Archaeological Investigations at a Sacramento River Mining Camp (CA-Sha-1450) Shasta County, California

By Trudy Vaughan

Report prepared for the City of Redding
and the U.S. Department of the Interior
Bureau of Land Management

CITY OF REDDING

BUREAU OF LAND MANAGEMENT

REDDING, CALIFORNIA

ARCHAEOLOGICAL INVESTIGATIONS AT A SACRAMENTO RIVER MINING CAMP (CA-SHA-1450), SHASTA COUNTY, CALIFORNIA

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Eric W. Ritter, Ph.D.
General Editor

FOREWORD

When I first discovered this Sacramento River site complex during a routine survey of public land, it became readily apparent that here was an important and probably unique resource from anthropological, historical, and interpretive perspectives. Trudy's study has amply demonstrated this fact.

Early inquiries to members of the Shasta County Historical Society and to local "old time" miners and historians suggested that here so close to Redding was a blank spot in the area's history, perhaps a location that typified the late 19th century mining practices in the area. This only served to amplify the intrigue a number of us found surrounding the site and called for more investigation. Management considerations discussed in the report, in light of the City of Redding's development, provided a mechanism for serving both the City's interest and those of the public and the scientific communities. A means to begin filling in the blanks was at hand through resource protection requirements. And while this study is a significant step in understanding the local past, much remains unknown. Still, a framework has been developed for future researchers and for later interpretation.

This study demonstrates the benefits from cooperative efforts -- in this case, the City of Redding, the Bureau of Land Management, the Redding Museum and Art Center, and Coyote and Fox Enterprises.

On an individual basis, I wish to credit the author with an outstanding effort completed with little financial aid. In undertaking and completing this report, Trudy has added to her long list of accomplishments in this region's history and in historical archaeology. She has become one of the leading regional experts in this regard, and this report represents a task that will be widely recognized and used.

Eric W. Ritter, Ph.D.
General Editor

ABSTRACT

Historical archaeological investigations were conducted in the summer of 1985 at CA-SHA-1450, a historic gold mining complex along the Sacramento River near Redding, Shasta County, California. The study was pursued to mitigate potential adverse effects to the site from an interpretive hiking trail planned by the City of Redding. The work of mapping, feature recording, surface collection, and test excavation was centered around five standing rock fireplaces and their associated artifact scatters which consisted primarily of broken embossed bottle fragments.

Archival research of county records was unsuccessful in locating the early claim or claimants in this area of placer and hydraulic mining; but analysis of the time-sensitive artifacts places the site occupation between 1877 and 1900. Test excavation trenches across pits in front of two of the rock fireplaces revealed burned wood, square nails, and evidence of cellar construction.

No similar group of rock fireplaces is known to date, and CA-SHA-1450 is determined to have at least local historical significance. The site will be protected by a Cooperative Agreement between the Bureau of Land Management and the City of Redding which provides for monitoring the site. Recommendations for further work include continued archival research and an analysis of the mining features and the technology employed.

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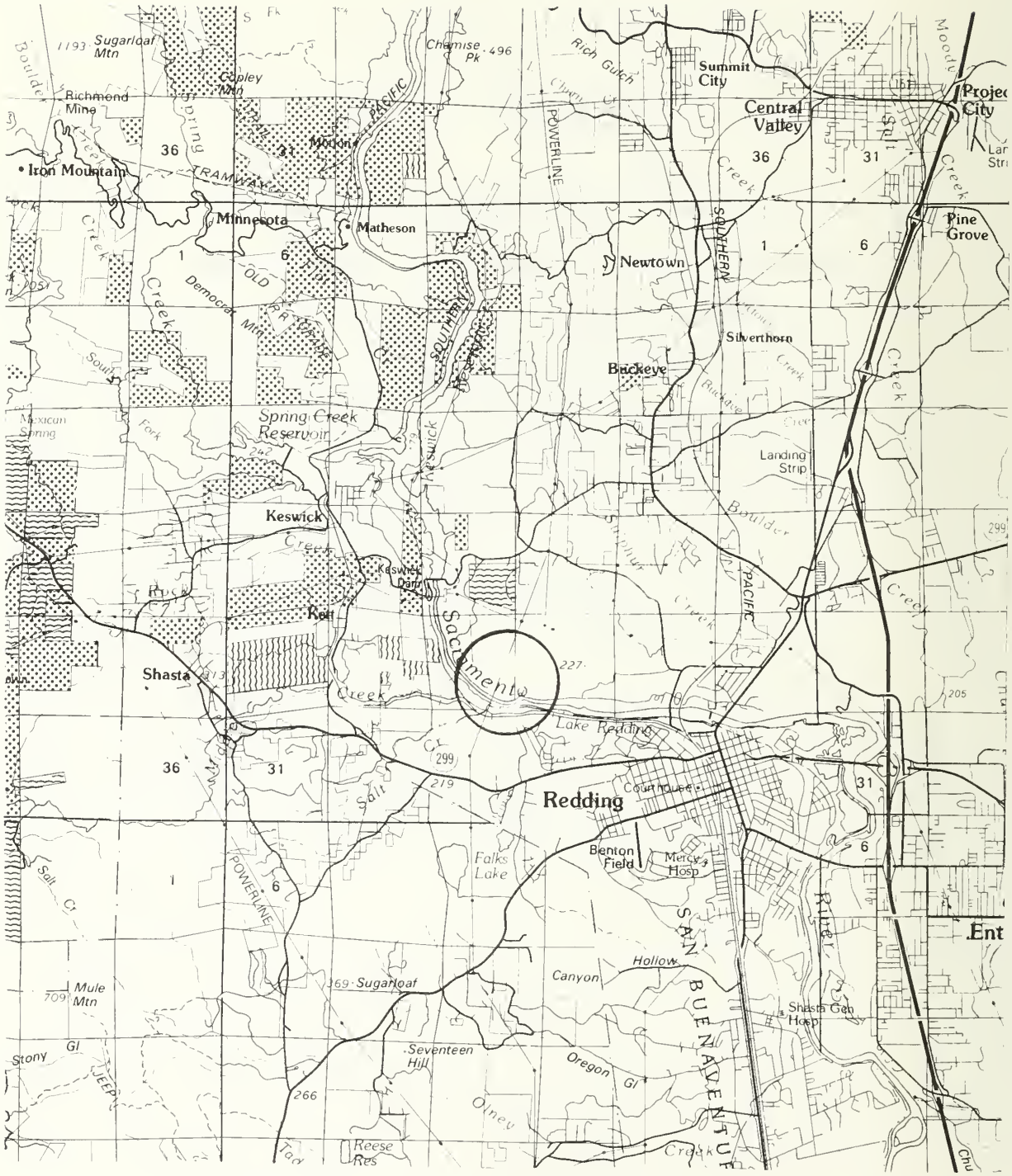


FIGURE 1.1: Site Vicinity Map
Scale 1:100,000
Bureau of Land Management
Redding Quadrangle, 1979

CHAPTER 1
INTRODUCTION

Historical archaeological investigations were conducted in the summer of 1985 at CA-SHA-1450, an historic gold mining complex. The study was pursued to mitigate potential adverse effects to the structure remains and associated artifacts believed to retain sufficient integrity to date the occupation of the area and to yield data on the lifeways of local miners in the late 1800s: their subsistence, architecture, and camp organization.

CA-SHA-1450 was recorded in June 1983 by Eric Ritter, Archaeologist for the Bureau of Land Management/Redding Resource Area (BLM) as part of a survey of 180 acres of land along the east bank of the Sacramento River approximately halfway between Keswick Dam and the housing development to the west of Lake Redding Park in the City of Redding, Shasta County, California (Figure 1.1: Site Vicinity Map). The purpose of the survey was to inventory the cultural resources in this federally owned parcel for which the City of Redding has a right-of-way and has applied for a lease and eventual title transfer in order to develop a nature study area and riding and hiking trails along the riverfront.

This site was one of six recorded in the project area and was by far the most extensive and complex. It measures 1,787 feet (550 meters) NW/SE by 812 feet (250 meters) NE/SW, or 3.3 acres (13.75 hectares). The complex consists of historic mining activity and prehistoric flake scatters; but the latter retain little integrity, and additional study of this component was not considered relevant. Specific historic features include hydraulically mined bluffs, placer mined drainages, stacked boulders, boulder walls, ditches, small dam remnants, old roads and trails, historic artifact scatters, and the remains of five rock fireplaces, two of which have associated pits.

The historic artifact scatters and the rock fireplaces were considered particularly significant. Similar rock features have been noted in northern California (see page 3); but no group of rock fireplaces in such close proximity is known, and only one previous archaeological project (Greenwood 1982) is known to have attempted to determine their age and

associated structure, if any. The surface artifact scatters recorded in the vicinities of these fireplaces consisted of heavy concentrations of glass bottle fragments, many of which are embossed. The integrity of these features was good, and the artifacts generally were considered to be in situ because the area is heavily overgrown with manzanita (Arctostaphylos sp.) and access is somewhat difficult for the average bottle hunter.

The uniqueness of the five rock fireplaces in relatively close proximity, the associated embossed glass fragments available for dating purposes, and the integrity of this portion of the site resulted in BLM determining that the site has at least local historical significance and the ability to yield important historical information not found in historical documents. Because of potential damage to the artifacts and features resulting from increased access by visitors on the new hiking trail, BLM recommended to the City of Redding that archaeological investigations be conducted in this area prior to any land transfer and that a program be developed for monitoring the site to prevent vandalism. Consultation with the State Historic Preservation Officer resulted in a recommendation for further testing of the site before a determination could be made as to the site's eligibility to the National Register of Historic Places.

A Cooperative Agreement was signed between BLM and the City of Redding in which the City agreed to provide (1) funding for archaeological work, (2) mapping assistance, and (3) a yearly field evaluation of the integrity of CA-SHA-1450. BLM/Redding agreed to (1) develop the scope of work for the archaeological project, (2) provide field assistance and logistical support to the archaeological crew, (3) assist the City in historical interpretive projects in the area, and (4) monitor the site's integrity annually at a different time from the City.

The Redding Museum and Art Center, as a City-associated non-profit corporation, contracted with Coyote & Fox Enterprises to perform the archaeological work. The scope of work was written to include (1) archival research to try to determine the mining claimants and dates of operation for the area, (2) a scale map of the entire site showing topographic and historic features, (3) larger scale, more detailed maps of the feature areas in association with the rock fireplaces, (4) systematic surface collection of artifacts within the fireplace areas, followed by cataloging and analysis, and (5) laying out of two test excavation units, the locations to be based on preliminary analysis of the site. BLM/Redding agreed to provide the crew for the excavation work.

ARCHAEOLOGICAL BACKGROUND

Limited archaeological work is known to have been conducted at historic sites with similar rock fireplaces. The author has seen a photograph of one such fireplace noted by a local resident on a grassy hillside in southwest Shasta County.

During a cultural resources survey in Tehama and southern Shasta counties (Johnson and Theodoratus 1984), several chimneys constructed of tabular sandstone and mud mortar were recorded in the historic mining areas. Based on surface reconnaissance only, the authors state that most had little refuse associated with them, are believed to have been short-lived, "and it appears that in most cases the associated structures were dismantled and materials used elsewhere." Two of the sandstone chimneys were in association with extensive ash dumps and had a wide variety of historic artifacts, including both wire and square cut nails. They are dated to the late 1890s.

Archaeological excavations were conducted in 1981 at two rock fireplace features in the Mother Lode, near Angels Camp, Calaveras County, California (Greenwood 1982). Small ash lenses were noted, and wall foundations around one fireplace were revealed. All nails recovered were square cut. The features are dated from the 1850s to the 1880s based on research into seven recovered ceramic smoking pipes and the manufacturing techniques of recovered glass bottle fragments (none were embossed).

RESEARCH DESIGN AND METHODOLOGY

The primary objectives of this project were to provide a descriptive report on the rock features and to date the occupation of the area through archival research and analysis of the artifacts. The scope of the project was necessarily limited by time and funding. A detailed research design was not prepared, and the discussion of historic mining practices and technology is left for future research. Hopefully, the data presented here will be used in future historic mining studies which will help determine if this particular mining complex is typical or unique for its time.

Fieldwork took place in June 1985 during a particularly hot spell when it was only reasonable to work in the morning hours. Two or three persons spent four days of five or six hours in the field for a total of 6.5 person-days. A general map of the site was prepared using an orthographic photo

provided by the City of Redding with a scale of 1:2400 (1" = 200') and five foot contour intervals (Figure 3.1). The various historic features were plotted using the features of drainages, power lines, brush clumps and open areas shown visually on the map. Detailed feature area maps were prepared using a compass, tape, and clinometer to plot elevation changes, natural drainages, ditches, rock fireplaces, pits, and surface glass concentrations. Rock fireplaces were recorded with numerous height, width, and depth measurements, following by photographs from several angles on each rock structure.

The surface collection of artifacts at each feature was conducted by traversing the area and bagging by feature all artifacts through which analysis could yield data to answer questions related to the age, structure identification, and social/cultural lifeways at the site. All glass fragments were collected which showed embossing or gave clues to size and/or type of bottle. A large sample of non-diagnostic glass fragments was collected to aid in determining the number of bottles at each feature; but the collections were not complete -- many small fragments still remain on the ground. Only representative samples were collected of large metal items, e.g., bedsprings; and some non-diagnostic metal fragments were not collected. The location of each artifact was not plotted, except in the case of specific surface concentrations, all of which consisted primarily of glass bottle fragments.

Each surface collection area was scraped with a trowel and/or rake to uncover other artifacts, and a few arbitrary test scrapes approximately ten feet in diameter were conducted at each feature. A metal detector was used briefly at each feature to determine the extent of subsurface metal, but comparatively little material was recovered by this method.

Features 1 and 5 were chosen for the locations of the test excavation units because of their size and the presence at both of them of a large pit in front of the fireplace. Specific research questions to be answered through excavation included what purpose the pits held and what was the makeup of the structures built in association with the fireplaces. A trench two feet wide and ten feet long was laid out at each feature with the upper end on level ground on the edge of the pit and the trench dropping into the pit and leveling out at the base. At Feature 5, a second trench was later laid out perpendicular to Trench 1 because of the variety of material recovered from the first trench. Excavation of one 6-inch level at the three test trenches was completed by crews of three to five persons in three days using standard archaeological methods and dry screening through 1/4" mesh.

Artifacts are accessioned under BLM/Redding number 190, with the specimens from each feature area being assigned a lot number based on the feature number; e.g., catalog number 190-4-35 is the 35th item cataloged from Feature 4. Many individual pieces were grouped by type; the total 295 catalog numbers represent 3,130 individual fragments.

All records and artifacts remain the property of the United States Government, but the artifacts will be stored at the Redding Museum and Art Center under a permanent loan agreement.

ACKNOWLEDGEMENTS

BLM, the City of Redding Planning Department, and the Redding Museum and Art Center were all very cooperative in arranging this project and providing assistance in the form of maps and references. Eric Ritter, BLM Archaeologist, and Beth Elstien, a BLM summer volunteer from the Student Conservation Association, also provided invaluable, time-consuming assistance in cataloging, excavation, and archival research.

In addition to the author, Coyote & Fox Enterprises crew involved in mapping and surface collection were Charles Crackel and Daniel Elliott. BLM employees and volunteers who did the excavation were Francis Berg, Beth Elstien, Tony King, Robert Korfhage, Howard Matzat, Joseph Molter, Bret Ritter, and Eric Ritter. Artifact drawings were completed by Carol Farber.

The staff of the Archeology Laboratory for the State of California Department of Parks and Recreation in Sacramento, especially Jeannette Schulz and Chris Swiden, were very helpful in glass bottle identification by making available their reference library and their type collection of historic bottles for comparative studies. John Hitchcock, an archaeologist for the Shasta-Trinity National Forests, also assisted in dating embossed glass fragments; and Dewayne Vaughn, a local mining historian, provided some mining history and identification of some of the unique metal artifacts. Identification of the small ironstone containers as toothpaste holders was provided by Carolyn Bond, Director of the Redding Museum and Art Center, with the assistance of a local antique dealer.

Thank you, all.

CHAPTER 2
HISTORICAL BACKGROUND

The BLM property which was surveyed for this project includes a narrow floodplain and rocky river shoreline with an adjoining ancient terrace characterized by relatively steep bluffs. The hills and terraces are dissected by both natural drainages and man-made ditches and tail races.

The mining potential of this area is described in a 1893 report on the geology and mineralogy of Shasta County.

> The line of hills which border the Sacramento River on the east between Redding and the mouth of Pitt River belongs to the Auriferous Series, and the rocks are well deserving of that designation. The gulches leading both east and west from this ridge were very rich in gold, but now the interest in this section centers in the numerous gold-bearing quartz ledges. . . . The line of hills seems formed of parallel dikes of fine greenish, crystalline rocks and greatly altered quartz and feldspar porphyries. Between them are strata of highly altered sedimentary rocks. Both dikes and slaty rocks have in general a strike a little east of north and west of south, and a very steep east or west dip. The ore is sulphurets and free gold, with generally very little silver. The veins occur at the contact of porphyry with slaty rocks of two different kinds of porphyry, or of porphyry with massive greenish dikes, which are so decomposed that no precise name can be given to them.
>
> Judging from the amount of alteration, the dikes represent two periods. The porphyritic dikes are in all cases the younger; the older are compact, fine grained, and possess a green color. They are either massive or shistose. The surface rock under the gravels is often decayed down 25 to 40 feet. Hence, the time must be great since their surfaces were exposed to erosion. This period probably antedated the deposit of the great body of gravels and conglomerates filling the head of the Sacramento Valley (Fairbanks 1893:42-43).

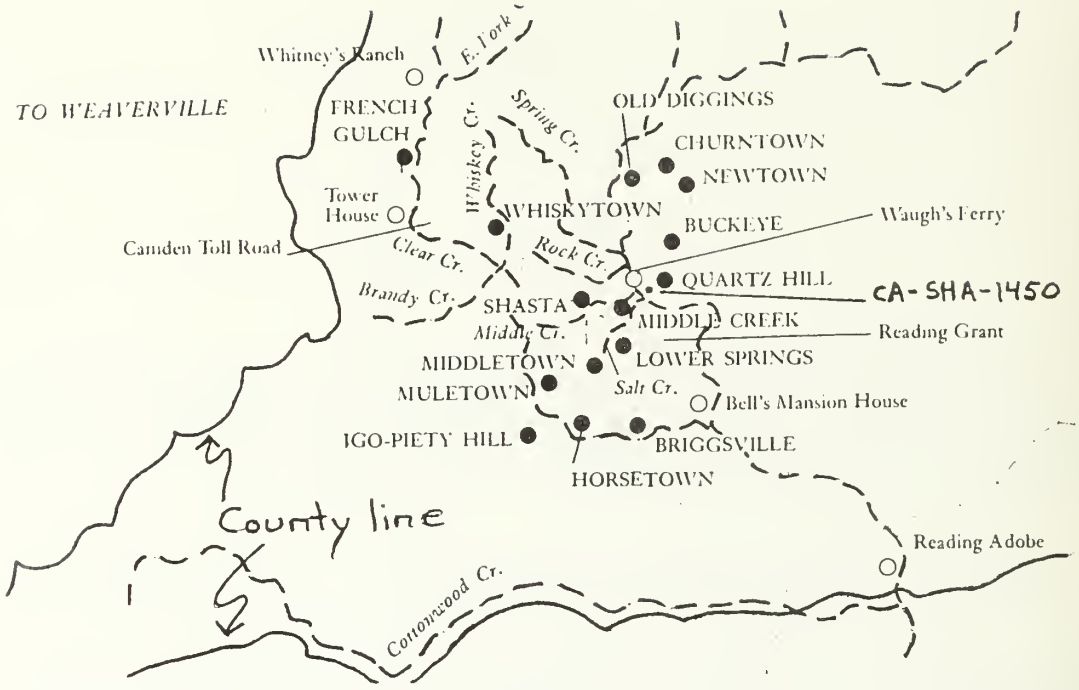


FIGURE 2.1: Early Mining Communities in Shasta County (Frisbie and Beauchamp 1973:6)

The California Gold Rush brought an influx of miners to Shasta County to tap this gold bearing region, and by 1850 the town of Shasta was well established. The town had almost a monopoly providing miners with supplies and services, being at the end of the wagon road and the beginning of many pack trails heading various directions into the hills.

Many miners headed east and crossed the Sacramento River, not an insurmountable task according to a report in the local newspaper, The Redding Independent, on April 17, 1879. An "early Californian" was recalling his experiences.

> On the 27th day of December, 1849, a company of thirty men, principally from New England, the writer among the number, with mining tools, camp utensils, arms, ammunition and food for twenty days subsistence, gathered on the bank of the river for a third attempt at a settlement of the country beyond the river.

In a "partial dug-out" they succeeded in crossing the river at the mouth of Rock Creek, and camped that night opposite the mouth of Middle Creek.

This location is a good river crossing because of the fairly restricted river channel and some natural benches. Joseph Waugh realized the miners' need for safer access to

the east and by 1853 had established a ferry crossing the river on what became known as the Sacramento River Trail. This ferry crossing known as The Narrows was also recorded as an historic site during the field survey for this project. A large iron pin still remains protruding from a rock on the east bank of the river.

> Another of the spokes in the wheel of roads out of Shasta dated from very early days. It was the Sacramento River road, going northeast from Shasta to Waugh's Ferry on the Sacramento River just below the mouth of Rock Creek. Crossing the ferry, the site of which can be seen just below Keswick Dam, the road led on the west side of the river to the cluster of "up-river" mining communities: Buckeye, Quartz Hill, Newtown, Churntown, and Old Diggings (Frisbie and Beauchamp 1973:76).

This ferry operation was ended in 1883 by the railroad, but Mr. Waugh continued to keep business going along this portion of the river for several more years (Frisbie and Beauchamp 1973:82).

> Waugh became a key figure in the rivalry that ensued between Shasta and the new railroad town of Redding, the terminus for ten years after 1872. By the early eighties negotiations for the railroad right-of-way ended the existence of Waugh's Ferry. With the money he received in compensation for the railroad company's cutting off his access to the river, Waugh, encouraged by the businessmen from Shasta, who had promoted the construction of a new road down Middle Creek, built a hotel at its mouth. The plan was to make this new settlement the railroad depot for Shasta, thereby cutting off any schemes of the merchants from the bumptious new town of Redding for outdistancing Shasta as the economic and social center of the north. The hotel was opened on August 18, 1883, with a grand ball attended by the residents of Shasta and the up-river country, but with Redding people conspicuous by their absence.
>
> By 1885, the community seemed to be serving the purpose for which it was intended. Both passenger and freight trains stopped there, with two daily express wagons coming down the new road from Shasta to meet them: Wells Fargo and Company had established an office; there was a telegraph office; and the Post Office Department in Washington had designated the new station as Waugh, where Shasta residents could receive their mail without the inconvenience of its languish-

> ing overnight in Redding. A new ferry crossed the river, while a new access road served the upriver communities of Buckeye, Quartz Hill, Churntown and Old Diggings. But the schemes of Shastans to outwit fate eventually failed. By 1887, after a long court fight and two elections, the county seat was moved to Redding. The new road from Shasta was extended along the south bank of the river and continued to be the main road between Shasta and Redding until the road was built along the route in use today.

The "new ferry" crossed the river at Middle Creek, and the old road shown in Figure 3.1 on the southeast edge of the site is believed to be the "new access road" mentioned above.

The communities mentioned in Frisbie and Beauchamp's book are shown in Figure 2.1; CA-SHA-1450 lies closest to Quartz Hill. A limited review of early newspapers on microfilm at the Shasta County Library failed to find any references to this specific area, but the following excerpts provide insights on the activities in the general area of the Old Diggings Mining District. Specific boundaries of this district are not known, but the district appears to encompass all the communities on the east side of the river between Quartz Hill and Old Diggings.

The site may have been owned and/or worked by Chinese. Several newspaper articles in the 1880s discuss Chinese owners and miners despite the strong anti-Chinese sentiments in the Euro-American communities.

An article of March 19, 1887 (Republican Free Press) explains the need for almost year-round occupation of the site, even though the actual mining could only take place from October or November until May or June when rains provided runoff for the ditches.

> Men cannot expect to make anything unless they are here to prepare for winter operations. There may be ditches to dig, reservoirs to build, cuts to open, lumber to be obtained and made into sluice boxes, shooters to rig up, etc. No sane man will undertake this work unless he is permanently located.

The dateline of the above article is Manzanita Ridge, an appropriate name for the area. This correspondent provided fairly frequent copy for the newspaper. According to him, the "sane" men were "antiques," and the others were "pilgrims."

> Here, like everywhere else, there are two distinct classes of people - the antiques and pilgrims. The

> antiques are the old settlers who make this camp their abiding place at all seasons and who try to uphold the old-time repute. The pilgrims are nomads, who though following the same occupation want only to know where they can squat for the winter, and what inducement does this, that, or the other camp offer. Is there any possible show to make a quick raise here? If not, we will have to try somewhere else. If it does not rain gold dust so that these men can rake up a pile in the months between December and March, they leave in disgust and ten to one give the camp a black eye wherever they go, thus deterring others from coming here to locate.

The time and energy required to construct the rock fireplaces at CA-SHA-1450 and the extensive mining activity indicate site occupation by "antiques."

Court decisions and laws relating to hydraulic mining provide some dates which can be used to develop a time frame for the occupation of CA-SHA-1450. A landmark case by the United States Circuit Court on January 23, 1884 resulted in what is known as the Sawyer Decision. The court decided in favor of the California agricultural interests protesting the overloading of rivers with mining debris (Haley 1923:11).

> The result of the Sawyer decision was far-reaching in its effects. The decree of the court was nominally against the dumping of the debris into streams and rivers tributary to the watershed of the Great Valley; but in actual fact, hydraulic mining was permanently enjoined in all of its major operations. The larger mines were immediately suspended, as injunction after injunction closed them down, and property worth millions went into disuse and decay.

This 1884 date can not, however, mark the definitive end to hydraulic mining, and activity at CA-SHA-1450 may date later. Many smaller mines still operated, and battles between the miners and the farmers continued for several years. In 1891, a government commission of engineers published a report which stated that dams and other restraining works could be erected in many of the canyons for the restraining of debris caused by future mining operations as well as debris already in the rivers from former operations (Haley 1923:12).

This report resulted in the passage of the Caminetti Act in 1893 which established the California Debris Commission.

> It is the duty of this commission to make examinations and surveys which will improve the rivers and insure them against damage due to mining debris, natural erosion, or other causes, with a view of restoring the navigability of these rivers to the condition existing in 1860, and permitting hydraulic mining to be carried on, provided the same can be accomplished without injury to the navigability of said rivers or injury to the lands adjacent thereto (Haley 1923:13).

Strict regulations were outlined in the law for the approval of all restraining dam construction, and there were stiff penalties for violations. The miners were pleased with the Caminetti Act, however, because it ended the feud with the farmers and allowed them to continue working. Hydraulic mining continued for a while but began a gradual decline. By 1923 when Mr. Haley wrote his report, hydraulic mining was completely replaced by other mining methods (Haley 1923:16).

There is some evidence of possible restraining dams at CA-SHA-1450, and it is not possible to determine when hydraulic mining of these bluffs ceased.

Pre-field research by Ritter for the survey project produced only one known older mine in the project area; the Blue Diamond Mine, still privately owned as a patented claim, is located just west of CA-SHA-1450. The mining claim was first filed in 1900, and a registered mineral patent survey for this claim in 1905 shows the owner as Bernard Kearney and states the claim is in the Old Diggings Mining District.

A 1908 map of Shasta County shows the location of the Blue Diamond Mine, Waugh's Ferry crossing, and the Golden Eagle Dredging Ground. In a conversation with Richard B. Eaton, retired County judge and well-known local historian, he stated that a dredge worked that stretch of river, but it struck a rock in 1906 and sank. Eaton said the iron framework of the dredge can still be seen in the river when the water is low (personal communication 1983). Dewayne Vaughn, a local mining historian, sees no evidence of dredging in this part of the river; the activity occurred a short ways downriver. He believes the buried ironwork is part of a large dredge originally located a few miles upriver which washed down in a major flood (personal communication 1986).

Based on the above historical information, a broad general time frame was created for possible mining activity and occupation at CA-SHA-1450. The earliest probable date is 1853 when Waugh's Ferry would have provided the miners relatively easy access to supplies; and the latest occupation

would probably have been associated with the Blue Diamond Mine or the Golden Eagle dredging activity.

Using these dates as a guide, research was conducted at the Shasta County Courthouse to try to determine the specific claims and/or claimants at CA-SHA-1450. No definitive answers could be found in the time available, although a few names and some claim locations need further research. As indicated by the typical claim notice copied below, claim boundaries are vague and difficult to locate accurately on today's maps.

> Notice is hereby given that we the undersigned claim each 300 feet on this Ledge for Quartz mining purposes with all its spurs, dips and angles, commencing at a point on said Ledge 300 northerly or easterly from this notice and running on said Ledge Southwesterly 3,000 feet. We claim the same for the precious metals therein contained.
>
> (10 names)
> April 7, 1863
>
> Said Ledge is situated on the east side of the Sacramento River and the point on said Ledge discovered by us is on the East side of the road leading from Waugh's ferry to Buckeye about 100 yards (more or less) Southeasterly of a flume on the Churn Creek Ditch South of Storys House on said road and this notice is placed on a white Oak Tree at said point said Tree being first blazed with a pick.
>
> O. Davis & Co.
>
> April 7th, 1863
> Filed for Record on April 9th 1863 at 2 1/2 o'clock P.M. J. R. Dunck County Recorder
> (Shasta County Records Book S, p 282)

As the site was being mapped, an old claim corner was located at the northeast corner of the site (Figure 3.1). It consists of an badly weathered squared post which has fallen out of a pile of rocks. No claim notice was found in the rocks. The problem now is to find a claim notice in the County records that matches the location of this marker.

This archival search was somewhat frustrating both because of lack of time and lack of results; and it made the artifact analysis for dating purposes a more critical issue. If the latter process can develop a tighter time frame for possible site occupation, then a future review of all mining deeds and newspapers within that time period will be a reasonable, more manageable task.

CHAPTER 3
FEATURE DESCRIPTION AND ANALYSIS

The fieldwork at CA-SHA-1450 was conducted in six feature areas, five of which contain rock fireplaces and one (Feature 3) which is an artifact concentration with diagnostic materials. The Site Map (Figure 3.1) shows the location of the features using the control points established in mapping the site. More detailed maps of the fireplace features in relation to these control points are included on the following pages. Appendix A provides a numerical listing of artifacts by feature. Glass artifacts are cataloged separately from those of other materials.

The fireplaces are all of similar construction. As the photographs in this chapter illustrate, the rocks were piled in a general semi-circle. Mud mortar was used for chinking, and some effort was made to give the structures straight sides. Some fireplaces are composed of mostly angular rocks, while others consist mostly of rounded, riverworn rocks. Vaughn (personal communication 1986) analyzed the angular rocks as quartz diorite from the immediate area and the rounded rocks as meta-andesite (Copley greenstone) which has washed down from upriver. A random measurement of six to eight rocks from three of the fireplaces gave sizes averaging from 8 to 12" (20 to 30 cm) on the longest sides and 3 to 5" (8 to 13 cm) in height.

(Site Map excluded from public report
to ensure site protection.)

FIGURE 3.1: Site Map, CA-SHA-1450

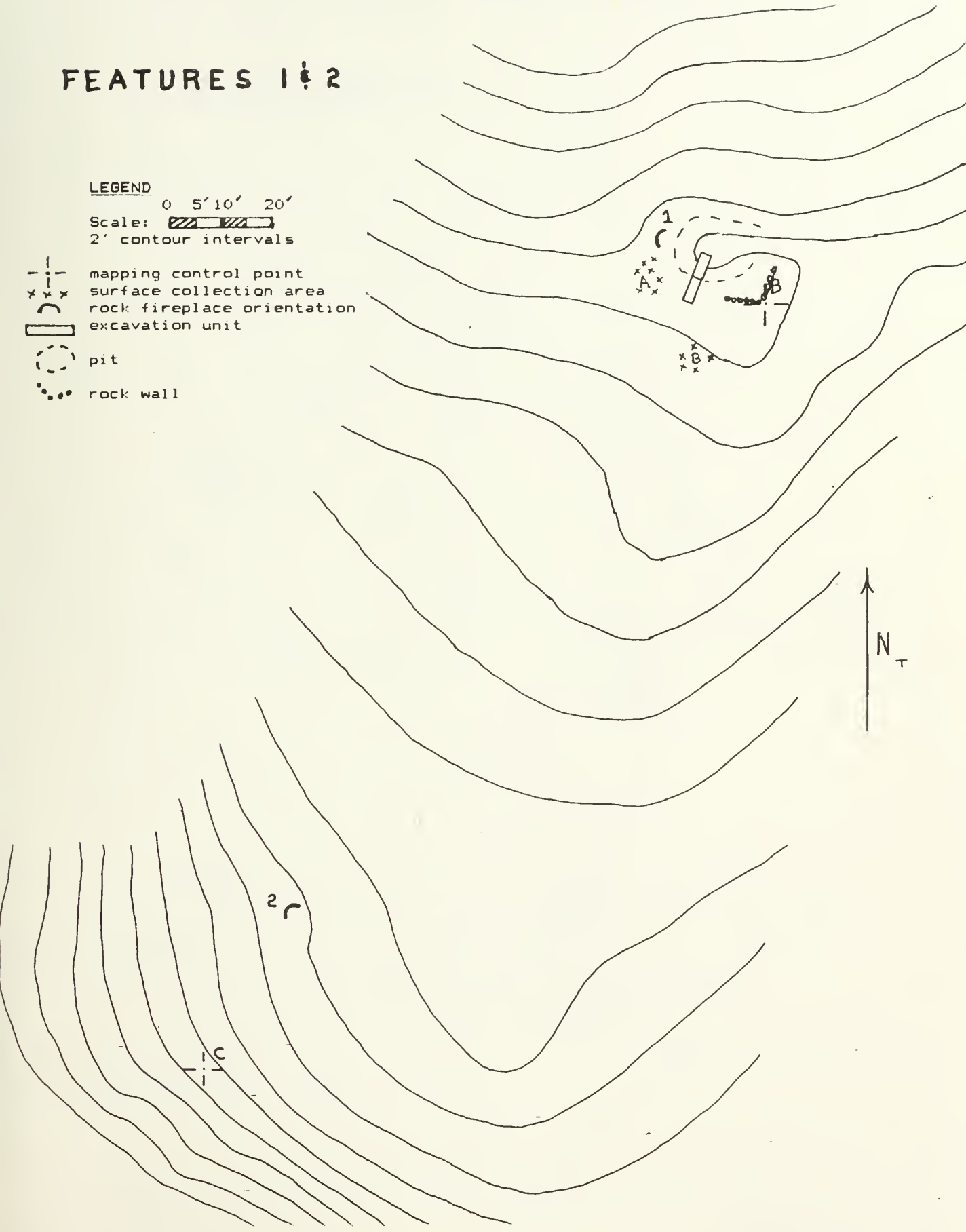


FIGURE 3.2: Contour Map, Features 1 & 2

FEATURES 4 & 5

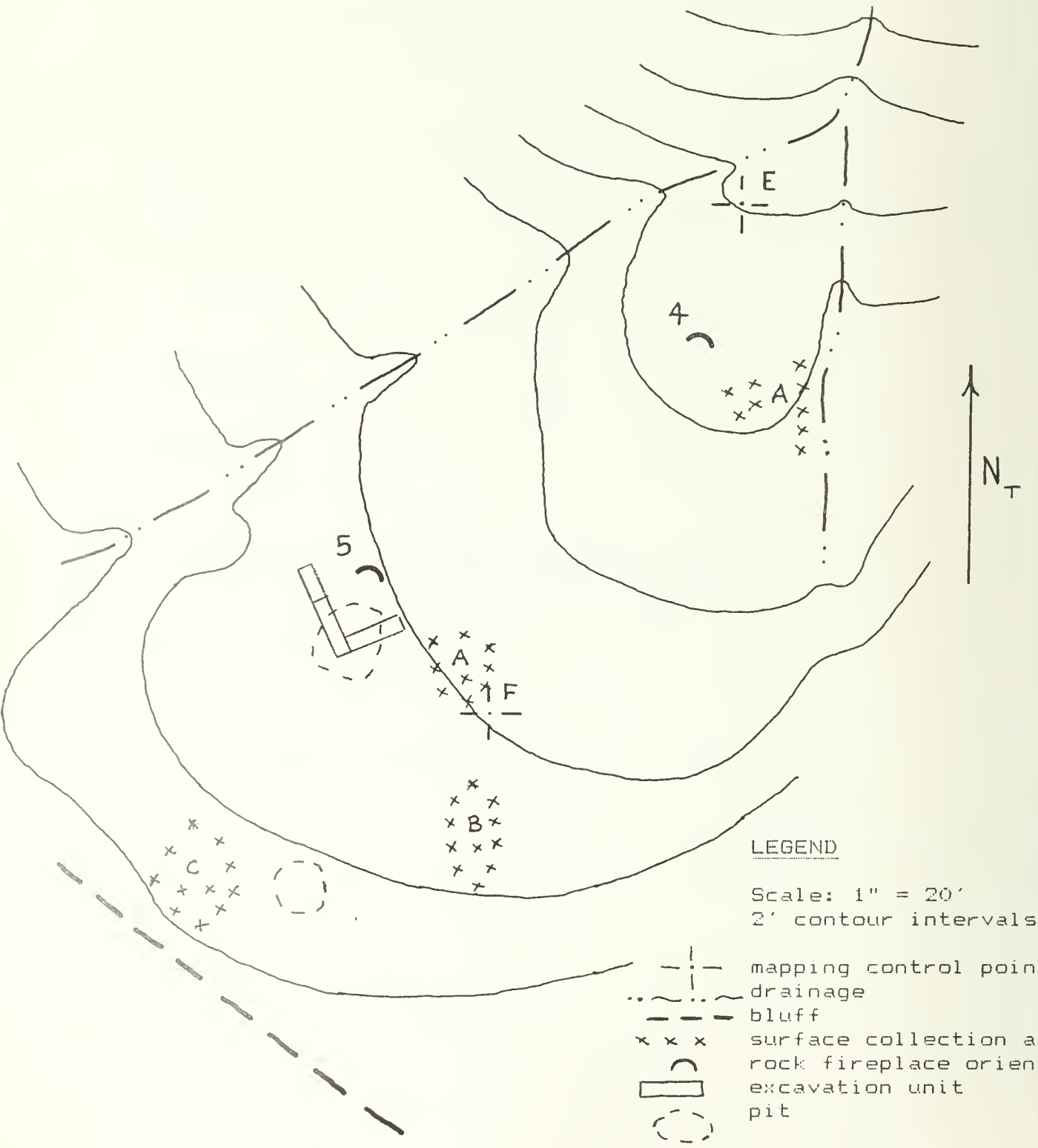
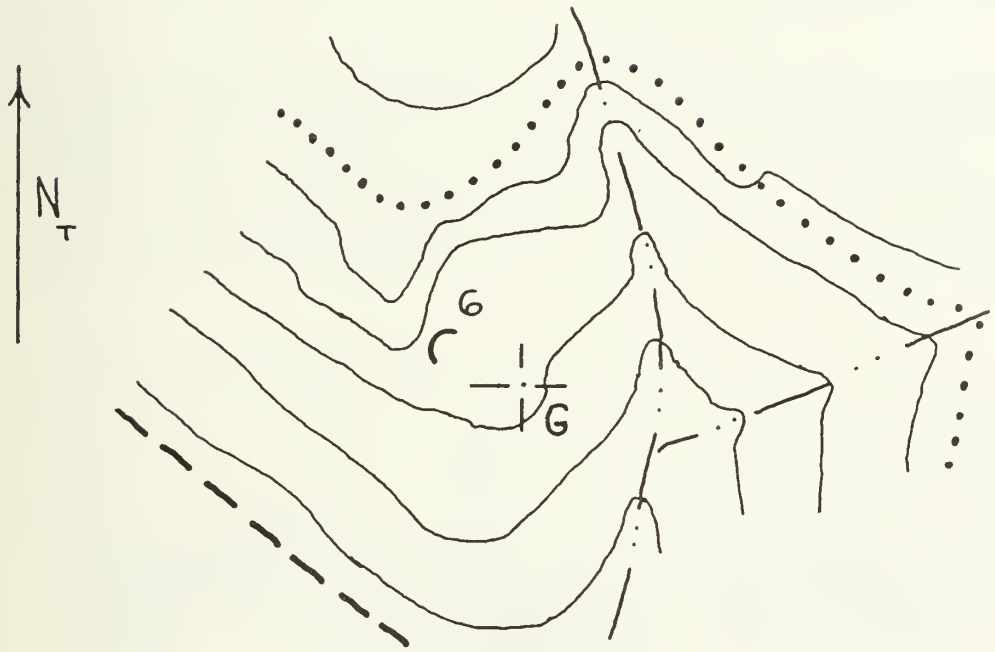


FIGURE 3.3: Contour Map, Features 4 & 5

FEATURE 6



LEGEND

Scale: 1" = 20'
2' contour intervals

mapping control point
mining ditch
drainage
bluff
rock fireplace orientation

FIGURE 3.4: Contour Map, Feature 6

FEATURE 1

Feature 1 is a rock fireplace, a pit, and the associated artifact scatter located on an alluvial bench or ancient river terrace which now stands approximately 150 feet (45.8 m) above the river.

The fireplace faces South 76° East. It measures 55" (1.39 m) high at the back and is the tallest of the existing fireplaces on the site. It measures 77" (1.96 m) wide across the front, and the opening for the fire is 50" (1.27 m) wide and 20" (50 cm) deep. As Figure 3.5 illustrates, the thickness of the wall varies from 14" (36 cm) to 24" (61 cm), and the wall is flat on both the front and the back with definite angles forming the sides.

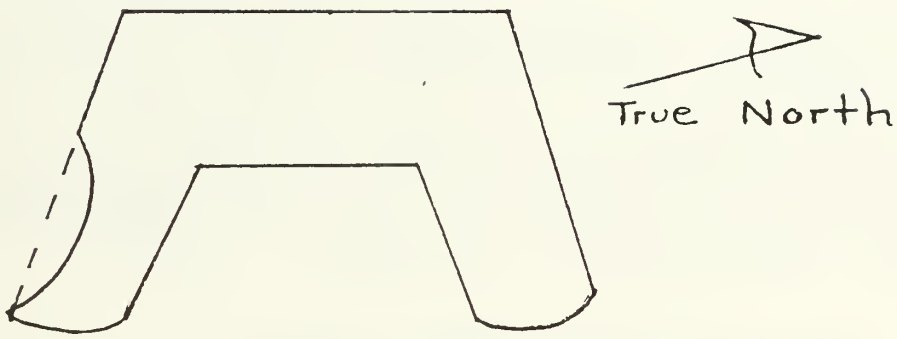
From the front of the fireplace, the ground is level for approximately three feet (92 cm), then it drops into a pit which measures 10' by 12' (3.05 x 3.66 m) on the surface and is five feet (1.53 m) deep. At the eastern end of the pit, there is a short channel about three feet (92 cm) wide which is level with the base of the pit and which appears to have been cut out to meet the edge of the hillside. There may have been an outside underground entrance to the cellar, or once the structure was abandoned, the eastern end was dug out for drainage.

Map control point B marks the location of the corner of a rock wall about two feet (61 cm) thick which forms a right angle. Some other rocks in the area may be the remains of other rock walls, and if this one corner is visually extended, the original structure may have been as large as 19 ' by 24' (5.80 by 7.32 m).

No surface artifacts were found in the pit. In addition to a small collection of artifacts scattered generally through the feature area, two concentrations of artifacts were collected. Collection A, a surface glass scatter, measured about 2' by 8' (61 cm by 2.44 m) and was located three feet (92 cm) southwest of the southwest corner of the fireplace. Collection B, downslope from Collection A, was uncovered while conducting several three- to five-foot diameter scrapes with a trowel in the vicinity of the fireplace. Artifacts collected from Feature 1 include a variety of sizes, shapes, and colors of bottle fragments, a white crockery fragment, a leather boot fragment, metal strips, nails, a fragment of a large sieve, the head of a hoe, and a satchel brace.

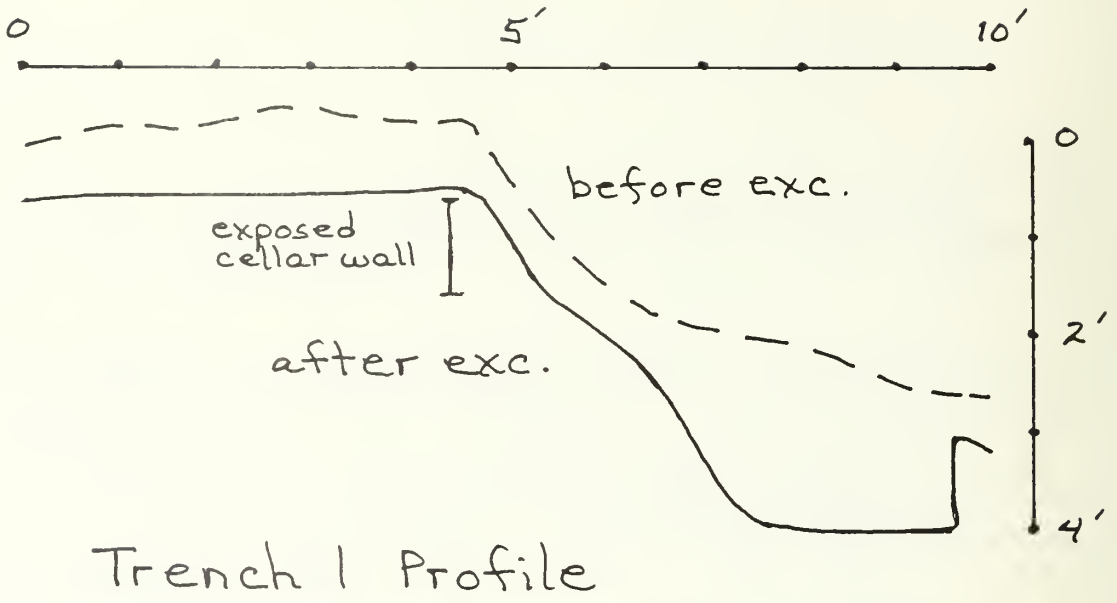
Trench 1 was laid out for excavation on the southeast side of the fireplace at an orientation of North 22° East/ South 22° West. The southwest end, two feet (61 cm) wide, was

Plan view Feature 1 fireplace
1"=25"



Orientation N40°W

FIGURE 3.5: Feature 1



Trench 1 Profile

Orientation S20°W
Trench 1/Feature 1

FIGURE 3.6: Trench 1/Feature 1 excavation

on level ground, and the ten foot (2.59 m) long trench dropped into the pit leveling out on the base. Excavation progressed quickly, but with some difficulty due to cobbles and induration. The soil screened easily. Only various sizes of square cut nails were recovered in the single level excavated which varied from 6" to 12" (Figure 3.6). Nail density decreased considerably with depth.

Ritter believes he exposed the side of the excavated cellar in the upper portion of the pit; there was evidence of a flat wall cut into decomposing bedrock. No floor was confirmed, however; no wood fragments were noted; and there was no evidence of a structure having been burned. This test excavation revealed little to answer questions of pit function and occupant lifeways.

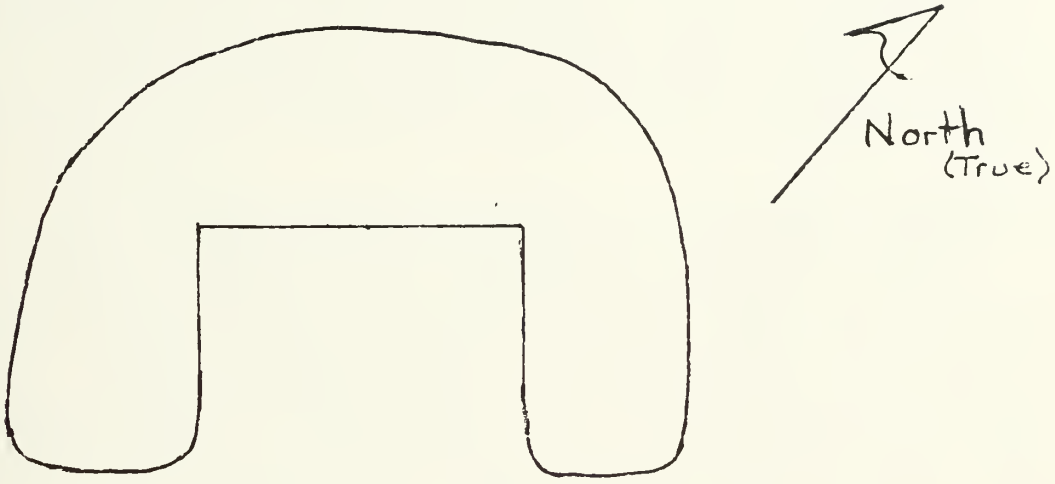
FEATURE 2

Feature 2 lies 149 feet (45.44 m) southwest of Feature 1 on the same bench. It is another rock fireplace and associated artifact scatter. Although composed of smaller rocks and presently not as high as the Feature 1 fireplace, this structure was probably originally larger. A dense jumble of rocks covers the area directly west of the rock feature which faces South 43° East and is presumed to have tumbled down from the top of it.

The fireplace measures 88" (2.23 m) wide, but only 28" (71 cm) high at the tallest point; and the opening is 31" (79 cm) deep and 15" (38 cm) wide. The wall is 26" (66 cm) thick, the back portion is curved, and the inside is flat forming right angles.

No pit or other structure remains were noted with the fireplace. It sits only 30 feet (9.15 m) from the edge of an hydraulic mining escarpment which drops on two sides into drainages. Artifacts were scattered downslope into these ditches. Less artifacts were collected at Feature 2 than at any of the other five features. They include glass bottle fragments, a heavy chain, a stove lid, a Dutch oven lid, a rifle shell casing, and fragments of a kerosene lantern.

Plan view Feature 2 fireplace
1" = 25"



Orientation N30°W

FIGURE 3.7: Feature 2

FEATURE 3

No fireplace or structure was found in the area designated as Feature 3. This was a heavy artifact concentration in an open grassy area on a hillside on the western edge of the site across a mining ditch from Features 1 and 2. The original integrity of this area has been disturbed by a power transmission line and small pits believed to have been dug by bottle collectors.

The area from which artifacts were collected measures 63 feet (19.22 m) North/South by 100 feet (30.50 m) East/West. A small bench on the slope held a concentration of ironstone and was designated Collection A. More crockery was found at Feature 3 than at any of the other features. Glass artifacts include a variety of sizes and colors of bottles and some kerosene lantern reservoir fragments. Leather boot sole fragments and a fragment of black cloth were recovered; and metal items include can fragments, a coffee grinder, and a Dutch oven.

FIGURE 3.8: Feature 3 area
Orientation N23°W

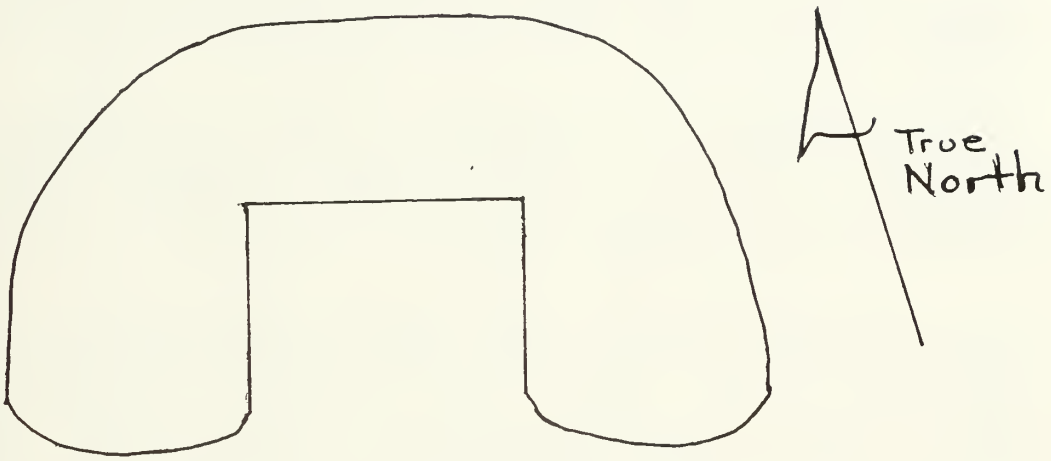
FEATURE 4

Feature 4 is another rock fireplace and associated artifact scatter. It is located across a major drainage on the next ridge to the west of Feature 1 and at about the same elevation.

The fireplace faces South 15° West. Its present measurements are 42" (1.07 m) high and 97" (2.46 m) wide. The opening is 29" (74 cm) deep and 35" (89 cm) wide, it has been squared off, and a small pit has been dug in the center. As at Feature 2, a large jumble of rocks is scattered on the north side and is presumed to have tumbled down from the top of the fireplace. The thickness of the wall varies from 24" (61 cm) to 32" (81 cm), and the back is curved.

North of the fireplace is a major drainage ditch which runs southwesterly down the ridge; and to the east, a small drainage ditch runs to the south. A concentration of glass bottle fragments three feet (92 cm) diameter lay on the surface in front of the fireplace and on the edge of this latter ditch. This was labelled Collection A, and, as scraping of duff extended five feet (1.52 m) across and ten feet (3.05 m) up and down the ditch, considerably more bottle fragments were recovered. Only glass fragments were found at Feature 4 except for two whole cans which are believed to be relatively recent based on the almost complete deterioration of most cans found in association with the bottle scatters.

Plan view Feature 4 fireplace
1" = 25"



Orientation N45°E

FIGURE 3.9 Feature 4

FEATURE 5

Feature 5 is located 56 feet (17.08 m) southwest of Feature 4 on the same ridge. Like Feature 1, it is a rock fireplace and pit with the associated scatter of artifacts. Test excavations were also conducted here.

The fireplace faces South 19° West. It measures 45" (1.14 m) high and 112" (2.84 m) wide, and the fire opening is 45" (1.14 m) wide and 38" (97 cm) deep. The back of the wall is angled at the corners, and the wall varies in thickness from 26" (66 cm) to 40" (1.02 m).

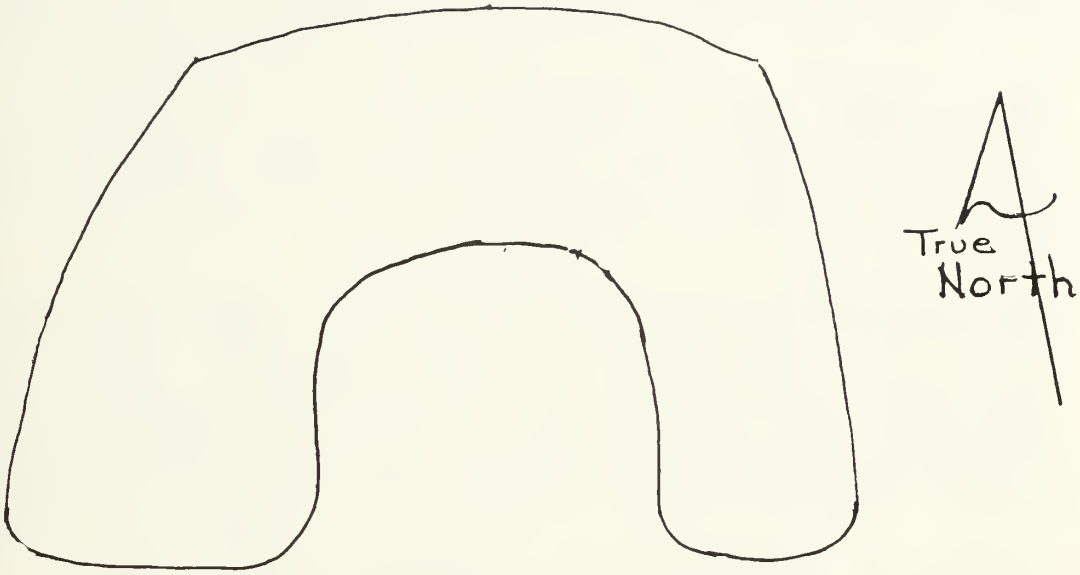
From the front of the fireplace the ground is level for approximately two feet (61 cm), then it drops into a pit which measures 8' by 10' (2.44 by 3.05 m) on the surface and is four feet (1.22 m) deep. Another pit is located 45 feet (13.73 m) South 12° West of the fireplace pit and measures ten feet diameter and five feet deep (3.05 by 1.53 m). Use of the metal detector and raking of duff at this latter pit uncovered no artifacts, while similar work at the fireplace pit revealed a few artifacts.

More artifacts were collected from Feature 5 than from any of the other feature areas, but this area was considerably larger. Three concentrations of glass artifacts were collected in the large open area in front of the fireplace. Collection A measured ten feet (3.05 m) diameter and lay southeast of the fireplace; Collection B was a linear concentration six feet by fifteen feet (1.83 x 4.58 m) and below A; and Collection C was a fifteen foot (4.58 m) diameter area some twenty feet (6.10 m) west of the second pit. The bottle fragments again include a wide variety. Metal artifacts and ironstone were all given a general provenience as they were scattered over the entire area and within the glass concentrations. Similar items were found in different glass scatters, and not all pieces were collected; e.g., only one of three bedsprings was returned to the laboratory.

Trench 1 (2' x 10') was laid out to the southeast of the fireplace running into the pit at an orientation of South 65° West. The soil was generally soft and screened easily, but there were numerous medium to large cobbles almost covering the trench area. Many of these are presumed to be from the collapsed fireplace. A hard surface, covered partly with smashed cans, was encountered at about 9" (22.9 cm) depth at the base of the pit. This was hypothesized to be the cellar floor and was excavated in toward the back of the pit (Figure 3.11).

Plan view Feature 5 fireplace

1" = 25"



Orientation N25°W

FIGURE 3.10: Feature 5

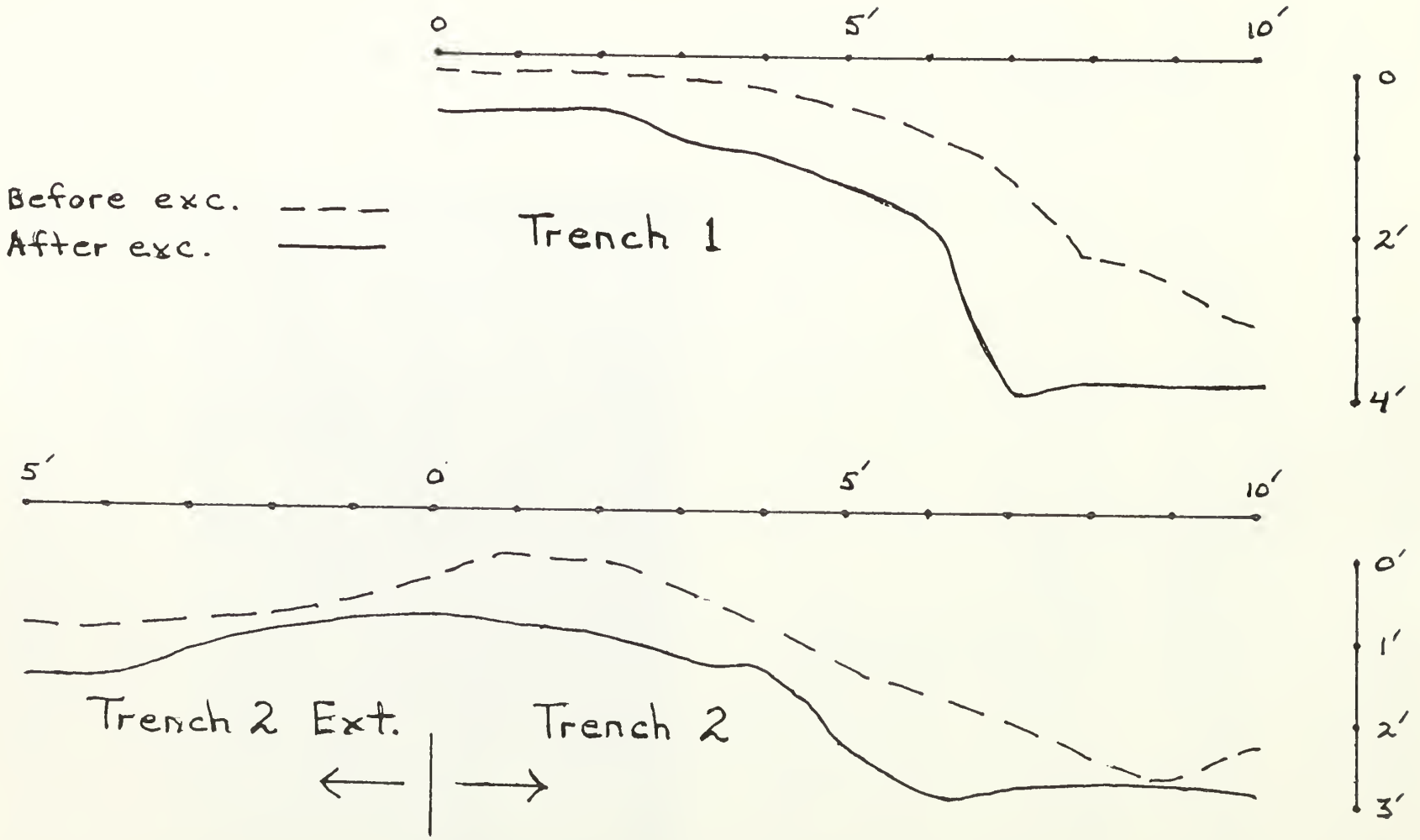


FIGURE 3.11: Feature 5 Trench Profiles

Chunks of charcoal were recovered in the trench, and the soil was ashy and oxidized, especially toward the northeast end. Kelly Williams, BLM Forester, identified the burnt wood fragments as pine and probably cedar.

Abundant nails and a collection of small washers were recovered toward the center of the pit, and fragments of window pane glass were found on the upper edge. In the ashy area, melted glass fragments were found indicating an intense heat.

In an attempt to learn more about the structure, a second ten-foot trench was laid out at a right angle to the base of Trench 1 extending North 25° West toward the fireplace. Similar artifacts were found including a dense ashy layer at the edge of the pit. Trench 2 was then extended an additional five feet on the surface to include more of the burned deposit, and numerous melted glass and burned ceramic fragments were found.

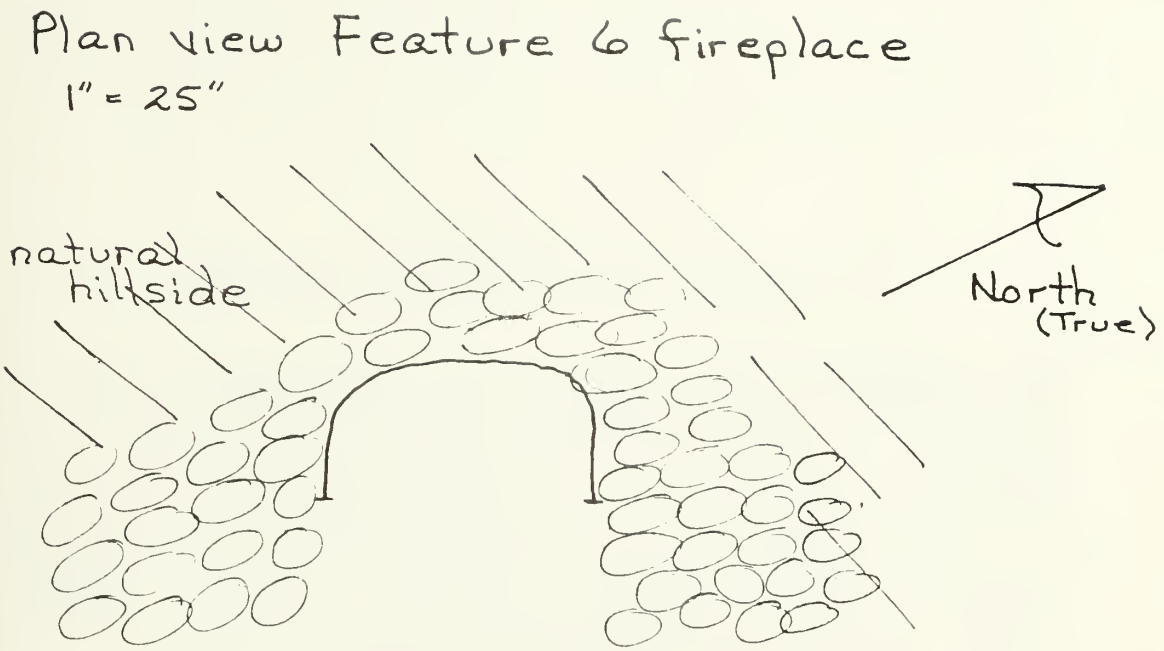
The ash deposit around the edge of the pit indicates a fire which burned the wood flooring which served as a roof for the cellar and a floor for the cabin. The lack of more wood fragments in the area may be due to the scarcity of building materials; boards were salvaged and moved to the new mining area.

FIGURE 3.12: Excavating Trench 1
Orientation N19°E

FEATURE 6

Feature 6 is located across a drainage to the west of Features 4 and 5 at the headwaters of one drainage and the mouth of the drainage running from the north above the latter two features. This rock fireplace is built into the hillside on a small bench above and facing South 64° East into the drainage. The natural terrain provides part of the back wall, and no precise width measurement can be determined. The fireplace opening is 35" (89 cm) wide, 20" (51 cm) deep, and 20" (51 cm) high at the back. Three-foot (92 cm) wide rock walls are lined up on both sides of the fireplace for some five feet (1.53 m).

Similar artifacts were recovered here as at the other features: glass bottle fragments, a can, a Dutch oven lid, and two mining rakes. Some small pits, identified as made by bottle hunters, were noted in the area.



Orientation N50°W

FIGURE 3.13: Feature 6

CHAPTER 4
ARTIFACT DESCRIPTION AND ANALYSIS

The following discussion of artifacts is based on the format used for the report of archaeological excavations at Harrison Diggin's, an historical mining complex in the northern Sierra Nevada dating to the 1850s (Jensen 1980). Jensen modeled his classification system from the work of the noted historical archaeologist Stanley South who developed an increasingly generalized Type-Class-Group artifact classification (Jensen 1980:22). Groups are defined primarily on the basis of functional activities related to one another within a behavioral context; and the Classes are based on form as well as function. In this study, a total of six Groups have been produced by combining 22 separate Classes. An exception is Group VII which represents miscellaneous classes. Some of the Classes are further broken down into Types on the basis of discrete attribute variations.

One might question the applicability of some of the Classes within their assigned Groups; e.g., medicine bottles do not seem to "fit" in the Kitchen Group. Jensen (1980:23) paraphrases South's reasoning behind the Group/Class system:

> The question of whether a particular association makes sense is to miss the point and cloud the primary objective of the classification. Classifications are produced for the purpose of solving particular problems of interest to the researcher, and South created the level of Group to study "generalized behavioral activities and broad cultural processes." At this level there is no necessary contradiction in the pairings noted, since other independent data document a clear association of the behavioral activities identified with the Classes which have been linked at the Group level.

A total of 295 catalog numbers were assigned for this project. Many individual items were grouped together by material, and the catalog numbers represent 3,130 individual items and/or fragments. Glass bottle fragments are emphasized in this study for dating purposes, and they represent the majority of artifacts. Table 4.1 shows the relationship

between glass artifacts and artifacts of other materials. Table 4.2 lists glass bottle fragments by Class, and Table 4.3 lists by Group and Class all artifacts other than glass bottle fragments.

TABLE 4.1: ARTIFACT DISTRIBUTION BY MATERIAL

Material	Cat.#s	% of Total	# pcs.	% of Total
Surface Glass	130	43.8	1590	46.6
Subsurface Glass	5	1.7	335	9.8
Surface Metal	58	19.5	461	13.5
Subsurface Metal	62	20.1	839	24.6
Surface Ceramic	29	9.8	102	3.0
Subsurface Ceramic	3	1.0	50	1.5
Surface/Other Materials	6	2.0	14	1.1
Subsurface Other	4	1.3	22	

TABLE 4.2: GLASSWARE FROM CA-SHA-1450 BY CLASS

(All measurements in feet)

Cat # 190-	PROVNC	OBJECT	#PCS	COLOR	EMBOSSING	CONTENTS	BASE SHAPE	DIAM or LENGTH	WIDTH	HEIGHT	REMARKS
1. DISHES											
3 - 8	Gen	dish	1	clear		salt dish	oval	0.16+	0.19	0.14	
5 - 90	pit	scalloped edge	1	purple							
2. BEER BOTTLES											
1 - 24	A	neck	1	aqua		beer				0.3	glob top
1 - 31	B	frags	5	amber		beer?					
3 - 15	Gen	base(3)	3	brown	BEER,W&CCo M1LW	beer	round	0.25			
3 - 16	Gen	frags	6	brown		beer					
5 - 63	B	frags	34	brown		beer					
5 - 82	C	base frag	1	brown		beer	round	0.23			
3. WINE & CHAMPAGNE BOTTLES											
1 - 21	Gen	neck/frags	7	grn drk		wine				0.3	
1 - 22	A	frag	1	grn drk		wine					
1 - 32	B	base(2)/frags	13	grn drk		wine	round				heavy glass
2 - 11	Gen	neck	1	grn drk		wine				0.35	glob top
3 - 9	Gen	neck/frags	3	straw/grn		wine				0.28	glob top
3 - 13	Gen	base (2)	2	green		champagne	round	0.25/0.3			large kick-ups
3 - 14	Gen	necks(4)/frags	7	green		wines?				0.27/0.25	glob top
5 - 47	A	bases	2	grn drk		wine	round	0.23			
5 - 52	A	neck/frags	17	green		wine					
5 - 62	B	base1/neck2	5	brown		wine	round	0.23			2 bottles
5 - 69 A	B	base5/neck2	23	grn drk		wine	round	0.3/0.25			1 w/o kickup
5 - 69 B	B	frags	66	grn drk		wine					
6 - 3	Gen	frags	4	grn drk		wine					
4. SODA & MINERAL WATER BOTTLES											
3 - 6	Gen	frag	1	blue	WATE_	soda					
5 - 54	A	necks3,bases2	6	aqua	soda? & medicine		square	0.21			
5 - 59	A	thick frags	14	aqua		soda?					
5. FOOD BOTTLES											
1 - 20	Gen	neck/frags	4	aqua		food				0.24	large
1 - 33	B	frags	4	purple		food					
3 - 10	Gen	base	1	aqua	B C Co	vinegar?	round	0.26			BurlingtonGlass
3 - 20	Gen	lip (3)	3	aqua		food/medcn					1 wide mouth
3 - 21	Gen	frags	13	aqua		food					some large diam.
5 - 46	A	frags	7	aqua drk		dry spice					angular
5 - 70	B	frag	1	aqua	_AS_, cross	fruit					canning jar
5 - 88	pit	neck edge	1	aqua		food					wide mouth
5 - 91	pit	neck	1	purple		mustard					
6. BITTERS BOTTLES											
2 - 12	Gen	neck	1	grn drk		bitters				0.13	glob top

TABLE 4.2: GLASSWARE FROM CA-SHA-1450 BY CLASS

(All measurements in feet)

Cat # 190-		PROVNC	OBJECT	#PCS	COLOR	EMBOSSING	CONTENTS	BASE SHAPE	DIAM or LENGTH	WIDTH	HEIGHT	REMARKS
2 - 13		Gen	base/neck/frags	5	brn drk	HOSTETTERS	bitters	square	0.24	0.24	0.12	glob top
2 - 15		A	base/neck/frags	37	amber	HOSTETTERS	bitters	square	0.23			
3 - 12		Gen	base (3)	8	grn drk	HOSTETTERS	bitters	square	0.24			
3 - 18		Gen	shoulder	1	amber		bitters					
4 - 5		A	neck/frags	10	amber	HOSTETTERS	bitters					
5 - 57		A	bottle	20	amber	HOSTETTERS	bitters					
5 - 61		B	frags	6	brown	HOSTETTERS	bitters					
6 - 4		Gen	frag	1	amber		bitters					
7. MEDICINE BOTTLES												
1 - 17		Gen	side	1	aqua lt	_TAR'S						WISTAR'S BALSAM
1 - 18		Gen	body	1	purple	W.S. _RELL CO	pills	square	0.08		0.16+	
1 - 19		Gen	side	1	aqua							
1 - 23		A	neck/frags	4	brown							glob top
1 - 26		A	frags,emboss	3	aqua	_HEM,_AN&CO						
1 - 28		B	bottle	1	aqua lt		pills	round	0.09		0.22	
1 - 29		B	neck/frags	4	clear						0.09	
1 - 30		B	base	1	aqua			rctngle	0.18	0.08		
2 - 10		Gen	frag	1	clear	_S_						
3 - 7		Gen	base/frags	3	purple	_Co, _E		round	0.15			
3 - 19		Gen	base/side	4	aqua			rctngl(8)	0.2	0.13	.36+	
3 - 20		Gen	lip (3)	3	aqua							
3 - 34		A	base	1	clear			round	0.18			
3 - 36		A	base/frags	4	amber			oval	0.24+	0.1+		
3 - 37		A	frags	3	aqua							
4 - 2		A	base/side	5	aqua drk	RUMFORD CHEM WORKS		square	0.15+			
4 - 4		A	neck/frags	7	purple						0.11	
4 - 6		A	body frags	8	amber	Warners Safe		oval				
4 - 7		A	side	2	aqua	AYER'S						
4 - 10	A	A	base (8)	8	aqua	DR JAYNES		oval	0.24	0.14		
4 - 10	B	A	neck/asst frags	22	aqua	DR JAYNES						
4 - 11	A	A	base/side (4)	5	aqua	DR KENNEDY		rctngle	0.27	0.17		
4 - 11	B	A	frags	8	aqua	DR KENNEDY						
4 - 12		A	sides	8	aqua	CUTICURA		square				
4 - 13		A	base (3)	20	grn lt	DR PIERCE		rctngle	0.26	0.14		
4 - 14		A	body/base	10	aqua	DR PIERCE						
4 - 15		A	neck, asst(8)	8	aqua							
4 - 16		A	base (2)	2	aqua			rctngle	0.23+	0.15		
4 - 17		A	frags, asst	72	aqua							
4 - 18		A	frags	10	grn lt							
5 - 42		A	bottles(3)	12	aq/lt grn	US MED CO NY		rctngle	0.18	0.1	0.5	
5 - 44		A	frags	11	grn lt	H.H._, M						horse medicine
5 - 45		A	frag	1	aqua	NEW / HEART						
5 - 48		A	base/neck	2	purple			oval	0.21	0.13		
5 - 49		A	bases/necks	4	purple			rctngle	0.15	0.07		tall neck

TABLE 4.2: GLASSWARE FROM CA-SHA-1450 BY CLASS

Cat # 190-		PROVNC	OBJECT	#PCS	COLOR	EMBOSSING	CONTENTS	BASE SHAPE	(All measurements in feet) DIAM or LENGTH	WIDTH	HEIGHT	REMARKS
5 - 53		A	base/frags	30	amber			round				
5 - 54		A	necks3,bases2	6	aqua			square	0.21			
5 - 60		B	frags	4	brown	Warners Safe						
5 - 64		B	side frags	3	purple	CALIF F16 SYRUP		rctngle				
5 - 65		B	base/frags	9	purple	SALT RHEUM		round	0.17			
5 - 66		B	side frags	3	purple	PAT MAY 18_8,DF&D						
5 - 67		B	necks2,base1	18	purple							assorted
5 - 71		B	frags	6	aqua	CUTICURA						
5 - 73		B	base/side	8	aqua	DR PIERCE		oval	0.23	0.14		
5 - 74		B	frags	7	aqua	DR KENNEDYS						
5 - 75		B	base2/neck3	7	aqua			octagon	0.2			assorted
5 - 76		B	embossed	6	aqua	__'__'__						3 unknowns
5 - 77		B	asst frags	83	aqua							
5 - 78		C	base/frags	10	grn lt	DR PIERCE						
5 - 80		C	base5/neck2	7	aqua			rctngle	0.23/.25	0.15/.17		assorted
5 - 83		C	base	1	purple	SALT RHEUM		round	0.17			
5 - 84		C	base	2	purple	PAT MAR 14 18_2		round	0.2			
5 - 85		C	base3/neck2	10	purple			round/sq				
5 - 86		C	asst frags	103	purple							
5 - 89		pit	side	1	aqua	CUTICURA						
5 - 94		Gen	base	1	purple			square	0.12	0.12		
6 - 5		Gen	asst pcs	14	aqua							
8. SARSAPARILLA BOTTLES												
4 - 8		A	side	2	aqua grn	DR HENRY'S SARSA						
4 - 9	A	A	base (6)	6	aqua	HOODS		rctngle	0.25	0.15		
4 - 9	B	A	neck/body/frags	22	aqua	HOODS						
5 - 51		A	side frags	8	aqua	AYERS SARSA						
5 - 56	A	A	bottles (3)	5	aqua	HOODS						
5 - 56	B	A	frags	20	aqua	HOODS						
5 - 72		B	base/side	2	aqua	AYERS		rctngle				
5 - 79	A	C	base3/neck3	8	aqua	HOODS						
5 - 79	B	C	frags	26	aqua	HOODS						
5 - 92		pit	side	1	amber	_PARI_						Warner's?
9. UNIDENTIFIABLE FRAGMENTS												
1 - 25		A	asst frags	10	aqua							
1 - 16		Gen	frag	1	amber	_AL_, _RN_						
1 - 27		B	frag	1	clear							
2 - 14		Gen	frags	3	grn drk							
2 - 9		Gen	frag	1	purple							
3 - 35		A	frags	3	grn drk							
3 - 11		Gen	frags	2	clear							
3 - 22		Gen	frags	2	green							
3 - 17		Gen	frag	1	straw							

TABLE 4.2: GLASSWARE FROM CA-SHA-1450 BY CLASS

(All measurements in feet)

Cat # 190-	PROVNC	OBJECT	#PCS	COLOR	EMBOSSING	CONTENTS	BASE SHAPE	DIAM or LENGTH	WIDTH	HEIGHT	REMARKS
5 - 58	A	frags	137	aqua							
5 - 50	A	frags	52	clr/prpl							from -48,-49
5 - 87	pit	melted frags	7	aqua							
5 - 68	B	base	3	grn drk			round	0.26			very thick
5 -140	TR 2	frags	23	assrtd							all from Tr.Ext
5 -125	TR 1	asst frags	26	aqua							
5 - 43	A	flat frags	5	clear							
5 -139	TR 2	melted frags	230	assrtd							
5 -126	TR 1	melted frags	42	aqua/clr							
5 - 55	A	melted frags	2	aqua							
5 - 81 B	C	asst lrg frags	50	aqua							
5 - 81 A	C	asst sm frags	210	aqua							
6 - 8	Gen	asst frags	7	purple							
6 - 7	Gen	base	1	purple			oval	.25+	0.18		melted leather

TABLE 4.3: CA-SHA-1450 ARTIFACTS SORTED BY GROUP AND CLASS

Cat # 190-	PROVNC	MATERIAL	OBJECT	#PCS	DIAM or (All measurements in feet) LENGTH	WIDTH	HEIGHT	REMARKS
KITCHEN ARTIFACT GROUP								
A. GLASSWARE								
See Table 4.2								
B. CERAMICS								
1 - 14	Gen	ironstone	frag	1				white, burned
2 - 1	Gen	ironstone	frags	6				white,1w/name / 2 plates
3 - 24	Gen	ironstone	plate frags	2				white
3 - 25	Gen	ironstone	plate frags	2				white,thick
3 - 26	Gen	ironstone	plate frags	3				white
3 - 27	Gen	ironstone	plate frag	1				white,w/design
3 - 28	Gen	ironstone	asst frags	10				white
3 - 29	Gen	ironstone	cup or bowl	2				white
3 - 30	A	stoneware	frag	1				drk brown
3 - 38	A	ironstone	plate frags	2				white,w/writing
3 - 39	A	ironstone	large lid frag	1				white
3 - 40	A	ironstone	deep plate frag	2				white
3 - 41	A	ironstone	frags/4 plates	10				white
5 - 32	Gen	ironstone	frags	11				white,cup handle/plate frags
5 - 33	Gen	ironstone	plate frag	1				white
5 - 34	Gen	ironstone	plate frag	1				white
5 - 35	Gen	ironstone	plate frag	1				white
5 - 36	Gen	ironstone	plate frags	2	0.74			white
5 - 37	Gen	ironstone	bowl frag	1	0.26			white
5 - 38	Gen	ironstone	lid	1	0.25			
5 - 40	Gen	ironstone	cup frag	1				white
5 - 41	Gen	stoneware	jug frags	8				red w/brn
5 - 78	B	ironstone	frags	5				white
5 - 87	C	ironstone	cup & frags	22				w/writing
5 - 96	Gen	stoneware	frags	2				beige
5 -136	TR 2	ironstone	plate frags	27				burned
5 -137	TR 2	ironstone	cup & frags	21				white
C. TABLEWARE								
5 -165	TR 2	metal	fork tines	1				
D. METAL FOOD CONTAINERS								
1 - 33	B	metal	assortment	8				includes 0.52 lid, can 0.42x.38
3 - 2	Gen	metal	can frags	3	0.24			
3 - 3	Gen	metal	can frags	3				
3 - 33	A	metal	assortment	6				can lid & frags
5 - 4	Gen	metal	can	1	0.24	0.36		
5 - 5	Gen	metal	can	1	0.25	0.36		
5 - 8	Gen	metal	can	1	0.22	0.33		
5 - 10	Gen	metal	can	1	0.43	0.18		
5 - 11	Gen	metal	can	1	0.28	0.18		
5 - 12	Gen	metal	can	1	0.33	0.42		
5 - 82	pit	metal	can frag	1				
5 -114	TR 1	metal	frags	52				cans and pans

TABLE 4.3: CA-SHA-1450 ARTIFACTS SORTED BY GROUP AND CLASS

Cat # 190-	PROVNC	MATERIAL	OBJECT	#PCS	(All measurements in feet) DIAM or	LENGTH	WIDTH	HEIGHT	REMARKS
5 -127	TR 1	metal	can frags	40					from floor of Trnch
5 -144	TR 2	metal	can frags	70					
6 - 2	Gen	metal	can	1	0.2			0.25	
E. KITCHEN WARES									
2 - 5	Gen	iron	Dutch oven lid	1	1.24				curled up edge
2 - 7 A,B	Gen	iron	stove lid	2	0.69				
3 - 5	Gen	iron	coffee grinder	1	0.37			0.23	
3 - 42 A-C	Gen	metal	Dutch oven	3	0.97			0.42	w/legs
5 - 2 A,B	Gen	iron	Dutch oven	9				0.36	w/legs
5 - 31	Gen	metal	flat frags	30					pots & pans
5 -146	TR 2	metal	scroll piece	2					stove decoration?
6 - 10 A,B	Gen	metal	Dutch oven lid	2	0.94				
II. BONE GROUP									
5 -123	TR 1	bone	frags	2					
5 -142	TR 2	bone	frags	9					burned
III. PERSONAL GROUP									
A. TOBACCO									
5 - 1	Gen	metal	tobacco can&lid	2		0.25	0.07	0.35	
B. ARMS									
2 - 3	Gen	metal	gun cartridge	1					WRA 25-35
C. LUGGAGE									
1 - 11	Gen	metal	satchel brace	1			0.06		
D. TOILET ARTICLES									
3 - 23	Gen	ceramic	jar	2	0.29				white
5 - 39	Gen	ceramic	jar	1	0.24				white
5 -138	TR 2	ceramic	jar	2					white
E. WRITING MATERIALS									
5 -166	TR 2	metal	fountainpen tip	1					
6 - 6	Gen	glass	ink bottle frag	3					embossed design
F. COINS									
5 -167	TR 2	metal	Chinese coin	1					
IV. CLOTHING GROUP									
A. BUTTONS									
5 - 25	Gen	metal	button	1	0.06				
5 -116	TR 1	porcelain	buttons	8					1 shell
5 -117	TR 1	metal	buttons	3					
5 -141	TR 2	porcelain	buttons	3					
B. OTHER CLOTHING PARTS									
5 -115	TR 1	metal	hooks,rivets	7					some w/Levi
C. BOOTS									
1 - 15	Gen	leather	heel	1					
1 - 34	B	leather	sole frags	5					
2 - 2	Gen	leather	sole	1					w/nails

TABLE 4.3: CA-SHA-1450 ARTIFACTS SORTED BY GROUP AND CLASS

Cat # 190-	PROVNC	MATERIAL	OBJECT	#PCS	(All measurements in feet) DIAM or	LENGTH	WIDTH	HEIGHT	REMARKS
3 - 1	Gen	leather	soles2,pc	3					
3 - 31	A	leather	sole frags	3					
5 -115	TR 1	metal	hooks, rivets	1					includes 1 boot eye hook
D. FABRIC									
3 - 32	A	cloth	frag	1					black
ARCHITECTURAL GROUP									
A. SQUARE NAILS									
1 - 1	Trnch	metal	nail, sq	1		0.5			
1 - 2	Trnch	metal	nail, sq	8					16ds, common cut
1 - 3	Trnch	metal	nail, sq	14					9ds, common cut
1 - 4	Trnch	metal	nail, sq	5					5ds, common cut
1 - 5	Trnch	metal	nail, sq	33					misc.heads& shafts
1 - 7	Gen	metal	nail, sq	2					
3 - 33	A	metal	assortment	6					includes 1 nail
1 - 33	B	metal	assortment	8					includes 2 nails
5 - 80	pit	metal	nail, sq	5					
5 - 97	TR 1	metal	nail, sq	3					10ds,common cut
5 - 98	TR 1	metal	nail, sq	9					20-60d
5 - 99	TR 1	metal	nail, sq	26					6-16d, common cut
5 -100	TR 1	metal	nail, sq	20					12ds, common cut
5 -101	TR 1	metal	nail, sq	8					2ds, common cut
5 -102	TR 1	metal	nail, sq	16					4ds, common cut
5 -103	TR 1	metal	nail, sq	5					7ds, common cut
5 -104	TR 1	metal	nail, sq	6					6ds, common cut
5 -105	TR 1	metal	nail, sq	8					16ds, common cut
5 -106	TR 1	metal	nail, sq	11					9ds, common cut
5 -107	TR 1	metal	nail, sq	10					6ds, common cut
5 -108	TR 1	metal	nail, sq	155					misc nail frags
5 -135	TR 1	metal	nail, sq	1					large
5 -154	TR 2	metal	nails, sq	38					16ds, common cut
5 -155	TR 2	metal	nails, sq	26					12ds, common cut
5 -156	TR 2	metal	nails, sq	14					20ds, common cut
5 -157	TR 2	metal	nails, sq	6					8ds, common cut
5 -158	TR 2	metal	nails, sq	9					10ds, common cut
5 -159	TR 2	metal	nails, sq	2					6ds, common cut
5 -160	TR 2	metal	nails, sq	1					7d, common cut
5 -161	TR 2	metal	nails, sq	3					30ds, common cut
5 -162	TR 2	metal	nails, sq	135					misc frags
B. WINDOW GLASS									
4 - 3	A	glass	pane frags	3					lt. aqua
5 - 93	pit	glass	pane frags	37					
5 -124	TR 1	glass	pane frags	14					
C. CONSTRUCTION HARDWARE									
5 - 23	Gen	metal	hinge	1					large/hvy
5 - 24	Gen	metal	latch/lock	4		0.35	0.27		

TABLE 4.3: CA-SHA-1450 ARTIFACTS SORTED BY GROUP AND CLASS

Cat # 190-	PROVNC	MATERIAL	OBJECT	#PCS	(All measurements in feet) DIAM or	LENGTH	WIDTH	HEIGHT	REMARKS
5 -112	TR 1	iron	nuts	3					
5 -118	TR 1	metal	washers	24					
5 -128	TR 1	metal	screw	1					
5 -129	TR 1	metal	tacks	4					
5 -130	TR 1	metal	staples	2					
5 -132	TR 1	metal	oval washer	1					
5 -133	TR 1	metal	washer	1					
5 -143	TR 2	metal	washer?	1					
5 -145	TR 2	metal	screw	1					
5 -163	TR 2	metal	tack	1					
D. FURNISHINGS									
2 - 4	Gen	metal	lantern parts	6					
4 - 1	A	glass	lantern frags	11					chimney & reservoir
5 - 29	Gen	metal	bedsprings	2					
5 - 79	pit	metal	lantern part	1					
5 -111	TR 1	metal	lantern parts	2					
VI. MINING GROUP									
A. TOOLS									
1 - 13	Gen	metal	hoe	1		0.34	0.55		
5 - 15	Gen	metal	tool	1					
5 - 81	pit	iron	fork frag	1					same as 6-9
6 - 1	Gen	iron	fork frag	1		0.09	0.05	0.29	part of a 6-9
6 - 9	Gen	iron	mining fork	1		0.57	0.41		
B. PLACER MINING EQUIPMENT									
1 - 12	Gen	metal	seive frag	1		1.02	0.36		punched .03 holes
2 - 6	Gen	iron	spike	1		0.12	0.05	0.58	smashed
5 - 17	Gen	metal	2circles w/hole	1	0.43				
5 - 20	Gen	iron	flat frags	4			0.14		bushing sleeve fragments
5 - 21	Gen	metal	grate	1		0.38	0.24		sluice box riffles?
5 - 26	Gen	iron	round strap	1	0.31		0.14		bushing sleeve
5 - 28	Gen	metal	grate?	1		0.7	0.34		sluice box riffles
5 -110	TR 1	iron	frags	2					bushing lining
5 -148	TR 2	metal	disk	1	0.25				
5 -149	TR 2	metal	spike end	1					
5 - 22	Gen	lead	electrode	1					for Voltaic cell
C. ASSAY EQUIPMENT									
5 - 27	Gen	iron	pot	1	0.43			0.32	melting pot
5 -119	TR 1	lead	melted frags	3					
VII. MISCELLANEOUS GROUP									
A. IDENTIFIABLE OBJECTS									
1 - 10	Gen	metal	handle	1		0.68	0.1		w/2 rivets
2 - 8	Gen	metal	chain	1		0.83			
5 - 3	Gen	metal	paint can	1	0.42			0.46	
5 - 6	Gen	metal	RR spike	1				0.48	

TABLE 4.3: CA-SHA-1450 ARTIFACTS SORTED BY GROUP AND CLASS

Cat # 190-	PROVNC	MATERIAL	OBJECT	#PCS	(All measurements in feet) DIAM or	LENGTH	WIDTH	HEIGHT	REMARKS
5 - 7	Gen	metal	paint can lids	2	0.39				
5 - 9	Gen	metal	horseshoe	1					
5 - 14	Gen	metal	handle	2			0.1		w/rivets
B. ASSORTED UNIDENTIFIABLE FRAGMENTS									
1 - 6	Gen	metal	bent heavy wire	1					
1 - 8	Gen	metal	strips	2			0.09		
1 - 9	Gen	metal	round rim	1		0.46			
3 - 4	Gen	iron	bent rod	1		0.06	0.03	1.4	
5 - 13	Gen	metal	strips,asst	18					
5 - 16	Gen	metal	assortment	12					straps,nails,wires
5 - 18	Gen	iron	strip w/bend	1		0.32	0.09		w/rivets
5 - 19	Gen	metal	bar w/notch	1		0.52			
5 - 31	Gen	iron	strap w/holes	1		1.12	0.18		
5 - 95	Gen	metal	bracket?	1					
5 -109	TR 1	metal	asst frags	7					handle, can,
5 -113	TR 1	metal	rod frags	7					
5 -120	TR 1	tin?	thin frags	4					
5 -121	TR 1	metal	?	1					
5 -122	TR 1	?	?	1					
5 -131	TR 1	metal	small cylinder	1					
5 -134	TR 1	?	frags	3					
5 -147	TR 2	metal	large frags	2					
5 -150	TR 2	metal	brads	4					
5 -151	TR 2	metal	oval ring	1		0.22	0.1		
5 -152	TR 2	metal	diag. pc	1					
5 -153	TR 2	metal	frags	3					
5 -164	TR 2	metal	frags	3					

I. KITCHEN ARTIFACT GROUP

A. GLASSWARE. All glass is grouped here with the exception of an ink bottle, some fragments of window pane glass, and some fragments of a kerosene lantern reservoir. These pieces represent only 3% of the total glass. Some of the unidentified glass fragments, of course, may not actually belong in this Group, but that is not considered relevant in this analysis.

Table 4.2 describes the glass asssemblage. Color, measurements, size, shape, embossing, and some limited remarks provide data for analysis. The discussion here will deal with a general breakdown of the bottles by their contents and analysis of the most commonly found embossed fragments. Determining the dates of the site occupation is one of the primary research questions, and a study of the embossing on bottles generally provides tighter dates than an analysis of bottles based on how they were made. There was significant duplication among the features of some of the recognizable embossed bottles, and these samples were selected for study as being the most accurate time markers.

Table 4.4 shows a breakdown of the various types of bottles by content as they appeared at each feature. The number of bottles is estimated based on the number of bases, necks, and embossed fragments. Many unembossed fragments were not identifiable, but many have been classified by type based on their size, thickness, and color match with known fragments.

TABLE 4.4: BOTTLE TYPES BY FEATURE

Fea.	Beer	Wine	Soda	Food	Bitters	Medicine	Sarsaparilla
1	1	3	---	2	---	8	---
2	---	1	---	---	3	1	---
3	3	7	1	2	2	7	---
4	---	---	2	---	1	31	7
5	1	8	---	4	2	38	9
6	---	1	---	---	1	1	---
Total	5	20	3	8	9	86	16

1. Dishes. Item 190-3-8 is a fragment of a small, footed, pressed glass dish 1 1/2" (3.8 cm) high, 2 1/2" (6.4 cm) wide, and at least 4" (10.2 cm) long. A local antique dealer tentatively identified it as a "master salt," and this was confirmed in photographs of salt dishes of similar size and pattern in McKearn's publication American Glass (1941: 369).

At Feature 5, a small purple fragment was found with a scalloped edge similar to that seen on candy and sauce dishes.

2. Beer Bottles. Fragments of only three beer bottles were readily recognizable in the collection, all from Feature 3, the hillside scatter not associated with any fireplace. "Beer bottle brown" fragments were noted at some of the other features, but they can not be absolutely identified as beer bottles. This brown color was also used for some whiskeys, but the absence of any embossed whiskey fragments and the relatively small number of fragments from beer- or whiskey-size bottles would indicate that liquor was not popularly consumed. In fact, although the embossed beer bottle bases and embossed fragments at Feature 3 appear old, the proximity of this feature to the powerline and road, and the lack of embossed liquor bottles at any of the other features may mean these were deposited at a somewhat later date than the rest of the collection.

3. Wine and Champagne Bottles. Fragments of an estimated twenty wine or champagne bottles were found scattered among all feature areas except Feature 4. Several of the bases had deep kick-ups. No embossing was present.

Several of the necks were finished with the "glob top," an early crude bottle finish dating to the mid-1800s; and several fragments were very dark green, more commonly called "black," glass. This color was commonly used in bottle manufacturing from 1840 to 1860 (Rock 1981:17). Black glass bottles are found in sites dating to the turn of the century, however, because they were refilled and sold again. Jeanette Schulz (personal communication 1985) explained that in the mid- to late 1800s there was a shortage of bottle glass, and advertisements can be found during this period when bottlers were offering to buy empty bottles for re-use.

4. Soda and Mineral Water Bottles. Only one sample (190-3-6) is clearly a mineral water bottle because of the partial embossing. The brand could not be identified.

5. Food Bottles. Unembossed teal blue glass fragments (190-5-46) with a unique concave front panel were identified as being from a ground dry spice bottle. They match a sample

at the State Parks Archeology Laboratory in Sacramento which is embossed H. C. Hudson & Co. This company bottled spices from 1861 to 1892 (Zumwalt 1980:252).

A fragment of a canning jar (190-5-70) shows a portion of the Hero Fruit Jar Company cross over the word MASON'S. The spokes of the cross are lettered with the initials of the company which date the jar as being manufactured no earlier than 1884 (Toulouse 1969:149).

An aqua bottle base (190-3-10) is embossed BGCo which stands for Burlington Glass Company. This basal mark was produced from 1877 to 1909 (Toulouse 1972:85), and the bottle probably contained something like vinegar.

The neck of one purple fragment (190-5-90) is identified as being from a mustard barrel. Other wide-mouthed aqua lips and large diameter fragments are probably indicative of contents such as pickles or brandied fruits.

6. Bitters Bottles. Fragments of bottles containing Hostetter's Stomach Bitters were the most common individual type found among the features at CA-SHA-1450; ten separate bottles have been identified scattered in all the feature areas except Feature 1.

> Bitters is a high alcohol content beverage flavored with herbs that was sold as a medicine. In the United States, the popularity of bitters as a drink was increased by the enactment of the Revenue Tax Act of 1862 which placed a higher tax on alcoholic beverages than on medicines. . . . Although inordinate and ridiculous claims were made by the bitters manufacturers, many people did believe that they were drinking medicines. The United States government bought Hostetter's bitters for the Union troops during the Civil War, and at that time Hostetter's bitters were 94 proof (Stewart and Cosentino 1976:35).

Hostetter first began embossing his bottles in 1858, and he formed a partnership to market his product in the United States in 1863 (Schulz et al. 1980:59). Of the ten Hostetter's bottles identified from this site, six are amber and four are very dark green or black glass. Jensen's report (1980:30) dates the Hostetter's bottles in his collection to 1861 for the black and 1869 for the amber; but, based on the information mentioned above for black glass wine bottles and the fact that the Hostetter company bottled medicines until 1935, these samples may date much later than the 1860s.

7. Medicine Bottles. As shown in Table 4.4, the majority of identifiable bottles are in this Type. Based on the ratio of medicine bottles to liquor bottles and knowing the tendency of single miners to imbibe, one must assume that, like the bitters discussed above, most of the medicines were consumed for their alcoholic content rather than for their curative powers, especially following the Revenue Tax Act of 1862. As the following testimonial for Warner's Safe Cure indicates, large amounts of these medicines were consumed (Wilson and Wilson 1971:95).

> Orange C.H., Va. March 5, 1869 -- Last August I was run over by a railroad truck and paralyzed in my legs, bladder and the lower part of my bowels. . . . I was so bad off that the doctors thought I was bound to die and I thought so too. I was nothing but skin and bone and it seemed to me I suffered more than any mortal ever did before. In this condition my friends brought me a bottle of "Warner's Safe Cure" and I took it and received so much benefit that I got more. I used 14 bottles of "Safe Cure" and 8 bottles of "Safe Pills," and as a result my bladder and kidneys and back are all right. It saved my life and I shall ever be grateful.

Two samples of WARNER'S SAFE CURE were found. Hubert Harrington Warner changed careers from the manufacture of safes to bottling patent medicines after securing a formula from a "doctor" who had cured a serious illness of his (Wilson and Wilson 1971:144). The name WARNER'S SAFE CURE was registered in 1879 (Stewart and Cosentino 1976:88). Although the two bottles of this type in this collection have slightly differing designs, these can not serve to provide specific dates. In Baldwin's research (1973:507), he examined eight random samples of these bottles and found that the safe design and the embossing were different on every one.

The most numerous patent medicine bottle in the collection is DR. D. JAYNE'S ALTERATIVE, 84 CHEST ST. PHILA., although all eight of the bottles were recovered from Feature 4 and were obviously a favorite of that occupant. The earliest advertisement for the product was noted in 1851 (Baldwin 1973:271), and Wilson and Wilson (1971:46) date the bottle to circa 1854. The company operated until 1911 (Young 1961:138), however, and these samples could date anywhere in the late 1800s or later.

Perhaps the most enjoyable part of the medicine bottle research was reading the advertisements included with some of the drawings and descriptions of the bottles. The following

for Dr. Jayne's Alterative is perhaps the most comprehensive cure-all (Wilson and Wilson 1971:46).

> This valuable preparation combines all the medicinal virtues of those articles of which long experience has proved to possess the most safe and efficient alterative and deobstruent properties for the cure of Scrofula, King's Evil, White Swellings, Ulcers, Scrofulous, Cancerous and Indolent Tumors, Mercurial Affections, Goitre or Bronchoesie (swelled neck), Enlargement and Ulcerations of the Bones, Joints, Glands, or Ligaments, or of the Liver, Spleen, Kidneys, etc., all the various diseases of Skin, such as Tetter, or Salt Rheum, Ringworms, Boils, Pimples, Carbuncles, Sore Eyes, etc., Dyspepsia, and Liver Complaint, Nervous Affections, Epileptic Fits, Chorea, or St. Vitus Dance, Dropsy, and Dropsical Swellings, Constitutional Disorders, and diseases originating from a Depraved and Imperfect State of the Blood or other fluids of the body: all diseases of a mixed or complicated character and those arising from an abnormal or unnatural discharge of, or a cessation of, the usual secretions.

The next most common patent medicine bottles found were five each of DR. PIERCE'S GOLDEN MEDICAL DISCOVERY and DR. KENNEDY'S MEDICAL DISCOVERY at Features 4 and 5. In Buffalo, New York, Ray Vaughn Pierce, M.D. opened his "World's Dispensary" in the early 1870s. Baldwin's earliest recorded advertisement for the Golden Medical Discovery is 1872 (1973:387), and Wilson and Wilson (1971:70) date the bottle circa 1882 to 1895.

DR. KENNEDY'S MEDICAL DISCOVERY, ROXBURY MASS. was "always the best seller" for Donald Kennedy. He began preparing and bottling his medicines about 1848, and by the mid-1850s they were widely distributed. In 1874, his son George "opened a central distributing depot in Boston, and by the turn of the century, it was one of the busiest in the United States" (Berge 1980:97).

Another Kennedy product found at Feature 5 was two samples of KENNEDY'S SALT RHEUM OINTMENT. These were also noted as being widely distributed by the mid-1850s (Wilson and Wilson 1971:123).

In the process of researching the most common patent medicine bottles, a few others were identified. H.H.H.HORSE MEDICINE / DDT 1868 is Donald Dodge Tomlinson's Celebrated Indian Vegetable Pain Extractor for Horses which was patented

in 1868 and produced until 1898 (Wilson and Wilson 1971:119). This remedy was suitable for both men and beast.

WISTARS BALSAM OF WILD CHERRY is dated circa 1880 (Wilson and Wilson 1897:99). The company was bottling medicines by 1845, but production was sporadic for several years because of financial problems which were not resolved until the 1860s.

The front and back of another bottle is embossed THE CUTICURA SYSTEM OF CURING CONSTITUTIONAL HUMORS, and the sides read POTTER DRUG & CHEMICAL CO. BOSTON MASS. U.S.A. The earliest advertisement noted for this product is 1879 (Baldwin 1973:140), and Wilson and Wilson (1971:30) date the bottle circa 1887.

Two probable medicine bottle fragments were recovered with embossed patent dates (190-5-66 and 190-5-84). Unfortunately, on both samples the third digit of the year is chipped and illegible (18__ and 18_2), but the base of the number appears to have been rounded such as in a 6 or an 8.

8. Sarsaparilla Bottles. Four different brands of sarsaparilla bottles were recovered from the field. Wilson and Wilson (1971) include them in their reference book on patent medicines, but Baldwin (1973) does not. The main ingredient is sarsaparilla, a root from the "tropics," and other ingredients include dock, stillingia, mandrake, and iodine (Wilson and Wilson 1971:191).

Twelve of the sixteen sarsaparilla bottles were identified from the embossing as being HOOD'S SARSAPARILLA, C.I. HOOD APOTHECARIES, LOWELL MASS. Hood took ownership of the company in 1876 and began filling these rectangular aqua bottles with his concoction. "By the turn of the century, it is likely his Sarsaparilla was nearly on a par with J. C. Ayers for sales volume" (Wilson and Wilson 1971:120).

James Cook Ayers also had his company in Lowell, Massachusetts. His sarsaparilla was first bottled in 1857 and was popular through the turn of the century. As one testimonial in an advertisement states, "By the blessing of God, it (Ayer's Sarsaparilla) has cured me. I feel young again. The best that can be said of Ayer's Sarsaparilla is not half good enough" (Wilson and Wilson 1971:105). This product was advertised in a March 1880 issue of the Redding newspaper. Two samples of this bottle were recovered.

Fragments of a DR. HENRY'S SARSAPARILLA were recovered, but dating information on this product was not readily available. The other embossed sarsaparilla fragment is tentatively

identified by its shape and color (six-sided amber) as WARNER'S LOG CABIN SARSAPARILLA. Warner patented his Log Cabin line of products in 1887 (Wilson and Wilson 1971:96).

Table 4.3 summarizes the glass artifacts for which dates were researched. The firm early dates based on a patent or specific style change are marked with an asterisk (*). Other beginning production dates are based on known advertisements or unreferenced statements of when a particular company began. Unless otherwise indicated, all companies produced the product into the first decade of the twentieth century.

TABLE 4.5: TIME SENSITIVE GLASS FRAGMENTS

Product	1840	1850	1860	1870	1880	1890	1900
Foods							
Hero Fruit Jar					*84	----------	
Hudson spice			*61	----------	----------	92	
Burlington Glass					*77	----------	
Hostetter's Bitters			58	----------	----------	----------	
Patent Medicines							
Cuticura					79	----------	
Dr. Jaynes		51	----------	----------	----------	----------	
Dr. Kennedy		48	----------	----------	----------	----------	
Dr. Pierce				72	----------	----------	
HHH Horse				*68	----------	----------	98
Warner's Safe Cure					*79	----------	
Wistar's Balsam	45	----------	----------	----------	----------	----------	
Sarsaparilla							
Ayer's			57	----------	----------	----------	
Hood's					76	----------	
Warner's Log Cabin						*87	--------

B. CERAMICS. No dish fragments were noted at Features 4 and 6, and the majority were recovered from Features 3 and 5. All fragments were various forms of glazed white ironstone except for the following: (1) 190-3-30 is a small, thin, dark brown glazed fragment; (2) 190-5-96 is two small, unglazed beige fragments; and (3) 190-5-41 is several thick red stoneware fragments with brown glaze which are part of a large flat bottomed bowl estimated to be 5 1/4" (13.3 cm) diameter at the mouth.

The ironstone is generally very fragmented but shows a wide variety of thickness and quality. Most pieces are plain, but some show forms of a raised scalloped or ribbed border pattern. Various sizes and shapes of plates, saucers, and cups were noted; an estimate is made of four cups, two saucers, three plates, and a small deep bowl (190-5-37) from Feature 5, and of three saucers or plates and one cup at Feature 3. At Feature 3, there were also two platters and a portion of a lid for a large serving dish (190-3-39).

Impressed or printed trademarks were found on six of the ironstone fragments. Two (190-5-87 and 190-3-40) are too fragmentary or illegible to be identified. The others all match marks researched from historic sites in Sacramento (Praetzellis et al. 1983). 190-3-38 matches Mark 40 (p 14), an impressed circular design of "T.& R. Boote & Co. Sydenham Shape" around a Registry Diamond, patented in July 1854. 190-5-33 matches Mark 39 (p 14), an impressed circular design of "T.& R. Boote" and "Union Shape" around a Registry Diamond, patented in August 1856. 190-2-1 matches Mark 104 (p 133), a printed Victorian Royal Arms crest (seated) above "Stone China" above "James Edwards & Son" above "Dalehall," which dates from 1852 to 1882. 190-5-36 matches Mark 184 (p 57), a printed "Ironstone China" above the Victorian Royal Arms crest (standing) above "J.& G. Meakin" above "Hanley" above "England." The J. & G. Meakin company dates from 1851 to 1891, and this latter fragment was found in Canada in a trash pit known to have been deposited between 1875 and 1883. All of the above English marks date from 1850 and probably did not come into common usage in America until the 1860s.

C. TABLEWARE. A small fragment of a table fork was recovered during the excavation of Trench 2, Feature 5. It is almost unrecognizable, and one can only assume that other tableware at the site has completely disintegrated.

D. METAL FOOD CONTAINERS. Table 4.3 lists cans and can fragments by feature provenience, number, size, and type. The majority of individual items in this category are can fragments, 162 being very small pieces recovered during trench excavations at Feature 5, and some of which are somewhat

heavier metal and are probably from pots and pans. Eleven diagnostic cans or can fragments were recovered, three of which have crimped seams. Three cans are identified as being solder top evaporated milk cans, and specimen 190-6-2 is probably a small baking powder tin.

Dating information provided by the cans is very general. Solder seams date from 1850 to the early 1900s (Rock 1980:2); and double seamed sanitary cans became practical to manufacture in the United States between 1894 and 1903 (Rock 1980:7). No firm dates of site occupation can be based on this small sample. The sanitary seam cans may have been deposited at a later date.

The relative small size of the cans indicates that probably only one or two individuals lived at each structure. No cans were recovered from Features 2 and 4, but their close proximity to Features 1 and 5 respectively indicates that perhaps the occupants of each two structures ate together.

The limited number of cans in proportion to glass is surprising, but rather than assuming that few canned goods were eaten, it is more likely to hypothesize that the cans have decomposed and/or, being lighter in weight than the glass, have been washed down the hillsides and drainages.

E. KITCHEN WARES. The top of the coffee grinder is illustrated in Figure 4.1.

Two possible iron stove parts were recovered: a stove burner lid 8 1/4" (13.3 cm) diameter, and a decorative scroll piece. Stove parts are generally common artifacts found at historic sites, and the lack of any more here indicates that (1) the stoves were well cared for and were removed from the site when it was abandoned; (2) other stove parts have been collected from the site over the past 100 years; or (3) cast iron stoves were not used by the miners, the scroll piece comes from something else, and the burner lid was used for another purpose.

Three different sizes of cast iron Dutch ovens are identified from the two pots with feet and the two lids with curled up edges to hold coals for baking. Assorted metal handles and fragments scattered in the feature areas probably represent other pots and pans.

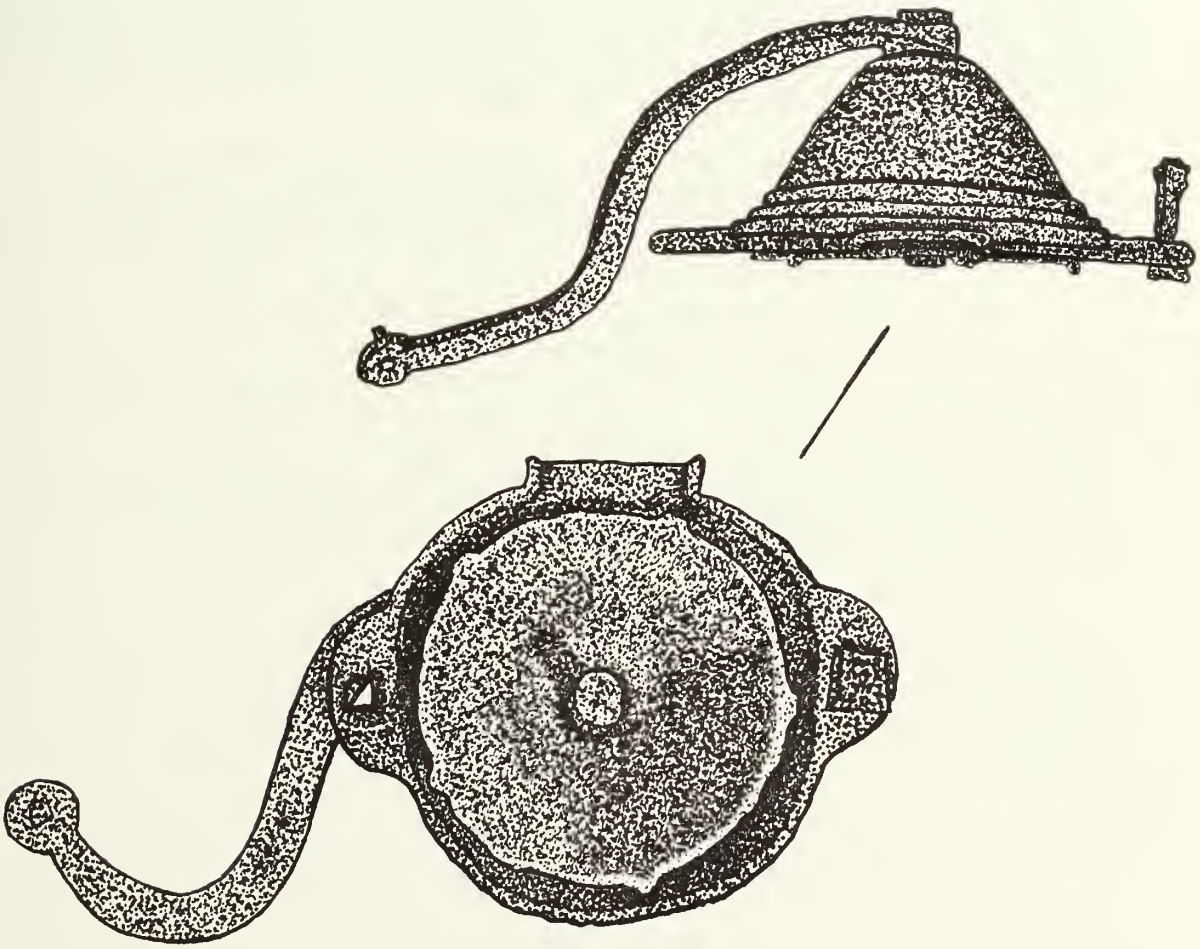


FIGURE 4.1: Top of coffee grinder
(#190-3-5) Scale 1:2

II. BONE GROUP

Eleven small fragments of bone were recovered from the trench excavations at Feature 5. Nine of these are burned, and none are diagnostic.

III. PERSONAL GROUP

The artifacts in this group are generally self-explanatory. A Tobacco Group and an Arms Group are common at most historic sites, but only one item from each Group was found at CA-SHA-1450, and they are included here.

A. TOBACCO. Smoking, surprisingly, does not appear to have been a popular pastime for these miners. The only artifact found related to smoking was a pocket tobacco tin with a hinged lid (190-5-1).

B. ARMS. The brass rifle casing (190-2-3) is stamped W.R.A. 25-35 W.C.F. (Winchester Repeating Arms, Winchester Center Fire). Barnes (1965:21) states that the .25-.35 was developed by Winchester and introduced in 1895 for the Model 94 lever action rifle. Along with the .30-.30, it was one of the first small bore, smokeless powder, sporting cartridges developed in the United States. This single casing may have been deposited during or after the site occupation.

C. LUGGAGE. At Feature 1, an artifact (190-1-11) was recovered which is identified as a portion of the metal brace which holds open the top of a leather satchel such as the traditional doctor's medical bag. The flat metal piece appears to be half of the brace for one side of the satchel and measures 5" (12.7 cm) high by 8 3/4" (22.2 cm) along the broken long side. It is of a size for a medium satchel which would probably hold the limited amount of clothing and personal articles a miner would have at a small camp such as CA-SHA-1450.

D. TOILET ARTICLES. Three similar ironstone pieces were collected at Features 3 and 5 -- small round containers with lips inset at the top to hold a separate lid. One (190-3-23) measures 3 1/2" (8.9 cm) diameter and 2" (5.1 cm) high, and the other two (190-5-39 and 190-5-138) measure 1 15/16" (4.9 cm) diameter and 1 1/2" (3.8 cm) high. A milk glass lid (190-5-38) was recovered from Feature 5 which fits the latter size. Research at the Redding Museum and Art Center and a local antique shop indicate these containers were sold containing toothpaste. The ironstone lid at the shop had a decorative painted top with the name of an English company and the contents. No date has been found for this item.

E. WRITING MATERIALS. The tip of a fountain pen (190-5-166) and the presence of one identifiable ink bottle (190-6-6) attest to the literacy of at least some of the occupants at the site.

F. COINS. A Chinese coin (190-5-167) was recovered in the excavation of Trench 2, Feature 5. The Chinese characters are legible and identify the coin as being issued during the reign of Ch'ien-lung (1736-1795) (Craig 1976:63). This coin was the most common among those found during the excavations in Old Sacramento (Farris 1980:28); and all of the identifiable coins recovered by Ritter in his work at Olney Creek near Redding had these same markings (personal communication 1986).

Although Chinese may have worked at this site, this single traditional Chinese artifact can not confirm that. The coin may have been collected by a Euro-American miner or traded during the normal working relationships between Caucasians and Chinese in the mining district.

IV. CLOTHING GROUP

A. BUTTONS. A total of fifteen buttons and button fragments were recovered, all from Feature 5, and all, with the exception of one metal button, from the excavation trenches. Undoubtedly, more buttons are lying on the site, but these smaller items are generally only recovered during screening. The buttons include nine white porcelain 4-hole buttons from 7/16" (1.1 cm) to 5/8" (1.6 cm) diameter, one 2-hole shell button 7/16" (1.1 cm) diameter, one 2-hole metal button 1/2" (1.3 cm) diameter, two 4-hole metal buttons 3/4" (1.9 cm) diameter, and two flat metal buttons with the shank on the back and LEVI embossed on the front.

Very little firm dating information can be gleaned from the buttons. No dates are available for shell and metal buttons. Some of the buttons classified as porcelain may actually be of a celluloid or composition material. Ceramic and porcelain buttons were abundantly manufactured in the United States after the 1850s until about 1910; and celluloid was first introduced as a substitute material shortly after the Civil War, becoming popular during the late nineteenth and early twentieth centuries (Albert 1949:35, 69).

B. OTHER CLOTHING PARTS. Confirmation of the use of heavy work pants by the miners, most likely blue jeans, is provided by the six rivets recovered which are similar to those found on jeans today.

C. BOOTS. Thirteen fragments of boots were recovered from three features, including four heels. The heels all have square nails in them which date them "from between 1840 and 1880" (Jensen 1980:47); and two of the latter still retain semi-circular metal taps around the back edge of the heel. One metal boot lace hook was found in Trench 1, Feature 5 (190-5-115).

D. FABRIC. Fragments of dark-colored heavy cotton fabric were found at Feature 3. Folds and stitching lines are evident; the best guess is that this was part of a work shirt.

V. ARCHITECTURAL GROUP

A. SQUARE NAILS. All 583 nails and nail fragments recovered from the site are square cut. As discussed by Fontana (1965) and Nelson (1968:10-11), the transition from square machine-cut to wire nails occurred about 1890.

> Until 1879, wire nails, although they had been manufactured in the United States since the 1850s, were less common and more expensive than square cut nails. This is because wire nail manufacturers had to use expensive Norwegian iron. But in 1879 one American manufacturer succeeded in using the newly developed Bessemer steel wire, and eight years later, the price of Bessemer steel billets was low enough to make wire nail making an economic success (Fontana 1965:89).

All of the nails and nail fragments except ten were recovered from the trench excavations, and five of those ten were recovered using the metal detector in the pit at Feature 5. Elstien sorted the nails from the excavation by size using Kimbark's catalogue (1876). 349 fragments were not identifiable; Table 4.4 on the following page gives the breakdown by size of the pieces that could be identified.

The variety of nail sizes and their presence in the pits at Features 1 and 5 are indications that structures were built in association with these rock fireplaces. A local building contractor (personal communication 1986) stated that the smallest sizes of nails (2d and 4d) are generally used for shingles, 7d to 9d for sheeting, and 12d to 16d for framing. At Feature 1, a hypothesis about the structure must await a larger assortment of nails; but, based on these size categories, the large number of framing nails at Feature 5 indicates a frame structure (cabin). The difference in the nail assortment recovered from the two trenches at Feature 5 may be explained by different portions of the building collapsing, being dismantled, or burning in different areas of the pit.

At one of the features excavated in the Greenwood investigations mentioned previously, 206 square cut nails were recovered, but they all ranged from 4d to 10d (1982:48).

TABLE 4.4: NUMBER OF NAILS RECOVERED BY SIZE AND EXCAVATION UNIT

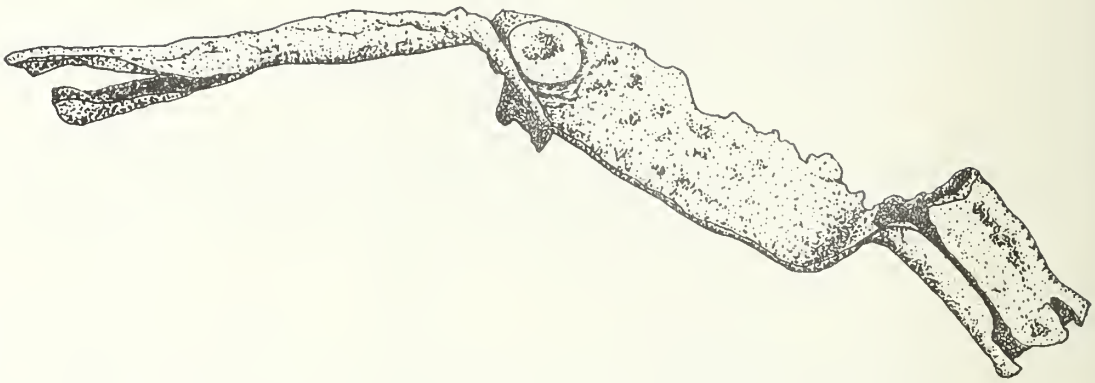
Size	F 1/Trnch 1	F 5/Trnch 1	F 5/Trnch 2	Total
2d	--	8	--	8
4d	--	16	--	16
5d	5	--	--	5
6d	--	16	2	18
7d	--	5	1	6
8d	--	--	6	6
9d	14	11	--	25
10d	--	3	9	12
12d	--	20	26	46
16d	8	8	38	54
20d	--	5	14	19
30d	--	4	3	7
\30d	1	1	--	2
Totals	28	97	99	224
Total in Trnch incl. frags	66	278	234	801

B. & C. WINDOW GLASS AND CONSTRUCTION HARDWARE. These artifacts attest to the presence of a structure with glass windows and a locked door. Some of the heavy nuts and the numerous small washers may actually have been used on mining equipment rather than the living structure.

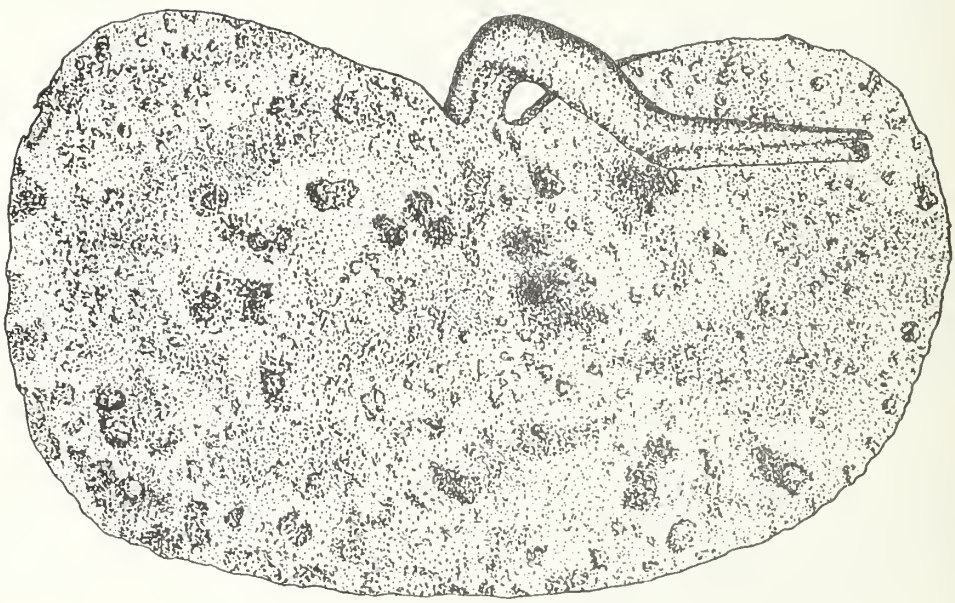
D. FURNISHINGS. The presence of bed springs is another indication of a somewhat more permanent, more substantial structure; folding cots would probably have been used in a tent or very temporary cabin. Metal and/or glass parts from the standard kerosene lantern were recovered from three of the five fireplace features indicating that these lanterns were the common form of lighting.

VI. MINING EQUIPMENT GROUP

Eighteen catalog numbers are listed in this Group, but identification of the function of many of these artifacts is tentative or unknown. The decision to place items in this



4.2a: Unidentified tool (190-5-15)



4.2b: Hoe (190-1-13)

FIGURE 4.2: Tools
Scale 1:1.5

Group was based on their size and weight, their unusual shape, and because these items were not recognized as being household related and were therefore presumed to be related to the principal purpose for the site -- mining. For example, the colander/seive fragment is included here because the punched holes 3/8" (0.9 cm) diameter seem too large for kitchen use.

A. TOOLS. Figure 4.2 illustrates the well-worn head of a hoe and an unknown tool 7 1/2" (19.1 cm) long.

Figure 4.3 illustrates a mining fork (190-6-9), and 190-5-81 and 190-6-1 are fragments of similar tools. This heavy iron fork had three bent tines and was used for raking heavy rocks out of the tail races.

B. PLACER MINING EQUIPMENT. The function of item 190-5-7 (Figure 4.4) is not known. It consists of two metal disks 5 1/4" (13.3 cm) diameter riveted together with a hole through the center.

Two types of grates were recovered which are tentatively identified as sluice box riffles. One (Figure 4.5a) is composed of galvanized steel rods wired together, and the other is the more standard cross-hatched fire grate which has been purposely cut to a 3" (7.6 cm) by 4 1/2" (11.4 cm) rectangle.

Item 190-5-26 is a heavy iron strap 1 3/4" (4.4 cm) wide forming a circle 3 3/4" (9.5 cm) in diameter. It is probably the sleeve for a bushing. Item 190-5-20 is several fragments of the same guage metal of the same width, and 190-5-110 is a copper strip which probably served as the lining for the bushing (Figure 4.5b).

The heavy iron spikes, one of which is illustrated in Figure 4.6a, have been well used, as indicated by the worn smashed heads. Two letters deciphered as a "gS" are scratched in the side of the illustrated spike. These heavy spikes were possibly used in a process called crevicing. If gold were seen down in the crack of a large boulder or rock face, a spike would be used to enlarge the crack or split open the rock to extract the gold.

C. ASSAY EQUIPMENT. Item 190-5-27 (Figure 4.6b) is a small iron pot 5" (12.7 cm) diameter and more than 4" (10.2 cm) tall. The bottom has burned out, and a white slag has built up on the inside surface. Dewayne Vaughn (personal communication 1986) explained that the white coating is from salt, and the pot was used to test for gold. A small button of lead of a known weight is placed in the pot, finely pulverized ore is added, and then a layer of salt about one inch

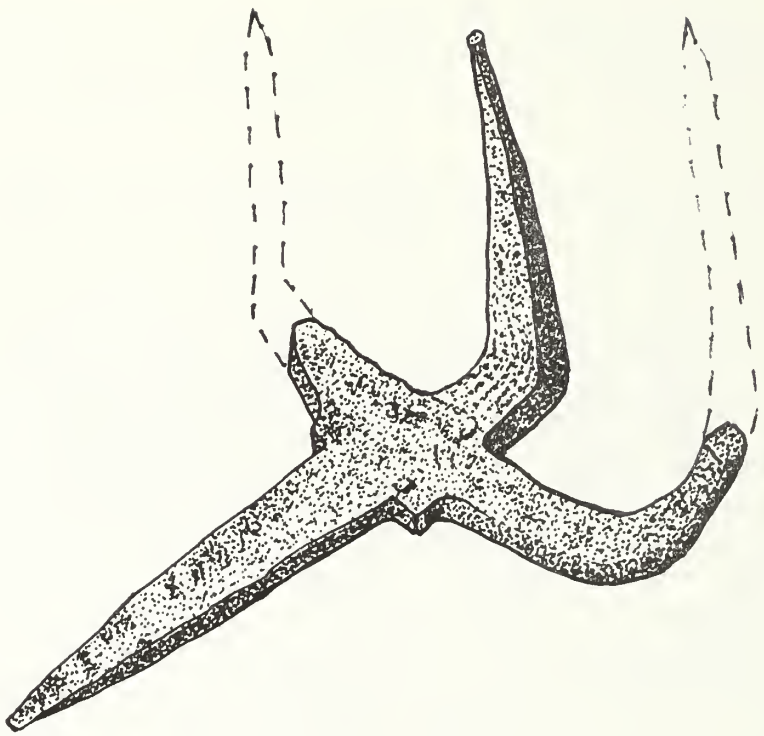


FIGURE 4.3: Mining Fork (#190-6-9)
Scale 1:2

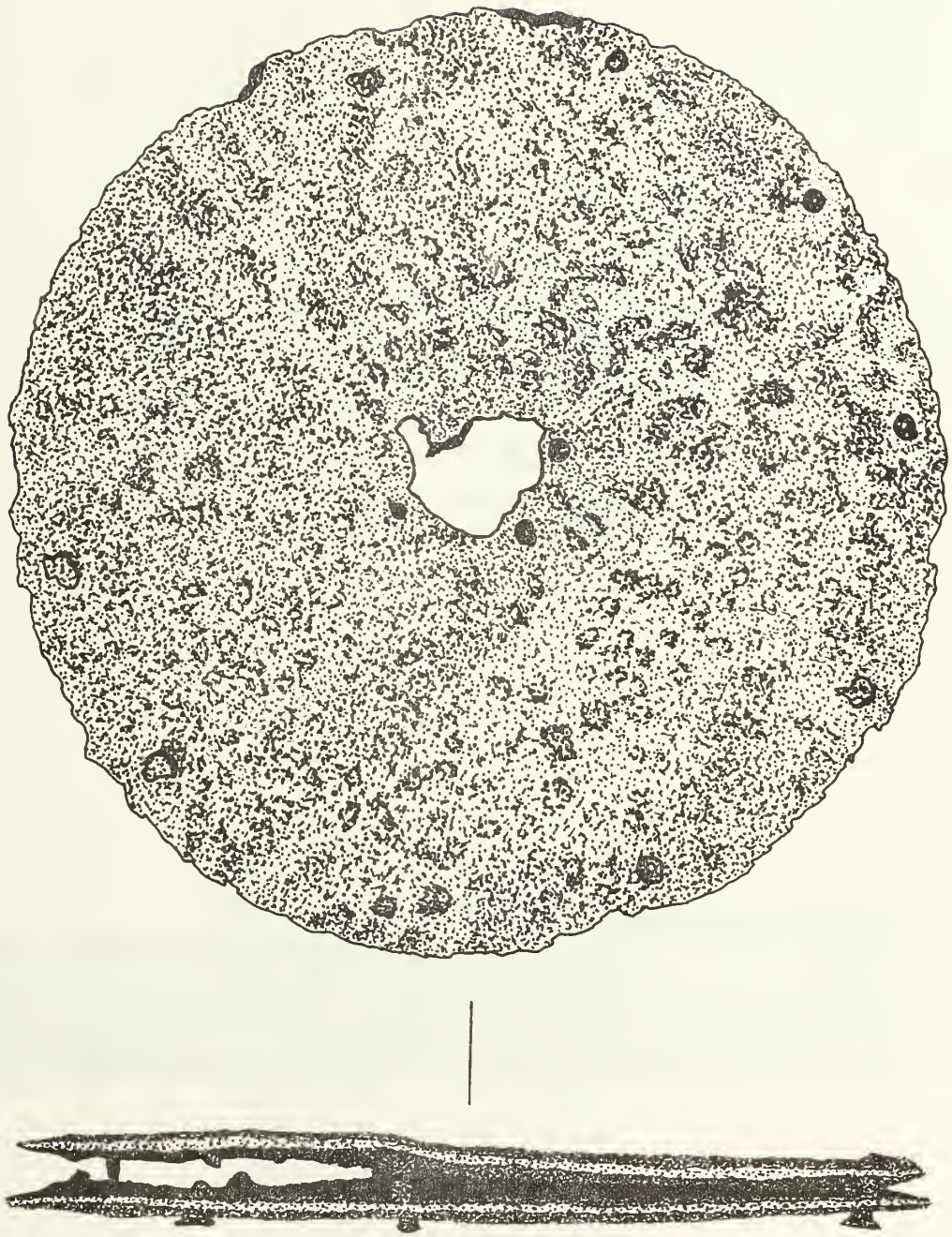
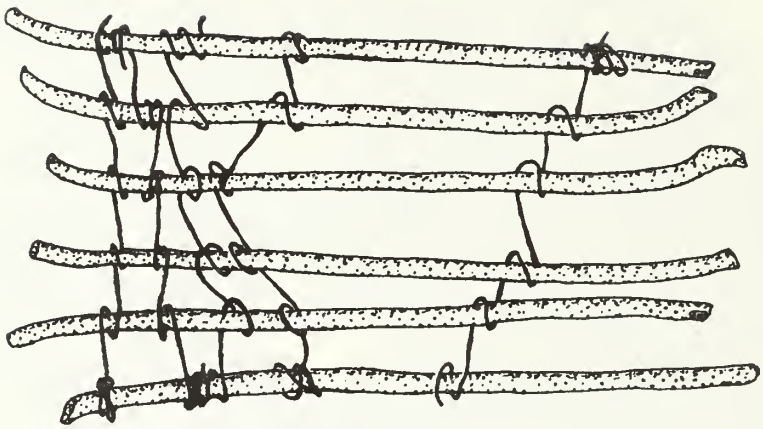
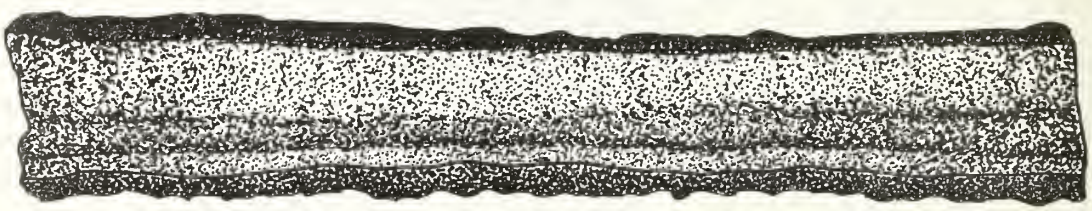


FIGURE 4.4: Unidentified metal disks
(#190-5-17) Scale 1:1

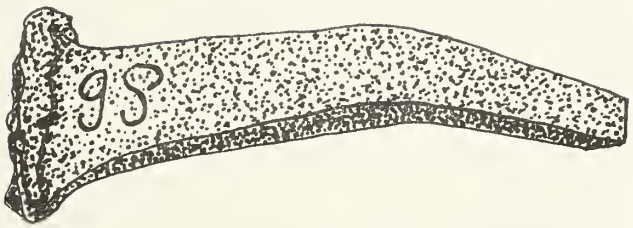


4.5a: Metal grate (#190-5-28)
Scale 1:2

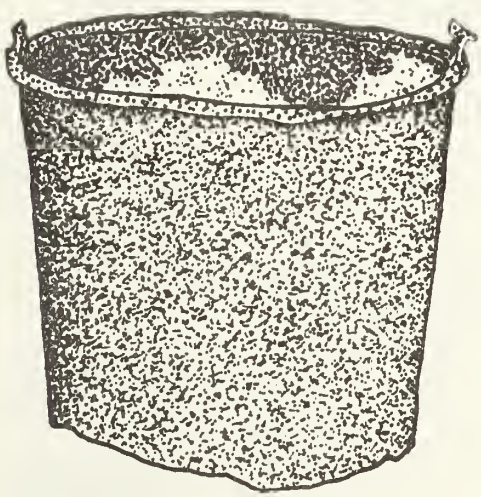


4.5b: Grooved copper strip (#190-5-110)
Scale 1:1

FIGURE 4.5: Placer Mining Equipment

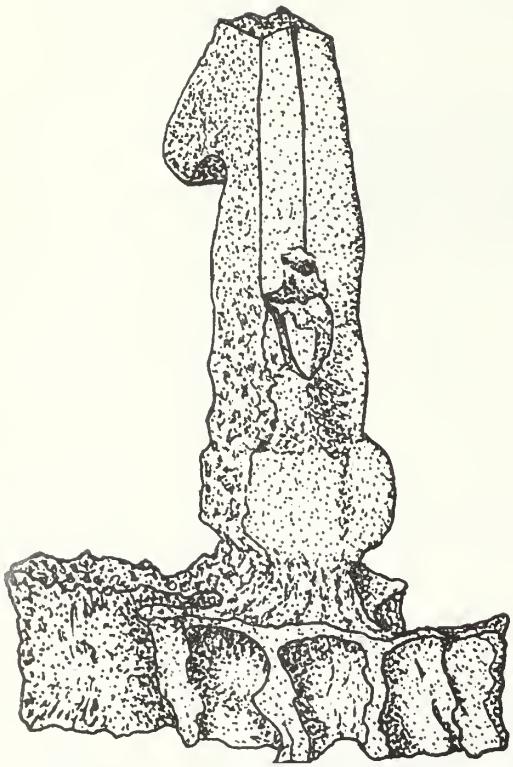


4.6a: Iron spike (#190-2-6)

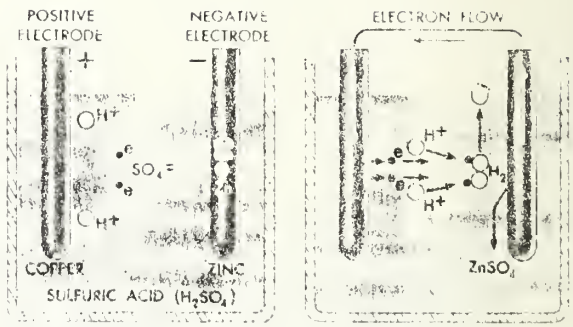


4.6b: Melting pot (190-5-27)

FIGURE 4.6: Mining and Assay Equipment
Scale 1:2

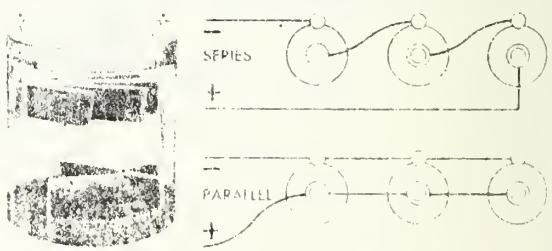


4.7a: Lead electrode (190-5-22) Scale 1:1



A VOLTAIC CELL AND ITS ACTION

In a resting cell (left) the electrolyte (sulfuric acid) is dissociated into hydrogen and sulfate ions. When an external circuit is provided, action proceeds as shown at the right.



A GRAVITY CELL AND CELL CONNECTIONS

At the left, is a gravity type Daniell cell. The diagram at the right shows how cells are connected in series to increase voltage and in parallel to boost current, or amperage.

4.7b: Diagram of Wet Cell Process (from unknown encyclopedia)

FIGURE 4.7: Wet Cell

thick is poured on top. The mixture is cooked at an intense heat until the ore melts. Soft metals (gold, silver, copper amd lead) will mix with the lead. When the mixture has cooled, the lead is weighed again; and any increase in weight is the amount of soft metals in the sample. (Other processes will separate out these soft metals.)

Small fragments of melted lead (190-5-119) were recovered during trench excavation at Feature 5, and perhaps these are associated with this assay process.

Item 190-5-22 (Figure 4.7a) is made of solid lead. Vaughn identified this as the positive electrode in a wet cell. A battery combines two or more of these to produce higher voltage. The wet cell is also known as a Voltaic cell, invented by Alessandro Volta in Italy in the early 1800s.

The artifact hung on the edge of a jar and the spokes at the base, now broken off, radiated out in a semi-circle. The diagram from an unknown encyclopedia (Figure 4.7b) illustrates the principle with a more modern electrode, and Witkowski (n.d.:34) explains the operation.

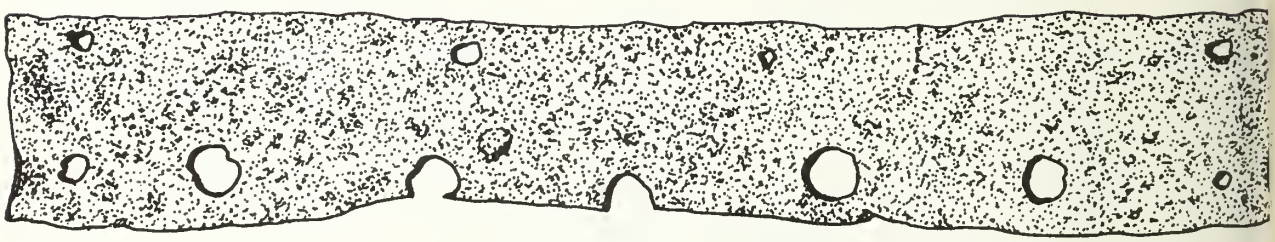
> A wet cell in its simplest form consists of a glass jar, a suitable liquid called an electrolyte, and a copper or lead plate (positive) and a zinc plate (negative) known as electrodes. The external circuit including the resistor is connected to the electrodes. The electrolyte is a weak solution of sulphuric acid. The chemical action of the electrolyte on the zinc (negative) electrode sets up an electromotive force. The current continues as long as chemical action takes place. Current ceases either when the external circuit is opened or when one of the cell elements is exhausted or consumed.

Vaughn suggests this simple cell was not used for electric lighting but for electroplating in the ore separation process or for communication. He read of these cells being used to power a telegraph system in the 1870s along a ditch near Malakoff Diggings in Calaveras County.

VII. MISCELLANEOUS GROUP

This Group contains a few recognized items which do not fit appropriately into any of the previous six Groups and are not numerous enough to create an additional Group. Handles are combined in this Class because it can not be determined if

they are from kitchen wares or tools. The majority of pieces in the Group, however, are an assortment of metal fragments, strips, and rods of various weights.



Iron band, function unknown
(190-5-31)

CHAPTER 5
CONCLUSIONS AND RECOMMENDATIONS

The estimated time frame for the occupation of CA-SHA-1450 is set at 1877 to 1900 based on Table 4.4 which summarizes the time-sensitive glass artifacts. Enough of the bottles were not produced until after 1872 to allow a hypothesis that the site was not occupied until the late 1870s. Two glass bottles were not made until the mid-1880s, but, rather than setting the initial occupation of the site at the latest time of manufacture, one can assume these later bottles were acquired while the site was in use. The same can be said for the rifle casing first manufactured in 1895; this could also have been left by a later hunter.

The ironstone trademarks are dated, but they do not aid in tightly dating the site because they were all first manufactured in the 1850s and some have been noted at sites dating to the 1920s. Another time-sensitive tool is the abundance of square cut nails, or, more importantly, the absence of wire nails. Since wire nails were fairly commonly used by 1890, the construction of the structures at CA-SHA-1450 probably occurred prior to that time.

The artifacts reveal that the occupants slept (bedsprings), cooked (Dutch ovens), and ate (ironstone dishes) at the site, but little could be learned about their diet from the few cans and food-related glass bottles (home-canned fruits and vegetables, condiments, evaporated milk). The lack of liquor bottles and the large number of patent medicine bottles leads to a hypothesis that the latter were drunk for their alcoholic content. This may indicate the lower economic status of the miners because the medicines were not heavily taxed, as were the liquors.

There was no indication of any women living at the site which is typical of most small mining camps. The only uniquely ethnic artifact is the Chinese coin, and, as mentioned previously, it may have been a Euro-American collector's item.

The type of artifacts found at all of the feature areas are similar, and the site was probably occupied by one group of men at generally the same time. Determining how long the site was occupied is difficult, but the amount of time and

energy required to construct the fireplaces would probably not have been expended for a short term (less than one year) project. The presence of the fireplaces indicates winter occupation. As discussed in the historical record, the mining season was generally from December to April depending on the amount of rainfall providing water for the ditches; but a successful operation required almost year-round occupation to prepare for the winter's work. If one assumes one, possibly two, occupants per cabin, those five to eight men were the permanent residents, the "antiques;" and a larger crew of "pilgrims" arrived in the fall to help with the mining work and lived in tents.

The sturdy fireplaces contrast sharply with the apparently rather flimsy structures associated with them. Despite the fact that one hundred years have elapsed, it seems that some evidence of any substantial structure would still exist. Fragments of decayed boards have been noted at other historic cabins of similar age. Judge Eaton (personal communication 1983) stated that board houses of the late 1800s were simple light board and batten structures with shake roofs built on non-cemented rock foundations using timbers for flooring, and most such structures did not last. Another explanantion for the lack of wood fragments at the features is that wood for building structures was not readily available. Boards may have been salvaged and carried to a new mining area.

The trench excavations at Feature 1 reveal a possible cellar wall and that a structure was constructed there using various sizes of nails. At Feature 5, the number and variety of nails and the window glass fragments recovered during excavation confirmed the presence of a frame structure, and the cellar floor was uncovered at the base of the pit. The test excavations did not provide the anticipated answers of structure makeup and function. Additional excavation may locate the wall foundations outside of the pits; and excavation in other feature areas possibly can provide clues to structure construction.

This report does not claim to provide an exhaustive analysis of CA-SHA-1450, but the information presented does confirm (1) the site's potential to yield historical data not found in archival records and (2) Ritter's preliminary recommendation that the site deserves protection. No other known mining sites have been recorded in the local area, and perhaps over a broader geographical area, with a similar group of rock fireplace structures. The site must be considered unique until shown to be otherwise.

The artifact collection conducted during this project has decreased the chances of site vandalism, some of which is

expected from increased visitation to the area on the new hiking trail along the river. Monitoring of the site must continue, however, as stated in the agreement between the City of Redding and the Bureau of Land Management to protect the fireplaces and the remaining subsurface components for possible future study. Some historic interpretation of the site could be provided through signs and perhaps an interpretive trail discussing the mining activity of the late 1880s and the living conditions of the miners.

Following is a partial list of additional research questions and approaches to continue an historical study of the site.

(1) Beginning with a time frame of 1877-1900, review county records for mining claims at this location. Based on typical claim notices of the period, try to determine how a claim notice might be worded that was placed at the old claim marker on the site. If no record of the claim can be found in the county records during this time period, gradually broaden the dates year by year and continue research.

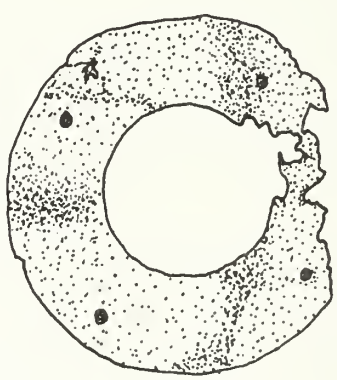
(2) Review old newspapers of the same time period for references to claims and miners in the Old Diggings District.

(3) More research is needed to determine whether these structures are unique. Historical societies within the region and national and regional archaeological societies should be informed of this report and its findings with requests for information on similar sites and structures.

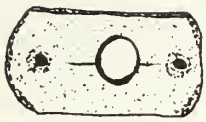
(4) More time can be spent on glass analysis to identify some of the more difficult embossed glass fragments -- those with only a few letters showing from the middle of a word. Additional research on bottle shapes and comparison with fragments in the collection may reveal more food containers and clues to the diet of the site occupants, their economic status, and their markets.

(5) This project concentrated on the fireplace feature areas. The remainder of the site which demonstrates placer and hydraulic mining techniques also merits attention. The rock walls, ditches, tail races, and mining escarpments can be compared with those at other historic mining sites to evaluate their similarities and differences. Study of the mining techniques at CA-SHA-1450 may illustrate the changes which occurred in hydraulic mining following the Sawyer Decision and the later Caminetti Act, and aid in identifying some of the as yet unknown, but presumed to be mining related artifacts.

(6) The excavations conducted during this project were only limited tests to evaluate the site significance. A complete archaeological investigation would require the analysis of the mining features mentioned above, plus excavation and surface scraping and collection of a larger (25%) sample of the feature areas. Perhaps such a project can be planned in the future; or, it may become a necessary mitigation project if monitoring of the site determines that valuable scientific data are being lost through vandalism and/or natural erosion.



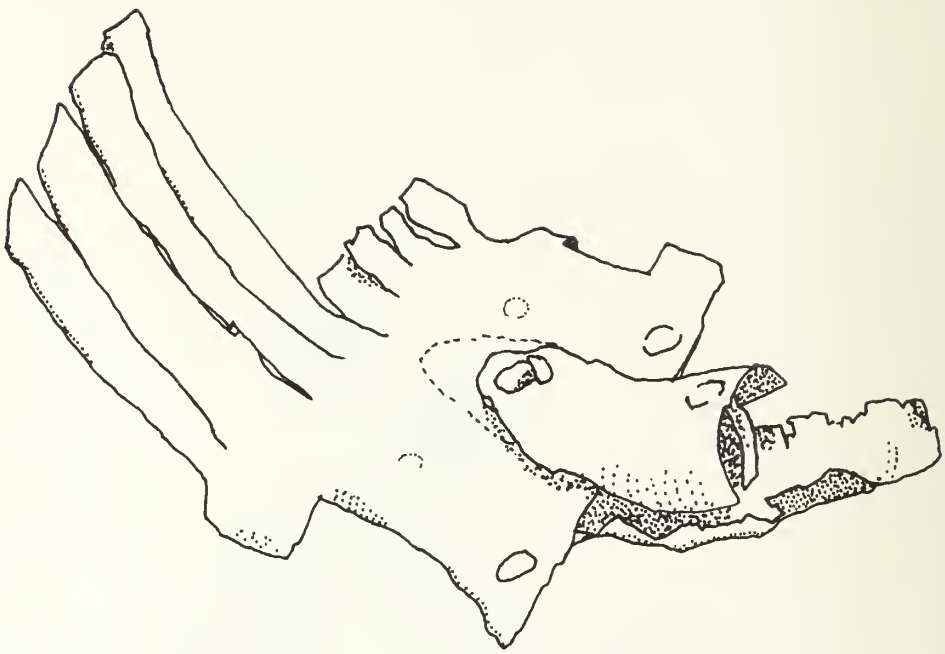
Brass lantern part
(190-5-11)



Metal latch part from Feature 5, Trench 1
(190-5-132)

Metal washers from Feature 5, Trench 1
(190-5-118)

Broken metal appendage of unknown function
(190-5-121)



Shovel head modified into sluice box rake.
Recovered from tailings area.

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APPENDIX A

ACCESSION 190 / SACRAMENTO RIVER MINING SITE / CA-SHA-1450

GLASSWARE

(All measurements in feet)

	PROVNC	MATERIAL	OBJECT	#PCS	COLOR	EMBOSSING	CONTENTS	BASE SHAPE	DIAM or LENGTH	WIDTH	HEIGHT	REMARKS
1- 16	Gen	glass	frag	1	amber	_AL_, _RN_	----					
1- 17	Gen	glass	side	1	aqua lt	_TAR'S	medicine					WISTAR'S BALSAM
1- 18	Gen	glass	body	1	purple	W.S. _RELL CO	medicine	square	0.08		0.16+	pills
1- 19	Gen	glass	side	1	aqua		medicine					
1- 20	Gen	glass	neck/frags	4	aqua		food				0.24	large
1- 21	Gen	glass	neck/frags	7	grn drk		wine				0.3	
1- 22	A	glass	frag	1	grn drk		wine					
1- 23	A	glass	neck/frags	4	brown		medicine					glob top
1- 24	A	glass	neck	1	aqua		beer				0.3	glob top
1- 25	A	glass	asst frags	10	aqua		----					
1- 26	A	glass	frags,emboss	3	aqua	_HEM,_AN&CO	medicine					
1- 27	B	glass	frag	1	clear		----					
1- 28	B	glass	bottle	1	aqua lt		medicine	round	0.09		0.22	pills
1- 29	B	glass	neck/frags	4	clear		medicine				0.09	
1- 30	B	glass	base	1	aqua		medicine	rctngle	0.18	0.08		
1- 31	B	glass	frags	5	amber		beer?					
1- 32	B	glass	base(2)/frags	13	grn drk		wine	round				heavy glass
1- 33	B	glass	frags	4	purple		food					
2- 9	Gen	glass	frag	1	purple		----					
2- 10	Gen	glass	frag	1	clear	_S_	medicine					
2- 11	Gen	glass	neck	1	grn drk		wine				0.35	glob top
2- 12	Gen	glass	neck	1	grn drk		bitters				0.13	glob top
2- 13	Gen	glass	base/neck/frags	5	brn drk	HOSTETTERS	bitters	square	0.24	0.24	0.12	glob top
2- 14	Gen	glass	frags	3	grn drk		----					
2- 15	A	glass	base/neck/frags	37	amber	HOSTETTERS	bitters	square	0.23			
3- 6	Gen	glass	frag	1	blue	WATE_	soda					
3- 7	Gen	glass	base/frags	3	purple	_Co, _E	medicine	round	0.15			
3- 8	Gen	glass	dish	1	clear		dish	oval	0.16+	0.19	0.14	salt
3- 9	Gen	glass	neck/frags	3	straw/grn		wine				0.28	glob top
3- 10	Gen	glass	base	1	aqua	B C Co	food	round	0.26			BurlingtonGlass
3- 11	Gen	glass	frags	2	clear		----	.				
3- 12	Gen	glass	base (3)	8	grn drk	HOSTETTERS	bitters	square	0.24			
3- 13	Gen	glass	base (2)	2	green		champagne	round	0.25/0.3			large kick-ups
3- 14	Gen	glass	necks(4)/frags	7	green		wines?				0.27/0.25	glob top
3- 15	Gen	glass	base(3)	3	brown	BEER,W&CCo MILW	beer	round	0.25			
3- 16	Gen	glass	frags	6	brown		beer					
3- 17	Gen	glass	frag	1	straw		----					
3- 18	Gen	glass	shoulder	1	amber		bitters					
3- 19	Gen	glass	base/side	4	aqua		medicine	rctngl(8)	0.2	0.13	0.36+	

ACCESSION 190 / SACRAMENTO RIVER MINING SITE / CA-SHA-1450
GLASSWARE

(All measurements in feet)

190	PROVNC	MATERIAL	OBJECT	#PCS	COLOR	EMBOSSING	CONTENTS	BASE SHAPE	DIAM or LENGTH	WIDTH	HEIGHT	REMAR
3 - 20	Gen	glass	lip (3)	3	aqua		food/medcn					
3 - 21	Gen	glass	frags	13	aqua		food					1 wide mo
3 - 22	Gen	glass	frags	2	green		----					some larg
3 - 34	A	glass	base	1	clear		medicine	round	0.18			
3 - 35	A	glass	frags	3	grn drk		----					
3 - 36	A	glass	base/frags	4	amber		medicine	oval	0.24+	0.1+		
3 - 37	A	glass	frags	3	aqua		medicine					
4 - 2	A	glass	base/side	5	aqua drk	RUMFORD CHEM WORKS		square	0.15+			
4 - 4	A	glass	neck/frags	7	purple		medicine				0.11	
4 - 5	A	glass	neck/frags	10	amber	HOSTETTERS	bitters					
4 - 6	A	glass	body frags	8	amber	Warners Safe	medicine	oval				
4 - 7	A	glass	side	2	aqua	AYER'S	medicine					
4 - 8	A	glass	side	2	aqua grn	DR HENRY'S SARSA						
4 - 9 A	A	glass	base (6)	6	aqua	HOODS	sarsapl	rctngle	0.25	0.15		
4 - 9 B	A	glass	neck/body/frags	22	aqua	HOODS	sarsapl					
4 - 10 A	A	glass	base (8)	8	aqua	DR JAYNES	medicine	oval	0.24	0.14		
4 - 10 B	A	glass	neck/asst frags	22	aqua	DR JAYNES	medicine					
4 - 11 A	A	glass	base/side (4)	5	aqua	DR KENNEDY	medicine	rctngle	0.27	0.17		
4 - 11 B	A	glass	frags	8	aqua	DR KENNEDY	medicine					
4 - 12	A	glass	sides	8	aqua	CUTICURA	medicine	square				
4 - 13	A	glass	base (3)	20	grn lt	DR PIERCE	medicine	rctngle	0.26	0.14		
4 - 14	A	glass	body/base	10	aqua	DR PIERCE	medicine					
4 - 15	A	glass	neck, asst(8)	8	aqua		medicine					
4 - 16	A	glass	base (2)	2	aqua		medicine	rctngle	0.23+	0.15		
4 - 17	A	glass	frags, asst	72	aqua		medicine					
4 - 18	A	glass	frags	10	grn lt		medicine					
5 - 42	A	glass	bottles(3)	12	aq/lt grn	US MED CO NY	medicine	rctngle	0.18	0.1	0.5	
5 - 43	A	glass	flat frags	5	clear		----					
5 - 44	A	glass	frags	11	grn lt	H.H._, M	medicine					horse medic
5 - 45	A	glass	frag	1	aqua	NEW / HEART	medicine					
5 - 46	A	glass	frags	7	aqua drk		food					spice/angul
5 - 47	A	glass	bases	2	grn drk		wine	round	0.23			
5 - 48	A	glass	base/neck	2	purple		medicine	oval	0.21	0.13		
5 - 49	A	glass	bases/necks	4	purple		medicine	rctngle	0.15	0.07		tall ne
5 - 50	A	glass	frags	52	clr/prpl		----					from -48,-
5 - 51	A	glass	side frags	8	aqua	AYERS SARSA	sarsapl					
5 - 52	A	glass	neck/frags	17	green		wine					
5 - 53	A	glass	base/frags	30	amber		medicine	round				
5 - 54	A	glass	necks3,bases2	6	aqua		soda/med	square	0.21			

ACCESSION 190 / SACRAMENTO RIVER MINING SITE / CA-SHA-1450
GLASSWARE

(All measurements in feet)

	PROVNC	MATERIAL	OBJECT	#PCS	COLOR	EMBOSSING	CONTENTS	BASE SHAPE	DIAM or LENGTH	WIDTH	HEIGHT	REMARKS
55	A	glass	melted frags	2	aqua		----					
56 A	A	glass	bottles (3)	5	aqua	HOODS	sarsapl					
56 B	A	glass	frags	20	aqua	HOODS	sarsapl					
57	A	glass	bottle	20	amber	HOSTETTERS	bitters					
58	A	glass	frags	137	aqua		----					
59	A	glass	thick frags	14	aqua		soda					
60	B	glass	frags	4	brown	Warners Safe	medicine					
61	B	glass	frags	6	brown	HOSTETTERS	bitters					
62	B	glass	base1/neck2	5	brown		wine	round	0.23			2 bottles
63	B	glass	frags	34	brown		beer					
64	B	glass	side frags	3	purple	CALIF FIG SYRUP	medicine	rctngle				
65	B	glass	base/frags	9	purple	SALT RHEUM	medicine	round	0.17			
66	B	glass	side frags	3	purple	PAT MAY 188_,DF&D						
67	B	glass	necks2,base1	18	purple		medicine					assorted
68	B	glass	base	3	grn drk		----	round	0.26			very thick
69 A	B	glass	base5/neck2	23	grn drk		wine	round	0.3/0.25			1 w/o kickup
69 B	B	glass	frags	66	grn drk		wine					
70	B	glass	frag	1	aqua	_AS_, cross	food					
71	B	glass	frags	6	aqua	CUTICURA	medicine					
72	B	glass	base/side	2	aqua	AYERS	sarsa	rctngle				
73	B	glass	base/side	8	aqua	DR PIERCE	medicine	oval	0.23	0.14		
74	B	glass	frags	7	aqua	DR KENNEDYS	medicine					
75	B	glass	base2/neck3	7	aqua		medicine	octagon	0.2			asst
76	B	glass	embossed	6	aqua	__,__,__	medicine					3 unknowns
77	B	glass	asst frags	83	aqua		medicine					
78	C	glass	base/frags	10	grn lt	DR PIERCE	medicine					
79 A	C	glass	base3/neck3	8	aqua	HOODS	sarsapl					
79 B	C	glass	frags	26	aqua	HOODS	sarsapl					
80	C	glass	base5/neck2	7	aqua		medicine	rctngle	0.23/.25	0.15/.17		asst
81 A	C	glass	asst sm frags	210	aqua		----					
81 B	C	glass	asst lrg frags	50	aqua		----					
82	C	glass	base frag	1	brown		beer	round	0.23			
83	C	glass	base	1	purple	SALT RHEUM	medicine	round	0.17			
84	C	glass	base	2	purple	PAT MAR 14 18_2	medicine	round	0.2			
85	C	glass	base3/neck2	10	purple		medicine	round/sq				
86	C	glass	asst frags	103	purple		medicine					
87	pit	glass	melted frags	7	aqua		----					
88	pit	glass	neck edge	1	aqua		food					wide mouth
89	pit	glass	side	1	aqua	CUTICURA	medicine					
90	pit	glass	scalloped edge	1	purple		dish					
91	pit	glass	neck	1	purple		food					mustard

ACCESSION 190 / SACRAMENTO RIVER MINING SITE / CA-SHA-1450
GLASSWARE

(All measurements in feet)

190	PROVNC	MATERIAL	OBJECT	#PCS	COLOR	EMBOSSING	CONTENTS	BASE SHAPE	DIAM or LENGTH	WIDTH	HEIGHT	REMARK
5 - 92	pit	glass	side	1	amber	_PAR1_	sarsapl					
5 - 94	Gen	glass	base	1	purple		medicine	square	0.12	0.12		
5 -125	TR 1	glass	asst frags	26	aqua		----					
5 -126	TR 1	glass	melted frags	42	aqua/clr		----					
5 -139	TR 2	glass	melted frags	230	assrtd		----					
5 -140	TR 2	glass	frags	23	assrtd		----					all from Tr
6 - 3	Gen	glass	frags	4	grn drk		wine					
6 - 4	Gen	glass	frag	1	amber		bitters					
6 - 5	Gen	glass	asst pcs	14	aqua		medicine					
6 - 7	Gen	glass	base	1	purple		----	oval	0.25+	0.18		melted leatr
6 - 8	Gen	glass	asst frags	7	purple		----					

123 TOTAL CAT #S TOTAL PCS 1857

ACCESSION 190 / SACRAMENTO RIVER MINING SITE / CA-SHA-1450
ARTIFACTS OTHER THAN GLASS

(All measurements in feet)

190	PROVNC	MATERIAL	OBJECT	#PCS	DIAM or	LENGTH	WIDTH	HEIGHT	REMARKS
1 - 1	Trnch	metal	nail, sq	1		0.5			
1 - 2	Trnch	metal	nail, sq	8					16ds, common cut
1 - 3	Trnch	metal	nail, sq	14					9ds, common cut
1 - 4	Trnch	metal	nail, sq	5					5ds, common cut
1 - 5	Trnch	metal	nail, sq	33					misc.heads& shafts
1 - 6	Gen	metal	bent heavy wire	1					
1 - 7	Gen	metal	nail, sq	2					
1 - 8	Gen	metal	strips	2			0.09		
1 - 9	Gen	metal	round rim	1		0.46			
1 - 10	Gen	metal	handle	1		0.68	0.1		w/2 rivets
1 - 11	Gen	metal	satchel brace	1			0.06		
1 - 12	Gen	metal	seive frag	1		1.02	0.36		punched .03 holes
1 - 13	Gen	metal	hoe	1		0.34	0.55		
1 - 14	Gen	ceramic	frag	1					white, burned
1 - 15	Gen	leather	heel	1					
1 - 33	B	metal	assortment	8					includes 2 nails
1 - 33	B	metal	assortment	8					includes 0.52 lid, can 0.42x.38
1 - 34	B	leather	sole frags	5					
2 - 1	Gen	ceramic	frags	6					white,1w/name / 2 plates
2 - 2	Gen	leather	sole	1					w/nails
2 - 3	Gen	metal	gun cartridge	1					WRA 25-35
2 - 4	Gen	metal	lantern parts	6					
2 - 5	Gen	iron	Dutch oven lid	1	1.24				curled up edge
2 - 6	Gen	iron	spike	1		0.12	0.05	0.58	smashed
2 - 7 A,B	Gen	iron	stove lid	2	0.69				
2 - 8	Gen	metal	chain	1		0.83			
3 - 1	Gen	leather	soles2,pc	3					
3 - 2	Gen	metal	can frags	3	0.24				
3 - 3	Gen	metal	can frags	3					
3 - 4	Gen	iron	bent rod	1		0.06	0.03	1.4	
3 - 5	Gen	iron	coffee grinder	1	0.37			0.23	
3 - 23	Gen	ceramic	jar	2	0.29				white
3 - 24	Gen	ceramic	plate frags	2					white
3 - 25	Gen	ceramic	plate frags	2					white,thick
3 - 26	Gen	ceramic	plate frags	3					white
3 - 27	Gen	ceramic	plate frag	1					white,w/design
3 - 28	Gen	ceramic	asst frags	10					white
3 - 29	Gen	ceramic	cup or bowl	2					white
3 - 30	A	ceramic	frag	1					drk brown
3 - 31	A	leather	sole frags	3					
3 - 32	A	cloth	frag	1					black
3 - 33	A	metal	assortment	6					can lid & frags
3 - 33	A	metal	assortment	6					includes 1 nail

ACCESSION 190 / SACRAMENTO RIVER MINING SITE / CA-SHA-1450
ARTIFACTS OTHER THAN GLASS

(All measurements in feet)

190	PROVNC	MATERIAL	OBJECT	#PCS	DIAM or	LENGTH	WIDTH	HEIGHT	REMARKS
3 - 38	A	ceramic	plate frags	2					white,w/writing
3 - 39	A	ceramic	large lid frag	1					white
3 - 40	A	ceramic	deep plate frag	2					white
3 - 41	A	ceramic	frags/4 plates	10					white
3 - 42 A-C	Gen	metal	Dutch oven	3	0.97			0.42	w/legs
4 - 1	A	glass	lantern frags	11					chimney & reservoir
4 - 3	A	glass	pane frags	3					lt. aqua
5 - 1	Gen	metal	tobacco can&lid	2		0.25	0.07	0.35	
5 - 2 A,B	Gen	iron	Dutch oven	9				0.36	w/legs
5 - 3	Gen	metal	paint can	1	0.42			0.46	
5 - 4	Gen	metal	can	1	0.24			0.36	
5 - 5	Gen	metal	can	1	0.25			0.36	
5 - 6	Gen	metal	RR spike	1				0.48	
5 - 7	Gen	metal	paint can lids	2	0.39				
5 - 8	Gen	metal	can	1	0.22			0.33	
5 - 9	Gen	metal	horseshoe	1					
5 - 10	Gen	metal	can	1	0.43			0.18	
5 - 11	Gen	metal	can	1	0.28			0.18	
5 - 12	Gen	metal	can	1	0.33			0.42	
5 - 13	Gen	metal	strips,asst	18					
5 - 14	Gen	metal	handle	2			0.1		w/rivets
5 - 15	Gen	metal	tool	1					
5 - 16	Gen	metal	assortment	12					straps,nails,wires
5 - 17	Gen	metal	2circles w/hole	1	0.43				
5 - 18	Gen	iron	strip w/bend	1		0.32	0.09		w/rivets
5 - 19	Gen	metal	bar w/notch	1		0.52			
5 - 20	Gen	iron	flat frags	4			0.14		bushing sleeve fragments
5 - 21	Gen	metal	grate	1		0.38	0.24		sluice box riffles?
5 - 22	Gen	lead	electrode	1					for Voltaic cell
5 - 23	Gen	metal	hinge	1					large/hvy
5 - 24	Gen	metal	latch/lock	4		0.35	0.27		
5 - 25	Gen	metal	button	1	0.06				
5 - 26	Gen	iron	round strap	1	0.31		0.14		bushing sleeve
5 - 27	Gen	iron	pot	1	0.43			0.32	melting pot
5 - 28	Gen	metal	grate?	1		0.7	0.34		sluice box riffles
5 - 29	Gen	metal	bedsprings	2					
5 - 31	Gen	metal	flat frags	30					pots & pans
5 - 31	Gen	iron	strap w/holes	1		1.12	0.18		
5 - 32	Gen	ceramic	frags	11					white,cup handle/plate frags
5 - 33	Gen	ceramic	plate frag	1					white
5 - 34	Gen	ceramic	plate frag	1					white
5 - 35	Gen	ceramic	plate frag	1					white
5 - 36	Gen	ceramic	plate frags	2	0.74				white

ACCESSION 190 / SACRAMENTO RIVER MINING SITE / CA-SHA-1450
ARTIFACTS OTHER THAN GLASS

(All measurements in feet)

190	PROVNC	MATERIAL	OBJECT	#PCS	DIAM or LENGTH	WIDTH	HEIGHT	REMARKS
5 - 37	Gen	ceramic	bowl frag	1	0.26			white
5 - 38	Gen	ceramic	lid	1	0.25			
5 - 39	Gen	ceramic	jar	1	0.24			white
5 - 40	Gen	ceramic	cup frag	1				white
5 - 41	Gen	ceramic	jug frags	8				red w/brn
5 - 78	B	ceramic	frags	5				white
5 - 79	pit	metal	lantern part	1				
5 - 80	pit	metal	nail, sq	5				
5 - 81	pit	iron	fork frag	1				same as 5-9
5 - 82	pit	metal	can frag	1				
5 - 87	C	ceramic	cup & frags	22				w/writing
5 - 93	pit	glass	pane frags	37				
5 - 95	Gen	metal	bracket?	1				
5 - 96	Gen	ceramic	frags	2				beige
5 - 97	TR 1	metal	nail, sq	3				10ds,common cut
5 - 98	TR 1	metal	nail, sq	9				20-60d
5 - 99	TR 1	metal	nail, sq	26				6-16d, common cut
5 -100	TR 1	metal	nail, sq	20				12ds, common cut
5 -101	TR 1	metal	nail, sq	8				2ds, common cut
5 -102	TR 1	metal	nail, sq	16				4ds, common cut
5 -103	TR 1	metal	nail, sq	5				7ds, common cut
5 -104	TR 1	metal	nail, sq	6				6ds, common cut
5 -105	TR 1	metal	nail, sq	8				16ds, common cut
5 -106	TR 1	metal	nail, sq	11				9ds, common cut
5 -107	TR 1	metal	nail, sq	10				6ds, common cut
5 -108	TR 1	metal	nail, sq	155				misc nail frags
5 -109	TR 1	metal	asst frags	7				handle, can,
5 -110	TR 1	iron	frags	2				bushing lining
5 -111	TR 1	metal	lantern parts	2				
5 -112	TR 1	iron	nuts	3				
5 -113	TR 1	metal	rod frags	7				
5 -114	TR 1	metal	frags	52				cans and pans
5 -115	TR 1	metal	hooks,rivets	7				some w/Levi,1 boot eye hook
5 -116	TR 1	porcelain	buttons	8				1 shell
5 -117	TR 1	metal	buttons	3				
5 -118	TR 1	metal	washers	24				
5 -119	TR 1	lead	melted frags	3				
5 -120	TR 1	tin?	thin frags	4				
5 -121	TR 1	metal	?	1				
5 -122	TR 1	?	?	1				
5 -123	TR 1	bone	frags	2				
5 -124	TR 1	glass	pane frags	14				
5 -127	TR 1	metal	can frags	40				from floor of Trnch
5 -128	TR 1	metal	screw	1				
5 -129	TR 1	metal	tacks	4				

ACCESSION 190 / SACRAMENTO RIVER MINING SITE / CA-SHA-1459
ARTIFACTS OTHER THAN GLASS

(All measurements in feet)

190	PROVNC	MATERIAL	OBJECT	#PCS	DIAM or	LENGTH	WIDTH	HEIGHT	REMARKS
5 -130	TR 1	metal	staples	2					
5 -131	TR 1	metal	small cylinder	1					
5 -132	TR 1	metal	oval washer	1					
5 -133	TR 1	metal	washer	1					
5 -134	TR 1	?	frags	3					
5 -135	TR 1	metal	nail, sq	1					large
5 -136	TR 2	ceramic	plate frags	27					burned
5 -137	TR 2	ceramic	cup & frags	21					white
5 -138	TR 2	ceramic	jar	2					white
5 -141	TR 2	ceramic	buttons	3					
5 -142	TR 2	bone	frags	9					burned
5 -143	TR 2	metal	washer?	1					
5 -144	TR 2	metal	can frags	70					
5 -145	TR 2	metal	screw	1					
5 -146	TR 2	metal	scroll piece	2					stove decoration?
5 -147	TR 2	metal	large frags	2					
5 -148	TR 2	metal	disk	1	0.25				
5 -149	TR 2	metal	spike end	1					
5 -150	TR 2	metal	brads	4					
5 -151	TR 2	metal	oval ring	1		0.22	0.1		
5 -152	TR 2	metal	diag. pc	1					
5 -153	TR 2	metal	frags	3					
5 -154	TR 2	metal	nails, sq	38					16ds, common cut
5 -155	TR 2	metal	nails, sq	26					12ds, common cut
5 -156	TR 2	metal	nails, sq	14					20ds, common cut
5 -157	TR 2	metal	nails, sq	6					8ds, common cut
5 -158	TR 2	metal	nails, sq	9					10ds, common cut
5 -159	TR 2	metal	nails, sq	2					6ds, common cut
5 -160	TR 2	metal	nails, sq	1					7d, common cut
5 -161	TR 2	metal	nails, sq	3					30ds, common cut
5 -162	TR 2	metal	nails, sq	135					misc frags
5 -163	TR 2	metal	tack	1					
5 -164	TR 2	metal	frags	3					
5 -165	TR 2	metal	fork tines	1					
5 -166	TR 2	metal	fountainpen tip	1					
5 -167	TR 2	metal	Chinese coin	1					
6 - 1	Gen	iron	fork frag	1		0.09	0.05	0.29	part of a 6-9
6 - 2	Gen	metal	can	1	0.2			0.25	
6 - 6	Gen	glass	ink bottle frag	3					embossed design
6 - 9	Gen	iron	mining fork	1		0.57	0.41		
6 - 10 A,B	Gen	metal	Dutch oven lid	2	0.94				

172 TOTAL CATALOG #S TOTAL PIECES 1273

DATE DUE

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