Cultural Resource Inventory and Assessment

for the

Frohner Mine and Mill (24JF1560)

Prepared for the

Montana Department of Environmental Quality
Mine Waste Cleanup Bureau
Helena, Montana 59620

By

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October, 1998

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INTRODUCTION

The Mine Waste Cleanup Bureau of the Montana Department of Environmental Quality (MWCB), as part of its reclamation work, needs to identify and evaluate cultural resources southwest of Helena in Jefferson County, Montana (Figure 1). The property is the former Frohner mine and mill (24JF1560) within the Clancy Historic Mining District - 24JF1393 (Figure 3). This cultural property was recorded and evaluated in terms of the criteria of the National Register of Historic Places (NRHP) at all aspects of integrity. The inventory of the project area included lands within the north half of the southeast quarter; and the northeast quarter of the southwest quarter of Section 15, Township 8 North Range 5 West (Figure 2). A total of (1000 feet north /south x 3000 feet east/west = 3,000,000 square feet) 70 acres were included in the inventory and designated as the project area. Because these lands are within the boundaries of both the Clancy Historic Mining District and the Clancy HMD Sub-area (24JF1541) that may have importance to Montana history - the cultural resources found on these lands were evaluated in terms of the mining districts, as a historic landscape, and as an individual historic site.[1]

The inventory was conducted to satisfy federal and state legislation requiring cultural resources inventory in compliance with the National Historic Preservation Act (Public Law 89-665, as amended); the National Environmental Policy Act; and the Montana Environmental Policy Act and other state and federal legislation. The purpose of the cultural resources inventory is to locate, record, and evaluate the kinds and nature of the resources within the vicinity of the Frohner Mine and Mill project area and to evaluate those resources in terms of the National Register of Historic Places. The results of the investigation, which are documented in this report, include recommendations of significance for cultural resource sites.

The principal investigator on the project was Dale M. Gray, historian, who was responsible for overall project management and inventory. The field inventory of the project area was conducted by Dale Gray and Bill Fischer on June 21 and July 5 - 7, 1998. Maps were drawn by Gray. Historical research was provided by Gray and Fischer. The report was prepared by Gray.

EXECUTIVE SUMMARY

The MWCB proposes actions on the Frohner Mine and Mill site (24JF1560) that may impact cultural resources. This study examined the site to determine: 1) what, if any, cultural resources were in the project area and 2) the value of the identified resources in terms of the NRHP.

One historic site was recorded: the Frohner Mine and Mill (24JF1560). The site is recommended individually to be eligible for the NRHP under Criterion C and D. Even though the individual features of the site have poor integrity, taken as a whole, the site qualifies for the National Register of Historic places as a site, a historic landscape, a sub-district and as a contributing component of the Clancy HMD Sub-areas (24JF1541). The Montana SHPO has concurred on the Bureau of Land Management (BLM) recommendation that the Clancy HMD Sub-district is eligible for the NRHP.

The proposed Frohner Mine and Mill reclamation project may affect significant historical resources. While little cultural value remains attached to the individual features of the Frohner Mine and Mill, avoidance of the remaining features is recommended. This report is recommended as mitigation for other work conducted on the site.

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1 Because the relatively little work that has been done on the Clancy Historic District and the Clancy HMD Sub-areas is recent and preliminary, their status in terms of the National Register of Historic Places has not yet reached a final determination. The Bureau of Land Management and the Montana SHPO concur that the Clancy HMD Sub-areas (24JF1541) is eligible for the NRHP, but appear to disagree on the larger Clancy Historic Mining District (24JF1393). See discussions below.

Figure 1. The location of the project area on a modern Montana highway map.

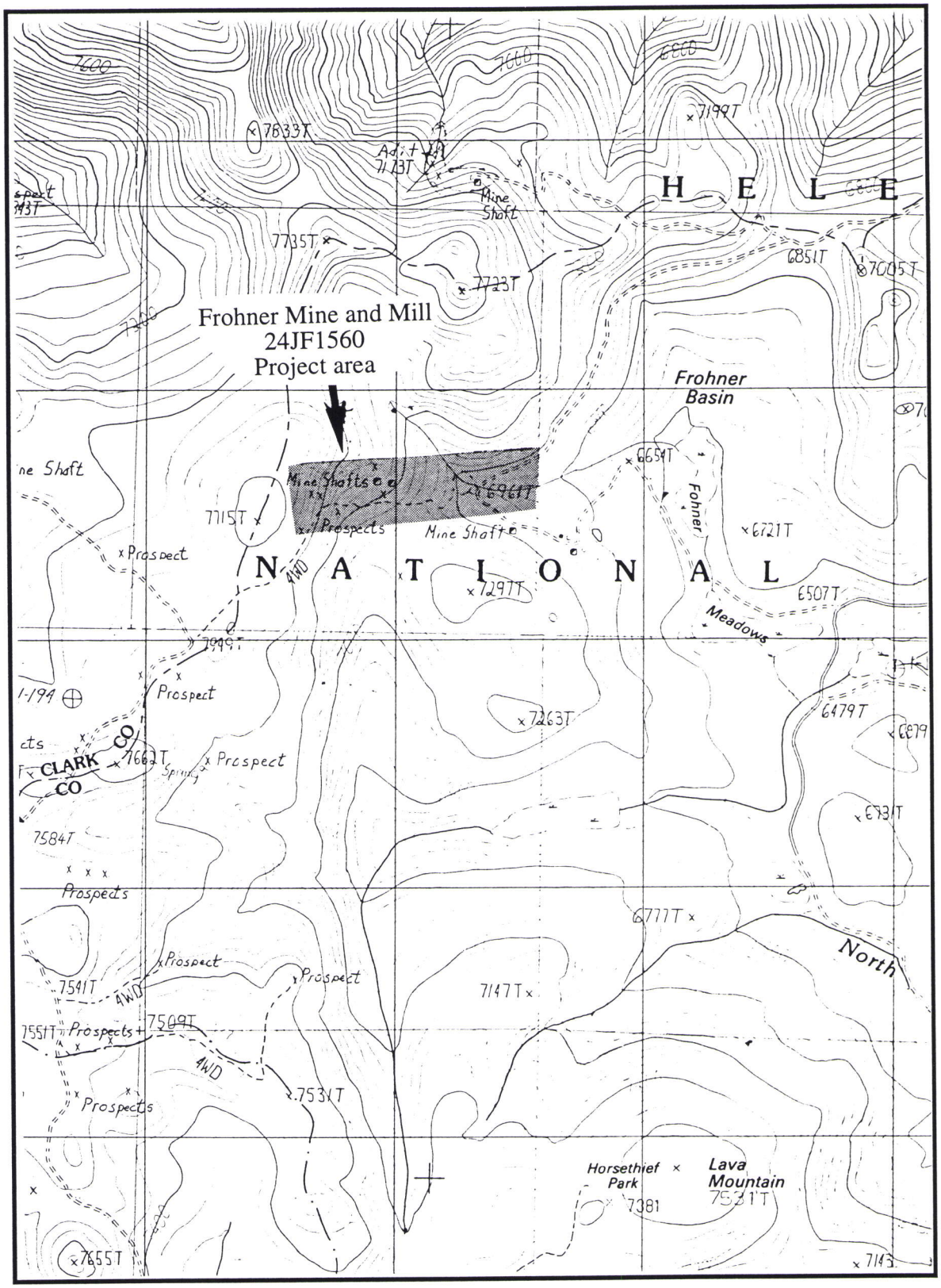

Figure 2. The Frohner Mine and Mill (24JF1560) on the USGS Chessman Reservoir quadrangle map (1:24,000).

PHYSICAL ENVIRONMENT

The Frohner Mine and Mill project area is located on a hillside and mountain valley southwest of the city of Helena in Jefferson County, Montana. The site is near the mountainous divide between Lump Gulch Creek and Ten Mile Creek. The topography includes a steep hillside on the north side of the eastward sloping upper mountain valley of Lump Gulch Creek. Lump Gulch Creek empties into Prickly Pear Creek, which in turn flows through the Helena Valley and drains into the Missouri River. The creeks provide water throughout the year with some of the smaller drainages being seasonal (Figure 3).

The project area is in the Lodgepole Pine-Douglas Fir Forest zone which covers the higher mountain areas to the west (Payne 1973). Elevation within the project area ranges from 6900 feet amsl at the Frohner Mill to 7550 feet amsl at mine Feature O. The climate is semi-arid with precipitation varying from 12-15 inches per year.

The surficial geology of the Clancy mining district is "characterized by smoothly rounded, dome-like mountains typical of a maturely dissected upland". Glaciation during the Pleistocene deposited glacial till on some portions of the district and altered some of the drainages. Below the glacial till lies the Boulder batholith within which are the minerals of economic significance; the dominant minerals being silver, gold, lead, copper and zinc . Although the quartz monzonite of the Boulder batholith is the prevalent rock throughout the Clancy district and under the glacial till, andesite, aplite, and dacite contribute to its geological composition. The quartz monzonite is intrusive and rests upon late Cretaceous andesite - the oldest rock in the district. In return, abnormally large masses of aplite intrude upon the quartz monzonite, with the most notable being southwest of Jefferson City. The ore deposits of the Clancy district occur in quartz veins which appear in the andesite, quartz monzonite and aplite (Loraine and Hundausen 1948).

METHODOLOGY

Inventory, recording and evaluation methodology followed the guidelines in the "AMRB Standard Procedures for the Documentation, Evaluation and Management of Historic Mining Properties" (AMRB Draft 1994) and the tasks in the Scope of Work (DEQ MWCB Contract #780002.TO5). Prior to field work, detailed historic overviews of the Clancy Historic Mining District and the Frohner Mine and Mill were prepared identifying significant events, historical chronologies, periods of historical patterns, significant persons, technologies and mining properties that might be associated with the area. This was compiled using sources such as previous cultural resource reports, supplemented with primary sources from the Montana Tech Library in Butte, the Montana State Historical Library in Helena, the Department of Environmental Quality files and records in Helena, Government Land Office Records at the BLM in Butte, and the Thayer-Lindsley collection at the University of Wyoming.

The task of conducting historic research on the project area was complicated by an unusual lack of historical references -- despite the large-scale development of the site.

The project area around the Frohner Mine and Mill was subject to a pedestrian examination of an intensity to maximize the potential for locating all visible prehistoric and historic sites. The survey was equivalent to BLM Class III inventory standards. The survey area is shown on Figure 2. All historic features, e.g., foundations, historic artifacts, roads, railroad lines, were located and recorded on standard Montana Site Inventory forms. All features and buildings were photographed and evaluated in terms of the National Register of Historic Places.

The Frohner Mine and Mill also was evaluated in terms of its contributions to the larger Clancy Historic Mining District (24JF1393), Clancy HMD Sub-areas (24JF1541), as a mining district in its own right and as a potential historic mining landscape.

Significance assessments were made by evaluating the Frohner Mine and Mill mine in respect to the four National Register criteria (36 CFR 60.4) and in terms of the guidelines in the various National Register Bulletins, e.g., 14, 15, 21, 30, 36 (draft), 39, and 42. A site was assessed as being significant and therefore eligible for inclusion on the National Register of Historic Places if it met any of the following criteria and retains integrity:

Criterion A: The site was associated with events that have made a significant contribution to the broad patterns of our history.

Criterion B: The site was associated with the lives of persons significant in our past.

Criterion C: The site embodied the distinctive characteristics of a type, period, or method of construction, or that represented the work of a master, or that possesses high artistic values, or that represented a significant and distinguishable entity whose components may lack individual distinction.

Criterion D: The site has yielded or may be likely to yield information important in prehistory or history.

To be eligible each site and/or historic district must retain integrity of location, design, setting, materials, workmanship, feeling and association.

RESULTS OF FILES AND LITERATURE SEARCH

An intensive file search was conducted at the State Historic Preservation Office (SHPO) for the Clancy Mining District area around the Frohner Mine. The sources for the Clancy Mining District were also examined and selected for their potential to provide information on the Frohner Mine and Mill. The government land office records at the BLM in Butte were checked for land and mineral titles. Research at Montana Tech in Butte and the Thayer-Lindsley collection at the University of Wyoming was conducted to provide historical information on the operation and production of the Frohner Mine and Mill. Prior cultural resource reports were checked for information concerning the local history and the location of cultural resources.

Most significant of the previous cultural reports on the area are:

Anderson, Paul and Barbara Sommer
1990 Preservation Planning Overview for Phase 25 of Projects 25, 26, 27 and 28: Parts One and Two. Report prepared for the Montana Department of State Lands, Helena, by GCM Services, Inc., Butte.

GCM Services
1995 "Clancy Mining District", part of a contextual overview of 224 mining districts in Montana. Prepared for the Montana Department of State Lands, Abandoned Mine Reclamation Bureau, by GCM Services, Butte.

Renewable Technologies, Inc.
1996 "Frohner (PA No. 22-243) Clancy Mining District, Jefferson County, Montana" prepared for the Abandoned Mine Reclamation Bureau, Department of Environmental Quality, Helena, Montana.

1997 "Clancy Mining District - 24JF1393", Montana State Office Site Form, Bureau of Land Management. Prepared for BLM Report No. 97-MT-070-075-35.

1997 "Devil's Land Exchange: Supplimental Archaeological and Historical Investigations, 1997. BLM Report No. 97-MT-070-075-35.

Sanders, Darrell
1998 "Clancy HMD Sub-Areas - 24JF1541" Prepared for the Montana State Office Site Form, Bureau of Land Management. Prepared for BLM Report No. 97-MT-070-075-35.

No prehistoric sites were identified in previous studies of the area.

REPEAT PHOTOGRAPHY

Archives of the Montana Historical Society Photo Archives, the Jefferson County Public Library in Boulder, the University of Montana, the library of Montana Tech, and local residents were consulted during the search for historic photographs of the sites. No historic photographs of the mine and mill were located.

CLANCY MINING DISTRICT BOUNDARIES AND DEFINITIONS[2]

The Clancy mining district consists essentially of the drainages of Lump Gulch and Clancy Creek, both tributaries of Prickly Pear Creek. The district is directly south of Helena and was first developed by placer operations along Prickly Pear Creek around 1865. The gold placers did not prove to be very profitable, but rich silver lodes were discovered the next year by Joseph Fultz and Thomas G. Merrill.

Geology

The dominant rock of this district is the quartz monzonite. With it are associated dikes and large masses of aplite. Intrusions of pegmatite and granite porphyry are also present and in many places late Tertiary rhyolite rests on the eroded surface of the quartz monzonite. Deposits occur as lodes in the quartz monzonite and comprise representatives of both the older and the younger groups. The younger deposits have been more productive; with rich silver bearing lodes containing galena, sphalerite, and tetrahedrite. They occur in the central and southern part of the district, mostly on and near Clancy Creek and Lump Gulch (Schrader 1929).

Discussion of Boundaries in the Geological Literature

The Clancy district is located around the town of Clancy in Jefferson County. Knopf (1913) does not give any description of the area covered by the district other than to say it encompassed the area around the town of Clancy. He does describe the mining operations in the district as including: the Legal Tender, Kennedy (or Jackson Creek), King Solomon, Little Nell and Yellowstone Prospect, all of which are either a few miles to the west, or just a short distance to the east of Clancy. The area included basically the Clancy Creek and Lump Gulch Creek drainages, no more than five miles to the west of Clancy, plus an area a few hundred yards to the east.

Pardee and Schrader (1933) describe the Clancy district as covering a far greater area than that of Knopf:

> As considered herein it [the Clancy district] extends from Red Mountain east to the Elkhorn Mountains and therefore includes nearly all of the drainage basins of Clancy, Buffalo, and Warm Spring Creek and Lump Gulch, as well as a considerable part of the valley of Prickly Pear Creek, the trunk stream (Pardee and Schrader 1933:227).

Sahinen (1935) vaguely described the district as Clancy and Alhambra. He states that the district is traversed by the Butte- Helena highway (now I-15). Sahinen also included the area of upper Lump Gulch and Buffalo Creek within the Buffalo Creek District.

Becraft, Pinckney and Rosenblum (1963) reduce the area somewhat from that of Pardee and Schrader to an area that:

> ...includes the northeastern part of the Jefferson City quadrangle roughly north of Jefferson City and east of Lava Mountain and the Spruce Hills. Also included in the Clancy district of most older reports are the mines in the drainage of Warm Springs Creek east of Alhambra, in the Clancy quadrangle. Parts of the Clancy district have been referred to as the Warm Springs, Alhambra, and Lump Gulch districts (Becraft et al. 1963:63).

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2 The Clancy Mining District discussion is drawn directly from GCM (1995) which in turn was derived from Anderson and Sommer (1990).

Roby, Ackerman, Fulkerson and Crowley (1960) describe the district stating:

> The Clancy - Lump Gulch district embraces that part of Jefferson County tributary to Lump Gulch and Clancy Creek. The district centers in T8N, R4W & R5W. The Butte - Havre branch of the Great Northern Railway, U.S. Highway 91, and Prickly Pear Creek traverse and border the district to the east, the Continental Divide on the west, Quartz Creek to the south, and Jack Mountain and the divide between Jack Creek and Clark Gulch to the north (Roby et al. 1960:40).

One of the problems with the mining districts in the region south of Helena is that they overlap with each other, as is mentioned above. None of these districts were ever specifically defined. The boundaries appear to have been redefined as convenient and used historically to describe the area where mining operations were the most active at that time. Thus, when the Lump Gulch drainage was at its peak during the 1890s it was described as the Lump Gulch district. Later, when it had become dormant, it was simply included in the Clancy district. The Alhambra and Buffalo Creek districts have also been similarly incorporated into the Clancy district. The most plausible district definition would approximately be that as described by Roby, Ackerman, Fulkerson and Crowley (1960). The area would cover all or portions of the following:

Sections 4-9, 16-20, 30-31, T8N, R3W
All sections, T8N, R4W
Sections 1, 12, 13-15, 22-25, 34-36, T8N, R5W
Sections 31-34, T9N, R3W
Sections 23-36, T9N, R4W

Cultural Resource Literature: Boundary Definitions and Discussions

Very little cultural resource work has been done defining the Clancy Historic Mining District. In the past year, the Bureau of Land Management has begun work on defining the district utilizing the above historic boundaries as listed by GCM Services (1995). Windshield surveys of the district failed to find extensive mine workings typical of Montana mining districts. The few mines that were found often had seen extensive reclamation or had been significantly altered by the encroachment of modern housing. Merle Good, BLM Area Manager in Butte, in a letter (1998) to the Montana SHPO suggested that the Clancy Historic Mining District (24JF1393) is not eligible for the National Register of Historic Places, but that certain sub-districts within the boundary of the Clancy District were potentially eligible for the NRHP. This recommendation was subject to confirmation through field inventory and historic document research. A site form for the Clancy HMD Sub-areas (24JF1541) was prepared and submitted to SHPO in March of 1998. The Frohner Basin Sub-area, which was defined to include the Nellie Grant, but inadvertantly excluded the actual Frohner mine and mill development, was one of three areas included as part of the Clancy HMD Sub-area Site Form[3]. The BLM recommended that these three areas be eligible for the National Register of Historic Places as a discontiguous district. The SHPO response concurred with BLM recommendation on the eligibility of the Clancy HMD Sub-Areas, but questioned whether a windshield survey was adequate to assure the excluded areas in the Clancy District were free of cultural resources. The issue of the NRHP status of the Clancy District remains unresolved at this point. Appendix B has site forms for the Clancy Historic Mining District, the Clancy HMD Sub-Area and correspondence between the BLM and SHPO.

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3 The Nellie Grant, which is the only major mining property in the defined Frohner Sub-area, has been determined to be ineligible for the NRHP and has been 100% reclaimed.

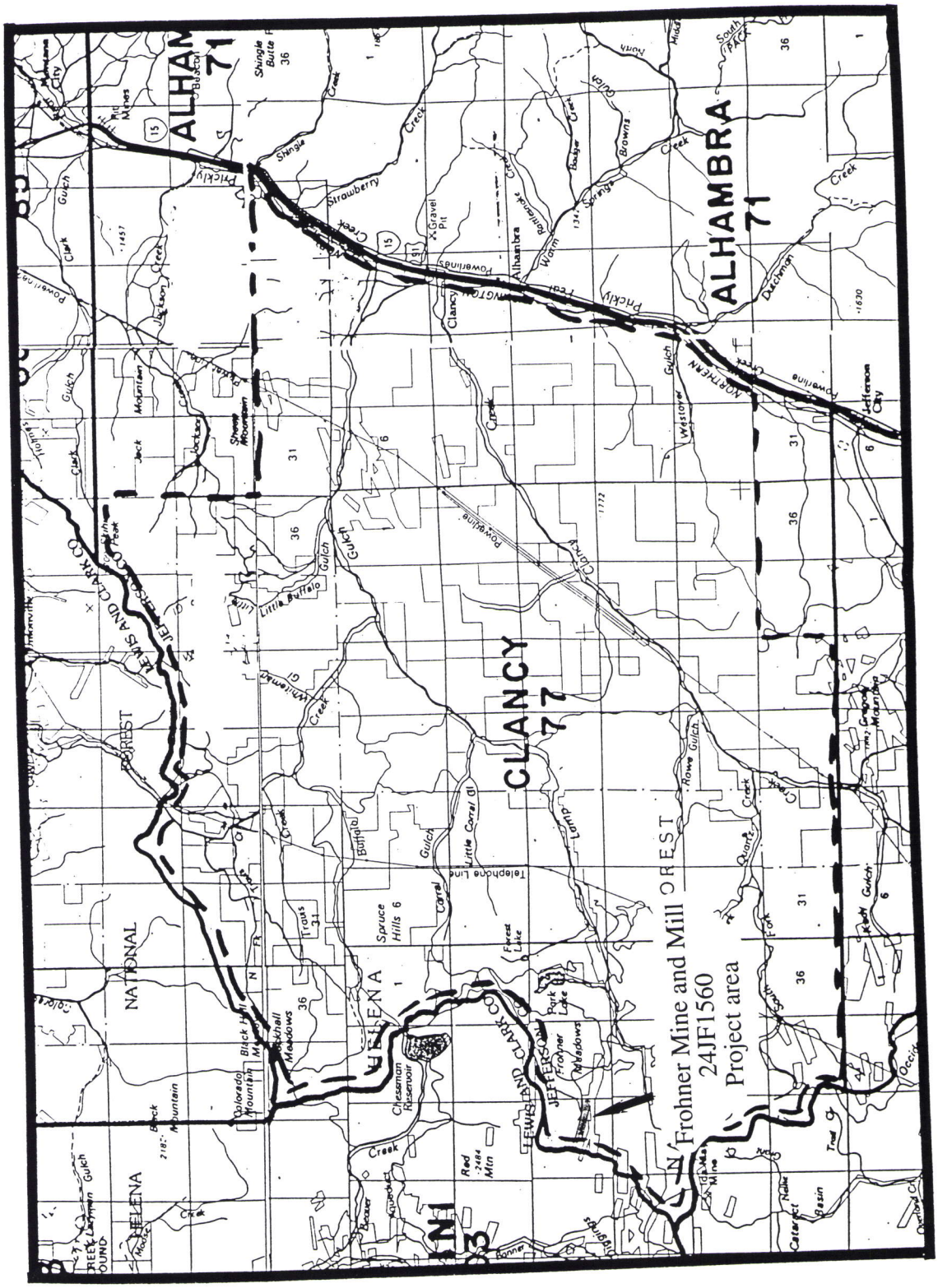

Figure 3. Map of the Clancy Historic Mining District (24JF1393) after Becraft et al.(1963) and AMRB (1994).

Frohner Mine and Mill Historic District and Landscape Discussion

The Frohner Mine and Mill qualifies both as a historic site and as a historic mining area. The Frohner Mine and Mill contain a wide range of mining related features scattered on 70 acres and connected along several miles of historic mining roads. The site contains prospect pits and adits, primitive shafts served by ladders, shafts served by whims, shafts served by headframes and a "Sutro" style tunnel for access to ore at depth and to provide gravity drainage of the mine. To transport the ore there still remains the decayed remnants of a series of ore bins, a network of roads, and two wood trestles. To process the ore a large mill was erected in the late 1880s and a much smaller mill was erected in the 1930s to treat the tailings. For support, there existed several cabins, a boarding house, and a cistern to provide water for the boarding house and probably the mill as well. Because it contains most of the elements of a mining district and apparently had little interaction with the other mining operations in the area, the mine and mill complex qualifies as a small sub-district of both the larger Clancy Historic Mining District (24FJ1393) and the Clancy HMD Sub-areas (24JF1541).

Visually, the Frohner Mine and Mill presents many of the elements of a mining landscape such as: land uses and activities; patterns of spatial organization; response to natural environment; and circulation networks.. It is recognized that the Frohner Mine and Mill has been subject to natural forces such as decay, erosion, deposition and collapse, and has felt the effects of modern human activities on the site such as salvage, exploration, repeated episodes of milling, and vandalism. In addition the regrowth of forest has altered the vegetative component of the historic mine. Many of these forces which diminished the mine's integrity as a classically defined historic mining site have either had a lesser effect on the landscape or have added yet another layer to the visual landscape of the mine. While most of the individual features lack integrity, when taken as a whole, they present a viable historic mining landscape where the mechanisms of feature degradation have added another layer to the visual landscape.

Land Use and Activities: The mine and mill activity is reflected in several land uses. Examples include the driving of a 1250 foot tunnel to tap the mines at depth and the utilization of the slope of the hill to facilitate the movement of materials through the mill.

Patterns of spatial organization: The mines are found up slope from the main adit and milling features where the veins outcrop in linear patterns. The human support structure and the main adit were constructed at a point on the mine road where they could most easily be accessed. The mill was placed down slope from the mines and the main adit so that ore and water could be transported by gravity while waste would flow away from the workings.

Response to Natural Environment: Because the veins outcropped near the top of the divide between Lump Gulch and the Ten Mile Creek valley, the mines tended to develop along the linear outcrops. The mill was positioned below the mines and near a source of water. Because the mill was on the opposite side of the stream from the main adit, a connecting road and later a more direct trestle were constructed.

Circulation networks: Extensive circulation networks in the form of wagon roads, trestles, a "Sutro" style tunnel and water supply once existed at this site. However the passage of time has degraded all of these with the road system least affected.

Vegetation related to land use: Historically, the mill had a tremendous impact on the vegetation. The mines would have used timber for supports, buildings were created with log walls, and the mill utilized large amounts of timber in its structure and may have utilized wood in its boilers. As a result, historically the vicinity would have had little or no trees after the 1880s.

Buildings, structures and objects: The mill once consisted of a complex set of structures, linked for the reduction of ores and the production of precious metals. Only a few standing structures remain intact (Feature K, Feature Q, Feature 11 and Feature 13). However, a large number of partially intact structures were observed.

Clusters: The site is composed of four clusters. The upper mines have created a linear cluster of adits with associated cabin, platforms and satellite adits (Figure 26). The middle mines have a number of shafts, adits and an associated cabin (Figure 25). The main adit complex (Figure 15) has industrial tunnels, waste dumps, boarding house, cistern and several smaller excavations. The lower mill complex contained two mills, an adit, prospect and a assay office (Figure 16).

Archaeological sites: Because the site is remote and difficult to get to, the work force was housed at the site. As a result, several middens were recorded (Feature A and Feature 17) and there are undoubtedly a number of outhouse pits scattered around the site, though none were identified during this survey.

Small-scale elements: The repeated scavenging of the site has left fewer small-scale items than would be expected for such an isolated site. However, a number of items were observed ranging from drill bits, to dynamite boxes, ladders, flotation cells (Feature 15A) and a horse-drawn whim (Feature K).

HISTORIC BACKGROUND

To understand the historical significance of the Frohner Mine and Mill, it is necessary to view it within the context of the historical district in which it is located. However, the mine is rarely listed in historic discussions of the larger Clancy Mining District. It appears that the physical isolation has resulted in little interaction with the other mines of the district. Because the mine was probably privately financed, it did not need to generate the publicity normally associated with mines financed through public offering of stock.

Clancy Mining District

The district is directly south of Helena and was first developed by placer operations along Prickly Pear Creek around 1865. The gold placers did not prove to be very profitable, but rich silver lodes were discovered the next year by Joseph Fultz who discovered the Legal Tender mine (located on Prickly Pear Creek and in the Alhambra sub-district) and Thomas G. Merrill who located the Liverpool. By 1872 the Legal Tender mine, equipped with a whim hoist, had sunk a shaft 160 ft with drifts from the 80 ft and 160 ft levels. Most of the first class ore, worth from $128 to $870 per ton was shipped by wagon to Corrine, Utah and then to smelters in San Francisco and Europe. Merrill thought the Liverpool claim was not worth developing and abandoned the property but he returned in the early 1880s and relocated the claim. He lacked the capital to properly develop it until John S. Miller of Helena became a partner in the early 1890s. At first the quartz veins were thin but it was quickly found that they were inverted lodes which got larger as the mine went down. The ore was of such rich quality that within 18 months the mine paid $200,000 in dividends, employed 45 men and by the end of the 1890s produced $1,500,000 worth of silver. The mine continued to produce on a small scale, intermittently, until 1951 (Knopf 1913; Pardee and Schrader 1933; Becraft et al. 1963; Wolle 1963; Krohn and Weist 1977).

Encouraged by the success of the Liverpool and Legal Tender mines, some two dozen other lode mines were opened in the district, mostly along the Lump Gulch drainage. The town of Lump Gulch City grew during the 1870s to around 200 persons and contained a hardware store, post office, machine and blacksmith shop, a general merchandise store, a butcher shop and an assay office. Both Clancy and Lump Gulch City were primarily supported by the King Solomon, Free

Coinage and Little Nell mines which produced exceptionally rich silver ore, totaling about 2,618,000 ounces of silver for all three mines (Wolle 1963; Becraft et al. 1963).

The Little Nell and Liverpool mines were once again active by 1908. They supplied the 20 ton Gold Crown Concentrator.

By 1915 only $5000 worth of ore was produced, but a brief revival of mining operations occurred in 1920 when the price of silver was established at one dollar per ounce. Over $218,000 in silver was produced that year but by 1929 the figure had dropped to $3000. Only small-scale lode mining has been done in the district since 1930. Since World War II, development and small-scale work has been done at the Maggie, Rhoades, and Meadow mines. Total production from the district has amounted to somewhat more then $4,000,000 (Pardee and Schrader 1933; Roby et al. 1960; Becraft et al. 1963; Lawson 1972; 1974; 1976; 1977).

The placer gold deposits on Clancy and Prickly Pear creeks were dredged between 1933 and 1947.

Frohner Mine and Mill History[4]

Gold was discovered in the Lump Gulch basin in 1865. During a very brief period of placer gold prospecting and mining, a placer claim covering about 157 acres at the head of Lump Gulch, including the Frohner site, was located. Subsequently, as miners searched for quartz veins in the same area, six lode claims were also located within the boundaries of the unnamed placer. The seven claims were surveyed for patent in 1872, but only two - the Frohner and Moltke lodes - were ever patented (Wolle 1963; Cheney 1984; GCM 1995; GLO 1872).

During the following decade, there was little if any mining in the area. Interest in Lump Gulch was renewed in the early 1880s when Thomas G. Merrill, a miner who discovered a promising lode about 15 years earlier, returned to attempt development. While development of his Liverpool claim did not materialize until the following decade, other miners prospected the area (GCM 1995).

Jacob Frohner and unnamed others were among those miners. They relocated the Frohner claim and had it surveyed for patent in October of 1882. Improvements at that time included the discovery shaft (which dated to 1872 or earlier), a second shaft, an adit, and surface excavations, together valued at $1870 (GLO 1882). Shortly thereafter, the mining claim was patented (Jefferson County Clerk and Recorder).

Information about the early years of the mine is lacking, but serious development presumably awaited the formation of the Frohner Gold and Silver Mining Company. That company was incorporated on March 30, 1886. Early on, V. Charles Rinda served as president and E. C. Prosser as secretary (Montana Historical Society Archives: MC 170, Box 20, Folder 10).

By at least 1888, Frohner Gold and Silver began developing its mine. The year before, it claimed the Frohner Extension Lode (Figure 6) at the east end of the Frohner claim where the company would later build its mill and boarding house (GLO 1904).

In 1888, the company mortgaged the Frohner and Frohner Extension claims to John O. Briscoe, trustee (for $780), Charles Lehman (for $780), and D. J. Arnold (for $500). Perhaps, it was also at that time that, with the borrowed and other money, Frohner Gold and Silver extended the adit (Feature 1) to 1,120 feet and built the mill (Feature 14), boardinghouse (Feature 17) and whatever other surface improvements there might have been (Montana Historical Society Archives: MC 170, Box 20, Folder 10; GLO 1904).

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4 The text for the Frohner Mine and Mill History is drawn with minor changes from Renewable Technologies, Inc. 1996: 3-8.

A short five years later, the property was closed, and none of the sources consulted reported production by Frohner Gold and Silver. The mine is likely to have closed as a result of the Repeal of the Sherman Silver Purchase Act. It appears there was an attempt to revive the mine about two years later, in 1895. E. P. and Retta Briscoe signed another mortgage in April of that year, this one with the First National Bank of Helena for $50,803.49. Neither the 1888 or 1895 loans were repaid, and in 1904 the Conrad-Stanford Company sued Frohner Gold and Silver and other parties with interest in the Frohner and Frohner Extension mining claims. Conrad-Stanford, which had taken over the assets of the First National Bank of Helena two years earlier, succeeded in its suit, and thereafter apparently became the owner of the Frohner Mine (Becraft 1963; Montana Historical Society Archives: MC 170, Box 20, Folder 10; GLO 1904).[5]

The mine was briefly re-opened by unknown parties in 1911 when it produced "gold ore containing a little copper." A mill rated at 30 tons was reported to be under construction that same year, but the mill has left no trace in the physical or historical record. The mill may have never progressed out of the planning stage. It again lapsed into obscurity until 1928 and 1929, when unnamed lessees shipped two cars of sulphide lead ore to the American Smelting & Refining Company smelter in East Helena.[6] One source suggested that production continued after the late 1920s to as late as 1954 (Features D, I, and J), but none of the other sources consulted reported mining after 1929. Total recorded production between 1928 and 1954 was listed at 1,917 tons (Hall 1912; MR 1928; Roby 1960).

In 1939, an unknown party reworked Frohner mill tailings with a small jib (flotation) mill (Feature 15 and 15a). The mill consisted of a 3 foot ball mill, four flotation cells, and a home-made classifier. Although the mill or parts of it remained on-site until the late 1950s or later, it apparently was used only briefly (MY 1940; MBMG; Roby 1960).

Other Mining Claims in Frohner Vicinity

An adit and two small waste rock dumps at the upper end of the Frohner site are located about 200 feet south of the main concentration of workings (Features R and possibly Features S and T). These lie within the boundaries of the patented Fraction and unpatented Loeber No. 1 lode mining claims. These two mining properties were located and worked separately from the Frohner Mine.

With the exception of the original survey plat, none of the sources consulted mentioned activity on the Fraction claim. The Fraction was located in September 1889 such that it overlapped the previously claimed Loeber and General Sherman lode mining claims. Robert Shanahan held the Fraction two years later when it was surveyed for patent. At that time improvements included two shafts and several cuts, together valued at $645 (GLO 1891).

Little more is known of the Loeber mining claim. It was among six lode claims that were located by 1872 within the boundaries of a large placer claim at the head of Lump Gulch. The only development and active mining known to have occurred at the Loeber Mine was in 1957 when it produced 60 tons of ore. At that time, the property was claimed and operated by C. E. Pew and W. Beaver. However, the mining claim had never been patented, and it was canceled in 1990 (Roby 1960; GLO 1872; 1990).

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5 RTI did not examine the district court file at the Lewis and Clark County Courthouse Annex. However, Conrad-Stanford's successful lawsuit is indicated by the fact that the Frohner Extension was subsequently patented by William Muth, Conrad-Stanford's agent and manager (GLO 1904).

6 Ore bins at Features 13, B and M appear to date from the late 1920 to early 1930 era.

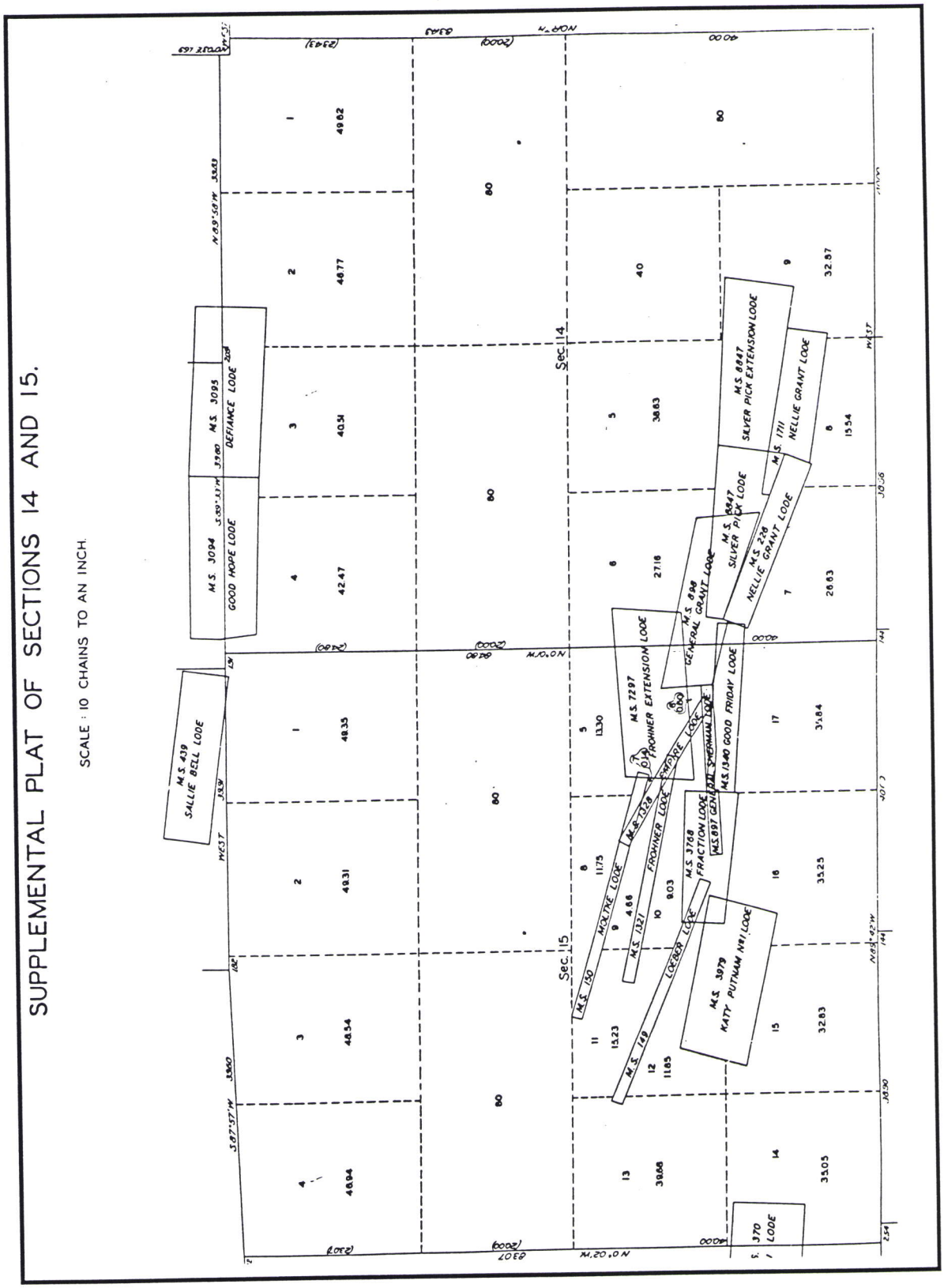

Figure 4. Mining Claims in the vicinity of the Frohner Mine and Mill (24JF1560).

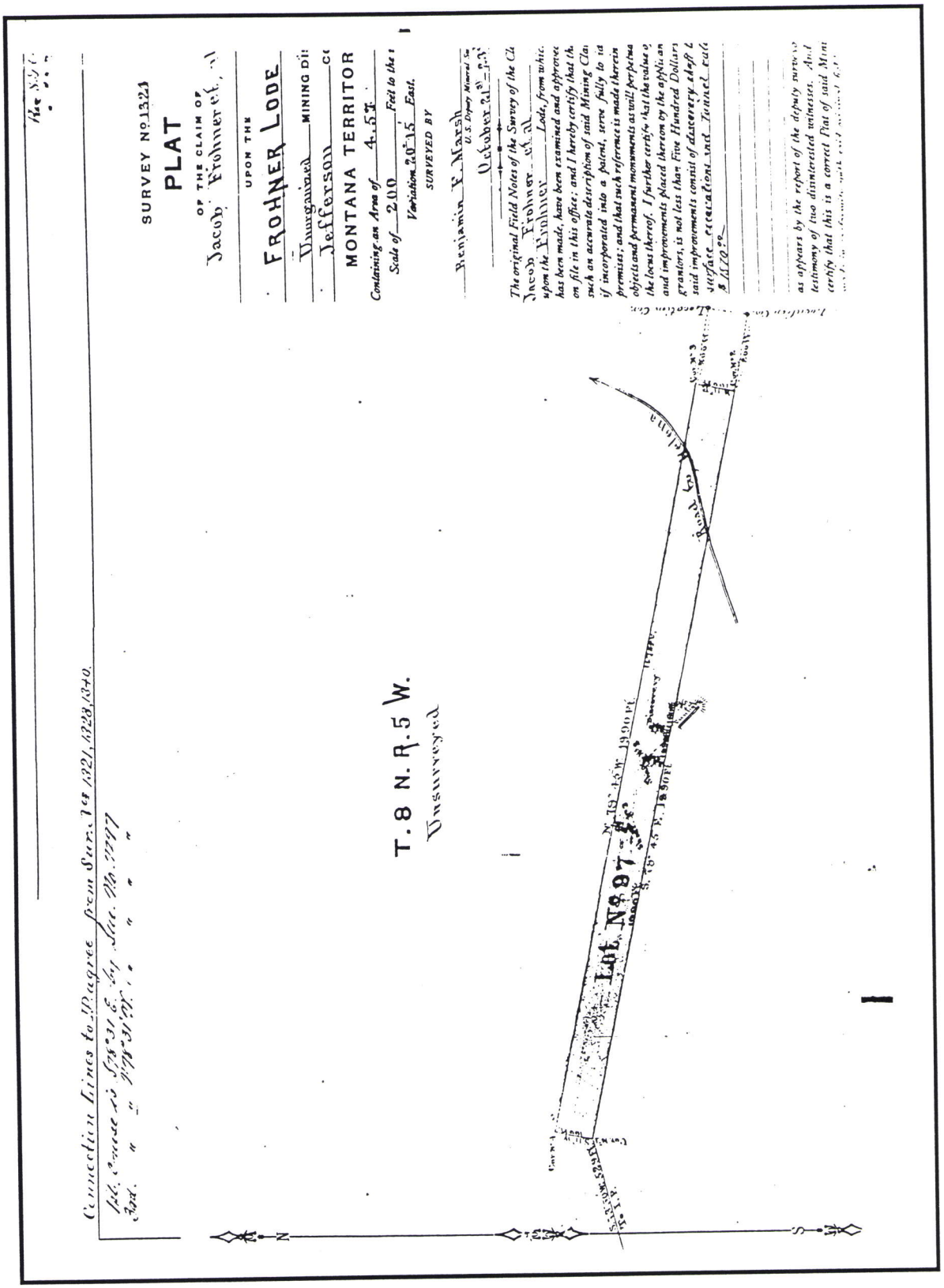

Figure 5. Frohner Mineral Survey map (1882)
showing the discovery pit, two shafts (Features B and I) and a tunnel (Feature D).

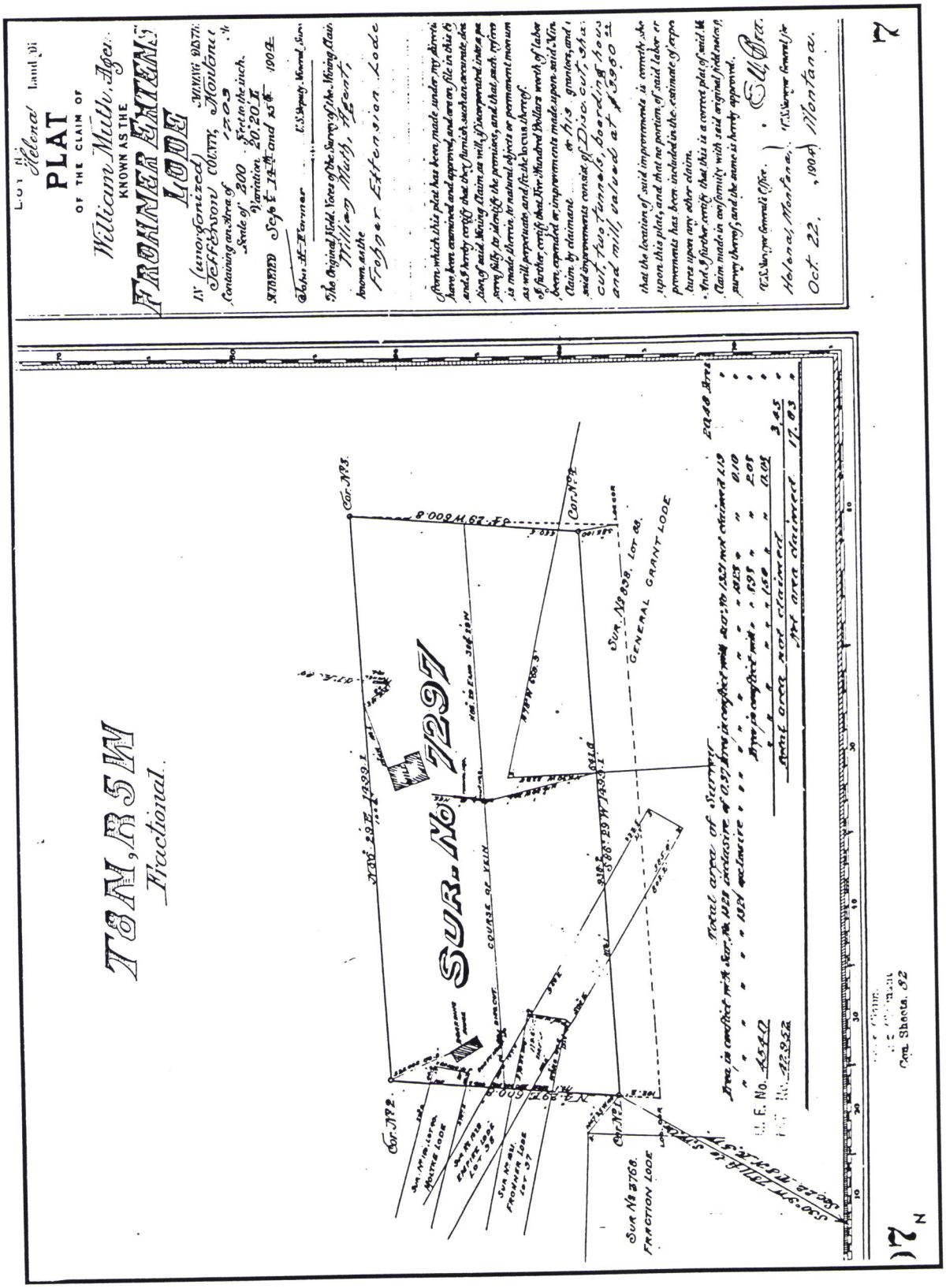

Figure 6. Frohner Extension Mineral Survey map (1904) showing the mill (Feature 14) and boarding house (Feature 17).

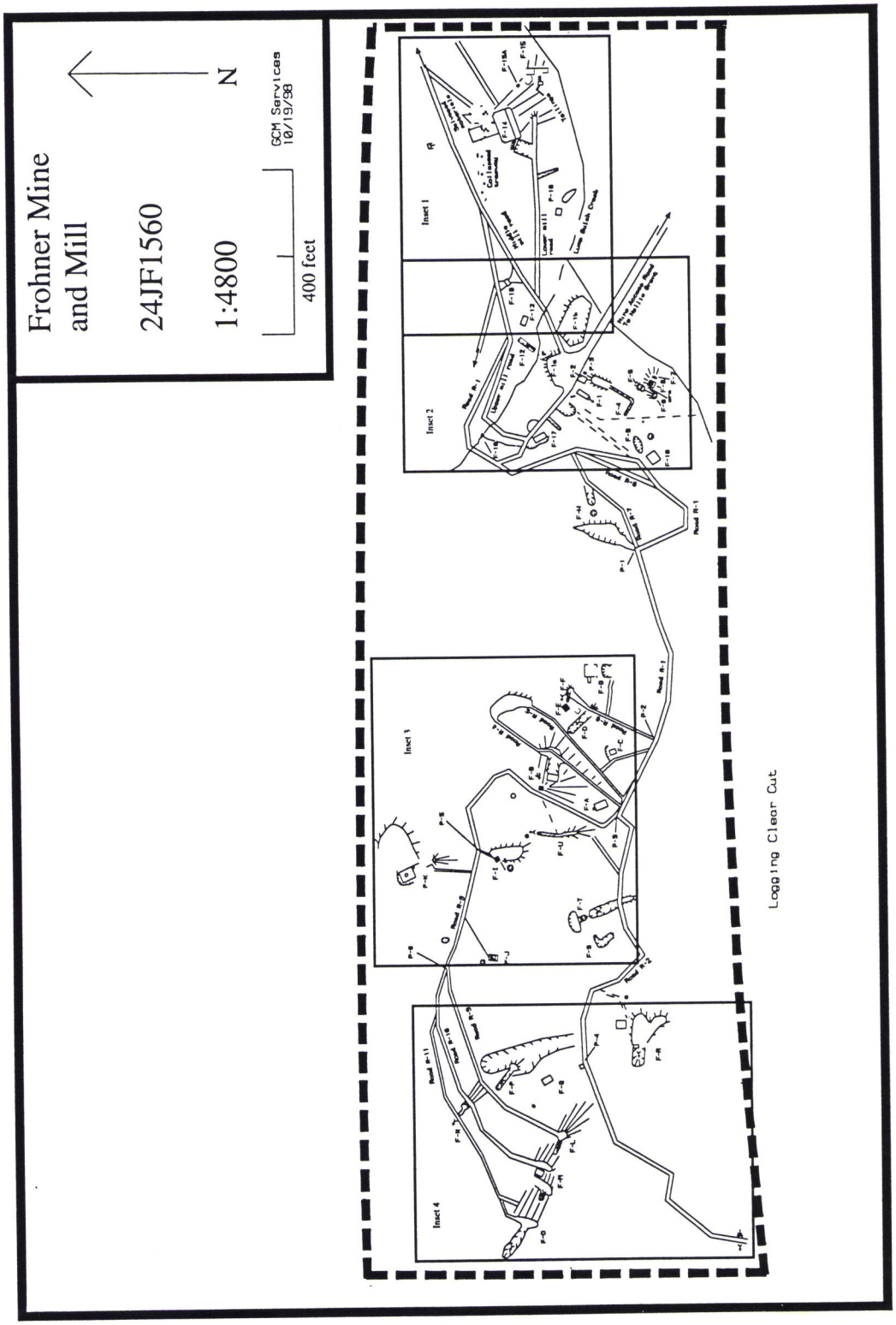

Figure 7. Frohner Mine and Mill Site Map (1998 GCM).

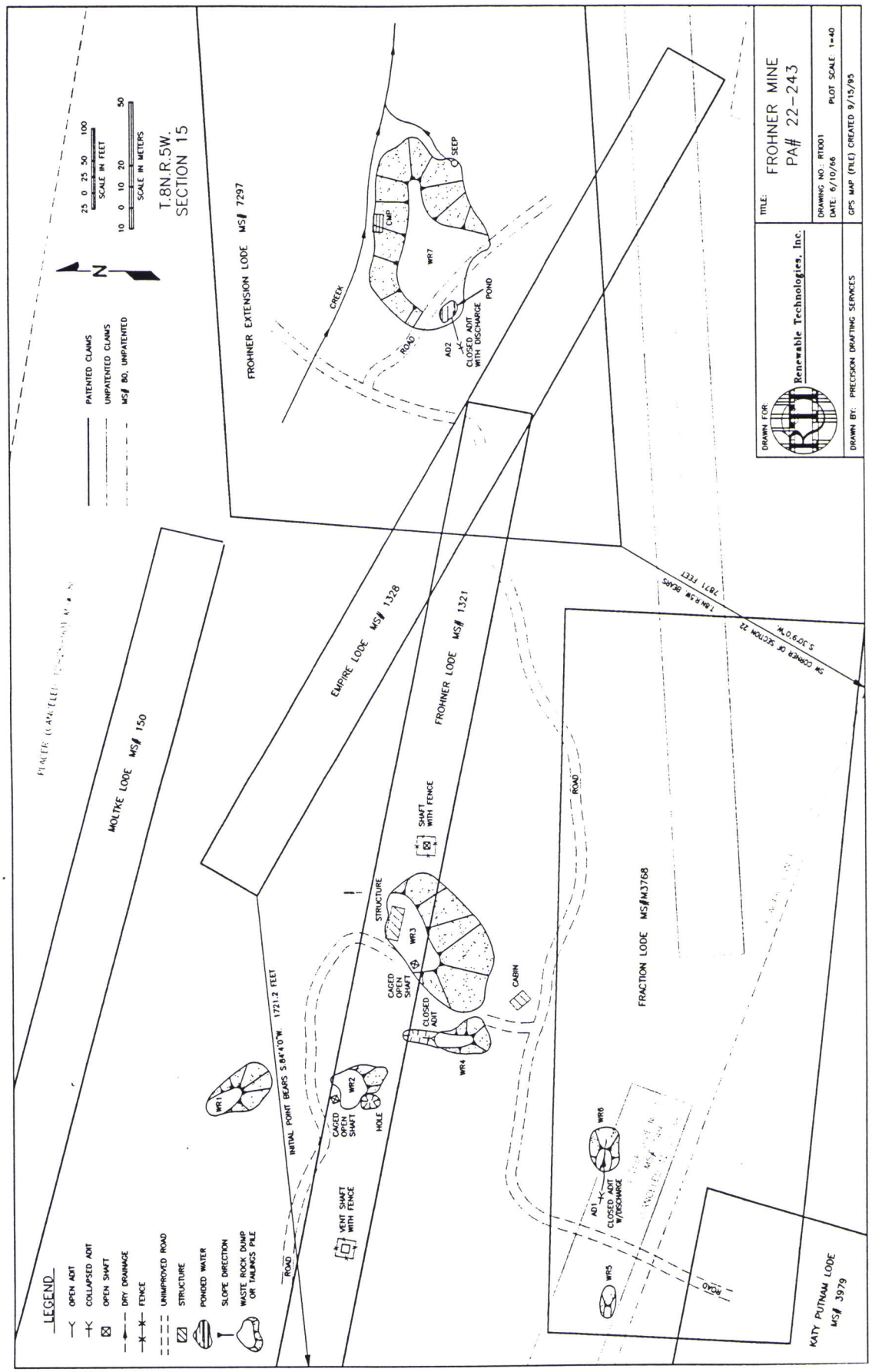

Figure 8. Claim map with select mining features (1995 RTI).

Figure 9. July 1998 photograph of Frohner Mill ore bin stone pier viewed to the northwest.

Figure 10. July 1998 photograph of Feature 12 cabin viewed to the northwest.

Figure 11. July 1998 photograph of Frohner Mine main adit house (Feature 1) viewed to the west.

Figure 12. July 1998 photograph of Frohner Mine main adit house (Feature 1) seepage detail viewed to the west.

Figure 13. July 1998 photograph of Frohner Mine main adit (Feature 1a) waste dump and trestle remains viewed to the west.

Figure 14. July 1998 photograph of Frohner Mine main adit (Feature 1b) waste dump remains viewed to the west.

RESULTS OF INVENTORY

By contractual definition, the project was limited to the survey and recordation of the Frohner Mine and Mill southwest of Helena, Montana. No additional historic or prehistoric sites were identified or recorded.

Frohner Mine and Mill - 24JF1560

Site Type:	Historic mine and mill site
Location:	N1/2, SE 1/4 Sect 15, T8N, R5W
	NE1/4, SW 1/4 Sect 15, T8N, R5W
Ownership:	Barmont Mines Corporation (Frohner and Frohner Extension)
	Sandra L. and Ronald R. Peterson (Fraction Mining Claim)
	Helena National Forest (Unpatented land)
Figures:	2, 5 - 31

Description: The site is located in southwest Montana southwest of Helena near the dividing ridge between Lump Gulch and Ten Mile Creek. The site consists of a number of salvaged and whole log buildings, ore bins, two mills, a tunnel portal and two large waste piles, several prospect pits and adits, a number of collapsed adits, open shafts, collapsed shafts, air shafts and covered shafts and one relatively well preserved whim. Because of several episodes of poorly financed mining in the 20th century, the site has been extensively salvaged. The mine and mill site is recommended to be eligible for the National Register of Historic Places as a site, a historic mining landscape, a historic sub-district and as a contributing component of the Clancy HMD Sub-areas.

The mine is composed of four clusters of features. The two groups of mining features (Upper and Lower) were physically separated from the Main adit and mill features. This separation is reflected in the recordation by utilizing alphabetical feature designations for the mining clusters and numerical feature designations for the main adit and mill clusters.

Features:

F-1 Main adit and adit house (11 x 30 feet). Located on the mine access road at its junction with the middle mill road, the northeast corner of this structure serves as the prime datum for the site. The building fronts a nearly closed adit from which a relatively large volume of water is seeping. The water is laden with iron which had deposited on the floor of the adit house - - forming an iron-based set of terraces as it spills out the remains of the front door. Judging by the size of waste dumps Feature 1a and 1b, more material was removed from this tunnel than all the other excavations combined. It is likely that this adit tapped the ore bodies at depth and served as a downward sloping exit for the materials and mine water.

The adit house which fronts the road and abuts the adit portal, had doorways to the east and west. The structure has been reduced to only 3 or 4 logs in height. The structure has saddle-notched corners. Since there are no apparent materials deposited around the structure, the materials from the upper building may have been salvaged. To the side of the structure are two 3.5 foot diameter cog tractor wheels.

F-1a Waste dump and trestle remains. Located across the main road from Feature 1 adit and north of the middle mill road, this fan shaped waste dump extends from 57 to 135 feet from the door of the adit house. On the toe slope of the dump is a jumble of poles and rotting wood. The wood is opposite the stream from Feature 14 trestle remains. Because of this relationship, the wood is likely to also be trestle remains.

F-1b Waste dump. Located on the south side of the middle mill road opposite Feature 1a, this dump appears to have been subject to recent excavation and removal. The level of the dump is eight feet lower than the surrounding waste piles. The excavated dump begins at a point 133 feet from the adit house doorway. It extends 111 feet to the east. The northern edge of the dump is adjacent to the stream. The west side of the dump has some pole debris.

F-2 Collapsed building (14 x 20 feet). Located 20 feet south of Feature 1 on the mine access road, this feature rises only 3 to 6 logs high. The structure has saddle-notched corners. Because there is little remaining materials from the upper walls and roof, it is likely that the structural materials were salvaged.

F-3 Outhouse (4 x 7 feet). This collapsed log privy is located nine feet south of Feature 2 along the mine access road. The building is 6 logs high with saddle notch corners. It has partially collapsed into the hole beneath it.

F-4 Collapsed adit. The waste dump toe slope of this excavation touches the south wall of Feature 2. The waste dump is 46 feet long and 20 feet wide. The adit cut and collapsed adit form a dog-leg with the lower leg 6 x 69 feet at 212 degrees with the upper leg 6 x 60 feet at 300 degrees.

A footpath runs diagonally past the headwall at 340 degrees. The path connects a small stream with an open cut near Feature 1. The path is either for access to drinking water or as a mining claim / forest service demarcation. A corner post marked "... 371 B1" was observed across the path from the excavation. The path corresponds to the western boundary of the Frohner Extension Lode.

F-5 Prospect shaft (11 x 14 feet). Located 33 feet south of the corner of Feature 4 and 8 feet north of the Feature 6 enclosed shaft, this small prospect shaft has a small waste dump on the east side.

F-6 Enclosed shaft (15 x 14 feet). This pole-shored shaft is enclosed in a partially collapsed log structure with "V" notch corners that is 9 logs high. The structure has quarter pole chinking, mud daubing, and no roof. The interior is heavily stained by smoke. Square nails were observed in the building. The open doorway on the northeast side is the structure's only entrance.

The enclosed shaft is rectangular (4 x 8 feet) and appears to be about 10 feet deep.

F-7 Prospect shaft (6 x 4 feet). This small shaft is immediately southeast of the Feature 6 shaft structure. While filled with water, it appears to be only 2-3 feet deep.

F-8 Funneled shaft (11 x 17 feet). Located 36 feet northwest of the Feature 6 shaft enclosure, this funneled shaft is partially filled with water. It appears to be about 14 feet deep. A waste dump descends the east side to Feature 5.

F-9 Prospect (18 x 45 feet). Located to the west across a footpath from Feature 8, this feature is approximately above the line of the Feature 1 adit. The pit is about 10 feet deep.

F-9a Prospect (11 x 15 feet). Located seven feet south of Feature 9. This pit is about 12 feet deep.

F-10 Disturbed area (24 x 27 feet). Located 83 feet east of the upper junction of Roads R-1 and R-8, this area is on the south side of the R-1 road. The area is roughly rectangular and shows evidence of disturbance. At the lower end near Feature 9 are several charred logs.

F-11 Log cabin (13 x 22 feet). The cabin is located 45 feet above the creek crossing and is oriented at 290 degrees. The rectangular log structure has a log foundation, 7 log high walls, quarter pole chinking, mud and concrete daubing, and a double board and batten gable roof supported by four purlins and a ridgepole. Open windows are in the south, west and east wall. The open doorway entrance is on the east side. The south window has been cut down to form a doorway. Items observed in association with the structure include a small stove, round nails, plate glass fragments, a boot, brick and white plate fragments.

F-12 Collapsed trestle (48 x 10 feet) extends from the upper mill road to the creek. The trestle remains are 45 feet from the back of cabin Feature 11. The former structure was constructed of logs which are now in a jumble running down the slope. It is opposite a jumble of similar logs on the toe slope of the Feature 1a waste dump.

F-13 Ore bin (16 x 10 feet). Located 193 feet west of the junction of the upper and middle mill roads, this wood ore bin appears to have provided loading capability for ore brought down the hill on Road R-1 from the upper mines, or ore from the Feature 1 main adit brought across the trestle or on the upper mill road. The structure is 27 feet from the middle mill road and 17 feet from the upper mill road. The ore bin appears to be of scavenged wood -- indicating use after the mill (Feature 14) ceased production. The front of the ore bin has three spouts and is propped up with two diagonal posts and is anchored to the hillside by a cable. The floor and east wall of the ore bin are missing.

F-14 1888 Mill. Located 497 feet east of the middle mill stream crossing, the ore bin of the mill is 40 feet below the middle mill road. This large mill has no remaining roof or walls. The lack of material coupled with the extensive tailings indicate that the mill was salvaged after a period of operation. It is represented on Mineral Survey No. 7297 conducted in 1904. On the east side of the mill are two piles of wood that appear to have been left during the salvage effort.

The ore bin (32 x 32 feet) is the most intact portion of the mill. The horizontal ore bin floor is supported by five sets of five posts of increasing length as the hill dropped away. The far end of the ore bin floor is anchored by a massive stone and mortar wall. The wall is 32 x 4 at its base, but tapers to 2 feet wide at the top of its 18 foot height. The western top corner has crumbled. The top of the ore bin is flat with a mound of ore still in place. The flat surface allowed a now-collapsed tramway to connect to the mill from the middle mill road to the west. The wood tramway has collapsed and is in a jumble to the west of the mill ore bin.

Below the masonry pier, the slope of the hill is covered with a jumble of stone from the pier and broken poles, timbers and planks. The 32 x 32 foot area corresponds to the ore reduction floor, but the advanced state of decay and disorganization leave little clue as to the manner of ore reduction.

Below the sloping jumble is a roughly 80 x 39 foot flat floor. The level probably corresponded to some sort of separation and concentration processes. The area has been salvaged down to the floor boards, many of which are also missing. On the east end are two concrete machine mounts with four threaded bolts protruding from the top surface.

To the south of the large floor is a 15 foot wide slightly curving lip above the extensive tailings. The tailings descend the slope 84 feet to the Feature 15 modern mill.

F-15a Flotation tank (6.5 x 5 feet). This wood three cell flotation tank is on its side near the bottom of the Feature 14 tailings dump.

F-15 1939 mill remains. Located below the historic mill near the bottom of the tailings piles. This small mill appears to have been created to reprocess the tailings. A 19 foot long retaining wall was erected to hold back the eroding tailings and to keep them out of the mill. Into the tailings was excavated a narrow cut that has since eroded. From the cut, tailings were hauled on wood rails

topped with carpet end-strips to the 13 x 8 tailings bin which is intact. Because the chute on the eastern side of the bin is lower than the wooden machine mounts, the tailings would have to have been raised by some mechanism to the 3 foot ball mill listed in the historic literature. On the eastern downslide side of the bin is a wood structure that may have held an elevator mechanism of some sort that fed tailings into a small ball mill mounted on the north side. Wood debris is located east and toward the creek. On either side of the debris are partially intact wood floors. To the north of the tailings bin are two piles of mill screen, timbers and planks salvaged from the historic mill. A gasoline tank was observed in this area. There is little indication that this milling endeavor met with success. The tailings are little excavated and there are no new tailings below the modern mill to indicate any volume of reprocessed material.

F-16 Assay office (13 x 16 feet). Located 42 feet below the lower mill road, this small collapsed rectangular log cabin has remaining walls five feet high. The structure has inverted saddle notch corners, and internal quarter pole chinking without daubing. Round nails were observed in the structure. The door is to the east -- there are no windows. Inside on the south side is a manger or ore sample bin running the length of the wall.

Across the road from the cabin is a 1920s automobile hood. West of the cabin are two wood wagon tailgates and a wood table.

Ten feet east of the cabin is a dump containing items typical of assay labs. Items observed include scorifiers (5), muffle (1), brick fragments (20+), brown glass fragments (5+), cupel fragments (20+), 3 hole-in-top cans, wash basin fragment (1).

F-16A Collapsed adit (10 x 54 feet). The ravine is located 83 feet southeast from the Feature 16 cabin. The cut originates on the flood plain of the creek and extends upward to the lower mill road. It is five feet wide at its mouth. The adit is represented on the 1904 Mineral Survey No. 7297.

F-17 Boarding House (14 x 31 feet). Located 165 feet northwest of the datum at Feature 1, the boarding house is opposite the mine/mill road junction. The rectangular log building has been reduced to floorboard level only 2 feet high. The structure had "V" notching and quarter pole chinking. Rotting floor joists run across the structure. Square nails were observed in the structure. A large stripped down cook stove was observed in association with the structure. Because there is no wood debris, the building appears to have been salvaged. The boarding house appears on the Mineral Survey No. 7297 for the Frohner Extension.

Across the road from the structure is a debris plume extending down the road bank toward the creek. Items include shoes, purple glass, stoneware, clear whiskey shot glass, aqua bottle neck, stove pipe, numerous tin can fragments, whiteware, clear glass and a mason jar top -- "Grand Prize Acorn 8-22".

Twenty feet south along the road is a narrow open cut running west up the hillside. This small collapsed adit is the discovery cut for the Frohner Extension.

F-18 Cistern (8 feet long, 4 feet high). The cistern consists of a wood dam across a small stream; a modern valve is at its base. It is located across the creek 120 feet to the northeast of Feature 17 and 30 feet above the upper mill road. The reservoir behind the wood structure extends about 10 feet to the northwest. The reservoir is nearly silted-in. To the southwest of the dam is the debris from an earlier dam structure.

Running from the southwest side of the dam toward Feature 17 is a shallow ditch that may have provided water for the mess hall.

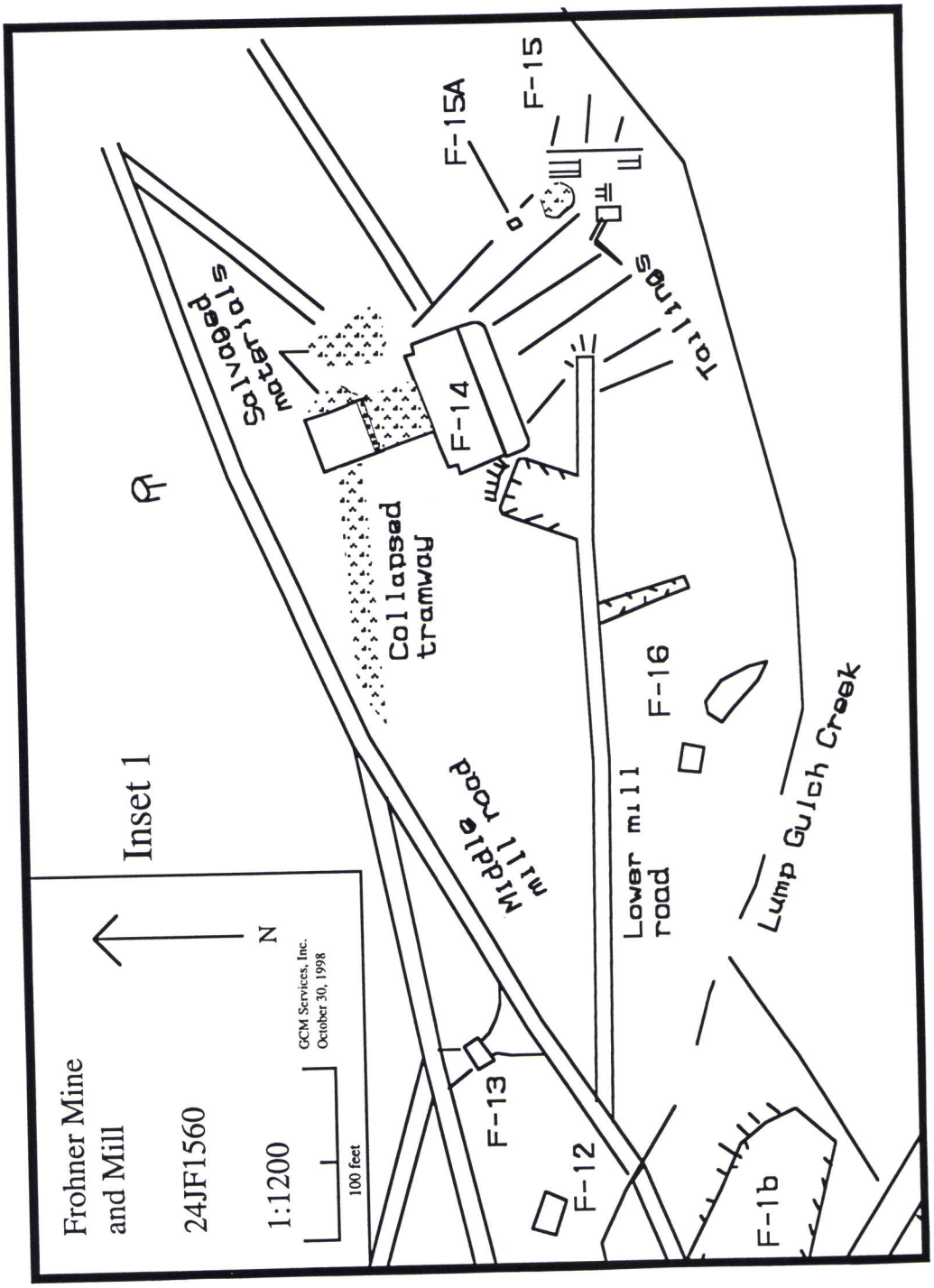

Figure 15. The Frohner Mine and Mill (24JF1560) Mill complex

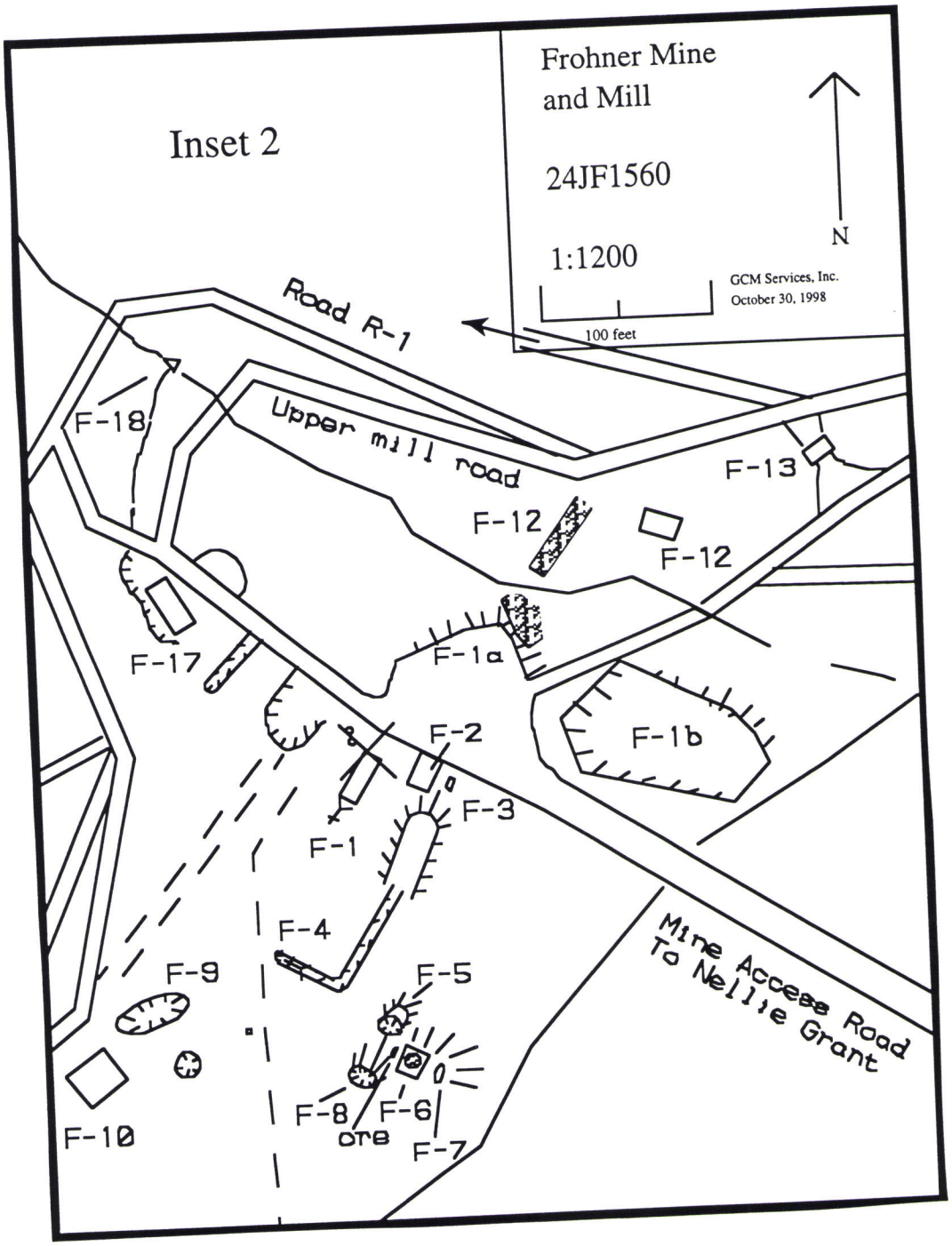

Figure 16. The Frohner Mine and Mill (24JF1560) Main adit complex detail.

Figure 17. July 1998 photograph of Frohner Mine adit viewed to the west.

Figure 18. July 1998 photograph of Feature 2 cabin viewed to the southwest.

Figure 19. July 1998 photograph of Frohner Mine Feature 6 shaft house viewed to the southwest.

Figure 20. July 1998 photograph of Feature 13 ore bin viewed to the northeast.

Figure 21. July 1998 photograph of Frohner Mill Features 14 and 15 viewed to the northwest.

Figure 22. July 1998 photograph of Feature 15 ore bin and Feature 14 tailings viewed to the southeast.

Figure 23. July 1998 photograph of Feature 16 assay office viewed to the southwest.

Figure 24. July 1998 photograph of Feature 17 Boarding House viewed to the south.

Mine

F-A Cabin (29 x 18 feet) Located 40 feet at 66 degrees from Datum "P-3" at the junction of roads R-1, R-2 and R-3. The partially rectangular cabin has a log foundation, "V" notch corners, quarter-pole chinking with mortar daubing. The slab gable roof has 8 purlins and a ridgepole. The entrance, an open doorway, is on the southeast side along with an open window. The southwest wall of the cabin has collapsed. The northeast side has an open window. The northwest side has a collapsed root cellar (11 x 9 feet). While the back of the cabin's roof is nearly at ground level, the front of the cabin's roof is nearly 10 feet off the ground.

A debris scatter in front of the cabin includes: 1/4 inch window glass, charcoal, stove parts, square and round nails, International hub-cap, bone, brown glass fragments, light purple glass fragments, center-fire pistol cartridge, green glass fragments, aqua glass fragments. Whiteware shards were found in front of the cabin and were observed downhill along Road R-1.

F-B Shaft (4 x 8 feet). Located between Road R-3 and Road R-4 about 212 feet northeast of Datum "P-3". The log-shored, open shaft is covered by a steel grate (10 x 10 feet). Below and to the east of the shaft is the decaying remains of a wood headframe. To the southeast is a 26 x 16 foot ore bin that has collapsed. Below the ore bin is a pre-WWII truck cab. The waste dump for the shaft extends downslope to R-4 and to the southwest 100 feet.

This shaft is represented on the 1882 Frohner Lode Mineral Survey as the Shaft No. 2 (GLO).

Below the shaft to the east, Road R-4 historically terminated in a platform so that trucks could back into the ore bin. This road has been extended to the northeast by a bulldozer and connected with Road R-5 below.

F-C Log tent platform (13 x 16 feet). Located above Road R-1 and below R-5, the platform is along a road trace running between the two roads. The rectangular platform is one log high and sits in a platform excavated into the hillside.

F-D Collapsed tunnel (63 x 18 feet). Located between Roads R-4 and R-5, the collapsed tunnel extends into the hillside at an orientation of 318 degrees and is shown connecting to the Feature B shaft in the 1882 Mineral Survey of the Frohner Lode. The mouth of the tunnel cut opens onto Road R-5 and a small 11 x 10 foot waste dump is across the road from the adit. Ten feet to the northeast of the tunnel portal is a 10 x 12 foot pile of decayed mine timbers. Fourteen modern rock drill bits were observed in a pile on the southwest side of the timber pile. The tunnel is shown just outside the Frohner Lode to the south on the 1882 Mineral Survey of the claim with a dotted line connecting it to Shaft No. 2 (Feature B) (GLO 1882).

F-E Shaft (8 x 4 feet). This shored open shaft has been enclosed by a 13 x 15 foot barbed wire fence. The south corner of the fence is 17 feet northeast of the Feature D mine timber pile. A wood ladder is on the east side of the shaft. Because the shaft appears to be deep without a corresponding waste dump pile, the shaft may be an air shaft / emergency escape route for the main adit (Feature 1).

F-F Collapsed adit (28 x 10 feet). Located 10 feet below Feature F-E and 66 feet northeast of the mouth of Feature D, the collapsed adit is aligned to intersect the Feature E shaft. The exposed tunnel is oriented at 248 degrees. The portal of the adit has been destroyed by a bulldozer pushing material past the historic terminus of Road R-6 and through the adit tunnel. The bulldozer exposed two stulls, mine ties and rail and the adit portal from the inside (though the original portal exterior is now covered). A large metal sheet is laying on the hillside on the south side of the adit along with a large bucket.

F-G Whim building and covered shaft. Located about 90 feet southeast of the south corner of Feature E, the feature consists of a former whim building and shaft that have been partially destroyed by a bulldozer. The whim house (29 x 24 feet) is oriented at 0 degrees. While all four "V" notch corners survived, the 3 - 4 foot high walls are intermittent. The north, east and west sides are dug into the hillside. The interior of the northeast corner is heavily covered by soot, indicating the presence of a forge. An open window is in the east wall and a collapsed root cellar is in the west wall (6 x 11 feet). Several hole-in-top cans were observed below the structure to the east.

Directly south of the whim house is a shallow depression measuring 60 x 51 feet. The former shaft location has been completely obliterated by a bulldozer. A road trace extends up the hill to the west and intersects with Road R-6 on the southwest side of Feature D.

F-H Excavations. Located near Datum "P1" on Road R-1, this feature consists of a hillside platform (184 x 34 feet), a prospect pit (6 x 6 feet) and a small prospect adit (18 x 21 foot oriented at 312 degrees). The features are along a road trace (Road R-7) that descends from datum "P1" to the junction of Roads R-1 and R-8.

F-I Shaft (4 x 8 feet). Located 36 feet at 206 degrees from datum "P-5" along Road R-3, the shored and open shaft is covered by a modern 11 x 11 foot steel grate. A three lobe dump extends to the east, southeast and southwest. A 16 x 15 foot funneled shaft with no waste dump is located 25 feet southwest of the grated shaft. This probably represents Shaft No. 3 on the 1882 Mineral Survey of the Frohner Lode. A 3.5 inch metal pipe 25 feet long lies on the ground between the two shafts. A wood platform (4 x 10 feet) on the waste dump overlooks the funneled shaft. Two prospect pits are located below the waste dump to the east and southeast. Immediately above the grated shaft is a flat area with several items. These include a dynamite box, modern hoses, a boot, fuel line, 5 gallon gas can, 55 gallon barrel, and round nails. The site appears to have been worked in the 1960 to 1980 era (GLO 1882).

F-J Air shaft (12 x 11 feet). Located 111 feet to the southwest off of Road R-3 between Data "P-4" and "P-5", this deep shaft has no waste dump below. The shaft is surrounded by a 21 x 15 foot fence. The shaft is shored with vertical poles. Twelve feet to the northwest is a 12 x 12 foot prospect pit with waste rock descending the hill toward the air shaft. Four modern rock drill bits were observed on the side of the waste rock pile. A two-track road trace connects the air shaft to the R-3 road.

F-K Whim house and covered shaft. Located 92 feet at 04 degrees from Road R-3 near Datum "P-5", this development consists of a nearly intact whim house, covered shaft and a partially intact log structure. The log base of the log structure has been reduced to two walls, east and south which stand three feet high. The corners are "V" notched. The structure is partially covered by a modern bulldozer push. The missing two walls were removed by the same bulldozer. The function of the structure could not be determined.

The shaft to the north of the log structure appears to have once been enclosed in a log structure of its own. While the bulldozer removed the south and west walls, the 20 foot east wall remains standing as does the wall shared with the whim house. In the center of the former 20 x 27 foot structure is a depression that likely corresponds to the location of the shaft. In the remaining corner in the northeast of the structure is a log crib filled with rocks -- typical of that used by forges between 1860's and 1910's. The walls around the forge crib are covered with soot.

The whim house is immediately north of the shaft house and 33 feet north of the partial log structure. The walls have "V" notch corners, quarter pole chinking and square nails are evident. The building is intact with doors in the south and east walls, but no roof. The building sits in a platform dug into the hillside. In the center of the building is a horse- or mule-powered whim.

While the wood portions have been subject to decay and the metal portions subject to rust, it is a very good example of a late model whim. The model appears to be from a "kit" and is one that is designed be disassembled and reused. The whim probably was utilized further down the mountain at Feature T and Feature G. To the east of the building is a substantial waste dump with a pile of decayed poles on the east side.

F-L Collapsed adit. Located at the terminus of Road R-9, the collapsed adit extends 36 feet up the hill at 294 degrees. Three stulls and horizontal pole shoring are visible. The waste dump platform is 22 x 28 feet with a 93 foot toe extending down to Road R-2. A smaller lobe of the dump extends along the hillside to the southwest. A small seep exits the adit and runs between the lobes. Items observed in association with the feature include a shovel blade, white ceramic coffee mug fragments, iron sheeting, 1 inch pipe, a 35 pound oil drum with plastic spout, and a 4 x 8 foot sheet of plywood.

F-M Collapsed adit and ore bin. Located at the terminus of Road R-10, the ore bin is immediately above a small platform. The ore bin (20 x 14 feet) is of heavy timbers attached to three sets of four poles set into the ground. Two spouts are on the lower southeast side. The ore bin does not appear to have been completed or used. The road platform at the ore bin has a 57 foot toe slope that descends to R-9 Road just east of Feature L. A metal ore cart was observed part way down the slope.

Above the ore bin and connected by a 23 foot long path is a collapsed adit (6 x 18 feet). Two stulls and plank shoring can be seen in the collapsed portal. The adit has a 14 foot wide waste dump platform with a platform cut into the hill on the southwest side. This smaller platform may have been used for support or as a tent platform. A paint can, rubber hose and tar paper were found on the platform.

F-N Collapsed Adit. Located between Roads R-10 and R-11 at a point midway between the junction of the two roads and Features O and M, the collapsed adit is 30 feet long and oriented at 304 degrees. The headwall of the collapsed adit is directly below R-11 with a depression in the road indicating that the adit has collapsed below. The waste dump platform is 15 x 12 feet. The toe slope descends to R-10 and continues on down the hill to R-9.

F-O Collapsed adit. Located at the end of Road R-11, this is the highest of the site's adits. The collapsed adit extends 90 feet up the hill at 306 degrees. The mouth of the adit cut is 25 feet wide and opens onto a waste platform 59 feet wide and 25 feet outward from the portal. The toe slope extends down 57 feet to Feature M. On the southwest side of the portal is a stack of tongue and groove planks and a shovel.

F-P Collapsed adit. Located 60 feet at 330 degrees from Feature Q, this collapsed adit stretches 57 feet at 308 degrees. The headwall of the adit is immediately below Road R-9. The adit is 11 feet wide at its portal with a waste dump platform 35 x 19 feet with a 30 foot toe. Items observed in association with the adit include tin can fragments and a blue enamel tea pot. A 500 gallon fuel tank was observed 100 feet to the west. The waste pile from the adit extends outward into a deflated area. It could not be determined if the erosion of the deflated area was natural or man-made.

F-Q Cabin (16 x 25 feet). Located 104 feet at 330 degrees from datum "P-4", this standing cabin is built on a platform built into the sloping hillside. The log cabin has "V" notched log walls and corrugated metal on a plank shed roof. An open doorway and open window is to the southeast. A surface scatter of debris is below the cabin to the southeast. Items include: stove parts, dynamite box, brick and brick fragments, metal plates, leather harness, square nail, wind-up clock, brown glass fragments, tobacco can, corrugated metal. The bottom of a large glass jug was

recorded -- "L / PATENT/ NO 2091518 / FOR USE WITH / NESBITS / PRODUCTS / ONLY / 3".

Below the cabin and immediately adjacent to Datum "P-4" on Road R-2 is a tent platform (10 x 10 feet).

F-R Collapsed adit. Located 147 feet at 166 degrees from Datum "P-4", this adit is at the base of the hill. The collapsed opening is 30 feet wide and runs 48 feet up the hillside. The adit has a two lobe dump. The eastern lobe extends 87 feet at 86 degrees from the portal and is covered with ore on the east side. The toe slope is 12 feet. The western lobe extends 81 feet at 130 degrees and has a 10 foot toe. At the portal of the adit was observed the collapsed and rotting remains of a log cabin (13 x 9 x .5 feet high).

A tent platform is located 87 feet at 56 degrees from the portal. The flat area dug into the slope of the hillside measures 21 x 24 feet and is oriented at 270 degrees A bench seat was observed inside the platform. The platform appears to have had a plank floor. A brick was observed on the floor.

A two-track road terminates between the adit and the tent platform. The track originates on the lower mine road (R-2) 139 feet to the east. About halfway to the road is a small prospect to the south.

F-S Collapsed adit/ open cut. This is an"L" shaped collapsed adit/open cut. The mouth of the cut is 285 feet due west of Datum "P-3" near a bend in the R-2 road. The lower segment is oriented at 318 degrees and is 30 feet long. The cut opens onto a waste platform 15 x 6 feet. The upper portion of the feature is oriented at 60 degrees and extends 30 feet. The upper cut is aligned with the Feature T shaft.

F-T Adit, shaft and whim house platform. The mouth of the adit is along Road R-2 173 feet west of datum "P-3". The waste dump extends to the south of the road 32 feet at 156 degrees. The 10 foot wide dump has 10 inch diameter trees growing in it.

The 6 foot wide collapsed adit extends up the hillside 65 feet at 336 degrees. The headwall is only 10 feet from the log enclosure around the shaft.

The 4 x 8 foot shaft has horizontal pole shoring. It is enclosed in a 3 - 6 foot high 17 x 13 foot log enclosure. There is a 5 foot wide open doorway on the south side overlooking a small waste platform and the collapsed adit.

To the north of the shaft house is a half-moon shaped platform dug into the hillside. The platform is 53 feet wide and 25 feet from front to back. A one-horse Fresno was observed in the middle of the platform. The platform likely once was used as a position for the whim observed at Feature K.

F-U Collapsed adit. Located immediately above and to the north of Feature A, the top of the toe is 102 feet at 340 degrees from Datum "P-3". The waste dump extends 49 feet at 170 degrees from the adit cut mouth. The top of the waste dump is 8 feet wide and has four remaining track ties. The toe slope is 57 feet to the south. The adit cut and collapsed portal extends 51 feet up slope at 8 degrees. Material is piled to the east on the lower 10 feet of the cut. A trail runs eastward from the portal cut mouth toward Feature B.

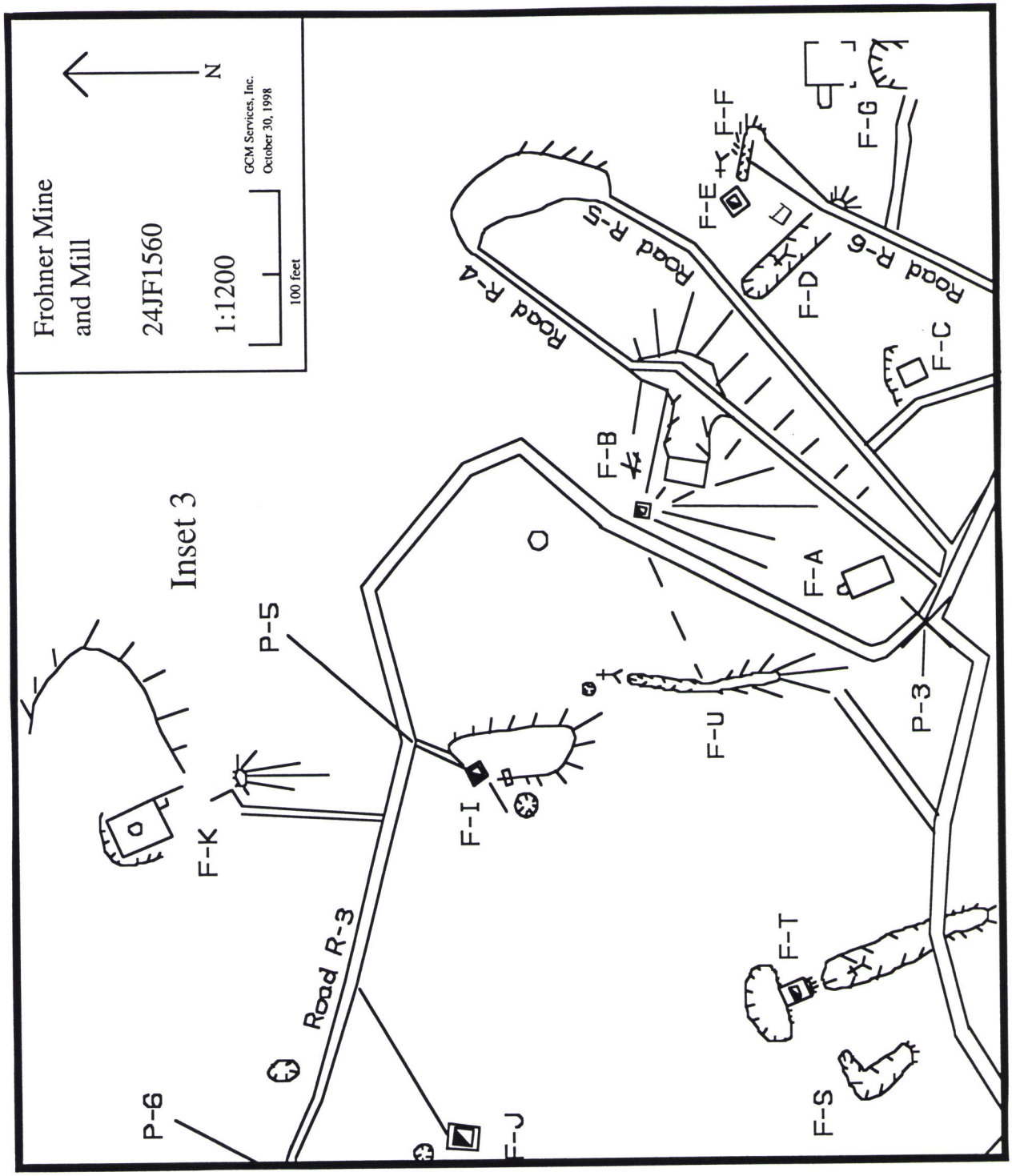

Figure 25. The Frohner Mine and Mill (24JF1560) lower mine complex detail.

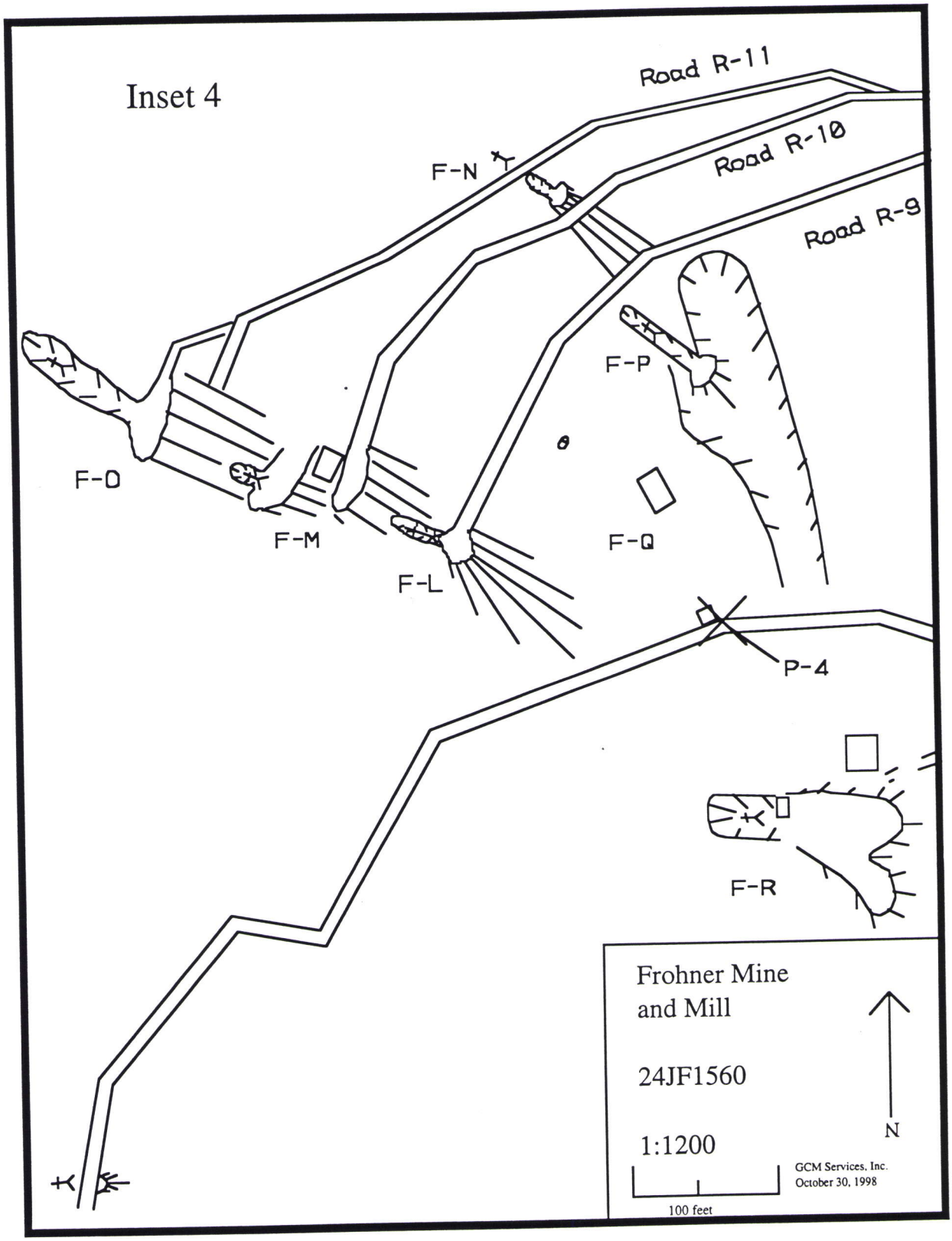

Figure 26. The Frohner Mine and Mill (24JF1560) upper mine complex detail.

Figure 27. July 1998 photograph of Frohner Mine Feature A cabin viewed to the north.

Figure 28. July 1998 photograph of Feature B waste dump and ore bin viewed to the west. Note truck cab.

Figure 29. July 1998 photograph of Frohner Mine Feature K whim house viewed to the northeast.

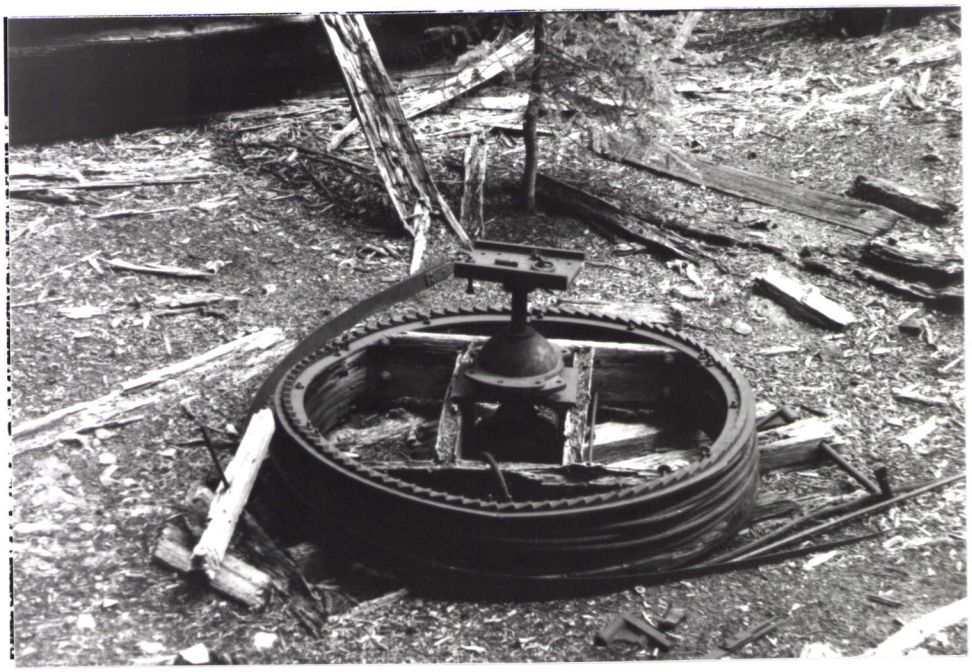

Figure 30. July 1998 photograph of Feature K whim detail. viewed to the east.

Figure 31. July 1998 photograph of Frohner Mine Feature L ore bin viewed to the southwest.

Figure 32. July 1998 photograph of Feature Q shack viewed to the north.

History: [The History of the Frohner Mine and Mill is discussed above.]

Integrity of the Mine Site:
The site has good integrity. While individual features are in a degraded condition, they have been subject to historic salvage which was part of the historic mining of the site. The initial development in the 1880s created a network of roads and mine infrastructure that was used as source material for later smaller-scale/low budget mining operations. The mill has been salvaged down to ground level with little remaining to reveal technologies or the flow of material.

Features 1A and 1B appear to have been subject to modern excavation with large volumes of materials transported off-site. The site has recently been subject to recent hazardous mine opening closure with two grates placed over shafts and two shafts covered over by bulldozers. There is also evidence of modern drilling with drill bits found near air shafts Features E and J. The bulldozer push below Feature B may also be a modern drill pad.

Despite these historic and modern alterations to individual features, the site as a whole has retained values of location, setting, materials, workmanship, feeling and association.

Significance:
The site is recommended to be eligible for the National Register of Historic Places under Criteria C and D. Because of the size and variety of features and artifacts, the Frohner Mine and Mill is recommended to be eligible as a site, a historic mining landscape and as a sub-district with the Clancy Historic Mining District.

The mine and milling complex are notable in their absence in the historical literature. The operation was active in the late 1880s and 1890s when Montana was filled with many more prominent operations of greater and lesser scales. The isolation and private funding of the enterprise left little to report. The mine and mill may have produced some profits for its owners, but ultimately, it also ate those profits up again. The mine had little impact on local or regional history and contributed little to the economy or the evolution of mining in Montana (Criterion A).

The site is not directly associated with the activities of persons of local, regional, or national historical importance (Criterion B).

While most of the site has been heavily scavenged and individual features retain little integrity, Feature K contains a nearly intact example of a "kit" whim. Whims were equine-powered hoisting mechanisms that were used in mines with shafts exceeding the limits of hand-windlasses. Because they were limited to one or two horses or mules, the hoists were relatively slow and were limited in the depth they could achieve. In contrast to the more powerful steam hoists, the whims were relatively inexpensive and could be moved from shaft to shaft as need arose. Early whims were crafted utilizing local materials with a few forged metal parts at stress points. Animal strength was used both for hoisting and for holding the cage in place at level. Kit whims were delivered as a number of cast metal parts that were assembled at the mine site with local wood materials. The advanced models often featured both band-brakes and top ratchets that could be used to hold the cage at level and improve the safety of the hoisting. Surviving examples of the kit whims are relatively rare and when found are usually in poor condition. Features F-G and F-T show evidence of being the prior locations of the whim. The whim qualifies as a good and archetypical example of the technology (Criterion C).

While the site was not tested due to the potential presence of hazardous conditions, several living areas were observed. Because the historic record for the site is so poor, the middens and outhouse pits associated with these living areas have the potential to reveal important information about the periods of occupation and the material culture of those that occupied the site (Criterion D).

Significance in terms of the Clancy HMD Sub-areas

Investigations by the Butte Office of the Bureau of Land Management in the Spring of 1998 identified three "sub-areas" of the Clancy Historic Mining District (24JF1393) potentially eligible for the National Register of Historic Places. These sub-areas were then included in a non-contiguous mining district designated the "Clancy HMD Sub-areas - 24JF1541". One of the three sub-areas was defined as the Frohner Basin Sub-area. The Montana SHPO concurred with the NRHP eligibility recommendation for the sub-areas with some reservations concerning the larger Clancy Historic Mining District.

The Frohner Mine and Mill (24JF1560) is discussed within the Clancy HMD Sub-areas Site Form historic discussion. However, through a clerical error, the mine and mill were inadvertantly left out of the legal location for the sub-area and excluded from the accompanying map. The delineation of the sub-area was based upon a windshield survey of the general vicinity, but not to the Frohner Mine and Mill. However, it was clearly the intent of the recorder to include all the historic mining resources in the vicinity (Rossillon 1998). Therefore, the Frohner mine and mill site should be added to the Clancy HMD Sub-area: Frohner Sub-area. The on-the-ground field survery and historical document research for this project confirms the BLM's recommendation of NRHP eligiblility for the Frohner Basin Sub-area. This project further recommends the Frohner Mine and Mill as a primary contributing component of the Frohner Basin Sub-area. The legal location and map of the Frohner Basin Sub-area of the Clancy HMD Sub-areas (24JF1541) should be adjusted accordingly.

RECOMMENDATIONS

The Montana Department of Environmental Quality, Mine Waste Cleanup Bureau (MWCB), proposes actions on the Frohner Mine and Mill site (24JF1560) that may affect cultural resources. As a result, this study examined the site to determine: 1) what, if any, cultural resources were in the project area and 2) the value of the identified resources in terms of the National Register of Historic Places.

The survey revealed that the historic mine and mill were developed in the 1880s and have since been subject to a series of lesser mining and milling episodes that have added additional layers to the landscape by adaptive reuse of equipment, scavenging, salvaging and reuse of previous workings.

The site is recommended to be eligible for the NRHP as a site, historic landscape and a district under criteria C and D. Because the status of the Clancy Historic Mining District (24JF1393) is not settled, it cannot be determined at this time if it contributes to that district as well. However, the site is defined as part of the lesser Clancy HMD Sub-areas (24JF1541) and is a primary contributing component.

Any work done on the Frohner Mine and Mill may have an effect on significant historical resources. While little cultural value remains attached to the individual features of the physical site, the mine and mill when viewed as a whole -- either as a site, as part of a mining landscape or as part of the mining district -- retains value as a cultural resource. As a result, any action by the MWCB would have an effect on the site and affect the integrity of the site, historic mining landscape and sub- district -- whether viewed separately or as part of the Clancy HMD Sub-areas (24JF1541).

It is recommended that structural features be avoided along with a buffer area that may contain buried cultural materials (middens and outhouse pits). For effects to non-structural features such as waste dumps and tailings, this report is recommended as mitigation.

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Appendix A

Cultural Site Records

Frohner Mine and Mill (24JF1560)

MONTANA CULTURAL RESOURCES INVENTORY

Site Form

Form No. 1. Locational Information

1.1 Site Number: 24JF1560

1.2 Site name/field designation Frohner Mine and Mill

1.3 County: Jefferson

1.4 Township/Range:
N1/2, SE 1/4, Section 15, T8N, R5W
NE 1/4, SW 1/4, Section 15, T8N, R5W

1.5 UTM:

Zone	Easting	Northing
12	406 640 / 407 600	5143 450 / 5143 750

1.6 Site type: Historic mine and mill

1.7 Recording status: The site has been photographed, mapped, recorded and assessed.

1.8 Administrative/surface ownership:
Barmont Mines Corporation (Frohner and Frohner Extension)
Sandra L. and Ronald R. Peterson (Fraction Mining Claim)
Helena National Forest (Unpatented land)

1.9 Mineral ownership: Same

1.10 Project name: Frohner Mine and Mill, Jefferson County, Montana. Montana Department of Environmental Quality, Mine Waste Cleanup Bureau.

1.11 General narrative description of site: Located in southwest Montana southwest of Helena near the dividing ridge between Lump Gulch and Ten Mile Creek. The site consists of a number of salvaged and whole log buildings, ore bins, two mills, a tunnel portal and two large waste piles, several prospect pits and adits, a number of collapsed adits, open shafts, collapsed shafts, air shafts and covered shafts and one relatively well preserved whim. Because of several episodes of poorly financed mining in the 20th century, the site has been extensively salvaged. The mine and mill site is recommended to be eligible for the National Register of Historic Places as a site, a historic mining landscape, a historic sub-district and as a contributing component of the Clancy HMD Sub-areas.

1.12 Map reference: USGS Chessman Reservoir Quadrangle (Provisional 1985)1:24,000

1.13 City/town:
Vicinity of: Clancy, Montana.

1.14 Access to site: From Clancy, Montana, proceed eight miles up the Clancy Gulch road to Forest Service Road 426. Proceed east up this road for five miles to the Nellie Grant mine road at Frohner Meadows. Wind up on this road for approximately two miles through the Nellie Grant mine on the Chessman Reservoir / National Extension Mine road. The site is located along this road several hundred feet beyond the western-most feature of the Nellie Grant.

MONTANA CULTURAL RESOURCES INVENTORY

Form No. 2. Environmental Setting

2.1 Geographic Setting:
Regional: The Frohner Mine and Mill project area is located in the mountains southwest of the city of Helena in Jefferson County, Montana. The mountains are part of the Boulder Batholith that stretches between Butte and Helena.

Local: The site is near the mountainous divide between Lump Gulch Creek and Ten Mile Creek. The topography includes a steep hillside on the north side of the eastward sloping upper mountain valley of Lump Gulch Creek. Lump Gulch Creek empties into Prickly Pear Creek, which in turn flows through the Helena Valley and drains into the Missouri River. The creeks provide water throughout the year with some of the smaller drainages being seasonal

2.2 Elevation: 6900 - 7550 feet amsl

2.3 View/aspect: View is to the south and east.

2.4 Major drainage: Lump Gulch Creek

2.5 Minor drainage: Prickly Pear Creek

2.6 Water sources

	Names	Distance (in m)	Elev. Change (in m)	Type/ seasonality
1.	Lump Gulch Creek	0 m	0 m	perennial
2.				

2.7 Vegetation - regional: The project area is in the Lodgepole Pine-Douglas Fir Forest zone which covers the higher mountain areas to the west (Payne 1973).

2.8 Vegetation - local: Douglas fir, bear grass

2.9 Soils: forest loam, waste rock, tailings, bed-rock.

2.10 Surface visibility/season of survey: 100%. Summer

2.11 Other environmental factors pertaining to site location:

MONTANA CULTURAL RESOURCES INVENTORY

Form No. 3. Site Assessment and Recording Documentation

3.1 Integrity of site: The site has good integrity. While individual features are in a degraded condition, they have been subject to historic salvage which was part of the historic mining of the site. The initial development in the 1880s created a network of roads and mine infrastructure that was used as source material for later smaller-scale/low budget mining operations. The mill has been salvaged down to ground level with little remaining to reveal technologies or the flow of material.

Features 1A and 1B appear to have been subject to modern excavation with large volumes of materials transported off-site. The site has recently been subject to recent hazardous mine opening closure with two grates placed over shafts and two shafts covered over by bulldozers. There is also evidence of modern drilling with drill bits found near air shafts Features E and J. The bulldozer push below Feature B may also be a modern drill pad.

Despite these historic and modern alterations to individual features, the site as a whole has retained values of location, setting, materials, workmanship, feeling and association.

3.2 Site significance (NRHP): The site is recommended to be eligible for the National Register of Historic Places under Criteria C and D. Because of the size and variety of features and artifacts, the Frohner Mine and Mill is recommended to be eligible as a site, a historic mining landscape and as a sub-district with the Clancy Historic Mining District.

The mine and milling complex are notable in their absence in the historical literature. The operation was active in the late 1880s and 1890s when Montana was filled with many more prominent operations of greater and lesser scales. The isolation and private funding of the enterprise left little to report. The mine and mill may have produced some profits for its owners, but ultimately, it also ate those profits up again. The mine had little impact on local or regional history and contributed little to the economy or the evolution of mining in Montana (Criterion A).

The site is not directly associated with the activities of persons of local, regional, or national historical importance (Criterion B).

While most of the site has been heavily scavenged and individual features retain little integrity, Feature K contains a nearly intact example of a "kit" whim. Whims were equine-powered hoisting mechanisms that were used in mines with shafts exceeding the limits of hand-windlasses. Because they were limited to one or two horses or mules, the hoists were relatively slow and were limited in the depth they could achieve. In contrast to the more powerful steam hoists, the whims were relatively inexpensive and could be moved from shaft to shaft as need arose. Early whims were crafted locally utilizing local materials with a few forged metal parts at stress points. Animal strength was used both for hoisting and for holding the cage in place at level. Kit whims were delivered as a number of cast metal parts that were assembled at the mine site with local wood materials. The advanced models often featured both band-brakes and top ratchets that could be used to hold the cage at level and improve the safety of the hoisting. Surviving examples of the kit whims are relatively rare and when found are usually in poor condition. Features F-G and F-T show evidence of being the prior locations of the whim. The whim qualifies as a good and archetypical example of the technology (Criterion C).

While the site was not tested due to the potential presence of hazardous conditions, several living areas were observed. Because the historic record for the site is so poor, the middens and outhouse

pits associated with these living areas have the potential to reveal important information about the periods of occupation and the material culture of those that occupied the site (Criterion D).

3.3 Impacts:

3.4 Recommendations: The site has been recorded, mapped and photographed. No further work is required.

3.5 Site located by: Dale M. Gray; Bill Fischer **Date**: June 21, 1998

3.6 Site recorded by: Dale M. Gray; Bill Fischer **Date**: July 5-7, 1998

3.7 Revisions by: **Date**:

3.8 Permit No. N/A

3.9 Publication(s) where site is described:

Gray, Dale M.
1998 "Cultural Resource Inventory and Assessment for the Frohner Mine and Mill". Prepared for the Montana Department of Environmental Quality, Mine Waste Cleanup Bureau by GCM Services, Butte.

3.10 Artifact repository: N/A

3.11 Fieldnotes/maps/photo repository: Montana Department of Environmental Quality, Mine Waste Cleanup Bureau, Helena, Montana.

3.12 Photo and accession numbers:

No.	Description	View
July, 1998, DMG, Black and White, Roll 1		
0	Feature 11	NW
1	Feature 11	NW
2	Feature 13	N
3	Feature 12	SSW
4	Feature 11	E
5	Feature 13	S
6	Feature 14B	ENE
7	Feature 14 Mill	SE
8	Feature 14 wood debris	SSE
9	Feature 14 ore bin	SW
10	Feature 14 ore bin	SW
11	Feature 14	W
12	Feature 15A, flotation cell	E
13	Feature 15, tailings mill	SE
14	Feature 14 and 15	NW
15	Feature 16	SW
16	Feature 1	SSW
17	Feature 2	SSE
18	Feature 3	SE
19	Feature 17	W
20	Feature 17	SE
21	Feature 18	NW
22	Feature 6	SSE
23	Feature 6 detail	S
24	Feature 8	W
25	Feature 1	N

July, 1998, DMG, Black and White, Roll 2

0	Feature A	N
1	Feature A	N
2	Feature A	SW
3	Feature B	ESE
4	Feature B ore bin debris	E
5	Feature B	N
6	Feature C	NE
7	Feature E drill bits	
8	Feature D	N
9	Feature E	E
10	Feature F	W
11	Feature G	SE
12	Feature G	N
13	Feature H	SE
14	Feature I	SE
15	Feature K whim house	E
16	Feature K whim detail	NE
17	Feature K	SE
18	Feature L	W
19	Feature M	SW
20	Feature N	W
21	Feature O	W
22	Feature P	W
23	Feature Q	NW
24	Feature R	W
25	Feature S	N
26	Feature T	S

July, 1998, DMG, Color, Roll 3

0	Feature 1	SSW
1	Feature 1	SSW
2	Feature 6	S
3	Feature 11	N
4	Feature 13	N
5	Feature 14	SW
6	Feature 14	W

June, 1998, DMG, Color, Roll 4

9	Feature 1	SW
10	Feature 1	SW
11	Feature 2	S
12	Feature 3	SE
13	Feature 4	S
14	Feature 6	SE
15	Feature 5	SE
16	Feature 6	S
17	Feature 7	SE
18	Feature 8	W
19	Trail above Feature 8	NNW
20	Feature 9	E
21	Feature 10	N
22	Feature 1A	N
23	Feature 1B	NE
24	Feature 12	SW

MONTANA CULTURAL RESOURCES INVENTORY

Form No. 5. Description of Historic Sites

5.1 Site dimensions, shape, how dimensions determined: 1000 feet north /south x 3000 feet east/west = 3,000,000 square feet (70 acres)

Area determined by extent of features.

5.2 Features:
The mine is composed of four clusters of features. The two groups of mining features (Upper and Lower) were physically separated from the Main adit and mill features. This separation is reflected in the recordation by utilizing alphabetical feature designations for the mining clusters and numerical feature designations for the main adit and mill clusters.

Features:

F-1 Main adit and adit house (11 x 30 feet). Located on the mine access road at its junction with the middle mill road, the northeast corner of this structure serves as the prime datum for the site. The building fronts a nearly closed adit from which a relatively large volume of water is seeping. The water is laden with iron which had deposited on the floor of the adit house - - forming an iron-based set of terraces as it spills out the remains of the front door. Judging by the size of waste dumps Feature 1a and 1b, more material was removed from this tunnel than all the other excavations combined. It is likely that this adit tapped the ore bodies at depth and served as a downward sloping exit for the materials and mine water.

The adit house which fronts the road and abuts the adit portal, had doorways to the east and west. The structure has been reduced to only 3 or 4 logs in height. The structure has saddle-notched corners. Since there are no apparent materials deposited around the structure, the materials from the upper building may have been salvaged. To the side of the structure are two 3.5 foot diameter cog tractor wheels.

F-1a Waste dump and trestle remains. Located across the main road from Feature 1 adit and north of the middle mill road, this fan shaped waste dump extends from 57 to 135 feet from the door of the adit house. On the toe slope of the dump is a jumble of poles and rotting wood. The wood is opposite the stream from Feature 14 trestle remains. Because of this relationship, the wood is likely to also be trestle remains.

F-1b Waste dump. Located on the south side of the middle mill road opposite Feature 1a, this dump appears to have been subject to recent excavation and removal. The level of the dump is eight feet lower than the surrounding waste piles. The excavated dump begins at a point 133 feet from the adit house doorway. It extends 111 feet to the east. The northern edge of the dump is adjacent to the stream. The west side of the dump has some pole debris.

F-2 Collapsed building (14 x 20 feet). Located 20 feet south of Feature 1 on the mine access road, this feature rises only 3 to 6 logs high. The structure has saddle-notched corners. Because there is little remaining materials from the upper walls and roof, it is likely that the structural materials were salvaged.

F-3 Outhouse (4 x 7 feet). This collapsed log privy is located nine feet south of Feature 2 along the mine access road. The building is 6 logs high with saddle notch corners. It has partially collapsed into the hole beneath it.

F-4 Collapsed adit. The waste dump toe slope of this excavation touches the south wall of Feature 2. The waste dump is 46 feet long and 20 feet wide. The adit cut and collapsed adit form a dog-leg with the lower leg 6 x 69 feet at 212 degrees with the upper leg 6 x 60 feet at 300 degrees.

A footpath runs diagonally past the headwall at 340 degrees. The path connects a small stream with an open cut near Feature 1. The path is either for access to drinking water or as a mining claim / forest service demarcation. A corner post marked "... 371 B1" was observed across the path from the excavation. The path corresponds to the western boundary of the Frohner Extension Lode.

F-5 Prospect shaft (11 x 14 feet). Located 33 feet south of the corner of Feature 4 and 8 feet north of the Feature 6 enclosed shaft, this small prospect shaft has a small waste dump on the east side.

F-6 Enclosed shaft (15 x 14 feet). This pole-shored shaft is enclosed in a partially collapsed log structure with "V" notch corners that is 9 logs high. The structure has quarter pole chinking, mud daubing, and no roof. The interior is heavily stained by smoke. Square nails were observed in the building. The open doorway on the northeast side is the structure's only entrance.

The enclosed shaft is rectangular (4 x 8 feet) and appears to be about 10 feet deep.

F-7 Prospect shaft (6 x 4 feet). This small shaft is immediately southeast of the Feature 6 shaft structure. While filled with water, it appears to be only 2-3 feet deep.

F-8 Funneled shaft (11 x 17 feet). Located 36 feet northwest of the Feature 6 shaft enclosure, this funneled shaft is partially filled with water. It appears to be about 14 feet deep. A waste dump descends the east side to Feature 5.

F-9 Prospect (18 x 45 feet). Located to the west across a footpath from Feature 8, this feature is approximately above the line of the Feature 1 adit. The pit is about 10 feet deep.

F-9a Prospect (11 x 15 feet). Located seven feet south of Feature 9. This pit is about 12 feet deep.

F-10 Disturbed area (24 x 27 feet). Located 83 feet east of the upper junction of Roads R-1 and R-8, this area is on the south side of the R-1 road. The area is roughly rectangular and shows evidence of disturbance. At the lower end near Feature 9 are several charred logs.

F-11 Log cabin (13 x 22 feet). The cabin is located 45 feet above the creek crossing and is oriented at 290 degrees. The rectangular log structure has a log foundation, 7 log high walls, quarter pole chinking, mud and concrete daubing, and a double board and batten gable roof supported by four purlins and a ridgepole. Open windows are in the south, west and east wall. The open doorway entrance is on the east side. The south window has been cut down to form a doorway. Items observed in association with the structure include a small stove, round nails, plate glass fragments, a boot, brick and white plate fragments.

F-12 Collapsed trestle (48 x 10 feet) extends from the upper mill road to the creek. The trestle remains are 45 feet from the back of cabin Feature 11. The former structure was constructed of logs which are now in a jumble running down the slope. It is opposite a jumble of similar logs on the toe slope of the Feature 1a waste dump.

F-13 Ore bin (16 x 10 feet). Located 193 feet west of the junction of the upper and middle mill roads, this wood ore bin appears to have provided loading capability for ore brought down the hill

on Road R-1 from the upper mines, or ore from the Feature 1 main adit brought across the trestle or on the upper mill road. The structure is 27 feet from the middle mill road and 17 feet from the upper mill road. The ore bin appears to be of scavenged wood -- indicating use after the mill (Feature 14) ceased production. The front of the ore bin has three spouts and is propped up with two diagonal posts and is anchored to the hillside by a cable. The floor and east wall of the ore bin are missing.

F-14 1888 Mill. Located 497 feet east of the middle mill stream crossing, the ore bin of the mill is 40 feet below the middle mill road. This large mill has no remaining roof or walls. The lack of material coupled with the extensive tailings indicate that the mill was salvaged after a period of operation. It is represented on Mineral Survey No. 7297 conducted in 1904. On the east side of the mill are two piles of wood that appear to have been left during the salvage effort.

The ore bin (32 x 32 feet) is the most intact portion of the mill. The horizontal ore bin floor is supported by five sets of five posts of increasing length as the hill dropped away. The far end of the ore bin floor is anchored by a massive stone and mortar wall. The wall is 32 x 4 at its base, but tapers to 2 feet wide at the top of its 18 foot height. The western top corner has crumbled. The top of the ore bin is flat with a mound of ore still in place. The flat surface allowed a now-collapsed tramway to connect to the mill from the middle mill road to the west. The wood tramway has collapsed and is in a jumble to the west of the mill ore bin.

Below the masonry pier, the slope of the hill is covered with a jumble of stone from the pier and broken poles, timbers and planks. The 32 x 32 foot area corresponds to the ore reduction floor, but the advanced state of decay and disorganization leave little clue as to the manner of ore reduction.

Below the sloping jumble is a roughly 80 x 39 foot flat floor. The level probably corresponded to some sort of separation and concentration processes. The area has been salvaged down to the floor boards, many of which are also missing. On the east end are two concrete machine mounts with four threaded bolts protruding from the top surface.

To the south of the large floor is a 15 foot wide slightly curving lip above the extensive tailings. The tailings descend the slope 84 feet to the Feature 15 modern mill.

F-15a Flotation tank (6.5 x 5 feet). This wood three cell flotation tank is on its side near the bottom of the Feature 14 tailings dump.

F-15 1939 mill remains. Located below the historic mill near the bottom of the tailings piles. This small mill appears to have been created to reprocess the tailings. A 19 foot long retaining wall was erected to hold back the eroding tailings and to keep them out of the mill. Into the tailings was excavated a narrow cut that has since eroded. From the cut, tailings were hauled on wood rails topped with carpet end-strips to the 13 x 8 tailings bin which is intact. Because the chute on the eastern side of the bin is lower than the wooden machine mounts, the tailings would have to have been raised by some mechanism to the 3 foot ball mill listed in the historic literature. On the eastern downslide side of the bin is a wood structure that may have held an elevator mechanism of some sort that fed tailings into a small ball mill mounted on the north side. Wood debris is located east and toward the creek. On either side of the debris are partially intact wood floors. To the north of the tailings bin are two piles of mill screen, timbers and planks salvaged from the historic mill. A gasoline tank was observed in this area. There is little indication that this milling endeavor met with success. The tailings are little excavated and there are no new tailings below the modern mill to indicate any volume of reprocessed material.

F-16 Assay office (13 x 16 feet). Located 42 feet below the lower mill road, this small collapsed rectangular log cabin has remaining walls five feet high. The structure has inverted saddle notch corners, and internal quarter pole chinking without daubing. Round nails were observed in the structure. The door is to the east -- there are no windows. Inside on the south side is a manger or ore sample bin running the length of the wall.

Across the road from the cabin is a 1920s automobile hood. West of the cabin are two wood wagon tailgates and a wood table.

Ten feet east of the cabin is a dump containing items typical of assay labs. Items observed include scorifiers (5), muffle (1), brick fragments (20+), brown glass fragments (5+), cupel fragments (20+), 3 hole-in-top cans, wash basin fragment (1).

F-16A Collapsed adit (10 x 54 feet). The ravine is located 83 feet southeast from the Feature 16 cabin. The cut originates on the flood plain of the creek and extends upward to the lower mill road. It is five feet wide at its mouth. The adit is represented on the 1904 Mineral Survey No. 7297.

F-17 Boarding House (14 x 31 feet). Located 165 feet northwest of the datum at Feature 1, the boarding house is opposite the mine/mill road junction. The rectangular log building has been reduced to floorboard level only 2 feet high. The structure had "V" notching and quarter pole chinking. Rotting floor joists run across the structure. Square nails were observed in the structure. A large stripped down cook stove was observed in association with the structure. Because there is no wood debris, the building appears to have been salvaged. The boarding house appears on the Mineral Survey No. 7297 for the Frohner Extension.

Across the road from the structure is a debris plume extending down the road bank toward the creek. Items include shoes, purple glass, stoneware, clear whiskey shot glass, aqua bottle neck, stove pipe, numerous tin can fragments, whiteware, clear glass and a mason jar top -- "Grand Prize Acorn 8-22".

Twenty feet south along the road is a narrow open cut running west up the hillside. This small collapsed adit is the discovery cut for the Frohner Extension.

F-18 Cistern (8 feet long, 4 feet high). The cistern consists of a wood dam across a small stream; a modern valve is at its base. It is located across the creek 120 feet to the northeast of Feature 17 and 30 feet above the upper mill road. The reservoir behind the wood structure extends about 10 feet to the northwest. The reservoir is nearly silted-in. To the southwest of the dam is the debris from an earlier dam structure.

Running from the southwest side of the dam toward Feature 17 is a shallow ditch that may have provided water for the mess hall.

Mine

F-A Cabin (29 x 18 feet) Located 40 feet at 66 degrees from Datum "P-3" at the junction of roads R-1, R-2 and R-3. The partially rectangular cabin has a log foundation, "V" notch corners, quarter-pole chinking with mortar daubing. The slab gable roof has 8 purlins and a ridgepole. The entrance, an open doorway, is on the southeast side along with an open window. The southwest wall of the cabin has collapsed. The northeast side has an open window. The northwest side has a collapsed root cellar (11 x 9 feet). While the back of the cabin's roof is nearly at ground level, the front of the cabin's roof is nearly 10 feet off the ground.

A debris scatter in front of the cabin includes: 1/4 inch window glass, charcoal, stove parts, square and round nails, International hub-cap, bone, brown glass fragments, light purple glass fragments, center-fire pistol cartridge, green glass fragments, aqua glass fragments. Whiteware shards were found in front of the cabin and were observed downhill along Road R-1.

F-B Shaft (4 x 8 feet). Located between Road R-3 and Road R-4 about 212 feet northeast of Datum "P-3". The log-shored, open shaft is covered by a steel grate (10 x 10 feet). Below and to the east of the shaft is the decaying remains of a wood headframe. To the southeast is a 26 x 16

foot ore bin that has collapsed. Below the ore bin is a pre-WWII truck cab. The waste dump for the shaft extends downslope to R-4 and to the southwest 100 feet.

This shaft is represented on the 1882 Frohner Lode Mineral Survey as the Shaft No. 2 (GLO).

Below the shaft to the east, Road R-4 historically terminated in a platform so that trucks could back into the ore bin. This road has been extended to the northeast by a bulldozer and connected with Road R-5 below.

F-C Log tent platform (13 x 16 feet). Located above Road R-1 and below R-5, the platform is along a road trace running between the two roads. The rectangular platform is one log high and sits in a platform excavated into the hillside.

F-D Collapsed tunnel (63 x 18 feet). Located between Roads R-4 and R-5, the collapsed tunnel extends into the hillside at an orientation of 318 degrees and is shown connecting to the Feature B shaft in the 1882 Mineral Survey of the Frohner Lode. The mouth of the tunnel cut opens onto Road R-5 and a small 11 x 10 foot waste dump is across the road from the adit. Ten feet to the northeast of the tunnel portal is a 10 x 12 foot pile of decayed mine timbers. Fourteen modern rock drill bits were observed in a pile on the southwest side of the timber pile. The tunnel is shown just outside the Frohner Lode to the south on the 1882 Mineral Survey of the claim with a dotted line connecting it to Shaft No. 2 (Feature B) (GLO 1882).

F-E Shaft (8 x 4 feet). This shored open shaft has been enclosed by a 13 x 15 foot barbed wire fence. The south corner of the fence is 17 feet northeast of the Feature D mine timber pile. A wood ladder is on the east side of the shaft. Because the shaft appears to be deep without a corresponding waste dump pile, the shaft may be an air shaft / emergency escape route for the main adit (Feature 1).

F-F Collapsed adit (28 x 10 feet). Located 10 feet below Feature F-E and 66 feet northeast of the mouth of Feature D, the collapsed adit is aligned to intersect the Feature E shaft. The exposed tunnel is oriented at 248 degrees. The portal of the adit has been destroyed by a bulldozer pushing material past the historic terminus of Road R-6 and through the adit tunnel. The bulldozer exposed two stulls, mine ties and rail and the adit portal from the inside (though the original portal exterior is now covered). A large metal sheet is laying on the hillside on the south side of the adit along with a large bucket.

F-G Whim building and covered shaft. Located about 90 feet southeast of the south corner of Feature E, the feature consists of a former whim building and shaft that have been partially destroyed by a bulldozer. The whim house (29 x 24 feet) is oriented at 0 degrees. While all four "V" notch corners survived, the 3 - 4 foot high walls are intermittent. The north, east and west sides are dug into the hillside. The interior of the northeast corner is heavily covered by soot, indicating the presence of a forge. An open window is in the east wall and a collapsed root cellar is in the west wall (6 x 11 feet). Several hole-in-top cans were observed below the structure to the east.

Directly south of the whim house is a shallow depression measuring 60 x 51 feet. The former shaft location has been completely obliterated by a bulldozer. A road trace extends up the hill to the west and intersects with Road R-6 on the southwest side of Feature D.

F-H Excavations. Located near Datum "P1" on Road R-1, this feature consists of a hillside platform (184 x 34 feet), a prospect pit (6 x 6 feet) and a small prospect adit (18 x 21 foot oriented at 312 degrees). The features are along a road trace (Road R-7) that descends from datum "P1" to the junction of Roads R-1 and R-8.

F-I Shaft (4 x 8 feet). Located 36 feet at 206 degrees from datum "P-5" along Road R-3, the shored and open shaft is covered by a modern 11 x 11 foot steel grate. A three lobe dump extends to the east, southeast and southwest. A 16 x 15 foot funneled shaft with no waste dump is located 25 feet southwest of the grated shaft. This probably represents Shaft No. 3 on the 1882 Mineral Survey of the Frohner Lode. A 3.5 inch metal pipe 25 feet long lies on the ground between the two shafts. A wood platform (4 x 10 feet) on the waste dump overlooks the funneled shaft. Two prospect pits are located below the waste dump to the east and southeast. Immediately above the grated shaft is a flat area with several items. These include a dynamite box, modern hoses, a boot, fuel line, 5 gallon gas can, 55 gallon barrel, and round nails. The site appears to have been worked in the 1960 to 1980 era (GLO 1882).

F-J Air shaft (12 x 11 feet). Located 111 feet to the southwest off of Road R-3 between Data "P-4" and "P-5", this deep shaft has no waste dump below. The shaft is surrounded by a 21 x 15 foot fence. The shaft is shored with vertical poles. Twelve feet to the northwest is a 12 x 12 foot prospect pit with waste rock descending the hill toward the air shaft. Four modern rock drill bits were observed on the side of the waste rock pile. A two-track road trace connects the air shaft to the R-3 road.

F-K Whim house and covered shaft. Located 92 feet at 04 degrees from Road R-3 near Datum "P-5", this development consists of a nearly intact whim house, covered shaft and a partially intact log structure. The log base of the log structure has been reduced to two walls, east and south which stand three feet high. The corners are "V" notched. The structure is partially covered by a modern bulldozer push. The missing two walls were removed by the same bulldozer. The function of the structure could not be determined.

The shaft to the north of the log structure appears to have once been enclosed in a log structure of its own. While the bulldozer removed the south and west walls, the 20 foot east wall remains standing as does the wall shared with the whim house. In the center of the former 20 x 27 foot structure is a depression that likely corresponds to the location of the shaft. In the remaining corner in the northeast of the structure is a log crib filled with rocks -- typical of that used by forges between 1860's and 1910's. The walls around the forge crib are covered with soot.

The whim house is immediately north of the shaft house and 33 feet north of the partial log structure. The walls have "V" notch corners, quarter pole chinking and square nails are evident. The building is intact with doors in the south and east walls, but no roof. The building sits in a platform dug into the hillside. In the center of the building is a horse- or mule-powered whim. While the wood portions have been subject to decay and the metal portions subject to rust, it is a very good example of a late model whim. The model appears to be from a "kit" and is one that is designed be disassembled and reused. The whim probably was utilized further down the mountain at Feature T and Feature G. To the east of the building is a substantial waste dump with a pile of decayed poles on the east side.

F-L Collapsed adit. Located at the terminus of Road R-9, the collapsed adit extends 36 feet up the hill at 294 degrees. Three stulls and horizontal pole shoring are visible. The waste dump platform is 22 x 28 feet with a 93 foot toe extending down to Road R-2. A smaller lobe of the dump extends along the hillside to the southwest. A small seep exits the adit and runs between the lobes. Items observed in association with the feature include a shovel blade, white ceramic coffee mug fragments, iron sheeting, 1 inch pipe, a 35 pound oil drum with plastic spout, and a 4 x 8 foot sheet of plywood.

F-M Collapsed adit and ore bin. Located at the terminus of Road R-10, the ore bin is immediately above a small platform. The ore bin (20 x 14 feet) is of heavy timbers attached to three sets of four poles set into the ground. Two spouts are on the lower southeast side. The ore bin does not appear to have been completed or used. The road platform at the ore bin has a 57 foot

toe slope that descends to R-9 Road just east of Feature L. A metal ore cart was observed part way down the slope.

Above the ore bin and connected by a 23 foot long path is a collapsed adit (6 x 18 feet). Two stulls and plank shoring can be seen in the collapsed portal. The adit has a 14 foot wide waste dump platform with a platform cut into the hill on the southwest side. This smaller platform may have been used for support or as a tent platform. A paint can, rubber hose and tar paper were found on the platform.

F-N Collapsed Adit. Located between Roads R-10 and R-11 at a point midway between the junction of the two roads and Features O and M, the collapsed adit is 30 feet long and oriented at 304 degrees. The headwall of the collapsed adit is directly below R-11 with a depression in the road indicating that the adit has collapsed below. The waste dump platform is 15 x 12 feet. The toe slope descends to R-10 and continues on down the hill to R-9.

F-O Collapsed adit. Located at the end of Road R-11, this is the highest of the site's adits. The collapsed adit extends 90 feet up the hill at 306 degrees. The mouth of the adit cut is 25 feet wide and opens onto a waste platform 59 feet wide and 25 feet outward from the portal. The toe slope extends down 57 feet to Feature M. On the southwest side of the portal is a stack of tongue and groove planks and a shovel.

F-P Collapsed adit. Located 60 feet at 330 degrees from Feature Q, this collapsed adit stretches 57 feet at 308 degrees. The headwall of the adit is immediately below Road R-9. The adit is 11 feet wide at its portal with a waste dump platform 35 x 19 feet with a 30 foot toe. Items observed in association with the adit include tin can fragments and a blue enamel tea pot. A 500 gallon fuel tank was observed 100 feet to the west. The waste pile from the adit extends outward into a deflated area. It could not be determined if the erosion of the deflated area was natural or man-made.

F-Q Cabin (16 x 25 feet). Located 104 feet at 330 degrees from datum "P-4", this standing cabin is built on a platform built into the sloping hillside. The log cabin has "V" notched log walls and corrugated metal on a plank shed roof. An open doorway and open window is to the southeast. A surface scatter of debris is below the cabin to the southeast. Items include: stove parts, dynamite box, brick and brick fragments, metal plates, leather harness, square nail, wind-up clock, brown glass fragments, tobacco can, corrugated metal. The bottom of a large glass jug was recorded -- "L / PATENT/ NO 2091518 / FOR USE WITH / NESBITS / PRODUCTS / ONLY / 3".

Below the cabin and immediately adjacent to Datum "P-4" on Road R-2 is a tent platform (10 x 10 feet).

F-R Collapsed adit. Located 147 feet at 166 degrees from Datum "P-4", this adit is at the base of the hill. The collapsed opening is 30 feet wide and runs 48 feet up the hillside. The adit has a two lobe dump. The eastern lobe extends 87 feet at 86 degrees from the portal and is covered with ore on the east side. The toe slope is 12 feet. The western lobe extends 81 feet at 130 degrees and has a 10 foot toe. At the portal of the adit was observed the collapsed and rotting remains of a log cabin (13 x 9 x .5 feet high).

A tent platform is located 87 feet at 56 degrees from the portal. The flat area dug into the slope of the hillside measures 21 x 24 feet and is oriented at 270 degrees A bench seat was observed inside the platform. The platform appears to have had a plank floor. A brick was observed on the floor.

A two-track road terminates between the adit and the tent platform. The track originates on the lower mine road (R-2) 139 feet to the east. About halfway to the road is a small prospect to the south.

F-S Collapsed adit/ open cut. This is an"L" shaped collapsed adit/open cut. The mouth of the cut is 285 feet due west of Datum "P-3" near a bend in the R-2 road. The lower segment is oriented at 318 degrees and is 30 feet long. The cut opens onto a waste platform 15 x 6 feet. The upper portion of the feature is oriented at 60 degrees and extends 30 feet. The upper cut is aligned with the Feature T shaft.

F-T Adit, shaft and whim house platform. The mouth of the adit is along Road R-2 173 feet west of datum "P-3". The waste dump extends to the south of the road 32 feet at 156 degrees. The 10 foot wide dump has 10 inch diameter trees growing in it.

The 6 foot wide collapsed adit extends up the hillside 65 feet at 336 degrees. The headwall is only 10 feet from the log enclosure around the shaft.

The 4 x 8 foot shaft has horizontal pole shoring. It is enclosed in a 3 - 6 foot high 17 x 13 foot log enclosure. There is a 5 foot wide open doorway on the south side overlooking a small waste platform and the collapsed adit.

To the north of the shaft house is a half-moon shaped platform dug into the hillside. The platform is 53 feet wide and 25 feet from front to back. A one-horse Fresno was observed in the middle of the platform. The platform likely once was used as a position for the whim observed at Feature K.

F-U Collapsed adit. Located immediately above and to the north of Feature A, the top of the toe is 102 feet at 340 degrees from Datum "P-3". The waste dump extends 49 feet at 170 degrees from the adit cut mouth. The top of the waste dump is 8 feet wide and has four remaining track ties. The toe slope is 57 feet to the south. The adit cut and collapsed portal extends 51 feet up slope at 8 degrees. Material is piled to the east on the lower 10 feet of the cut. A trail runs eastward from the portal cut mouth toward Feature B.

5.3 Artifacts (observed, collected): See feature discussion.

5.4 Historical information and evaluation: Gold was discovered in the Lump Gulch basin in 1865. During a very brief period of placer gold prospecting and mining, a placer claim covering about 157 acres at the head of Lump Gulch, including the Frohner site, was located. Subsequently, as miners searched for quartz veins in the same area, six lode claims were also located within the boundaries of the unnamed placer. The seven claims were surveyed for patent in 1872, but only two - the Frohner and Moltke lodes - were ever patented (Wolle 1963; Cheney 1984; GCM 1995; GLO 1872).

During the following decade, there was little if any mining in the area. Interest in Lump Gulch was renewed in the early 1880s when Thomas G. Merrill, a miner who discovered a promising lode about 15 years earlier, returned to attempt development. While development of his Liverpool claim did not materialize until the following decade, other miners prospected the area (GCM 1995).

Jacob Frohner and unnamed others were among those miners. They relocated the Frohner claim and had it surveyed for patent in October of 1882. Improvements at that time included the discovery shaft (which dated to 1872 or earlier), a second shaft, an adit, and surface excavations, together valued at $1870 (GLO 1882). Shortly thereafter, the mining claim was patented (Jefferson County Clerk and Recorder).

Information about the early years of the mine is lacking, but serious development presumably awaited the formation of the Frohner Gold and Silver Mining Company. That company was incorporated on March 30, 1886. Early on, V. Charles Rinda served as president and E. C. Prosser as secretary (Montana Historical Society Archives: MC 170, Box 20, Folder 10).

By at least 1888, Frohner Gold and Silver began developing its mine. The year before, it claimed the Frohner Extension Lode (Figure 6) at the east end of the Frohner claim where the company would later build its mill and boarding house (GLO 1904).

In 1888, the company mortgaged the Frohner and Frohner Extension claims to John O. Briscoe, trustee (for $780), Charles Lehman (for $780), and D. J. Arnold (for $500). Perhaps, it was also at that time that, with the borrowed and other money, Frohner Gold and Silver extended the adit (Feature 1) to 1,120 feet and built the mill (Feature 14), boardinghouse (Feature 17) and whatever other surface improvements there might have been (Montana Historical Society Archives: MC 170, Box 20, Folder 10; GLO 1904).

A short five years later, the property was closed, and none of the sources consulted reported production by Frohner Gold and Silver. The mine is likely to have closed as a result of the Repeal of the Sherman Silver Purchase Act. It appears there was an attempt to revive the mine about two years later, in 1895. E. P. and Retta Briscoe signed another mortgage in April of that year, this one with the First National Bank of Helena for $50,803.49. Neither the 1888 or 1895 loans were repaid, and in 1904 the Conrad-Stanford Company sued Frohner Gold and Silver and other parties with interest in the Frohner and Frohner Extension mining claims. Conrad-Stanford, which had taken over the assets of the First National Bank of Helena two years earlier, succeeded in its suit, and thereafter apparently became the owner of the Frohner Mine (Becraft 1963; Montana Historical Society Archives: MC 170, Box 20, Folder 10; GLO 1904).[1]

The mine was briefly re-opened by unknown parties in 1911 when it produced "gold ore containing a little copper." A mill rated at 30 tons was reported to be under construction that same year, but the mill has left no trace in the physical or historical record. The mill may have never progressed out of the planning stage. It again lapsed into obscurity until 1928 and 1929, when unnamed lessees shipped two cars of sulphide lead ore to the American Smelting & Refining Company smelter in East Helena.[2] One source suggested that production continued after the late 1920s to as late as 1954 (Features D, I, and J), but none of the other sources consulted reported mining after 1929. Total recorded production between 1928 and 1954 was listed at 1,917 tons (Hall 1912; MR 1928; Roby 1960).

In 1939, an unknown party reworked Frohner mill tailings with a small jib (flotation) mill (Feature 15 and 15a). The mill consisted of a 3 foot ball mill, four flotation cells, and a home-made classifier. Although the mill or parts of it remained on-site until the late 1950s or later, it apparently was used only briefly (MY 1940; MBMG; Roby 1960).

Other Mining Claims in Frohner Vicinity

An adit and two small waste rock dumps at the upper end of the Frohner site are located about 200 feet south of the main concentration of workings (Features R and possibly Features S and T). These lie within the boundaries of the patented Fraction and unpatented Loeber No. 1 lode mining claims. These two mining properties were located and worked separately from the Frohner Mine.

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1 RTI did not examine the district court file at the Lewis and Clark County Courthouse Annex. However, Conrad-Stanford's successful lawsuit is indicated by the fact that the Frohner Extension was subsequently patented by William Muth, Conrad-Stanford's agent and manager (GLO 1904).

2 Ore bins at Features 13, B and M appear to date from the late 1920 to early 1930 era.

With the exception of the original survey plat, none of the sources consulted mentioned activity on the Fraction claim. The Fraction was located in September 1889 such that it overlapped the previously claimed Loeber and General Sherman lode mining claims. Robert Shanahan held the Fraction two years later when it was surveyed for patent. At that time improvements included two shafts and several cuts, together valued at $645 (GLO 1891).

Little more is known of the Loeber mining claim. It was among six lode claims that were located by 1872 within the boundaries of a large placer claim at the head of Lump Gulch. The only development and active mining known to have occurred at the Loeber Mine was in 1957 when it produced 60 tons of ore. At that time, the property was claimed and operated by C. E. Pew and W. Beaver. However, the mining claim had never been patented, and it was canceled in 1990 (Roby 1960; GLO 1872; 1990).

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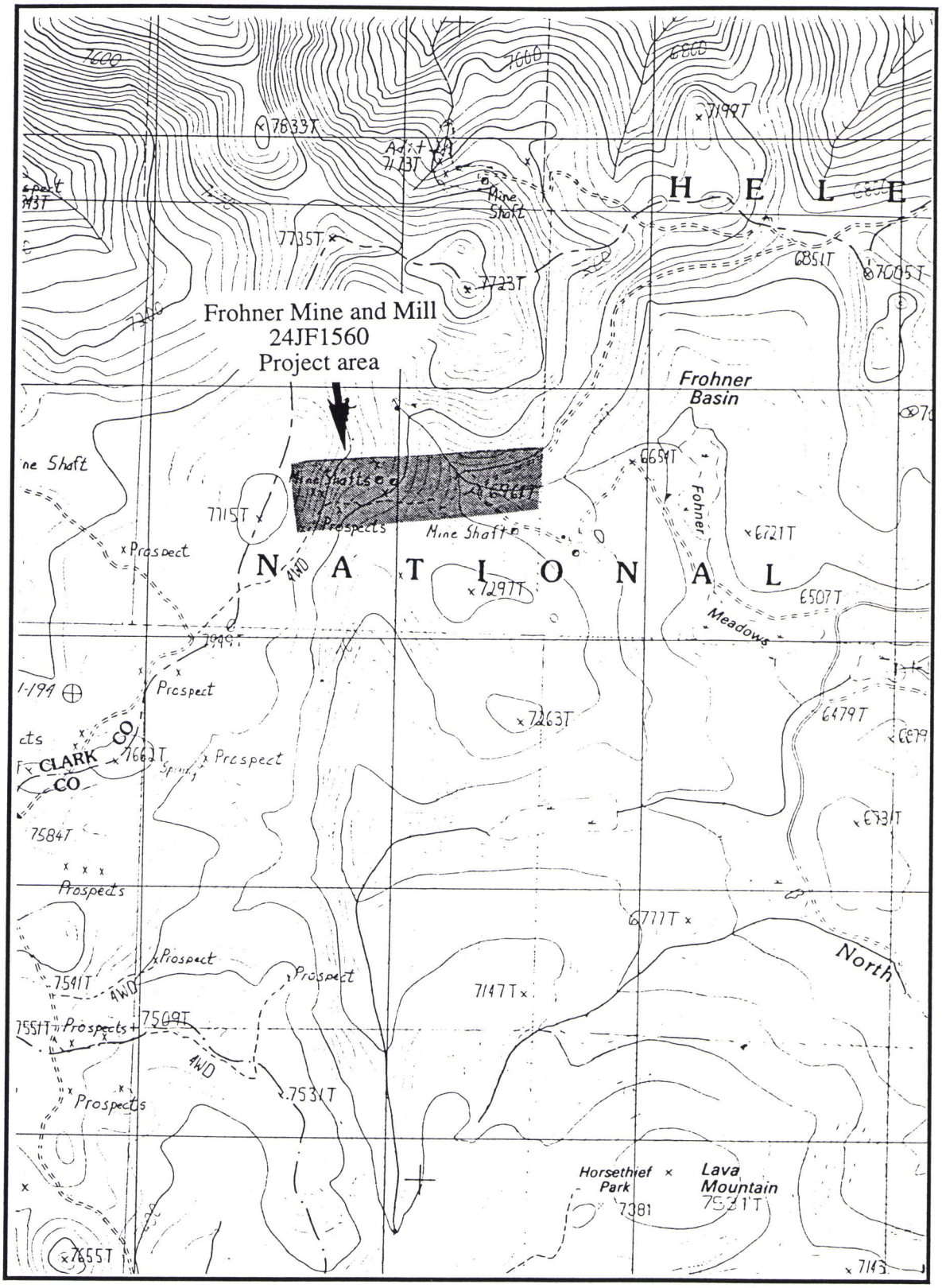


Figure 2. The Frohner Mine and Mill (24JF1560) on the USGS Chessman Reservoir quadrangle map (1:24,000).

Frohner Mine
and Mill

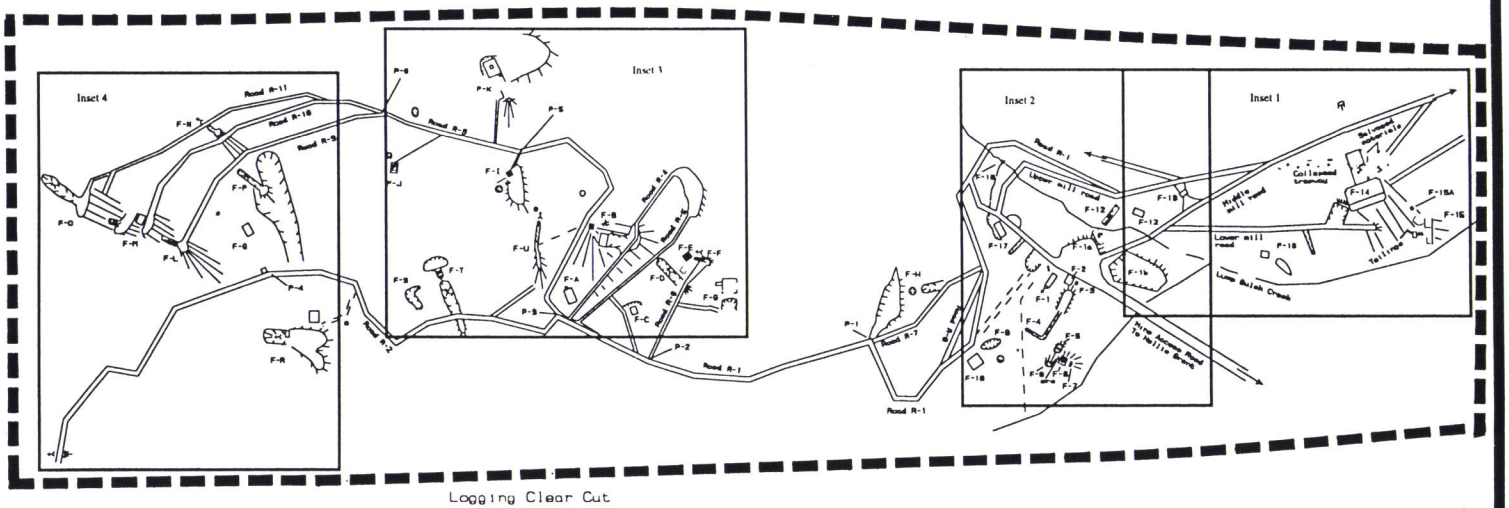
24JF1560

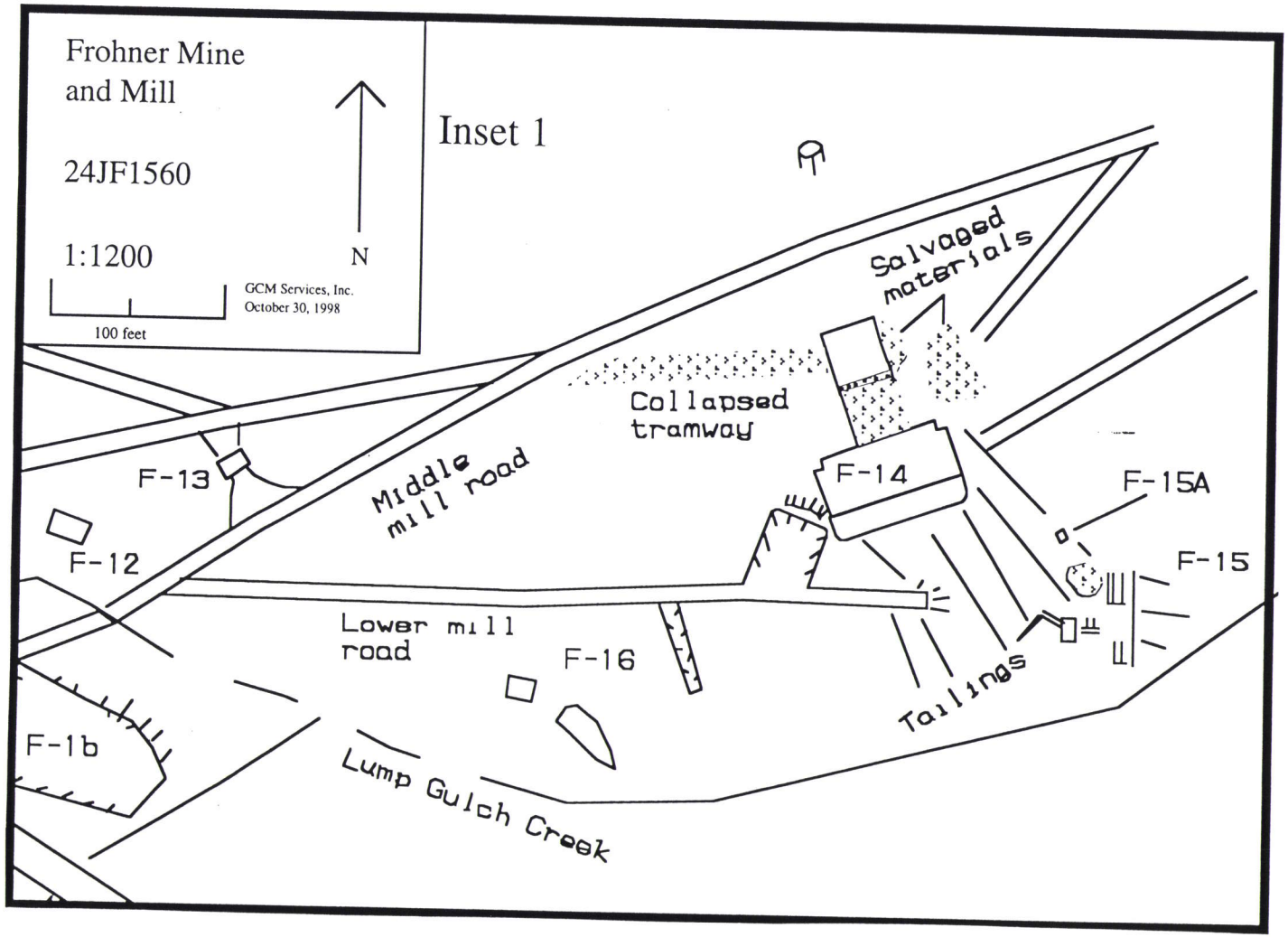
1:4800

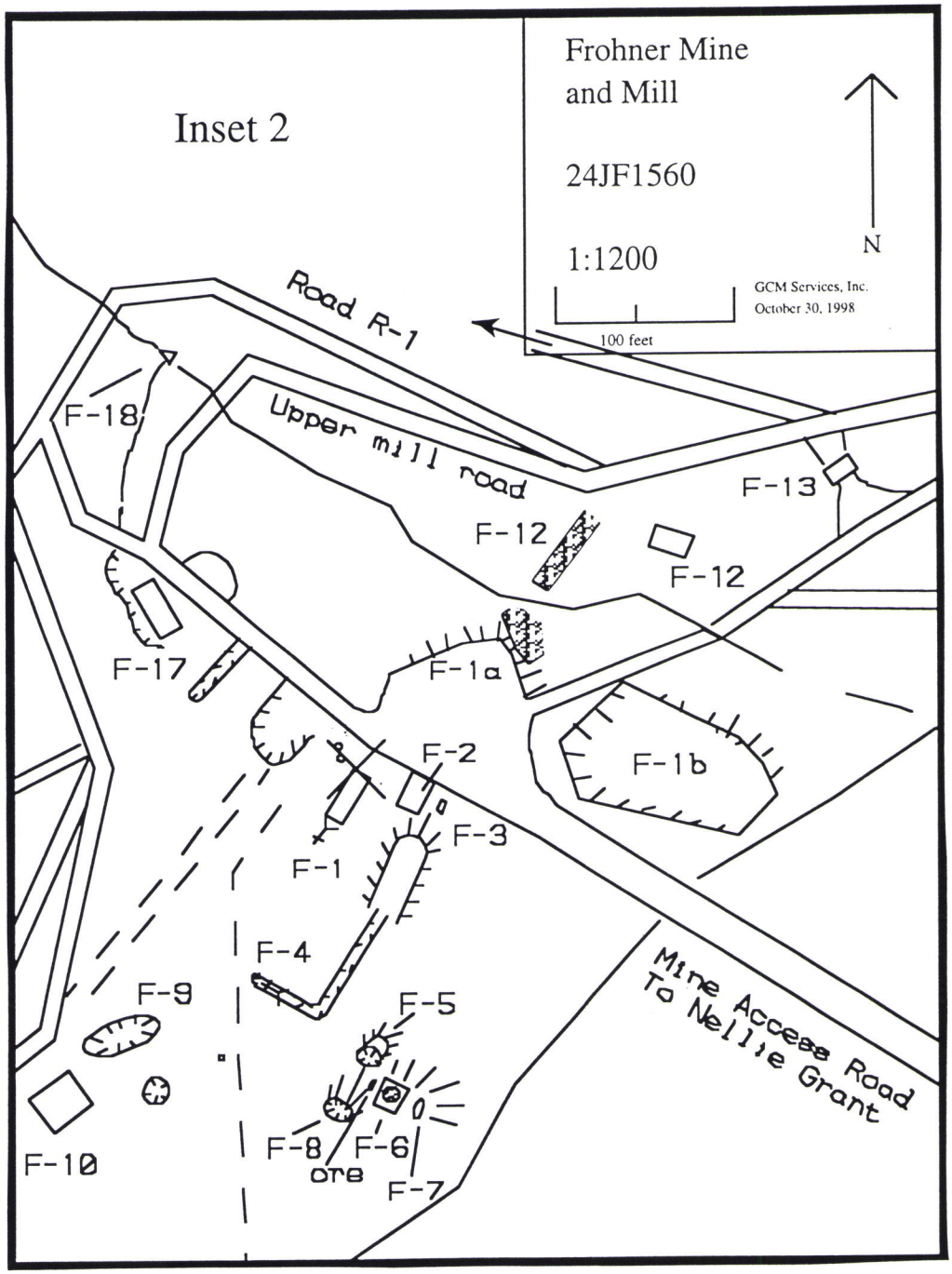
N

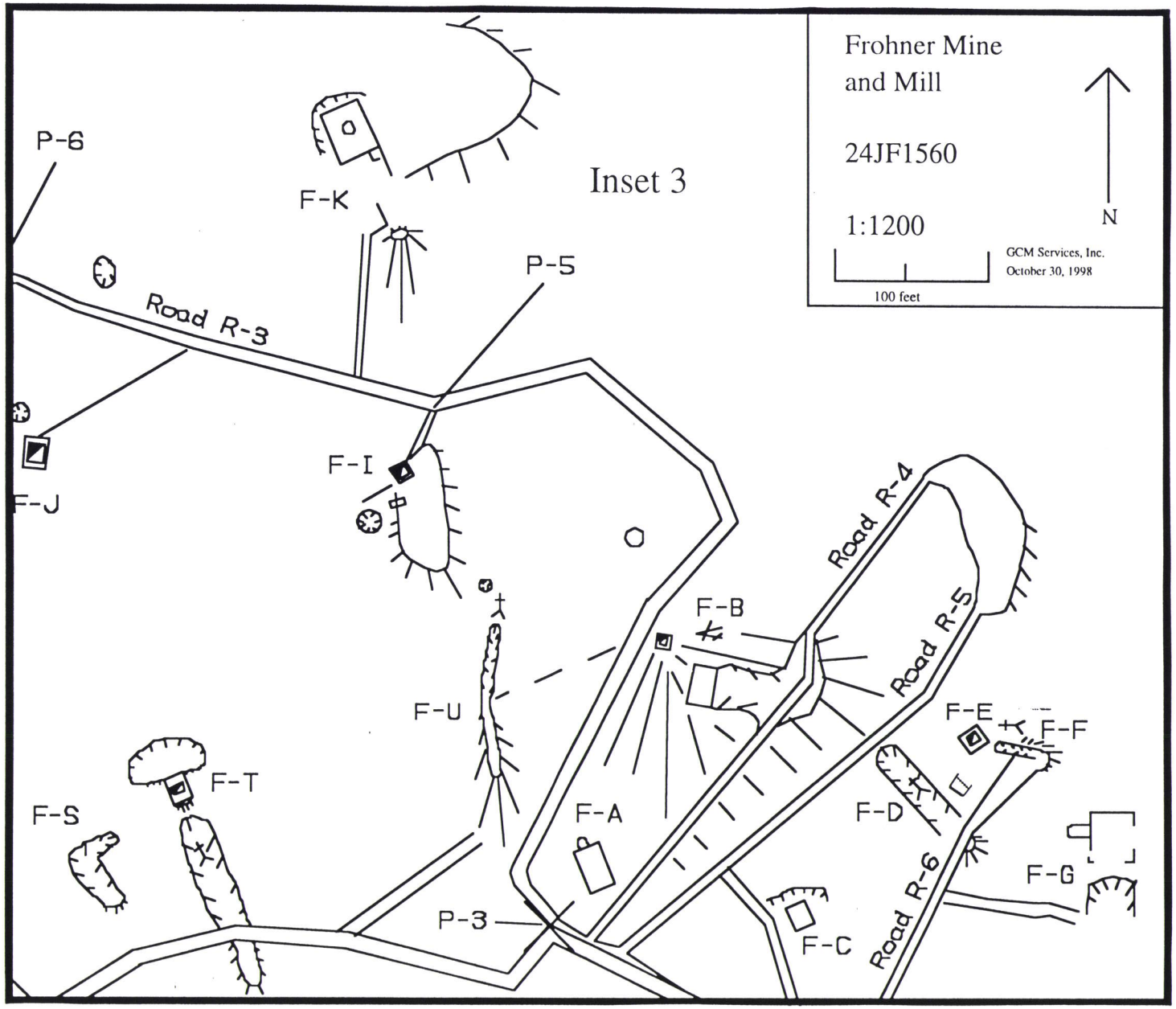
400 feet

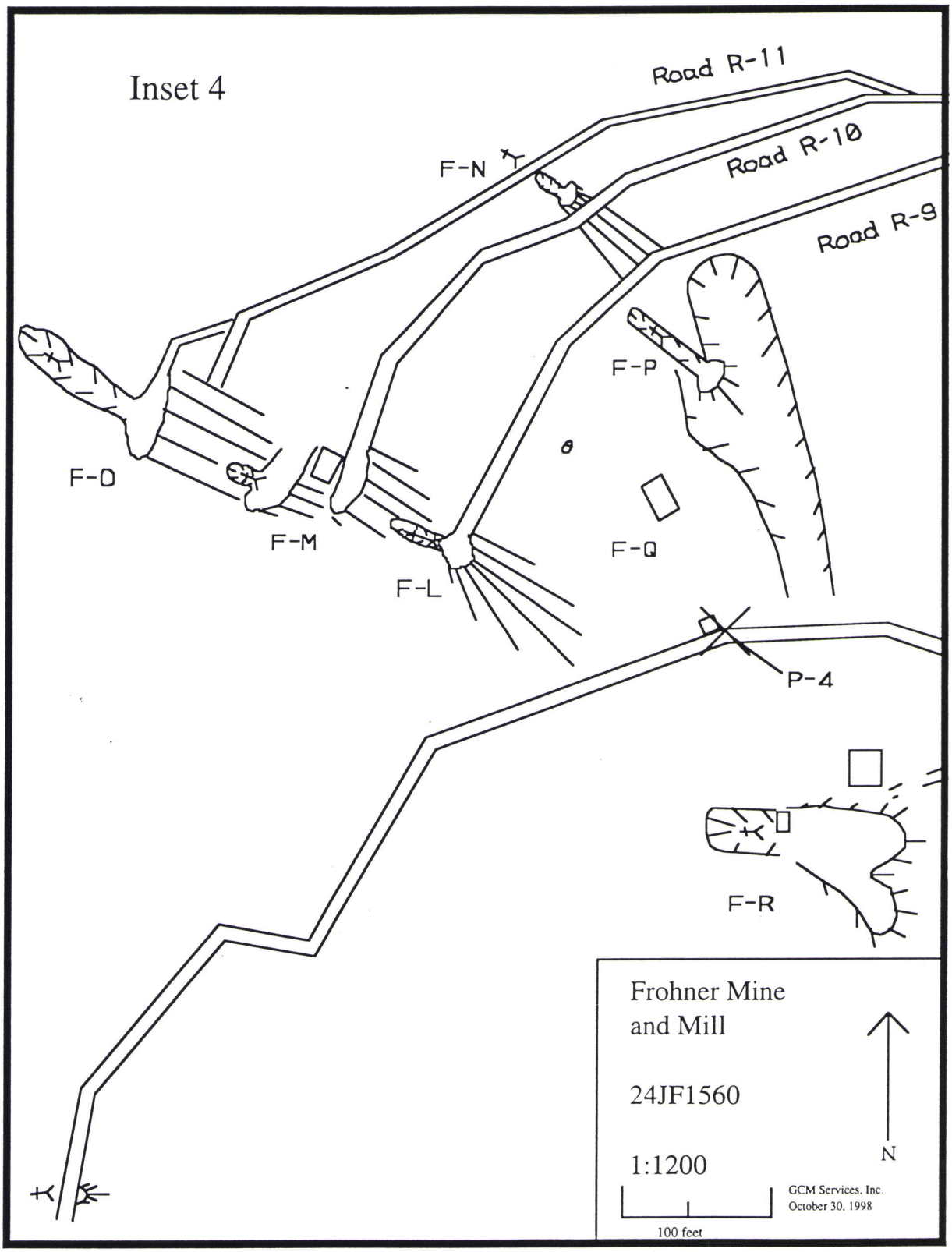
GCM Services
10/19/98




Frohner Mine
and Mill
24JF1560
1:1200
N
100 feet
GCM Services, Inc.
October 30, 1998
Inset 1
Salvaged materials
Collapsed tramway
Middle mill road
F-13
F-12
F-14
F-15A
F-15
Lower mill road
F-16
Tailings
F-1b
Lump Gulch Creek

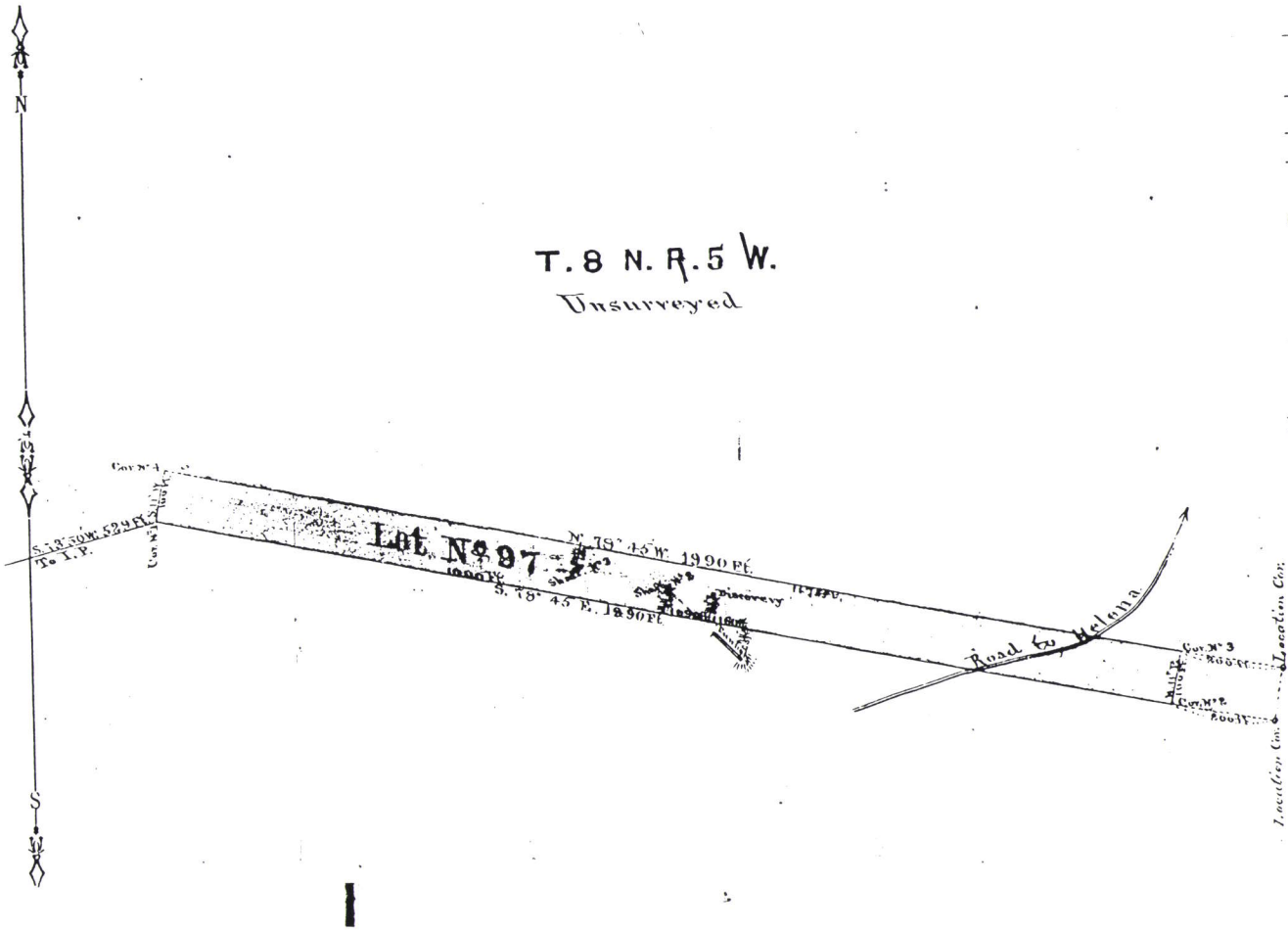

Inset 2
Frohner Mine
and Mill
24JF1560
1:1200
N
GCM Services, Inc.
October 30, 1998
100 feet
Road R-1
Upper mill road
F-18
F-13
F-12
F-12
F-17
F-1a
F-1b
F-2
F-3
F-1
F-4
F-9
F-5
F-10
F-8
F-6
OTB
F-7
Mine Access Road
To Nellie Grant


Frohner Mine
and Mill
24JF1560
1:1200
100 feet
GCM Services, Inc.
October 30, 1998
N
Inset 3
P-6
F-K
P-5
Road R-3
F-J
F-I
F-U
F-B
Road R-4
Road R-5
F-E
F-F
F-T
F-S
F-A
F-D
F-G
Road R-6
P-3
F-C


Inset 4
Road R-11
Road R-10
Road R-9
F-N
F-P
F-O
F-M
F-L
F-Q
P-4
F-R
Frohner Mine
and Mill
24JF1560
1:1200
N
100 feet
GCM Services, Inc.
October 30, 1998

Connection Lines to I.P. agree from Sur. Nos 1321, 1328, 1340.

1st. Course is S 78° 31 E. by Sur. No. 7297
3rd. " " N 78° 31' W. " " " "



SURVEY No 1321

PLAT

OF THE CLAIM OF

Jacob Frohner et. al

UPON THE

FROHNER LODE

Unorganized MINING DI

Jefferson CO

MONTANA TERRITOR

Containing an Area of 4.57

Scale of 200 *Feet to the*

Variation 20° 15' *East.*

SURVEYED BY

Benjamin F. Marsh
U. S. Deputy Mineral Su

October 21st – 23

The original Field Notes of the Survey of the Cl
Jacob Frohner et al
upon the Frohner *Lode, from whic*
has been made, have been examined and approve
on file in this office; and I hereby certify that th
such an accurate description of said Mining Cla
if incorporated into a patent, serve fully to id
premises; and that such reference is made therein
objects and permanent monuments as will perpetua
the locus thereof. I further certify that the value o
and improvements placed thereon by the applican
grantors, is not less than Five Hundred Dollars
said improvements consist of discovery shaft t
surface excavations and Tunnel val
$1570.00

as appears by the report of the deputy surveyo
testimony of two disinterested witnesses. And
certify that this is a correct Plat of said Mini
made in conformity with said original field

Appendix B

Site Forms for the

Clancy Historic Mining District (24JF1393)

Clancy HMD Sub-areas (24JF1541)

Correspondence

Letter from Merle Good 4/10/98

SHPO Reply 4/13/98

Montana State Office Site Form
Bureau of Land Management
Page 1

1. Field No. Clancy Mining District

2. Site No. 24JF 1393

Management Data:

3. BLM Report No. 97-MT-070-075-35

4. USGS Map Quad Black Mountain, Chessman Reservoir, Clancy, East Helena, Helena, and Jefferson City **7.5'** **Date(s)** 1988

5. County Jefferson

6. Other Maps:

7. Legal Location (Required):

Twp 8 North	**R** 3 West	✓**Sec** 4-9, 16-20, and 30-31
Twp 8 North	**R** 4 West	✓**Sec** all
Twp 8 North	**R** 5 West	✓**Sec** 1, 12-15, 22-25, and 34-36
Twp 9 North	**R** 3 West	✓**Sec** 31-34
Twp 9 North	**R** 4 West	✓**Sec** 23-36

8. UTM Reference (Optional):

A. Zone	**mE**	**mN**
B. Zone	**mE**	**mN**
C. Zone	**mE**	**mN**
D. Zone	**mE**	**mN**

9. Official Designation (BLM Use Only)

Eligible	**Date**
Not Eligible	**Date**
Need More Information	**Date**
Listed	**Date**
Contributing to NR District	**Date**
Not Contributing to NR District	**Date**

10. Site Category (check as many as apply):

- **Prehistoric archaeological site**
- **Historic archaeological site**
- **Historic building(s)**
- **Historic structure(s)**
- **Historic feature(s)**
- **Other** XXX

11. Use Category (BLM Use Only)

- **Scientific**
- **Conservation Use**
- **Management Use**
- **Sociocultural Use**
- **Public Use**
- **Discharge Use**

Environmental Data:

12. Topographic Setting: mountainous area bordered by Prickly Pear Creek on the east and the Continental Divide on the west

13. Soil Description (Character and Color):

14. Depositional Environment; e.g., aeolian:

15. Elevation **ft.**

16. Nearest Water: Name/Nature **Elevation:** **ft.**
Distance **Direction**

17. Vegetation on site mainly coniferous, but also some sagebrush and grass flats

18. Surrounding vegetation

19. Slope **%**

20. Recorder's Affiliation Renewable Technologies, Inc.

JF1393

Field No. Clancy Mining District **Site Number** 24JF

Site Data:

21. Access:

22. Description of Site: The Clancy Mining District was a modest producer when compared to the adjacent Helena and Wickes districts. It yielded slightly over $4 million, primarily in silver although also some placer gold. As with most western Montana areas, the original locations in the Clancy Mining District were placers dating to the middle 1860s, but these quickly played out. Almost immediately, the important early lode mines known as the Legal Tender and Liverpool were discovered and worked. Several other lode locations followed, and the small communities of Lump Gulch City and Clancy developed in the 1870s. Mining properties, which included the relatively successful King Solomon, Free Coinage, and Little Nell Mines, were worked sporadically during the following 60 years. Generally, the silver ore was shipped outside of the district for concentrating. Two notably exceptions were the Frohner mill and the Gold Crown Concentrator, the first operated briefly in the late 1880s and the second soon after the turn of the century. During the early 1930s and again after World War II, extensive exploitation of placer gravels ensued. At that time, dredges worked both Clancy and Prickly Pear Gulches. Work at lode mines after World War II was limited to development and small production.

23. Site Dimensions: about 90 square miles

24. Boundary Description and Justification: The boundary included here is that identified by GCM Services in its technical historical overview of the Clancy Mining District. GCM found that the size and the boundaries of the Clancy district changed over time, as some areas came to be abandoned while others were more intensively worked. The boundary that the company identified most closely follows that defined in 1960 by the staff of the Montana Bureau of Miners and Geology, which is as follows.

> The Clancy-Lump Gulch district embraces that part of Jefferson County tributary to Lump Gulch and Clancy Creek. The district centers in T8N, R4W & R5W. The Butte-Havre branch of the Great Northern Railway, U.S. Highway 91, and Prickly Pear Creek traverse and border the district to the east, the Continental Divide on the west, Quartz Creek to the south, and Jack Mountain and the divide between Jack [Jackson] Creek and Clark Gulch to the north.

While this is clearly the boundary of the Clancy Mining District and the site herein defined at 24JF , it is *not* the boundary of a National Register eligible district.

25. Description of Cultural Materials (Quantify and identify):

0 **# of items of cultural material observed**
0 **# collected**

26. Artifact Repository: No artifacts were collected.

27. Description of Subsurface Testing: No subsurface testing was conducted.

28. Current Use of Site: multiple use, including residential, commercial, and recreational

29. Land Status (Indicate jurisdiction or ownership): Bureau of Land Management, U.S. Forest Service, Montana Department of Natural Resources and Conservation, and private

30. Cover (% of visible ground):

31. Person-hours spent on-site: 7

32. Project Title: Devil's Elbow Land Exchange
P.I.: Mitzi Rossillon

33. Report Title: Devil's Elbow Land Exchange: Supplemental Archaeological and Historical Investigations, 1997
Author: Mitzi Rossillon and Mary McCormick

JF1393

Field No. Clancy Mining District **Site No.** 24JF

34. Other Published References:

Clancy Mining District, technical version, by GCM Services, Inc., prepared for Montana Department of State Lands, 1995.

Roby, R.N, W.C. Acherman, F.B. Fulkerson, and F.A. Crowley
1960 Mines and Mineral Deposits (Except Fuels) Jefferson, County, Montana. *Montana Bureau of Mines and Geology Bulletin* 16.

35. Description of Collections Observed: not applicable

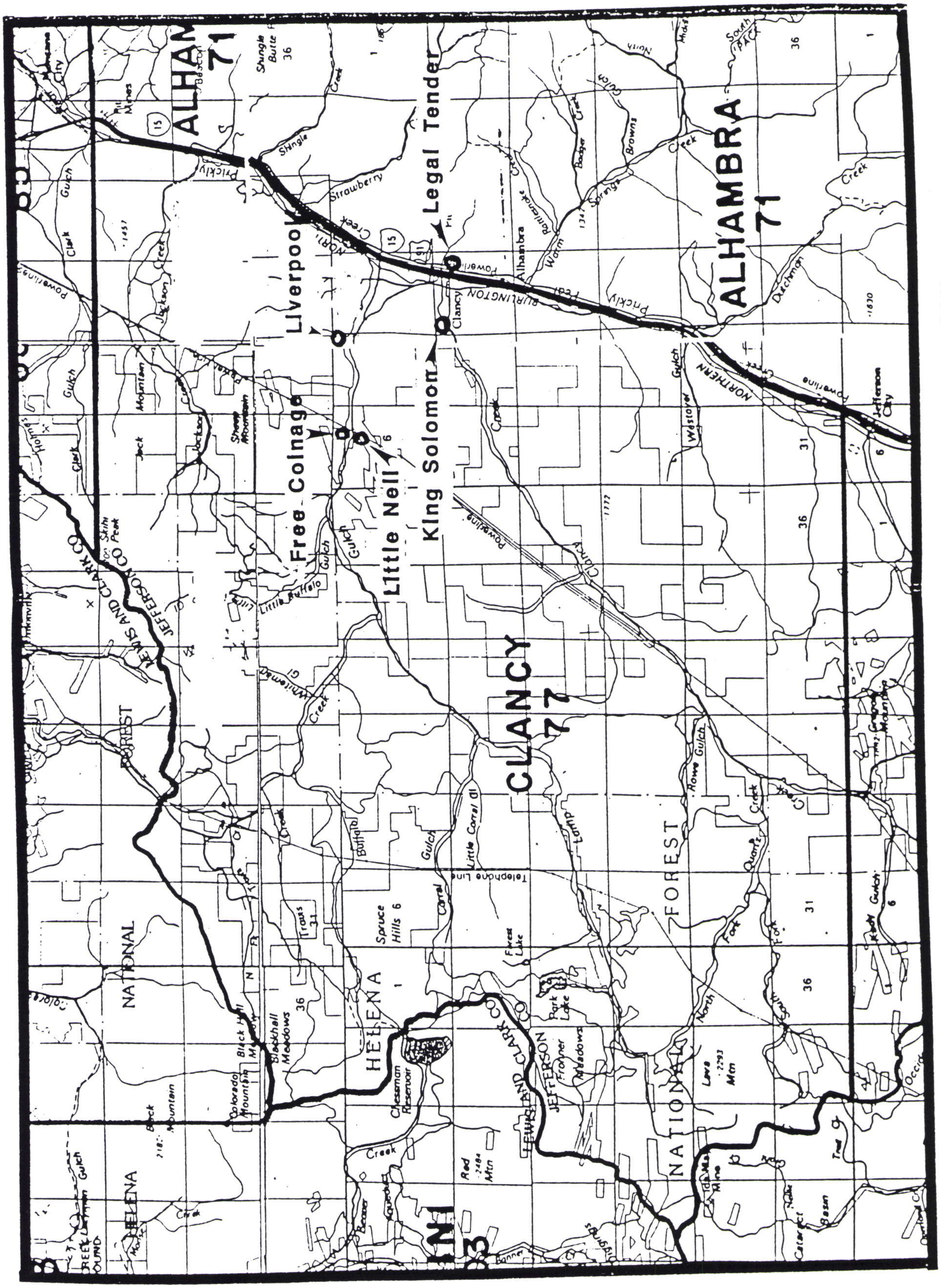
36. Owner-Address of Collections Observed: not applicable

37. Statement of Integrity: A review of existing site records and a reconnaissance survey of most accessible portions of the Clancy Mining District indicate that the area does not retain sufficient integrity of design, materials, workmanship, feeling, association, or setting to reflect its historic mining past. The dominant factor in the loss of integrity is the relatively recent and intensive development of residential properties along Lump Gulch, within a mile or so of the mouth of Clancy Creek, and along Prickly Pear Creek. Many of the most important hard-rock mines in the district, which include the Bell, Free Coinage, Legal Tender, Little Nell, Liverpool, King Solomon, and Nellie Grant, were inaccessible at the time of the reconnaissance because they are in private ownership. Nevertheless, observations made in adjacent areas indicate that little of the mines and associated buildings and structures likely remains intact. Alternately, nearby residential construction has limited the intact remains to a very small area, certainly much smaller that the 90 square mile Clancy Mining District. Various "site leads," such as the records of the Mine Waste Cleanup Bureau of the Montana Department of Environmental Quality, identify other, relatively minor mining sites as generally consisting of collapsed adits and shafts with few or no buildings or structures associated. Finally, only rarely have previously-recorded sites been found to have sufficient integrity or significance to reflect an important historical event, trend, or engineering development.

38. Statement of Significance: The Clancy Mining District, as identified in Items 7 and 24, is not eligible for listing in the National Register of Historic Places because it lacks integrity. The site files review and field reconnaissance did, however, identify three smaller areas which may be National Register eligible. These are the town of Clancy, placer mining areas along Clancy Creek, and Frohner Basin and vicinity. Additional historical research must be compiled to document the historical, engineering, and/or architectural significance of these areas, and fieldwork must be conducted to establish district integrity.

Recorded by Mitzi Rossillon **Date** September 8, 1997

JF1393



Legal Tender
Liverpool
Free Colnage
Little Nell
King Solomon
ALHAMBRA
71
CLANCY
77
NATIONAL
FOREST
HELENA
LEWIS AND CLARK CO
JEFFERSON CO

MONTANA STATE OFFICE SITE FORM
BUREAU OF LAND MANAGEMENT
Page 1

1. Field No./Name Clancy HMD Sub-areas
2. Site No. 24JF 1541
BLM District: Butte
Resource Area: Headwaters
Management Data:
3. BLM Report No. 97-MT-070-075-35

4. USGS Map Quad Clancy 7.5' x 15' __ Date(s) _____ (attach copy)
5. County Jefferson
6. Other Maps: Jefferson City
7. Legal Location (Required):

Town of Clancy Sub-area: T8N R3W Section 9 (portions within the NW 1/4 of the NE1/4 and potions within the NE 1/4 of the NW1/4).

Clancy Creek Placers Sub-area: T8N R3W, portions of Sections 7 and 8; T8N R3W, Section 9 (portion within the NW1/4 of the NW1/4); T8N R4W, portions of Sections 13, 14, 23, 27, 28, and 33. S.½ Sec7 N½ Sec8 NENE Sec13 NWSW Sec13 SE Sec14 NWNE, NW, NWSW of Sec23, SE Sec22, N½ Sec27, NE Sec28, W½ SW Sec33

Frohner Basin Sub-area. T8n R4W, portions of Sections 7, 18, and 19; T8N R5W, portions of Sections 13, 14, 23, and 24. S½ sec12, all of 13, N½ and N½ of S½ Sec24, N½ and NENE Sec23, E½ and E½ of W½ Sec14, S½ S½ Sec11 SWSW Sec7 W½ of W½ of W½ Sec18, W½ NW an NENESW Sec19

8. UTM Reference (Optional):

A. _ _; _ _ _ _ _ _mE _ _ _ _ _ _ _mN

9. Official Designation (BLM Use Only)

Eligible	_____	Date _____
Not Eligible	_____	Date _____
Need more information	_____	Date _____
Listed	_____	Date _____
Contributing to NR District	_____	Date _____
Not Contributing to NR District	_____	Date _____

10. Site Category (check as many apply):

Prehistoric archaeological site	____
Historic archaeological site	____
Historic building(s)	x
Historic structure(s)	x
Historic feature(s)	x
Other	____

11. Use Category (BLM Use Only)

Scientific Use	x
Conservation Use	____
Management Use	____
Sociocultural Use	____
Public Use	x
Discharge Use	____

Environmental Data:

12. Topographic Setting: Along stream banks and adjacent valley floors.
13. Soil Description (Character and Color): _____
14. Depositional Environment; e.g., eolian: _____
15. Elevation _____ ft.
16. Nearest Water: name/nature _____ Elevation _____ ft.
Distance _____ Direction _____
17. Vegetation on site: _____
18. Surrounding Vegetation: _____
19. Slope _____
20. Recorder's Affiliation BLM
Recorded by Darrell Sanders
Date 3/27/98

MONTANA STATE OFFICE SITE FORM
BUREAU OF LAND MANAGEMENT

Field No./Name Clancy HMD Sub-areas Site Number 24JF

Site Data:

21. Access: Via Interstate 15.

22. Description of Site: The "site" consists of three discontinuous sub-areas within the Clancy Historic Mining District (24JF1393) as tentatively defined for BLM by Renewable Technologies, Inc. (Rossillon and McCormick 1997). The sub-areas contain concentrations of mining related buildings, structures, objects, and features that date to the district's historic mining period, circa late 1860s to the early 1940s. The three sub-areas are: (1) Town of Clancy; (2) Clancy Creek Placers; and (3) Frohner Basin.

The three sub-areas were identified during a "windshield" survey of the Clancy Historic Mining District (24JF1393) by Mitzi Rossillon of Renewable Technologies, Inc. During her survey, Rossillon marked the boundaries for the Town of Clancy and Clancy Creek Placers sub-areas on USGS 7.5' topographic maps (see attached maps). Boundaries for the Frohner Basin sub-area were delineated on a USGS 7.5' topographic map by Darrell Sanders of BLM, based upon a phone conversation with Rossillon on March 27, 1998.

The sub-areas include the district's densest concentrations of historic mining materials . Excluded from the sub-areas are areas where the landscape is dominated by modern residential development.

Provided below are Rossillon and McCormick's (ibid.) narrative descriptions of the three sub-areas:

> Sub-area 1: Town of Clancy. There have been no previous investigations of Clancy, but,...a small number of historic building [are located here] that appear to retain integrity of design and materials. There are several modern residences on the fringe of the historic core, however. (See Continuation Sheet).

23. Site Dimensions _____m _____m Area _____m^2/4047 _____ acres

24. Boundary Description and Justification: See Description of Site and attached maps.

25. Description of Cultural Materials (Quantify and Identify): _____
_____# of items of cultural material observed
_____# collected

26. Artifact Repository: _____

27. Description of Subsurface Testing: None.

Recorded by Darrell Sanders Date 3/27/97

MONTANA STATE OFFICE SITE FORM
BUREAU OF LAND MANAGEMENT

Field No./Name Clancy HMD Sub-areas Site Number 24JF

28. Current Use of Site: Multiple use.

29. Land Status (Indicate jurisdiction or ownership): Pvt, USFS, BLM.

30. Cover (% of visible ground): _____

31. Man-hours spent on site: _____

32. Project Title: Devil's Elbow Land Exchange

P.I.: Mitzi Rossillon

33. Report Title: Devil's Land Exchange: Supplemental Archaeological and Historical Investigations, 1997. BLM Report No. 97-MT-070-075-35.

Author: Mitzi Rossillon and Mary McCormick

34. Other Published References:

Fairchild, Gary
1983d Amended site form for 24JF726 and 24LC1048. On file, Archaeological Records, University of Montana, Missoula.

Roby, R.N., W.C. Acherman, F.B. Fulkerson and F.A. Crowley
1960 Mines and Mineral Deposits (Except Fuels) Jefferson County, Montana. Montana Bureau of Mines and Geology, Bulletin 16, Butte.

Tennis, P.
1975 Site form for 24JF726 and 24LC1048. On file, Archaeological Records, University of Montana, Missoula.

35. Description of Collections Observed: None.

36. Owner-Address of Collections Observed: _____

37. Statement of Integrity: Unknown at present; all three sub-areas need to be subjected to intensive field inventory and their properties assessed for integrity.

38. Statement of Significance: Unknown; additional background research coupled with field inventory is needed to determine significance.

Recorded by Darrell Sanders Date 3/27/98

Field No./Name Clancy HMD Sub-areas Site Number 24JF

Item No. 22: Description of Site.

Sub-area 1: Town of Clancy (continued).

The community of Clancy was established as a small mining center in about 1872...By the late 1870s, the town boasted a population of 200 and a general store, drug and hardware store, post office, machine and blacksmith shop, assay office, and shop. While work at the nearby Legal Tender Mine in the 1880s spurred the period of most activity at Clancy, little if anything of the town remains from that period. A fire in 1902 "razed most of the business section," and a subsequent fire damaged what remained...Despite the fire, Clancy continued to be a small commercial center, and survives today with a handful of businesses.

.[Windshield surveys] identified two stone buldings ...several residences, and a few churches that are cleary of historic age, probably constructed between between 1903 and the 1930s. These appear to retain sufficient integrity of location, design, materals, and setting to comprise a very small district of perhaps a dozen contributing elements. Their significance may more properly lie with their arcitectural merits, rather than their historic associations.

Sub-area 2: Clancy Creek Placers. Like the town of Clancy, no previous investigations noted the worked placer ground along Clancy Creek, although the pertinent topogrpahic map marks the extent of the majority of the placer tailings...tailings [were noted} along most of the creek from Morgan Gulch to a point less than 1/2 mile upstream form the town of Clancy.

The earliest placer mining along Clancy Creek presumably dates to the 1860s or 18870s, but activity was limited at the time. Only one short section of the creek may reflect that early placering-near the head of Clancy Creek at the mouth of Morgan Gulch. The bulk of placer mining on the creek dates to the 1930 and 1040s. Beginning in 1937, the Humphreys Gold Corp. used a dragline to excavate 1,433,445 cubic yards of material along Clancy Creek.

Another "dry-land dredge" operated from 1940 to1942. A third operation involving both a dry-land dredge and a dragline dredge, worked the gravels from the end of World War II through 1947 (Roby et al. 1960:18). The remains of those three operations are obvious today (Figure 14).

MONTANA STATE OFFICE SITE FORM
BUREAU OF LAND MANAGEMENT
Continuation Form

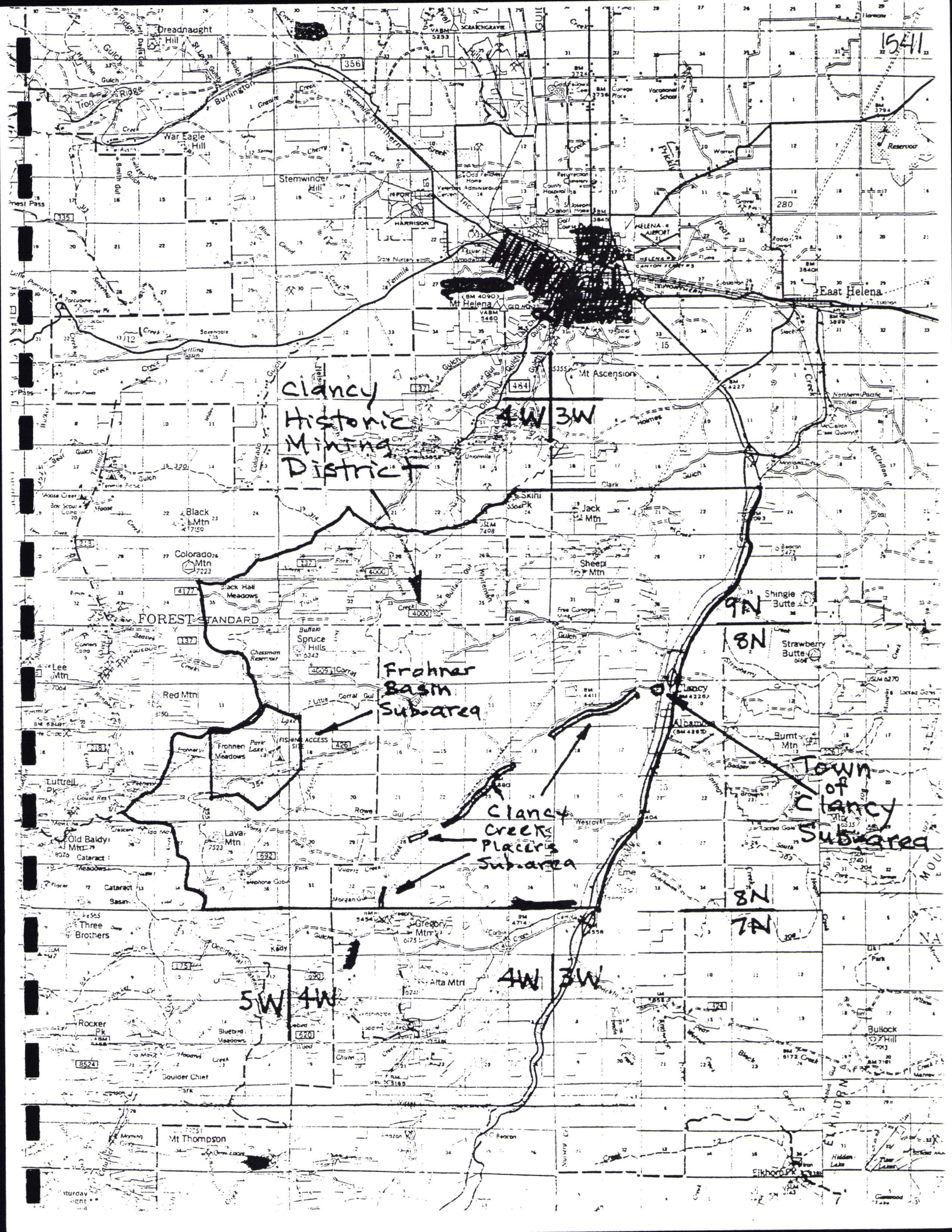
Field No./Name Clancy HMD Sub-areas Site Number 24JF

Item No. 22: Description of Site.

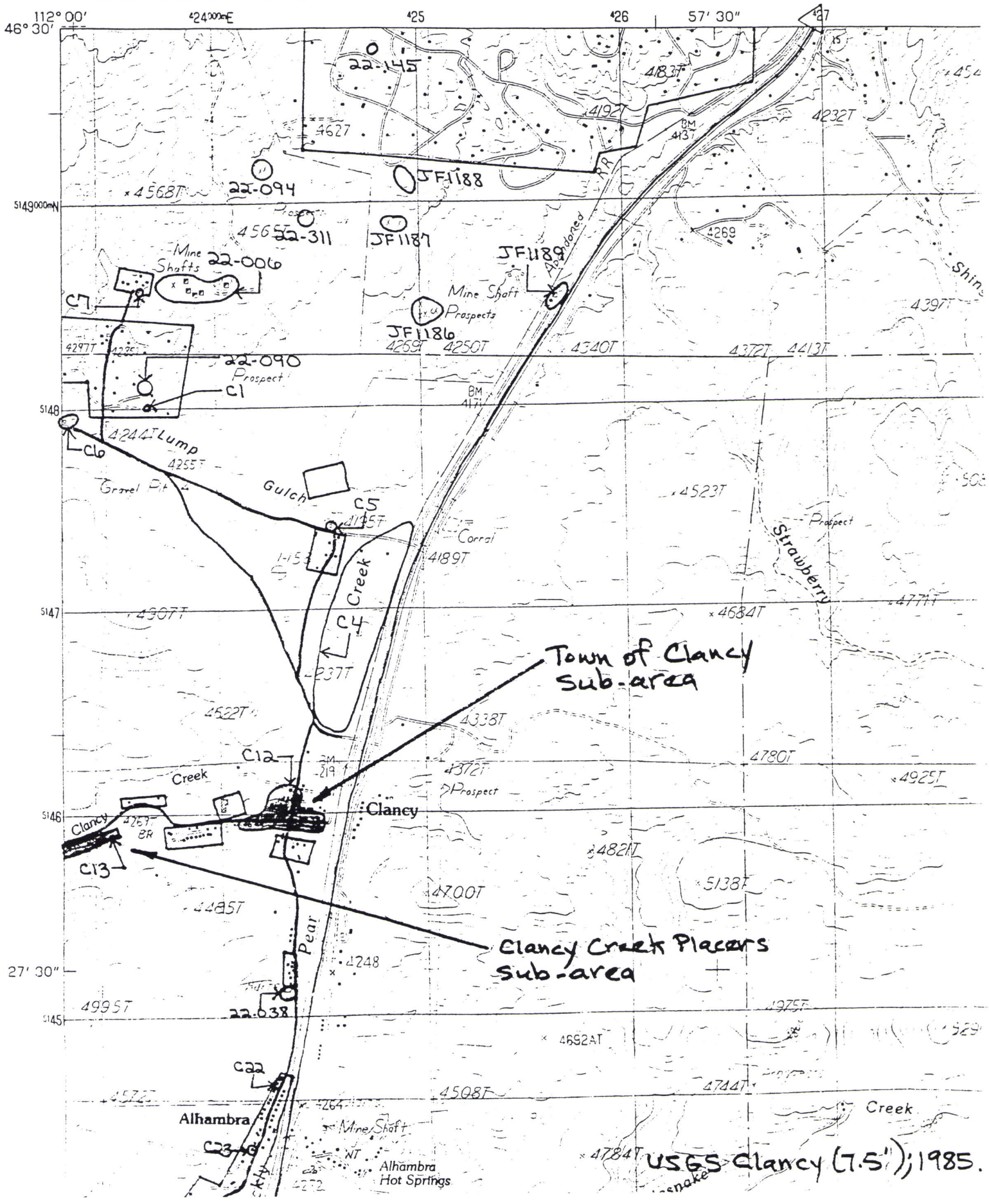
The significance of the 1937-1947 placer mining must be established to determine if indeed there is a Clancy Creek placering district that is National Register eligible. Specifically, the type of equipment used within the context of other placer mining operations of the era should be researched, as well as the economic impact of the work. Additionally, the presence of several building of historic age along the creek (Figure 15) suggests a relationship between them and placer mining. The histories of individual buildings should be collected. Finally, the integrity of both the nineteenth century and 1937-1947 (okacer taukubg aooears ti be giidm wutg ibkt nubir abd ubfreqyebt niderb ubtrsuibs) (residences) or damage (local road construction). placer tailing appears to be good, with both minor and infrequent modern disturbances.

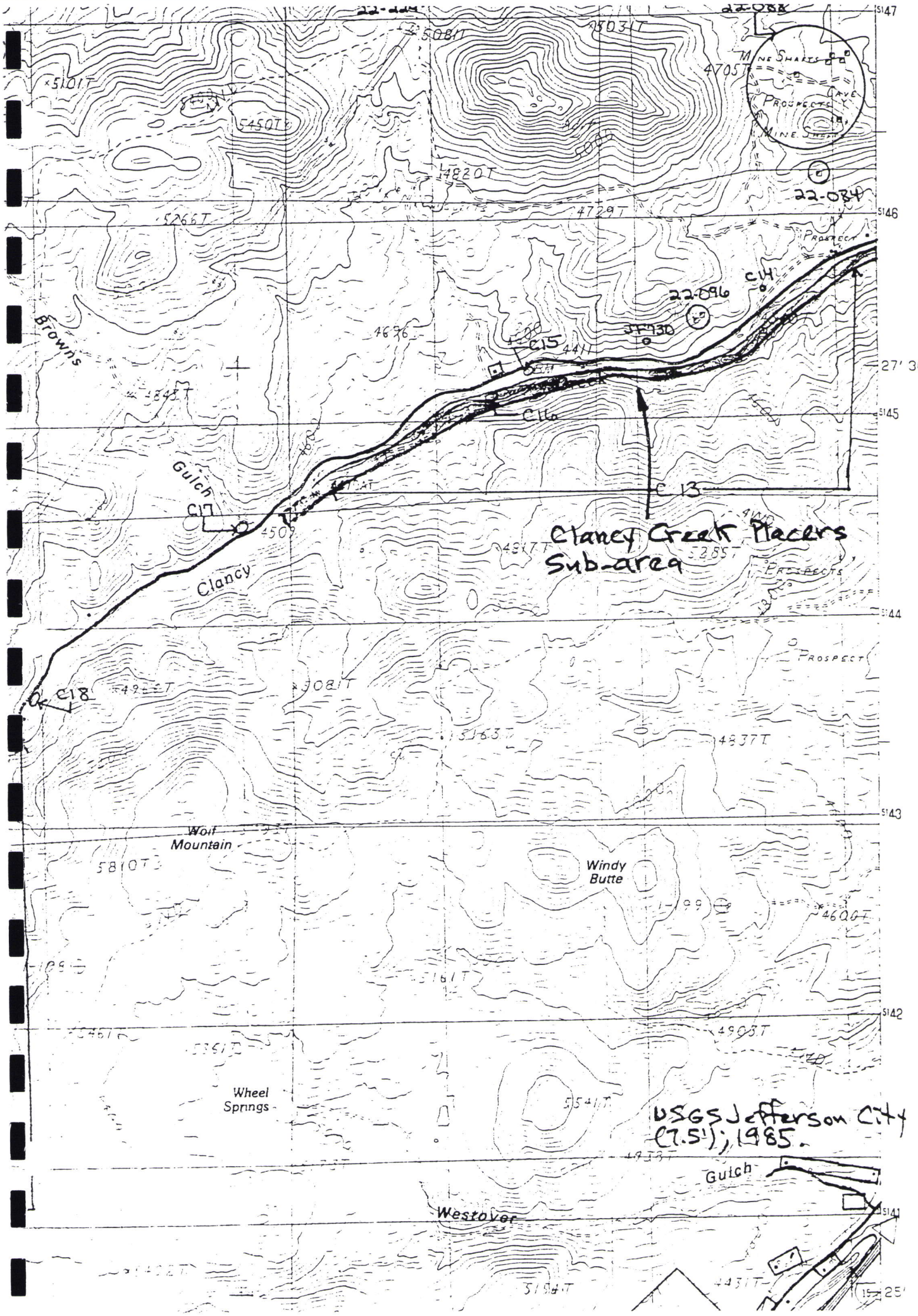
Sub-area 3: Frohner Basin. The Frohner Basin lies at the head of Lump Gulch. It witnessed mining activity quite early, with both placer and lode claims filed in the late 1860s or early 1870s. However, the earliest significant mining at one of the larger mines in the area, the Frohner, did not begin until the late 1880s. Subsequent work was limited, although a 30-ton mill was built to process the gold and silver ore locally. The mine operated only for a few years in the late nineteenth century and was reopened briefly in 1911, 1928-1929, and the late 1930s to the early 1940s (Roby et al. 1960:106; Renewable Tecnologies, Inc. 1996:3-7. The Nellie Grant Mine was another, nearby producer, ba a late one It yielded 1,057 tons of ore from 1948-1957 (Roby et al. 1960:43).

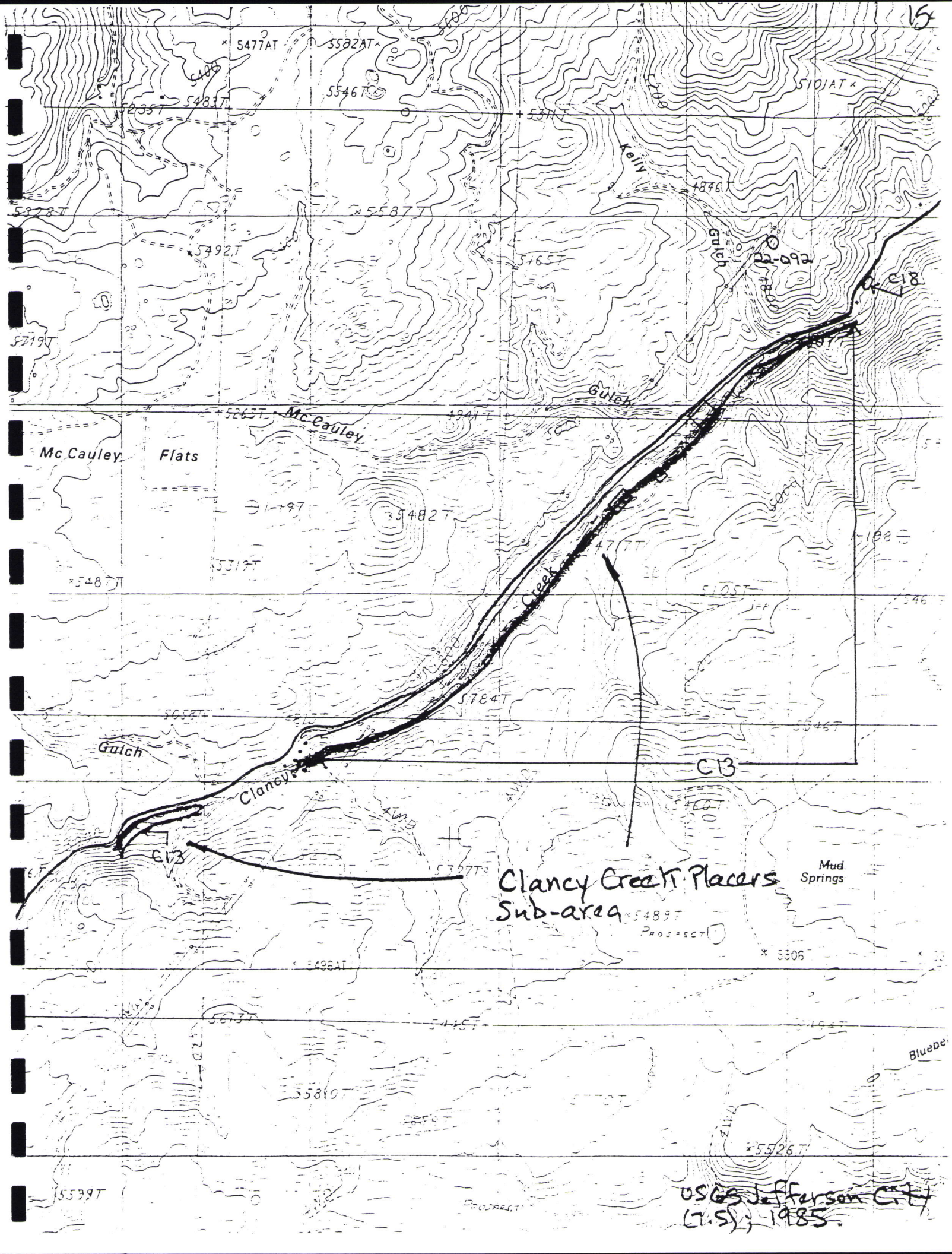
The premier site in the Frohner area is not related to minin at that location, but instead to placer mining along Grizzly, Oro Fino, and Dry Gulches just outside of Helena. The Park Kitch (24JF7260), constructed in 1870-1872 was built by Helena businessmenwho had joined incorporate the Park Ditch Company. The structure was instrumental in developing the Helena gold placers (Tnnis 1975; Fairchild 1983d). It retains integrity of location, design, materaials, and workmanship (personal communication to Mitzi Rossillon by Carl Davis of the Helena National Forest).


1541
Clancy Historic Mining District
Frohner Basin Subarea
Clancy Creek Placers Subarea
Town of Clancy Subarea
4W 3W
9N
8N
7N
5W 4W
Dreadnaught Hill
War Eagle Hill
Stemwinder Hill
HARRISON
Mt Helena
East Helena
Mt Ascension
Black Mtn
Colorado Mtn
Black Hall Meadows
FOREST STANDARD
Spruce Hills
Lee Mtn
Red Mtn
Frohner Meadows
Lutrell Pk
Old Baldy Mtn
Lava Mtn
Three Brothers
Gregory Mtn
Alta Mtn
Rocker Pk
Bluebird Meadows
Boulder Chief
Mt Thompson
Jack Mtn
Sheep Mtn
Shingle Butte
Strawberry Butte
Clancy
Alhambra
Burnt Mtn
Bullock Hill
Elkhorn Pk

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY




Clancy Creek Placers
Sub-area
USGS Jefferson City
(7.5'); 1985.
22-084
22-096
C14
C15
C16
C17
C18
C13
Browns
Gulch
Clancy
Wolf
Mountain
Windy
Butte
Wheel
Springs
Westover
Gulch
Mine Shafts
Prospects
Cave
Prospect
27' 30"
25'


15
5477AT
5582AT
5546T
5483T
5235T
5311T
5101AT
Kelly
4846T
5328T
5587T
5492T
5165T
Gulch
22-092
C18
5719T
Gulch
5263T
Mc Cauley
4941T
Mc Cauley
Flats
5482T
5319T
5487T
Creek
5105T
5784T
Gulch
Clancy
C13
C13
Clancy Creek Placers
Sub-area
Mud
Springs
5489T
PROSPECT
5306
5498AT
5613T
5445T
5494T
Bluebe
5810T
5526T
5539T
PROSPECT
USGS Jefferson City
(T.S); 1985.

Roe Gutch

Clancy Creek

Quartz Creek

Morgan Gl

Valparaiso Mountain

Gregory Mountain

Alta Mountain

C1

C13

C21

C13

C20

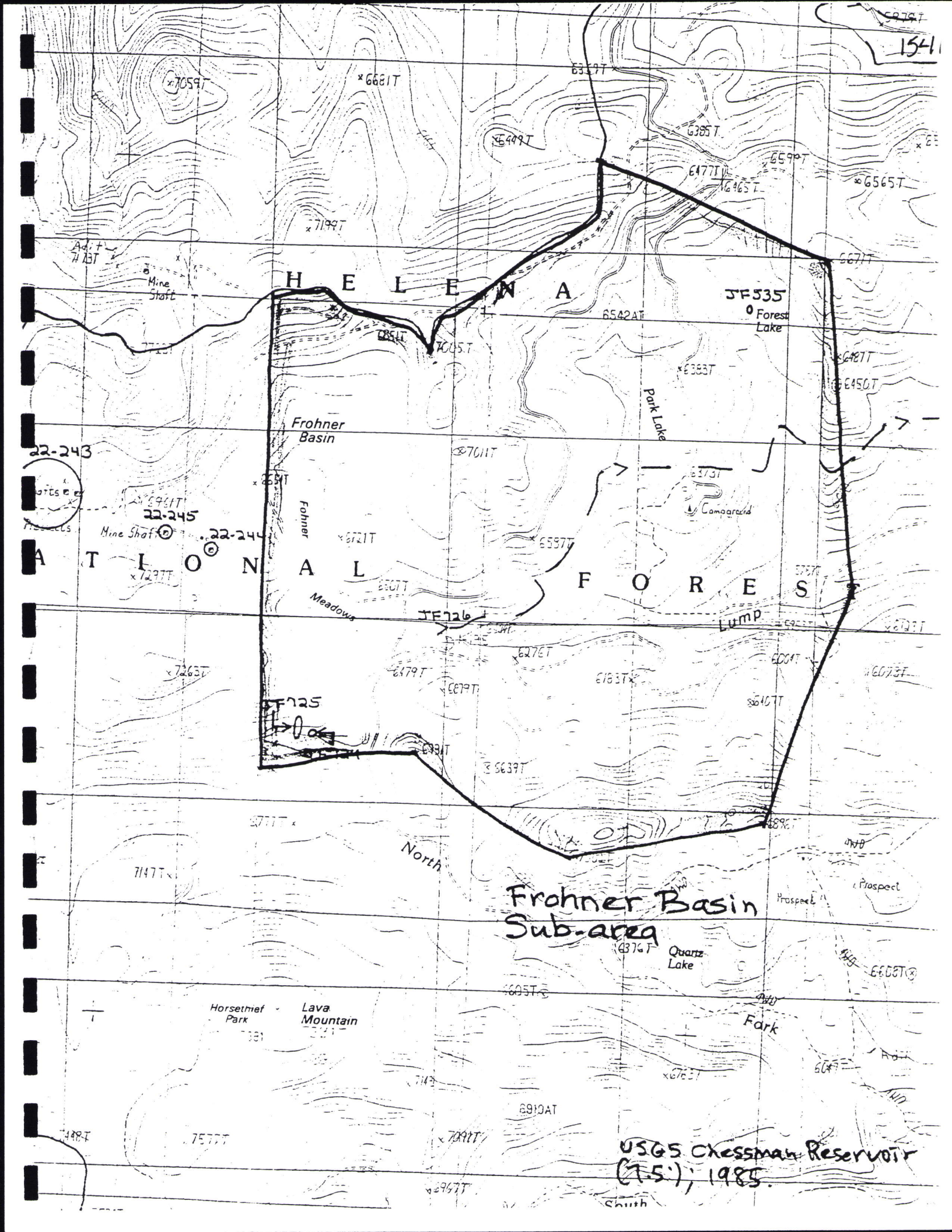
C19

Clancy Creek Placers Sub-area

PRODUCED BY THE UNITED STATES GEOLOGICAL SURVEY
CONTROL BY . . . . . USGS, NOS/NOAA
COMPILED FROM AERIAL PHOTOGRAPHS TAKEN 1980
FIELD CHECKED . . . . . 1981 MAP EDITED 1985
PROJECTION . . . . . LAMBERT CONFORMAL CONIC
GRID: 1000-METER UNIVERSAL TRANSVERSE MERCATOR . . . . . ZONE 12
10000-FOOT LATTICE GRID TICKS . . . . . MONTANA, SOUTH ZONE

USGS Jefferson City (7.5'), 1985

SCALE



1541
HELENA
ATIONAL FOREST
JF535
Forest Lake
Park Lake
Frohner Basin
Fohner
Meadows
JF726
Lump
Campground
22-243
22-245
22-244
Mine Shaft
JF725
North
Frohner Basin Sub-area
Quartz Lake
Prospect
Horsethief Park
Lava Mountain
Fork
USGS Chessman Reservoir (7.5'); 1985.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Headwaters Resource Area
106 North Parkmont
P.O. Box 3388
Butte, Montana 59702-3388
Telephone: 406-494-5059

IN REPLY TO:

8143A (075)

APR 10 1998

Josef

9804315
BLK

Mr. Josef Warhank
State Historic Preservation Office
P.O. Box 201202
Helena, Montana 59620-1202

Dear Mr. Warhank:

Pursuant to your request of March 12, 1998, three discontiguous subareas of the Clancy Historic Mining District (24JF1393) have been defined. The enclosed site form (24JF1541) describes these areas.

Based upon "windshield" surveys, the historic buildings and structures that make up the three subareas appear to be relatively intact. Consequently, I have determined that the subareas are potentially eligible properties. However, this needs to be confirmed through field inventory and historic documents research.

Regarding the overall Clancy Historic Mining District, I continue to believe the district as a whole is not eligible due to a lack of integrity caused by modern residential intrusions. The only exceptions to this would be, of course, the three subareas, providing they are confirmed through additional research.

As you know, it has been almost 3 months since I first consulted with you on the eligibility of the Clancy Historic Mining District. I therefore eagerly await your opinion regarding its eligibility status.

Please call Darrell Sanders at 494-5059 if you have questions or need more information.

Sincerely,

Merle Good

Merle Good
Area Manager

1 Enclosure
1-Site form 24JF1541 (Clancy Historic Mining District Subareas)

Post-it® Fax Note 7671	Date 19 Oct 98	# of pages ▶ 2
To Dale Gray	From Josef J Warhank	
Co./Dept.	Co. SHPO	
Phone # (208) 376-4080	Phone # (406) 444-0388	

Post-it® Fax Note 7671	Date 19 Oct 98	# of pages ▶ 2
To Dale Gray	From Josef J Werkhank	
Co./Dept.	Co. SHPO	
Phone # (208) 376-4080	Phone # (406) 444-0388	
Fax # (208) 376-9794	Fax # (406) 444-6575	

This form constitute[illegible] Officer on a particular project and is the official SHPO reply. The dates of SHPO actions appear in the appropriate boxes.

Please Route This Form To:	BLM POB 3388 Butte, MT 59702

Your Agency Requested Consultation with the Montana State Historic Preservation Officer (SHPO) on this Project under this Law or Regulation: **Section 106**

PROJECT NUMBER		**AGENCY**	BLM	**OTHER Agency**	
PROJECT NAME and Other Descriptions	Clancy Hist. Dist.	**Dates and Separate Requests to SHPO on This Project**	04/13/98	Josef	
THIS FORM documents			**Individual actions.**		

Memo(s) to Sender

Dear Marie,
We can concur that the three areas submitted (24JF1541) are Eligible for the National Register. The Clancy District would appear, based on your report, not to retain enough integrity. It must be pointed out that other historic properties still exist in this area. If projects are plan in some of these areas, we would need to survey them to insure that the vast areas between these properties do not contain Cultural Resources. A "Windhield survey" will not do if we are attempting to insure that a area is free of Cultural Resources.

DETERMINATION OF ELIGIBILITY **The SHPO Has Considered Whether, per Your Request, Sites Either Meet or Do Not Meet the Criteria of the National Register of Historic Places. The Finding of the SHPO Is as Follows:**	**Sites which Meet National Register Criteria**		**Sites Not Meeting National Register Criteria**	

Criterion A Findings	Criterion B Findings	Criterion C Findings	Criterion D Findings

DETERMINATIONS OF EFFECT **The shpo has considered whether this undertaking will have an affect on significant historic properties. The finding of the shpo is as follows:**	**No Eligible or Listed Properties Are Within the Area of**		**The Project Will Have NO EFFECT on These**
	Potential Effect		**Eligible Properties**	
Descriptions of Effects on Eligible Property Using 36 CFR 800.9			**The Effect on These Properties Is:**	
			Adverse	
			Not Adverse.	

Other Comments:

Appendix C

Photologs and proof sheets

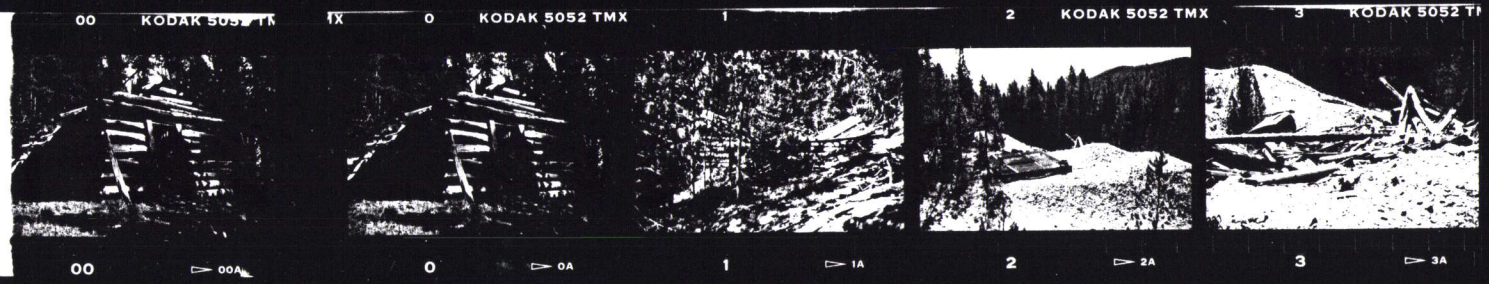
Photo and accession numbers:

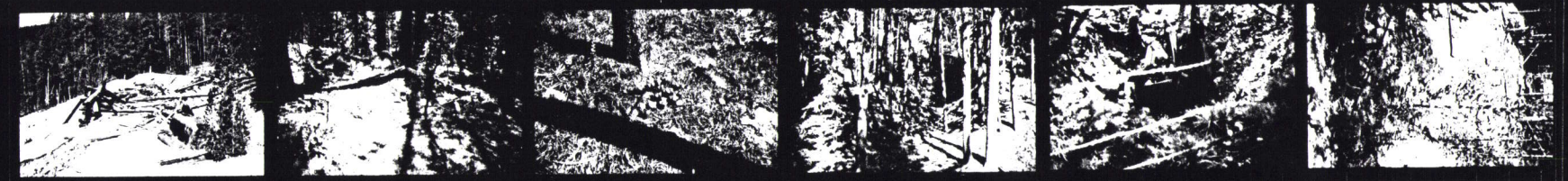
No.	Description	View
July, 1998, DMG, Black and White, Roll 1		
0	Feature 11	NW
1	Feature 11	NW
2	Feature 13	N
3	Feature 12	SSW
4	Feature 11	E
5	Feature 13	S
6	Feature 14B	ENE
7	Feature 14 Mill	SE
8	Feature 14 wood debris	SSE
9	Feature 14 ore bin	SW
10	Feature 14 ore bin	SW
11	Feature 14	W
12	Feature 15A, flotation cell	E
13	Feature 15, tailings mill	SE
14	Feature 14 and 15	NW
15	Feature 16	SW
16	Feature 1	SSW
17	Feature 2	SSE
18	Feature 3	SE
19	Feature 17	W
20	Feature 17	SE
21	Feature 18	NW
22	Feature 6	SSE
23	Feature 6 detail	S
24	Feature 8	W
25	Feature 1	N

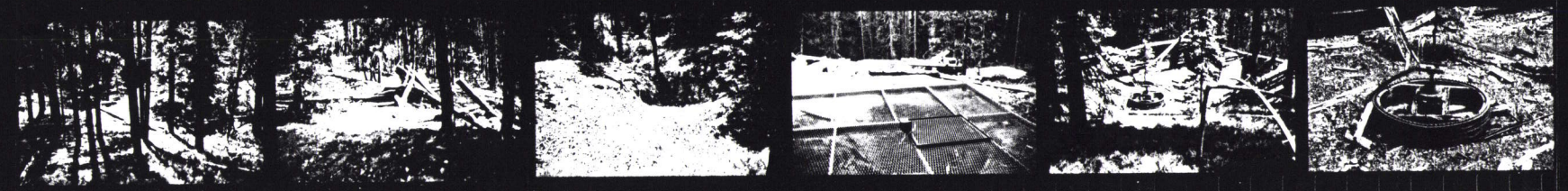
ARCHIVAL STORAGE

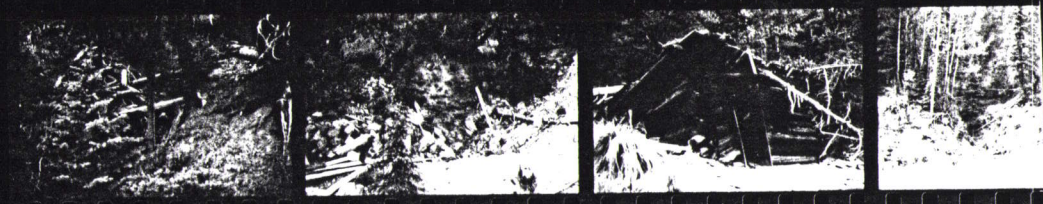
July, 1998, DMG, Black and White, Roll 2

0	Feature A	N
1	Feature A	N
2	Feature A	SW
3	Feature B	ESE
4	Feature B ore bin debris	E
5	Feature B	N
6	Feature C	NE
7	Feature E drill bits	
8	Feature D	N
9	Feature E	E
10	Feature F	W
11	Feature G	SE
12	Feature G	N
13	Feature H	SE
14	Feature I	SE
15	Feature K whim house	E
16	Feature K whim detail	NE
17	Feature K	SE
18	Feature L	W
19	Feature M	SW
20	Feature N	W
21	Feature O	W
22	Feature P	W
23	Feature Q	NW
24	Feature R	W
25	Feature S	N
26	Feature T	S









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ARCHIVAL STORAGE