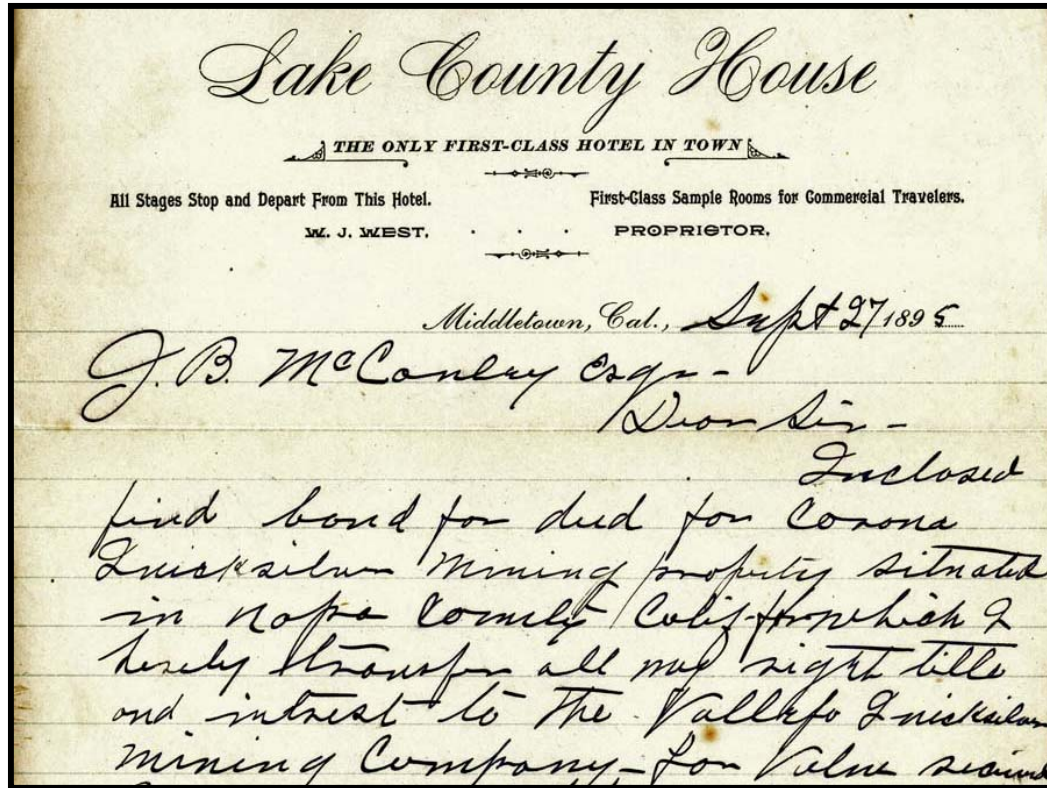




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**CULTURAL RESOURCE EVALUATION OF
THE CORONA AND TWIN PEAKS MINES, NAPA COUNTY
APN 115-018-013**



Prepared at the request of:

Tuleyome
607 North Street
Woodland, CA 95695

Prepared by:

John W. Parker, Ph.D., RPA
USGS Quad: Detert Reservoir 7.5'
August 30, 2012

**THIS VERSION CONTAINS NO RESOURCE LOCATION INFORMATION AND CAN BE RELEASED FOR
PUBLIC USE.**

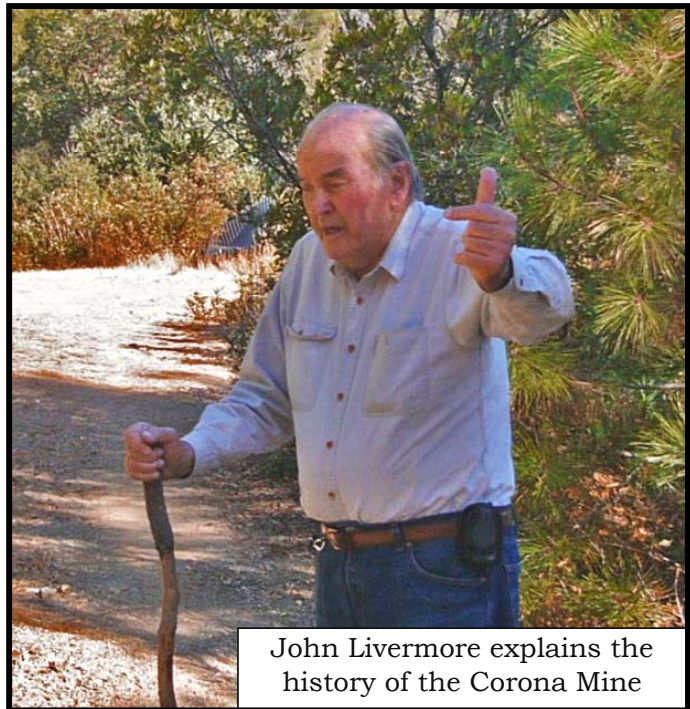
CONTENTS

SUMMARY	2
INTRODUCTION AND BACKGROUND	2
Natural Setting.....	3
Prehistoric Background	3
Historic Background.....	4
PREFIELD RESEARCH.....	8
FIELD INSPECTION	9
RESULTS.....	10
Prehistoric Resources	10
Historic Resources.....	11
CONCLUSIONS.....	30
Legal Framework.....	30
Resource Significance.....	32
Land Use Planning Recommendations	37
BIBLIOGRAPHY	38

Acknowledgements

Many people provided their knowledge, time, and talents to make this study possible. Special thanks must be given to John Livermore and Justin Smith for their interest in preserving the history of the project area. Sylvia Marciano and Bev Barns of Calistoga's Sharpsteen Museum and Alexandria Brown of the Napa County Historical Society are to be commended for their research assistance. Jeff Parady (Pope Valley Garage) is appreciated for the leads he provided and his interest in local mine history.

Without the dedication and hard work of the staff and directors of Tuleyome Inc., this project would not have happened. Finally, I would like to thank my wife, Cheyanne, for her excellent field work in the face of steep slopes, poison oak, bears, and wild dogs. She also needs to be commended for her patience and advice as I worked on the report.



John Livermore explains the history of the Corona Mine

SUMMARY

On April 24th, Sara Husby-Good requested that the author conduct a cultural resource investigation of the Corona and Twin Peaks mine sites and associated historic resources situated in the James Creek watershed, Napa County. The purpose of the investigation was to map, describe, and evaluate archaeological and historical sites and features prior to a planned mine site cleanup project. Archaeological Research was also asked to assist the mine site cleanup specialists in designing a plan that would avoid impacts to significant historic resources.

This investigation included an extensive review of published and unpublished historical documents, maps, photographs, and the field inspection of ~53 acres. This work discovered six historic sites (containing at least 37 definable features), one combination historic/prehistoric site, and one isolated prehistoric feature. Six of the cultural resources appear to be significant as defined under the California Environmental Quality Act (CEQA). Four of these sites exist within the immediate project area.

The historic resources making up the Corona and Twin Peaks mine sites provide an excellent example of the initial development and continual refinement of hard rock cinnabar mining and mercury processing as it existed in the California Coast Range between 1870 and 1970. In addition to mining-related engineering features, extensive residential deposits were discovered containing materials that can provide information important in reconstructing the personal lives of the mine owners and workers throughout this period.

Cutting through the project area is Oat Hill Road. This wagon road has been recognized by many researchers as a significant transportation route linking Napa and Lake Counties and providing access to one of the most productive mercury mining regions in California (E Clampus Vitus 1998).

It is recommended that the mine site cleanup plan be designed to avoid the significant cultural resources reported herein. In places where resources cannot be avoided, it will be necessary to mitigate impacts through the recovery and analysis of the historic information they contain (see page 44, "Land Use Planning Recommendations").

INTRODUCTION AND BACKGROUND

The fieldwork carried out as part of this study was conducted by John and Cheyanne Parker. Dr. Parker holds a Ph.D. in Archaeology, and is a Registered Professional Archaeologist. Cheyanne has 15 years of archaeological field and lab experience. The fieldwork took place between May 18 and 30, 2012.

The proposed project will require a local discretionary permit indicating that the California Environmental Quality Act (CEQA) applies to the project. Therefore,

this cultural resource evaluation was written to comply with the requirements set forth in CEQA (sec. 21083.2). This report follows the outline for identification of cultural resources as presented in the “Archaeological Resource Management Reports (ARMR): Recommended Contents and Format” (State of California 1990).

The project area consisted of mostly steep terrain located south of Kidd Creek and west of Bateman Creek on the northeast slope of Mt. St. Helena.

The property is depicted on the Detert Reservoir 7.5' USGS topographic map as existing in Sections 32 and 33, T10N, R6W and Section 4, T9N, R6W.

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Natural Setting

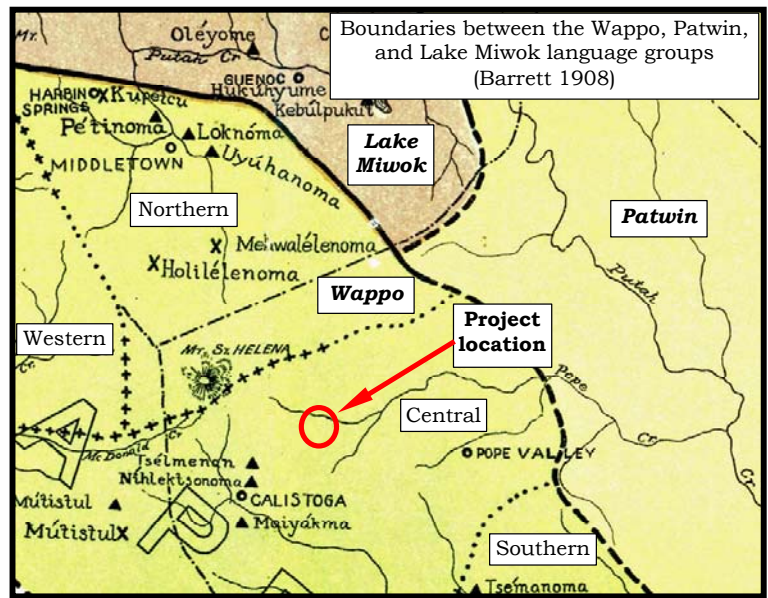
The project area consists of steep rugged terrain along the north slope of Mt. St. Helena in the Mayacmas Mountains. Soils within the project are a mix of those derived from the volcanic bedrock making up much of Mt. St. Helena and the Palisades and those derived from the serpentine bedrock that makes up much of the Franciscan Formation in the area. These soils support a mixed coniferous/hardwood forest with patches of chaparral and occasional meadows.

Springs are evident throughout the area.

Historically, the project area had been used for hunting and mining. The latter included extensive logging of timber in the immediate watershed for use in the mines and ore processing.

Prehistoric Background

Prior to European arrival, the project area was within the Central Wappo tribal territory. Their territory encompassed the northern Napa River drainage to a point just south of Glass Mountain. It also included the upper reaches of the Pope Creek drainage east of Mt. St. Helena (Barrett 1908, Sawyer 1978).



Wappo villages were located along major streams and rivers. The mountainous project area would not have been suitable for permanent villages or camps. However, the project area was certainly used for resource procurement; involving both plant gathering and hunting.

It is possible that the project area may have been used by the nearby Lake Miwok and Patwin people for casual hunting and resource gathering.

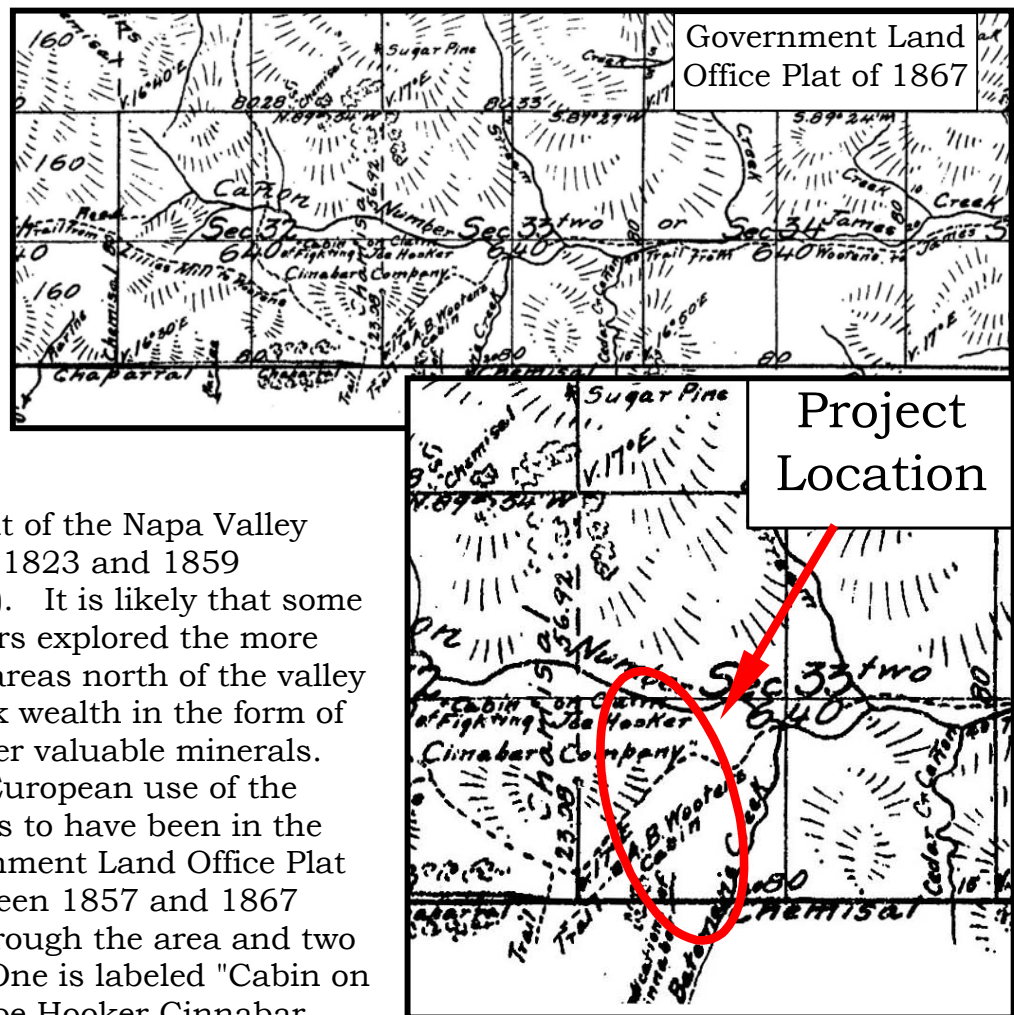
A review of the 1908 tribal map indicates that many Wappo village names ended with the suffix "onoma". In fact, the county name "Sonoma" is a word that is likely derived from a Wappo term "C^ho-nóma" meaning abandon village (Sawyer 1978).

During 40-years of research in the Clear Lake Basin, the author discovered that the oldest known evidence of human occupation dates to between 14,000 and 20,000 years ago (Parker 2008:58). Though the origins of the Wappo are unknown, it is likely that people were using the Napa Valley and Mt. St. Helena resources during this time period. The Wappo language has been attributed to the Yukian language family. Both Fredrickson (1973) and Heizer (1953) suggest that the Wappo language likely branched off from the other Yukian languages about 4,000 years ago.

Historic Background

Early Days (1823-1867)

The exploration and early settlement of the Napa Valley took place between 1823 and 1859 (Verardo et al 1986). It is likely that some of these early settlers explored the more remote wilderness areas north of the valley hoping to find quick wealth in the form of gold, silver and other valuable minerals. The first recorded European use of the project area appears to have been in the 1850's. The Government Land Office Plat Map prepared between 1857 and 1867 shows two trails through the area and two "cabin" locations. One is labeled "Cabin on Claim of Fighting Joe Hooker Cinnabar



Company" and the other is "A.B. Wooten's Cabin". The trails through the area are labeled "Trail from Wooten's to James" and "Trail from Lillie's Mill to Wooten's".

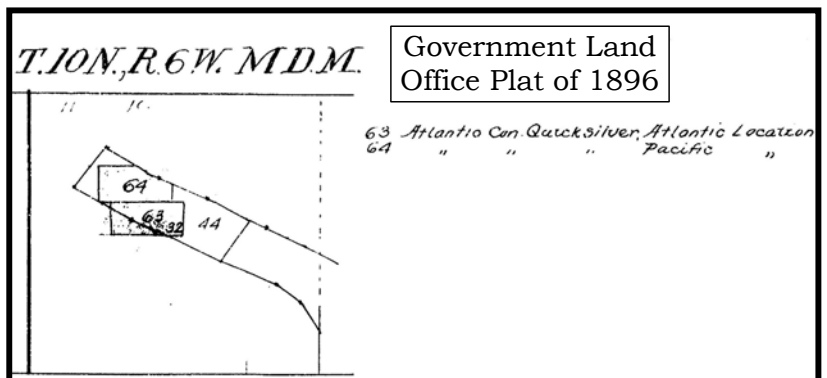
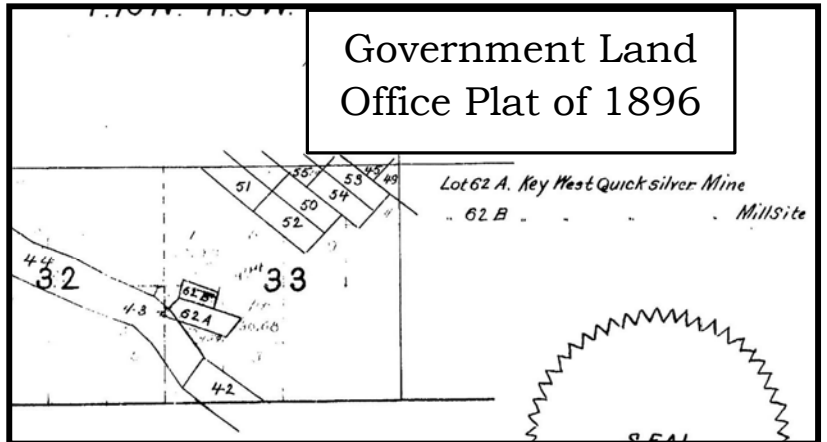
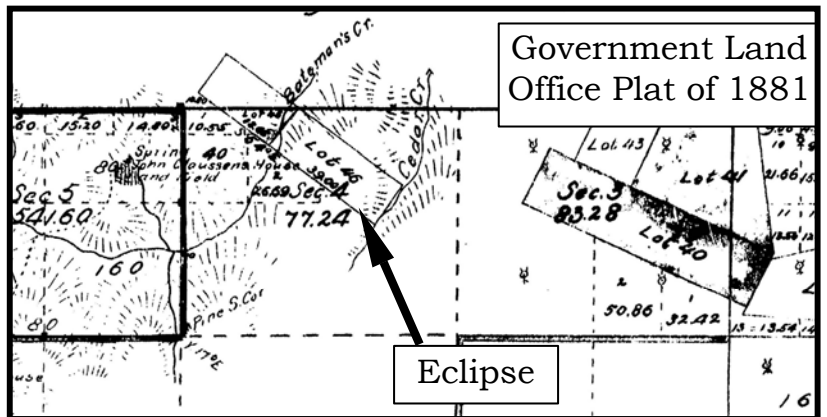
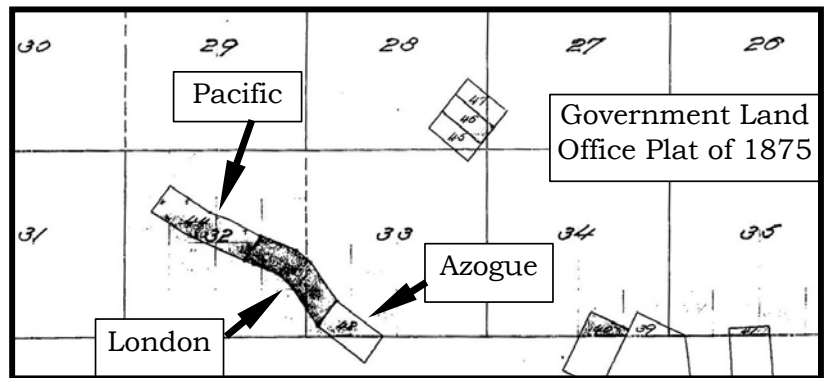
Lillie's Mill was a mill operated by the Lillie family on St. Helena Creek at the base of the north slope of Mt. St. Helena (Stanton 2010:56).

Early Mine Claims (1860-1896)

By 1860, the area was known as the Mammoth Ledge Mining District (Livermore 2012). The first recorder of the district was J.T. Edwards. and the first claims staked were the Azogue, London, and Pacific Quicksilver Claims in 1861 (see attached Plat Map). J.P. James became the official recorder in 1861 and miners filed their claim notices on the side of a cabin owned by Jones in the vicinity of the Twin Peaks mine. The area became known as Jonesville (Livermore 2012).

In 1862, early claims in the area of the Azogue were taken over by the Mercury Mining Company (where the Twin Peaks Mine now sits). Further southeast of the Azogue was the Eclipse Quicksilver claim (depicted on the 1881 Government Land Office Plat).

In 1893, the Oat Hill Road was completed connecting Napa and Lake Counties.



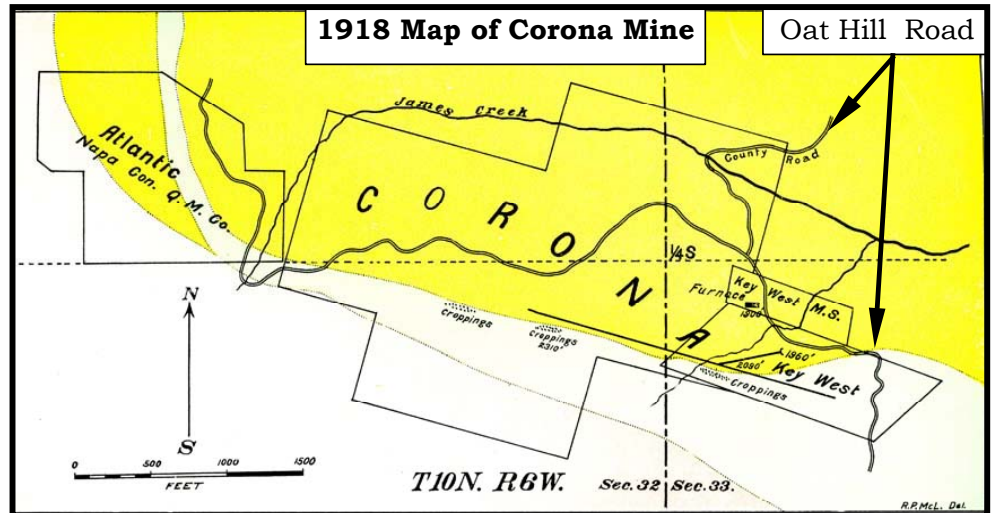
The 1896 map shows the Pacific Quicksilver Claim split into an Atlantic Location and a Pacific Location. Also depicted is a claim establishing the Key West Quicksilver Mine and Mill Site at the location of the present-day Corona Mine.

Corona Mine (1895-1970)

In September 1895, H.C. Davey transferred the deed to the Corona, Cinnabar, Lake, Hardtack, North Side, San Juan, and St. James mining claims along with 90,000 shares in Corona Mining Company stock to the Vallejo Quicksilver Mining Company, 409

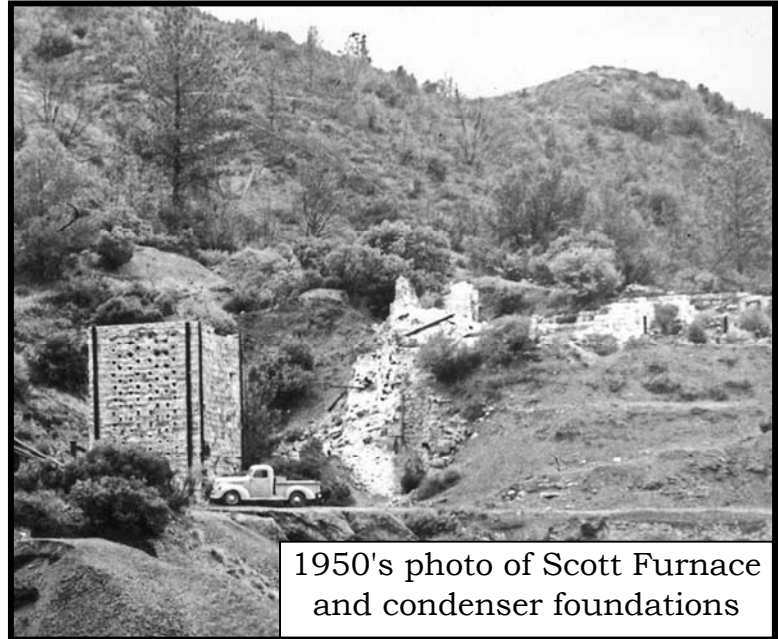
Carolina Street, Vallejo (see letter on cover). James B. McCauley was president of the Vallejo Quicksilver Mining Company and H.C. Davey was given the position of superintendent. At that time, the only improvements listed on the property were "a good trail almost wide enough for a wagon road... Also a house, blacksmith shop, etc." of a value "not less than \$1,000." (Wilson 189?). The Vallejo Quicksilver Mining Company operated the Corona Mine from 1895 until 1906. Work at the mine stopped due to a heavy winter that overwhelmed the pumps used to keep the mine dry (Bradley 1918:81, Davey 1895, Williams 1895).

In 1890, prior to opening the Corona Mine, McCauley had partnered with John H. Brennan, establishing a bottling works in Vallejo known as McCauley & Brennan "Mc & B". In 1901, the company built a new bottling plant on Main Street and the tracks of the Southern Pacific railroad. This new plant was named the St. Louis Bottling Works. The business bottled various mineral waters and controlled the general distribution for Rainier beer (Gregory 1912). It is likely that much of the funding needed to set up the St. Louis Bottling Works came from Corona Mine profits. McCauley moved on to establish the Calso Water Company in San Francisco (S.F. Directory 1928).



It is reported that a "20-ton fine-ore furnace" was constructed at the Corona in 1896. In 1901, stockholders voted to construct the 50-ton capacity Scott Furnace that is still standing (Ingle nd.).

Though he never worked the mine again, McCauley owned the Corona until his death in 1943. He leased out the claim to various individuals and companies to be worked and it appears that the mine was worked in 1911, 1916, and 1939-44 (mindat.org, Gould 1929).

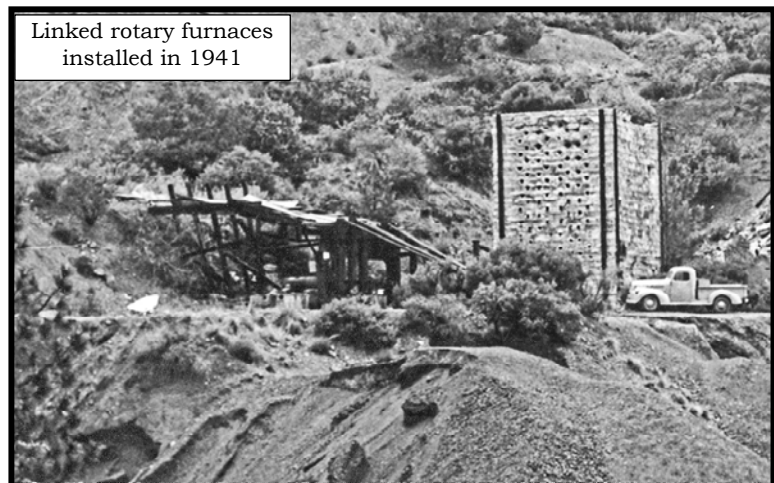


1950's photo of Scott Furnace and condenser foundations

It appears that between 1928 and 1930, McCauley spent \$80,000 to \$85,000 to have the drain tunnel excavated to take care of the drainage problem in the mine. Before any ore could be processed, the price of mercury had declined and no further work was conducted. The mine did not open again until late 1939 when it was leased to Flynn and Shelby. They removed material from existing mine dumps, furnace residue and surface areas. They retorted the material in a "D" retort several miles away (Ingle nd.). They took \$13,000 from the mine in 2 years.

In 1941, the Corona was subleased by a group headed by Mr. Tuttle. This group installed the small linked rotary furnaces and condensing system located just south of the Scott Furnace. They also made \$13,000 to \$14,000 by processing old ore from the mine dumps before losing their lease.

It appears that Don Emerson obtained the mine from the McCauley estate and owned it until it was purchased by John Livermore in 1995 (Smith 2012).



Linked rotary furnaces installed in 1941

Hugh C. Ingle, Jr. leased and operated the Corona Mine from 1957 to 1972 (Swent 2000). In a published interview, Ingle indicates that he began exploring the mine in 1957. In 1963 and 1964 he installed a Gould rotary furnace and other

processing equipment that he bought from other nearby mines. A drop in the price of mercury stopped the operation. Work started up again in 1968 and he worked the mine until 1972. This involved two new ore bodies that were mined both underground and as open pits.

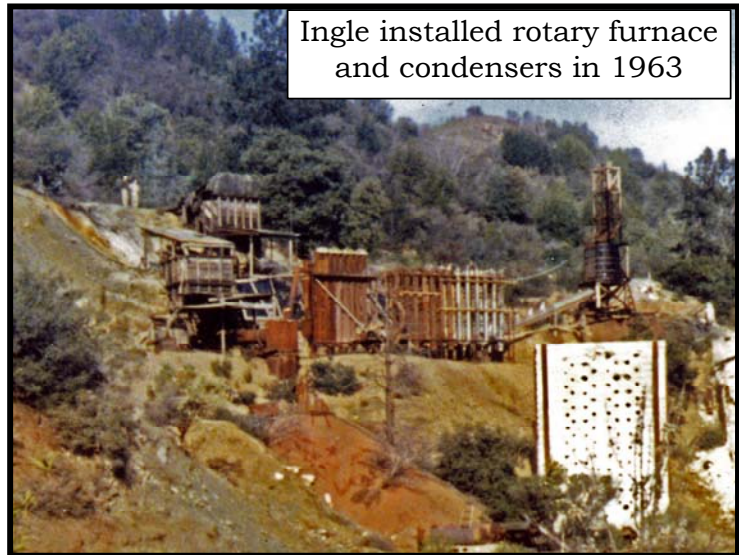
During his time at the Corona, Ingle also used his rotary furnace to process ore trucked to the site from the New Almaden Mine area in the Santa Clara Valley. He also cleaned out and processed material from the Scott Furnace condensers.

Twin Peaks Mine (1904-1943)

Though the Azogue Quicksilver Claim was filed in 1861, many changes in claim ownership and location took place over the years. Small operations came and went, producing only a few flasks of mercury.

In 1904, Hamlin W. and Edward L. Herrick staked the Twin Peaks claims over older claims that had lapsed. Herrick sold the Twin Peaks claim to Louis Douglas Fay in 1915 (Livermore 2012). By 1917, Fay had produced 275 flasks of mercury (Bradley 1918:91). During this period, the ore was being obtained from both the upper and lower adit levels. Two "D" retorts were being used to process the ore.

The next report of Twin Peaks operation is in 1942, when Fay installed a 60-ton rotary furnace before discovering that no new ore was available. Fay sub-leased the Corona, reopened several areas of the mine and trucked ore to the Twin Peaks furnace. They produced \$48,000 in mercury before stopping operations in 1943 (Livermore 2012).



Ingle installed rotary furnace and condensers in 1963



Plaque on rock at mine area near Oat Hill Mine Road



PREFIELD RESEARCH

Prior to the field inspection, the author conducted background research at the California Historical Resource Inventory System office (CHRIS), Sonoma State University. Additional background research was conducted at the Sharpsteen Museum, Calistoga; the Napa County Historical Society Research Library, Napa; and John Livermore's personal collection of historical documents.

The CHRIS research revealed that a small portion of the project area had been inspected and a historic resource recorded. This was the main processing area of the Corona Mine (P-28-1534) recorded by Mike Newland in 2008.

Though not affected by the current project, four additional archaeological features had been recorded within a 1-mile radius of the project area. Two obsidian flakes had been recorded NE of the main Corona processing area and two sections of wagon road with wheel ruts in solid rock had been recorded NE and SE of the main Corona processing area (P-1486). These were recorded as part of a Timber Management Plan for Montesol (Gill 2007).

The Oat Hill Extension Mine site was recorded NW of the Corona processing area as P-28-1429. This was recorded as part of a BLM land exchange plan. The report indicates that the site was "relatively intact and has integrity of design". The report states, "National Register Criterion "C" is probably applicable as an example of a complete, small, family run mercury mining operation." (Lloyd et al 2007:9)

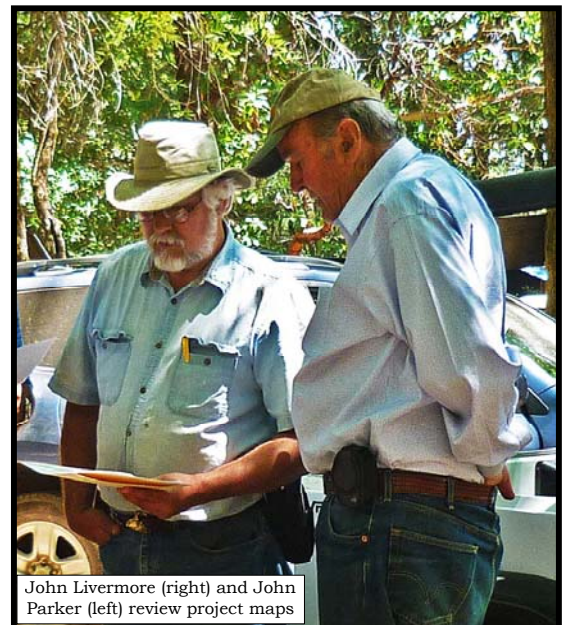
FIELD INSPECTION

The field inspection included a surface walkover of the ore processing and residential areas of both the Corona and Twin Peaks Mines. In addition, historic plat maps indicated two residences in the vicinity. Those areas were also inspected for historic features and materials.

Wherever terrain and vegetation allowed, all areas were walked and the ground inspected in transects spaced 3 to 5 meters apart.

Most of the project area was densely vegetated and covered with a thin layer of leaf litter.

When necessary, a trowel was used to clear through this layer to examine the mineral soil. In all areas, rodent dirt piles, open areas, cut and erosion banks, as well as the root balls of downed trees were carefully examined for evidence of buried cultural materials.



RESULTS

During the field inspection, one combination historic/prehistoric site, one isolated prehistoric feature and six historic sites were observed and recorded. A portion of one of the historic sites (P-28-1534) had already been recorded in 2008 by Mike Newland of the Sonoma State University Anthropology Studies Center. The current inspection expands on the work started by Mr. Newland.

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Prehistoric Resources

During the field inspection, one prehistoric site and one isolated prehistoric feature were recorded.

Prehistoric Site (P-28-1654)

The site consists of a moderate scatter of obsidian flakes. The site is situated on a partly sloping, partly level terrace.

The area contains chipped obsidian, as well as historic structural depressions, structural artifacts, and cultural material covering an area 88 meters EW by 24 meters NS.

Several obsidian flakes (from both Napa and Borax Lake sources) were discovered on the surface. These appeared to represent thinning and retouch flakes suggesting that the creation and maintenance of hunting and butchering tools had taken place at this location.



Isolated Bedrock Mortar (P-28-1657)

An isolated bedrock mortar is located within the Oat Hill Road alignment.

An examination of surrounding areas failed to turn up any other cultural material.



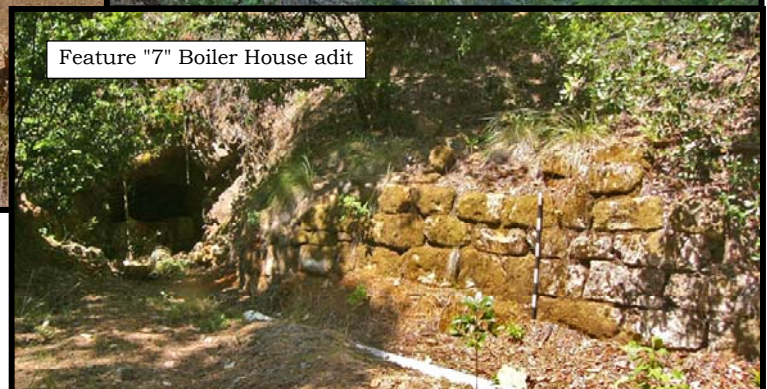
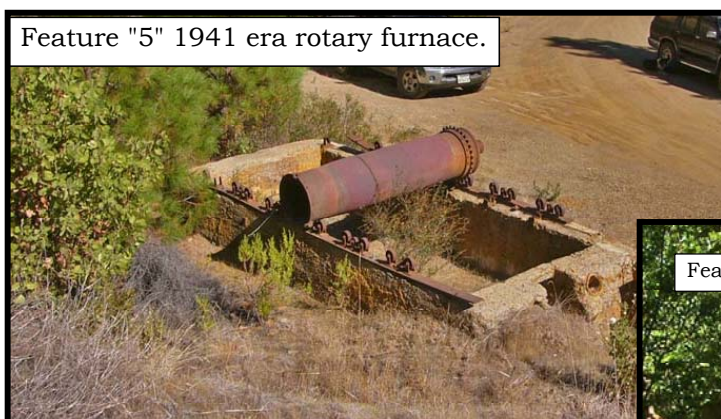
Historic Resources

Corona Mine and Residential Site (P-28-1534 and 1654)

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|---|---------------------------------|
| 1. Ore Car Incline | 5. WWII Roller Furnace |
| 2. Lower Corona Drain adit | 6. Hugh Ingle's processing area |
| 3. Scott Furnace | 7. Boiler House Portal |
| 4. Upper Scott Furnace support structures | 8. 1956 Ford dump truck |

The Archaeological Site Record filed by Mike Newland provides a detailed description of many of the ore processing features that make up the Corona Mine (**Features 3 through 7** on the Corona Mine Processing Features Map). With the exception of a few minor alignment changes to the 1941 rotary furnace footings and the addition of the Scott Furnace condenser area, the Newland map is still the best representation of the processing area. No additional information is needed.



Features 1 and 2 represent an ore car incline track used to provide access from Oat Hill Road to the Corona drain adit (sometimes called the "Lower Corona" or "drain tunnel"). This adit was developed between 1928 and 1930 to fix the flooding problem in the mine. It involved tunneling westward toward the mine. The ore car track allowed the waste rock to be removed and dumped downstream.



Feature 8 is a 1956 Ford dump truck that had run off Oat Hill Road and ended up in a ravine. This truck was most likely lost during the Ingle mine operation (1957-1972).



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|-------------------|---------------------|--------------------------|
| A. Flat | F. Water Pipe House | K. Can House flat |
| B. Well House | G. Dining Hall | L. No Name House terrace |
| C. Saw House | H. Possible House | M. Pampas House feature |
| D. Stairway House | I. Cabin Ruin | N. Spring House |
| E. Flask House | J. Heater House | O. Spring Box |
| | | P. Dining Hall refuse |

Residential Features "A" and "B" (P-28-1654)

Feature "A" is a partly sloping, partly level terrace.

The area contains structural depressions, structural artifacts, and cultural material covering an area 88 meters EW by 24 meters NS.



Time-sensitive artifacts observed suggest that the area was used between 1890 and 1916.



The Well House feature (Feature "B") consists of a level terrace measuring 7 meters NS by 3 meters EW.

At the southwest corner of the terrace is a shallow rock-lined well measuring 30-40 cm in diameter. The depth was not measured.

An old road/trail extends northwest from the Well House terrace.

Though no time sensitive artifacts were discovered, the terrace contains a wood-burning stove part, window glass, and stoneware fragments suggesting the location of a cabin.



Residential Features "C", "D", "E", "F", "G", and "P" (P-28-1534)

These features are contiguous and sometimes overlapping making up an extensive residential area.

This area contains at least 5 terraced or natural bench areas that contain household refuse and structural remains.

Feature "C" (Saw House feature) consists of a level terrace measuring 19 meters NS by 17 meters EW. A pile of natural and dressed stone is at the southeast edge of the terrace suggesting the remains of a fireplace. Encased in a tree at the SE edge of the rock pile is a 2-man buck saw.



An old road/trail extends north from the terrace. A historic refuse scatter extends 32 meters north of the terrace and 26 meters south of the terrace. Time sensitive artifacts suggest that this feature was in use between 1897 and 1915. There may have also been a brief period of use just before 1930 (when the Drain Tunnel was being dug).

Feature "D" (Stairway House) is a level terrace measuring 29 meters NS by 10 meters EW. A dressed stone and wood timber stairway (evidenced by pairs of steel retaining pipes in the ground) provided access.

Structural remains include a rectangular area dug out of the slope (2.8 meters wide) which may have served as a root cellar and parts from a wood-burning cook stove (Patented 1870).

Time sensitive artifacts suggest that this feature was in use between 1897 and 1915. There may have also been a brief period of use just before 1930 (when the Drain Tunnel was being dug).

Features "E" and "F" (Flask House and Water Pipe House) are two small terraces between Feature "D" and Feature "G". The Flask House feature is a level terrace measuring 13 meters NS by 8 meters EW.

The Water Pipe House feature is a level terrace measuring 12 meters NS by 2.5 meters EW just upslope of the Flask House feature.

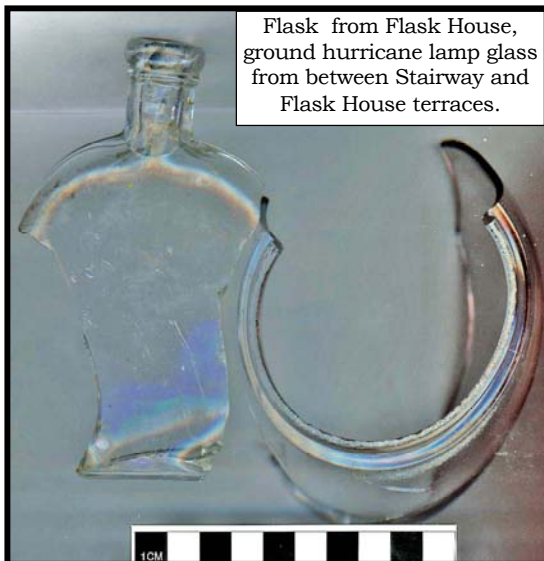
Both contain household materials. Feature "F" contains a wood-burning stove part and water pipe suggesting a structure. Though few time-sensitive artifacts were found, those observed suggested use sometime between 1880 and 1914.



Feature "D" remains of wood-burning cook stove



"F" Water Pipe House terrace looking northwest, wood stove part in foreground.



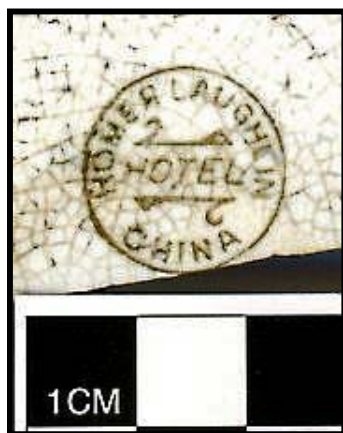
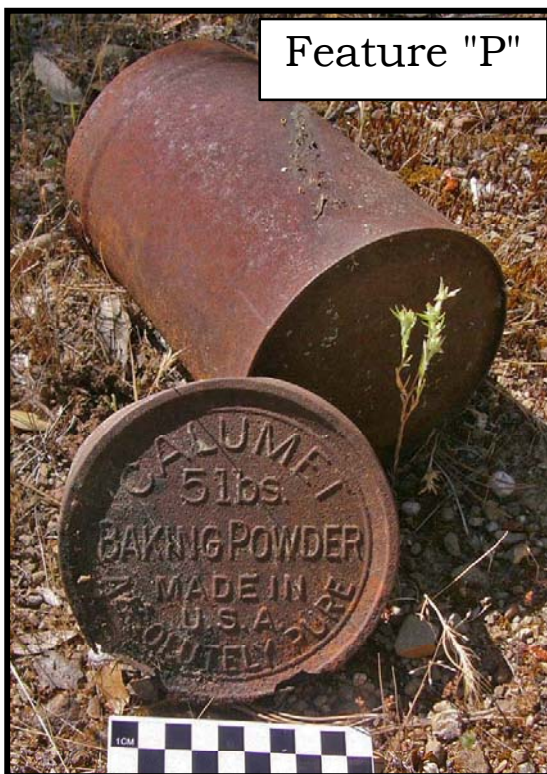
Flask from Flask House, ground hurricane lamp glass from between Stairway and Flask House terraces.

Feature "P" is an extensive sheet trash deposit containing an abundance of broken dishes, serving bowls, and food containers suggesting that it originated from a dining hall (most likely Feature "G" located immediately upslope).

Feature "G" (Dining Hall terrace) covers an area 60 meters NS by 32 meters EW.

A portion of the feature appears to have been disturbed by trenching. A pile of bricks just below the trench suggests the location of a fireplace.

Time sensitive artifacts from both features "G" and "P" suggest use between 1890 and 1915. There may have also been a brief period of use just before 1930 (when the Drain Tunnel was being dug).



Residential Features "H", "I", "J", "K", "L", "M", "N", and "O" (P-28-1534)

These features are contiguous and sometimes overlapping making up an extensive residential area.

This area has at least 7 terraced or natural bench areas that contain household refuse and structural remains.

Feature "H" is a level area that may have been the location of a structure; however, dense vegetation prevented a detailed examination.

Feature "I" the Cabin Ruin is a collapsed structure on a level terrace. The cabin was built on stone foundation piers, wire nails were used throughout, corrugated roofing, propane stove, running water, probably hot water heater, regular porcelain flush toilet and cone-top beer can were observed.



Although some early glass is on the ground around the area (1887-1915), most material is from the 1940's and later, suggesting that this cabin was in use during the WWII phase of mine operations. It may have been used by the Ingle family between 1955 and 1970. This suggestion is supported by an interview with Hugh Ingle in which he states,

"Vince Yracibil had a little pipe retort behind his cabin.
His cabin is that old one over here. (Swent 2000)."

Feature "J" the Heater House flat has little cultural material except for a gas heater. The heater suggests that this cabin flat was likely in use during the WWII phase of mine operations and may have been used by the Ingle family while they were operating the Corona mine between 1955 and 1970. This may be where Vince Yracibil's "little pipe retort" was located.

Feature "K" the Can House flat is a small terrace 5 meters in diameter and covered with rusted cans. On the



southern edge of the terrace is the top part of a wood cook stove.

Feature "L" the No Name House terrace is a non-descript terrace.

Feature "M" the Pampas House feature consists of a cleared terrace area. It has pieces of a wood-burning cook stove, enameled cookware, brick, glass, water pipe, and stoneware fragments.

Time sensitive artifacts from Feature "M" suggest use between 1880 and 1914.

Feature "N" the Spring House was a small level area containing glass and stoneware fragments.

Feature "O" the Spring Box consists of a cemented stone catchment with a pipe extending down-slope. A narrow trail leads to the spring box. The trail is rock lined in some places. A tubular kerosene lamp piece made by the C.T. Ham Mfg. Co. (1886 to 1915) was discovered along the trail (Kirkman 2010).



Feature "M"
Pampas House stove parts



Feature "O"
Spring box and pipe

Twin Peaks Mine and Historic Residential Site (P-28-1656)

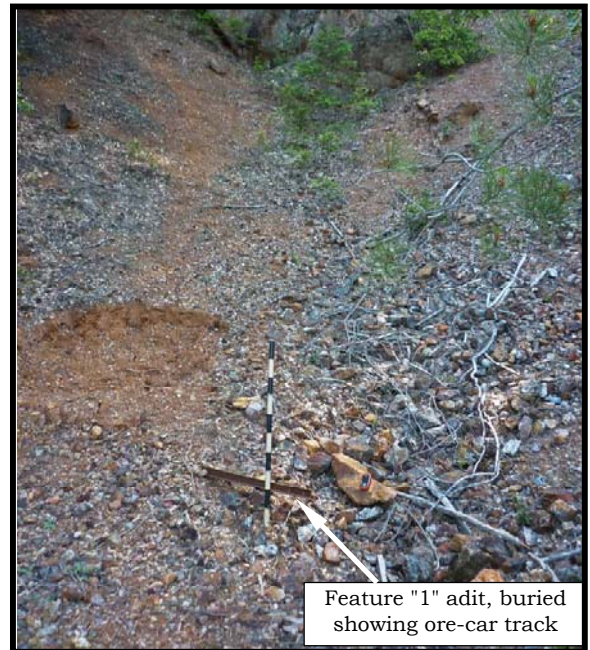
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- | | |
|----------------|-----------------------------------|
| 1. Sealed adit | 5. Open adit |
| 2. Open adit | 6. Condenser/processing structure |
| 3. Open adit | 7. General processing area |
| 4. Open adit | 8. Tailings and waste rock piles |

Five mine adits were observed during the field inspection of the Twin Peaks Mine area (Features 1 through 5). The northern-most adit is caved in, however the other 4 remain open.

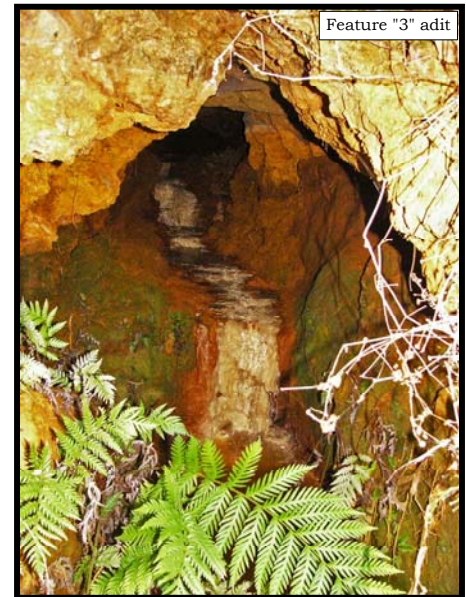
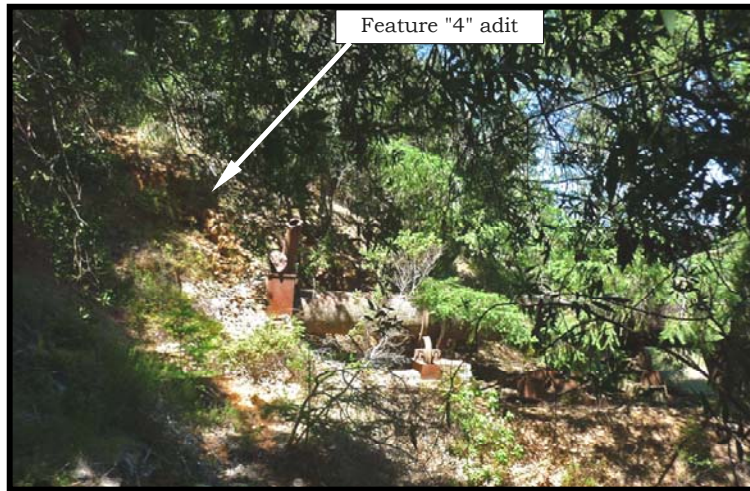
Feature "1" Adit appears to have been closed by a landslide, however, an ore-car rail protrudes from the loose rock and a large waste rock tailing area extends down slope.

Feature "2" Adit is hidden behind trees, this adit is still open.



Feature "3" Adit is the mine opening that is draining water.

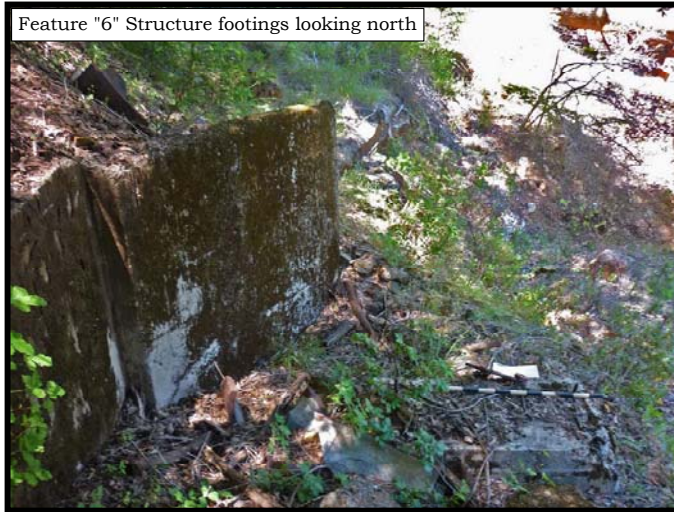
Feature "4" Adit is mostly closed.



Feature "5" Adit is an open adit.



Feature "6" Concrete Footings include slabs and walls stepped into the side of the hill running a distance of 13 meters NS. It is believed that these footings held the condenser system associated with the rotary furnace.



Feature "7" General Processing Area contains the footings and rotary furnace structure. The structure and footings measure 16.8 meters EW by 3.2 meters NS. The feature includes the condenser hood, engine footing, and engine block.

Feature "8" Tailings & Waste-rock Piles extend down slope from Adit "1" and Adits "3", "4", and "5". Both deposits contain historic artifacts.



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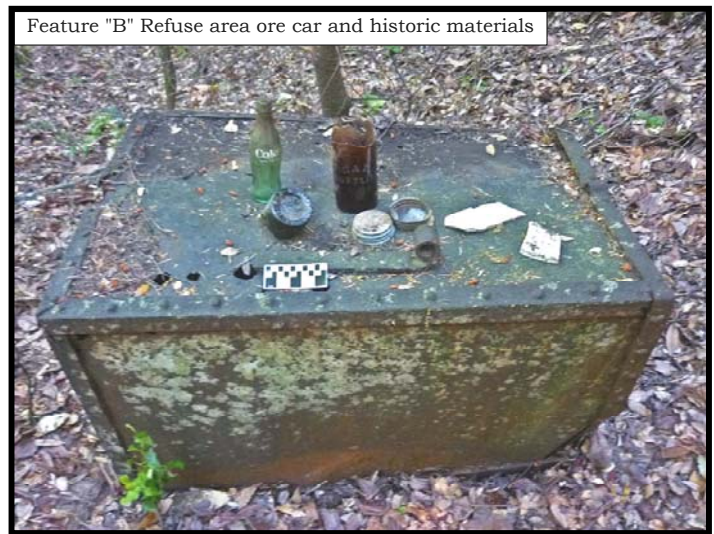
- A. Residential Refuse Deposit
- B. Residential Refuse Deposit
- C. Developed Spring Area

- D. Residential Area
- E. Developed Road or Trail

Features "A" and "B" are historic residential refuse areas. Both contain historic and recent household discards including metal, glass, and ceramics. Feature "B" covers an area 20 meters NS by 90 meters EW.

Historic materials include a metal cable-driven ore box, canning jar lids and fragments, ceramics, both historic (1880's) and recent (1980's) glassware. Materials appear to represent residential discards from the historic mining period.

Feature "C" Developed Spring is located in a fairly level draw. It is used for equipment and material storage.



Feature "D" Probable Historic

Residential Area is a large level area. At the time of the field inspection, the area was swept clean and only a few pieces of historic material were observed.

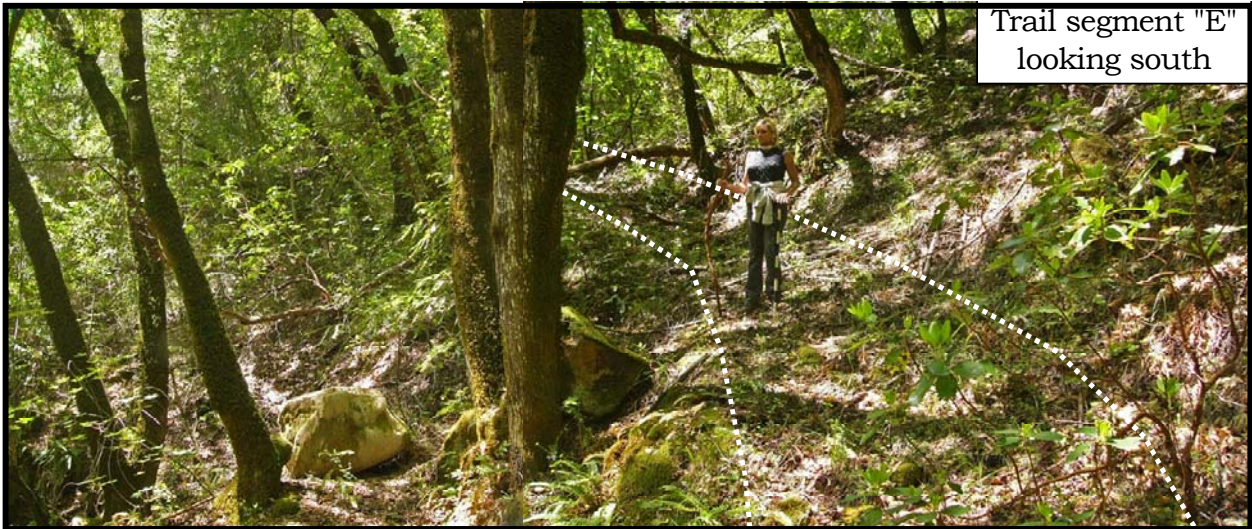
In 1867, this spot was at the confluence of 3 major trails through the mountains. The trail from A.B. Wooten's Cabin to James Place, the trail from Lillie's Mill to Wooten's Cabin, and the trail to the Cabin of Joe Hooker. In 1893, Napa County completed the Oat Hill Road, providing stage coach and wagon access to the newly developing mines as well as a free link between Napa and Lake Counties.



The year-round water supply, would have provided a welcome rest stop after the dusty horse or wagon ride out of Napa Valley. The location was important enough to blast the side of the adjacent cliff to create the road bed.

It is likely that the area has been the location of one or more cabins since the 1860's. It is also likely that Twin Peaks miners had cabins at the site in 1904.

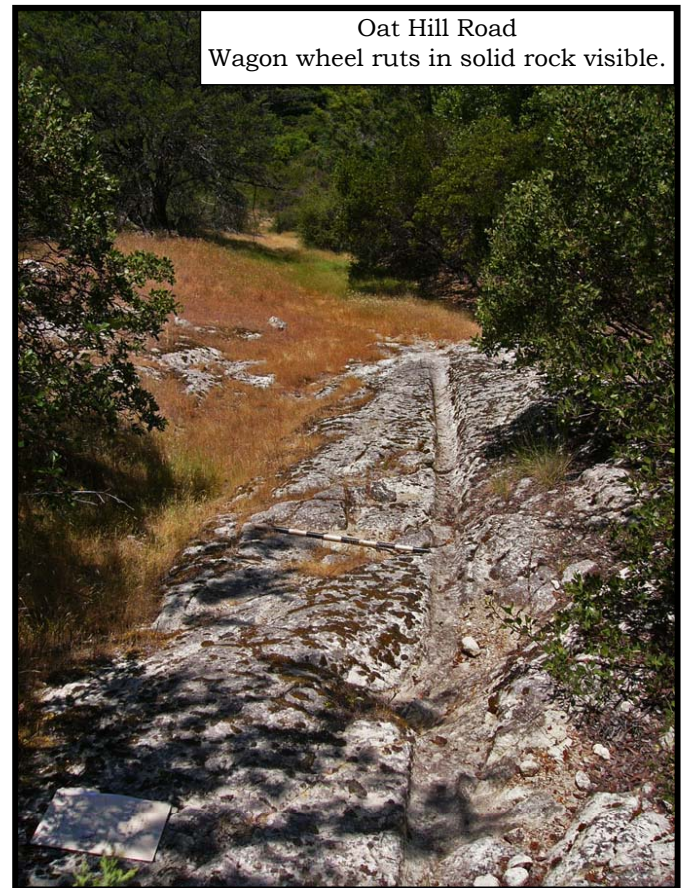
Feature "E" Old Trail The developed trail segment is an average of 2 meters wide and 63 meters long. The trail appears to be on an alignment that would have traveled to James Creek and on to James Place or the Aetna Mine as noted on historic maps.



Oat Hill Road (P-28-1658)

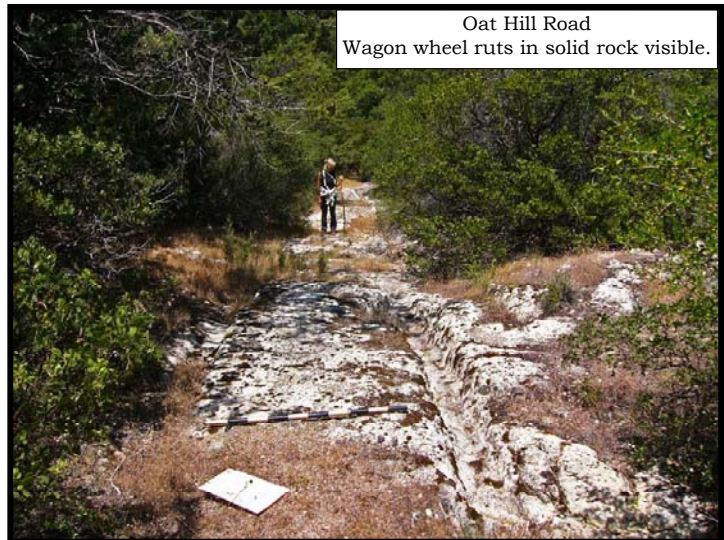
Completed in 1893, the Oat Hill Road cuts through the entire project area. Between 1893 and 1924, it was the only free wagon road between Napa and Lake County over Mt. St. Helena. The only other road over the mountain was the Lawley Toll Road (completed in 1867). Once the Oat Hill Road was finished, it was the road of choice for those who could not afford the toll road fees (Stanton 2010:46).

Though today it is impassable in some places, the Oat Hill Road still provides a sense of the history of wagon and horse travel through the region. Years of steel-rimmed wagon wheels, heavily laden with mine supplies, ore, and passengers have cut ruts in the road's solid rock base. In some places, the road had to be blasted out of the side of near vertical cliff faces.



Wheel rut grooves in the rock are spaced 120 to 130cm apart, are up to 20cm deep, and 20 to 40cm wide.

Chunks of cinnabar ore ,dropped from freight wagons, can be found along the road alignment. Some rock dislodged during the blasting for road construction fell into Bateman Creek at the base of a waterfall, creating a small swimming hole.



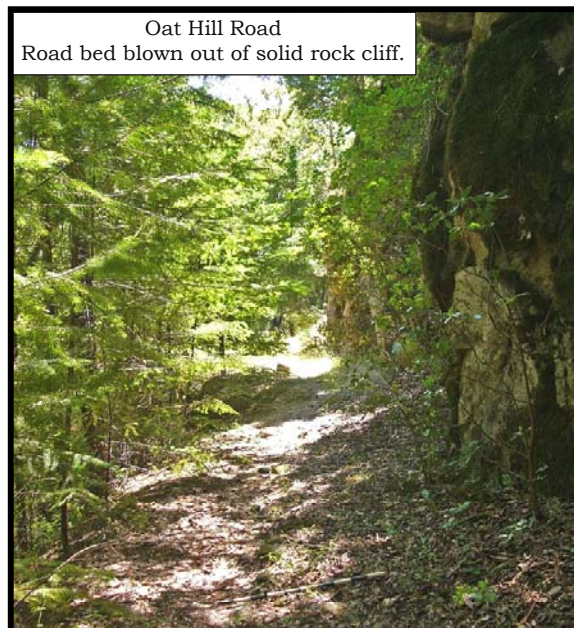
Oat Hill Road
Wagon wheel ruts in solid rock visible.



Blasted rock from Oat Hill Road
construction created swimming hole.



Oat Hill Road supported by
dressed stone wall.



Oat Hill Road
Road bed blown out of solid rock cliff.

**HOOKER'S CABIN (P-28-695), WEST CORONA (P-28-1655),
AND WOOTEN'S CABIN (P-28-1653)**

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Joe Hooker's Cabin Site (P-28-695)

The 1867 Government Plat map depicts the location of a "Cabin on Claim of Fighting Joe Hooker Cinnabar Company". Historic materials from the proper time period are scattered around a small flat measuring 64 meters NS by 60 meters EW. Hooker's cabin and claim appear to have existed about 10 years before any other mining claims were filed and mapped on the Government Plats in the area.

Structural materials include brick and a door hinge. Household materials include metal (cans and cast iron), glass, and stoneware.

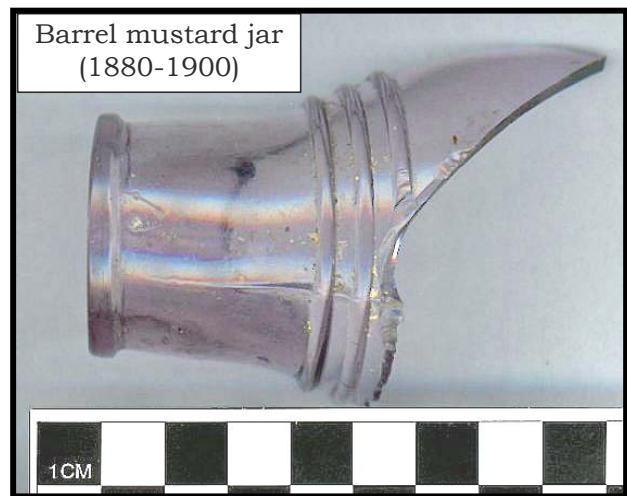


This Johnson Brothers stoneware makers mark was used between 1883 and 1913 (Godden 1991:355).



A Peruvian Bitters bottle fragment was discovered representing manufacture between 1871 and 1891 (Wichmann 1999:93).

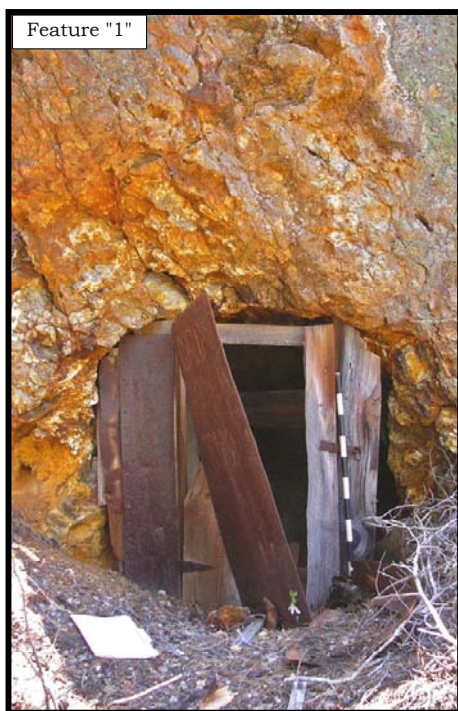




West Corona Mine Site (P-28-1655)

The West Corona includes two open adits and an ore loader.

Feature "1" Rock Adit is an open adit (caved in a short distance inside the opening) situated at the base of a large rock. The adit has a door and frame made with wire nails.

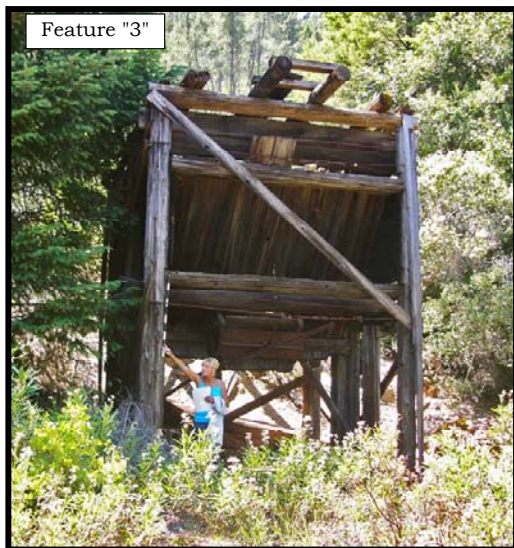


Feature "2" Open Adit is dug into the side of a large excavated pit.



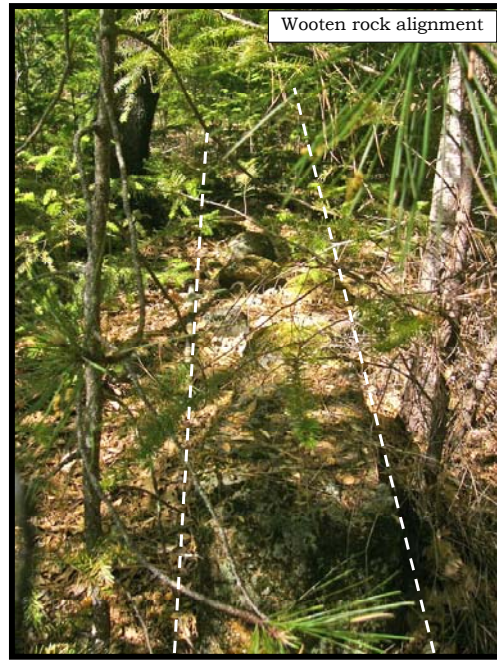
The **Feature "3" Ore Loader** consists of a level area containing a large loading bin made of telephone poles. A linear cleared path appears to extend down slope to the loader. Down slope and to the east of the loader are large waste rock piles.

All the West Corona Mine features appear to represent operations from the 1940's or later.



Wooten's Cabin Site (P-28-1653)

The 1867 Government Land Office Plat map depicts A.B. Wooten's Cabin. An examination of the area did not turn up any historic artifacts, however two rock alignments were observed and recorded. One is a rock/boulder alignment in the tree line. The alignment is 1 to 2 boulders wide and 21.2 meters long. Half of the alignment is oriented NS and the northern half of the alignment is angled to the NW.



The other feature appears to be a corner marker or foundation remnant of stacked stones creating a right-angle.

Dense vegetation and ground cover prevented a detailed examination of the area and it is likely that additional historic features and artifacts exist.



CONCLUSIONS

Legal Framework

Under the California Environmental Quality Act (CEQA), historic resources require a “mandatory finding of significance”¹. CEQA stipulates that only impacts to “unique” or “significant” historic resources² need be addressed during the environmental review and project planning process³. Not all old sites are considered “unique” or “significant” historic resources.

CEQA relies on the California Register of Historic Resources to determine what is a “Unique” or “Significant” historic resource⁴.

According to the California Register, a resource is determined “significant” if it meets one of the following criteria:

- A. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- B. Is associated with the lives of persons important in our past;
- C. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value; or
- D. Has yielded, or may be likely to yield, information important in history or prehistory⁵.

Most archaeological sites will be determined “significant” under item “D” as long as they have maintained their integrity over the years.

If an historic resource can be avoided during construction, no further cultural resource work need take place following the initial field inspection. If disturbance to a historic resource can’t be avoided, it becomes necessary to determine whether the resource is “significant”. It is possible that surface observations

¹ Sec. 15065 [a]

² Archaeological resources are considered a subset of “historical resources”.

³ Sec. 21083.2

⁴ Sec. 15064.5 a

⁵ Pub. Res. Code Sec. 5024.1, Title 14 CCR, Sec. 4852

made during the initial field inspection can be used to determine if a resource is significant.

When a significant archaeological site is involved, CEQA requires that the permitting agency first consider project alternatives, which will allow the “resources to be preserved in place and left in an undisturbed state”⁶. The following alternatives are listed in CEQA to accomplish this goal:

1. The project shall be designed to “avoid archaeological sites.” (CEQA sec. 21083.2 (b1))
2. The project shall protect the resource by “deeding archaeological sites into a permanent conservation easement.” (Sec. 21083.2 (b2))
3. The project shall protect the resource by “Capping or covering the archaeological sites with a layer of soil before building on the sites.” (Sec. 21083.2 (b3)) This should be followed by the filing of a deed restriction preventing any future owners from excavating beneath the fill soil.
4. The project shall protect the resource by “Planning parks, greenspace, or other open space to incorporate archaeological sites.” (Sec. 21083.2 (b4))

CEQA goes on to say that, as a last resort, archaeological sites that cannot be preserved in place shall be mitigated through the excavation and analysis of the “scientifically consequential information from or about the resource”⁷.

⁶ CEQA sec. 21083.2 [b]

⁷ CEQA sec. 15126.4 [c]

Resource Significance

The following table outlines significance recommendations for each resource based on background research, surface observations, and the legal framework listed above. An expanded discussion of each resource is presented below.

<i>Resource</i>	<i>Significance Determination</i>	<i>California Register Criteria Used</i>	<i>Land Use Planning Recommendation</i>
P-28-1654 Prehistoric and Historic Site	significant	D	avoidance
P-28-1657 Isolated Bedrock Mortar	not significant	n/a	n/a
P-28-1534 Corona Mine Processing and Residential Site	significant	A, B, C, D	avoidance
P-28-1656 Twin Peaks Mine Processing and Residential Site	likely significant	A, D	avoidance
P-28-1658 Oat Hill Road	significant	A, C	avoidance
P-28-695 Joe Hooker's Cabin Site	significant	A, D	avoidance
P-28-1655 West Corona Mine Site	undetermined	n/a	n/a
P-28-1653 Wooten Cabin Site	likely significant	A, D	avoidance

P-28-1654 Prehistoric and Historic Site (significant)

The prehistoric site consists of a dense scatter of Napa and Borax Lake obsidian chips. These materials suggest that the location served as a seasonal resource collection and hunting camp. An analysis of the types of flakes found at the site can shed light on the range of tool making activities and types of tools that were manufactured. This information can be used to determine what resources were being targeted by the site's inhabitants. Quantifying the amount of obsidian from the various sources represented⁸ can shed light on tribal movement as well as prehistoric trade and exchange networks. Obsidian is uniquely suited to dating⁹, allowing a determination of the time period(s) that the site was in use.

This site has the potential for addressing several research questions important to the ongoing study of Wappo, Patwin, and Lake Miwok prehistory. It appears to

⁸ Either visually or through X-ray fluorescence.

⁹ Using hydration measurements and calibration based on source flow.

meet criterion "D" as a historic resource "likely to yield information important in history or prehistory."

The historic component of this site contains at least two residential features that appear to be associated with the early mining activities at the Corona Mine. See discussion of Corona Processing and Residential Site below.

P-28-1657 Isolated Bedrock Mortar (non-significant)

Though outside the project area, this isolated bedrock mortar appears to be the remains of a hopper mortar. Though there may be an associated prehistoric site in the vicinity, none was observed during the field inspection. By recording the isolated mortar in this report, the information about its location and physical attributes have been documented. Further analysis would not likely provide additional information important in prehistory.

This isolated resource is not likely to yield additional information important in history or prehistory.

P-28-1534 Corona Processing and Residential Site (significant)

In use from 1895 through 1972, the Corona Mine has one of the longest mining histories in the region. During its period of operation, many changes occurred in both the cinnabar mining process and in the mercury extraction process. These changes have left their mark on the ground, from the use of the stone and brick Scott Furnace in 1901, to the tube and "D" retorts, and the Gould and Cottrell rotary furnaces of the 1930's and 40's. This gives the Corona the distinction of still containing examples of most of the mercury mining and processing innovations that took place over a 100-year period.

The fact that the Corona was not the biggest producer of mercury in California probably contributed to the preservation of these earlier technologies on the ground. Had it been a bigger producer, the remains of the earlier technologies would likely have been destroyed to make way for increased and more efficient production. The fact that the mine had very few owners and that it was located in an isolated area also contributed to its unique preservation.

The mining of cinnabar and processing of mercury is an event that "made a significant contribution to the broad patterns of California's history". As such, historic mines of this type are considered significant resources under Criterion "A" of the California Register of Historic Resources.

The fact that the Corona was owned by James McCauley, a prominent Vallejo and later San Francisco businessman (founder of the Calso Water Company), indicates that the site is "associated with the lives of persons important in our past" as listed in Criterion "B" of the California Register of Historic Resources.

The wide range of processing features at the Corona correspond to the technological advances that took place over the years. This indicates that the site meets Criterion "C" of the California Register as containing "distinctive characteristics of a type, period, region, or method of construction".

A study of the Corona processing features has the potential for "yielding, information important in history or prehistory", indicating that the site meets Criterion "D" of the California Register of Historic Resources.

As with the processing features, the Corona residential features span the 100-year period that the mine was in use. Most of these residential features appear to be intact and contain significant amounts of cultural material.

During the earliest period of mine operation, it is likely that the workers represented a wide range of recent immigrants to California (and to the U.S.). During this period, workers tasks, and even living quarters, were often segregated based on ethnicity (Johnston 2004:179). By the late 1800's, most mercury mines had a two-tiered work force of white managers and immigrant workers. Andrew Johnston argues that the camps at such mines "are best understood as sets of distinct racialized landscapes, tied to specific overlapping racial and ethnic groups." He suggests that the camps are the sum of these racialized landscapes (Johnston 2004:259).

It is important to note that the Corona's early residential features were divided geographically into two distinct "camps". Did these two distinct "camps" correspond to a segregated work force of managers vs. workers or did these two distinct residential areas correspond to different periods of mine operation? Such questions can only be addressed by studying the archaeological materials at the site.

The later periods of mine operation (1941 and 1950's-60's) were conducted by small operators. In the case of the 1950's Ingle operation, it was mostly a family-run business. It is hypothesized that residential needs would have been completely different under these circumstances.

A study of Corona residential features would be "likely to yield information important in history" as defined in Criterion "D" of the California Register of Historic Resources.

P-28-1656 Twin Peaks Processing and Residential Site (likely significant)

As with the Corona Mine, the Twin Peaks Mine represents a fairly long period of use, spanning 39 years from 1904 until 1943. During that time, "D" retorts were used as was a large Cottrell rotary furnace. Much of the 1940's processing hardware and foundations still exist.

The Twin Peaks Mine was part of an event that "made a significant contribution to the broad patterns of California's history". As such, historic mines of this type are considered significant resources under Criterion "A" of the California Register of Historic Resources.

The residential areas near the Twin Peaks Mine were not as distinct and well preserved as those in the vicinity of the Corona Mine. This was likely due to recent activity that may have recycled, reused, and removed some structural features and artifacts. However, there is a well established sheet-trash deposit that appears to contain the habitation debris of early Twin Peaks miners. It is possible that this deposit also represents earlier activities, such as the location of Jonestown, related to the intersection of three major historic trails at this location in the 1860's.

As nothing is known about the early activities along the three historic trails or the possibility of a traveler's stop-over in the area, any cultural feature that may contain information about this early period of travel would be considered significant under Criterion "D" of the California Register of Historic Resources.

P-28-1658 Oat Hill Road (significant)

Oat Hill Road was the only free wagon route connecting Napa and Lake Counties over Mt. St. Helena from 1893 to 1924. In addition to providing through traffic, it provided an essential connection between the railhead in Calistoga and the mercury mining areas north of Mt. St. Helena. This enabled heavy equipment, personnel, and supplies to be brought into the mining areas. It also allowed unprocessed ore and mercury flasks to be brought out of the area.

Today, much of the Oat Hill Road has the look and feel that it did during its heyday. This is due primarily to two events that rendered the road obsolete so it was not widened, improved, or paved for modern car travel:

1. The Lawley toll road over Mt. St. Helena became a free public highway in 1924,
2. The large mine operations along Oat Hill Road ended.

In many places, Oat Hill Road was blasted out of solid rock. In some places, its solid rock base still holds the scars of years of travel by steel-rimmed wagon wheels.

Because the Oat Hill Road is associated with events that made a significant contribution to the broad patterns of California's history and embodies the distinctive characteristics of a period and method of construction, it should be considered a "significant" historic resource based on Criterion "A" and "C" of the California Register of Historic Resources.

P-28-695 Joe Hooker's Cabin Site (significant)

Though outside the project area, the Hooker cabin site represents one of the earliest European settlements in the area. It is listed as a mining claim under the heading "Fighting Joe Hooker Cinnabar Company". The location contains historic residential materials from the period, indicating that a study of the site may shed some light on the activities that took place there.

The fact that it is listed as one of the earliest European settlements in the area indicates that it is part of an event (the early European settlement of the region) that "made a significant contribution to the broad patterns of California's history". As such, the Hooker cabin site should be considered a significant resource under Criterion "A" of the California Register of Historic Resources. It may also be considered a significant resource under Criterion "D" as it is likely to yield information important in the study of the history of the region.

P-28-1655 West Corona Mine Site (undetermined)

Though outside the project area, the West Corona Mine Site features appear to represent only the most recent mine activities conducted during the Ingle mining operation (1957-72). The Ingle operation is much better represented at the main Corona processing area. The West Corona features do not appear to add new or additional information to that available at the main Corona processing area. If, however, the West Corona area contains features related to the Joe Hooker era of mine use, then those features of the West Corona should be deemed historically significant.

As the West Corona Site is outside of the currently proposed project location, it is unlikely that any impacts will occur. No further studies are warranted at this time.

P-28-1653 A.B. Wooten's Cabin Site (likely significant)

Though outside the project area, the Wooten cabin location represents one of the earliest European settlements in the area. It is listed as "A.B. Wooten's Cabin" on the 1867 Government Land Office Plat map. The location contains rock alignments that may represent residential use of the area from this early period. The location may contain other cultural materials that were not observed due to heavy ground cover.

The fact that it is listed as one of the earliest European settlements in the area indicates that it is part of an event (the early European settlement of the region) that "made a significant contribution to the broad patterns of California's history". As such, the Wooten cabin site should be considered a significant resource under Criterion "A" of the California Register of Historic Resources. It may also be considered a significant resource under Criterion "D" as likely to yield information important in the study of the history of the region.

Land Use Planning Recommendations

This study recorded Six historic resources that appear to be significant as defined by the California Public Resources Code (5024.1, Title 14 CCR, Sect. 4852) and CEQA. Four of these resources are in the immediate vicinity of the proposed project. In addition, one historic resource (outside the proposed project area) was not evaluated for significance and one isolated prehistoric feature (also outside the proposed project area) was determined not to be significant.

In order to preserve the significant resources in place¹⁰, it is recommended that ground disturbance activities avoid encroaching on those cultural resource areas.

If disturbance of all or part of a significant resource becomes necessary, the following recommendations are made:

1. It is recommended that a qualified archaeologist be retained to assist in the engineering design of the ground disturbance activity in an effort to minimize resource damage. To assist in avoidance and accidental impacts, those resources located immediately adjacent to project activities will be protected from those activities by temporary fencing.
2. It is recommended that the archaeologist be provided the time and funding necessary to recover and analyze the information contained in those portions of the resource that will be damaged prior to project construction as outlined in CEQA sec. 15126.4 [c].
3. It is recommended that the archaeologist be retained to monitor any ground disturbing impacts when they occur, and be given the authority to redirect those activities to other locations in the event that significant artifacts or features are encountered which require scientific mapping and recovery.

No human remains are known to exist within or near the project area. If human remains are encountered, all work in the immediate vicinity of the discovery will be suspended and procedures outlined in the Health and Safety Code (Sec. 7050.5) and Pub. Res. Code (Sec. 5097.98 and 5097.99) shall be followed. Work within the area encompassed by the human remains will not resume until all actions required by the Health and Safety Code and Public Resources Code have been completed to the satisfaction of the Napa County Planning Division.

¹⁰ as outlined in CEQA sec. 21083.2 [b]

If followed, these recommendations will mitigate cultural resources to a level of "no significant impact" thereby allowing the approval of a "Mitigated Negative Declaration" for this project.

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