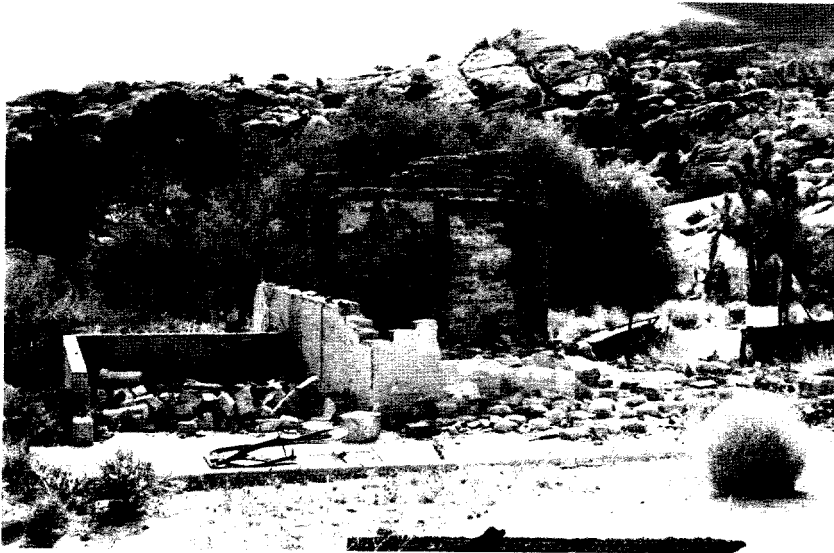


Illustration 148.

Ruins of Ohlson home, 1982.



Illustration 149.

Area of pictographs near Ohlson home. NPS photos by Linda W. Greene.

## XII. Other Historical Resources

### A. Desert Queen Ranch

#### 1. Origins of William F. Keys

Bill Keys's relationship with the Joshua Tree National Monument area was long, intimate, and unique. He arrived while the land was wide open and grass was knee-high, when neighbors were few and far between, and when a high degree of self reliance was absolutely essential for survival.

Keys's origins are somewhat unclear. His daughter relates two different stories of his birth. Her father told her that he was born in Palisade, Nebraska, in 1879 of parents who had migrated there from Virginia.<sup>1</sup> His name at birth was George Barth. In a later interview, Mrs. Pat Garry said that his parents were German millers who moved to Russia, where all but one of their children were born. She states the family did not emigrate to the United States and settle in Nebraska until Keys was a teenager.<sup>2</sup>

Some time during his teen years, an urge to see new places drove Keys farther west. He supported himself by working as a ranchhand. Reaching Colorado, he became deeply interested in prospecting and mining. Moving on to Phoenix, he enlisted in Teddy Roosevelt's Rough Riders, changing his name to William Key at this time. Because of a hospital stay, he never saw action, however, and began drifting around Arizona instead. He worked in the copper mines and smelters of Jerome for almost two years.

Keys then moved to Needles, California, where he worked on a cattle ranch and from the Indian cowboys there learned their language and much about their culture. Returning to Arizona around

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1. "Life Story of Bill Keys, as Told to His Daughter, Pat Garry," Desert Journal (Joshua Tree, Ca.), Oct. 4, 1956.

2. Garry interview, Mar. 3, 1976, in JTNM files, p. 1.

1901 he worked for another cattle company and acted as a deputy sheriff of Mojave County in Arizona Territory. Ultimately Keys decided to concentrate on mining, and after working a while in Arizona headed up toward the Rhyolite, Nevada, area and then over into Death Valley. He located several claims there over the next year or two, including the Desert Hound Mine, which became the focus of a large-scale mining hoax that resulted in the infamous Battle of Wingate Pass. This fiasco was cooked up by Death Valley Scotty, a desert prospector and notorious con artist, to sell a bogus gold mine to Eastern capitalists. In an effort to discourage the Easterners from their insistence on seeing the mine before making a decision, Scotty decided to scare them off with a fake ambush and enlisted Bill and another man to shoot at the expedition, without hitting anyone, as it entered Death Valley. Unfortunately for Keys, his fellow ambusher wounded Scotty's brother, and the resulting outrage resulted in the arrest of Scotty, Keys, and his partner. All charges were finally dropped. Although no indictments ever resulted, the incident cast a pall over the reputations of all concerned.

Keys later sold his Death Valley claims to the Boston-based Key Gold Mining Company. Over the next several months he traveled throughout California, from Randsburg up into the Mother Lode country of the Sierra Nevadas, and finally into the High Desert area of the Mojave. Around 1910, and possibly as early as 1908, he was involved in prospecting in the Bullion Mountains north of Twentynine Palms and in working as a cowboy for one of the cattle companies in the area. At Twentynine Palms he met Joe Reynolds, who invited him to participate in the spring roundup. Every evening Keys hiked from camp at Twentynine Palms to the Desert Queen Mine, where he became acquainted with the watchman and the owner, William Morgan. After the roundup, Keys leased Reynolds's Crown Prince Mine south of the Queen Mine. (About this time [1911] Keys also leased the Tully Mine in the present monument area.) Ore was hauled from there to the Bryant roller mill in Twentynine Palms. Keys also hauled ore there by burro for C.W. Roach, who was operating the Desert Queen that summer. Phil Sullivan and family



operated the cookhouse at the mill. After Roach left the area for Los Angeles, Keys began to "watch" the Queen Mine.<sup>3</sup>

2. Keys and the Desert Queen Ranch

Keys worked as a watchman and assayer at the Desert Queen Mine for several years, taking care of the mine, machinery, and mill site. After his employer's death, Keys acquired ownership of the mine in lieu of back pay. This writer assumes that the Desert Queen mill site in the Cow Camp area, about six miles west of the mine, was included in the deal.

Evidence in the form of pictographs and rock cairns indicates that the Cow Camp area had earlier been frequented by Indians. Improvements there when Keys took over the property consisted of the original McHaney five-stamp crushing mill, a well, and three adobe buildings built by the McHaney family in the mid-1890s when they were using the land as pasturage for their cattle. The precise year that Keys started working at the Desert Queen Mine is unclear. He might well have started as early as 1910--the year Mrs. Keys once stated he had begun living at the ranch site.<sup>4</sup> The McHaney family had probably never legally filed on the land, but utilized it for the period of time they ran cattle and operated the Desert Queen Mine. It is possible Keys started living there in one of the cabins while watching over the Desert Queen mill site for William Morgan. During the time the McHaney family occupied the property, it was known variously as Piñone Ranch, the Old McHaney Cow Ranch, the Desert Queen, and the Queen Mill.

The McHaney family ultimately left the ranch, and in 1916 Keys filed on an eighty-acre homestead that included the mill site. Sometime

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3. Keys, "A Brief Sketch of the Life of Wm. 'Bill' Keys," September 1962, p. 12.

4. Mrs. W. F. Keys to United States Land Office, Department of the Interior, Sept. 14, 1944, Central Files, 1907-49, RG 79, NA.

around 1913 possibly, Keys erected a small frame home (either from scratch or using an already existing shack) with a stone chimney and set up housekeeping with Frances Lawton whom he met on a trip to Los Angeles and married in 1918. Together these two resourceful individuals built a comfortable home, raised a large family, and indelibly left their mark on the desert they loved.

Keys, who finally added an "s" to his name during this time, had gradually been building up a small herd of cattle. In addition he raised horses, mules, and burros. These animals, used as pack animals and to pull wagons, were corralled in rock-enclosed valleys north of the ranch. Goats provided meat and dairy products. Domestic rabbits and chickens were also raised for food. To water his livestock, and for domestic and gold-milling needs, Keys created a reservoir behind his house by erecting dams across washes. He also developed several springs and water holes and dug additional wells. He continued to homestead more property until he had acquired 880 acres of beautiful choice mountain and desert land.

No towns of any size existed near the Keys homestead. Because of the distance to Banning, over primitive dirt roads, the Keyeses had to provide much of their own food and other necessities. In the early years, except for occasional prospectors and cowboys, few visitors penetrated their splendid isolation. Guest houses were eventually built to house relatives, acquaintances, and tourists who dropped by. The family adapted beautifully, and thrived. The entire Keys Ranch area is an example of modifying a harsh environment to provide the necessities of life. The concrete dam northeast of the ranchhouse stored water from seepage and rainfall. This reservoir was later stocked with bluegill, bass, and catfish. Water collected in this reservoir was channelled through pipes to a garden and orchard. The latter contained apple, peach, apricot, pear, crabapple, and prune trees. Grapes and all kinds of berries grew. The garden was filled with corn, tomatoes, beans, squash, turnips, beets, carrots, cucumbers, melons, peanuts, kale,

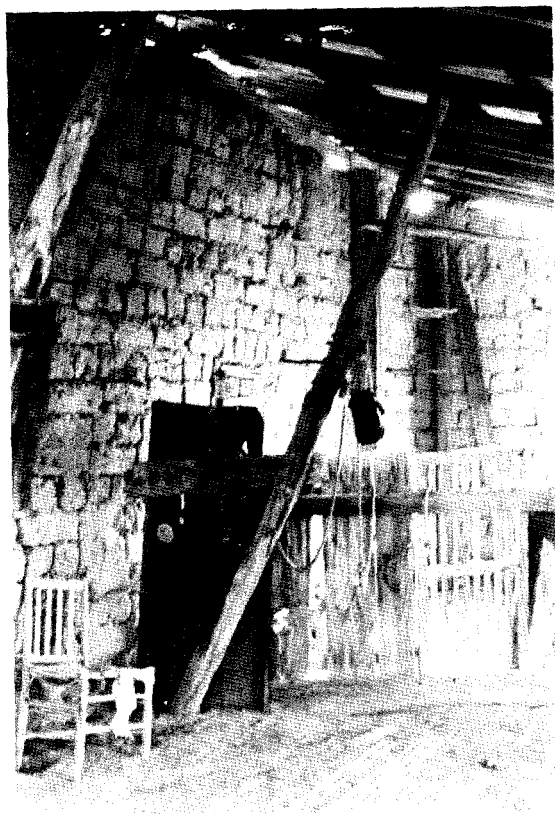


Illustration 150 (top).  
Keys ranchhouse, 1982.

Illustration 151 (bottom).  
Interior of adobe barn at Keys  
Ranch. NPS photos by Linda W.  
Greene.

lettuce, dill, and asparagus.<sup>5</sup> Produce from these areas was canned or dried, and some of the excess was sold in Yucca Valley. Oats, barley, wheat, and alfalfa were grown and the grains milled at the ranch.

Keys's cattle, numbering less than 100 head, ranged over the Queen and Lost Horse valleys and over to Quail Spring in the summer and were sheltered in lower Pleasant Valley during the winter. Keys kept Pinyon Well in operation and pumped water from it into a Pleasant Valley water trough. Keys's cattle-raising efforts were the foundation of many of his problems, first with other cattlemen and later with the federal government. As his herd grew, he erected fences around some of his land and water holes. This cut down on the amount of open range and water available to other cattlemen in the area. In retaliation Keys's cattle were often stolen or shot and his fences cut.

The family's principal source of income during the early years was mining. Keys acquired many properties throughout the monument. He worked several mines at different times and hauled the ore to the ranch by horse and wagon for milling. Many of his properties were periodically leased to companies and individuals. The lessees would bring in stoves and other equipment to furnish their small cabins. When they left, Keys often dismantled the cabins, removed the lumber, and took the furnishings to his ranch. In this way he also acquired all kinds of machinery (compressors, drills, mine cars, hoists, wagons, and trucks) that enabled him to mine profitably. The ranch became a phenomenal junkyard as Keys routinely brought in equipment and building supplies from abandoned mining and homestead sites. Much of this salvaged material was used in repair work and the construction of buildings at the ranch. The rest was stored on the ground for future need. Keys reportedly bought an entire junkyard at one time and hauled it to the ranch, where the trays of nuts, bolts, washers, and the like now sit rusting in the parching desert sun. Keys also owned the Wall Street two-stamp gold mill, located between his ranch and the Desert Queen Mine. There he did custom milling and assessment work for other miners.

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5. Garry interview, Mar. 3, 1976, p. 34.

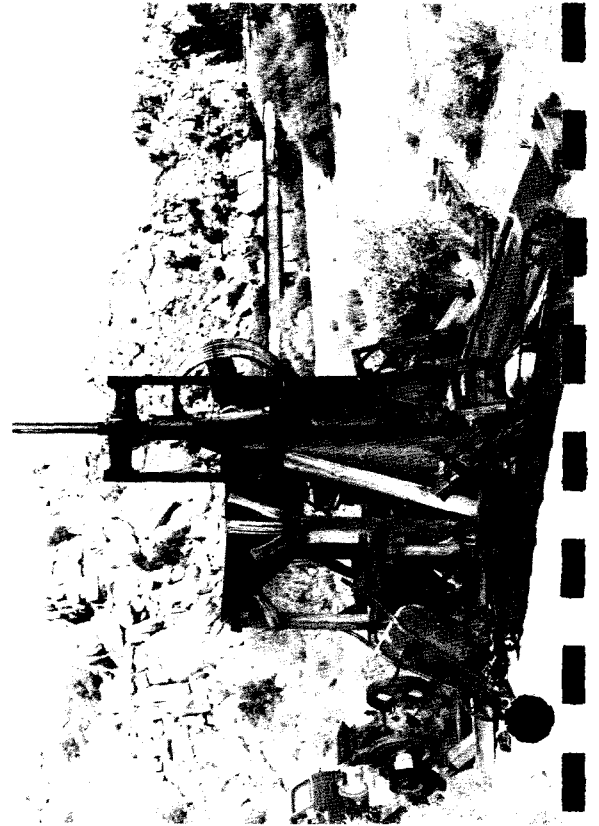
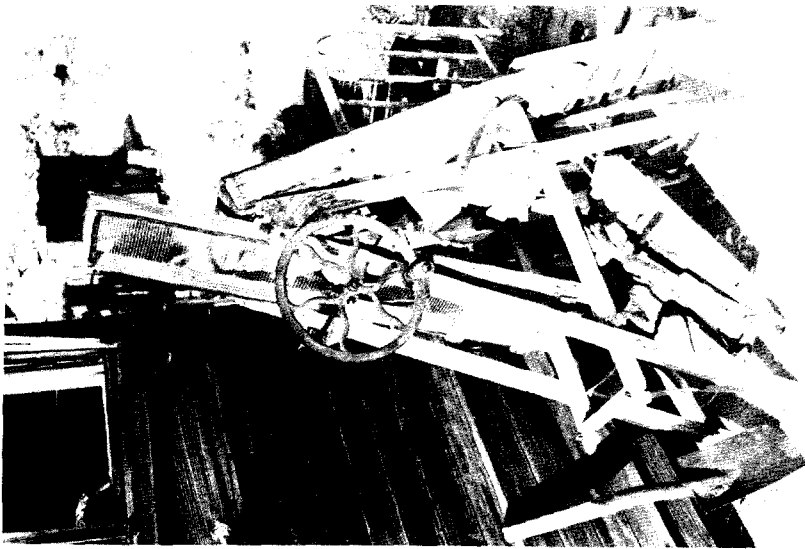
To ensure a decent education for his young family, Keys hired school teachers for several years beginning in the early 1930s, originally utilizing a cabin at the ranch for a schoolhouse. Later a regular school building was erected. The county declared it an emergency school and provided a teacher. A few children from neighboring homesteads also attended. The school was finally discontinued in 1942.

Although Keys had previously gotten into arguments over boundaries, waterholes, and loose stock that resulted in shots being exchanged, it was not until the 1940s that anything serious occurred. Late in the 1930s Worth Bagley, a retired Los Angeles lawman, moved onto a neighboring homestead. For whatever reason, ill feelings immediately grew up between him and Keys. Some of Keys's stock was shot, and in 1943 a gunfight occurred in which Bagley, who by then nurtured a deep-seated obsession to murder Keys, was killed. Convicted of manslaughter despite his plea of self-defense, Keys was sent to San Quentin Prison, from which he was paroled in 1948. With the help of lawyer-writer Erle Stanley Gardner and other influential people, who found new evidence supporting Keys's innocence, Keys eventually obtained a full pardon in 1956.

Returning to his ranch, Keys picked up the threads of his old life. He undertook further improvements, building two more dams behind his house, increasing his orchard and garden areas, continuing assessment work on his mining properties, raising the wall of Barker Dam, manufacturing adobe, and temporarily reopening the Wall Street mill (1966).

After Frances Keys died in 1963, Keys continued to live at the ranch. He hoped to one day turn it into a fishing and recreation resort by creating more small lakes along the creek near his house. Although this dream never materialized, the ranch became a favorite camp and picnic spot for Boy Scout and other youth and civic groups and clubs. In 1964 Keys sold the ranch to a man from Los Angeles who eventually traded it for government land elsewhere. The ranch then

Illustration 152.  
Some of the mining equipment at  
Keys Ranch, 1982. NPS photos  
by Linda W. Greene.



became part of Joshua Tree National Monument with Keys having life tenancy. He died in 1969, just short of his ninetieth birthday. Bill and Frances Keys and three of their sons are buried in the family cemetery at the ranch.

### 3. Keys's Impact on Area

Keys's impact on the land and history of the national monument was widespread and lasting. In addition to his large ranch complex, he built several roads, including the one to the overlook atop the Little San Bernardino Mountains that offers a majestic view of the Salton Sea, Coachella Valley, and Colorado Desert south of the monument. Keys was the only settler in the monument who gained a comfortable long-term livelihood from his livestock, homesteading, and mining ventures. His success was due not to luck or chance, but to the type of individual he was. Ambitious, independent, self-reliant, a hard worker, and a man quick to take advantage of any opportunity presented, Keys was able to eke an existence from the desert unaided by pension or welfare checks, by working with it, realizing its potential for adversity, yet appreciating its natural beauty and assets.

Keys's relationship with National Park Service personnel was volatile in the early years of the national monument. That is understandable when one remembers that Keys had already been living on the land for twenty-five years and was used to being able to run his operations as he pleased. He could not be expected to be amenable to attempts to suddenly limit his cattle grazing, open his water holes to the public, and restrict his homesteading and mining activities.

Keys's cattle had always grazed in Lost Horse Valley, which unfortunately was one of the most scenic areas of the monument. Keys also found himself in violation of federal law when timbering his mine shafts with native trees--an action natural for a desert miner and prospector but contrary to National Park Service regulations. Keys thought it was unfair of the government to remove so much land from the public domain and exclude its use by cattlemen and miners. He believed his cattle should be able to roam at will over Lost Horse and Queen

valleys, grazing from one water hole to another as weather and forage conditions changed--just as they had always done. He felt he had a legitimate right to sole use of the water in Barker Dam because of the improvements he had made there and because he had been using it for so long. He also resented that many of the mining properties on which he had kept up assessment work through the years were invalidated and he was forbidden to work them. He was especially disappointed that his patent application for the Desert Queen Mine was turned down.

It was a difficult situation for monument personnel, also, who had to make a sincere effort to enforce regulations but who at the same time often wanted to be lenient with old-timers in the area. The cattle issue pretty much resolved itself in the 1940s as the effects of overgrazing and a decline in rainfall mitigated against successful cattle ranching. Keys's involvement in this activity was further restrained by his indictment for the murder of Worth Bagley and his absence from the area for the five years between 1943 and 1948. Keys appeared to mellow during his years at San Quentin and in later years became much friendlier with monument personnel. Both parties were, after all, highly appreciative of the abundant resources of the area.

#### 4. Evaluation of the Desert Queen Ranch

##### a) Anthropological Concerns

In 1977 Country Nodes: An Anthropological Evaluation of William Keys' Desert Queen Ranch was published by the National Park Service. Its author, Patricia Parker Hickman, set forth in this work an argument for the anthropological and ethnohistorical importance of the site as a source of data important to an anthropological understanding of certain patterns of human behavior in American history. On the basis of this perceived value, Ms. Hickman determined the site to be of regional significance.

The application of anthropological terms and concepts to explain human behavior at Keys Ranch in response to social stimuli and to economic and technological changes that are known to have occurred during a certain historical period detracts from the main values



for which the site is important within the history of Joshua Tree National Monument. The lack of a sound and complete historical data base, which is a prerequisite to behavioral studies, makes many of the assumptions in Country Nodes questionable. The historical research on Keys Ranch on which that study was based comprised primarily family reminiscences, secondary documentation, and overviews. The lack of data in Country Nodes for instance, in regard to mining activities is clear both in the paucity of data presented and in some of the inaccuracies in the text and on the maps.

Certain hypotheses in the Hickman report need to be reevaluated in light of historical data obtained during research for this historic resource study that do not support, and sometimes even contradict, assumptions and interpretations of the anthropological report. Specifically, on the basis of more in-depth historical research, it is difficult to accept

1. the strong emphasis on a continual competition between Keys Ranch and the neighboring communities of Twentynine Palms, Joshua Tree, and Yucca Valley (p. xviii) and between the Desert Queen Mine/Keys Ranch and the Lost Horse Mine/Ryan's Ranch (p. 14);
2. the statement that Keys built up a social network that extended throughout southern California and to the Pacific Coast (p. xix);
3. the suggestion that Keys always carefully weighed his actions in terms of what his return on the investment would be--strategies that are in anthropological terminology referred to as generalized reciprocity, negative reciprocity, and the like (pp. 12-13);
4. the determination that Keys's affinity toward old-timers in the area and his minimal involvement with residents of Twentynine Palms was a conscious effort to disassociate himself from that

community (p. 15) rather than merely due to his limited ability to socialize because of distance from town and understandable feelings of stronger kinship with those who entered the area when he did. Keys was also too busy to socialize to any great extent. Furthermore, home was almost completely self-sufficient--minimizing this loner's need for closer relations with townspeople;

5. that there was ever any conscious effort by Keys to develop his home as a "major interaction node in the region" (p. 16).
6. that a pattern of collective "non-local" ownership of mines had been characteristic of the Joshua Tree region since the 1870s (p. 20);
7. that Keys's filing on Cow Camp and his acquisition of the Desert Queen Mine should be dwelled upon as a planned strategy toward a shift in status from "employee, outsider and newcomer" to landowner (p. 28). The records indicate that around 1916 the question of disposition of the mine property was in the courts, and, because Keys had not been paid for the last few years it was decided he should be given the property. Also at this time Cow Camp was finally vacated by McHaney and the land, over which McHaney had no legal control, was open to filing. Keys's actions in taking these properties seem to be perfectly logical for a man who desired to settle in the area, who was familiar with these tracts, and who took advantage of their being vacant;
8. that strong emphasis should be given to "hostile interaction" and "zones of tension" as constant factors in relationships between mining communities and mills as they competed for natural resources from surrounding areas in the monument (pp. 29, 63-64). There is simply no evidence that this was a major problem;

9. that the aggrandizement of mining claims by Keys was done to insure his staying power over his rivals (p. 40)--these claims were for a while his primary sources of income; and
10. that he hoarded material goods as a form of display, a statement of his material wealth and status (p. 79). Retrieving abandoned material that could be used for repair or construction has long been typical of desert mining camps and other isolated communities where people live far from sources of supply.

Part of the premise in Country Nodes for the importance of Keys Ranch for study is an assumption that it was closely involved in and influenced by regional developments. Thorough historical research has shown that this simply was not true to the extent assumed in Country Nodes. Nor is it true that Keys exerted a sizable influence in the region. Historical evidence does not support considering the ranch a "node" in which "regional networks of social interaction were centered."

Keys's mining activities in the region cannot be considered to have been important outside the general monument area. He owned several mining properties, but his operations were small and only minimally productive, although he did derive some income from them. His most important contribution in that area was probably the custom milling and assay work that he performed for other individuals. Although cattle operations may have been economically important to some ranchers in the region at one time, Keys's stockraising efforts were sufficient only to fulfill his personal needs--he usually ran less than 100 head of cattle. His subsequent problems with other cattlemen and the federal government were not of regional consequence but were a direct response to efforts to curtail already low-scale operations that he felt were essential for his family's personal welfare. Keys never, as far as the historical evidence indicated, attempted to become an important cattle raiser in the region or to compete in either mining or ranching on a regional level. The exaggerated sense of Keys's economic and social influence in the region as presented in the anthropological study detrimentally influenced judgements about Keys's actions and those of his family.

In Country Nodes, the anthropological importance of the site is based on supposedly characteristic responses by its occupants to "culture contact, frontier and developmental situations" that could be expected to be similar to those of people undergoing like experiences, thereby proving the commonality of human behavior on the frontier and resulting in an identifiable set of responses by early settlers to changing socioeconomic situations in remote areas. First a determination should be made as to whether the Keys family epitomizes common reactions to frontier settlement processes. If they do, then such a study might have value beyond the local level. However, this type of detailed comparative analysis was not carried out, and indeed its use for management and interpretive purposes would be negligible. It is acknowledged by a variety of people, however, that Keys was a unique individual, proven by the fact that he was able to succeed where so many others failed. Were his and his family's motivations and responses to their environment and its challenges, therefore, not unusual, differing markedly from those of other settlers attempting to live under the same conditions? The comparative value of such a detailed study would then be limited. For this reason Keys's Ranch can only be valuable when studied in a local rather than a regional context.

The emphasis of the anthropological report on calculated personal relationships, ever-changing statuses and roles in relation to fluctuations in the socioeconomic system, and other complex behavioral analyses are irrelevant to the ranch's role in the history of the monument. Keys's efforts to make a proper life for himself and his family seem to be viewed too heavily as schemes and planned strategies to improve his power and status than as natural reactions of an ambitious and fiercely independent individual to existing situations and opportunities. Keys's Ranch was not in competition with other communities. Its growth as a separate self-contained entity began long before other towns existed and was necessary because of its distance from supply sources; its decline was not due to overshadowing by competing towns, but to Keys's family growing up and leaving home, his jail term and absence from the area, the onset of old age, and to a changing set of historical and environmental conditions over the fifty years he lived in the monument that made obsolete most of his former lifeways.

building material was scavenged from abandoned mines and homesteads. The buildings were piecemeal and patchwork assemblages with no foundations, comfortable but insubstantial to be sure, and certainly not executed in any recognizable architectural style.

Preservation by major stabilization and repair also appears to be a futile recourse because of the vast amount of money and time involved and the fact that it would be only a temporary expediency. In harsh economic times it is difficult to justify such expenditures of government money on professional preservation of flimsy structures of only local significance. Ultimately the machinery and odd bits of furnishings left on site will deteriorate to such a degree that they will become useless for interpretive purposes and eyesores on the landscape. In the long run, it has been recognized, the historical scene that now exists cannot be preserved, simply due to the nature of the resource. Eventually the structures will fall and the site will deteriorate and be restored to its natural condition.

In the meantime only minor repairs, continuing maintenance, and structural reinforcing have been performed, primarily for safety reasons, but also in an attempt to extend the life of the structures. The problem then arises as to how much repair work should be done. Because visitors do not need to enter the buildings to acquire the flavor of the spot, some reinforcing (but no major repair of fabric or hardware) could take place inside the structures and not be visually intrusive or objectionable. By keeping visitors away from the buildings and only permitting access to the area through controlled conducted tours, a minimum of safety-related work would have to be done.

The ranch's picturesque setting, its ability to impress upon visitors the realities of life in that area in the not-too-distant past, and the curiosity to see the site first-hand after viewing the movie Challenge of the Desert at the visitor center, convince this writer that the ranch should be used interpretively as long as possible. It is one of the primary historical resources of the monument and important enough to justify minimal expenditure related almost totally to life safety measures

and not to a major overhaul or aesthetic concerns. The philosophy in the past has been, and should remain in the future, to perform minimal selective work to slow down the action of the elements, preserving the ranch as long as possible as a unique interpretive resource--a monument to one man's adaptation to, and unity with, the desert. It is strongly recommended that no deliberate demolition or substantial alteration take place until the integrity of the resource is irretrievable. At that point structures that have fallen or become dilapidated beyond interpretive use can be removed after consultation with the Advisory Council on Historic Preservation. Even when all structures are gone, the site can be interpreted through an on-site exhibit.

In 1974 the ranch was declared a Point of Historical Interest by San Bernardino County. Two years later an interdisciplinary team of cultural resource specialists visited the ranch to select a museum collection out of the vast amount of significant late-nineteenth- and early-twentieth-century mining and agricultural implements at the site. This array of items was especially valuable because they all still had their original relationship to each other. The tools were in close association to the areas where they were made and to the equipment they were used to make. Historically or technologically significant artifacts were documented as to original site, then removed from the site to the monument collection room in the garages in the headquarters compound. Many artifacts of lesser but still notable importance were left on site and will be allowed eventually to recycle into the desert. Others were identified as items that could be loaned to other Park Service areas for interpretive purposes. The ranch area was mapped, recorded, and photographed during the Keys Ranch team project of April 1976. A Section 106 proceeding on the recommendation that the National Park Service not attempt to preserve the buildings, which are considered unpreservable to National Park Service standards, is needed. Also required is further documentation of the structures by detailed mapping, preparation of measured drawings, and additional photography to mitigate the eventual loss of the resource.

The importance of Keys's Ranch is its association with Keys, not necessarily as a symbol of him but as a monument to man's ability to adapt. The ranch is important because it is what enabled Keys to succeed. It represents what one unique individual accomplished in the way of adaptation to a hostile environment. The extent to which Keys improved the property and succeeded in making a living there is what makes the site important interpretively and historically as an unusual early twentieth-century desert homestead. The existence of Keys Ranch is due to the fact that Keys, in an arid region, acquired abundant water--that life-saving commodity that permitted stockraising, the cultivation of food, and the milling of ores. Keys's actions and relations with his neighbors, while open to as much conjecture as anyone else's in terms of psychological motivation, were primarily aimed at minding his own business and sustaining his chosen lifestyle rather than making himself all-powerful in the region. Certainly he was aware of his impact on and contribution to the area and undoubtedly felt that he had to actively fight the encroachment of civilization to preserve his lifestyle, but it is difficult to believe that he was so concerned with social position that every action he took was aimed at maintaining a certain status in the region.

If Keys had not been as hard a worker or as ingenious a thinker, as skillful a laborer or as determined a rancher, as good a miner or as astute a businessman, the ranch would never have existed. These are the qualities of Keys's life that should be studied and interpreted and that are preserved through the ranch. The ranch's primary importance, therefore, is due to its association with Keys and its status as an uncommon twentieth-century desert homestead and ranch. Significance of the site can easily be justified on the local level, but hardly beyond that. Keys Ranch is what Keys made it, not out of a desire to create a significant "interaction cluster," but to create a comfortable life and niche for himself and his family.

It is furthermore not the responsibility of the National Park Service to perform pure as opposed to applied research. In fact, the Service requires that research it undertakes and funds be mission-oriented, which some of the research proposed in Country Nodes is not.

In the first part of Ms. Hickman's study the Keeper of the National Register is quoted regarding the wealth of source material available on Keys Ranch usable to several disciplines. Although there is a fair amount of material on the ranch and its occupants, much of it consists of reminiscences, news articles, and hearsay. It is often not very dependable, as Ms. Hickman herself realized. Her statements that "that someone said something is a piece of information regarding the purported event and the person speaking, regardless of its factuality," and that she did not "propose that everything which follows is 'true' in the sense that it actually happened," are perhaps the most telling remarks concerning the validity of this study.

b) Recommendations for Management

This report will not present a detailed listing of buildings and artifacts at the Desert Queen Ranch. Several inventories of the ranch complex and studies by the National Park Service adequately describe the resource, with the best guide probably being "Keys' Desert Queen Ranch, Joshua Tree National Monument, Preservation Study," written by the Historic Preservation Team of the Western Region, National Park Service, based on a study commenced in 1974. The complex consists today of buildings, sheds, dams, mining machinery, and miscellaneous tool and equipment parts associated with ranching and mining.

Keys's Desert Queen Ranch was determined, unquestionably, to be of local historical significance in terms of Agriculture and Industry (mining) and was entered on the National Register of Historic Places on October 30, 1975. A major question concerning the resource was whether or not attempts should be made to preserve the structure, and if so, how this objective could be accomplished. The several buildings of the ranch complex are slowly melting back into the desert. National Park Service cultural resource specialists determined that any attempt at restoration would result in a resource in much better condition than the original structures and therefore an inaccurate representation of the original homestead. Another factor making accurate restoration infeasible is that the buildings were mostly unpainted frame, with some adobe and stone used. Much of the



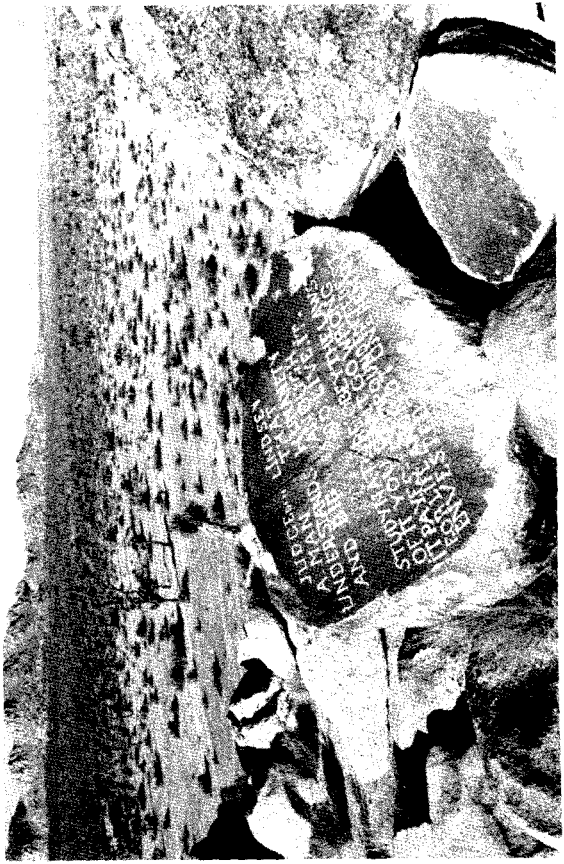


Illustration 153. Samuelson's Rocks, 1972. Courtesy JTNM.

## B. Samuelson's Rocks

### 1. History

John Samuelson was a Swedish gentleman who around 1926 worked with Bill Keys at the Hidden Gold Mine below Keys View and lived at the Keys Ranch. After working for a time at the Desert Queen Mine around 1928 he took up a homestead near Quail Spring. It was during this time that he chiseled politically oriented sayings on eight nearby flat, smooth rocks in a boulder field. One of the inscriptions is dated 1927 and certainly their economic theme places them as having been executed during the years leading into the Depression. One writer states that in 1928 Samuelson sold his homestead and moved to Los Angeles where a year later he killed two men during a fight and was sent to Mendocino State Prison. He escaped from there in 1930 and fled to Washington State, where he eventually died from injuries received in a logging camp accident. (This information does not agree with correspondence found indicating that he was working the Hidden Gold Mine in the late 1930s.)

### 2. Importance

These inscriptions are an interesting type of folk art and an interesting commentary on the hard times and bitterness of the Depression. Inscribed in a Gothic-type lettering, they remain well preserved primarily due to their distance from main roads. One writer stated that

for a man who lived and died in obscurity, John Samuelson managed to leave a legacy of thought and attitude more enduring than most men leave. However simple his statements (and the laborious process of transcribing them must have encouraged the discipline of succinctness), they encapsulate the feelings of a whole age in American history.<sup>6</sup>

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6. Walter Houk, "Writ on Rock" (journal and date unknown), JTNM files, p. 54.



Illustration 154.

Grave at Lost Horse Well, n.d.



Illustration 155.

Grave at Lost Horse Well, 1967. Photos Courtesy JTNM.

### C. Graves

Ordinarily cemeteries or graves of historical figures are not considered eligible for the National Register unless they are integral parts of districts that do meet the criteria or it is a grave of a historical figure of outstanding importance and there is no other appropriate site or building directly associated with his productive life.

#### 1. Ryan's Ranch

Local legend holds that several people are buried at Ryan Ranch. Art James, shot to death soon after his discovery of the Desert Queen Mine, was reportedly buried near the old Lost Horse Mine headquarters on the west slope of Ryan Mountain, near a group of boulders. Above his grave a date was painted on the rock face. It is said that the boulder once read "James 1893." Currently the date 1897 is found among the boulders alongside the road to the ranch. A former superintendent of the Lost Horse Mine also was supposed to have been buried at the camp at the well, then referred to as Langville. Les Earenfight stated in an interview that five Mexican miners killed during an altercation there were buried at the ranch and their names painted in red on these same rocks southwest of the house. It is obviously unclear who, if anyone, is actually buried at the ranch. In 1966 a park ranger counted eight graves. No recommendations are made for the protection of these structures because the data surrounding them is so uncertain.

#### 2. Matt Riley

Matt Riley, a miner about forty years old, and a fellow worker at the O.K. Mine in the Dale Mining District decided to walk to Mecca to celebrate the Fourth of July 1905. They took only one canteen of water to sustain them during the sixty-mile walk. The other fellow decided to return to the O.K. after only about twelve miles, but Riley pushed on. On July 6 his body was found by a teamster under a bush near the Mecca/Cottonwood Spring road fork. Riley's trail of footprints indicated he had been within a mile of the spring, probably suffering from heat and thirst, when he became confused and turned back north. Some claim that Riley was carrying bourbon, not water. Riley is buried about one-quarter mile west of the Cottonwood residential area alongside



Illustration 156.

Matt Riley's grave, n.d.



Illustration 157.

John Lang's grave on Keys View road, n.d. Photos courtesy JTNM.

the old wagon road. His grave is outlined in rocks. A wooden board supported by metal posts serves as a headstone under a juniper tree. Although Matt Riley was not a locally significant character and his gravesite is not eligible for the National Register, it should be protected. The site of his grave serves as a reminder of the mining traffic that moved through this area and of the hardships faced by desert dwellers, especially those who did not take sufficient precautions.

3. Johnny Lang

Between 1917 and 1926, Lang lived in the old cookhouse at the Lost Horse Mine. Whenever he was hungry he would go out and shoot one of Barker's cattle. As time passed, Lang became sick and had trouble keeping himself fed. In January 1926 he set off for town and, apparently weak from lack of nourishment, died. His mummified body was found wrapped in his bedroll about two months later by Frank Kiler, Jeff Peeden, and Bill Keys. A grave was dug and he was buried on the spot. Keys ultimately replaced the original weathered marker on Lang's grave with a white-painted headboard with Lang's name and the dates "1853-1926." Later Keys placed a rough granite slab there, but for some reason changed the death date to 1925. The grave is roughly two miles from Cap Rock Wye, west of the road to Keys View, and about one hundred feet north of the Lost Horse Mine road.

Johnny Lang was a prominent character in local history and especially in the early development of the national monument area. He located one of the earliest and most productive mines there--the Lost Horse--and although he sold his interest in it, he remained closely associated with the mine throughout its history. Stories linking him with early saloon-keeping and gold thievery have assured him a prominent place in the oral and written traditions of the region. His grave is not considered eligible for the National Register. It is felt that Lang is forever memorialized by the existence of the Lost Horse Mine complex. The Lost Horse Mine itself is so directly associated with him that its placement on the National Register is as much a memorial to him as to the Ryan family. Lang's grave should be protected, however, because it is the final resting place of an early pioneer.

4. Keys Ranch

The family cemetery at the ranch contains five graves with headstones. Buried there are Bill and Frances Keys and three of their sons that died in infancy and early childhood. The cemetery is the property of the Keys heirs and considered by the National Park Service to be part of the locally significant Keys Ranch complex.





XIII. General Recommendations from the Division of Park Historic Preservation, Western Regional Office, National Park Service

Frequently, with respect to properties not considered significant, this report has recommended a management policy of allowing natural deterioration to reclaim old mine sites. This means taking such measures as are necessary to protect against safety hazards of old tunnels and shafts, but otherwise not disturbing such sites, leaving them to the processes of time and natural decay. The mines in Joshua Tree National Monument were for the most part small, hard-rock operations, and surface stripping was minimal. They are not, by and large, major intrusions on the natural scene. While parts of the monument have been designated formal wilderness areas, historically they have not truly been wilderness for a half century or more, having experienced extensive cattle ranching, mining, and development of water sources and roads. Many of these past developments are already obscure and fast fading into the desert, and the best treatment is simply to leave them alone, neither attempting to preserve nor attempting to pretend that they never existed by obliterating them. This concept of management has been described as leaving such properties as "mouldering ruins" or following a management technique called "benign neglect," but the term "natural deterioration" seems better to describe what is intended. In a few instances where some non-historically significant development is intrusive, its removal rather than natural deterioration has been recommended.

In some instances, a management approach of allowing natural deterioration is recommended for a property which is significant; in such instances, full compliance with the provisions of Section 106 of the National Historic Preservation Act is necessary prior to formalizing that decision.



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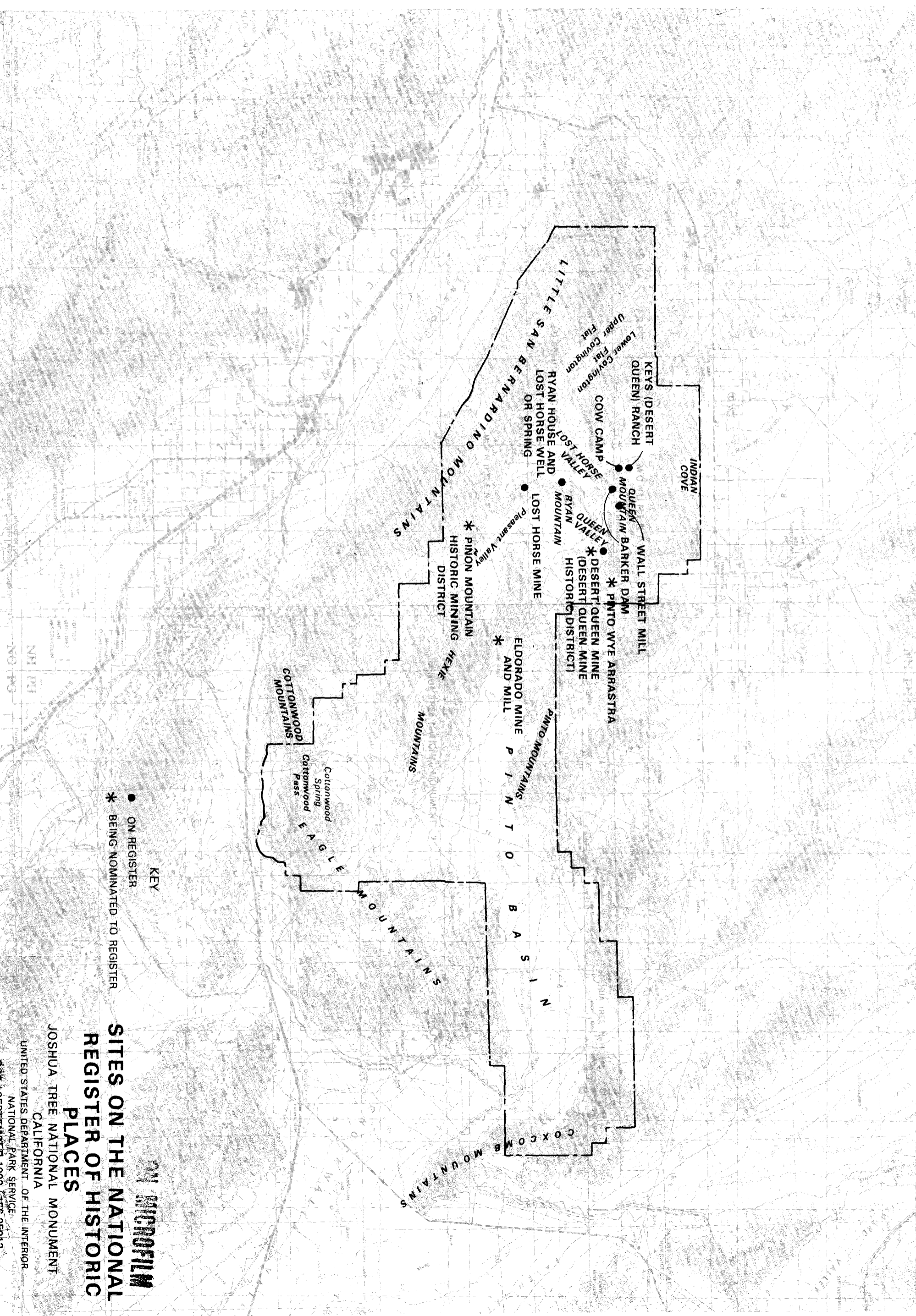
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