SWEETWATER GOLD MINE, ORE CONCENTRATION MILL HAER No. CA-2281-A
Forest Service Road 5S24
Sierra National Forest
Jerseydale vicinity
Mariposa County
California

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
Pacific West Regional Office
U.S. Department of Interior
1111 Jackson Street, Suite 700
Oakland, CA 94607

HISTORIC AMERICAN ENGINEERING RECORD

SWEETWATER GOLD MINE

ORE CONCENTRATION MILL

HAER No. CA-2281-A

Location: The ore concentration mill for the Sweetwater Gold Mine is located on the east side of Forest Service Road 5S24, approximately 2.5 miles north of where 5S24 intersects with Mariposa County Road 118.

USGS 7.5 Quad: Feliciana Mountain
UTM: Zone: 11; 245480mE / 4162730 mN

Present Owner: Sierra National Forest, USDA Forest Service, 1600 Toolhouse Road, Fresno, California 93611.

Present Use: Vacant.

Significance: The Sweetwater Gold Mine complex, which includes an ore concentration mill, represents one of the best examples of a small gold mining site in California. Furthermore, the Sweetwater Gold Mine is associated principally with patterns of serial gold mining activities over many decades in Mariposa County—the southernmost of California's Mother Lode counties. The Sweetwater Gold Mine long and persistent mining history covers the following historical mining themes: (1) late nineteenth and early twentieth century quartz lode mining, (2) Depression-era reoccupation of mines during the New Deal period to reprocess low-grade metals, and (3) mid to late twentieth century resurgent mining development following World War II. In all cases, the Sweetwater Gold Mine was a small individually owned or non-corporate mining operation that had, at best, modest success. A related theme, exemplified by the ore concentration mill, is the evolution of mining technology, and the use of appropriate technology in local non-corporate mining operations. The Sweetwater Gold Mine ore concentration mill holds architectural/engineering interest or merit because it illustrates the evolution of mining technology and the use of appropriate technology in local non-corporate mining operations (cyanidation vs. Chilean mill). The Sweetwater Gold Mine mill used machinery and tools that largely date to the 1930s, when Ray Foster purchased the mine. This processing facility is almost a living museum with tangible examples of small mine technology of that era, and how they could be uniquely adapted to local circumstances.

Historian: Historian Anthony Godfrey of U.S. West Research, Inc., Salt Lake City, Utah prepared this document, and acted as the project manager and editor for the project in

behalf of the U.S. Forest Service, Sierra National Forest. Photographer Clayton B. Fraser of Fraserdesign of Loveland, Colorado contributed the large-format photographs, as well as the site and floor plans for the project in behalf of the U.S. Forest Service, Sierra National Forest. The project was completed for the U.S. Forest Service, Sierra National Forest in April 2011.

Project Information: Between October 2000 and April 2001, the Forest Service, on behalf of the U.S. Government, acquired several structures through forfeiture of the mining claims of the Sweetwater Gold Mine on the Sierra National Forest California. At the time the Forest Service acquired the mine, eight buildings and structures associated with Sweetwater Gold Mine were extant. They were listed as: (1) an ore processing mill, (2) assay office, (3) compressor house, (4) woodshed, (5) barracks/storehouse, (6) main cabin, (7) chicken coop, and (8) outhouse. In addition to these buildings and structures, mining-related equipment located on the claims include two free-standing stamp mills (moved to the site in the early 1980s), burned remains of a small sawmill, a narrow-gauge trestle, a mercury retort or concentrate roaster, settling tanks and engines related to ore processing, and hundreds of feet of pipeline, miscellaneous tools, hardware, and equipment scattered about the mine site. Physical remnants of mining activities also included an old mill-tailing pond; six or more open adits, and several collapsed or partially collapsed adits and waste rock piles. Forest Service road 5S24 bisects the Sweetwater Gold Mine site.

In 2002, an archeological survey of the Sweetwater Gold Mine was conducted (FS 05-15-51-678-H), which determined that the property was potentially eligible for the National Register of Historic Places (NRHP). In 2008, Applied Earthworks, Inc. of Fresno, California determined that the Sweetwater Gold Mine was NRHP eligible under Criteria A, B, C and D. Thereafter, the Forest Service proposed reclamation for the Sweetwater Gold Mine that would have an adverse effect on the cultural resource. After consultation with the SHPO, the Forest Service entered into a Memorandum of Agreement (MOA) with the SHPO to mitigate any adverse effects to the property. This Historic American Engineering Record (HAER), produced in manufacturing/industrial site outline format, is one of the proposed mitigation measures.

Part I. Historical Information

A. Physical History of Building:

1. Date of Construction: The ore concentration mill was built ca.1934-1939. The 1930s date of the Chilean mill and flotation tanks suggest that the building was built and equipped at that time.[1]

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[1] Wendy M. Nettles, Randy Baloian, Barry A. Price, and Mark Kile, National Register of Historic Places Eligibility Evaluation of the Sweetwater Gold Mine in Mariposa County, California (Prepared for U.S. Forest Service, Sierra National Forest by Applied Earthworks, Inc.), Fresno, California: 2008: pp. 23, 66.

2. Architect/Engineer: The architect/engineer for the ore concentration mill was most likely either and/or both Ray G. Foster and his son Clyde T. Foster.

In the late 1920s, Ray Foster obtained first-hand gold mining experience, while working the Twin Sisters Mine in Nevada County to the north, and in 1933, took advantage of the opportunity to mine the Sweetwater Gold Mine, when Nettie McCartney sold the property to him. On the other hand, Clyde Foster, commonly known as "Sweetwater Clyde," was born to mining and engineering. "Sweetwater Clyde" Foster grew up mining with his father in Nevada County. During the early years of the Great Depression, Clyde attended California's Santa Rosa Junior College, and then the University of Nevada's Mackey School of Mines (1930-1931). Following his brief years of university education, and up until World War II, Clyde Foster also owned and worked the Sleeping Beauty Mine in Nevada County, several counties north of Mariposa County.

It is very likely, that Ray Foster put his mining experience together with his son's mining education and experience, and designed the ore concentration mill together.

3. Builder/Contractor/Supplier: Ray G. Foster and Clyde T. Foster.

4. Original Plans: No original plans are available.

5. Alterations and Additions: Physical examination of the ore concentration mill indicates that few, if any, alterations or additions were made to the mill once it was constructed.

B. Historical Context: For the historical context pertaining to the ore concentration mil see general historical context in CA-2281, pages 7-9.

Part II. Site Information

A. General Description:

The Sweetwater Gold Mine ore concentration mill is a wood-frame multilevel ore processing facility built into the west slope of Sweetwater Creek, and was the terminus of a mining system created by the Fosters, and functioning from the 1930s to the 1990s. The ore concentration building is sided with a mixture of wood and corrugated metal, with a single wood-frame window on the northern facade. The shed roof, which slopes to the north, was clad in corrugated sheet metal. Round wooden posts set on wooden piers support the building. Dry-laid native stonewalls at the base of the building along Sweetwater Creek were likely placed to limit erosion under the building.

The ore concentration mill has four levels. The first, or ground surface level, had an exposed ceiling and housed the Chilean mill, the main amalgamation copper plate (4'x

12'), barrels to catch tailings, and, originally, a pump system to pump the tailings to the flotation cells on the above level, or to the tailings pond south of the building. From here, a short flight of stairs on the east side of the Chilean mill led to the second level above, which was considered the main work area. This irregular shaped second level surrounded and looked down on the Chilean mill below. It contained workbenches, flotation cells, as well as power supplied for the mill by an automobile engine on a platform, which may have been taken from a ca. 1954-1956 Plymouth Plaza.[2] A hand-operated feeder gate, located on this level of the building, fed into the Chilean mill below. From here, a very steep set of stairs at the east end of the second level allowed access to the third level, a smaller platform area that housed the engine system for an ore feeder and rock crusher. On the east side of this platform area, the set of steps continued upward and led to the top level of the building, where tram ore carts on a track dumped ore into a tipple that contained a grizzly (or gate) that screened out the course rock from the finer rock.

1. Character: The Sweetwater Gold Mine ore concentration mill holds architectural/engineering interest or merit because it illustrates the evolution of mining technology and the use of appropriate technology in local non-corporate mining operations. The Sweetwater Gold Mine mill used machinery and tools that largely date to the 1930s, when Ray Foster purchased the mine. This processing facility is almost a living museum with tangible examples of small mine technology of that era, and how they could be uniquely adapted to local circumstances.

2. Condition of Fabric: The mill building is in fair to poor condition. Some of the siding, particularly on the west and north facades has fallen off, and at one time, a small tree have fallen across the north facade. By 2010, much of the siding and roofing material had disappeared. The stairs leading from the first to the second level is leaning to the side and is unstable. The foundation posts and piers are rotting. However, most of the critical interior components of ore processing are still in place (tipple, ore feeder, rock crusher, flotation cells, engines, and Chilean mill), allowing a very complete understanding of the technological processes employed at the facility.

B. Site Layout: The Sweetwater Gold Mine site is located on a series of terraces principally along the west side of Sweetwater Creek. The ore concentration mill is on a lower terrace and is the focus of the manufacturing/industrial area (see Site Plan for the location of the ore concentration mill), which also included the main adit, compressor house, track and trestle system, tailings, and sawmill (not extant).

Part III. Operations and Process

A. Operations: The ore concentration process for the Sweetwater Gold Mine began when raw ore was removed from the main adit and delivered to the mill via an electrical tram system that ran on an 18" wide track system. The track began at the main adit on

[2] The body of the ca. 1954-1956 Plymouth Plaza is still on the site.

the west side of Road 5S24. From there, the rails headed generally east across the road, then split. The southern fork curved southeast and into the compressor house (built ca. 1980), where it terminated at the southeast façade (see Site Plan).

The compressor house is a windowless one-story wood-frame rectangular building erected in 1982–1983 to replace an older structure that had stood for more than 60 years. The building measures 42' x 19'. The northeast facade is open, while the southwest facade is closed with wood siding. Only half of the northwest and southeast facades are sided with wood. The other half of each facade is open to accommodate the tracks for the tram system. The gable roof is clad with corrugated sheet metal. The foundation consists of posts attached by machine-made metal braces to formed cement blocks. Some of the blocks are faced with wooden boards. Inside the compressor house, the compressor system was used primarily to provide air to the main adit. Air flowed from a compressor to a receiver tank, a converted propane tank. The air went from the receiver tank through a metal pipe to the adit. A Hill-McCanna Company lever located near the receiver tank operated the flow to the pipe. The pipe went underground at the tank, followed the tram rails northwest across the road, then resurfaced and continued to the adit. There were several compressors used at various times to support the system. A stationary Ingersoll Rand 12' x 10'' horizontal compressor (Class ERI, No. 35546) mounted on a cement block measuring 5' long x 1' 8" wide x 1' 10' high, and driven by a converted tractor, was installed in 1982. The horizontal compressor had a permanently attached air pipe leading to the receiver tank. This compressor was originally powered by a tractor engine, but was later powered by a 4-cylinder diesel automobile motor. An Ingersoll Rand rotary compressor was once located immediately west of a receiver tank. A large vertical pipe extending through the roof also acted as an air receiver. A steam whistle brought from Korea was once attached to the end of this pipe.

From the compressor house, the northern fork of the rails continued in a northeasterly direction and forked again. The northern fork of this split terminated in the ore concentration building. The southern fork crossed Sweetwater Creek on a trestle built in the 1980s, and then terminated at a waste rock dump. The final 50' of this fork was constructed on waste rock (see Site Plan).[3]

Mineral Processing Tools, Techniques, and Technologies

One of the most important steps in recovering metal values from raw mined materials is mineral processing. It involves the process of separating valuable minerals from the gangue, or non-valuable material, and starts with separation and then size reduction (comminution) to release the valuable constituents from the gangue, prior to ore concentration operations.

[3] The motor for the tram originated from a 1960 Navy surplus forklift and was powered by a battery that was recharged each night by a system built by Clyde Foster—piped water from the creek turned a small Pelton wheel connected to an automobile alternator which, in turn, recharged the battery. By 2010, the trestle had completely collapsed, the Pelton wheel and motor used to charge the tram was no longer extant, and the track system was completely removed.

Separation and Size Reduction

Ore was always sorted to separate high-grade ore that could be shipped directly to a smelter instead of going to the mill. The earliest form of concentration was hand sorting in the Sweetwater Gold Mine, where miners probably broke the ore with sledges and then sorted the ore with some of the waste rock immediately being used to fill the stopes. Following this initial hand sorting and crushing, all milling and concentrating processes began with the mechanical crushing and grinding of the ore to suitable sizes. Many pieces of equipment were used to reduce the ore from large chunks often down to microscopic sizes.

First, a tram brings the ore from the extraction site into the upper level at the south side of the ore concentration mill building. From there, the ore was delivered from the tram carts into a tipple, that led into an ore bin that contained a grizzly (or grate), which screens out the coarse rock from the finer rock. In most hard rock mines, a grizzly consisted of a number of parallel bars. Often they were simply old track rails set apart at the required aperture. The finer rock went through the grizzly, falling into a chute leading to the lower levels and the Chilean mill below.

Then began the mechanical crushing and grinding of the ore to suitable sizes by a variety of means. The larger rocks, which were about apple size, were hand or gravity fed into a jaw crusher. This jaw or rock crusher was located below the ore bin. The jaw crusher consisted of a fixed vertical jaw or plate and a movable jaw at a slight vertical angle, which was pushed backwards, and forwards by a system of toggles. The rock fell into the opening between the jaws and was crushed by the rapid but short forward movement of the jaw. The plates converged towards the bottom and thus the rock was pinched and shattered several times before it fell free through the bottom opening. By the twentieth century, a jaw crusher was the first primary crusher in most operations, and at the Sweetwater Gold Mine, the "Joshua Henley Machine Works" of Sunnyvale, CA manufactured the jaw crusher located in this mill. A four-cylinder 1932 White truck engine,[4] which was located on the third level of the building, powered the jaw crusher. The crusher reduced the larger apple-sized chunks to walnut-sized pieces, which fell then into a chute that led to a rack and pinion feeder gate. The hand-operated feeder gate was located on the second level of the building.

The reduced ore was then moved by hand to a Chilean mill, or roller quartz mill, on the first level. The Chilean mill was a variant of the arrastra. Instead of drag stones, large stone or cast-iron wheels set on edge revolved about a horizontal axle and crushed the ore. The Chilean mill was a superior crusher capable of being operated by either horsepower or water wheel. The wheel arrangement eliminated a great deal of friction and more effectively nipped the ore. Being more difficult to dismantle than the arrastra, the Chilean mill was used only for crushing ore. Reportedly, Chilean mills were more durable, cheaper, and more efficient than a standard stamp mill. In 1889, J.M. Bryan mechanized the basic Chilean mill concept and called his patented invention a "quartz

[4] The body of the White truck may still be on the site.

roller mill." The quartz roller mill used three steel rollers to pulverize the ore in a 6' diameter circular mortar pan. Each wheel weighed approximately 1,000 to 1,300 pounds and was fitted with an iron shoe. At the Sweetwater Gold Mine mill, a six-cylinder 1921 Studebaker car engine with transmission and driveline powered this roller quartz mill—that may date to the 1930s.

Concentration Operations: Amalgamation and Flotation

After the minerals have been liberated from the gangue in the crushing and grinding processes, the ore was subjected to one or more processes of concentration to separate valuable minerals from the gangue. These operations result in two products, an enriched part containing the desirable mineral—the concentrate; and a barren part—the tailings. The latter part is discarded into the tailings pond or pile. Two processes of concentration were used at the Sweetwater Gold Mine to separate the desired metal content from the ore waste. They were amalgamation and flotation.

Amalgamation was used extensively in the early days of mining when the primary ore bodies were simple free gold in quartz lode or spongy oxide deposits. Amalgamation to recover gold is based on mercury's ability to dissolve gold. This was the most common recovery process used during the nineteenth century for free-milling gold ores. In the amalgamation process used at the Sweetwater ore concentration mill, water from Sweetwater Creek in various amounts was added to each ton of crushed quartz ore to make a thin pulp or slurry that was then moved through a system of screens to further refine it. The slurry was eventually sent into a distributor box. This box distributed the crushed ore pulp across the amalgamation plate. The amalgamation plate (not extant) was probably a 4' x 12' mercury-covered copper or silver-coated plate brushed with mercury to attract the gold particles. The mercury absorbed the free metal liberated by the crushing process, forming an amalgam that remained on the plates. The gold- and silver-laden amalgam was removed at regular intervals and the mercury was retorted in a pot, recovering nearly pure gold and silver. The liquefied mercury was reused time and time again in this process, while this amalgam of gold and silver was shipped to a refiner, where the metal was assessed according to its composition. Some of the tailings were piped to the tailings pond south of the ore concentration mill.

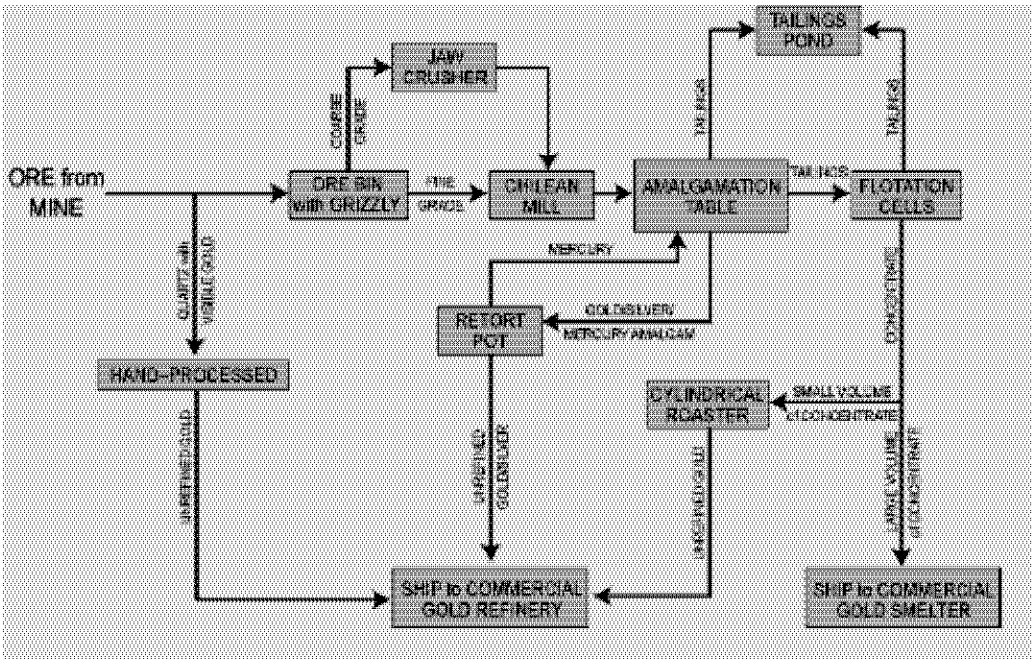
Since in the twentieth century the amalgamation process seldom yielded more than seventy percent recovery, the tailings from the amalgamation plate were emptied into a large barrel, where a pumping system sent them to a series of flotation cells on the second level for better recovery. Flotation is a concentration method that recovers various minerals from low-grade and complex ores more effectively than gravity methods. Valuable materials are isolated through the surface tension of liquids and the ability of minerals to attach to air bubbles in liquids. In the early 1900s, the flotation process used created air bubbles in a liquid solution of finely ground ore. The ore was "frothed" with air and pine oil or other reagents. The metal compounds floated to the surface with the air bubbles. They were then collected by the oil and removed by mechanical paddles, and the gangue sank. The concentrates produced by flotation usually were dewatered (dried) in Dorr Company-type thickeners and then were filtered before shipment to the

smelter.

To create the ore froth at the Sweetwater mill, three German-made flotation cells were located on the second level that squeezed out whatever gold were left in the tailings. The flotation cells were 24' by 24' metal tubs connected together in a row, and probably dated to the 1930s. The incoming pulp was treated in an air-injected bubble bath of chemical solution; the froth was moved from one cell to the next to clean and further distill the solution. The first two cells produced a primary concentration, and the third cell cleaned and produced the final concentrate, which then flowed into a concentrate box or trough. The flotation cells received air from a compressor (not extant) that was driven by three flat drive belts connected to a drive line from a six-cylinder engine and transmission. The final concentrate from the flotation cells was shipped to a smelter for further refinement to recover whatever minerals were present. The remaining tailings were piped to the tailings pond south of the ore concentration mill.

While the dark concentrate produced by the flotation process scarcely resembled anything of value, it was in fact rich in gold and silver—each ton might contain several ounces of gold. Compared to the unrefined gold and silver from the retort, the flotation concentrate was less valuable per measure of weight, but much more of it was produced—sometimes several tons. The small quantities produced at the Sweetwater mill were most likely treated in a cylindrical smelter made by Ray and Clyde Foster and then shipped to a commercial gold smelter.

The complete beneficiation process for the Sweetwater Gold Mine is depicted in the following chart as explained in narrative form above.



Flow Chart of the Sweetwater Gold Mine Ore Concentrating Process. Adapted from Nettles, et .al. National Register of Historic Places Eligibility Evaluation of the Sweetwater Gold Mine in Mariposa County, California (2008).

B. Machines: The following is an inventory of the machinery associated with the ore concentration mill.

- Jaw crusher manufactured by the "Joshua Henley Machine Works" of Sunnyvale, California—used to crush ore
- Four-cylinder 1932 White truck engine—supplied power to run jaw crusher
- Six-cylinder 1921 Studebaker car engine—supplied power to turn roller quartz mill
- Roller quartz mill (i.e. Chilean mill)—used to crush and refine ore
- German-made flotation cells (three)—used to create ore froth to concentrate tailings
- Unknown type of six-cylinder automobile engine—used to power flotation cells and provide lighting for the ore concentration mill

C. Technology: The Sweetwater ore concentration mill possesses remarkable physical integrity, since these mills were and still are prime targets for the salvage of structural materials and machinery when abandoned. The remaining material evidence permits virtually a complete reconstruction of the milling operation.

The simple adaptable technology used in the Sweetwater ore concentration plant was typical of small mining operations conducted by individuals or non-corporate entities in the mid-twentieth century and later in California and elsewhere. It included size separation (grizzly), size reduction (jaw crusher and roller quartz mill), and two concentration and refining operations (amalgamation and flotation). Developed in the 1930s, the Sweetwater Gold Mine ore concentrator is associated with mid-to-late twentieth century lode mining carried out by individuals who did not have the backing of large corporate enterprises. The site remained unaltered and utilized until probably the early 1990s, and the site reflects the evolution of mining technology and the efforts of its occupants to adapt the available technologies to their specific needs.

D. Workers: The Sweetwater Gold Mine ore concentration mill was probably a two-man operation. The work force would have included Ray and Clyde Foster until Ray Foster retired prior to World War II. Ray Foster was a miner who in the 1920s gained his experience in Nevada County. Clyde Foster, his son and also an experienced miner, gained mining knowledge while working for his father as a youth at the Twin Sister Mine in Nevada County (1927), and from attending the University of Nevada's Mackey School of Mines (1930-1931). Following his brief years of university education, and up until World War II, Clyde Foster also owned and worked the Sleeping Beauty Mine in Nevada County, several counties north of Mariposa County.

During his tour of duty during World War II, Clyde Foster received survey training at the Stanford University Graduate School. While he was away in 1941 and 1942, Lee Rowland leased the mine. Upon his return to the area, after serving in the Korean War,

where he gained knowledge in the use of explosives, Clyde Foster worked the Sweetwater Gold Mine and the ore concentration mill. To help him, since his father Ray Foster had retired, Clyde Foster hired help. One worker was Bud Munck, who helped document the main features of the mine, as well as the mining process for archeologists who in 2008 were conducting the National Register of Historic Places evaluation for the property. Bud Munck was a friend and confidant of "Sweetwater Clyde" Foster, the owner of the mine from the 1950s until his death in 1999. He began working with Clyde Foster in the 1970s, and was intimately familiar with the mine property, features, and artifacts.

E. End Product: The end product of the ore concentration mill was the recovery of gold from ore extracted from the Sweetwater Gold Mine.

Part IV. Sources of Information

A. Primary and Secondary Sources: The essential knowledge for this section of this HAER study comes from two reports, which thoroughly explored available primary and secondary resources pertinent to the subject matter, including California mining journals, records at the Mariposa County Courthouse, and the California State Mining and Mineral Museum in Mariposa, California, and personal interviews, and video-taped interviews with Bud Munck. They are:

Mogge, Marie and Connie Popelish. "Archeological Site Record for the Sweetwater Mine." On file, Sierra National Forest, Clovis, California: 2003.

Nettles, Wendy M., Randy Baloian, Barry A. Price, and Mark Kile. National Register of Historic Places Eligibility Evaluation of the Sweetwater Gold Mine in Mariposa County, California. Prepared U.S. Forest Service, Sierra National Forest. Applied Earthworks, Inc., Fresno, California: 2008.

B. Secondary Sources: Secondary sources consulted for this report include the following:

California Department of Transportation (CALTRANS). A Historical Context and Archaeological Research Design for Mining Properties in California. Sacramento, California: 2008.

Godfrey, Anthony. Historic Preservation Plan Placer and Hard Rock Mining Resources in Montana. 3 Volumes. Prepared for Bureau of Land Management, Montana, Purchase Order ESP000053. U.S. West Research, Inc., Salt Lake City, Utah: 2003.

Godfrey, Anthony. Historic Preservation Plan: Historic Resources on the White River National Forest. 3 Volumes. Prepared for U.S. Forest Service, White River National Forest, Contract #AG-82D7-P-07-0052. U.S. West Research, Inc., Salt

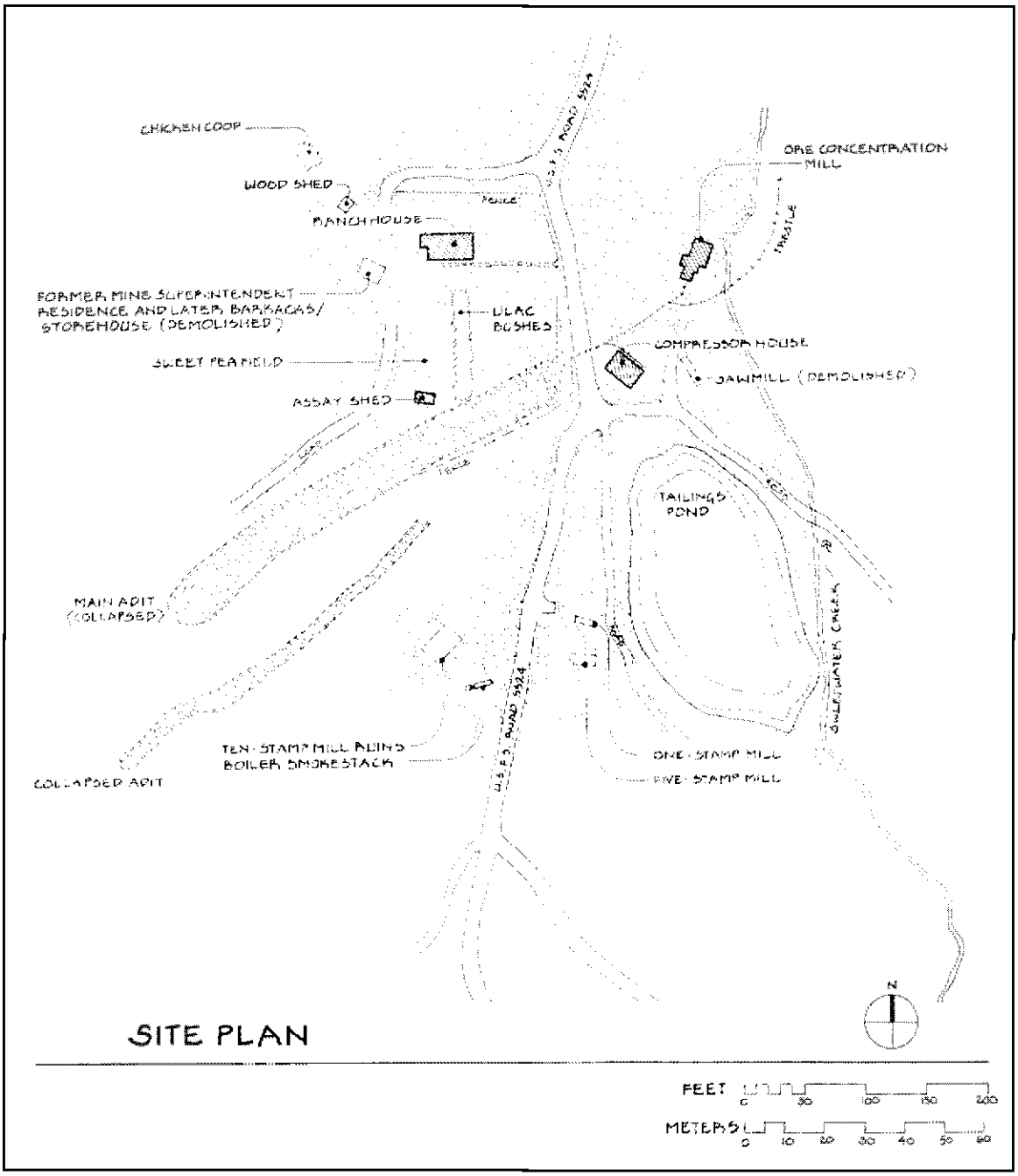
Lake City, Utah: 2009.

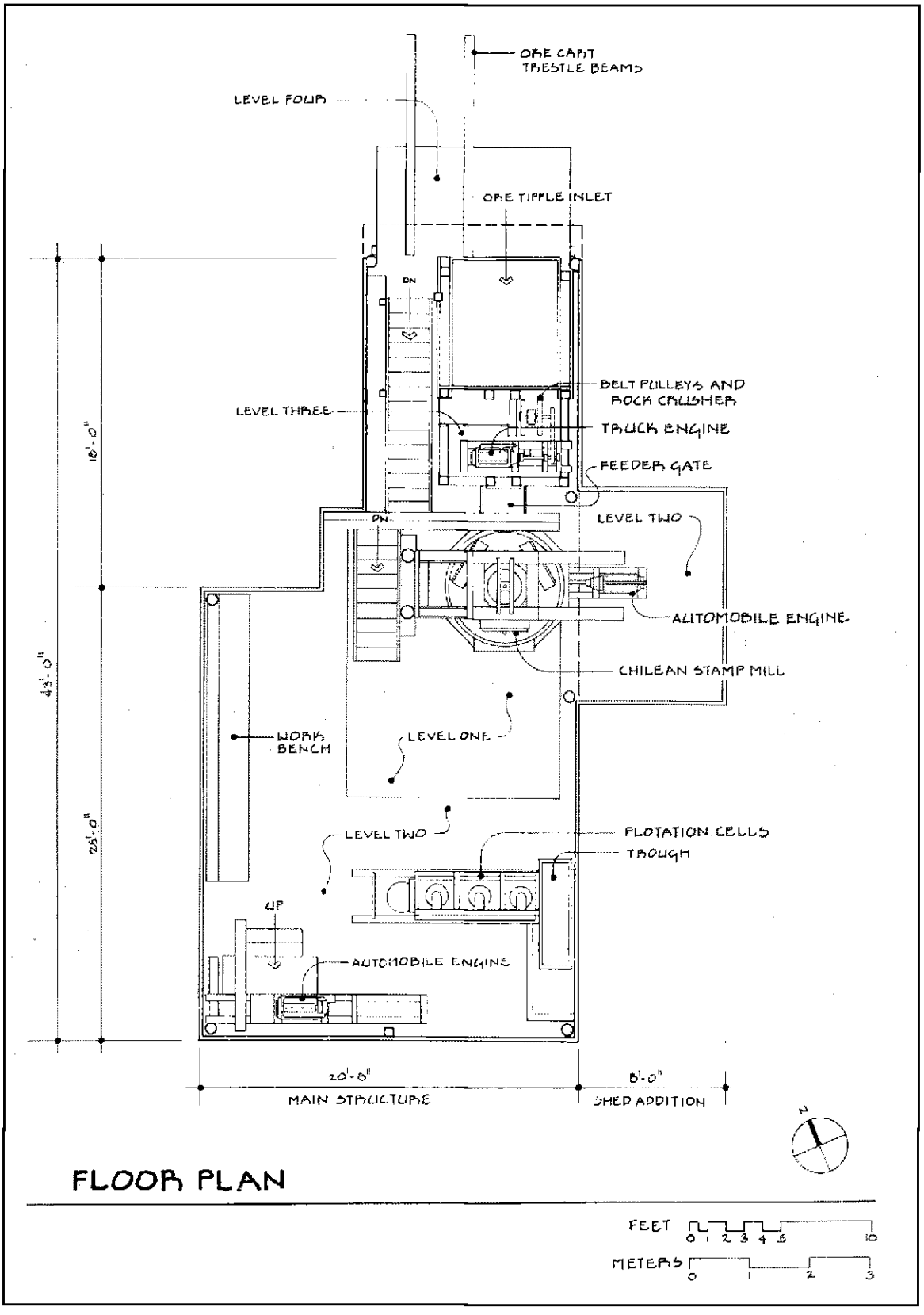
Meyerriecks, Will. Drills and Mills: Precious Metal Mining and Milling Methods of the Frontier West. Tampa, Florida: W. Meyerriecks: 2001.

Twitty, Eric. Riches to Rust: A Guide to Mining in the Old West. Montrose, Colorado; Western Reflections Publishing Company.

C. Likely Sources Not Yet Investigated: In 2003, and again 2008, archeologists extensively inventoried and/or collected hundreds upon hundreds of industrial and domestic artifacts from dumps and scattered areas that have gone unanalyzed. Forest Service archeologists have also inventoried and collected artifacts from the site as well. The collected artifacts are currently stored at the Jerseydale Fire Station, Sierra National Forest. The artifacts are in fair to poor condition because they have been affected through exposure to the elements, vandalism, and re-use. Taken in conjunction with an analysis of this material associated with the Sweetwater Gold Mine and video-taped interviews with Bud Munck, historical archeology might be conducted here with exceeding profitability.

Additionally, the Mariposa Museum and History Center remains an untapped archival resource, and is more than likely to have some information regarding the mine.


CHICKEN COOP
WOOD SHED
RANCH HOUSE
FORMER MINE SUPERINTENDENT RESIDENCE AND LATER BARRACKS/ STOREHOUSE (DEMOLISHED)
LILAC BUSHES
SWEET PEA FIELD
ASSAY SHED
MAIN ADIT (COLLAPSED)
COLLAPSED ADIT
TEN-STAMP MILL RUINS
BOILER SMOKESTACK
ORE CONCENTRATION MILL
PENSTOCK
COMPRESSOR HOUSE
SAWMILL (DEMOLISHED)
TAILINGS POND
SWEETWATER CREEK
ONE-STAMP MILL
FIVE-STAMP MILL
N
SITE PLAN
FEET
METERS


ORE CART TRESTLE BEAMS
LEVEL FOUR
ORE TIPPLE INLET
DN
BELT PULLEYS AND ROCK CRUSHER
LEVEL THREE
TRUCK ENGINE
FEEDER GATE
LEVEL TWO
AUTOMOBILE ENGINE
CHILEAN STAMP MILL
WORK BENCH
LEVEL ONE
LEVEL TWO
FLOTATION CELLS
TROUGH
UP
AUTOMOBILE ENGINE
18'-0"
25'-0"
43'-0"
20'-8"
MAIN STRUCTURE
8'-0"
SHED ADDITION
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FLOOR PLAN
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0 1 2 3 4 5 10
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