

# The Mojave Mining District, a Brief History of Gold Mining

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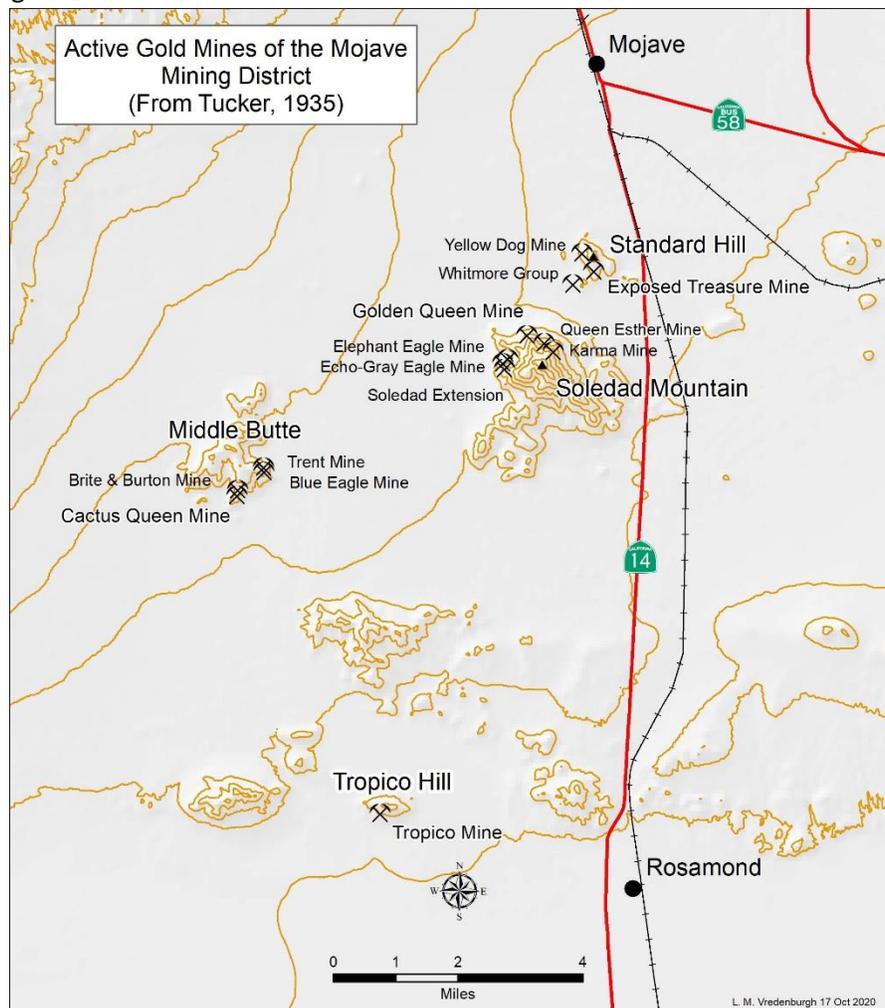
## INTRODUCTION

Soledad Mountain, which rises almost 1,400 feet above the surrounding, mostly flat, western Mojave Desert, has been like a sentinel for explorers, travelers and prospectors who have passed by this solitary mountain on their way to somewhere else, yet not realizing they were passing by a literal mountain of gold.

Kern County has been blessed with immense mineral riches essentially lying on the surface. In the Taft area oil has been flowing to the surface in seeps and springs since the Pleistocene Epoch (since about 2 million years ago). The world's largest borax mine, located at Boron, California, was discovered in 1913 by John Suckow, at a depth of 40 feet while drilling for water on his homestead claim. There are so many other examples of riches found at the surface: the Big Blue Mine at Kernville, gold in the El Paso Range and Randsburg, silver at the Kelly Rand mine and tungsten at Atolia to name just a few.

On the northeast side of Soledad Mountain, literally in its shadow, tiny Standard Hill rises a mere 450 feet above the desert. But it was here, originally named Bowers Hill, that a rich surface exposure

of gold bearing rock was first found in 1894. Soon gold was also discovered on Soledad Mountain, Middle Butte and Tropico Hill (also see Wilkerson, 2020). These hills fit within a 12.3-mile diameter circle. After initial mining activity, until about 1914, the mining district saw a revival from about 1933 until 1942, and sporadically from the mid-1980s until present time.



## 1894 – 1914

### Standard Hill

Gold was first discovered in the Mojave Mining District after George Bowers stepped off the train in Mojave to get a bite to eat while the locomotive stopped for water. He noticed Indians selling quartz crystals, bought some and inquired where they came from. Bowers returned on a subsequent trip in 1894 and

The date of his discovery is recorded as March 8, 1894. A few days later the Bakersfield *Daily Californian* reported that “George E. Bowers and C. Bowers each located quartz claims at a point about four miles south of Mojave.” Another account stated that Bowers located 6 claims in 1894. Bowers found a gold-rich surface outcrop on what is now known as Standard Hill, half mile west of the Southern Pacific Railroad. His first “mining” consisted of



The Exposed Treasure Mine early 1900s, Standard Hill, Mojave Mining District. Photo by C. C.

discovered gold just south of town. Bowers wasn't just some raggedy prospector. Born in 1833 in Pennsylvania, by 1870 he was living in Grass Valley, where the census taker listed him as a quartz miner. In the San Francisco city directory two decades later, his occupation is listed as “Mining.”

gathering up about 40 tons of loose gold-bearing surface rock which he shipped to a mill by railcar at a profit. Bowers quickly set to work sinking shafts. The mine that was developed from this find was named the Exposed Treasure.

Soon the area was swarming with prospectors, several of whom were rewarded with “many valuable finds in low grade gold

bearing ore. . ." Because of this increase in mining activity, a Mojave Mining District was established on November 29, 1896, with H. E. Coleman the elected recorder.

After attempting to interest investors in the property, Bowers sold his claims to K. A. Calkins and C. N. Davidson in June 1898. During 1901 a 20-stamp mill was erected at the Exposed Treasure and an 18-mile long water line was laid from Oak Creek.

In 1912 Mojave Consolidated Gold Mines Company purchased all of the mines on Standard Hill and operated them until 1915. It is estimated that about 105,000 ounces of gold were produced from the Exposed Treasure Mine from 1894 until 1915.

In 1921 a spectacular discovery was made at the Yellow Dog Mine, on Standard Hill. Percy Wegman, son of E. H. Wegman owner of the Queen Esther and Karma mines, located on Soledad Mountain, found several pieces of gold rich "float" rock on a wagon road a hundred feet from an existing mine shaft. However, the ore body which was discovered proved to be small. In 1921 Standard Mining and Milling Company operated the mines until 1928.

### **Soledad Mountain**

Mining began on the north slope of Soledad Mountain at the Queen Esther, Karma, Echo, Elephant and Gray Eagle mines by 1897. In 1902 a 10-stamp mill (later enlarged to 20-stamps) was erected at the Echo Mine. At the Queen Esther, a roller mill with 75 tons of daily capacity was erected in 1903; the mill capacity was increased to 150 tons the following year.

The Karma Mine, between 1897 and 1904, shipped ore averaging 50 ounces of silver and .5 ounce of gold per ton to the smelter. These shipments yielded \$287,000. In 1904 a 20-stamp mill was erected to treat ore from the Karma Mine.

Between 1894 and 1909 the Queen Esther produced about 62,500 ounces the Karma 37,500 ounces of gold.

### **The Tropico Mine and the Burton Brothers**

Shortly after Bowers' 1894 discovery, more rich gold ore was discovered on the south end of the district. Beginning in the 1870s clay was mined by Dr. L. A. Crandall from the north side of what is now known as Tropico Hill. Eventually, Ezra Hamilton, owner of a manufactured fire clay pipe company in Los Angeles, began buying clay from Crandall, and in 1882 he purchased the quarry. Years later, in the early 1890s, Hamilton decided to pan some of the clay and found specks of gold. He soon hooked up his team and, with his son Truman, headed out to find the source of the gold. But it wasn't easy. It took two years of prospecting whenever he could get away, before he discovered the source of the gold. Finally, in 1896 Hamilton made a rich strike at the crest of a hill. Then he and his son began staking out claims, and started sinking a prospect shaft. His first shipment of 21 tons netted them \$4,600 from which they purchased mining machinery. In 1898 he purchased a two-stamp mill. Hamilton sold one of his claims in 1900 for an astounding \$100,000. Soon afterward Hamilton built a 5-stamp mill to process ore from the Lida and Fairview Claims. Under Hamilton's management the mine produced \$260,000 (about 13,000 ounces) of gold from a narrow vein that carried 1 to 5 ounces of gold per ton.

The mine changed hands several times until it was acquired in 1909 by Tropico Mining and Milling Company. Several of the stockholders of this company were from a small community known as Tropico located near Glendale, California.

In 1910 Clifford Burton, who eventually came to own the Tropico mine, began working for the company. In 1900, at the age of 12, Clifford's family moved from England to a ranch 5 miles west of Lancaster, California. When Clifford was 18, he set out with Mike O'mara, an old prospector who was passing through the Antelope Valley on his way to Death Valley. At Ballarat Clifford met Mel Stanford. The two of them began prospecting together, and before the end of the year they discovered the Gold Bug mine high in the Slate Range. After selling the mine for

\$2,000 he took courses in assaying, and other mining subjects. He had this and other mining experience under his belt, prior to beginning work for the Tropico Mining Company. In June 1914, a short time after he began working for the company, he was promoted to superintendent. At this time, he hired his brother Cecil. After serving during World War I Clifford returned to find the mine shut down. At first, he was granted permission to reprocess tailings; then, in 1920, he worked the mine under a lease. Slowly the two brothers purchased the mine's stock and by 1928 Clifford and Cecil formed the Burton Brothers Corporation for the purpose of operating the Tropico Mine and the Burton Brothers Custom Mill.

Under their ownership they expanded the mill and extended drifts westward toward the Kid claim where they encountered the largest ore bodies found at the mine. This mine, as nearly all gold mines in the country, were closed down in 1942. After the war the mine was operated on a small scale until 1956. During the life of the mine, between six and eight million dollars was produced.

## **The 1930s**

### **Soledad Mountain**

In the 1930s the Mojave Mining District experienced a significant revival that U. S. Bureau of Mines mining engineers C. E. Julihn and F. W. Horton attributed in no small part to Clifford and Cecil Burton.

They described the Burton Brothers, in their 1937 report on mining in the district as,

“hard-rock miners themselves, who had labored and sacrificed to become owners of Tropico mine, mill, and general supply store. With faith in the district, they were persistent grubstakers of worthy prospectors, as well as outstanding good citizens of the little hamlet of Rosamond in the Mohave Desert.

It was they who, at the onset of the great depression, leased the Exposed

Treasure and other old properties, subleased small parcels of the ground to miners out of employment, grubstaked them, and milled at Tropico whatever small lots of ore the mines produced. As a result, there were ultimately 50 to 60 groups of leasers in the district making a living through deliveries of ore to the Tropico mill. These small leasing operations produced \$180,000 worth of ore. A leaser looking for a new place to work found the now famous horn shaped piece of rich gold float that led to discovery of the Golden Queen vein, to his suddenly becoming a millionaire, and to revival of mining in a big way throughout the moribund Mojave district.”

During the early 1930s numerous leasers were working the old mines of the district. George Holmes was one of these leasers. He was born in 1903, and was 26 when he began mining in 1929 near the Elephant Eagle Mine on the northwest side of Soledad Mountain. Though born in Michigan he grew up in Grass Valley. He began working in the mines at 16. He had worked at the North Star Mine in Grass Valley for three years, and in other mines in Nevada and California. In addition, he took some geology courses at the University of Southern California but lacked finances to complete his courses. Though he had done well on his lease on Soledad Mountain, he held out hope to find another outcrop to work.

On Sunday morning September 17, 1933 while scouting high up on the northwest side of the mountain he encountered Bruce Minard, another leaser who also was looking for a better prospect to work. Later that day, Holmes broke a horn shaped piece from a large loose boulder. The fresh fracture surface showed free gold. (Later, when assayed, the sample yielded a phenomenal 45 ounces of gold and 377 ounces of silver per ton.) The new partners immediately



California Geological Survey Photo. "Golden Queen Mining Co. New 300-ton mill and cyanide plant. Photo by W. W. Bradley." Tucker, 1935, p. 477.

set out to find the source of the rich gold sample. After a few days they found what they believed was the source, and after checking, they determined the ground was unclaimed. The claim that they recorded included Holmes and Minard's names as well as Minard's friend W. E. Dew and George's father Marvin.

They named their claim the Silver Queen. To prove this was more than an isolated find trenching and digging prospect pits was required. According to one account, Minard and Dew were "not impressed with initial results and sold their interests to Cy Townsend, an ex-Justice of the Peace, for \$1,500." But Holmes and a small crew persisted and the first 30 sacks of ore were dug out with a pick and shovel, and carried down the mountain on their backs. Also, they began sinking two incline shafts. Over the next year, as work progressed, about 4,000 tons of ore was shipped which yielded \$20 (about .57 ounces) per ton, or about \$80,000 with gold at \$35 per ounce.

Months later, in January 1935, Holmes and his father sold the property to a syndicate headed by the Gold Fields American Development Company for \$3,170,000, plus they retained a royalty interest.

After purchasing the mine, which the Gold Fields Company renamed as the Golden Queen, they conducted extensive exploration, and by October 1935 erected a mill with a 300-ton per day capacity. The Golden Queen Mine eventually expanded to include the Karma, Queen Esther, Echo and Gray Eagle properties. Between 1936 and 1942 about 500,000 tons were processed yielding about 171,000 ounces of gold. This mine was shut down by the government in 1942.

As was the case in the 1890s following the original discovery by George Bowers, soon prospectors were again scouring the hills in the Mojave Mining District.

#### **Middle Butte**

At Middle Butte, on the west side of the district, several discoveries were made. The

most significant was the Cactus Mine in the fall of 1934. Soon after this discovery the property was purchased by Clifford Burton, who leased and later sold it to Cactus Mines Company. From 1935 until 1942 more than 230,000 tons was produced which yielded .35 ounces of gold and 10 ounces of silver per ton.

### **Standard Hill**

Mining from 1928 until 1940 on Standard Hill was mostly done by lessees who shipped ore to the Tropico mill. In 1940 Standard Hill Mines purchased the property and mined it until 1942. Total historic production was estimated at about 150,000 ounces of gold and 500,000 ounces of silver. Up to 85 percent of this total is credited to the Exposed Treasure vein.

### **1980s and Beyond**

#### **Middle Butte**

In 1979 the Cactus mine was acquired by CoCa Mines of Denver Colorado. Commercial production started August 1986. Active mining ceased in 1992. Heap leaching of stockpiled ore continued until 1996. Total production during this period was about 400,000 ounces of gold and 3,000,000 ounces of silver. Subsequent exploratory drilling discovered an additional gold resource beneath the Shumake Pit. The new resource may contain as much as 600,000 ounces of gold.

#### **Standard Hill**

In 1983 Billiton Minerals USA, a subsidiary of Shell Mining, began an exploration sampling and drilling program on Standard Hill. Construction began at the mine March 1987, and mining in May. The first pour of precious metal occurred July 21, 1987. The average grade of the ore was .08 ounces per ton. Production continued through 1994.

#### **Soledad Mountain**

In the 1980s Golden Queen Mining Company began exploring the potential of reactivating the mine on Soledad Mountain. The proposal was

approved by Kern County and the Bureau of Mines in 1997. A modified Environmental Impact Report was approved in 2010. At that time, it was estimated the mine would be active for 12 years, that 51.2 million tons would be heap leached, and up to 225 million tons of overburden mined. It was projected that gold and silver production would be 1,067,000 oz of gold and 12,039,000 oz of silver over a period of 15 years. The first pour of gold occurred in March 2016. As of January 2020, the mine was still going strong.

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