

# Fort Irwin and Vicinity: History of Mining Development

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## INTRODUCTION

Until the coming of the Army in 1940, the central Mojave Desert seems to be a place to pass through, to get somewhere else, somewhat like the travelers on Interstate 15 today. But on their way a few stopped, picked up some rocks and liked what they saw.

The mining history of area of the central Mojave Desert encompassed today by Fort Irwin is obscure, found scattered in dozens of newspapers and mining periodicals, and hard to find Federal and County documents. Mining began as early as 1850 just outside of the fort at Salt Springs, and flourished intensely but briefly between 1904 and 1908. Towns were established, stock was bought and sold but very little metal came from the ground. This paper is not an exhaustive treatment of the history of mining within Fort Irwin and on its borders, but it hopefully brings to light some obscure aspects of mining history here.

## BACKGROUND

In a sense work on this paper began when I prepared a report for the Bureau of Land Management to evaluate the mineral potential of the Wilderness Study Areas in the Avawatz and Soda Mountains. I spent two days in the field investigating the location and general geology of mines. That report, which was completed in May 1981, was reprinted by the South Coast Geological Society in their volume on the geology and mineral potential of the Death Valley region (Vredenburg, 1988). About the same time I completed my report, the Army invited geologists with the California Division of Mines and Geology (CDMG) and others into the Fort in anticipation of reactivation of Fort Irwin. John Rapp, then with the CDMG was one of those who had conducted mine investigations within the Fort. After contacting John about his field investigations, we decided to work together on a paper addressing the mining and mineral potential within Fort Irwin and the fringes. During 1982 and 1983, I interviewed Kenneth Van Doren (son of C. S. Van Doren) and Ben Bahten, son of Ed Bahten (also known as the Furnace Creek Kid, or by the family as the Greenwater Kid), was allowed access to the Army Corps of Engineers files in Los Angeles, and dug through the Bureau of Land Management's files. Also, the U. S. Bureau of Mines lent me microfilm copies of San Bernardino County mining claim Location Notices for 1904 through 1909. In February 1983 and again in 1989 I accompanied John Rapp and others with the CDMG into Fort Irwin and the Avawatz Range. John Rapp and myself coauthored an abbreviated version of this paper for *California Geology* (Rapp and Vredenburg, 1991, p. 123). As a result of this work and conversations with archaeologists on contract

with the Army and on the Army staff, I am more confident of the locations of the mines and towns within Fort Irwin. And I find that my conclusion as to the location of Crackerjack presented in *Desert Fever* (Vredenburg, Shumway and Hartill, 1981) was in error.

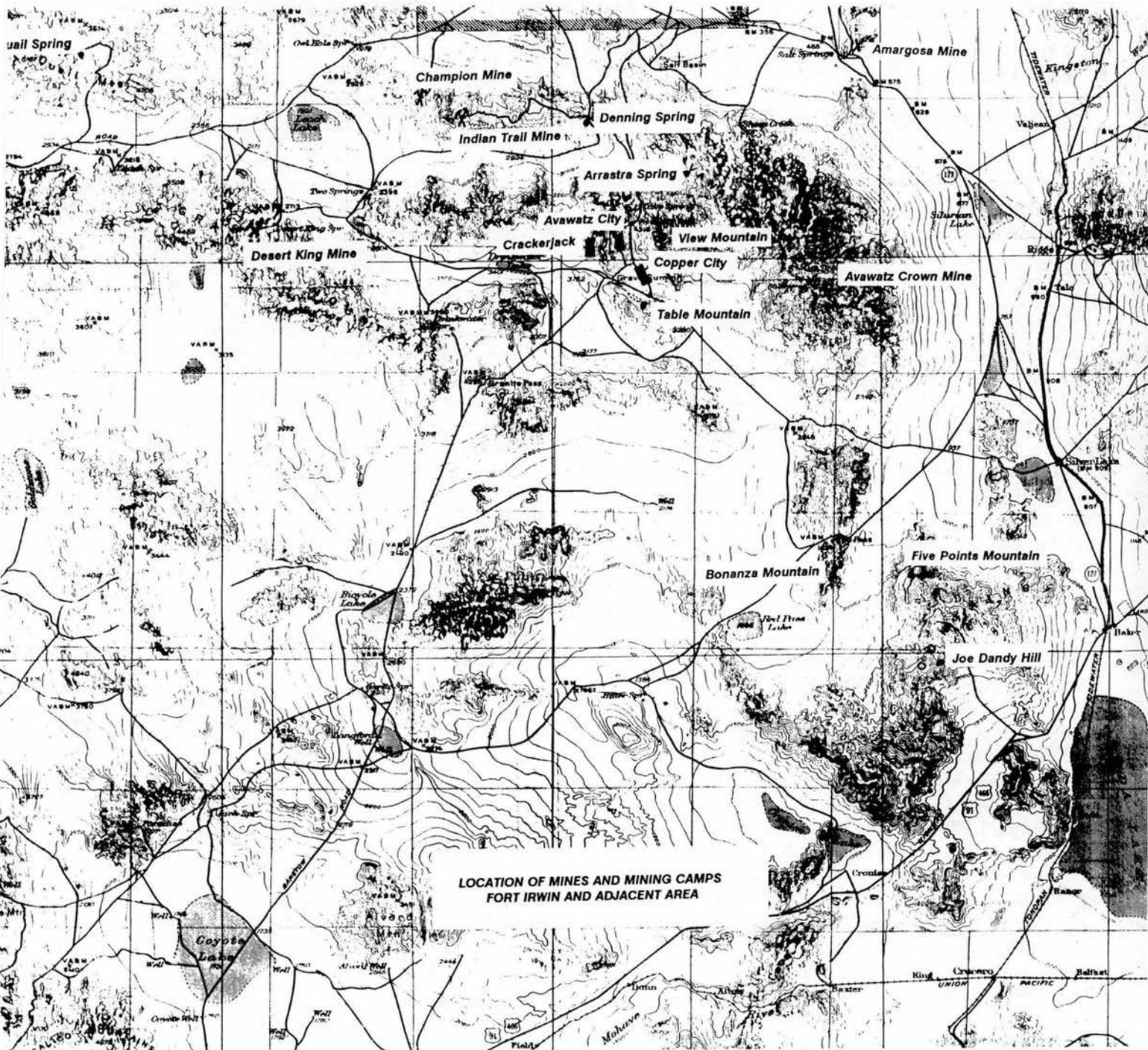
## THE SPANISH TRAIL

Between 1829 and 1848, the Spanish Trail supported lucrative trade between Santa Fe, New Mexico and Los Angeles. This trade consisted of caravans driving large herds of horses to Santa Fe, which were sold at great profit, and returning with blankets and other goods from Santa Fe. The route of the trail crossed the southeastern edge of Fort Irwin, exited the Fort on the east through Red Pass and continued north along the base of the eastern edge of the Avawatz Range to Salt Springs. Within the Fort the trail passed through Bitter Springs before turning south through Spanish Canyon in the Alvord Mountains (Hafen and Hafen, 1954, p. 315-325).

In the spring of 1844 six Mexicans with about thirty horses set out for Santa Fe ahead of the main caravan to get the best of the grass, but at Resting Springs they decided to wait two weeks for the caravan to catch up. On April 23, the group was surrounded by Paiutes and attacked. Andreas Fuentes and eleven year old Pablo Hernandez, who were on horseback at the time of the attack, fled for their lives. Riding all night back down the trail they encountered John C. Fremont's exploring party at the Mojave River the next day. Fremont's party continued to Bitter Spring the following day. From Bitter Spring, Kit Carson and Alexis Godey set out to pursue the Indians, traveling all night. At dawn on April 26 Carson and Godey spotted the stolen horses at the Indian camp at Horse Thief Springs in the Kingston Range. They surprised the Indians, killing two, and taking their scalps. Carson and Godey drove the remaining fifteen horses back to Fremont's camp at Bitter Spring late that afternoon. On April 29 they arrived at Resting Springs where they found the bodies of Santiago Giacomo and Pablo's father. Fuentes' wife and Pablo's mother were not found, evidently they were taken captive (Egan, 1985, p. 240 - 244; Lingenfelter, 1986, p. 28 - 30).

On the morning of January 24, 1848, James Marshall discovered gold at Sutter's mill at Coloma, 40 miles east of Sacramento. Nine days later on February 2, 1848 at Guadalupe Hidalgo, near Mexico City, a peace treaty was signed by representatives of the United States and Mexico, bringing to an end the Mexican War, and bringing California into the territory of the United States.

Kit Carson, Lieutenant George Brewerton and twenty-seven



men set out from Los Angeles on May 4, 1848 in route to Washington D.C. with dispatches and news of the discovery of gold in California. Eight days' journey into the desert, they overtook the last Mexican horse caravan to Santa Fe. This caravan consisted of 200 to 300 Mexican traders and about 1,000 head of stock (Brewerton, 1930, p. 58). Carson reached Taos, New Mexico on June 19 and Washington in August (Carter, 1968, p. 119, 220). It is ironic that a little more than a year later gold was discovered very literally a stone's throw from Carson's route across the Mojave Desert.

### AMARGOSA MINE

Though trade between Santa Fe and Los Angeles ended, discovery of gold in California brought new travelers on the trail through Fort Irwin. This portion of the trail was to become an occasionally used alternate route to the gold fields of California via Salt Lake City. It also became the route to San Bernardino for Mormon settlers.

In September 1849, gold seekers who had arrived in Salt Lake City too late to take the trail across the Sierra Nevada persuaded Jefferson Hunt, a former captain of the Mormon

Battalion in the Mexican War, to guide them through the desert to southern California. The wagon-train consisted of 400 to 500 people about 110 wagons and roughly 1,000 oxen, cattle, and pack animals. This was the first wagon-train to travel the trail, only one wagon having ever traversed it before this.

Certain of a short cut to the gold fields, several groups split off from the main party, only to stumble into Death Valley, thirteen losing their lives. One of the survivors of the ordeal, Jim Martin, discovered a ledge of silver in the Panamint Range, from which he fashioned a gunsite to replace the one which had broken off of his gun.

On December 1, 1849 two Mormon missionaries, who had continued with the Hunt wagon-train to San Bernardino, discovered gold in the Salt Spring Hills, just to the northeast of Fort Irwin where the Amargosa starts its U turn into Death Valley. James Brown and Addison Pratt, bound for the mission fields of Tahiti, discovered flakes of placer gold at Salt Springs. A man named Rowan who was bound for the California gold fields traced the placer gold to its source, a 4-inch quartz vein containing pea-sized grains of gold. Brown grabbed a chisel and hammer and collected some specimens.

Three days before Christmas the wagon-train reached Isaac William's ranch at Chino, spreading news of the gold discovery. Williams led a group back in January, returning with more rich specimens. A second expedition set off in February organized by Los Angeles' first mayor, Benjamin D. "Don Benito" Wilson. After working the mine a short time, Wilson realized it was very expensive to turn a gold bearing outcrop far in the desert into a mine, and abandoned the operations. One of the members of the second expedition, John B. Reill, wasn't so easily discouraged.

Reill set out for San Francisco with some rich ore samples to interest investors. Reill's Los Angeles Mining Company set out in July 1850 to relocate the lode. Before they reached the mine another party led by a man named Davis, who had been part of Williams first expedition in January, had already beat them there. Davis, and some men from Grass Valley that he had interested in the lode, had left some open ground. In 1850 the Los Angeles Mining Company and the Desert Mining Company began working side-by-side, the Los Angeles company constructing one arrastra and the Desert company two. The former mountain man Ben Sublette was superintendent for the Desert company at the mine.

In January 1851, the Los Angeles Company shipped a steam-powered mill to the mine, only to abandoned it on the Mojave, when the wagon broke down. By August 1851 the company was dissolved.

Both mines were purchased by their creditors led by Don Benito Wilson, who evidently hadn't learned his lesson two years earlier. The Salt Spring Mining Company was formed to work the deposit. Sublette was kept on as superintendent and the mill was finally hauled to the mine, and started up in spring 1852. However, the high salt content of the water at Salt Springs clogged the boiler and steam engine, by July operations ceased. Sublette was killed a year later by a grizzly bear in Malibu Canyon. That July the boiler and steam engine was sold to a lumberman, Charles Crisman, and hauled to Mill

Creek to power the first sawmill in the San Bernardino Mountains.

The Amargosa Gold and Silver Mining Company of San Francisco began working the mine in 1863, installing a mill that fall. But this steam powered mill also became choked by salts. Although a small amount of gold was produced, it wasn't enough to clear expenses. Some miners were kept on at the mine. On October 29, 1864 the Los Angeles *News* trumpeted "Three Men Murdered" reporting that band of Indians raided the mine, set fire to the mill, and killed a man. The other two fled into the desert and committed suicide "by putting a bullet through their skulls." The San Francisco *Alta* reported on November 26, the mill had been sold by the sheriff of San Bernardino County to Augustus Spear. That winter the mill machinery was moved to the Techatticup mine in Eldorado Canyon.

Von Blon (1950, p. 26) indicates that in the mid-1860s George Rose operated the mine for several months. Although the mill had been removed, it is possible that he could have employed the arrastras.

Adrian Egbert, in 1894 came to southern California from Washington state to better his health. Unable to find a job, he and a new found friend set out in the middle of summer in search of the "lost" Amargosa mine. Supplied with a map, a newly purchased wagon, and some prospecting supplies, eventually they found the mine and worked it briefly. Von Blon (1950) indicates that Egbert purchased a five-stamp mill from a mine at Crescent, which was teamed to the mine by Adolph Nevaes and James Christian.

In 1902 J. B. Osborne, of Daggett began working and was rewarded with a \$60,000 pocket of gold (Belden, 1969, p. 14). Hewett, and others, (1936, p. 52) estimated the total production of the mine at about \$300,000 worth of gold since 1850.

#### Other Near-by Mines

In the early 1860s prospectors set out for the California desert, stirred by the fabulous discovery silver at the Comstock in the fall of 1859, and the tales of the lost Gunsite Mine. Rich deposits were discovered and for several years a mining frenzy possessed the state. The entire Death Valley region was prospected, and as early as 1861 (*Mining and Scientific Press*, Dec. 21, 1861) mining districts were established at Coso, the Argus Range, Panamint Range, and the Washington mining district which embraced the entire territory east of Death Valley to the stateline and south to Salt Spring. However, in the Death Valley region, during the early 1860s serious mining only occurred in the Slate and Coso Ranges. In part due to several Indian uprisings, and a burst mine investment bubble late in 1864, mining ebbed until around 1868. Between the late 1860s and early 1870s mines were worked in the Clark Mountains, Resting Springs Range, the Funeral Mountains and Avawatz Range.

During the 1860s a route to the Amargosa mines was developed from Visalia, across Walker Pass and across the northern part of Fort Irwin, by way of Leach Lake. This route, known as the Walker cutoff, was an often used route to the Ivanpah silver mines in eastern California (Warren, Roske,

and Patrick, 1981, p. 349).

"Professor" William D. Brown and brother Robert D., who had discovered rich silver-lead deposits in October 1874 which became Darwin decided to try their luck east of Death Valley in the spring of 1875. Amazingly, a short distance south of Resting Spring on the old Spanish Trail, they discovered another huge silver-lead deposit. Purchased in March 1876 by Jonas Osborne, the town of Tecopa was laid out to serve the mines. By May there was mail service and a regular stage connection to San Bernardino via the Salt Lake trail. Remi Nadeau's freighting company served the camp from Mojave via the Walker cutoff. In July 1881 operations ceased, after having produced an estimated \$260,000 (Lingenfelter, 1986, p. 135-142).

### EARLY AVAWATZ RANGE AND SODA MOUNTAINS MINING

In November 1871 silver was discovered high in the Avawatz Range, by the mountain man Johnny Moss who, with the aid of local natives in 1868 had discovered a mammoth copper deposit known as the Copper World mine in the Clark Mountains. Moss also is credited with the discovery of the fabulously rich Moss gold mine in Mohave County, Arizona in 1863. In 1864 he took the Mojave Chief Irataba to Washington D. C., to see the white chief, president Abraham Lincoln (Malach, 1977; Lingenfelter, 1986 p. 135, 136).

His mine in the Avawatz Range, dubbed the Summit (*Mining and Scientific Press*, June 8, 1872), boasted a 32 foot wide vein which supposedly carried \$300 per ton in silver. Although the San Bernardino *Argus* (August 21, 1873) boasted that the district was "yielding the richest ores on this coast," nothing more is heard from this mine after 1873. It is likely that it was relocated years later as the Avawatz Crown.

The discovery and development of the silver deposits at Calico between 1882 and the early 1890s and gold in the Alvard Mountains during the same period, again inspired prospectors to try their luck in the vast country which was to become Fort Irwin. Some silver and gold was discovered, however none could compete with Calico or Alvard for easy access and easily milled ore.

In 1887, three tons of silver ore was shipped from high in the Avawatz Range to Barber's mill at Calico (Ireland, 1888, p. 502) and to a smelter at Reno. It is probable that this mine is the one worked by Moss and was later known as the Avawatz Crown.

The Avawatz Crown was reactivated in 1908. Work resumed on the shaft which at that time was 230 feet deep, a gasoline hoist was installed to replace the steam powered one which is still at the site today (*American Mining Review* February 29, 1908 p. 18; April 11, 1908 p. 15; May 2, 1908; September 24, 1910). One rail car load (about 20 tons) was shipped in December 1908 which yielded 84 ounces of silver and 25 percent lead per ton. This is probably the site of Harper's North camp (Mendenhall, 1909, p. 54). In July 1917 the old camp was rehabilitated, the shaft pumped and retimbered to a depth of 275 feet and a crosscut adit was driven which struck rich silver-lead ore. A telegram to

Goldfield announced the strike, and a rush to Avawatz followed. But the best ground had long been staked. In spite of this work no shipments were made. One shipment was made in 1927, however the mine has lain idle since (*Mining and Oil Bulletin* July 1919 p. 451, Tucker, 1921, p. 359; Goodwin, 1957).

On January 2, 1906 John S. Harper and M. A. Cadwaladen located a group of claims about a mile south of the Avawatz Crown Mine (San Bernardino County Records of Mining Locations Book 47 page 167; Book 65 Page 386). William D. Allen and Tracy C. Becker purchased the Harper group of 20 claims in February 1908 (*American Mining Review*, February 6, 1908), and spent \$7,000 working twelve men constructing a mine camp, roads and trails, sinking shafts and digging adits and cuts. The principal claim was the Morris A. C. The camp, situated at Sheep Spring, later known as Harpers South Camp (Mendenhall, 1909, p. 54) consisted of a boarding house, assay office and stable. John Harper was kept on as superintendent after the purchase. The Morris A. C. and the site of the camp were patented.

### Five Point Mountain

Five Point Mountain is situated about six miles southwest of Silver Lake. C. C. Hart and W. J. Sullivan made one of the first discoveries here in 1884. They dubbed their mine the James G. Blaine. Other mines in the district were the Clifton, claimed by L. P. Sweeney and W. J. Sullivan, the Bullion Chief, and the London, Vienna and Comstock mines located by Marcus Pluth and Hart. These mines, which were probably little more than raw prospects, assayed high copper and silver values. The Five Point mining district was established by March 1885 (*Calico Print*, March 1, 1885, May 31, 1885).

Between 1905 and 1914 there were numerous active mines at Five Point Mountain. A camp named Day Break is shown here on a 1906 map, at the Break of Day mine which was worked by the Amos brothers. The camp, also known as Five Point, was served by a auto stage in late 1906 (*Las Vegas Age*, December 15, 1906 p. 1).

### Joe Dandy Hill, Solo Camp

Situated about 5 miles north of the Zzyzx exit of Interstate 15 at what now is known as the Blue Bell Mine, the mines on Joe Dandy Hill were first active in early 1885. There were two properties being worked here, the Bullion King owned by William Robinson and others, and another owned by two men named C. C. Hart and W. J. Sullivan.

On March 22, 1885 the *Calico Print* reported that William Robinson had brought in some "good looking base ore from the new mines about 10 miles from Soda Lake, that assays over 100 ounces [of silver] to the ton. Mr. Robinson will go out there shortly to see if the ore exists in paying quantities, and corroborates the statements of parties prospecting in that locality." The May Queen claim, located January 1, 1885 by W. S. Hathaway and P. M. Livingston, was later patented.

Mining continued until the early 1890s (Ireland, 1888, p. 502; Crossman, 1890). On February 18, 1889, the Solo Mining District was established to encompass the new discoveries as well territory extending south of Baker. The

district recorder's office was located at Solo camp. On the north side of the hill a 500 foot adit was driven.

The mines here were reactivated in 1949 as the Blue Bell, Little Mike and Hard Luck. Forty tons was shipped from the Little Mike and 80 from the Blue Bell. Ore was also shipped - from the Hardluck in 1951 and 1952 (Wight, 1953, p. 64, 101; Goodwin, 1957, p. 616, 639).

### Denning Spring

Frank Denning, a native of New York born in 1850, served in the Army during the Civil War and, briefly, during the Indian Wars. Frank was fortunate to arrive at the Little-Big Horn 36 hours after Custer's massacre. After leaving the Army, he prospected Arizona. In 1881 Denning and Stanley Miller found silver-copper ore north of Saratoga Springs. In May 1882 they sold the undeveloped deposit for an incredible \$48,000. After visiting Chicago and San Francisco he again took up prospecting (Lingenfelter, 1986, p. 144-145).

At Denning Spring, Frank Denning and Joe Cook discovered gold in 1884 (*Mining and Scientific Press*, October 25, 1884, p. 262). They constructed an arrastra, and labored for eight hard months. Calling it quits with only \$50 to show for their labors, Denning let Cook keep the money since he had a family, and Frank walked to Calico, then in full-swing (*Barstow Printer* April 23, 1931).

### Cave Spring

Between 1883 and 1887 Cave Spring was a water and rest stop for wagons laden with borax from William T. Coleman's operation at Shoshone. During the hot summer months, mining was shifted from the Harmony Borax works at Furnace Creek in Death Valley to the cooler Amargosa works just south of Shoshone (Lingenfelter, 1986, p. 181-182). Spears (1891, p. 139-140) reported that a mining claimant who had filed on Cave Spring sold water to the borax teamster for 25 cents per man and per animal for each night. At the time of Spear's visit to Cave Spring in 1891 he found a stone corral erected by Borax Smith's borax company and a ruined hut.

### Quail Spring

Aside from mining in the Avawatz Range, the earliest mining on the immediate borders of Fort Irwin occurred northwest of Leach Lake. Tom and William McFarlane, and Gus Yager discovered rich gold bearing rock on a lone butte near Quail Spring in March, 1895 (*Redlands Citrograph* March 30, 1895). They named their mine the Lone Star, and the Lone Star Mining District encompassed the entire region. Rich gold was re-discovered here in October 1907 by Milt Armstrong (*Redlands Citrograph* Oct. 26, 1907), resulting in a rush of prospectors from Crackerjack. Armstrong's mine camp lasted in some fashion until 1912. In April 1908, the Kennedy brothers were driving two tunnels on the Silver King mine located near Quail Spring (*American Mining Review*, April 18, 1908, p. 15).

### Desert King Mine

A two-stamp mill was erected at the Desert King mine situated fifteen miles west of the site of Crackerjack as early as

1903. *The Bullfrog Miner* (February 8, 1907) stated the mill had been operating for the past four years, and had paid from the start. However, contradicting this rosy evaluation of the mine is the fact that the assessment work was not performed in 1904, and the claims were relocated January 1905 by Ella F. Rose and Amelia Clemens. Rose was most likely George Rose's wife. *The Mining and Scientific Press* (November 24, 1906, p. 619) in a brief article about the newly established Crackerjack mining district noted that a \$1,200 gold brick had been produced from the "Rose and Palmer" claims - probably the Desert King mine. In June, 1911 the Atlasta Mining Company was incorporated and began operations. Between January 1913 and April 1914, Louis A. Flormann leased the mine and was reported to have erected a new mill. When the claims were surveyed for patent in 1912 there was a blacksmith shop at the main adit and a cabin at the two-stamp mill at Desert King Spring. At the time of the visit of David G. Thompson (1929, p. 197) of the U.S. Geological survey in 1917, the cabin and mill were still standing.

### CRACKERJACK

Some of the first locations in the vicinity of Crackerjack were made in late 1904, and nearly all of the main properties had been located by the time news made its way into the press, in late 1906. A significant number of locations were made before the July 1906 announcement that Arthur Kunze had sold claims to Charles Schwab, triggering the Greenwater stampede (Weight, 1969, p. 7). Undoubtedly the rush to Greenwater, some 60 miles to the north, spilled over, drawing attention to Crackerjack.

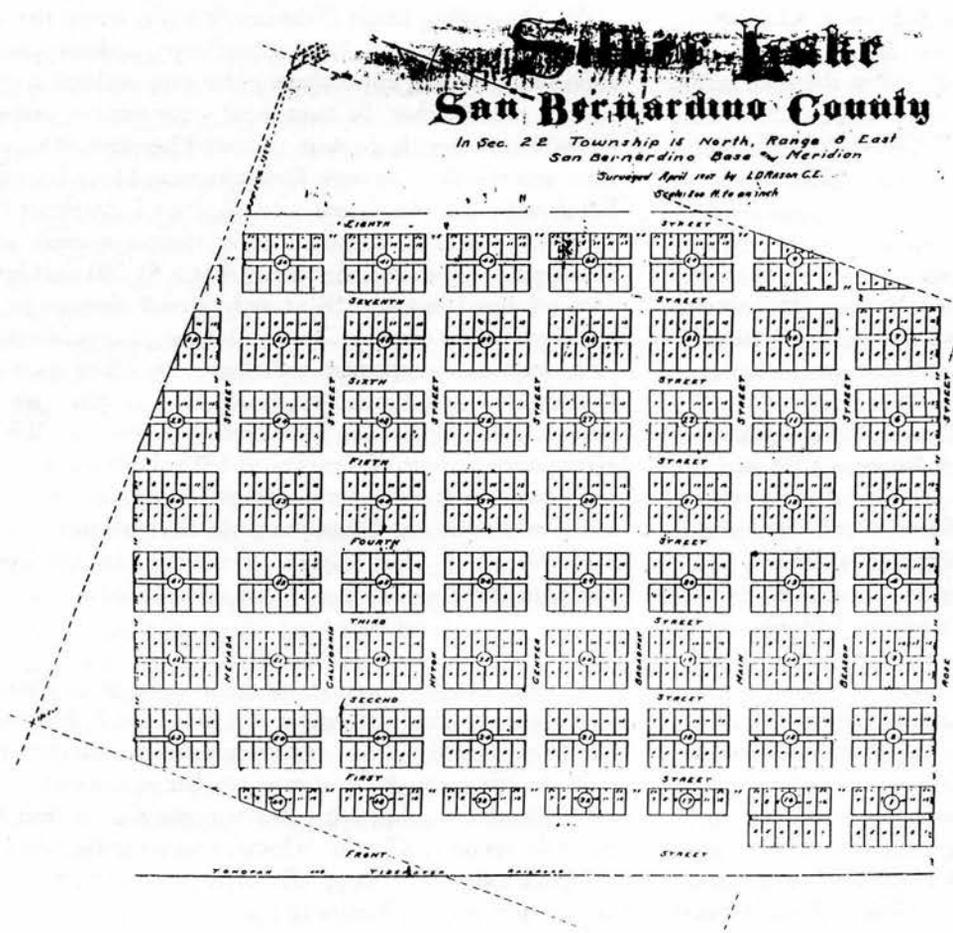
The Crackerjack mining district, encompassing 36 square miles was established by October 1906. Fred Bender, formerly of Rhyolite, was the district recorder.

The original camp in the area was Crackerjack. The mining claim dubbed the Crackerjack Lode # 2, was subdivided and the town was born (San Bernardino Board of Supervisors February 18, 1907). A post office was also established in February, and weekly newspaper, the *Crackerjack News*, was begun by Herbert Stanton in May 1907 (Lingenfelter, 1986, p. 331). The promotional *News'* first issue was summarized in the *Searchlight Bulletin* of May 24, 1907:

...as a residence town Crackerjack is supreme; that seldom has a more ideal site been chosen for a mining camp, being situated on a broad, gentle sloping mesa near the summit of the Avawatz, with towering peaks to the north and low rolling hills to the south; with an altitude of nearly 5000 feet; with the principal mines in close proximity to the town.

Advertisements in Los Angeles newspapers offered "choice lots for sale", and boasted that Crackerjack was "...destined to be the richest camp of all" (Moon, 1976 p. 25). A company was organized to construct a telephone line to Silver Lake (*Bullfrog Miner*, October 26, 1906).

With the discovery of rich copper and gold showings, several mining camps sprang up in Fort Irwin or just on the outskirts. These camps included Crackerjack, Dry Camp or



*The Silver Lake Township Company, a Corporation, does hereby certify that it is the owner of the lands shown on this map of Silver Lake Township, and has caused the same to be surveyed, and divided into lots, and that the said Township Company does hereby dedicate as public highways, all streets, roads and alleys shown on this map of Silver Lake Township, located in the T. 14 N., R. 8 E., S. 22.*

*In witness whereof and company has hereunto set its name and affixed its official seal this 16th day of September 1907.*

*J. H. Brown*  
Secretary

*State of California*  
County of San Bernardino

*On the 16th day of September in the year nineteen hundred and seven, before me a Notary Public in and for the County of San Bernardino, State of California, residing therein being duly commissioned and sworn, personally appeared G. J. Fisk and J. H. Brown known to me to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same.*

*In witness whereof, I have hereunto set my hand and affixed my official seal the day and year in the certificate first above written.*

*M. J. Conrad*  
Notary Public in and for the County of San Bernardino, State of California

*On a regular meeting of the Board of Supervisors of the County of San Bernardino, State of California, duly held on the 16th day of September, 1907, the said Board of Supervisors accepted on behalf of the public all of the streets, roads and alleys shown on this map, and said acceptance was authorized to be evidenced on this map as provided by law.*

*Dated this 16th day of September 1907.*

*G. J. Fisk*  
Chairman

*J. H. Brown*  
Secretary

The 1907 survey of Silver Lake, San Bernardino County, California.

Avawatz City, Copper City or Copper Center, Harper's Camps, Day Break or Five Points, Quail Springs, Denning Spring, Bonanza Camp, Cave Springs, Arrastra.

**Silver Lake**

The Tonopah and Tidewater Railroad had reached the playa of Silver Lake March 1906 (Myrick, 1963, p. 548). At this site, the town of Silver Lake mushroomed on the often not-so-dry lake bed, and became the jumping off point to the new camp. The general store established by George Rose, fifty year old George A. Heath and thirty-nine year old Oliver J. Fisk before long was doing an annual business of \$150,000.

Rose had come west working as a station master for the Pony Express, drifted through in Virginia City during its heyday, and perhaps as early as the 1860s, prospected the Death Valley area. Fisk began a auto-stage line to Crackerjack charging the one-way fare of \$15, or round-tip \$25 (*The Death Valley Chuckwalla* March 1, 1907). Heath's brother William, as president of the Avawatz Mining Company, was partially responsible for the establishment of Avawatz City.

Silver Lake, by March 1907, also had two restaurants, one run by J. H. Brown the other by Albert Wilson. Wilson also located several claims at Crackerjack with W. E. Beck (*Las Vegas Age*, March 9, 1907 p. 1).

On June 4, 1907 the San Bernardino Board of Supervisors

voted to make Silver Lake a judicial township and voting precinct. O. J. Fisk was appointed justice of the peace and Otto Vonarx, constable (San Bernardino County Board of Supervisors June 4, 1907). Fisk, as president, and J. H. Brown, secretary, of the Silver Lake Townsite Company, in September, 1907 had the townsite surveyed on 160 acres. The Board of Supervisors accepted the subdivision September 16, 1907 (San Bernardino County Surveyor's Office: Book 16 Map 72). Vonarx resigned as constable June 15, 1908 and Louis Flormann was appointed. On May 5, 1911 the *Barstow Printer* noted that George Brauer had purchased the store from Heath and company, ending an era.

**Arrastra Spring**

At the camp of Arrastra, located at Arrastra Spring, prospectors new to the area, found abandoned mine workings, an arrastra, and walls of crumbling adobe structures (*The Death Valley Chuckwalla* March 1, 1907). These were attributed to the Spanish. However, this secluded site was a favorite place to process ore which had been high-graded from producing mines as far away as Goldfield and Goodsprings, Nevada. The high-grade ore, stolen by mine workers, was sold to "fences" who processed it here and at other secluded arrastras. Some men reportedly involved with this illegal gold milling were Bill Russell, Jack Roach, Sontag Wilson, Cyclone Wilson,

Rattlesnake Pete and Herman Renau (Kenneth Van Doren personal communication).

Copper City

On a placer mining claim located February 20, 1907, C. E. Southworth and seven others laid out Copper City measuring one-quarter mile wide and nine-tenths mile long (Location Notice for Copper City Placer mining claim San Bernardino County records Book 58 Page 46). An advertisement for Copper City, which appeared March 7 in the Bullfrog Miner, encouraged, "If you have failed to make good in Tonopah, Goldfield and Bullfrog, try a brand new district." The town boasted a lodging house and an up to date saloon to serve the district's 250 residents. A general store was soon to open. Copper City, by the time it was ten days old, boasted a population of one hundred. It had the distinction of being the site of the district's only homicide, when Fremont Cole shot John Ward over a disputed mining claim in April 1907 (Lingenfelter, 1986, p. 331).

The Bullfrog Miner of February 15, 1907 reported concerning Copper City:

..the new district is increasing rapidly, and wagons, automobiles and stages arrive daily, crowded with investors and others who are desirous of trying their hand in the "new country."

Avawatz City

Avawatz City was founded May 1907 after eight armed men forced a Chinese mine cook out of Crackerjack, citing the mining district's rules which barred Chinese. Forty-two year old Louis F. Flormann, a loud talking man who always wore a gun, defied the vigilantes declaring that he would get himself a Chinese cook. Flormann eventually was to become one of the most important operators in the district.

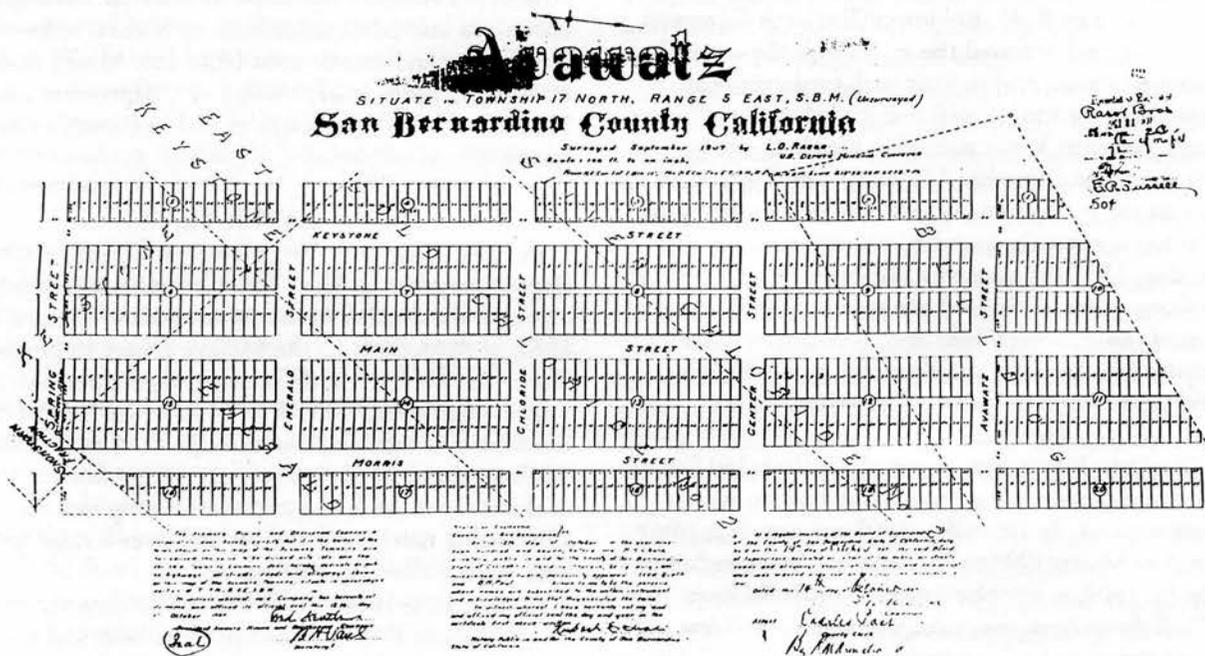
The county authorities worked out a plan to permit the cook to return, however so much ill will was generated, the new camp was established about one mile due east of Crackerjack (Moon, 1976, p. 25). The townsite of Avawatz measured 810 feet wide and about one-half mile long, and consisted of some 525 lots each measuring 25 by 100 feet. The townsite was surveyed September 1907 by L. D. Rasor for the Avawatz Mining and Developing Company, of whom William H. Heath was one of the primary interested parties (San Bernardino County Surveyor's Office: Book 16 Map 71).

The Turner general store, which housed the Crackerjack post office was moved here in October (Redlands Citrograph October 19, 1907) and the name of the post office was changed to Avawatz in August, 1908.

Crackerjack

Many colorful desert prospectors descended on Crackerjack, Shorty Harris, who had discovered gold at Rhyolite (Bullfrog Miner, October 26, 1906) was "...numbered among the most confident of the district's locators."

Ed Bahten, the "Furnace Creek Kid," not yet out of his teens, located some claims on Table Mountain, and in May 1907 leased them (Searchlight Bulletin, May 10, 1907). Bahten, who had found a job with Arthur Kunze at Greenwater, along the way located some claims which he sold for \$10,000 in a bar one night (John Bahten, personal communication; Glasscock, 1940, p. 230; Weight, 1969, p. 19 top photo, far right). F. M. "Shady" Myrick, was another claimant whose activities here found their way into the news of Crackerjack. His claims were located less than a half mile northeast of Copper City, on the southwest side of View Mountain. Later, the fifty-six year old Myrick discovered agate with bright red mercury inclusions just out of Fort Irwin to the west. The stone was dubbed myrickite after its discoverer, and was investigated by U. S. Geological Survey geologist, D. B.



The September, 1907 survey of Avawatz, San Bernardino County, California.

Sterrett (1913, p. 650).

The principal mines in the vicinity of Crackerjack, Avawatz, and Copper City were located on the ridge between Crackerjack and Avawatz, on the south side of Table which is located south of Avawatz, and on View Mountain, located northeast of Avawatz and southeast of Cave Springs.

Dozens of companies were incorporated to work the hundreds if not thousands of claims which blanketed the entire area. Although there was mention of high assay values, and extensive shafts, adits and drifts, there is only one mention of production or shipments. This was from the Crackerjack Tomboy, which early on reportedly produced \$5,000 in gold (*Mining World*, April 11, 1908, p. 612). The most extensive mining in the vicinity of Crackerjack was conducted on the ridge between Crackerjack and Avawatz City at the Tungate, Blue Bucket, Crackerjack Tomboy, Crackerjack and Copper Prince mines. Other mines were located immediately southeast of Avawatz Pass at the Old Shady (French Harp ?) mine, and the on the south side of Table Mountain south of Avawatz camp, at the Manhattan and Corona mines.

By the Spring of 1908 it was clear that the district's mines had failed to live up to expectations. In March 1908 the *Crackerjack News* moved to Silver Lake and was reestablished as the *Silver Lake Miner*. At the same time Greenwater was being deserted. Tiger Lil left Greenwater to run her "hotel" at Silver Lake for a while (Lingenfelter, p. 336).

#### Bonanza Mountain

The Crackerjack Bonanza gold mine which was located in February 1906 by S.S. Worley and W. L. Snodderly soon became the show-case producer of the camp of Crackerjack even though the mine was situated over 25 miles away. This mine and a few others were located on Bonanza Mountain, adjacent to Red Pass on the south, and just outside of the fort. By June 1907 the Crackerjack Bonanza Gold Mining Company, promoted by R. D. Robinson (*Redlands Citigraph*, January 18, 1908), had acquired the mine from the original locators, and was mining and sacking high-grade ore that assayed up to \$500 per ton. A well was drilled and small camp consisting of a boarding house and other buildings were erected near the mine (*American Mining Review*, September 14, 1907). This camp occasionally was referred to as Bonanza Camp and it too was briefly served by an auto stage.

By November, 1907 the company began leasing out portions of claims. George Rose, of Silver Lake took up the first lease on a portion of the Arizona Claim and immediately began sinking a shaft. At 30 feet he was rewarded by finding an eighteen inch wide pay streak (*American Mining Review*, November 9, 1907, p. 16).

On the Crackerjack Bonanza, eventually a shaft 250 feet deep was sunk, which was connected at the bottom with a 400 foot long crosscut. In December 1907 ore was shipped to Salt Lake and in March 1908 to Victorville (*American Mining Review*, July 24, 1909, p. 19; November 2, 1907; February 15, 1908, p. 15). Judging from the tailings present, a mill was erected. Many times, in news of the mine, it was stated that a mill would be constructed, but never was there story

announcing that a mill was built. The mine was patented March 21, 1910.

Louis Flormann, who was manager of the property after 1909, continued intermittent mining until 1914 (*Barstow Printer*, April 17, 1914). One unpublished Army Corps report from the late 1930s or early 1940s, indicated ore from the mine was milled at Bitter Spring.

Several other mines were worked on Bonanza Mountain in addition to the Crackerjack Bonanza. Flormann worked the Cameo mine (*Barstow Printer* February 28, 1913), and the Morning Star (*American Mining Review*, April 11, 1908 p. 15; June 13, 1908 p. 15), which was 1,500 feet north of the Crackerjack Bonanza's Owl claim. This mine had a shaft at least 90 feet deep. Another mine the Little Bonanza had a 75 foot deep shaft.

In the late 1970s Paul Ottell of the Chelsea Mining Company leased the Crackerjack Bonanza Mine, and began a project in late 1980 to heap leach gold from mine dumps. However, an argument arose and financial backers pulled out before any gold was recovered.

#### SODA LAKE

The *Las Vegas Age*, May 14, 1907 reported:

A Los Angeles company has a force of men building houses and sheds at the old government Fort on the old overland stage road at Soda Lake, getting ready for manufacture of soda on a big scale.

The Pacific Coast Soda Company, owned by a group of investors from Santa Ana, satisfied with the pilot plant they had constructed in May, began to increase capacity in August. The operation consisted of a nearly two mile long narrow gauge track on the lake surface, a mill to crush the brine laden crust, an ice-plant, tanks, and a drying kiln. The plant produced sodium sulphate and salt. When completed, \$30,000 had been expended and another \$40,000 at a plant at Santa Ana which received the material from the Soda Lake operations and produced sodium carbonate, sodium bicarbonate and caustic soda (*American Mining Review*, August 8, 1908, p.1; March 27, 1909, p. 79; September 24, 1910, p. 55). By Fall 1910 operations ceased, apparently never to resume.

#### LATER YEARS

In 1894, Charles S. Van Doren, employed by Chauncey Depew, president of New York Central Railroad and part owner of the Bagdad Chase mine south of Ludlow (Myrick, 1963, p. 828), came to the Mojave Desert to prospect. Van Doren was outfitted with an assay wagon, and two supply wagons. Beginning his trek in Mojave, he headed through Randsburg, continuing east through the Leach Lake Valley. Walking ahead of the wagons examining float rock at the base of the canyons he found some interesting rocks at Leach Lake. Continuing north up a canyon and over a ridge he found a bold vein of silver-bearing galena.

A short time later Depew decided to drop the exploration crew, so about 1900 Van Doren went back and located the best of his discoveries. These included the Manganese Cliff and the Indian Trail also known as the Avawatz Chief, silver

mine.

A small camp was erected at the Indian Trail mine, and supplies were sold to local prospectors from one of the two buildings. Water was hauled ten miles from Denning Spring, where George Shafter was employed to bail water into storage tanks. Also at the Denning Spring he utilized a short drift, and a substantial tent for storage. Several rail cars of silver bearing galena were hauled to Silver Lake from the mine. After mining out the pocket ore exposed on the surface, a shaft was sunk without striking another ore body as rich as the original. In 1939 Charles' son, Kenneth visited the camp. At that time all of the buildings except one had been destroyed, and the corrals, sorting belt and hoist engine had been stolen (Kenneth Van Doren, personnel communication).

It was perhaps during World War I Marsene Rose interested investors in his "gold, silver, lead, vanadium, tungsten and molybdenum" mine at Denning Springs. Rose and young Kenneth Van Doren, scrounged the desert for parts for a mill. With the investors money Rose built a modest camp consisting of a big house for his family, a boarding house and three or four cabins. He never really mined, he just ran enough ore to keep the investors on-board.

The Champion gold mine, situated about four miles west of the Avawatz Chief mine, was located in 1925. A small tonnage of high-grade gold ore was milled at Denning Spring in 1937, later another shipment was sent to the Burton brothers' mill near Rosamond (U. S. Army Corps documents).

#### Cave Springs

In 1894 Adrian Egbert first passed through Cave Spring on his way to work the Amargosa mine. In 1925, he returned to Cave Spring and took up permanent residence. A short time later he met Mrs. Ira B. Sweatman. Sweatman, a wealthy widow, had come to the desert for her health. In time she gave Egbert power of attorney, and he purchased the millsite claim located at the spring for her, and constructed several buildings, she apparently lived in Daggett and relied on Egbert's advice. While here he prospected, and opened a service station at Cave Spring. Egbert placed water jugs along the road for emergencies (Ford, 1939). In 1941 the United States began proceedings against the mining claims. Egbert died a short time later.

#### Arrastra Spring

During prohibition in 1925 or 1926, Nick Gegg, a immense German fellow, lived in a cabin at Arrastra Spring while prospecting and making moon-shine. Gegg shared his cabin with Claude Yake, who was raised in Pahrump Valley. The two got in a serious argument. Yake grabbed a shot-gun and blew off Gegg's right hand. With his left, Gegg reached under his pillow and pulled out a pistol but was unable to release the safety. Then Yake knocked the pistol out of his hand and picked it up. Yake told authorities that Gegg came at him and as he fled backing down the hill, he shot and killed Gegg. But a witness who came along after the shooting thought that from where the cartridges were it looked like Yake pursued Gegg and shot him. Reportedly George "Daddy" Rose, who soon arrived on the scene collected the cartridges and moved

them to substantiate Yake's story (Kenneth Van Doren, personnel communication).

#### Establishment of Fort Irwin

Executive Order 8507, signed August 8, 1940 by Franklin Delano Roosevelt, withdrew Camp Irwin from all forms of entry, including mineral entry as defined in the Mining Law of 1872. It appears, from reconstructing events of the time, that mining engineers of the General Land Office extracted claim information from County records and sent certified letters to all of the mineral claimants. A total of 1,083 contests were initiated against about 3,000 mining claims. Most of the letters were returned to the government, "addressee unknown," the cases were closed, and the claims were extinguished. However, hearings were held involving approximately 20 claimants, and about 150 claims. Each claim was described in a one-page government mineral report. Elaborate reports that included photographs, maps and assays were prepared for each of the hearings, but virtually all the reports were inadvertently destroyed by the Federal Records Center. Only two court transcripts existed in 1982. BLM records indicate that only eight claims were determined by the court to have valid mineral discoveries.

An Historic Index listing the mineral contests is available on microfilm "aperture" cards at the BLM's Barstow, Riverside and Sacramento offices. The contests listed in the Historic Indexes are geographically arranged. A serial register book of the mineral contests is available at the BLM State Office in Sacramento. This book, organized by contest, has the date of each piece of correspondence, and the outcome for each claim. In addition, several decisions have been pasted into the book. The locations of claims listed in the Historic Indexes roughly define areas which may be mineralized, and their names reveal something about the nature of the minerals being sought. For example, Vanadium No 1., Gold Supply, Tungsto, Bismuth King, Brucite No 2., White Eagle Borax, Iron Dollar, Cinnabar No. 2, and Niter No. 1 are the names of some of the claims located within the Fort.

Executive Order No 9526 signed February 28, 1945, decreed that six months after the end of World War II, jurisdiction over the Camp would be transferred back the Department of Interior, although the land would not be available for appropriation. However, some mineral claims were illegally located at this time, including the claims for iron in the Tiefert Mountains that were described by Tucker (1946, p. 319). On November 16, 1954, Fort Irwin was transferred to the United States Army. At this time, geologists and appraisers with the Army Corps of Engineers attempted to establish a fair market value of rental of the remaining valid claims. Rental payments were based in-part on the apparent mineral content of the claims. There are no records of the disposition of the mineral claims filed during the years 1946 to 1954. Interviews with geologists who worked with the U.S. Army Corps of Engineers and the newly formed U.S. Bureau of Land Management (1948), indicate that the government went through a hearing procedure similar to the withdrawal of 1940.

In the early 1980s the Army was still paying rent to the

Van Dorens and the owners of the Desert King mine.

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