SITE INSPECTION REPORT FOR ABANDONED AND INACTIVE MINES IN SOUTHERN IDAHO: VOLUME I: SILVER CITY-WAR EAGLE MOUNTAIN AREA, OWYHEE COUNTY, IDAHO

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</table>

INTRODUCTION

SOUTH MOUNTAIN PROPERTIES

3.57 Texas Mine (JV-151).
3.58 Laxey Tunnel (JV-144).
3.59 Golconda Mine (JV-140).
3.60 unnamed Prospect (Site No. B7229901).
3.61 Sonnemann Mine (JV-138).

xxxi
3.63 Washington Tunnel/Mexican Shaft
(JV-127/JV-128). ................................................................. 0:50:18-0:55:04
3.64 South Mountain Smelter (no site number). ................................. 0:55:12-0:58:40
END OF TAPE 4 STATEMENT. ........................................... 0:58:44-0:59:05
1.0 PROJECT OVERVIEW

1.1 INTRODUCTION

In order to identify and characterize the abandoned and inactive mines with environmental, health, and/or safety problems that are on or that could impact federal and state lands, the U.S. Environmental Protection Agency (EPA), the U.S. Bureau of Land Management (BLM), the Idaho Department of Lands (IDOL), and the Idaho Geological Survey (IGS) have undertaken to evaluate the mines in Owyhee County, Idaho. This report describes work that was done in the Silver City and War Eagle Mountain areas. As the lead state agency for the collection, interpretation, and distribution of information about the geology and mineral resources of Idaho, the state geological survey is keenly interested in cooperative projects that will expand our knowledge of current and historic mining areas. Major funding for this project came from the EPA, Idaho Operations Office. Additional support came from the BLM, Idaho State Office, for the analysis of geochemical samples and from the IDOL in conjunction with an ongoing revision of the state’s mines and prospects database.

1.2 PROJECT OBJECTIVES

The overall objectives of this inventory and preliminary characterization process are to:

1. Systematically identify all mine sites with possible human health, environmental, and/or safety related problems.

2. Identify the human health and environmental risks at each location based on site characterization factors (see Section 1.5), including screening-level soil and water samples collected and analyzed in accordance with Environmental Protection Agency (EPA) protocols and quality control procedures.

3. Cooperate with other state and federal agencies, and integrate these data with their programs.

4. Develop and maintain a data file of site information that will enable federal and state agencies to pro-actively respond to governmental and public interest groups.

In addition to the above objectives, the IGS is interested in gathering new information associated with these abandoned and inactive mines. This is an outgrowth of the Survey's enabling legislation (Sections 47-201–47-204 of the Idaho Code), which designates the IGS as the lead state agency for the collection, interpretation, and distribution of all geologic and minerals data for Idaho.

1.3 ABANDONED AND INACTIVE MINES DEFINED

For the purposes of this study, mines, mills, or other processing facilities related to mineral extraction and/or processing are defined as abandoned or inactive as follows:
A mine is considered *abandoned* if there are no identifiable owners or operators for the facilities, or if the facilities have reverted to federal ownership.

A mine is considered to be *inactive* if there is an identifiable owner or operator of the facility, but the facility is not currently operating and there are no approved plans or permits to operate.

### 1.4 HEALTH AND ENVIRONMENTAL PROBLEMS AT MINES

A variety of safety, health, and environmental problems may occur at abandoned and inactive mines. These include metals that contaminate ground water, surface water, and soils; airborne dust from abandoned tailings impoundments; eroding mine and mill wastes that contribute excessive amounts of sediment to surface waters; unstable waste piles with the potential for catastrophic failure; and physical hazards associated with mine openings and dilapidated structures.

Metals are often transported from a mine by water (ground water discharge or surface runoff) and may be dissolved, suspended, or carried as part of the bedload. When sulfides are present, acid water can form; this, in turn, increases the solubility of metals. This condition, known as acid mine drainage (AMD), is a significant source of metal releases at some mine sites in Idaho. The most important environmental hazard is the contamination of both surface and subsurface water by metals, acid mine drainage, or sediment loading.

#### 1.4.1 Acid Mine Drainage

Trexler and others (1975) identified six factors that govern the formation of metal-laden acid mine waters. They are:

1) availability of acid-producing minerals, particularly pyrite,
2) presence of oxygen,
3) moisture in the atmosphere,
4) availability of leachable heavy metals,
5) availability of water to transport the dissolved constituents, and
6) mine characteristics, which affect movement of air and water through the mine workings.

These factors occur not only within the mines themselves, but also within mine dumps and mill tailings piles, making these wastes potential sources of contamination as well. Formation of acid mine drainage can be reduced if minerals such as calcite, which can neutralize acidity, are present (Trexler and others, 1975; Marvin and others, 1995).

Acid mine drainage is formed by the oxidation and dissolution of sulfides, particularly pyrite (FeS₂) and pyrrhotite (Fe₁₋ₓS). Other sulfides play a minor role in acid generation. Oxidation of iron sulfides forms sulfuric acid (H₂SO₄), sulfate ions (SO₄²⁻), and reduced iron (Fe²⁺). When
sulfide-bearing rock is mined, the sulfide minerals are exposed to atmospheric oxygen and oxygen-bearing water. Consequently, the sulfide minerals are oxidized, and acid mine waters are produced (Trexler and others, 1975; Marvin and others, 1995).

The oxidation of the reduced iron is the step that limits how much acid will form. The rate of this reaction can be greatly increased by iron-oxidizing bacteria (Thiobacillus ferrooxidans). The oxidized iron produced by biological activity promotes further oxidation and dissolution of pyrite, pyrrhotite, and marcasite (FeS₂, a dimorph of pyrite) (Trexler and others, 1975; Marvin and others, 1995).

Once formed, the acid can dissolve other sulfide minerals to produce high concentrations of copper, lead, zinc, and other metals. Minerals that can contribute heavy metals to acid mine drainage include arsenopyrite, FeAsS; chalcopyrite, CuFeS₂; galena, PbS; tetrahedrite, (CuFe)₁₂Sb₄S₁₃; and sphalerite, (Zn, Fe)S. Aluminum can be leached by the dissolution of aluminosilicates common in soils and waste material found in Idaho. The dissolution of any given metal is controlled by the solubility of that metal (Trexler and others, 1975; Marvin and others, 1995).

1.4.2 Solubility of Selected Metals

The following information is paraphrased from Marvin and others (1995, p. 5-6). This report cites the following references as sources for this material: Lindsay (1979), Stumm and Morgan (1981), Hem (1985), and Maest and Metesh (1993).

At a pH above 2.2, ferric hydroxide [Fe(OH)₃] produces a brownish orange color in surface waters and forms a precipitate with a similar color on rocks in affected streams. If other metals, such as copper, lead, cadmium, zinc, and aluminum, are present in the source rock, they may also precipitate with or adsorb onto the ferric hydroxide (Stumm and Morgan, 1981). Alunite [KAl₃(SO₄)₂(OH)₆] and jarosite [KFe₃(SO₄)₂(OH)₆] will precipitate at a pH of less than 4, depending on SO₄²⁻ and K⁺ activities (Lindsay, 1979).

Under acidic conditions, the solubility of the metal controls how much will be released into the environment:

**Manganese** solubility is strongly controlled by the redox state and is limited by the presence of minerals such as pyrolusite and manganite; under reducing conditions, pyrolusite [MnO₂] dissolves and manganite [MnO(OH)] precipitates. Manganese is found in mineralized environments as rhodochrosite [MnCO₃] and its weathering products.

**Aluminum** solubility is most often controlled by alunite [KAl₃(SO₄)₂(OH)₆] or by gibbsite [Al(OH)₃], depending on pH. Aluminum is one of the most
common elements in rock-forming minerals such as feldspars, micas, and clays.

**Arsenic** tends to precipitate and adsorb with iron at low pH and de-sorb or dissolve at higher pH. Once oxidized, arsenic will be found in solution in higher pH waters. When the pH is between 3 and 7, the dominant arsenic compound is a monovalent arsenate, $\text{H}_2\text{AsO}_4$. Arsenic is abundant in metallic mineral deposits as arsenopyrite $[\text{FeAsS}]$, enargite $[\text{Cu}_3\text{AsS}_4]$, tennantite $[\text{Cu}_{12}\text{As}_8\text{S}_{13}]$, and other minerals.

**Cadmium** solubility data are limited. When the pH of soils is above 7.5, the solubility of cadmium is controlled by the carbonate species octavite $[\text{CdCO}_3]$; when the pH of the soil is below 6, cadmium solubility is controlled by strengite $[\text{Cd}_3(\text{PO}_4)_2]$. Octavite is the dominant control on the solubility of cadmium in soils. In water, at low partial pressures of $\text{H}_2\text{S}$, $\text{CdCO}_3$ is easily reduced to $\text{CdS}$.

**Copper** solubility in natural waters is controlled primarily by the amount of carbonate present; malachite $[\text{Cu}_2(\text{OH})_2\text{CO}_3]$ and azurite $[\text{Cu}_3(\text{OH})_2(\text{CO}_3)_2]$ form when $\text{CO}_3^-$ ions are available in sufficient concentrations. In soil, copper combines readily with iron to form cupric ferrite. Other compounds, such as sulfate and phosphates, may also control copper solubility in soils. Copper is present in many ore minerals, including chalcopyrite $[\text{CuFeS}_2]$, bornite $[\text{Cu}_5\text{FeS}_4]$, chalcocite $[\text{Cu}_2\text{S}]$, and tetrahedrite $[\text{Cu}_{12}\text{Sb}_4\text{S}_{13}]$.

**Mercury** readily vaporizes under atmospheric conditions and thus is most often found in concentrations well below the 25 µg/L equilibrium concentration. The most stable form of mercury in soil is its elemental form. Mercury is found in low temperature hydrothermal ores as cinnabar $[\text{HgS}]$, in epithermal (hot springs) deposits as native mercury, and as native mercury in man-made deposits where mercury was used to process gold ores.

**Lead** concentrations in natural waters are controlled by the formation of lead carbonate, which has an equilibrium concentration of 50 µg/L when the pH is between 7.5 and 8.5. As with other metals, concentrations in solution increase with decreasing pH. In sulfate soils with a pH of less than 6, the formation of anglesite determines how much lead will remain in solution. The formation of cerussite, a lead carbonate, controls solubility in buffered soils. Lead occurs in the common ore mineral galena $[\text{PbS}]$.

**Zinc** solubility is controlled by the formation of zinc hydroxide and zinc carbonate in natural waters. When the pH is above 8, the equilibrium concentration of zinc in water with a high bicarbonate content is less than 100 µg/L. Franklinitic may control solubility at pH less than 5 in water...
and soils, and its formation is strongly affected by sulfate concentrations. Thus, production of sulfate from acid mine drainage may ultimately control the solubility of zinc in water affected by mining. Sphalerite [ZnS] is common in mineralized systems.

1.4.3 The Use of pH and Specific Conductivity to Identify Water Quality Problems

Specific conductance (SC) and pH provide a rapid way to distinguish many "problem" mine sites from those that have no adverse water-related impacts. As a rough screening tool, low pH (<6.0) and high SC (variable) usually occur at sites with problems; neutral or higher pH and low SC indicate sites that are less likely to have serious problems.

Limiting data collection only to pH and SC largely ignores the various controls on solubility and can lead to overlooking some types of problems. Arsenic, for example, is most mobile in waters with higher pH values (>7), and its concentration is strongly dependent on the presence of dissolved iron. Cadmium and lead may also exceed standards in waters with pH values within acceptable limits.

Reliance on SC as an indicator of site conditions can also be misleading in certain situations. The SC value of a sample represents 55 to 75 percent of the total dissolved solids (TDS), depending on the concentration of sulfate. Also, it is necessary to have a statistically significant amount of SC data for a study area in order to define what constitutes a high or low SC value.

In some cases, a water sample with a near-neutral pH and a moderate SC could have one or more dissolved metal species that may exceed standards. The complete evaluation of a mine site for adverse impacts on water and soil should include the collection of samples for analysis of metals, cations, and anions.

1.5 METHODOLOGY

1.5.1 Data Sources

The IGS began compiling a database of mining properties in Idaho in 1979. This work has continued to date, and the database (now digital) contains information on some 8,700 mines and prospects. All or parts of the following databases and information sources have been integrated into this digital information system:

1. the Mineral Industry Location Subsystem (MILS) database (U.S. Bureau of Mines)
2. the Mineral Resources Data System (MRDS) database (U.S. Geological Survey)
3. published compilations of mines and prospects data
4. state publications on Idaho mineral deposits
6. IGS mineral property files
7. mines and prospects noted on the appropriate USGS 7.5-minute quadrangle maps
8. data held in private collections or company information
9. mines and prospects examined in the field as part of abandoned mine lands (AML) studies (1994 to date).

Most of the data for this project were collated with existing data in the IGS Mines and Prospects digital database. As noted, this is the most complete compilation available for information on Idaho's mining properties. The IGS continues to update the database, which now contains an estimated 85-90 percent of the mining properties in the state. During the field visits, the IGS located some (but not many) mines and prospects for which no previous information existed. Also, a very few mines listed in the database were not found.

1.5.2 Pre-field Screening

Field crews visited most of the mine sites in the study area that were on federal land, emphasizing the properties with the potential to release hazardous substances and those without enough information to make that determination without a field visit. The criteria used to evaluate these sites was similar to that developed by the IGS and the U.S. Forest Service for similar work in north Idaho. The screening criteria (Table 1.5-1) were used to determine if a site had the potential to release hazardous substances or posed other environmental or safety hazards. Published information was also used to help evaluate the sites. Mine sites which were not visited were retained in the database along with the data source(s) that were consulted.

Placer mines were not studied as part of this project. Although mercury was used in amalgamating free gold in placer mines, the complex nature of placer deposits makes detection of mercury difficult and is beyond the scope of this inventory.

Table 1.5-1. Screening Criteria (answer Yes or No to each item).

<table>
<thead>
<tr>
<th>Yes/No</th>
<th>Screening Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Mill site or tailings present.</td>
</tr>
<tr>
<td>2.</td>
<td>Adits with discharge or evidence of discharge.</td>
</tr>
<tr>
<td>3.</td>
<td>Evidence of or strong likelihood for metal leaching or AMD (water stains, stressed or lack of vegetation, waste below water table, etc.)</td>
</tr>
<tr>
<td>4.</td>
<td>Mine waste in floodplain or shows signs of water erosion.</td>
</tr>
<tr>
<td>5.</td>
<td>Residences, high public use area, or environmentally sensitive area (as listed in HRS) within 200 feet of the disturbance.</td>
</tr>
<tr>
<td>6.</td>
<td>Hazardous wastes/materials (chemical containers, explosives, etc.)</td>
</tr>
<tr>
<td>7.</td>
<td>Open adits/shafts, highwalls, or hazardous structures/debris.</td>
</tr>
</tbody>
</table>
1.5.3 Field Inspection Procedures

All sites discussed in this report were visited by an IGS geologist. At each site, geologists briefly characterized the geology, described surface workings, and noted if any ore processing facilities were present. Samples for geochemical analysis were collected from selected sites. All site locations were refined using conventional field methods, and each site was located by latitude and longitude and by Township, Range, and Section. If previously determined, these values were checked and corrected, as needed. In addition, Global Positioning System (GPS) readings were taken at a number of the sites visited (Appendix A).

On public lands, sites with ground-water discharge, flowing surface water, or contaminated soils (as indicated by impacts on vegetation) were mapped. Sketch maps show locations of the workings, exposed geology, dumps, tailings, and surface water and geologic sample locations. The site was photographically recorded using both still images and videotape. The videotape record proved especially useful for site description and review, and is recommended for future studies.

1.5.3.1 Soil, Rock, Stream Sediment, and Mine Waste Sampling Procedures

At selected sites identified as having a potential problem, the geologist collected tailings or mine waste samples, as appropriate. Sample locations were selected in areas where waste material was obviously impacting natural areas. In most cases a composite sample was gathered to get as representative a sample as possible. Three types of samples were collected:

1) select tailings or mine waste samples—specimens representing a particular material taken for analysis;

2) composite samples—rock and soil taken systematically from a waste dump or tailings pile for analysis, representing the overall composition of material in the source;

3) leach samples—duplicates of selected composite samples for testing leachable metals.

The three types of samples were used to examine the metal content of dumps and tailings, and to check the availability of metals from leaching when sample sites were exposed to water. Waste materials were not sampled extensively enough to provide reliable estimates of tonnages, grades, or economic feasibility.

1.5.3.2 Water Sampling Procedure

As noted, this project focused on the impacts of mining on surface water, ground water, and soils. The reasoning behind this approach was that a mine disturbance may have high total metal concentrations yet may be releasing few metals into the surface water, ground water, or soil. Conversely, another disturbance could have lower total metal content but be releasing metals in concentrations that adversely impact the environment.
The geologist selected water sample sites based on field parameters (SC, pH, temperature) and observations (such as erosion and staining of soils or stream beds). Sample locations were chosen that would provide the best information on the relative impact of the mine site to surface water and soils. All sample locations were accurately located on topographic base maps. Surface water samples were collected at discharge points.

At each water sampling site, the temperature, specific conductivity, and pH were measured. A unique sample number was affixed to the sample bottle. Two 125-ml samples were collected as required by various EPA analytical protocols. One sample was left raw and the other was acidified with 0.1N nitric acid. Both samples were stored in a secured ice box. The samples remained under constant refrigeration and security until submitted for analysis. Laboratory leach tests were used to determine if metals might be released from mine waste material, which could provide additional insight to possible ground-water contamination.

**1.5.4 Analytical Methods**

The Analytical Sciences Laboratory at the University of Idaho performed all of the laboratory analyses using the following EPA-approved protocols and quality assurance standards:

- Water Samples (acidified and unfiltered)—Total Recoverable Metal Screen (EPA Test 200.7).
- Water Samples (acidified and unfiltered)—Arsenic (EPA Test 200.9), Lead (EPA Test 200.9), and Mercury (EPA Test 245.1).
- Water Samples (raw and filtered 0.45 micron filter)—Dissolved Metal Screen (EPA Test 200.7).
- Soil and Waste Material—Element Screen (EPA Test 3050/6010), Leachable Metals (TCLP for Metals) Screen (EPA Test 1311/6010).

**1.5.5 Standards**

EPA and various state agencies have developed human health and environmental standards for various metals. In an attempt to put the metal concentrations that were measured into some perspective, they were compared to these developed standards. However, it is understood that the background metal concentrations in mineralized areas may exceed these standards.

**1.5.5.1 Water-Quality Standards**

The Safe Drinking Water Act (SDWA) directs EPA to develop standards for potable water. Some of these standards are mandatory (primary) and some are desired (secondary). The standards established under the SDWA are often referred to as primary and secondary maximum contaminant levels (MCLs). Similarly, the Clean Water Act (CWA) directs EPA to develop water-quality standards (acute and chronic) that will protect aquatic organisms. These standards may vary with water hardness and are often referred to as the Aquatic Life Standards. The primary and secondary MCLs along with the acute and chronic Aquatic Life Standards for selected metals are listed in Table 1.5-2. As these standards can vary with water hardness, a range of values is given for some elements. Hardness was not measured for this study.
Table 1.5-2. Standards for contaminants in water.

<table>
<thead>
<tr>
<th>Element</th>
<th>Primary MCL (mg/L)</th>
<th>Secondary MCL (mg/L)</th>
<th>Aquatic Life, Acute (mg/L)</th>
<th>Aquatic Life, Chronic (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>---</td>
<td>0.05-0.2</td>
<td>0.75</td>
<td>0.087</td>
</tr>
<tr>
<td>Arsenic</td>
<td>0.05</td>
<td>---</td>
<td>0.36</td>
<td>0.19</td>
</tr>
<tr>
<td>Barium</td>
<td>2</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Cadmium</td>
<td>0.005</td>
<td>---</td>
<td>0.004/0.009</td>
<td>0.001/0.002</td>
</tr>
<tr>
<td>Chromium</td>
<td>0.1</td>
<td>---</td>
<td>1.7/3.1</td>
<td>0.21/0.37</td>
</tr>
<tr>
<td>Copper</td>
<td>1.3</td>
<td>1</td>
<td>0.018/0.034</td>
<td>0.012/0.021</td>
</tr>
<tr>
<td>Iron</td>
<td>---</td>
<td>0.3</td>
<td>---</td>
<td>1</td>
</tr>
<tr>
<td>Lead</td>
<td>0.015</td>
<td>---</td>
<td>0.082/0.2</td>
<td>0.003/0.008</td>
</tr>
<tr>
<td>Manganese</td>
<td>---</td>
<td>0.05</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.002</td>
<td>---</td>
<td>0.0024</td>
<td>0.000012</td>
</tr>
<tr>
<td>Nickel</td>
<td>0.1</td>
<td>---</td>
<td>1.4/2.5</td>
<td>0.16/0.28</td>
</tr>
<tr>
<td>Zinc</td>
<td>---</td>
<td>5</td>
<td>0.12/0.21</td>
<td>0.11/0.19</td>
</tr>
</tbody>
</table>

1.5.5.2 Soil and Rock Background Standards

It is useful to have some idea about the natural background values of rocks and soils when interpreting geochemical data. Although no whole rock or soil samples were run for this study, an estimate can be made from the analyses presented by Bennett and Galbraith (1975). This study analyzed stream sediment samples collected from active stream channels in the 500-square-mile area surrounding Silver City and South Mountain. The results from these analyses are presented in Table 1.5-3, which shows the data for catchment areas of four different sizes. These samples were analyzed by atomic absorption spectrophotometry, whereas the current samples were analyzed by Inductively Coupled Plasma (ICP) mass spectrometry. However, these values give an indication of the level of contaminants present in various samples.

There are no federal standards for concentrations of metals and other constituents in soils; acceptable limits for such are often based on human and/or environmental risk assessments for an area. Since no assessments of this kind have been done, concentrations of metals in soils were compared to the limits postulated by the U.S. EPA for the Clark Fork Superfund site (Table 1.5-4). The proposed upper limit for lead in soils is 1,000 mg/Kg to 2,000 mg/Kg, and 80 to 100 mg/Kg for arsenic in residential areas.
Table 1.5-3. Mean and threshold values for elements in stream sediment samples for catchment basins of different sizes in the Silver City-South Mountain area, Owyhee County (data from Bennett and Galbraith, 1975; ppm = mg/Kg). Values higher than the threshold may be considered anomalous.

<table>
<thead>
<tr>
<th>Elements (in ppm)</th>
<th>Group 1: All samples (n=450)</th>
<th>Group 2: Catchment area ≤ 3 square miles (n=369)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Threshold</td>
</tr>
<tr>
<td>Copper</td>
<td>19.5</td>
<td>72.6</td>
</tr>
<tr>
<td>Manganese</td>
<td>555.9</td>
<td>1,531.0</td>
</tr>
<tr>
<td>Zinc</td>
<td>70.8</td>
<td>169.8</td>
</tr>
<tr>
<td>Chromium</td>
<td>18.4</td>
<td>62.5</td>
</tr>
<tr>
<td>Nickel</td>
<td>18.9</td>
<td>78.2</td>
</tr>
<tr>
<td>Lead</td>
<td>15.1</td>
<td>35.2</td>
</tr>
<tr>
<td>Silver</td>
<td>0.69</td>
<td>3.24</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.85</td>
<td>5.27</td>
</tr>
<tr>
<td>Gold</td>
<td>12.4</td>
<td>39.8</td>
</tr>
<tr>
<td>Copper (cold extractable)</td>
<td>2.5</td>
<td>6.1</td>
</tr>
<tr>
<td>Heavy metals (cold extractable)</td>
<td>11.8</td>
<td>20.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Elements (in ppm)</th>
<th>Group 3: Catchment area &gt; 3 square miles (n=81)</th>
<th>Group 4: Catchment area ≤ 3 square miles; contaminated samples removed (n=308)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Threshold</td>
</tr>
<tr>
<td>Copper</td>
<td>18.5</td>
<td>87.2</td>
</tr>
<tr>
<td>Manganese</td>
<td>491.2</td>
<td>1,254.0</td>
</tr>
<tr>
<td>Zinc</td>
<td>74.5</td>
<td>270.8</td>
</tr>
<tr>
<td>Chromium</td>
<td>18.4</td>
<td>69.4</td>
</tr>
<tr>
<td>Nickel</td>
<td>18.8</td>
<td>81.1</td>
</tr>
<tr>
<td>Lead</td>
<td>14.3</td>
<td>33.6</td>
</tr>
<tr>
<td>Silver</td>
<td>0.88</td>
<td>7.65</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>1.66</td>
<td>3.99</td>
</tr>
<tr>
<td>Gold</td>
<td>14.4</td>
<td>73.1</td>
</tr>
<tr>
<td>Copper (cold extractable)</td>
<td>2.8</td>
<td>6.6</td>
</tr>
<tr>
<td>Heavy metals (cold extractable)</td>
<td>12.0</td>
<td>21.3</td>
</tr>
</tbody>
</table>
Table 1.5-4. Clark Fork Superfund background levels for selected elements.

<table>
<thead>
<tr>
<th>Material</th>
<th>As (mg/Kg)</th>
<th>Cd (mg/Kg)</th>
<th>Pb (mg/Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Mean Soil</td>
<td>6.7</td>
<td>0.7</td>
<td>20.0</td>
</tr>
<tr>
<td>Helena Valley Mean Soil</td>
<td>16.5</td>
<td>0.2</td>
<td>11.5</td>
</tr>
<tr>
<td>Missoula Lake Bed Sediments</td>
<td>n.a.</td>
<td>0.2</td>
<td>34.0</td>
</tr>
<tr>
<td>Blackfoot River</td>
<td>4.0</td>
<td>&lt;0.1</td>
<td>n.a.</td>
</tr>
<tr>
<td>Phytotoxic Concentration</td>
<td>100.0</td>
<td>100.0</td>
<td>1,000.0</td>
</tr>
</tbody>
</table>

1.5.6 Analytical Results

The results of the sample analyses were used to estimate the nature and extent of potential impacts to the environment and human health. Selected results for each site are presented in the discussion; a complete listing of water quality, soil chemistry, and leach test results are presented in Appendix C. It should be noted that the sampling for this study was of a reconnaissance nature only, sufficient for outlining possible problem areas for future study. Sampling density was not sufficient to provide a statistically valid description of any specific site.

The data fields in the current database are presented in Appendix B, and the format (dBase IV) is compatible with the widely used ARC/INFO Geographical Information System (GIS).

1.5.7 Sample and Site Identification Numbers

All water, tailings, and dump samples were assigned unique numbers. These were determined according to the following system: 1) an initial letter code identifying the person who took the sample (usually the first letter of the last name); 2) one digit for the month; 3) two digits for the day on which the sample was taken; 4) the last two digits in the year in which the sample was taken (i.e., “99,” if the samples was taken in 1999); and 5) two digits, including a leading zero, identifying the individual sample. Site numbers for properties that did not have a database identification number assigned to them were generated in the same manner.
2.0 SILVER CITY-WAR EAGLE MOUNTAIN AREA, OWYHEE COUNTY, IDAHO

2.1 INTRODUCTION

This report describes forty-three sites in the Silver City and War Eagle Mountain areas of Owyhee County, Idaho. About half of the properties have produced some ore since 1900, and at least five had over 1,000 tons of total output during that period. Pre-1900 production, which was substantial for some of these mines, is not well documented. The study area covers the northern end of the Silver City Range from Jordan Creek on the north to War Eagle Mountain on the south. Also included are a few properties on the north side of Jordan Creek and in the drainage of Cunningham Creek, which flows into Jordan Creek from the north (Figure 2.1-1). Most of the mines and prospects in this report are on the slopes of War Eagle Mountain and are accessible from the dirt roads that cross the area.

Many of the older mines are on patented mining claims. The U.S. Bureau of Land Management administers the federal lands in this area, and a few of the mines are on land owned by the State of Idaho.

The forty-three sites in this report, some of which include parts of several mines and prospects, are on three 7.5-minute topographic maps (U.S. Geological Survey). Locations are shown in Figure 2.1-1. Elevations range from about 5,760 feet on Jordan Creek in the western part of the study area to 8,051 feet at the summit of War Eagle Mountain. Much of the area is covered with thickets of sagebrush and mountain mahogany, and the topography is generally steep.

2.1.1 Summary of the Silver City-War Eagle Mountain Study Area

There were forty-three mining sites (Table 2.1-1) examined in the Silver City-War Eagle Mountain area. Of these, five have the potential for an environmental impact on adjacent waterways. Of these, two have water discharges that exceed one or more water quality standards, two have waste dumps in active waterways, and one site has both water quality problems and waste rock impinging on an active waterway. Of the forty-three sites, twenty-five have open adits, stopes, or shafts; six of these have multiple open workings. Many of the openings pose significant safety hazards.

2.2 GEOLOGY

The most recent references describing the geology of the Silver City-War Eagle Mountain area are Ekren and others (1981, 1984). The geology and ore deposits of the area are discussed in Lindgren (1900), Piper and Laney (1926), Bennett and Galbraith (1975), Walker (1965), Asher (1968), and unpublished reports on individual deposits. Bennett and Galbraith (1975) discuss the geochemistry of the area between Silver City and South Mountain. A brief description of the geologic framework of the area follows.

Most of the mines and prospects in study area are underlain by granitic rocks of Cretaceous age (Figure 2.2-1). These rocks are principally biotite-muscovite granodiorite, with lesser amounts
Figure 2.2-1. Geology of the Silver City-War Eagle Mountain area, Owyhee County, Idaho (Ekren and others, 1981). Kg = Cretaceous granitic rocks; TD = Oligocene dike rocks; Tb = Miocene basalt; Ti = Miocene laite flows and associated clastic rocks; Tr = Miocene rhyolite dikes and plugs; Tsc = Miocene rhyolitic welded tuffs; QTg = Tertiary and Quaternary fan and terrace gravel deposits; Qls = Quaternary landslide deposits; Qa = Quaternary alluvium.
Table 2.1-1. List of mines and prospects (by site number) visited in the Silver City-War Eagle Mountain area, Owyhee County, Idaho.

Explanation:

**Site Number**: Idaho Geological Survey file number, or field designation number.  
**Surface Owner**: S = State; P = Private or Patented claims; BLM = Bureau of Land Management; M = mixed ownership; ? = ownership uncertain.

**Environmental Concerns**: W = water; D = waste dump; T = mill tailings. Environmental concerns are noted as follows: W - samples of adit water that exceed one or more water quality standards in the Dissolved Metals Screen, the Total Recoverable Metals Screen, or the arsenic, lead, or mercury tests; D or T - dump or tailings samples that exceed background or environmental standards for one or more elements in the Element Screen, and/or dump or tailings samples that show significant leaching of one or more metals in the TCLP for Metals Screen. Sites with environmental concerns are highlighted.

**Samples**: numbers indicate the number of samples collected: W = water; D = waste dump; T = mill tailings.

**Physical Conditions**: AO = open adit; AG = gated adit; AC = caved or otherwise closed adit; SO = open shaft; SC = caved shaft; StO = open stope; P = pit. Numbers indicate how many of each are at the site; queried when type or condition of workings is uncertain or unknown; physical hazards are shown in **bold**.

<table>
<thead>
<tr>
<th>Site Number</th>
<th>Mine Name</th>
<th>Surface Owner</th>
<th>Environmental Concerns</th>
<th>Samples</th>
<th>Physical Conditions/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>B7249903</td>
<td>Whiskey Prospect</td>
<td>M</td>
<td>none</td>
<td>none</td>
<td>1SO ? (water-filled)</td>
</tr>
<tr>
<td>B7249904</td>
<td>Unnamed Prospect</td>
<td>BLM</td>
<td>none</td>
<td>none</td>
<td>1SC</td>
</tr>
<tr>
<td>B7259901</td>
<td>Unnamed Prospect</td>
<td>P ? BLM ?</td>
<td>none</td>
<td>none</td>
<td>1AC</td>
</tr>
<tr>
<td>B7259902</td>
<td>Unnamed Prospect</td>
<td>BLM</td>
<td>none</td>
<td>none</td>
<td>1AC; small P</td>
</tr>
<tr>
<td>BO-116</td>
<td>Dewey Mine</td>
<td>BLM ? S ?</td>
<td>T</td>
<td>1T</td>
<td>1AC</td>
</tr>
<tr>
<td>BO-158</td>
<td>Potosi Mine (Silver City Mine)</td>
<td>BLM</td>
<td>none</td>
<td>none</td>
<td>1AO; 1SC (15 ft. deep, large opening)</td>
</tr>
<tr>
<td>BO-170</td>
<td>Bishop Tunnel of the Addie Consolidated Mining Co.</td>
<td>P</td>
<td>D</td>
<td>1D</td>
<td>5AC</td>
</tr>
<tr>
<td>BO-173</td>
<td>Westlake Group (Ruth Claim)</td>
<td>BLM</td>
<td>none</td>
<td>none</td>
<td>2AO; 3AC</td>
</tr>
<tr>
<td>BO-174</td>
<td>Belle Peck Adit (part of Poorman Mine)</td>
<td>P</td>
<td>W</td>
<td>1W</td>
<td>1AC</td>
</tr>
<tr>
<td>BO-175</td>
<td>Deluge claim</td>
<td>P ? BLM ?</td>
<td>none</td>
<td>none</td>
<td>1AC</td>
</tr>
<tr>
<td>Site Number</td>
<td>Mine Name</td>
<td>Surface Owner</td>
<td>Environmental Concerns</td>
<td>Samples</td>
<td>Physical Conditions/Comments</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------</td>
<td>---------------</td>
<td>------------------------</td>
<td>---------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>BO-176</td>
<td>Village Blacksmith</td>
<td>P ? BLM ?</td>
<td>none</td>
<td>none</td>
<td><strong>1AO; 1 deep vertical-walled cut; pits along vein</strong></td>
</tr>
<tr>
<td>BO-180</td>
<td>Owyhee Shaft</td>
<td>M</td>
<td>none</td>
<td>none</td>
<td>1SC; 1A (not visited)</td>
</tr>
<tr>
<td>BO-181</td>
<td>Oso Adit (part of Poorman Mine)</td>
<td>P ?</td>
<td>none</td>
<td>none</td>
<td>1AC</td>
</tr>
<tr>
<td>BO-183</td>
<td>Silver Cord Group (BO-182, BO-184, BO-185)</td>
<td>M W</td>
<td>3W</td>
<td>9AO; 10AC; 4SO; 3SC; numerous shallow to deep StO; numerous P and cuts (Adits 1-2 may be part of Pauper Mine, JV-9)</td>
<td></td>
</tr>
<tr>
<td>BO-186</td>
<td>General Connor</td>
<td>BLM ?</td>
<td>none</td>
<td>none</td>
<td>2AC; 1SO; pits</td>
</tr>
<tr>
<td>BO-187</td>
<td>Ymir Mine</td>
<td>BLM</td>
<td>none</td>
<td>none</td>
<td><strong>1AO</strong></td>
</tr>
<tr>
<td>BO-188</td>
<td>Mississippi Prospect</td>
<td>P ? BLM ?</td>
<td>none</td>
<td>none</td>
<td><strong>1AC</strong></td>
</tr>
<tr>
<td>BO-192</td>
<td>Cape Horn Mine</td>
<td>P</td>
<td>none</td>
<td>none</td>
<td><strong>1SO (20’ deep); 1AC; numerous P</strong></td>
</tr>
<tr>
<td>BO-194</td>
<td>South Poorman Shaft</td>
<td>M</td>
<td>none</td>
<td>none</td>
<td><strong>1SO</strong> (covered with cross-hatch of planks but crawl space under supports), very deep; 2AC (short)</td>
</tr>
<tr>
<td>BO-195</td>
<td>Illinois Central Shaft</td>
<td>M</td>
<td>none</td>
<td>none</td>
<td><strong>1SO</strong> (covered with cross-hatch of planks), very deep</td>
</tr>
<tr>
<td>BO-196</td>
<td>San Juan Shaft</td>
<td>BLM</td>
<td>none</td>
<td>none</td>
<td><strong>1SO; 1AC or collapsed stope</strong></td>
</tr>
<tr>
<td>BO-197</td>
<td>North Poorman Shaft</td>
<td>P ?</td>
<td>none</td>
<td>none</td>
<td><strong>3AC; 1SC; numerous P and cuts</strong></td>
</tr>
<tr>
<td>BO-197</td>
<td>War Eagle Shaft</td>
<td>M</td>
<td>none</td>
<td>none</td>
<td><strong>3AO; 2StO; SC; numerous pits or collapsed stopes; cuts</strong></td>
</tr>
<tr>
<td>BO-198</td>
<td>Stormy Hill Shaft</td>
<td>P ?</td>
<td>none</td>
<td>none</td>
<td><strong>1SO; numerous P, possible SC</strong></td>
</tr>
<tr>
<td>BO-199</td>
<td>San Juan Tunnel</td>
<td>BLM</td>
<td>none</td>
<td>none</td>
<td><strong>3AC; several small P; shallow SC or P</strong></td>
</tr>
<tr>
<td>BO-200</td>
<td>1885 San Juan Tunnel</td>
<td>BLM</td>
<td>none</td>
<td>none</td>
<td><strong>1AC</strong></td>
</tr>
<tr>
<td>BO-201</td>
<td>Dernier Resort</td>
<td>BLM</td>
<td>none</td>
<td>none</td>
<td><strong>1AO (currently active); may be gated when not being worked</strong></td>
</tr>
<tr>
<td>BO-202</td>
<td>Mahogany Mine</td>
<td>P ? BLM ?</td>
<td>none</td>
<td>none</td>
<td><strong>2SO; 1AO; 1StO</strong></td>
</tr>
<tr>
<td>Site Number</td>
<td>Mine Name</td>
<td>Surface Owner</td>
<td>Environmental Concerns</td>
<td>Samples</td>
<td>Physical Conditions/Comments</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------------</td>
<td>---------------</td>
<td>------------------------</td>
<td>---------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>BO-203/</td>
<td>Ida Elmore/Golden Chariot drainage tunnel</td>
<td>P ?</td>
<td>W, D</td>
<td>1W, 1D</td>
<td>1AO</td>
</tr>
<tr>
<td>BO-204</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BO-203,</td>
<td>Ida Elmore/Golden Chariot/Cumberland Mine and Mill</td>
<td>P ?</td>
<td>none</td>
<td>none</td>
<td>1AO; 1-3SC; deep cuts or StO; P</td>
</tr>
<tr>
<td>BO-204,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BO-210</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BO-207</td>
<td>1885 Red Jacket Shaft</td>
<td>BLM</td>
<td>none</td>
<td>none</td>
<td>1SC</td>
</tr>
<tr>
<td>BO-211</td>
<td>Minnesota Mine</td>
<td>P ?</td>
<td>none</td>
<td>none</td>
<td>1SO (to ~15 ft. or more)</td>
</tr>
<tr>
<td>BO-212</td>
<td>South Chariot Shaft</td>
<td>P ?</td>
<td>none</td>
<td>none</td>
<td>1SC; caved stope</td>
</tr>
<tr>
<td>BO-213</td>
<td>Red Jacket Mine</td>
<td>BLM ?</td>
<td>none</td>
<td>none</td>
<td>1AO; collapsed mill, no tailings</td>
</tr>
<tr>
<td>BO-214</td>
<td>Mountain Chief Mine</td>
<td>BLM ?</td>
<td>none</td>
<td>none</td>
<td>1SC; 1AC</td>
</tr>
<tr>
<td>JV-10</td>
<td>Afterthought Mine</td>
<td>P ?</td>
<td>none</td>
<td>none</td>
<td>1SO; prospects; mill, no tailings</td>
</tr>
<tr>
<td>JV-9, JV-</td>
<td>Pauper/Neversweat Mines</td>
<td>M</td>
<td>none</td>
<td>none</td>
<td>3SC; 1SO; 3AC; stopes; trenches; numerous P</td>
</tr>
<tr>
<td>11, JV-12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K7199901</td>
<td>Unnamed Prospect</td>
<td>P</td>
<td>none</td>
<td>none</td>
<td>1AC</td>
</tr>
<tr>
<td>K7199903</td>
<td>Tap Root (?) Prospect</td>
<td>BLM</td>
<td>none</td>
<td>none</td>
<td>1 short adit (15'); dozer cut</td>
</tr>
<tr>
<td>K7209901</td>
<td>Oro Fino Mine</td>
<td>P</td>
<td>none</td>
<td>none</td>
<td>1SO; 1StO; deep open cut; several P</td>
</tr>
<tr>
<td>K7219901</td>
<td>unnamed prospect</td>
<td>P ?</td>
<td>none</td>
<td>none</td>
<td>caved to partly open shafts and/or stopes; possible caved adit; numerous shallow pits</td>
</tr>
<tr>
<td>K7249901</td>
<td>Unnamed Prospect</td>
<td>BLM</td>
<td>none</td>
<td>none</td>
<td>1SO; numerous shallow cuts on vein</td>
</tr>
<tr>
<td>K7249902</td>
<td>Unnamed Prospect (part of Poorman Mine?)</td>
<td>P ?</td>
<td>none</td>
<td>none</td>
<td>1AO</td>
</tr>
<tr>
<td>K7259902</td>
<td>Unnamed Prospect</td>
<td>BLM</td>
<td>none</td>
<td>none</td>
<td>1AO; 1A (not visited - videoed from across valley)</td>
</tr>
<tr>
<td>K7259903</td>
<td>Home Resort</td>
<td>P ?</td>
<td>none</td>
<td>none</td>
<td>1AO; 5AC; 1StO 25-30 ft. deep; pits and trenches along vein</td>
</tr>
<tr>
<td>K7259904</td>
<td>Poorman Mill site</td>
<td>P ?</td>
<td>none</td>
<td>none</td>
<td>only concrete footings remain - no tailings</td>
</tr>
</tbody>
</table>
of albite granite and quartz monzonite. Other major rock units include basalt and flow-layered rhyolite, both of Miocene age (Ekren and others, 1981, 1984).

A number of north-northwest-trending faults cross the study area (Ekren and others, 1981, 1984). Three sets of closely related faults are described by Piper and Laney (1926).

2.3 ECONOMIC GEOLOGY

2.3.1 General Characteristics of the Ore

Most of the mines in the study area are hosted by granitic rocks of Cretaceous age (Figure 2.2-1). In the Dewey area, host rocks also include basalt and flow-layered rhyolite of Miocene age (Ekren and others, 1981, 1984). The mines exploited gold-silver veins, which sometimes contained minor amounts of base metals. Most of the veins are fissure fillings or silicified shear zones (Piper and Laney, 1926). Ore minerals include electrum, argentite, and a number of silver sulfantimonides and sulfarsenides in a gangue composed mainly of quartz (Lindgren, 1900; Piper and Laney, 1926). The major work at most of these mines was done before 1900, and much of the available geological information was written long after the major workings had become inaccessible. Even so, over half of the properties in the study area have produced ore since 1900, and five of these properties produced over 1,000 tons of ore.

2.3.2 Summary of Mill Development

The location and history of ore processing mills in the study area are important because a major source of environmental problems in many mining camps is old mill tailing disposal sites. These problems include high metal loadings, which could be available to waterways, and fine sediment, which could increase stream loadings or provide a source of fine wind-blown material. At one time or another, mills were present at the following properties (ranked by decreasing quantity of mill tails noted at the site):

Dewey Mine — stamp mill tailings
Cumberland Mine — stamp mill tailings
Poorman Mine
Potosi Mine
Mountain Chief Mine
Red Jacket Mine
Afterthought Mine
Neversweat Mine

Most of these mills were stamp mills, which crushed the ore into fine particles for further treatment. Plate amalgamation using mercury was used to recover the gold in the early years. Later improvements to the milling process included the addition of various gravity separation
methods and a switch to pan amalgamation. In 1897, experimental cyanide plants were installed at the Poorman mill and at De Lamar (Lindgren, 1900; Piper and Laney, 1926). The Poorman mill does not appear to have been successful, but repeated modifications on the De Lamar cyanide plant eventually produced satisfactory results (Piper and Laney, 1926). The only millsite in the study area with a significant amount of tailings is at the Dewey Mine.

2.4 HYDROLOGY AND HYDROGEOLOGY

The study area covers the parts of the drainages of west-flowing Jordan Creek and east-flowing Sinker Creek (Figure 2.1-1). The mines in the Dewey area are on or near Jordan Creek, while War Eagle Mountain is part of the drainage divide between Jordan and Sinker creeks. Because only limited sampling was conducted during the course of this study, no reference water samples were collected.

2.5 SUMMARY OF THE SILVER CITY-WAR EAGLE MOUNTAIN AREA

2.5.1 Summary of Environmental Observations

All the water samples collected for this study exceeded EPA water standards for one or more elements (Tables 2.5-1 and 2.5-2). Water quality variances include significant amounts of mercury in all water samples, and of zinc in samples from the Belle Peck Mine and from two adits at the Silver Cord Group. Arsenic exceeded the secondary MCL in one of the adits at the Silver Cord Group.

2.5.2 Mine Waste Samples

Samples were collected from properties where the mine waste dump impinged on an active waterway (Tables 2.5-3 and 2.5-4). As expected, these samples contain metal loadings, including arsenic, copper, and lead, which exceed the Clark Fork Superfund Background Levels. A sample of mill tailings was collected from the Dewey tailings impoundment. This sample also contains high metal loadings, particularly of lead, iron, and arsenic.
Table 2.5-1. Dissolved metals in water samples from the properties in the Silver City-War Eagle Mountain area, Owyhee County, Idaho. Numbers in bold-face type exceed one or more water quality standards.

<table>
<thead>
<tr>
<th>FIELD NO.</th>
<th>REMARKS</th>
<th>AL (ppm)</th>
<th>AS (ppm)</th>
<th>BA (ppm)</th>
<th>Cd (ppm)</th>
<th>Cr (ppm)</th>
<th>Cu (ppm)</th>
<th>Fe (ppm)</th>
<th>Pb (ppm)</th>
<th>Mn (ppm)</th>
<th>Hg (ppm)</th>
<th>Ni (ppm)</th>
<th>Zn (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K7209902</td>
<td>Ida Elmore/Golden Chariot drainage tunnel (BO-203/BO-204)</td>
<td>---</td>
<td>0.0036</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>0.0140</td>
<td>0.0170</td>
<td>---</td>
<td>0.0077</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K7229901</td>
<td>Silver Cord (BO-183) or Pauper (JV-9) Mine, Adit 1</td>
<td>0.160</td>
<td>0.0060</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>0.0700</td>
<td>0.0110</td>
<td>---</td>
<td>0.0120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K7229902</td>
<td>Silver Cord (BO-183) or Pauper (JV-9) Mine, Adit 2</td>
<td>0.200</td>
<td>1.3000</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>0.0850</td>
<td>0.0120</td>
<td>---</td>
<td>0.5800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K7229903</td>
<td>Silver Cord Group (BO-183), Adit 9</td>
<td>0.170</td>
<td>1.3000</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>0.1600</td>
<td>0.0083</td>
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<td>0.5800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K7249903</td>
<td>Belle Peck Adit (BO-174) of the Poorman Mine</td>
<td>0.190</td>
<td>1.3000</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>0.0520</td>
<td>0.0024</td>
<td>---</td>
<td>0.5800</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**EXPLANATION**

Blank space equals no analysis

Below Detection Limit is ---

**WATER QUALITY STANDARDS**

<table>
<thead>
<tr>
<th></th>
<th>Al (mg/L)</th>
<th>As (mg/L)</th>
<th>Ba (mg/L)</th>
<th>Cd (mg/L)</th>
<th>Cr (mg/L)</th>
<th>Cu (mg/L)</th>
<th>Fe (mg/L)</th>
<th>Pb (mg/L)</th>
<th>Mn (mg/L)</th>
<th>Hg (mg/L)</th>
<th>Ni (mg/L)</th>
<th>Zn (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary MCL</td>
<td>0.05-0.2</td>
<td>0.050</td>
<td>2.000</td>
<td>0.005</td>
<td>0.100</td>
<td>0.050</td>
<td>0.002</td>
<td>0.100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary MCL</td>
<td>0.05-0.2</td>
<td>0.050</td>
<td>2.000</td>
<td>0.005</td>
<td>0.100</td>
<td>0.050</td>
<td>0.002</td>
<td>0.100</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic Life, Acute</td>
<td>0.750</td>
<td>0.360</td>
<td>0.004-0.009</td>
<td>1.7-3.1</td>
<td>0.018-0.034</td>
<td>1.000</td>
<td>0.082-0.2</td>
<td>0.0024</td>
<td>1.4-2.5</td>
<td>0.12-0.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic Life, Chronic</td>
<td>0.087</td>
<td>0.190</td>
<td>0.001-0.002</td>
<td>0.21-0.37</td>
<td>0.012-0.021</td>
<td>0.003-0.008</td>
<td>0.000012</td>
<td>0.16-0.28</td>
<td>0.11-0.19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated Detection Level (33% confidence)</td>
<td>0.074</td>
<td>0.0007</td>
<td>0.0014</td>
<td>0.0019</td>
<td>0.0080</td>
<td>0.0067</td>
<td>0.0053</td>
<td>0.0025</td>
<td>0.0016</td>
<td>0.0005</td>
<td>0.011</td>
<td>0.0019</td>
</tr>
</tbody>
</table>
Table 2.5-2. Total recoverable metals in water samples from the properties in the Silver City-War Eagle Mountain area, Owyhee County, Idaho. Numbers in bold-face type exceed one or more water quality standards.

<table>
<thead>
<tr>
<th>FIELD NO.</th>
<th>REMARKS</th>
<th>Al (ppm)</th>
<th>As (ppm)</th>
<th>Ba (ppm)</th>
<th>Cd (ppm)</th>
<th>Cr (ppm)</th>
<th>Cu (ppm)</th>
<th>Fe (ppm)</th>
<th>Pb (ppm)</th>
<th>Mn (ppm)</th>
<th>Hg (ppm)</th>
<th>Ni (ppm)</th>
<th>Zn (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K7209902</td>
<td>Ida Elmore/Golden Chariot drainage tunnel (BO-203/BO-204)</td>
<td>0.0011</td>
<td>0.007</td>
<td>---</td>
<td>---</td>
<td>0.066</td>
<td>---</td>
<td>0.0210</td>
<td>0.00510</td>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K7229901</td>
<td>Silver Cord (BO-183) or Pauper (JV-9) Mine, Adit 1</td>
<td>0.0024</td>
<td>0.012</td>
<td>---</td>
<td>---</td>
<td>0.150</td>
<td>---</td>
<td>0.0160</td>
<td>0.00630</td>
<td>---</td>
<td>0.0064</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K7229902</td>
<td>Silver Cord (BO-183) or Pauper (JV-9) Mine, Adit 2</td>
<td>0.0350</td>
<td>0.023</td>
<td>---</td>
<td>---</td>
<td>0.010</td>
<td>0.150</td>
<td>---</td>
<td>0.0170</td>
<td>0.00780</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>K7229903</td>
<td>Silver Cord Group (BO-183), Adit 9</td>
<td>0.0018</td>
<td>0.011</td>
<td>---</td>
<td>---</td>
<td>0.010</td>
<td>0.240</td>
<td>---</td>
<td>0.0130</td>
<td>0.00810</td>
<td>---</td>
<td>0.0230</td>
<td></td>
</tr>
<tr>
<td>K7249903</td>
<td>Belle Peck Adit (BO-174) of the Poorman Mine</td>
<td>0.0089</td>
<td>0.011</td>
<td>---</td>
<td>---</td>
<td>0.010</td>
<td>0.130</td>
<td>---</td>
<td>0.0063</td>
<td>0.00710</td>
<td>---</td>
<td>0.0110</td>
<td></td>
</tr>
</tbody>
</table>

EXPLANATION

Blank space equals no analysis

Below Detection Limit is ---

<table>
<thead>
<tr>
<th>WATER QUALITY STANDARDS</th>
<th>Al (mg/L)</th>
<th>As (mg/L)</th>
<th>Ba (mg/L)</th>
<th>Cd (mg/L)</th>
<th>Cr (mg/L)</th>
<th>Cu (mg/L)</th>
<th>Fe (mg/L)</th>
<th>Pb (mg/L)</th>
<th>Mn (mg/L)</th>
<th>Hg (mg/L)</th>
<th>Ni (mg/L)</th>
<th>Zn (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary MCL</td>
<td>0.0500</td>
<td>2.0000</td>
<td>0.005</td>
<td>0.100</td>
<td>1.000</td>
<td>0.300</td>
<td>0.050</td>
<td>0.002</td>
<td>0.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Secondary MCL</td>
<td>0.05-0.2</td>
<td>0.004-0.009</td>
<td>0.018-0.034</td>
<td>1.000</td>
<td>0.082-0.2</td>
<td>0.0024</td>
<td>1.4-2.5</td>
<td>0.12-0.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic Life, Acute</td>
<td>0.750</td>
<td>0.3600</td>
<td>0.004-0.009</td>
<td>0.018-0.034</td>
<td>1.000</td>
<td>0.082-0.2</td>
<td>0.0024</td>
<td>1.4-2.5</td>
<td>0.12-0.21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aquatic Life, Chronic</td>
<td>0.087</td>
<td>0.1900</td>
<td>0.001-0.002</td>
<td>0.012-0.021</td>
<td>0.003-0.008</td>
<td>0.00012</td>
<td>0.16-0.28</td>
<td>0.11-0.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated Detection Level (33% confidence)</td>
<td>0.0005</td>
<td>0.001</td>
<td>0.002</td>
<td>0.0047</td>
<td>0.150</td>
<td>0.019</td>
<td>0.0049</td>
<td>0.0006</td>
<td>0.0005</td>
<td>0.012</td>
<td>0.0028</td>
<td></td>
</tr>
</tbody>
</table>
Table 2.5-3. Element screen for dump and tailings samples for properties in the Silver City-War Eagle Mountain area, Owyhee County, Idaho.

| FIELD NO. | REMARKS | Al (ppm) | As (ppm) | Ba (ppm) | Cd (ppm) | Cr (ppm) | Cu (ppm) | Fe (ppm) | Pb (ppm) | Mn (ppm) | Hg (ppm) | Ni (ppm) | Zn (ppm) |
|-----------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| K7199903  | Ida Elmore/Golden Chariot (BO-203/BO-204) drainage tunnel, dump | 90.0 | 49 | 1.50 | 4.4 | 25 | 9,600 | 46 | 390 | 4.5 | 75.0 | | |
| K7259901  | Bishop adit of Addie Consolidated Mining Co. (BO-170), dump | 77.0 | 160 | 1.30 | 3.1 | 44 | 7,100 | 65 | 230 | 3.6 | 80.0 | | |
| K7199902  | Dewey Mine (BO-116), mill tailings (?) | 150.0 | 210 | 1.30 | 4.9 | 27 | 13,000 | 230 | 120 | 6.2 | 73.0 | | |

Clark Fork Superfund Background Levels (mg/Kg) = ppm

<table>
<thead>
<tr>
<th></th>
<th>As</th>
<th>Cd</th>
<th>Pb</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Mean Soil</td>
<td>6.7</td>
<td>0.7</td>
<td>20.0</td>
</tr>
<tr>
<td>Helena Valley Mean Soil</td>
<td>16.5</td>
<td>0.2</td>
<td>11.5</td>
</tr>
<tr>
<td>Missoula Lake Bed Sediments</td>
<td>NA</td>
<td>0.2</td>
<td>34.0</td>
</tr>
<tr>
<td>Blackfoot River</td>
<td>4.0</td>
<td>&lt;0.1</td>
<td>NA</td>
</tr>
<tr>
<td>Phytotoxic Concentration</td>
<td>100.0</td>
<td>100.0</td>
<td>1000.0</td>
</tr>
</tbody>
</table>

Explanation

Below Detection Limit is ---
Not analyzed equals NA
Table 2.5-4. Toxicity Characteristic Leaching Procedure for dump and tailings samples from properties in the Silver City-War Eagle Mountain area, Owyhee County, Idaho.

<table>
<thead>
<tr>
<th>FIELD NO.</th>
<th>REMARKS</th>
<th>As (ppm)</th>
<th>Cd (ppm)</th>
<th>Cr (ppm)</th>
<th>Pb (ppm)</th>
<th>Hg (ppm)</th>
<th>Se (ppm)</th>
<th>Ag (ppm)</th>
<th>Ba (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>dumps</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K7199903</td>
<td>Ida Elmore/Golden Chariot (BO-203/BO-204) drainage tunnel, dump</td>
<td>---</td>
<td>0.063</td>
<td>0.038</td>
<td>---</td>
<td>0.012</td>
<td>---</td>
<td>---</td>
<td>1.400</td>
</tr>
<tr>
<td>K7259901</td>
<td>Bishop adit of Addie Consolidated Mining Co. (BO-170), dump</td>
<td>---</td>
<td>0.041</td>
<td>---</td>
<td>---</td>
<td>0.005</td>
<td>---</td>
<td>---</td>
<td>1.400</td>
</tr>
<tr>
<td><strong>tailings</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K7199902</td>
<td>Dewey Mine (BO-116), mill tailings (?)</td>
<td>---</td>
<td>---</td>
<td>0.046</td>
<td>---</td>
<td>0.012</td>
<td>---</td>
<td>---</td>
<td>1.100</td>
</tr>
</tbody>
</table>

**EXPLANATION**

- Blank space equals no analysis
- mg/L = ppm
- Below Detection Limit is ---

**WATER QUALITY STANDARDS**

<table>
<thead>
<tr>
<th></th>
<th>As (mg/L)</th>
<th>Cd (mg/L)</th>
<th>Cr (mg/L)</th>
<th>Pb (mg/L)</th>
<th>Hg (mg/L)</th>
<th>Se (mg/L)</th>
<th>Ag (mg/L)</th>
<th>Ba (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary MCL</td>
<td>0.050</td>
<td>0.005</td>
<td>0.100</td>
<td>0.050</td>
<td>0.002</td>
<td>0.050</td>
<td>2.000</td>
<td></td>
</tr>
<tr>
<td>Secondary MCL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.100</td>
<td></td>
</tr>
<tr>
<td>Aquatic Life, Acute</td>
<td>0.360</td>
<td>0.004 - 0.009</td>
<td>1.7 - 3.1</td>
<td>0.082 - 0.2</td>
<td>0.002</td>
<td>0.00012</td>
<td>0.00012</td>
<td></td>
</tr>
<tr>
<td>Aquatic Life, Chronic</td>
<td>0.190</td>
<td>0.001 - 0.002</td>
<td>0.21 - 0.37</td>
<td>0.003 - 0.008</td>
<td>0.000012</td>
<td>0.270</td>
<td>0.050</td>
<td></td>
</tr>
<tr>
<td>Estimated Detection Level (33% confidence)</td>
<td>0.49</td>
<td>0.02</td>
<td>0.03</td>
<td>0.500</td>
<td>0.0017</td>
<td>0.650</td>
<td>0.270</td>
<td>0.050</td>
</tr>
</tbody>
</table>
3.0 MINE DESCRIPTIONS

SILVER CITY AREA

Properties described in the following sections include several near the Dewey townsite west of Silver City (sections 3.1 to 3.5) and a number in the War Eagle Mountain-Silver City area (sections 3.6 to 3.43).

3.1 DEWEY TUNNEL (Site No. BO-116)
   Alternate names—Trade Dollar-Black Jack; Florida Mountain Mines Co.; Empire Mines Co.

3.1.1 Site Location and Access

The Dewey tunnel is on the south side of Jordan Creek Road in the NW¼ of the NW¼ of section 36, T. 4 S., R. 4 W., on the De Lamar 7.5-minute quadrangle (Figure 3.1-1). The adit is labeled “Dewey Mine” on the topographic map. About ½ mile west of Cunningham Creek, an access road off the south side of the Jordan Creek Road leads to the site. The Dewey tunnel is either on a strip of BLM land along Jordan Creek, a block of state land, or possibly on both.

3.1.2 Geologic Features

The deposits on Florida Mountain are enclosed by granodiorite in the deepest workings, by basalt in the intermediate workings, and by rhyolite in the upper workings near the summit of the mountain. A persistent basalt dike follows the Trade Dollar vein through the granite and merges with the basic flows on the fifth level of the mine. The principal veins occur along a set of roughly parallel fractures striking N. 15-30º W. and dipping 75-80º W. (Piper and Laney, 1926). The rhyolites in the Florida Mountain area are high-temperature ash-flow tuffs (Ekren and others, 1984).

3.1.3 Site History

Piper and Laney (1926, p. 121-123) provided the following excellent historical account of the development of the Trade Dollar-Blackjack Mine:

Rich gold-bearing float was discovered on Florida Mountain in 1871, but subsequent prospecting in the surface debris was disappointing. In 1881, however, active mining was in progress at the Seventy-nine claim . . . about half a mile north of the summit. Two years later the Empire State . . . , Black Jack, Starlight, and others were also producing. For several years the activity was limited and sporadic, but from it grew three mines—the Booneville, the Black Jack, and the Trade Dollar—which were later to be merged into one.
The Booneville mine included the old Seventy-nine and Philips and Sullivan properties . . . , and other claims along the northern end of the Trade Dollar vein, upon which the first discoveries of rich gold ore had been made. The ground was actively worked from shallow entries during the eighties, and several hundred thousand dollars produced therefrom. During 1895, 1896, and part of 1897, the group was operated by the Florida Mountain Mining and Milling Co. under the name of Booneville mine, through the Humboldt tunnel . . . and a drift northward from the Black Jack tunnel . . . . The property was shut down in 1897. In 1889 it was sold to the Trade Dollar Mining and Milling Co.

The Black Jack mine covered the central portion of the Trade Dollar vein between the Booneville group and the summit of Florida Mountain. The claims were worked intermittently and in desultory fashion by shallow entries during the seventies and early eighties. In 1889 the Idaho and Pittsburgh Mining and Milling Company bought the property and started the Black Jack adit . . . on the eighth level. The adit encountered the vein at a barren zone and operations were nearly suspended. In 1891, however, workable ore was encountered in drifting southward and the enterprise was assured of success. Production continued steadily and the vein was opened on the twelfth level by the Idaho tunnel . . . and two levels were turned from a 237-foot vertical shaft sunk therefrom. Operation was suspended in 1897, due to lack of adequate drainage for the lower workings; in the same year the property was consolidated with the Trade Dollar and Booneville mines. Its total production to that year was about $2,885,000.

The Trade Dollar property comprised the claims on the southern slope of the mountain, along the extension of the Black Jack vein, and on the Alpine and Empire State veins. During the seventies and eighties the veins were worked sporadically through shallow adit drifts. In 1891 Blaine tunnel . . . opened the vein on the twelfth level; the mine was purchased by the Trade Dollar Mining and Milling Company; and vigorous development and mining was inaugurated. The twelfth (Blaine tunnel) level was connected to the Black Jack workings, a shaft was sunk from it 2,000 feet from the portal, and the thirteenth and fourteenth levels were started. Rich ore was encountered in the northern portion of the ground and the production increased rapidly, the total prior to 1899 amounting to about $2,960,000.

The Booneville, Black Jack, and Trade Dollar mines were consolidated in 1899 by the Trade Dollar Mining and Milling Company, and in the same year a tunnel was started from Dewey . . . , on Jordan Creek, to explore the vein 500 feet below the level of the point of the Blaine tunnel. Development and mining were pushed to the utmost throughout the mine, and the precious metal production during the period 1899-1903 amounted to $2,580,000. In 1903 the property was acquired by the Trade Dollar Consolidated Mining Company, and, under the management of Mr. Frederic Irwin, was worked actively until 1910. The 1700 (Dewey tunnel)
level was extended southward along the vein to a point south of Long Gulch, raises were put through to the 1200 (Blaine tunnel) level to afford ore chutes; and drainage ways and exploratory levels turned therefrom. The 1700 level was made the main working entry, milling operations were centralized in the large mill at Dewey, and a 100-foot exploratory shaft was sunk from the 1700 level. At the same time the quantity of ore handled was materially increased, and the milling practice improved. During the seven-year period 1903-1909, inclusive, the precious metal output was valued at $4,425,000. In 1910, after being worked almost continuously since 1889, and with a total output of gold and silver worth $12,850,000, the mine was abandoned. For nearly a decade the property lay idle. In 1917 it was acquired by the Florida Mountain Mines Company, Dewey tunnel was reopened, and the mill at Dewey was overhauled in part.

Little development work was carried out, however, and activity was limited to extracting and milling the low-grade stope filling from the Alpine vein, between the 1200 and 1400 levels. Only 2,125 tons which averaged about $12 per ton were milled in 1919, and even less was handled to the following year. In 1920 the enterprise failed. In 1923 the enterprise was acquired by Mr. Peter Steele of Silver City and plans for re-opening the mine for thorough prospecting have been inaugurated.

The Dewey tunnel, started in 1899, became the main haulage level for the combined Booneville, Black Jack, and Trade Dollar mines. Most of the work done after the mid-1920s appears to have been by lessees.

3.1.4 Environmental Conditions

3.1.4.1 Site Features

The Dewey tunnel was visited by John Kauffman on July 19, 1999. A video segment describing the property is on Owyhee County Videotape (Tape 1, index 0:09:43-0:19:41). Documenting photographs are Roll K9, frames 8-17.

Figure 3.1-2 is a sketch showing the main features at this site. The Dewey adit is completely caved and is expressed as a shallow trough on the slope (Figure 3.1-3). An extensive waste dump, consisting of an eastern and western portion parallels the slope south of Jordan Creek but only barely reaches the creek along a short section of the dump. The width varies from 20 to 150 feet, with the widest part in front of the caved adit, and the maximum thickness is about 60 feet. The main, west portion of the dump is about 1000 feet long (Figure 3.1-4), and much of the rock is oxidized. The east portion is about 300 feet long (Figure 3.1-5) and consists of unoxidized rock fragments. The differences in the dump material suggests that the eastern part may have come from a second caved adit, but if this is the case, all trace of the adit has disappeared.
Slightly below and west of the end of the waste dump is a flat area about 100 feet long and 50 feet wide. This is the tailings impoundment from the stamp mill (Figure 3.1-6). The material consists mostly of sand-sized particles of crushed granitic rock. Maximum thickness is about 15 feet. The disturbed area at this site, including footings for several structures discussed below, covers about 3-5 acres.

3.1.4.2 Sample Locations

3.1.4.2.1 Solid Samples

Sample K7199902 was collected from material in the possible tailings impoundment.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Location</th>
<th>Analyzed (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K7199902</td>
<td>Dewey Mine, possible tailings</td>
<td>Yes</td>
</tr>
</tbody>
</table>

3.1.4.2.2 Water Samples

No water samples were collected.

3.1.4.2.3 Analytical Results

Solid Samples

In the element screen for sample K7199902, arsenic and lead are elevated above background levels, and copper is at or slightly above background levels. None of the metals show significant leaching in the TCLP for metals test.

3.1.5 Structures

Three ore bins or chutes, several concrete slab foundations, the free-standing rock footings of the mill, and the concrete walls of another structure are at the site. One ore bin is near the west end of the west portion of the dump (Figure 3.1-7), and the others are near the east end of the east portion of the dump (Figure 3.1-8). Several concrete slabs and the concrete walls for another structure (Figure 3.1-9) are on the flat at the mouth of Booneville Gulch on both the north and south sides of Jordan Creek. The free-standing rock footings of the mill are on the slope below the west end of the waste dump (Figures 3.1-10 and 3.1-11).

3.1.6 Safety

The ore chutes are deteriorated and could possibly collapse. The site is easily accessible and the flat surface of the waste dump is frequently used for camping.
Figure 3.1-1. Location of the Dewey tunnel, Owyhee County, Idaho (U.S. Geological Survey De Lamar 7.5-minute topographic map).
Figure 3.1-2. Sketch of the Dewey tunnel site.
Figure 3.1-3. Looking southeast at the caved Dewey adit (Roll K9, frame #8).

Figure 3.1-4. Looking east along the north side of the main, west portion of the waste dump (Roll K9, frame #13).
Figure 3.1-5. Looking east up Jordan Creek. The east portion of the waste dump is in the distance, just left of center of the picture. The main, western portion is to the right. The rock walls in the right foreground are part of the mill footings (Roll K9, frame #17).

Figure 3.1-6. Looking west at the edge of the tailings impoundment west of the mill site (Roll K9, frame #15).
Figure 3.1-7. Ore bin on the west end of the main waste dump (Roll K9, frame #12).

Figure 3.1-8. Looking east at the two ore bins on the east end of the smaller, east portion of the waste dump. Jordan Creek Road is at the left center of the picture (Roll K9, frame #14).
Figure 3.1-10. View from above of the rock-wall mill footings below the west end of the waste dump. Jordan Creek Road crosses the upper part of the picture (Roll K9, frame #11).

Figure 3.1-9. Looking north from the top of the waste dump. Two concrete slabs, one at the mouth of Booneville Gulch across Jordan Creek Road and one on the south side of the creek, were foundations for structures. The remains of another concrete-walled structure is also south of the creek below the dump (Roll K9, frame #9).
Figure 3.1-11. Looking southeast at the rock-wall mill footings. The large, west portion of the waste dump extends from the upper right to the center left edge of the picture (Roll K9, frame #16).
3.2 UNNAMED PROSPECT (Site No. K7199901; BO-467)

3.2.1 Site Location and Access

This prospect is on the north side of Jordan Creek Road about ½ mile west of Cunningham Creek in the NW¼ of the NW¼ of section 35, T. 4 S., R. 4 W., on the De Lamar 7.5-minute quadrangle (Figure 3.2-1). The site is on patented land.

3.2.2 Geologic Features

This prospect is underlain by latite and basalt of Miocene age (Mitchell and Bennett, 1979).

3.2.3 Site History

Nothing is known of the history of this site.

3.2.4 Environmental Conditions

3.2.4.1 Site Features

This small prospect was visited by John Kauffman on July 19, 1999. No video was taken at this site. Documenting photograph is Roll K9, frame 7.

The waste dump of a caved adit is just above the Jordan Creek Road (Figure 3.2-2). No evidence of the adit opening was found. The dump measures 65 feet long, 6 to 20 feet wide, and about 15 feet thick. A seasonal drainage, dry at the time the site was visited, has eroded part of the dump. The disturbed area is restricted to that covered by the dump, and is less than 0.25 acre.

3.2.4.2 Sample Locations

3.2.4.2.1 Solid Samples

No solid samples were collected.

3.2.4.2.2 Water Samples

No water samples were collected.

3.2.5 Structures

No structures were found at the site.

3.2.6 Safety

No hazards were found at this prospect.
Figure 3.2-1. Location of the Site No. K7199901, Owyhee County, Idaho (U.S. Geological Survey De Lamar 7.5-minute topographic map).
Figure 3.2-2. Looking north from Jordan Creek Road (bottom of picture) at the waste dump of the caved adit at Site No. K7199901 (Roll K9, frame #7).
3.3 TAP ROOT PROSPECT (Site No. K7199903; BO-468)

3.3.1 Site Location and Access

This prospect is on the north side of Jordan Creek north of the turnoff to the Dewey tunnel, near the center of the south edge of the S½ of section 25, T. 4 S., R. 4 W., on the De Lamar 7.5-minute quadrangle (Figure 3.3-1). A short access road from Jordan Creek Road terminates on the south side of the creek below the prospect. Foot paths lead to the site on the north side of the creek (Figure 3.3-2). A nearby claim notice identifies this as the Tap Root claim. The prospect is on BLM land.

3.3.2 Geologic Features

This prospect is underlain by latite and basalt of Miocene age (Mitchell and Bennett, 1979). It is probably on a northward extension of one of the Trade Dollar-Black Jack Mine veins.

3.3.3 Site History

Nothing is known about the history of this prospect.

3.3.4 Environmental Conditions

3.3.4.1 Site Features

This prospect was visited by John Kauffman on July 19, 1999. A video segment describing the property is on Owyhee County Videotape (Tape 1, index 0:19:47-0:22:27). Documenting photographs are Roll K9, frames 18-20.

A timbered portal and bulldozer cuts are easily seen from Jordan Creek Road (Figure 3.3-3). Even close up, the portal gives the appearance of an adit (Figure 3.3-4), but the rock face is about 15 feet from the portal (Figure 3.3-5). This is probably the original extent of the adit. Troughs both above and to the east of the portal are old bulldozer cuts. The “waste dump” is a series of irregular piles of material pushed out of the trenches. The disturbed area covers about 0.25 acre.

3.3.4.2 Sample Locations

3.2.4.2.1 Solid Samples

No solid samples were collected.

3.2.4.2.2 Water Samples

No water samples were collected.

3.3.5 Structures

No structures were found at this site.
3.3.6 Safety

The short opening is accessible but is not a serious safety hazard.
Figure 3.3-1. Location of the Tap Root Prospect, Owyhee County, Idaho (U.S. Geological Survey De Lamar 7.5-minute topographic map).
Figure 3.3-2. Sketch of the Tap Root Prospect.
Figure 3.3-3. View to the north from Jordan Creek Road of the timbered portal and bulldozer cuts of the Tap Root Prospect (Roll K9, frame #20)

Figure 3.3-4. Close-up of the timbered portal of the short adit (Roll K9, frame #18)
Figure 3.3-5. View inside the short adit (Roll K9, frame #19).
3.4 UNNAMED PROSPECT (Site No. B7259901; BO-469)

3.4.1 Site Location and Access

This unnamed prospect is on the slope west of Cunningham Creek about ½ mile north of Jordan Creek in the NW¼ of the NW¼ of the SE¼ of section 26, T. 4 S., R. 4 W., on the De Lamar 7.5-minute quadrangle (Figure 3.4-1). A jeep road follows the east side of Cunningham Creek. The prospect is near the base of the slope west of the creek and is near the boundary of BLM and private land.

3.4.2 Geologic Features

This prospect is underlain by the remobilized tuffs of the Miocene rhyolites of the Silver City Range (Ekren and others, 1981).

3.4.3 Site History

Nothing is known of the history of this site.

3.4.4 Environmental Conditions

3.4.4.1 Site Features

This prospect was visited by Earl Bennett on July 25, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 1, index 0:22:34-0:23:54). Documenting photograph is Roll B7, frame 22.

A caved adit with a small waste dump was found at this site. The dump measures about 50 feet long, but only 15 feet wide and 15 feet thick (Figure 3.4-2). Fine-grained dike rock was noted on the dump. The disturbed area covers less than 0.5 acre.

3.4.4.2 Sample Locations

3.4.4.2.1 Solid Samples

No solid samples were collected.

3.4.4.2.2 Water Samples

No water samples were collected.

3.4.5 Structures

No structures were found at this site.

3.4.6 Safety

No safety hazards were found.
Figure 3.4-1. Location of the Site No. B7259901, Owyhee County, Idaho (U.S. Geological Survey De Lamar 7.5-minute topographic map).
Figure 3.4-2. Small waste dump of the caved adit at Site No. B7259901 (Roll B7, frame #22).
3.5 UNNAMED PROSPECT (Site No. B7259902; BO-470)

3.5.1 Site Location and Access

This unnamed prospect is near the head of Tennessee Gulch about ¾ mile north of Jordan Creek in the NE¼ of the SW¼ of the NW¼ of section 26, T. 4 S., R. 4 W., on the De Lamar 7.5-minute quadrangle (Figure 3.5-1). The prospect is in the bottom of the gulch west of a jeep trail that follows Tennessee Gulch to Tennessee Mountain. The workings are on BLM land.

3.5.2 Geologic Features

This prospect is underlain by the remobilized tuffs of the Miocene rhyolites of the Silver City Range (Ekren and others, 1981).

3.5.3 Site History

Nothing is known of the history of this site.

3.5.4 Environmental Conditions

3.5.4.1 Site Features

This prospect was visited by Earl Bennett on July 25, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 1, index 0:23:58-0:27:53). Documenting photograph is Roll B7, frame 25.

This minor prospect consists of a caved adit and small pit near the head of Tennessee Gulch. The adit was driven in rhyolite. The small waste dump measures 20 feet long, 20 feet wide, and about 20 feet thick (Figure 3.5-2). The disturbed area covers less than 0.25 acre.

3.5.4.2 Sample Locations

3.5.4.2.1 Solid Samples

No solid samples were collected.

3.5.4.2.2 Water Samples

No water samples were collected.

3.5.5 Structures

No structures were found.

3.5.6 Safety

No safety hazards were found.
Figure 3.5-1. Location map of Site No. B7259902, Owyhee County, Idaho (U.S. Geological Survey De Lamar 7.5-minute topographic map).
Figure 3.5-2. Small waste dump at Site No. B7259902 (Roll B7, frame #25).
3.6 CAPE HORN MINE (Site No. BO-192)

3.6.1 Site Location and Access

The Cape Horn Mine is on the east flank of War Eagle Mountain in the SE¼ of the NE¼ of the SW¼ of section 4, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.6-1). The workings are several hundred feet below the road on the east loop of the War Eagle Mountain Road and are accessible on foot. The mine is on a strip of patented claims surrounded by BLM land.

3.6.2 Geologic Features

The Cape Horn Mine is in Cretaceous granitic rocks (Mitchell and Bennett, 1979). The workings are on the northward continuation of the Oro Fino vein, which is a nearly vertical, north-south-trending quartz vein in the granitic host rock. Several other mines are on the vein, which has a length of at least 1.5 miles.

3.6.3 Site History

Nothing is known of the history of this site.

3.6.4 Environmental Conditions

3.6.4.1 Site Features

The Cape Horn Mine was visited by John Kauffman on July 20, 1999. A video segment describing the property is on Owyhee County Videotape (Tape 1, index 0:27:58-0:32:55). Documenting photograph is Roll K9, frame 21.

Workings found at the Cape Horn include a caved adit, a shaft caved about 20 feet below the surface, and numerous pits and trenches (Figure 3.6-2). The shaft, on the north side of a spur ridge, is 10-12 feet in diameter and about 20 feet deep with very steep walls and a small horizontal opening near the top of the pit (Figure 3.6-3). The length of the opening could not be determined.

Numerous shallow pits and several trenches follow a set of parallel northwest-trending veins on the slope below the shaft. Several hundred feet northwest of the shaft is a caved adit. The waste dump for the adit measures 35 feet long, 6 feet wide on top, and about 30 feet down the face. All of the workings are in fairly thick timber with patches of thick underbrush. The total disturbed area at the site covers about 1.0 acre.

3.6.4.2 Sample Locations

3.6.4.2.1 Solid Samples

No solid samples were collected.
3.6.4.2.2 Water Samples
   No water samples were collected.

3.6.5 Structures
   No structures were found at this site.

3.6.6 Safety
   The deep pit of the caved shaft is dangerous because of the steep walls.
Figure 3.6-1. Location map of the Cape Horn Mine, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.6-2. Sketch of the Cape Horn workings.
Figure 3.6-3. View down into the pit of the caved shaft. Note the horizontal opening into the slope near the top of the shaft wall. The pit is 10-12 feet in diameter at the surface and 20 feet deep (Roll K9, frame #21).
3.7 ORO FINO MINE (BO-205)

Note: The Oro Fino Mine is one of a group of individual mines on separate claims that comprise the Oro Fino Group. These are on the Oro Fino-Golden Chariot vein that can be traced for over 1.5 miles. For this report, some of the mines are described separately while others are grouped together because of their proximity.

3.7.1 Site Location and Access

The Oro Fino Mine is along the eastern loop of the War Eagle Mountain Road in the SW¼ of the SE¼ of section 4, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.7-1). Workings are on both sides of the road at the head of Oro Fino Gulch and are on patented claims surrounded by BLM land.

3.7.2 Geologic Features

The Oro Fino Mine is on a nearly vertical, north-south trending quartz vein in granitic host rock. Several other mines are on the vein, which has a length of at least 1.5 miles.

3.7.3 Site History

Statham (1998, p. 11) summarized the following history of the Oro Fino:

The Oro Fino Mine was the second vein ... discovered in the Owyhees, July 1863. The first assay ... of the Oro Fino indicated over $7,000 per ton, mostly in gold. In a chute of ore near the surface, the Oro Fino yielded to Tim Regan, one of the mine’s owners, $78,000 in less than 3 months. Mr. Regan purchased the Oro Fino for $5,000 and later sold it for $750,000. This is one of the reasons that Mr. Regan was the first of two millionaires to leave Silver City and settle in the Boise Valley.

The Oro Fino Mine was developed through a shaft that was about 350 feet deep and operated continuously from 1866 to 1876. There were a number of production buildings, including a shaft house, covered dump tracks and a very picturesque settlement at the Oro Fino. The mine operated at intervals for many years and in 1885 and 1886 saw modest profits. This mine produced, throughout its life, a total of about $ 2,000,000. . . .

The Oro Fino-Golden Chariot vein extends form the Great Western Mine, north of the Oro Fino, south for about 1.5 miles to the Afterthought Mine. The vein varies from 3 to 14 feet wide and retains its character at a depth of 2,000 [feet] below the surface exposures. The mines that are on the vein comprise what is called the Oro Fino Group and include the Oro Fino, Ida Elmore, Golden Chariot, Minnesota, South Chariot and the Mahogany. These mines were developed from shafts located on small claims with the upper levels producing high-grade ore and
the lower levels maintaining good values in the ore. The mines of the Oro Fino Group were rich producers and actively worked until the crash of 1875. Although there was some work done in these mines for the next 20 years, they never went into serious production after 1875. During the life of these mines the Oro Fino Group produced an estimated $7,000,000.

Both Lindgren (1900) and Piper and Laney (1926) give historical overviews of the mines on the Oro Fino vein system.

### 3.7.4 Environmental Conditions

#### 3.7.4.1 Site Features

The Oro Fino Mine was visited by John Kauffman on July 20, 1999. A video segment describing the property is on Owyhee County Videotape (Tape 1, index 0:33:00-0:43:41), where it is identified as Site No. K7209901. Documenting photographs are Roll K9, frames 22-25, and Roll K10, frames 1-4.

There is a series of cuts, stopes and shafts on both sides of the War Eagle Mountain Road (Figure 3.7-2). Those on the north side include several caved stopes or prospect pits adjacent to the road (Figure 3.7-3). The caved stopes/pits are 5-7 feet deep and about 7-10 feet across. Farther to the north are a narrow open stope and a shaft 35-50 feet deep (Figure 3.7-4). The shaft is about 10-12 feet in diameter at the surface with nearly vertical walls (Figure 3.7-5). The waste dump for the shaft is about 30 feet long, 20 feet wide, and 15 feet thick. Adjacent to the shaft on the east side is an open stope 5 feet wide, 20 feet long, and at least 15 feet deep (Figure 3.7-6). The shaft and stope are surrounded by barbed wire fencing attached to steel fence posts, although part of the fence has been knocked down by fallen trees.

South of the road is a long and deep open cut. The lower portion (nearest the road) may be a caved shaft. The width of the cut pinches and swells over a length of at least 250-300 feet (Figure 3.7-7). The narrowest parts are about 10 feet wide and the widest are 30 or more feet across. The depth also varies from 10 to 30 feet. Adjacent to the lower end of the cut is a large waste dump, partly removed (or at least modified) by road construction. Most of the material is on the south side of the road, but a conical pile is on the north side (Figure 3.7-8). The conical pile, which has had some material removed, is about 60 feet long, 30 feet wide, and 20 feet high. The dump south of the road forms a rim around the north end of the cut, with the majority of the material on the east side and a lesser amount to the west. A free-standing retaining wall, consisting of granite boulders, forms the north and east edge of the waste dump (Figure 3.7-9). Large wooden beams with protruding bolts (Figure 3.7-10), which are adjacent to the deep, north end of the cut, may have been headframe supports.

The disturbed area at this site covers at least 3-5 acres.

Adjacent to and west of the conical waste rock pile is an open adit that extends under the War
Eagle Mountain Road. This is the Ida Elmore-Golden Chariot drainage tunnel, which will be discussed in Section 3.8.

### 3.7.4.2 Sample Locations

#### 3.7.4.2.1 Solid Samples

No solid samples were collected at this site. However, sample K7209903 was collected from the waste dump of the Ida Elmore-Golden Chariot drainage tunnel adjacent to the site. See section 3.8.4.3 for analytical results.

#### 3.7.4.2.2 Water Samples

No water samples were collected at this site, although sample K7209902 was taken from water draining from the adjacent Ida Elmore-Golden Chariot drainage tunnel. See Section 3.8.4.3 for analytical results.

### 3.7.5 Structures

No structures were found at this site, although large wooden beams on the waste dump south of the road may have been footings for a headframe.

### 3.7.6 Safety

The open stope and shaft are hazardous. The fence around the openings provides a warning that some hazard may be present, although it is not a deterrent to access. No other warning signs were noted in the area. War Eagle Mountain receives considerable recreational use by vacationers to the Silver City area and by outdoor enthusiasts weekending in the area from the Boise Valley.
Figure 3.7-1. Location map of the Oro Fino Mine, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.7-2. Sketch of the Oro Fino workings.
Figure 3.7-3. Caved stopes or prospect pits on the north side of War Eagle Mountain Road (Roll K9, frame #23).
Figure 3.7-4. Open shaft and adjacent open stope (to the right). Note the steel fence posts. Barbed wire attached to the posts has been knocked down in several places by fallen trees (Roll K9, frame #24).

Figure 3.7-5. View into the steep-walled open shaft (Roll K10, frame #1).
Figure 3.7-6. View into the open stope adjacent to the shaft. The narrow opening is 1-4 feet wide and nearly vertical (Roll K9, frame #25).
Figure 3.7-7. View to the south up the axis of the open cut south of War Eagle Mountain Road (Roll K10, frame #4).
Figure 3.7-8. Looking east along War Eagle Mountain Road. The conical waste rock pile is to the left and the waste dump of the long cut is in the trees to the right. The cut on the left side of the road in the foreground is where the Ida Elmore drainage tunnel emerges from under the road (Roll K9, frame #22).

Figure 3.7-9. Looking south at the free-standing rock retaining wall along the north edge of the waste dump for the long cut. War Eagle Mountain Road crosses the lower part of the picture and a short access road is on the left edge. The rock debris in the lower right corner is the bottom of the conical waste dump (Roll K10, frame #2).
Figure 3.7-10. Large wooden beams with protruding bolts on the waste dump south of the road. Note the rounded ends of the beams. These may have been the footings for a headframe (Roll K10, frame #3).
3.8 IDA ELMORE/GOLDEN CHARIOT/CUMBERLAND MINES (Site Nos. BO-203/BO-204/BO-210)
Alternate names: Golden Chariot Shaft (BO-203)—Oro Fino Group; Golden Crest Mining & Milling Corp.; Ida Elmore (BO-204)—Oro Fino Group; Cumberland Mine (BO-210)—Oro Fino Group; Big Four Development Co.

These mines are all part of the Oro Fino Group and are situated to the south of the Oro Fino Mine on the Oro Fino-Golden Chariot vein. There are a number of workings on these claims that are very close to one another. It was not definitively ascertained which workings corresponded to each mine; therefore, they are described together in this section. There was a mill at the Cumberland Mine, which is documented in this section.

3.8.1 Site Location and Access

These mines are at the head of Chariot Gulch and west of War Eagle Mountain Road, in the NW¼ of the NE¼ of section 9, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.8-1). The Ida Elmore-Golden Chariot drainage tunnel is at the head of Oro Fino Gulch next to the Oro Fino Mine workings, in the SW¼ of the SE¼ of section 4, T. 5 S., R. 3 W. An old jeep road off War Eagle Mountain Road leads to the main workings of the mines. The drainage tunnel is located beside the War Eagle Mountain Road about ½ mile north of the main workings. All of these mines appear to be on a group of patented claims surrounded by BLM land.

3.8.2 Geologic Features

The workings are on a nearly vertical quartz vein or veins intruded into granitic host rock. The mineralized vein can be traced for over 1.5 miles.

3.8.3 Site History

Statham (1998, p. 13-14) noted the following about the history of these workings:

The Ida Elmore operated from September 1867 to 1876 and produced about $1,315,100. The single shaft went to a depth of 1,000 feet and was still in good ore when it closed. The upper levels of the mine were reworked after 1876 and produced little.

The Golden Chariot operated from September 1867 to 1876 and produced about $1,714,300. The single shaft, just 75 feet from the Ida Elmore, went to a depth of nearly 1,250 feet and was still in good ore when it closed. The upper levels of the mine were reworked after 1876 and produced little.

The Cumberland Mine and Mill operated from 1897 to 1898 with little success. This was the earlier location of the Crane and Driggs Mine. During those early
years the mine promised riches with an assay in 1864 of $3,453.49 per ton of ore. . . . Unfortunately the mine never showed values upon development. . . .

A dispute developed between two of the rich mines, the Ida Elmore and the Golden Chariot. These mines were located 75 feet apart, on the surface, on the same ore vein and underground; a single rock partition separated them. In early 1868 the partition between the two mines was broken through, and the miners came face to face. A fight commenced because both mines had rich ore deposits and competing mine owners. The miners fought each other in order to protect their livelihood. The miners, while underground, tried to drown and burn each other with steam hoses. During the exchange, 40 shots were fired killing two Golden Chariot miners and wounding an Ida Elmore miner. A few days after this underground war, a shooting occurred in Silver City directly related to the dispute. One man, from Idaho City and a supporter of the Ida Elmore, was killed outright while the other, a famous Pacific slope Indian fighter and a supporter of the Golden Chariot, was wounded and died later. These deaths brought the hostilities to a conclusion.

Both Lindgren (1900) and Piper and Laney (1926) also give historical overviews of mines on the Oro Fino vein system.

3.8.4 Environmental Conditions

3.8.4.1 Site Features

All of these mines and the Cumberland mill were visited by John Kauffman on July 20, 1999. Video segments describing the mines and mill are on Owyhee County Videotape (Tape 1, index 0:43:45-0:59:28). Video of the Ida Elmore-Golden Chariot drainage tunnel is included with the Oro Fino Mine segment (section 3.7). Documenting photographs are K10, frames 5-20.

The Ida Elmore-Golden Chariot drainage tunnel has recently (probably within the past 10 years) been reopened, with the War Eagle Mountain Road routed over the new timbers (Figures 3.8-2 and 3.8-3). Water is draining from the tunnel at about 10 gallons per minute. Inside, the adit is timbered and cribbed as far in as can be seen (Figure 3.8-4). Rails and foot planks inside the adit extend out over the waste dump. The adit water has eroded a channel in the dump beneath the rails (Figure 3.8-5). Two levels of waste rock are apparent. The younger material, probably related to the reopening of the adit, forms a layer about 3-4 feet thick on older, more extensive material (Figure 3.8-6). Overall, the dump is about 60 feet long, 30 feet wide, and a maximum of 10 feet thick. Some scrap iron, plastic drain pipe, and a 55-gallon drum are on the dump. A sign at the site identifies the adit as the “Ida Elmore-Golden Chariot drainage tunnel” and reads: “Reopening project. Owner: Fairview Resources Corp. Contractor: Minex.” No date is given for the reopening work. The disturbed area covers about 0.5 acre.
The main workings for the Ida Elmore, the Golden Chariot, and the Cumberland mines are all at the head of Chariot Gulch (Figure 3.8-7). A long, snow-filled trench (Figure 3.8-8) probably represents the shafts and stopes of the Ida Elmore and Golden Chariot mines. The shafts and stopes are probably caved, but the snow in the trench may obscure any openings. An opening at the south end of the trench (Figure 3.8-9) may connect with the stope. Cut-granite blocks with large steel bolts (Figure 3.8-10), located above the trench, probably are the footings for a headframe. Much of the waste rock, forming irregular piles adjacent to the trench, has been modified by bulldozer work.

A caved shaft (Figure 3.8-11) and narrow open stopes south of the shaft (Figure 3.8-12) are probably belong to the Cumberland Mine, although the exact location of its workings is uncertain. Lindgren (1900) reports a tunnel 400 feet long at the Cumberland Mine. At the time of his visit, a shaft being sunk “at the mouth of the tunnel” was 300 feet deep. The open stopes south of the caved shaft may be above the old tunnel. Large piles of waste rock along Chariot Gulch below the mill and old access road (Figure 3.8-13) may be related to the Cumberland workings, or they may be remnants of waste rock from the other mines. A picture of the Cumberland mill and hoisting works in Statham (1998) shows the buildings in the vicinity of the cut granite blocks and the caved shaft noted above, and also shows large volumes of waste rock on the slope below the hoisting works and mill structure. Since the Cumberland Mine and Mill were operated more than twenty years later than the Ida Elmore and Golden Chariot, it is possible that one or both of those mines became part of the Cumberland operation.

The Cumberland mill burned, as evidenced by charred timbers in the vicinity of very well-constructed free-standing stone foundations (Figures 3.8-14 and 3.8-15). Numerous cut granite blocks, some with beveled edges, can be seen in these figures. On one of the blocks (Figure 3.8-16), carved letters read:

Virtue Con.'s
Mill.
Francis Jenkins
Supt.
Frank Stevens
Build.
EREC TED
1900.

Some fine, sandy material can be seen in front of the lower foundation in Figure 3.8-15, but no large piles or impoundments of mill spoils or tailings were noted. As at other mills in this area, this was probably a stamp mill producing crushed vein material from which the gold and silver were extracted through an amalgamation process. The waste product of this process is crushed rock with little or no sulfides or other mineralization.

The disturbed area for the Ida Elmore, Golden Chariot, and Cumberland mines and the Cumberland mill covers at least 10 acres.
3.8.4.2 Sample Locations

3.8.4.2.1 Solid Samples

Sample K7209903 was collected from the waste dump of the Ida Elmore-Golden Chariot drainage tunnel.

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<td>Yes</td>
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3.8.4.2.2 Water Samples

Water sample K7209902 was collected just inside the portal of the Ida Elmore-Golden Chariot drainage tunnel. No pH was taken because the meter was not functioning properly.

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<th>pH</th>
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<td>12</td>
<td>39</td>
<td>---</td>
<td>10</td>
<td>Yes</td>
</tr>
</tbody>
</table>

3.8.4.2.3 Analytical Results

Solid Sample

Sample K7209903 has an elevated level of arsenic, and slightly elevated levels of cadmium and copper in the element screen. Cadmium is slightly leachable in the TCLP for metals test.

Water Sample

Sample K7209902 from the adit exceeds all standards for mercury (ICP cold vapor test).

3.8.5 Structures

The free-standing rock foundations for the Cumberland mill are mostly intact. Another partly collapsed rock wall (Figure 3.8-17), a rock-lined well (Figure 3.8-18), and an old safe (Figure 3.8-19) were found on a flat area on the tree-covered slope several hundred feet southeast of the mill site. None of the old wooden structures remain.
3.8.6 Safety

The small opening at the south end of the snow-filled trench could be entered. If there are any other openings beneath the snow in the trench, they also could be hazardous. The narrow open stope south of the caved shaft has vertical sides and is at least 10-15 feet deep. The stope is not obvious until closely approached.
Figure 3.8-1. Location map of the Ida Elmore, Golden Chariot, and Cumberland mines and the Cumberland mill, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.8-2. Sketch of the Ida Elmore-Golden Chariot drainage tunnel.
Figure 3.8-3. Looking south at the portal of the Ida Elmore-Golden Chariot drainage tunnel (Roll K10, frame #6).
Figure 3.8-4. View inside the Ida Elmore-Golden Chariot drainage tunnel (Roll K10, frame #7).
Figure 3.8-5. Looking east at the rails extending from the Ida Elmore-Golden Chariot drainage tunnel. Water from the adit has eroded a channel beneath the rails. The large conical pile of waste rock is part of the Oro Fino Mine waste dump (Roll K10, frame #5).

Figure 3.8-6. Looking northwest at the waste dump of the Ida Elmore-Golden Chariot drainage tunnel. Note the two levels of waste rock (Roll K10, frame #8).
Figure 3.8-7. Sketch of the Ida Elmore, Golden Chariot and Cumberland mines.
Figure 3.8-8. Snow-filled trench, probably the caved (?) stopes and shafts of the Ida Elmore and Golden Chariot mines. The uppermost workings of the Oro Fino Mine are in the saddle of the ridge in the distance (Roll K10, frame #10).
Figure 3.8-9. Small opening at the south end of the snow-filled trench. The opening may lead into the stopes of the Golden Chariot Mine (Roll K10, frame #11).

Figure 3.8-10. Cut-granite blocks with steel bolts above the snow-filled trench. These blocks were probably the footings for the Cumberland hoisting works. Note the beveled edges and tight fit of the blocks (Roll K10, frame #9).
Figure 3.8-11. Looking west across the pit of the caved Cumberland (?) shaft. A small patch of snow is in the bottom of the pit (Roll K10, frame #13).
Figure 3.8-12. Looking down at the open stope south of the caved shaft. The vertical opening is 2-4 feet wide and at least 15 feet deep (Roll K10, frame #12).
Figure 3.8-13. Piles of waste rock along Chariot Gulch on the slope below the mill (to the right of the picture) (Roll K10, frame #17).

Figure 3.8-14. View to the southeast of the rock and cut-granite block foundation of the Cumberland mill. A pile of charred timbers is below the mill along the old access road, which diagonally crosses the left half of the picture. A short section of War Eagle Mountain Road is at the far left edge of the picture (Roll K10, frame #14).
Figure 3.8-15. Looking south at the free-standing stone foundation of the Cumberland mill. The mill was built in 1900 (Roll K10, frame #16).
Figure 3.8-16. Carved granite block on the west side of the mill foundation (Roll K10, frame #15).
Figure 3.8-17. Partly collapsed rock wall of a structure several hundred feet southeast of the mill (Roll K10, frame #20).

Figure 3.8-18. Rock-lined well near the structure shown in Figure 3.8-17. Water level is about 1 foot below the surface (Roll K10, frame #19).
Figure 3.8-19. Old safe near the structure shown in Figure 3.8-17 (Roll K10, frame #18).
3.9 MINNESOTA MINE (Site No. BO-211)
Alternate name—Oro Fino Group.

3.9.1 Site Location and Access

The Minnesota Mine is south of the Ida Elmore, Golden Chariot, and Cumberland mines on an extension of the Ida Elmore-Golden Chariot vein, in the SW¼ of the NE¼ of section 9, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.9-1). The workings are on the north side of the War Eagle Mountain Road where it turns southwest on Stormy Hill (this is the east-trending “Stormy Hill” shown on the 1990 edition of the 7.5-minute topographic map. Historically, Stormy Hill was the north-south-trending ridge off the south side of War Eagle Mountain). From the BLM surface management status map (Murphy, scale 1:100,000), the workings appear to be on patented claims surrounded by BLM land.

3.9.2 Geologic Features

The workings are on steeply dipping quartz veins cutting granitic host rock. The shaft is on the Oro Fino-Ida Elmore-Golden Chariot vein. The adits probably were driven to intercept the parallel Red Jacket vein structure to the west.

3.9.3 Site History


The Minnesota operated from August 1871 to 1876 and produced about $290,500. The single shaft went to a depth of 912 feet and was still in good ore when it closed. The upper levels of the mine were reworked after 1876 and produced little.

Lindgren (1900) reported that the Minnesota and Golden Chariot were consolidated in 1875, but both closed down a short time later.

3.9.4 Environmental Conditions

3.9.4.1 Site Features

The Minnesota Mine was visited by John Kauffman on July 20, 1999. A video segment describing the property is on Owyhee County Videotape (Tape 1, index 0:59:32-1:08:04). Documenting photographs are Roll K10, frames 21-25.

The main opening at the Minnesota is a shaft a few feet off the north side of War Eagle Mountain Road. Two adits and some prospect pits across the gully to the northwest are also included with this property (Figure 3.9-2), although it is uncertain exactly to what mine they belong. The adits are not mentioned in Statham’s historical account of the area (1998); they may be related to the Red Jacket Mine workings rather than the Minnesota.
The shaft is open to a depth of about 15 feet, where a plug of snow covers the bottom (Figure 3.9-3). The sides are nearly vertical. The opening, which measures about 20 feet across (Figure 3.9-4), is surrounded by a barbed wire fence. Several irregular mounds and piles of waste rock extend into the gully below the shaft (Figure 3.9-5). The piles of waste rock cover an area approximately 150 feet long and 100 feet wide, and the thickness averages about 20 feet.

Adit 1 was driven westward into the granite and is open (Figure 3.9-6). The waste dump, which measures 75 feet long, 15 feet wide, and about 10-15 feet thick, extends out parallel to the gully (Figure 3.9-7). A pit on the slope above the adit has a small opening that probably connects with the adit.

Further up the slope to the northwest is a second adit, which is caved and dry. It is marked by a shallow trough on the slope. The waste dump (about 50 feet long, 15 feet wide, and 10 feet thick) appears to have been built out over another small dump, possibly from a small prospect pit. Just north of the Adit 2 dump is another shallow prospect pit and a smaller waste pile.

The disturbed area for all these workings covers about 1 acre.

3.9.4.2 Sample Locations

3.9.4.2.1 Solid Samples
   No solid samples were collected.

3.9.4.2.2 Water Samples
   No water samples were collected.

3.9.5 Structures
   No structures were found.

3.9.6 Safety

Although surrounded by a barbed wire fence, the shaft is a safety hazard. The fence can easily be overcome by climbing between the strands or over the top. The snow plug 15 feet below the surface may be covering a deeper opening below. War Eagle Mountain Road, which receives a significant amount of tourist travel, is within a few feet of the fence.
Figure 3.9-1. Location of the Minnesota Mine workings, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.9-2. Sketch of the Minnesota Mine workings.
Figure 3.9-3. Looking down into the Minnesota shaft. The plug of snow is about 15 feet below the surface (Roll K10, frame #23).

Figure 3.9-4. Looking southeast at the shaft opening, which is about 20 feet across. A barbed wire fence surrounds the opening. The pickup is parked on War Eagle Mountain Road (Roll K10, frame #21).
Figure 3.9-5. Looking north at the waste piles from the Minnesota shaft (Roll K10, frame #22).
Figure 3.9-6. Looking west at open Adit 1, driven west into the slope (Roll K10, frame #24).
Figure 3.9-7. Looking east at the waste dump for Adit 1 (low bare area across the center of the picture). The piles of rock in the right background are from the Minnesota shaft (Roll K10, frame #25).
3.10 SOUTH CHARIOT SHAFT (Site No. BO-212)
Alternate name—Oro Fino Group.

3.10.1 Site Location and Access

The South Chariot shaft is on the southeast flank of War Eagle Mountain in the SW¼ of the SW¼ of the NE¼ of section 9, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.10-1). An access road to the Afterthought Mine, originating at the site of Fairview on the War Eagle Mountain Road, passes the shaft, which is shown by the upper of two shaft symbols on the topographic map. This site is either on patented claims or on adjacent BLM land.

3.10.2 Geologic Features

The South Chariot is on the southern continuation of the Oro Fino-Golden Chariot vein, a north-south-trending, near-vertical structure cutting the granitic host rock. The vein extends for a distance of over 1.5 miles.

3.10.3 Site History

Lindgren (1900, p. 150) noted:

The South Chariot shaft was located 800 feet south of the Minnesota and was in operation during the same period. Its production is not known. A big ore shoot is said to have been found between the sixth and tenth levels in this shaft. In 1875 the mine is reported as looking well and showing a small production; shortly after that time it closed down. The total depth attained is given as 900 feet. The vein does not appear to be identical with the Minnesota, though it may be a spur of it.

3.10.4 Environmental Conditions

3.10.4.1 Site Features

The South Chariot Shaft was visited by Earl Bennett on July 24, 1999. A video segment describing the property is on Owyhee County Videotape (Tape 1, index 1:08:09-1:15:00). Documenting photographs are Roll B7, frame 2-3.

A large pit marks the location of the caved South Chariot shaft. The shaft is near the center of a long, southeast-trending stope that was either worked to the surface or has collapsed (Figures 3.10-2 and 3.10-3). On a flat above the shaft are milled-granite blocks with beveled edges that formed the hoist foundation. The waste dump, consisting almost entirely of two-mica granite, extends about 215 feet to the northeast along the access road to the shaft. Although variable, the dump is roughly 25 feet wide and 80 or more feet thick. The disturbed area covers about 1.0 acre.
3.10.4.2 Sample Locations

3.10.4.2.1 Solid Samples
   No solid samples were collected.

3.10.4.2.2 Water Samples
   No water samples were collected.

3.10.5 Structures

The milled-granite blocks of the hoist foundation are the only remnants of a structure at this site.

3.10.6 Safety

Although the shaft and stope appear to be completely caved, the caved material often forms a bridge over deeper open workings. At the Mahogany shaft immediately below the South Chariot, the stope (on a continuation of the same vein) is open in places and is quite deep.
Figure 3.10-1. Location of the South Chariot Shaft, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.10-2. Sketch of the South Chariot Shaft.
Figure 3.10-3. Collapsed stope on the vein, with the South Chariot shaft in the foreground (Roll B7, frame #3).
3.11 MAHOGANY MINE (Site No. BO-202)
Alternate name—Oro Fino Group.

Site No. B7249901 is included in the description of this site.

3.11.1 Site Location and Access

The Mahogany Mine is below the South Chariot Shaft along the Afterthought Mine access road, in the SW¼ of the SW¼ of the NE¼ of section 9, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.11-1). The workings are about ½ mile southeast of the site of Fairview, where the access road joins War Eagle Mountain Road. The workings are probably on a strip of patented claims with BLM land nearby to the east.

3.11.2 Geologic Features

The Mahogany Mine is on the southern continuation of the Oro Fino-Golden Chariot vein, a north-south-trending, near-vertical structure cutting the granitic host rock. The vein extends for a distance of over 1.5 miles.

3.11.3 Site History

Statham (1998, p. 17) reported:

Mahogany Mine is the most southern property of the Oro Fino Group and was an active producer until 1876. The single shaft went to a depth of 1,180 feet and was still in good ore when it closed. The upper levels of the mine were reworked after 1876 and produced little.

Lindgren (1900, p. 150) provided the following production figures for the Mahogany:

1870, $32,551; 1871, $56,390; 1872, $73,100; 1873, $125,551; total, $287,592.

3.11.4 Environmental Conditions

3.11.4.1 Site Features

The Mahogany Mine was visited by Earl Bennett on July 24, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 1, index 1:15:05-1:22:15). Documenting photographs are Roll B7, frames 4-7.

The main opening at the Mahogany Mine is the shaft beside the access road. Several additional workings (field site no. B7249901) below the road are probably on the Mahogany claim and are included in the following description.

The Mahogany shaft is located on the north side of the access road behind a tin-covered powder shack (Figure 3.11-2). The shaft is open to a considerable depth. Adjacent to the shaft is a stope.
with some openings to the surface (Figure 3.11-3). This stope probably connects with the South Chariot shaft, which is nearby to the north, and may continue underground to the shaft and adit below the road (Site No. B7249901). Some of the waste rock has been dumped over the edge of the access road. This material extends northeast along the road for about 90 feet and down the slope for about 20-30 feet, although it is only a few feet wide beside the road. The main portion of the waste rock has been trammed to a large conical pile on the south side of the access road. This pile is at least 50-75 feet in diameter across the base and 20-30 feet high.

The waste rock dumped over the edge of the access road extends down to an open adit driven toward the same vein system. A 25-foot long notch excavated in the granite forms the entryway to the adit (Figure 3.11-4). A minor seep forms small stagnant pools in the entryway. A second shaft with a relatively small waste dump is a short distance southeast of the adit. The shaft is open and filled with water to within about 10-15 feet of the surface. It has nearly vertical sides (Figure 3.11-5).

The total disturbed area at the Mahogany Mine covers several acres.

### 3.11.4.2 Sample Locations

#### 3.11.4.2.1 Solid Samples

No solid samples were collected.

#### 3.11.4.2.2 Water Samples

No water samples were collected.

### 3.11.5 Structures

A metal covered shed is beside the access road in front of the main Mahogany shaft. A few blocks of the rock foundation for the hoist for the main shaft were found on a flat area just above the shaft.

### 3.11.6 Safety

The open shafts and stodes are a significant hazard. The main shaft and stope have nearly vertical walls and are open to an undetermined but dangerous depth. The adit may connect with the stodes. The depth of the lower shaft could not be determined, but it is at least 10-15 feet to the water. The sides of this shaft are also nearly vertical.
Figure 3.11-1. Location of the Mahogany Mine Survey, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.11-2. Metal-covered powder shack along the access road in front of the main Mahogany shaft (Roll B7, frame #5).

Figure 3.11-3. Open stope on the vein near the Mahogany shaft (Roll B7, frame #4).
Figure 3.11-4. Open adit below the Mahogany shaft, looking northwest (Roll B7, frame #6).

Figure 3.11-5. Open water-filled shaft near the adit. The water is about 10-15 feet below the surface. Note the near-vertical sides of the shaft (Roll B7, frame #7).
3.12 MOUNTAIN CHIEF MINE (Site No. BO-214)
Alternate name—Bluejacket Mine; Owyhee Gold Mining.

Field Site No. B7249902 is included in the description for the Mountain Chief Mine.

3.12.1 Site Location and Access

The Mountain Chief Mine is near the head of Mahogany Gulch on the southeast flank of War Eagle Mountain in the SE¼ of the SW¼ of the NE¼ of section 9, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.12-1). The site is identified as the “Bluejacket Mine” on the topographic map and on the video segment accompanying this report. A jeep trail provides access to the mine from War Eagle Mountain Road at the former town site of Fairview. This jeep trail is lower on the slope but parallels the access road to the Afterthought Mine. The Mountain Chief may be on BLM land, although patented claims are in the vicinity.

3.12.2 Geologic Features

The Mountain Chief is on a southeast-trending vein subsidiary to the north-south-trending Oro Fino-Golden Chariot vein. Like other veins in the area, the host rock is granite.

3.12.3 Site History

Nothing is known about the early history of this mine. Owyhee Gold Mining Company (incorporated in 1925) purchased the property for $15,000 in 1925. At that time, the property had 970 feet of development in five tunnels, one shaft, and one raise. Development continued until 1930, when the company's efforts shifted to promoting the property. Platts (1930) described the Mountain Chief in optimistic terms and estimated that a total of $30,000 would be needed to put the mine on a producing basis. Laney (1930) disagreed with many of Platts’s conclusions and stated (Laney, 1930, p. 1): “You will note that certain statements in the report [Platts, 1930] and certain features on the map are decidedly at variance with finds of Mr. Piper, Mr. Lindgren, and myself. This is especially true of total production of the specific block of ground and in regard to vein connections.” Apparently no backers were found to finance additional development. Owyhee Gold forfeited its corporate charter in 1938.

3.12.4 Environmental Conditions

3.12.4.1 Site Features

The Mountain Chief Mine was visited by Earl Bennett on July 24, 1999. A video segment describing the site (identified on the video as the Bluejacket Mine) is on Owyhee County Videotape (Tape 1, index 1:22:19-1:27:00). Documenting photographs are Roll B7, frames 8-10.
The main opening at the Mountain Chief was a shaft, although no pit was found associated with the waste dump. A spring originating at the site of the shaft produces about 5-10 gallons per minute. This water flows over the edge of the dump and into Mahogany Gulch. The dump measures about 95-100 feet long, 85 feet wide, and 15 feet thick (Figure 3.12-2). Below and southeast of the dump is the site of the Mountain Chief mill. A few old boards, beams, and concrete footings are all that remains of the mill (Figure 3.12-3 and 3.12-4). No tailings were found in the vicinity. The disturbed area at this site covers about 7-8 acres.

A caved adit and small waste dump are in the gully above the shaft and below the access road to the Afterthought Mine. This site, given a field designation of B7249902, is probably on the same vein as the shaft. The disturbed area at this site covers about 0.25 acre.

3.12.4.2 Sample Locations

3.12.4.2.1 Solid Samples
   No solid samples were collected.

3.12.4.2.2 Water Samples
   No water samples were collected.

3.12.5 Structures

Two small cabins are on a flat area in the trees below the collapsed mill.

3.12.6 Safety
   No safety hazards were found.
Figure 3.12-1. Location of the Mountain Chief Mine, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.12-2. Waste dump at the Mountain Chief shaft (Roll B7, frame #10).

Figure 3.12-3. Looking down on the old millsite at the Mountain Chief Mine (Roll B7, Frame #8).
Figure 3.12-4. Looking up at the ruins of the Mountain Chief mill (Roll B7, frame #9).
3.13 RED JACKET MINE (Site No. BO-213)

The Red Jacket Mine originally included the Dernier Resort claims (see section 3.16) and the Red Jacket 1885 shaft (see section 3.15).

3.13.1 Site Location and Access

The Red Jacket Mine is along the Afterthought Mine access road near the center of section 9, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.13-1). The mine is at the head of Mahogany Gulch about 400 feet south of the Mahogany Mine shaft. The site is probably on BLM land.

3.13.2 Geologic Features

The mine is most likely on a southeasterly continuation of the Dernier Resort vein, or a parallel vein system cutting the granitic host rock.

3.13.3 Site History

According to Statham (1998), the Red Jacket started operations in the late 1860's and was intermittently worked into the 1920's.

3.13.4 Environmental Conditions

3.13.4.1 Site Features

The Red Jacket Mine was visited by Earl Bennett on July 24, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 1, index 1:27:05-1:32:17). Documenting photographs are Roll B7, frames 11-13.

The Red Jacket consists of a recently reopened adit, large waste dump, a dilapidated mill building, a cabin, an outhouse, and a small shed. Originally this adit was operated in conjunction with the 1885 Red Jacket Shaft (see section 3.15) and the Dernier Resort (see section 3.16), but is presently operated as the Red Bird No. 1. The claimant is the same as for the Dernier Resort, which is now operated as the Red Bird No. 2. The open portal has relatively recent timbers (Figure 3.13-2). A gate that closed the portal has been removed and is lying on the ground in front of the adit. Water is flowing from the opening at about 3 gallons per minute. The large waste dump measures about 100 feet long, 80 feet wide, and 80 feet thick. What appears to be a garage or shed on the edge of the dump is actually the top part of the mill structure that is now used for storage. The mill is dilapidated but mostly still standing (Figure 3.13-3). No tailings were found at the site. The disturbed area covers about 3 acres.
3.13.4.2 Sample Locations

3.13.4.2.1 Solid Samples
   No solid samples were collected.

3.13.4.2.2 Water Samples
   No water samples were collected.

3.13.5 Structures

   The mill building is standing, but is in poor condition except for the uppermost part that is used for storage. In addition to the mill, a cabin, an outhouse, and a shed are at the site (Figure 3.13-4). The shed is in poor condition, but the cabin and outhouse are maintained.

3.13.6 Safety

   A gate that closed the adit has been removed and the adit is open. The access road passing in front of the adit is frequently used by outdoor enthusiasts visiting the Silver City area.
Figure 3.13-1. Location of the Red Jacket Mine, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.13-2. Open adit at the Red Jacket Mine (Roll B7, frame #12).

Figure 3.13-3. Side view of the Red Jacket mill building (Roll B7, frame #11).
Figure 3.13-4. Small shed, cabin, and outhouse at the Red Jacket Mine (Roll B7, frame #13).
3.14 AFTERTHOUGHT MINE (Site No. JV-10)
Alternate name—Lee Mines.

3.14.1 Site Location and Access

The Afterthought Mine is on the ridge separating Mahogany Gulch and the South Fork of Sinker Creek, in the NW¼ of the SE¼ of section 9, T. 5 S., R. 3 W., on the Cinnabar Mountain 7.5-minute quadrangle (Figure 3.14-1). An access road to the site turns off of War Eagle Mountain Road at the former town site of Fairview. The mine is about 1 mile south on the access road. The mine appears to be on patented claims surrounded by BLM land.

3.14.2 Geologic Features

The mine is at the southern end of the Oro Fino-Golden Chariot vein system. The near-vertical vein extends for over 1.5 miles to the north from the Afterthought. Piper and Laney (1926, p. 145-146) described the geology of the property as follows:

The property was acquired as a prospect by the De Lamar Company, Ltd., about 1900, and opened by a 470-foot shaft sunk from the crest of the ridge between two forks of the creek. At a depth of 85 feet the shaft passed out of rhyolite glacial (?) debris into granite, and all development is in that rock. . . . Five levels are turned from the shaft on a vein which dips 85° E. and is probably a southward extension of the Oro Fino-Golden Chariot. This vein varies in width between 4 inches and 6 feet, averaging 2½ or 3 feet. It is, in part, a breccia in the basalt dike which the Oro Fino vein seems to follow throughout much of its length, and in part, a filled fissure in granite. . . . The ore from the upper levels is oxidized, but that on the fourth and fifth showed abundant wire silver and silver sulphides, which were not found above. On the second level, 181 feet below the shaft collar, the vein is cut off by a fault-gouge dipping southward at a low angle. . . . The continuation of the vein has not been sought southward. The shaft was filled with water in 1925, and was not accessible to the writers; the information upon which this discussion is based being gathered from oral discussion with the owner, Mr. E. V. Orford.

3.14.3 Site History

The Afterthought Mine was acquired as a prospect by the De Lamar Company, Ltd., about 1900, and by 1925, the mine had about 2,000 feet of workings (Piper and Laney, 1926). According to White (1933, p. 4):

The DeLamar was an English company, operating from London. In 1912 and 1913, they began to build a mill to treat Afterthought ore. It will be remembered that at the beginning of the World War [World War I] the English Government stopped the export of any English capital for any purpose, so operations stopped. The United States Manager of the DeLamar Company, Mr. E. V. Orford, bought the property. His fortunes declined, and after some years he gave an option to
Charles Hussey, Mine Executive, of Spokane, Washington, and Rush J. White, Mining Engineer, of Wallace, Idaho, who now control the group.

Afterthought Mining Company was incorporated in 1927. In 1929 the property was leased to the “84” Gold Mining Company, which forfeited its corporate charter later that year. The property was idle for the next twenty-five years.

Lee Mines Incorporated (organized in 1953) obtained a 10-year lease and option on the property from the Orford estate. Purchase price was given as $160,000. During the lease period, a mill was built and equipped, several buildings were constructed, and maintenance was continued on existing structures. However, little, if any, underground development was done. Walker (1965) reported that the Afterthought was purchased by Floyd Tegnell and associated in 1963; however, the Idaho Mine Inspector's report for 1965 noted that Lee Mines had given a lease and option on the property to Tegnell. Lee Mines forfeited its corporate charter in 1971.

3.14.4 Environmental Conditions

3.14.4.1 Site Features

The Afterthought Mine was visited by Earl Bennett on July 23-24, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 1, index 1:32:23-1:39:34). Documenting photographs are Roll B6, frames 4-17.

This property was developed by a 470 foot shaft and five levels (Piper and Laney, 1926; Walker, 1965). The shaft is still open, although partly covered with old planks and timbers from the headframe (Figure 3.14-2). The waste dump is built out east of the shaft and down the slope on the Mahogany Gulch side of the ridge. It measures 85 feet long, 50 feet wide, and 20 feet thick. The site also contains several structures, including a relatively modern mill that can easily be seen from War Eagle Mountain Road. The equipment inside the mill is documented on the video segment. Numerous prospects marked on the topographic map, probably associated with the Afterthought, were not visited. No tailings were noted at the site, although what appears to be a tailings containment berm was found below the mill. The disturbed area at the site covers several acres.

3.14.4.2 Sample Locations

3.14.4.2.1 Solid Samples
No solid samples were collected.

3.14.4.2.2 Water Samples
No water samples were collected.
3.14.5 Structures

The mill building is in reasonably good condition and fairly modern, probably 1950s vintage. Most of the mill equipment inside the building is intact (Figures 3.14-3 through 3.14-6). The hoist house is adjacent to the top of the mill (Figures 3.14-7 and 3.14-8), with the shaft located between the hoist house and mill. A conveyor carried material from the jaw crushe to the mill (Figure 3.14-9). An open-sided equipment storage shed contains several old pieces of equipment (Figure 3.14-10). Several other sheds or outbuildings and an outhouse are also on the site (Figure 3.14-11). A large water tank sits on an elevated portion of the ridge (Figure 3.14-12).

3.14.6 Safety

Although partly covered with old boards and timbers of the headframe, the shaft is open and dangerous. Most of the boards appear to be in poor condition. Several warning signs are attached to strands of barbed wire fencing strung beside the shaft between the mill building and hoist house (Figure 3.14-13).
Figure 3.14-1. Location of the Afterthought Mine, Owyhee County, Idaho (U.S. Geological Survey Cinnabar Mountain and Silver City 7.5-minute topographic maps).
Figure 3.14-2. Open shaft partly covered with old boards of the headframe (Roll B6, frame #16).

Figure 3.14-3. View inside the mill and some of the electrical equipment (Roll B6, frame #7).
Figure 3.14-4. View inside the mill, showing the ball mill with a giant pack rat's nest on it (Roll B6, frame #6).

Figure 3.14-5. View inside the mill, showing the flotation cells (Roll B6, frame #5).
Figure 3.14-6. View inside the mill, showing the amalgamation tables (Roll B6, frame #4).

Figure 3.14-7. Looking west at an old building, which now serves as a hoist house, and the mill building. The shaft is between the two buildings (Roll B6, frame #14).
Figure 3.14-8. Looking north at the old building. The hoist is at the far end of the structure, and other parts of the building are used for storage (Roll B6, frame #10).

Figure 3.14-9. Looking west at the conveyor from the crusher to the mill. The slanting timbers to the left of the mill building are part of the headframe, and the hoist is just inside the lower door of the old building (Roll B6, frame #15).
Figure 3.14-10. Looking north at the open-sided equipment shed. The hoist house and mill are behind the truck (Roll B6, frame #12).

Figure 3.14-11. Looking east at the sheds and outbuildings. The hoist house is at the right (Roll B6, frame #13).
Figure 3.14-12. Old water tank at the Afterthought Mine (Roll B6, frame #11).

Figure 3.14-13. Barbed wire fence and warning signs around the Afterthought shaft (Roll B6, frame #8).
3.15 1885 RED JACKET SHAFT (Site No. BO-207)

3.15.1 Site Location and Access

The 1885 Red Jacket Shaft is on the east side of War Eagle Mountain about 300 feet below the top, in the NE¼ of the NW¼ of section 9, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.15-1). An old jeep road, which leaves the War Eagle Mountain Road just west of the Minnesota shaft, leads to the property. The property is on BLM land.

3.15.2 Geologic Features

The shaft was sunk on a silicified zone and a quartz vein that cut granitic host rock. This is probably a subsidiary vein parallel to the Ida Elmore-Golden Chariot vein to the east.

3.15.3 Site History

The Red Jacket vein was mined through this shaft in the 1880s (Piper and Laney, 1926).

3.15.4 Environmental Conditions

3.15.4.1 Site Features

The 1885 Red Jacket Shaft was visited by John Kauffman on July 20, 1999. A video segment describing the prospect is on Owyhee County Videotape (Tape 1, index 1:39:37-1:42:50). Documenting photographs are Roll K11, frames 1-4.

The shaft is caved and forms an oblong pit 25 feet long, 15-18 feet wide, and about 12 feet deep (Figure 3.15-2). The north and east slopes of the pit are relatively steep, but the south slope has sloughed to a much shallower angle. The waste dump consists of three separate piles (Figure 3.15-3). The main portion adjacent to the northeast side of the shaft (Figure 3.15-4) is 25 feet long, 25 feet wide, and 12 feet thick. A retaining wall, constructed of irregular pieces of rock, is still standing in places along the edge of the dump (Figure 3.15-5). A second, smaller dump (20 feet in diameter and about 10 feet thick; Figure 3.15-6) is northeast of the main dump across the old access road. Again a low rock retaining wall was built along the edge of the dump beside the road. A third, even smaller pile is just south of the main dump (about 15 feet in diameter and only 8 feet thick). The disturbed area at this site covers less than 0.5 acre.

3.15.4.2 Sample Locations

3.15.4.2.1 Solid Samples

No solid samples were collected.

3.15.4.2.2 Water Samples

No water samples were collected.
3.15.5 Structures
   No structures were found.

3.15.6 Safety

   The shaft is completely caved and is not a hazard.
Figure 3.15-1. Location of the 1885 Red Jacket Shaft, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.15-2. Looking southeast down the long axis of the caved shaft (Roll K11, frame #1).
Figure 3.15-3. Sketch of the 1885 Red Jacket Shaft and associated waste dumps.
Figure 3.15-4. Looking northeast across the surface of the main portion of the waste dump for the shaft (Roll K11, frame #2).

Figure 3.15-5. Retaining wall, built of irregular pieces of rock, at the northeast end of the main part of the waste dump (Roll K11, frame #3).
Figure 3.15-6. Looking northeast at the second, smaller portion of the waste dump. Note the rock retaining wall. The old access road to the shaft, now overgrown with sagebrush, passes along the wall at the bottom of the picture (Roll K11, frame #4).
3.16 DERNIER RESORT (Site No. BO-201)

Alternate names—Dernier Resorte; Dernier Ressort; Dernier Ressorte; Last Chance; Red Bird No. 2; Red Jacket Gold Mining Co.

This property was originally part of the Red Jacket Mine (see section 3.13).

3.16.1 Site Location and Access

This mine is on the north side of War Eagle Mountain Road, a few hundred yards west of the Minnesota shaft, in the SE¼ of the NW¼ of section 9, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.16-1). This mine, now called the Red Bird No. 2, is on an active claim on BLM land, although most of the activity consists of annual assessment work. The operator is Mr. Alan Leisk.

3.16.2 Geologic Features

The adit is driven along a narrow vein in granitic host rock.

3.16.3 Site History

The mine was worked in the mid-1860s by Robert G. Southern, known as Count Southern, an Irish immigrant. He constructed a cabin near the mine on the northwest side of a granite knob, but later moved the cabin to the southeast side because of strong winds. The cabin, built in 1867, has been restored by Mr. Leisk and his wife Ilene (Figure 3.16-2). Mr. Southern died in 1919 and was buried below the cabin (Statham, 1998; Alan Leisk, personal communication). The Leisks have built a white picket fence around the grave (Figure 3.16-3).

From 1920 to 1930, annual reports to the mine inspector for the Red Jacket Mine include the Dernier Resort and Dernier Resort No. 2 claims as part of that property.

Currently, the mine is being explored by Mr. Leisk. He indicated that he is operating the claim for another person, who holds the claims for this property and the Red Bird No. 1 (formerly the Red Jacket tunnel) on the south slope of Stormy Hill (the “Stormy Hill” shown on the 1990 edition of the 7.5-minute topographic map).

3.16.4 Environmental Conditions

3.16.4.1 Site Features

The Dernier Resort was visited by John Kauffman on July 20, 1999. Mr. Leisk was cleaning out the adit by hand and provided a brief underground tour of the mine. A video segment describing the property is on Owyhee County Videotape (Tape 1, index 1:42:55-1:48:50). Documenting photographs are Roll K11, frames 5-10.
The adit is 100 feet north of War Eagle Mountain Road, but the waste dump extends out to the road (Figure 3.16-4). The portal has recently been retimbered through a caved zone (Figure 3.16-5), although inside the rock is mostly stable and requires only local timbering. Open stopes provide an avenue for weathered granitic debris and rocks to be washed into the adit during the spring thaw. At the time of the site visit, Mr. Leisk was cleaning several feet of this material from the adit floor. Rails extend out from the adit (Figure 3.16-6) and curve from the southeast to the northeast across the waste dump (Figure 3.16-7). The dump is 75 feet long, ranges in width from 6 to 20 feet, and is about 10 feet thick. The disturbed area is less than 0.5 acre.

3.16.4.2 Sample Locations

3.16.4.2.1 Solid Samples
No solid samples were collected.

3.16.4.2.2 Water Samples
No water samples were collected.

3.16.5 Structures
The restored Count’s cabin and an outhouse below the cabin are the only structures at the site.

3.16.6 Safety
The open adit is apparently gated off when not being explored.
Figure 3.16-1. Location of the Dernier Resort Mine, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.16-2. The restored cabin of Count Robert G. Southern, built in 1867 (Roll K11, frame #5).

Figure 3.16-3. Grave site of Count Robert G. Southern below the cabin (Roll K11, frame #6).
Figure 3.16-4. Sketch of the Dernier Resort Mine.
Figure 3.16-5. Retimbered portal of the Dernier Resort adit (Roll K11, frame #9).

Figure 3.16-6. Looking northwest at the portal (behind trees) and the rails extending out from the portal (Roll K11, frame #7).
Figure 3.16-7. Looking east across the waste dump. War Eagle Mountain Road is at the far lower right of the picture. The Count’s cabin is behind the rock outcrop at the upper right (Roll K11, frame #8).
3.17 SAN JUAN MINE (San Juan Shaft, Site No. BO-196; San Juan Tunnel, Site No. BO-199; 1885 San Juan Tunnel, Site No. BO-200)

3.17.1 Site Location and Access

The San Juan Mine workings are on the southeast flank of War Eagle Mountain in the NW¼ of section 9, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.17-1). The shaft is about 120 feet in elevation below and south of the top of War Eagle Mountain in the NE¼ of the SW¼ of the NW¼ of section 9; the tunnel is on the slope above War Eagle Mountain Road and southeast of the shaft in the NW¼ of the SE¼ of the NW¼ of section 9; and the 1885 tunnel is further to the southeast and below War Eagle Mountain Road in the SE¼ of the SE¼ of the NW¼ of section 9. All of these sites appear to be on BLM land.

3.17.2 Geologic Features

The workings are on northwest-southeast-trending veins cutting granitic host rock.

3.17.3 Site History

Lindgren (1900) mentioned the San Juan as being on part of the Empire vein systems, but did not describe the property.

3.17.4 Environmental Conditions

3.17.4.1 Site Features

The San Juan Mine workings were visited by John Kauffman on July 21, 1999. A video segment describing the workings is on Owyhee County Videotape (Tape 1, index 1:48:55-1:56:02). Documenting photographs are Roll K10, frames 10-19.

The San Juan Mine consists of three separate sets of workings (Figure 3.17-2). The lowermost is the 1885 San Juan tunnel, the middle is the San Juan tunnel and associated workings, and the uppermost is the San Juan shaft and associated workings.

The 1885 San Juan tunnel is about 60 feet below War Eagle Mountain Road. The caved adit is marked by a shallow trough on the slope (Figure 3.17-3). The waste dump is 20 feet long, 20 feet wide, and 15-20 feet thick. The bare face of the dump extends down the hill 25-30 feet (Figure 3.17-4).

The San Juan tunnel and associated workings are about 120 feet in elevation above and 400 feet north of War Eagle Mountain Road. Three adits and several prospect pits were found at this site (Figure 3.17-2). Adit 1 (Figure 3.17-5) is the central of the three adits and probably was the main tunnel. It is open (Figure 3.17-6) but caved about 20 feet up the slope behind the portal. Rock retaining walls in front of the adit lead to the portal (Figure 3.17-7). The waste dump is 40
feet long, 20 feet wide, and about 10 feet thick. Just below the waste dump is a shallow pit that may be a caved, shallow shaft.

Adit 2, approximately 50 feet west of Adit 1, is completely caved. Piles of old boards on the waste dump appear to have been a structure built over the entrance to the adit (Figure 3.17-8). The waste dump extends out about 50 feet from the portal and is about 20 feet wide and 6-8 feet thick.

Adit 3, approximately 100 feet east of Adit 1, is also caved. The small waste dump (Figure 3.17-9) indicates the opening is relatively short. Several small prospect pits above and below Adit 3 are on a northwest trend.

The San Juan shaft is about 400 feet northwest of the upper tunnel and west of the jeep road that leads from War Eagle Mountain Road to the communication towers at the top of the mountain. The steep-walled shaft is open to an estimated depth of 30-50 feet (Figures 3.17-10 and 3.17-11). Part of the opening may be a stope along the vein. The waste dump is 30 feet long, 20 feet wide, and 10 feet thick. Two shallow pits on the dump surface may be subsidence features over a stope (Figure 3.17-12). Below the waste dump along the tower access road is another waste dump and a possible caved adit or stope. The dump for this caved opening is on the east side of the road, and is similar in size to that for the shaft.

3.17.4.2 Sample Locations

3.17.4.2.1 Solid Samples
   No solid samples were collected.

3.17.4.2.2 Water Samples
   No water samples were collected.

3.17.5 Structures
   No structures were found.

3.17.6 Safety

The open shaft is a serious safety hazard. There are no warning signs and no fence around the opening. The walls are nearly vertical and the depth is estimated to be 30-50 feet.
Figure 3.17-1. Location of the San Juan Mine workings, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.17-2. Sketch of the San Juan Mine workings.
Figure 3.17-3. Looking northwest at the caved adit (Roll K11, frame #10).
Figure 3.17-4. Looking southwest at the side of the waste dump for the 1885 San Juan tunnel (Roll K11, frame #11).
Figure 3.17-5. Looking northwest at Adit 1 of the San Juan tunnel workings (Roll K11, frame #12).
Figure 3.17-6. Close-up of the opening into Adit 1. The tunnel is caved about 20 feet from the opening (Roll K11, frame #13).
Figure 3.17-7. Looking southeast from above Adit 1 at the waste dump. Note the rock retaining walls leading to the adit (Roll K11, frame #14).
Figure 3.17-8. Looking northwest at caved Adit 2 of the San Juan tunnel workings. The old boards appear to have been part of a covered entrance to the adit (Roll K11, frame #15).
Figure 3.17-9. Looking east at the waste dump of caved Adit 3 of the San Juan tunnel workings. The small dump indicates a short working (Roll K11, frame #16).

Figure 3.17-10. Looking northwest across the opening to the San Juan shaft (Roll K11, frame #17).
Figure 3.17-11. View into the San Juan shaft. The narrow portion of the opening may be a stope off the shaft (Roll K11, frame #18).
Figure 3.17-12. Looking southeast at the waste dump for the San Juan shaft. The two shallow pits on the dump may be subsidence features over a stope (Roll K11, frame #19).
3.18 UNNAMED PROSPECTS (Site No. K7219901; BO-471)

The eastern workings may be related to the San Juan Mine and the western workings may be related to the War Eagle Mine.

3.18.1 Site Location and Access

Two unnamed shafts and associated workings are located near the top of War Eagle Mountain on the south side of the ridge, along the south edge of the NW¼ of the NW¼ of section 9, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.18-1). The workings are several hundred feet west of the access road to the top of War Eagle Mountain. The slope contains both relatively open areas as well as dense thickets of mountain mahogany. The workings, shown by shaft and prospect symbols on the topographic map, are either on patented claims or on BLM land surrounding the claims.

3.18.2 Geologic Features

The eastern workings are on narrow northwest-southeast-trending veins that cut the granitic host rock. This trend may continue to the San Juan Mine workings. The western workings are on a parallel vein structure or structures that continue southeast to the War Eagle and Stormy Hill mines.

3.18.3 Site History

Nothing is known about the history of these workings.

3.18.4 Environmental Conditions

3.18.4.1 Site Features

These workings were visited by John Kauffman on July 21, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 2, index 0:00:40-0:07:27). Documenting photographs are Roll K11, frames 20-25, and Roll K12, frames 1-2.

These prospects consist of two groups of workings about 300 feet apart (Figure 3.18-2). The eastern group consists of a shaft, a stope, a possible caved adit, and several minor prospect pits. The western group consists of a probable shaft or stope, an adit, a stope with two openings, a prospect pit (or caved stope), and a short prospect cut that follow a northwest-southeast trend just below the west communications tower on War Eagle Mountain.

At the eastern group, a shaft is connected to an open stope along a northwest-southeast trend that may continue to the San Juan Mine. The stope, about 2-3 feet wide, has a gradual incline in depth from the surface at the west end to about 20 feet at the east end where it connects to the shaft (Figure 3.18-3). Some of the shaft timbers are still present around the opening (Figure 3.18-4). The waste dump is about 45 feet long, 20 feet wide, and 10 feet thick (Figure 3.18-5).
A possible caved adit and small waste dump are on the slope below the shaft, and a few minor prospect pits were found among the rock outcrops southeast of the shaft. The disturbed area covers less than 0.5 acre.

The western group consists of a series of open, partly open, and caved stopes; a possible shaft; and an open adit along a northwest-southeast trend that extends southeastward to the War Eagle and Stormy Hill mines. The upper pit, probably a caved stope or shaft, is about 12 feet in diameter and 8 feet deep (Figure 3.18-6). The waste dump is roughly 30 feet long, 20 feet wide, and 10 feet thick. Old boards on the dump may be the remains of a collapsed shed (Figure 3.18-7). Just below the east side of the dump are two openings into a narrow stope, and below those is an adit with a small opening that may connect with the stope (Figure 3.18-8). East of and slightly above the adit is a prospect cut and a small waste dump. Further to the southeast from the adit, on what is probably the adit waste dump, is the lower pit. This pit is about 12 feet in diameter and 6-8 feet deep (Figures 3.18-9 and 3.18-10). A small opening on the southeast wall of the pit appears to lead into a stope. The pit, which may be the feature that is shown as a shaft on the topographic map, is either a caved shaft connected to the stope or a caved portion of the stope. The disturbed area for these workings covers about 0.5 acre.

3.18.4.2 Sample Locations

3.18.4.2.1 Solid Samples
   No solid samples were collected.

3.18.4.2.2 Water Samples
   No water samples were collected.

3.18.5 Structures

No structures were found at this site, although a pile of old boards on the waste dump of the pit at the western group of workings may be the remains of a collapsed shed.

3.18.6 Safety

The open stope and shaft at the eastern group are hazardous, although the gradual incline to the surface at the west end may provide a means of escape. At the western workings, the open adit and the small openings into the stopes could be entered. The upper stope is relatively shallow with a floor that inclines to the surface. The depth of the stope below the adit was not determined and could be hazardous if entered.
Figure 3.18-1. Location of the workings at Site No. K7219901, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.18-2. Sketch of the workings at Site No. K7219901.
Figure 3.18-3. Looking southeast along the open stope at the eastern workings. The opening is about 2-3 feet wide. The open shaft is at the far end of the stope, just past the narrow bridge of rock across the stope (Roll K11, frame #20).
Figure 3.18-4. Old timbers around the shaft opening at the eastern workings. The open stope from the previous figure continues off to the left of the picture (Roll K11, frame #22).

Figure 3.18-5. View to the southeast across the waste dump for the shaft at the eastern workings (Roll K11, frame #21).
Figure 3.18-6. Upper pit (caved stope or shaft) at the western group of workings, looking northwest. The pit is about 12 feet in diameter and 8 feet deep. The west communications tower on War Eagle Mountain is on the top of the ridge above the pit (Roll K11, frame #23).
Figure 3.18-7. Looking southeast at the waste dump of the upper pit of the western workings. The old boards are probably the remains of a collapsed shed (Roll K11, frame #24).
Figure 3.18-8. Looking northwest at the open adit at the western workings. The face of the waste dump for the upper pit is above the opening. The west communications tower is on the skyline (Roll K12, frame #1).
Figure 3.18-9. Looking southeast along the strike of the vein. The toe of the waste dump for the upper pit is at the bottom of the picture. The lower pit, either a caved shaft or caved portion of a stope, is at the center of the picture. The War Eagle Mine workings, which are on strike with the vein at this site, are at the right center of the picture (Roll K11, frame #25).

Figure 3.18-10. Caved shaft or stope at the lower pit at the western workings. An opening into the stope is at the left end of the pit (Roll K12, frame #2).
3.19 WAR EAGLE MINE (Site No. BO-197)

3.19.1 Site Location and Access

The War Eagle Mine is at the head of Silver Cord Gulch on the south side of War Eagle Mountain in the N½ of the SW¼ of section 9, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.19-1). The workings are just above War Eagle Mountain Road. An old access road, partly overgrown with sagebrush and mountain mahogany, leads to the mine, which is in an area containing both patented claims and BLM land.

3.19.2 Geologic Features

The War Eagle workings are along a northwest-southeast-trending vein or series of veins that cuts the granitic host rock and extends from the top of War Eagle Mountain on the northwest to the Stormy Hill Mine on the southeast.

3.19.3 Site History

Lindgren (1900, p. 154) reported that the vein “has been developed...by the War Eagle Shaft, which was worked from 1870 to 1884, its total depth being 700 feet. The production for 1873 is given in Raymond’s reports as $21,698, the value of the ore being $35 per ton.”

Statham (1998) included quotations from the Owyhee Avalanche from the mid-1870's. These news stories mention the War Eagle Mine but give little information on the history of the property.

3.19.4 Environmental Conditions

3.19.4.1 Site Features

The War Eagle Mine was visited by John Kauffman on July 21, 1999. A video segment describing the workings is on Owyhee County Videotape (Tape 2, index 0:07:30-0:16:27). Documenting photographs are Roll K12, frames 3-11.

The War Eagle Mine consists of a series of pits, one or possibly two caved shafts with large piles of waste rock, and three open adits, one of which has associated open stopes (Figure 3.19-2). Only one shaft is reported at the War Eagle, but three large pits are near the piles of waste rock. The middle pit is probably the caved shaft. One of the other two pits may be an unreported shaft, although it is more likely that both are caved stopes. Two additional, smaller pits and a trough on the slope along the same trend are either prospect pits or caved stopes.

The pit at the southeast end of the trend has steep walls and is about 20 feet deep (Figure 3.19-3). A small opening in the northwest wall of the pit appears to lead into a stope or may connect to...
the shaft. The next pit to the northwest, probably the caved remains of the original shaft, is about 20 feet deep and 20-25 feet in diameter at the surface. The sides have a moderate slope. North-northwest of the second pit is a third pit, which is slightly smaller in size but similar in shape and nearly as deep. Continuing northwestward along the trend are additional pits and a trough on the slope (Figure 3.19-4). To the west of the first three pits and across an old access road are two conical piles with smaller irregular mounds of waste rock (Figures 3.19-5 and 3.19-6). These also are probably waste rock from the War Eagle shaft. The larger of the two conical piles is 75-80 feet in diameter across the base and about 30 feet high. The other conical pile is slightly smaller.

Three open adits found in the vicinity are included with the War Eagle Mine. Adit 1 is 150-200 feet south of the shaft along the old access road. The opening is about 5.5 feet high and 3 feet wide (Figure 3.19-7), but only 25-30 feet in length. Little of the waste rock remains.

Adit 2 is across Silver Cord Gulch west of the waste dumps for the shaft and just above War Eagle Mountain Road. The adit goes through the granite outcrop and connects with an open stope to the northwest, a distance of about 40-50 feet. The adit opening is about 4 feet high and 3-4 feet wide (Figure 3.19-8). The stope is open to the surface for about 20 feet before again continuing underground to the northwest. The waste dump is relatively small and somewhat irregular (roughly 20 feet long, 10 feet wide, and 8 feet thick). It extends down the slope nearly to the road. Below the adit is another open stope about 25 feet in length along the northwest-southeast trend (Figure 3.19-9). The stope is 2-4 feet wide and 8-10 feet deep with vertical sides.

Adit 3 is several hundred feet south of Adit 1 and below the old access road to the shaft. The adit is open (Figures 3.19-10 and 3.19-11) and has standing water behind some collapsed rubble about 25 feet inside, although no water is seeping from the opening. A shallow trough extends out from the opening about 15 feet. The waste dump measures about 20 feet long, 10 feet wide, and only 5-7 feet thick.

3.19.4.2 Sample Locations

3.19.4.2.1 Solid Samples
No solid samples were collected.

3.19.4.2.2 Water Samples
No water samples were collected.

3.19.5 Structures

No structures were found at this site. There is an abundance of scrap metal, nails, old cans, and other debris near the shaft. One large, cut granite block and several bricks were found around the pit of the probable caved shaft.
3.19.6 Safety

The deep pit with steep side walls at the southeast end of the workings is a potential hazard, although the northwest side has large rocks that would provide an avenue of escape. The other pits, although fairly deep, have moderately sloped walls and are not a hazard. The open stopes at Adit 2 are narrow, have vertical walls, and are deep enough to be dangerous. The open adits can easily be entered. War Eagle Mountain Road receives a significant amount of recreational use by summer visitors. The open stopes, in particular, present a significant hazard to unsuspecting or inattentive tourists hiking in the area.
Figure 3.19-1. Location of the War Eagle Mine, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.19-2. Sketch of the War Eagle Mine workings.
Figure 3.19-3. Steep-walled pit, possibly a caved stope, at the southeast end of the series of pits associated with the shaft (Roll K12, frame #3).
Figure 3.19-4. Looking north-northwest along the series of pits north of the shaft (Roll K12, frame #4).
Figure 3.19-5. Looking southwest at the conical waste piles for the shaft (Roll K12, frame #5).

Figure 3.19-6. Looking southeast from Adit 2 at the conical waste piles for the shaft (Roll K12, frame #9).
Figure 3.19-7. Looking east at the opening of Adit 1 (Roll K12, frame #6).
Figure 3.19-8. Looking northwest at the opening of Adit 2 (Roll K12, frame #7).
Figure 3.19-9. Looking southeast at the open stope below Adit 2. The narrow stope is 8-10 feet deep (Roll K12, frame #8).
Figure 3.19-10. Looking east at Adit 3. A trough in front of the opening may be a caved portion of the adit (Roll K12, frame #10).
Figure 3.19-11. View inside Adit 3 (Roll K12, frame #11).
3.20 STORMY HILL MINE (Site No. BO-198)

3.20.1 Site Location and Access

The Stormy Hill Mine workings are on the slope south of War Eagle Mountain and above War Eagle Mountain Road in the SE¼ of the SW¼ of the NW¼ of section 9, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.20-1). War Eagle Mountain Road is within a few hundred feet of the workings. The slope is vegetated with sparse patches of sagebrush and denser patches of mountain mahogany. The workings are probably on patented claims surrounded by BLM land.

3.20.2 Geologic Features

The Stormy Hill workings are at the southeastern end of the vein structure that extends from the west end of War Eagle Mountain at Site No. K7129901 and continues through the War Eagle workings to Stormy Hill. (The ridge historically known as Stormy Hill extends south from War Eagle Mountain; it is not the “Stormy Hill” shown on the topographic map that extends east from War Eagle Mountain). The nearly vertical vein or veins cut granitic host rock.

3.20.3 Site History

Lindgren (1900, p. 154) reports: “The southern end of the vein is opened by the Stormy Hill shaft, from which some ore was produced in 1882, 1883, and 1884. The vein is here wide and well defined, containing much of the laminated pseudomorphic quartz similar to that from the Oro Fino.” The Stormy Hill is briefly mentioned in Statham's (1998) short historical account of the Stormy Hill-Silver Cord Gulch area.

The Stormy Hill Mining Company was incorporated in 1905. This company apparently did only assessment work on the property and forfeited its corporate charter in 1922.

3.20.4 Environmental Conditions

3.20.4.1 Site Features

The Stormy Hill Mine was visited by John Kauffman on July 21, 1999. A video sequence describing the property is on Owyhee County Videotape (Tape 2, index 0:16:30-0:21:40). Documenting photographs are Roll K12, frames 12-15.

The workings consist of an open shaft, a possible caved adit, a caved stope, several moderate-size pits, and numerous shallow cuts and pits (Figure 3.20-2).

The open shaft is about 400 feet north from War Eagle Mountain Road and 75-100 feet east of the main road to the communication towers on the mountain top. The opening is about 8 feet
long and 4-5 feet wide (Figures 3.20-3 and 3.20-4). A rock dropped into the opening hit water after about 1 second, indicating a depth to the water of 30 feet. Narrow quartz veins and stringers can be seen in the shaft walls, and abundant quartz fragments are scattered around the shaft. Very little waste rock is associated with the shaft. Most of the material was evidently removed through another opening, possibly an adit further down the slope to the south (Figure 3.20-5).

A trough and a small waste dump on the slope below the shaft may be a caved adit. It is in the vicinity of the adit symbol shown on the topographic map. A cut or pit about 8 feet deep still further down the slope (Figure 3.20-6) is probably a caved stope or possibly a second shaft. Most of the waste rock associated with these workings appears to have been removed through this opening. The waste pile is irregular, but is roughly 50 feet long, 30 feet wide, and 5-8 feet thick. Numerous other shallow prospect pits and cuts are in the vicinity.

The disturbed area at this site covers less than 1.0 acre.

3.20.4.2 Sample Locations

3.20.4.2.1 Solid Samples
No solid samples were collected.

3.20.4.2.2 Water Samples
No water samples were collected.

3.20.5 Structures
No structures were found.

3.20.6 Safety

The open vertical-walled shaft, filled with water at a depth of about 30 feet, is a serious hazard. No warning signs are posted and no fences have been erected around the opening.
Figure 3.20-1. Location of the Stormy Hill Mine workings, Owyhee County, Idaho (U.S. Geological Survey Silver City and Cinnabar Mountain 7.5-minute topographic maps).
Figure 3.20-2. Sketch of the Stormy Hill Mine workings.
Figure 3.20-3. Looking southeast at the Stormy Hill shaft. Note the abundant quartz fragments but very little waste rock. The pickup (far upper left) is parked on War Eagle Mountain Road (Roll K12, frame #12).

Figure 3.20-4. View into the throat of the shaft. The shaft was apparently sunk on the thin quartz veins cutting the granite, seen in the right wall (Roll K12, frame #13).
Figure 3.20-5. Looking south at several pits (to the right and center of the picture) and the caved stope and waste pile (just left of center). This ridge, which extends to the south (up the center of the picture), was historically known as Stormy Hill (Roll K12, frame #14).
Figure 3.20-6. Looking southeast into the pit of the probable caved shaft or stope. Most of the waste rock for the open shaft may have been removed through this opening (Roll K12, frame #15).
3.21 SILVER CORD GROUP (Includes: Jackson Claim, Site No. BO-182; Silver Cord Mine, Site No. BO-183; Empire Shaft, Site No. BO-184; Idlewild Claim, Site No. BO-185; Pauper Mine adits ?, Site No. JV-9; and numerous unnamed workings with no site numbers)

Alternate names—Silver Cord: South Poorman, South Empire; Pauper Mine: Ymir Consolidated Mining Co., Empire, Empire and Davidson.

3.21.1 Site Location and Access

The workings are in Silver Cord Gulch, along or south of War Eagle Mountain Road, in the E½ of section 8 and the W½ of section 9, T. 5 S., R. 3. W. Most of the openings are on the Silver City 7.5-minute quadrangle, although two of the adits are on the Cinnabar Mountain 7.5-minute quadrangle (Figure 3.21-1). War Eagle Mountain Road and several old jeep roads provide access to the main workings. The others are easily reached on foot, either on old trails or overland. The area is a mixture of patented claims and BLM land.

3.21.2 Geologic Features

Most of these workings are on small, secondary or subsidiary veins parallel to either the north-south-trending Poorman vein or the northwest-trending Owyhee vein. The Poorman vein is a steeply dipping to vertical structure, whereas the Owyhee vein dips about 50° NE; both veins are in granitic host rock. The Silver Cord Mine workings, as well as several nearby openings, were originally thought to be on the southern continuation of the Owyhee vein, but Piper and Laney (1926) doubted that correlation and suggested they were on an extension of the Jackson vein.

3.21.3 Site History

Adits 1, 1a, 2, and 2a may be related to the Pauper Mine (JV-9). Site history for the Pauper Mine is discussed in section 3.23.

Most of the principal mines in Silver Cord Gulch were discovered by the late 1860s to early 1870s. According to Statham (1998), a number of these mines continued working after the financial collapse of the San Francisco bank in 1875. Lindgren (1900, p. 154) described the Silver Cord as follows:

This appears to be sunk on a vein parallel to the Poorman, and lying about 200 feet east of it. The shaft is 500 feet deep, five levels being turned. . . . The total production is not known, although Raymond's [1870] reports for 1869 give the production for the year ending July 1, 1869, as $18,000, and a small production of $6,976 is given in the Mint report for 1885. The proportion of gold to silver by weight for the last-mentioned year was about 1:4.

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Statham (1998) noted that the Silver Cord operated from the mid 1860s to the late 1880s at regular intervals. The Owyhee Avalanche for January 18, 1879 (cited in Statham, 1998), reported the Silver Cord Mine and equipment were sold at a sheriff’s sale for $20,000 to C. W. Moore.

For the Empire Mine, Statham noted (1998, p. 19):
This mine was operated from the late 1860s to the late 1880s with a 450 foot deep shaft. The Empire vein is believed to be about 3,000 feet long and extends to the workings across the gulch just below the road. It produced more than $100,000 during its operations.

Also for the Empire, Lindgren reported (1900, p. 155):
The principal developments are found at the southern end [of the vein], where the Empire shaft is sunk to a depth of 460 feet, its bottom connecting by a crosscut with the Belle Peck tunnel [of the Poorman Mine]. The vein dips 60º E. The following amounts are found credited to it in the early reports: 1872, $55,394; 1873, $45,000; total, $100,394. The whole production is not known. In 1885 the mine was credited with a small production of $2,058.

The Silver Cord Mine on the Silver Cord vein (which was originally called the South Poorman vein) and the Jackson Claim were part of the Poorman Group of the Consolidated Mines and Dredge Company (1934-35) and the Poorman Mines Corporation (1936-37).

3.21.4 Environmental Conditions

3.21.4.1 Site Features

The Silver Cord Group was visited by John Kauffman on July 22 and 23, 1999. A video segment describing the workings is on Owyhee County Videotape (Tape 2, index 0:21:42-1:21:26). Documenting photographs are Roll K12, frames 16-25; Roll K13, frames 1-1-25; and Roll K14, frames 1-20.

Nineteen adits, seven shafts, and numerous open stopes and prospect pits comprise the workings found on this part of Silver Cord Gulch (Figure 3.21-2). These are discussed in the order they were found, beginning near the Silver Cord Mine farthest down the gulch. Whenever possible, the workings are identified with an individual name or site number.

Silver Cord (BO-183) or Pauper (JV-9) Mine:

Adits 1, 1a, 2 and 2a are related to either the Silver Cord Mine or, more likely, to the Pauper Mine. Adit 1 is located at the first switchback on an unmaintained jeep road going down into Silver Cord Gulch from the War Eagle Mountain Road (Figure 3.21-3). The caved adit has a steady flow of water, about 5 gallons per minute, draining through the rubble (Figure 3.21-4). The water flows across the access road and down a small ditch over the waste dump. The adit
has two separate waste piles: a long, flat dump parallel to the access road (Figure 3.21-5) and a large conical pile west of the flat dump. The flat dump is 100 feet long, 5-25 feet wide, and about 20 feet down the face. The conical pile is about 50 feet in diameter, 25 feet high on the uphill side, and 50 feet high on the downhill side. Collapsed wooden beams between the two dumps are probably the remains of a connecting trestle. About 200 feet further to the north along the access road is a probable short caved adit and a small waste dump, designated Adit 1a.

Adit 2, northwest of Adit 1, is at the third switchback on the old access road. Adit 2 is also caved and has a flow of about 5 gallons per minute (Figure 3.21-6). The waste dump is 60 feet long, 60 feet wide, and 50 feet down the face; the thickness is about 30 feet. Near the north end of the dump is a pile of old boards and metal. This pile is next to an excavated pad with additional boards and sheet metal, probably the remains of a shed. A small mound of vein material is piled near the north end of the dump (Figure 3.21-7). Down the hill from Adit 2, on a spur road off the road along Silver Cord Gulch, is another caved adit, designated Adit 2a, and a collapsed building. The waste dump for adit 2a is 25 feet long, 10 feet wide, and 30 feet down the face. The toe of the dump is just above the Silver Cord Gulch road.

Silver Cord Mine (BO-183):

Shaft 1 is the main opening for the Silver Cord Mine. It is about 450-500 feet north of Adit 2 on the east side of Silver Cord Gulch. The old access road passes just below the shaft and above the main waste pile (Figure 3.21-8). The caved shaft forms a circular pit about 20 feet in diameter and 15-20 feet deep (Figure 3.21-9). Wooden beams and cut granite blocks above the shaft appear to be footings for the headframe (Figure 3.21-10). Part of the waste rock has been piled around the west and north sides of the shaft, but most of the waste rock was apparently trammed across the access road and dumped on a conical pile (Figure 3.21-11). The dump adjacent to the shaft is 35 feet long, 20 feet wide, and 20 feet thick. The face extends down to the access road. The conical pile below the road is about 50 feet in diameter and 20-40 feet high. The uphill side has a stone retaining wall along the base. To the north of the shaft and waste dumps, at the U-shaped bend in the road in the bottom of the gulch, is an old cabin and an outhouse (Figure 3.21-12). Behind the cabin is a rock wall that may originally have been an enclosed storage building.

Unidentified workings:

Several prospect pits with waste piles, two shafts, and an adit are on the west side of Silver Cord Gulch west of the cabin. Which of the mines these workings are associated with has not been determined. However, they appear to be along a southern continuation of the Jackson vein and may be related to the Jackson Claim workings (Adits 4-6, discussed below). At least four circular pits 6-15 feet deep are on a flat area west of the gulch and 100 feet southwest of the cabin, just past the U-shaped bend in the old access road (seen in Figure 3.21-8). The combined waste dumps for these pits form an irregular bench along the gulch about 100 feet long, 10-30 feet wide, and 10-15 feet thick. Shaft 2 is about 200-250 feet west-northwest of the cabin. The shaft has steep walls and is 25-30 feet deep (Figure 3.21-13) to where it is caved. The waste
dump is 25 feet long, 10 feet wide, and 15 feet thick. It is covered with low brush and one large conifer (Figure 3.21-14). Caved Adit 3 is just above Shaft 2 along an old four-wheel-drive road (the road and the waste dump for Adit 3 can be seen in Figure 3.21-12). No water is flowing, although a stand of willows in front of the adit indicates a minor seep. The waste dump is 90 feet long, 6-12 feet wide, and 6-12 feet thick. A thick patch of mountain mahogany covers most of the dump (Figure 3.21-15). Near the top of the spur ridge above and west of Adit 3 is an open inclined shaft, designated Shaft 3 (Figure 3.21-16). The opening of the shaft is 12 feet long and 8 feet wide, but within several feet, it narrows to about 4 feet wide. Water fills the shaft to within 6-8 feet of the surface (Figure 3.21-17). The old jeep trail crosses the slope above the opening. The waste dump is small, measuring 15 feet long, 12 feet wide, and 10 feet thick.

**Jackson Claim (BO-182):**

Adits 4-6 (Figure 3.21-18) are probably on the Jackson claim or claims (Piper and Laney, 1926, Plate II). Two adits and several prospect symbols are shown in this vicinity on the topographic map. Caved Adit 4, the lower of the two adits shown on the topographic map, is about 80 feet above Shaft 3. The waste dump is 45 feet long, 12 feet wide, and 30 feet down the face (Figure 3.21-19). Just above the caved adit is a footpath and a rock retaining wall constructed along the base of the waste dump for Adit 5 (Figure 3.21-20). A 30-foot long trough along a vertical granite outcrop marks the location of caved Adit 5 (Figure 3.21-21), the upper of the two adits shown on the topographic map. The waste dump is relatively large, measuring 85 feet long, 5-15 feet wide, and 40-60 feet down the face (Figure 3.21-22). Adit 6 is a minor, caved adit with a small waste dump located about 200 feet east of Adit 5.

**Unidentified workings:**

Adit 7 is on the east side of Silver Cord Gulch several hundred yards northeast of Shaft 1 along an old access trail (Figure 3.21-23). The relationship of this adit to the other workings is uncertain. The adit, which is open and has standing water inside (Figures 3.21-24 and 3.21-25), was driven S. 30° E. into the hillside. The tunnel curves to the south after 50-60 feet. The dump (30 feet long, 10-15 feet wide, and 6 feet thick) is small for a tunnel of this length, but a portion of the waste rock may have been used to construct the access road.

Adit 8 is at the end of the old trail that passes Adit 7 (Figure 3.21-23) and is in the bottom of the gulch. It is shown by an adit symbol on the topographic map. The tunnel may connect at depth to the Idlewild shaft or the South Empire shaft. The log portal timbers are in poor condition, but the adit is open (Figures 3.21-26 and 3.21-27). Rails extend from the adit to the end of the waste dump (Figure 3.21-28), and rock retaining walls line the entrance to the adit. The dump measures 35 feet long, 8 feet wide, and a maximum of 15 feet thick. An old yellow Ingersol-Rand compressor is parked near the adit. A considerable amount of scrap metal, boards, garbage, and other relatively recent debris is scattered around the site. Salvaged rails are stacked along the road east of the portal.
Idlewild Shaft (BO-185):

Shaft 4, probably the Idlewild shaft, is about 120 feet in elevation up the gulch from Adit 8 (Figure 3.21-29). Part of the headframe is standing over the opening (Figure 3.21-30). Old timbers still frame the 6-foot by 12-foot opening (Figure 3.21-31), apparently a two-compartment shaft, and a section of 2-inch PVC pipe extends out of the opening. Water fills the shaft to about 15 feet below the surface. The waste dump is 30 feet long, 20 feet wide, and extends down the slope for 30 feet (Figure 3.21-32). A collapsed stope continues off the west side of the shaft.

Unidentified workings:

Adit 9 is about 100 feet east of and slightly above the shaft (Figure 3.21-29). This nearly caved adit has a small opening that is barely visible among the rocks (Figures 3.21-33 and 3.21-34). A seep of less than 1 gallon per minute is trickling from the adit. Boards and beams from a collapsed structure are scattered on the waste dump (Figure 3.21-35). The dump is 40 feet long, 5-20 feet wide, and 30-40 feet thick. On the west, it joins with the shaft dump. Black plastic pipe, scrap iron, 55-gallon barrels, and other debris are scattered around the site.

Adit 10, which was driven eastward into the slope, is 50 feet above and east of Adit 9 (Figure 3.21-29). A rock retaining wall and a collapsed shed or portal covering are in front of the opening (Figure 3.21-36). Inside, the adit stands open with only a few timbers for support (Figure 3.21-37). Thirty feet to the east is a collapsed stope that also provides an entry into the adit. The remains of a second, large, collapsed structure are on the waste dump, with scattered sheets of corrugated metal, as well as numerous boards and beams (Figure 3.21-38). The dump is large, measuring at least 75 feet long, 30 feet wide, and 50 feet thick. The west toe of the dump reaches the waste dump of Adit 9.

Adit 11 is just above Adits 9 and 10 (Figure 3.21-29). The entrance to the adit is through the rear of an old cabin (Figure 3.21-39). Some of the support timbers have collapsed, and rock rubble has caved into the adit (Figure 3.21-40). The waste dump has two lobes separated by a minor gully. The east lobe is 30 feet long, 20 feet wide, and 15 feet thick; and the west lobe is 30 feet long, 15 feet wide, and 20 feet thick. On both sides of the gully, rock retaining walls support part of the dump. An overturned outhouse is in the gully between the two parts of the waste dump. On the slope northwest of Adit 11 is a long, narrow stope, some sections of which are open to the surface (Figure 3.21-41). The vertical stope is 2-5 feet wide and at least 15 feet deep in places. Another collapsed stope is east of Adit 11 and several hundred feet up an old access road. The resulting pit is 10-12 feet across and at least 15 feet deep. Barbed wire fencing around the pit has, for the most part, fallen into the pit (Figure 3.21-42). A small opening near the bottom appears to lead into the stope and probably connects with Adit 11. Numerous old cans and broken bottles are scattered on the slope near the site.

The old access road to Adit 11, which comes down the slope from War Eagle Mountain Road, splits at the collapsed stope east of Adit 11. A short spur goes west to Adit 12 (Figure 3.21-43).
This adit is open (Figures 3.21-44 and 3.21-45) and connects with an open stope about 30 feet from the portal. Collapsed sections of the stope can be traced several hundred feet up the slope to the east (Figure 3.21-46). A collapsed structure, an old belt-driven piston compressor and tank, and a rusted vehicle frame are on the waste dump in front of the adit. The dump measures 75 feet long, 20-35 feet wide, and 25 feet thick.

**Idlewild Shaft No. 2 (BO-185):**

Southeast from Adit 12 and about 100 feet east of the collapsed stope above Adit 11 is another partly collapsed old cabin (Figure 3.21-47). About 50 feet south of the cabin is a steep-walled pit, designated Shaft 5. This shaft was identified on the video as the South Empire (South Central(?)) shaft, but it is probably the southern of the two shafts shown on the Idlewild Claim by Lindgren (1900); or it may be another collapsed stope. The opening is about 15 feet across and 25-30 feet deep (Figure 3.21-48). The dump associated with this pit is 65 feet long, 30 feet wide, and 10 feet thick.

**Unidentified workings:**

Adit 13 is about 100 feet southeast of Shaft 5. Again, a small cabin was built just in front of the portal (Figure 3.21-49). The timbers of the covered entrance to the portal have collapsed, but the adit is open inside (Figure 3.21-50). A hole in the floor of the adit appears to be a stope of unknown depth. The waste dump is 45 feet long, 15 feet wide, and 10 feet thick (Figure 3.21-51). Southeast of this adit are numerous shallow prospect pits, many of which are shown on the topographic map.

Adit 14 is on the west side of Silver Cord Gulch, about 400 feet northwest of Shaft 4 (Figure 3.21-52). This adit is again behind a cabin or shop building (Figure 3.21-53); and again, a short, covered enclosure, now collapsed, led from the cabin to the adit. Walls of a second collapsed structure lie in front of the cabin. The adit is open, with a few old boards leaning against one side of the entrance (Figure 3.21-54). The waste dump is long but relatively narrow. At the northwest end, it is about 20 feet wide beneath the cabin, but tapers to about 3 feet wide (on top) at the southeast end, which is about 65 feet from the portal (Figure 3.21-55). Thickness ranges from 20 to 50 feet. Scrap iron, a pile of rusted pipe, old hose, old cans, and broken bottles litter the site.

West of Adit 14 is an open vertical stope 2-5 feet wide and about 150 feet in length. Portions of the stope are at least 30 feet deep (Figure 3.21-56). At the lower end of the stope is a small pile of waste rock.

Northeast of Adit 14, along an old access road, are another cabin (Figure 3.21-57) and two sheds. Although standing, all are in disrepair.
West of these structures are three more adits (Figure 3.21-58). Adit 15 is an open tunnel just below War Eagle Mountain Road. The opening is nearly hidden by caved debris and rubble from the road above (Figure 3.21-59). Cool air coming out of the adit indicates a connection to other workings. A narrow, vertical vein cuts the granite on the roof of the adit (Figure 3.21-60). The waste dump is about 30 feet long, 8 feet wide, and 30 feet down the face (Figure 3.21-61). Immediately below the waste dump is an open stope and small waste dump. Adit 16, about 75 feet west of Adit 15, is caved and has a dump that measures 30 feet long, 12 feet wide, and 10 feet thick. Caved Adit 17 is on the north embankment of War Eagle Mountain Road (Figure 3.21-62), slightly to the east of Adit 15. A 2-inch metal pipe protrudes from beneath the caved rubble at the edge of the road. A 1-inch pipe buried under the road carries water, presumably from the adit, to the old cabin northeast of Adit 14. The waste dump parallels the road and measures 55 feet long, 10-12 feet wide, and 25 feet down the face. The thickness on the slope is about 10 feet. The toe of the dump can be seen in the upper left of Figure 3.21-61.

**Empire Shaft (BO-184):**

Shaft 6, probably the Empire Shaft, is below War Eagle Mountain Road and west of Adits 14-17 (Figure 3.21-63). The open stope described after Adit 14 follows the east edge of the waste dump. The shaft is caved, forming a pit about 18-20 feet in diameter and 15 feet deep (Figure 3.21-64). Some of the waste rock forms a crescent adjacent to the pit, but most of the rock was trammed across an old access road and dumped on a large pile. The conical dump is 50-60 feet across the base, about 20 feet high on the uphill side, and at least 100 feet on the downhill side (Figure 3.21-65).

**Unidentified workings:**

Shaft 7 is just below War Eagle Mountain Road and about 100 feet west of the corner where the road crosses the head of Silver Cord Gulch (Figure 3.21-66). The shaft is open and surrounded by a few strands of barbed wire fencing (Figure 3.21-67). Granite blocks, some of them shaped, surround the mouth of the shaft down to about 3-4 feet below the surface. The depth of the shaft could not be determined, but it is estimated to be at least 40-60 feet deep with vertical walls (Figure 3.21-68). A small waste dump (roughly 10 feet long, 5 feet wide, and 8 feet thick) is associated with the shaft. The lower side of the dump is supported by a rock retaining wall about 4-5 feet high. Most of the material was probably removed through other workings that connected to the shaft.

**3.21.4.2 Sample Locations**

**3.21.4.2.1 Solid Samples**

No solid samples were collected at these sites.
3.21.4.2.2 Water Samples

Water samples were collected from Adit 1 (K7229901), Adit 2 (K7229902), and Adit 9 (K7229903).

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</table>

3.21.4.2.3 Analytical Results

Water

Sample K7229901 from Adit 1 exceeds all standards for mercury. In the dissolved metals screen, this sample exceeds the Aquatic Life Chronic and is within the range of the standards for the Secondary MCL for aluminum. In the dissolved metal screen, samples K7229902 from Adit 2 and K7229903 from Adit 9 exceed both Aquatic Life standards for zinc; exceed the Aquatic Life Chronic and are within the range of the standards for the Secondary MCL for aluminum; and exceed all standards for mercury.

3.21.5 Structures

Five cabins and two small sheds, all in disrepair but standing, were found along Silver Cord Gulch. In addition, numerous collapsed structures were found at many of the individual workings. Structures that were found, whether standing or collapsed, are described in the text above. Most are also documented in the video segment on the Silver Cord Group.

3.21.6 Safety

The open shafts are extremely hazardous, especially Shafts 2, 4, 5 and 7. Shaft 7 has a few loose strands of barbed wire around the opening, but it is an inadequate safety barrier. All of these have vertical to nearly vertical sides and, even if caved, are at least 25 feet deep. Shaft 3 (inclined) is open but filled with water. It is much less of a hazard than the others.
The open stopes are also very dangerous. These steep-walled, narrow openings are difficult to see even at close range, and many are over 10 feet deep; in some instances, the depth could not be determined. Several of the deep pits, which are probably collapsed stopes, are also steep walled and hazardous. In particular, the pit uphill from Adit 11 is of concern.

Although most of the open adits are driven in fairly stable granite, some areas are fractured and prone to caving and collapse. Open adits include Adits 7, 8, 9, 10, 11, 12, 13, 14, and 15. Adit 13 is especially dangerous because of the open stope in the floor of the adit just inside the portal.

All of these workings are accessible from War Eagle Mountain Road and from the old access trails to the workings. War Eagle Mountain receives a significant amount of recreational use by campers, hikers, all-terrain-vehicle and trail bike enthusiasts, artifact hunters, and bird and deer hunters.
Figure 3.21-1. Location of the Silver Cord Group workings, Owyhee County, Idaho (U.S. Geological Survey Silver City and Cinnabar Mountain 7.5-minute topographic maps).
Figure 3.21-2. Location of adits (A) and shafts (S) of the Silver Cord Group workings (enlarged from the Silver City and Cinnabar Mountain 7.5-minute topographic maps).
Figure 3.21-3. Sketch of Adits 1, 1a, 2, and 2a of the Silver Cord Group. These may be related to the Pauper Mine.
Figure 3.21-4. Looking southeast at caved Adit 1. Note the unvegetated channel where the water drains from the adit (Roll K12, frame #16).
Figure 3.21-5. Looking southwest at the north end of the flat waste dump. The old jeep road is adjacent to the dump (Roll K12, frame #17).
Figure 3.21-6. Looking southeast at caved Adit 2. Water from the adit flows off to the lower right of the picture (Roll K12, frame #18).
Figure 3.21-7. Small mound of vein material (upper left) piled on the north end of the waste dump for Adit 2. The pile of boards and corrugated sheet metal is the collapsed remains of a structure, probably a shed or workshop (Roll K12, frame #19).
Figure 3.21-8. Sketch of Shaft 1, Shaft 2, Adit 3, and associated features.
Figure 3.21-9. Looking east into the pit of caved Shaft 1. Although this east wall is fairly steep, the other sides are sloped at about 25-30º (Roll K12, frame #21).
Figure 3.21-10. Looking northwest at the large wooden beams and granite blocks, probably the footings for the headframe, just above caved Shaft 1. The conical mound to the left is the main waste pile from the shaft (Roll K12, frame #20).

Figure 3.21-11. Looking west at the conical waste pile from Shaft 1. Note the rock retaining wall at the base. The old access road, which continues down Silver Cord Gulch behind the waste pile, crosses the bottom of the picture (Roll K12, frame #22).
Figure 3.21-12. Old cabin and outhouse in the bottom of Silver Cord Gulch. A stone retaining wall can be seen behind the cabin. The rock in the lower foreground is waste rock around the rim of the shaft. The U-shaped bend of the access road is at the lower left. The toe of the waste dump for Adit 3 is along the trail that curves up across the upper left part of the picture (Roll K12, frame #23).

Figure 3.21-13. View into the opening of Shaft 2 (Roll K12, frame #24).
Figure 3.21-14. Looking southeast across the waste dump for Shaft 2. The large conifer on the end of the dump is about 2 feet in diameter. The cabin in Figure 3.21-11 can be seen through the trees at the left edge of the picture (Roll K12, frame #25).

Figure 3.21-15. Thick patch of mountain mahogany on the waste dump for Adit 3, looking southwest (Roll K13, frame #1).
Figure 3.21-16. Sketch of Shaft 3, an open incline filled with water.
Figure 3.21-17. Shaft 3, looking north. The shaft is inclined about 30-40º and is filled with water to within 6-8 feet of the surface. Old timbers are floating in the water and lying in the mouth of the opening (Roll K13, frame #2).
Figure 3.21-18. Sketch of the Jackson Claim workings (Adits 4-6 of the Silver Cord Group).
Figure 3.21-19. Waste dump for Adit 4, the lowest opening on the Jackson Claim, looking southwest. Silver Cord Gulch is to the left of the picture. Jordan Creek is between this site and the mountains in the distance (Roll K13, frame #3).

Figure 3.21-20. Shaped granite blocks of a short retaining wall for the toe of the waste dump for Adit 5. The wall is just above Adit 4. A foot path from Adit 4 to Adit 5 passes along the base of the wall (Roll K13, frame #4).
Figure 3.21-21. Looking north at the trough of caved Adit 5, the upper tunnel on the Jackson Claim. The trough extends about 30 feet up the slope along a vertical granite outcrop, which is probably the original adit wall (Roll K13, frame #6).
Figure 3.21-22. Looking east at the face of the waste dump for Adit 5. Several other waste dumps of workings on Silver Cord Gulch are in the distance at the upper left. Stormy Hill is the ridge at the skyline (Roll K13, frame #5).
Figure 3.21-23. Sketch of Adits 7 and 8 of the Silver Cord Group.
Figure 3.21-24. Looking southeast toward open Adit 7 (Roll K13, frame #7).
Figure 3.21-25. View inside Adit 7. Several inches of water cover the floor, but no discharge was found in front of the adit (Roll K13, frame #8).
Figure 3.21-26. Looking north at the portal of Adit 8. Some of the log timbers are beginning to collapse (Roll K13, frame #9).
Figure 3.21-27. View inside Adit 8. A blue nylon tarp, air hoses, and metal pipe are on the adit floor. An old door that probably gated the adit is propped against the adit wall at the right edge of the picture (Roll K13, frame #10).
Figure 3.21-28. Looking west at the waste dump for Adit 8. Rails extend out to the face of the dump. An old Ingersoll-Rand compressor is parked west of the adit (Roll K13, frame #11).
Figure 3.21-29. Sketch of Shaft 4 and Adits 9, 10, and 11 of the Silver Cord Group.
Figure 3.21-30. Headframe over Shaft 4. This is probably the Idlewild Shaft (Roll K13, frame #12).
Figure 3.21-31. View of the old timbers framing the two-compartment shaft. Water fills the shaft to about 15 feet below the surface (Roll K13, frame #13).
Figure 3.21-32. Looking west at the waste dump for Shaft 4. The headframe is at the center right. The large waste dump at the top of the picture is from Shaft 6 (Roll K13, frame #14).

Figure 3.21-33. Looking north toward Adit 9. The opening is behind the pile of rocks above the 55-gallon barrel. A trickle of water flows from under the rocks and boards at the lower edge of the picture (Roll K13, frame #15).
Figure 3.21-34. Small opening into Adit 9. One horizontal support beam can be seen inside the opening (Roll K13, frame #16).

Figure 3.21-35. Looking west at the waste dump for Adit 9. The waste dump for Shaft 4 abuts the west side of this dump. The old boards that cover much of the Adit 9 dump are the remains of a collapsed structure. The rock rubble in the lower foreground is waste rock from Adit 10 (Roll K13, frame #17).
Figure 3.21-36. Looking east toward open Adit 10. The small bare patch above and to the right of the adit is a collapsed stope. Note the rock retaining wall to the right of the adit. The boards and sheet metal may have been a covering over the portal (Roll K13, frame #18).
Figure 3.21-37. View inside Adit 10 (Roll K13, frame #19).
Figure 3.21-38. Looking south across the surface of the waste dump for Adit 10. The wood and sheet metal strewn across the dump are the remains of a large collapsed structure, probably a cabin (Roll K13, frame #20).

Figure 3.21-39. View to the southeast of the cabin and waste dump at Adit 11. The entrance to the adit is through the rear of the cabin. An overturned outhouse is in the notch in the dump just to the right of the backpack (Roll K13, frame #21).
Figure 3.21-40. View of the inside of Adit 11. Clapboards on the left and right are part of the cabin wall. Part of the covered portal structure is collapsing, allowing rock and weathered granite debris to slough into the adit (Roll K13, frame #22).
Figure 3.21-41. Long, narrow vertical stope on the slope northwest of Adit 11. Some sections of the stope are open to the surface and at least 15 feet deep. View is to the northwest (Roll K13, frame #23).
Figure 3.21-42. Circular pit of the collapsed stope east of Adit 11. The pit is 10-12 feet across and at least 15 feet deep. Strands of barbed wire fencing that formerly surrounded the pit are hanging down into the opening. The red-and-white fence post at the top is about 4 feet in length. The headframe for Shaft 4 is at the top of the picture about ½ inch to the left of the fence post (Roll K13, frame #24).
Figure 3.21-43. Sketch of Adit 12, Adit 13, and Shaft 5 of the Silver Cord Group.
Figure 3.21-44. Looking north toward open Adit 12. Boards and planks of a collapsed structure, as well as a probable portal structure, litter much of the surface of the waste dump. A belt-driven piston compressor and a large metal tank are near the adit (Roll K13, frame #25).

Figure 3.21-45. View of the inside of Adit 12. The adit is partly caved about 30 feet inside where it intersects a northeast-trending stope (Roll K14, frame #1).
Figure 3.21-46. Collapsed section of the stope above Adit 12. The stope can be traced several hundred feet up the slope (Roll K14, frame #2).
Figure 3.21-47. Looking southeast toward Shaft 5. The opening (which could possibly be a large, caved stope) is about 50 feet to the right of the old cabin. The pit in the lower center of the picture is the collapsed stope shown in Figure 3.21-42. The waste dump of the Pauper Shaft is in the distance at the far right edge of the picture (Roll K14, frame #3).
Figure 3.21-48. Looking down into Shaft 5. The pit is 25-30 feet deep (Roll K14, frame #4).
Figure 3.21-49. Looking east at the cabin in front of Adit 13. The collapsed boards behind the cabin are from the covered portal for the adit (Roll K14, frame #6).
Figure 3.21-50. View into the narrow opening of Adit 13. The dark patch on the floor of the adit (at the tip of the board just below the center of the picture) is a hole into an apparent open stope (Roll K14, frame #7).
Figure 3.21-51. Looking east at the waste dump for Adit 13. The cabin is on the east end of the dump. Numerous shallow prospects are on the slope east of the cabin, one of which is on the open slope at the upper right (Roll K14, frame #5).
Figure 3.21-52. Sketch of Adit 14 of the Silver Cord Group.
Figure 3.21-53. Old cabin or shop building in front of Adit 14. The walls of a second, collapsed structure are to the right. Old hose, pipe, scrap metal, and other debris are scattered near the building. Jumbled boards behind the cabin appear to be the remains of a covered entryway into the adit. View is to the west (Roll K14, frame #8).
Figure 3.21-54. Opening into Adit 14 (Roll K14, frame #9).
Figure 3.21-55. Looking south at the waste dump for Adit 14. The waste dumps for Shaft 4 and Adits 9 and 10 are in the distance across Silver Cord Gulch off the nose of the dump for Adit 14 (Roll K14, frame #10).
Figure 3.21-56. Deep, open vertical stope west of Adit 14. The stope is 2-5 feet wide and can be traced for at least 150 feet up the slope. Portions of the stope are at least 30 feet deep. The waste dump at the upper left is from Shaft 6 (Roll K14, frame #11).
Figure 3.21-57. Old cabin northeast of Adit 14. War Eagle Mountain Road is about 40-50 feet above the cabin (Roll K14, frame #12).
Figure 3.21-58. Sketch of Adits 15, 16, and 17 of the Silver Cord Group.
Figure 3.21-59. Looking north toward Adit 15. A small opening is nearly hidden among the granite blocks filling the trough along the caved section of the adit. War Eagle Mountain Road crosses above the adit just below the top of the picture (Roll K14, frame #13).
Figure 3.21-60. Small opening into Adit 15. A narrow vertical vein cuts the roof of the adit (Roll K14, frame #14).
Figure 3.21-61. Looking east at the face of the waste dump for Adit 15. The cabin shown in Figure 3.21-57 is just above the dump. The large waste piles in the distance (upper center) are at the War Eagle shaft. The small dump at the far upper left is from Adit 17 (Roll K14, frame #15).
Figure 3.21-62. Caved Adit 17 beside War Eagle Mountain Road, looking north. A 2-inch metal pipe is at the foot of the embankment along the edge of the road (Roll K14, frame #18).
Figure 3.21-63. Sketch of Shaft 6 (probably the Empire Shaft).
Figure 3.21-64. Rubble-covered inner slope of the pit at caved Shaft 6. The pit is about 18-20 feet in diameter and 15 feet deep (Roll K14, frame #16).
Figure 3.21-65. Large, conical waste pile from Shaft 6. The pile is at least 50-60 feet across and 20 feet high on this side (uphill). The downhill side is at least 100 feet high. The access road down to Silver Cord Gulch is in the distance at the right. The waste dump for the Silver Cord Shaft (Shaft 1) and an old cabin are at the right edge of the picture. Up the road at the first switchback above Shaft 1 is the waste dump for Adit 2. Adit 1 is not visible but is at the third switchback above Shaft 1 and just below the snow field at the dump for the Pauper Shaft (upper right). The dump at the left edge is for Shaft 4 and Adits 9 and 10 (Roll K14, frame #17).
Figure 3.21-66. Sketch of Shaft 7 of the Silver Cord Group.
Figure 3.21-67. Looking down from War Eagle Mountain Road at Shaft 7. Note the retaining wall around the mouth of the shaft and the barbed wire fence surrounding the opening. A small waste dump is built out on the slope below the shaft (Roll K14, frame #19).

Figure 3.21-68. View down into the opening of Shaft 7. The shaft is estimated to be at least 40-60 feet deep (Roll K14, frame #20).
3.22 ILLINOIS CENTRAL SHAFT (Site No. BO-195)

3.22.1 Site Location and Access

The Illinois Central Shaft is just above War Eagle Mountain Road near the west end of War Eagle Mountain in the NE¼ of the SE¼ of the NE¼ of section 8, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.22-1). A short spur road leads up to the shaft from War Eagle Mountain Road (Figure 3.22-2). The shaft is in an area of mixed patented claims and BLM land.

3.22.2 Geologic Features

The shaft was sunk in the two-mica granite to exploit the ore-bearing quartz veins.

3.22.3 Site History

Statham (1998) noted that the Illinois Central vein was worked from the late 1860s to the mid-1880s through a 600-foot shaft. Lindgren (1900, p. 154) stated:

[T]he Illinois Central vein . . . has been developed by a shaft 600 feet deep. The mine is credited with a production of $24,278 in 1873, the ore containing $73 per ton. In 1875 it is stated that the shaft was 445 feet deep, following down a rich ore body averaging $75 per ton. The mine has been idle for the last fifteen years. The ore shoot is 200 feet long on the surface, narrowing with depth.

The Illinois Central was part of the Poorman Group of the Consolidated Mines and Dredge Company (1934-35) and the Poorman Mines Corporation (1936-37)

3.22.4 Environmental Conditions

3.22.4.1 Site Features

The Illinois Central Shaft was visited by John Kauffman on July 23, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 2, index 1:21:33-1:24:08). Documenting photographs are Roll K14, frames 21-22.

The shaft is open but covered with a steel I-beam frame and layered, crisscrossing planks (Figure 3.22-3). Large granite blocks have been placed around the open edge of the steel frame. This covering appears to be fairly recent. The opening is about 9 feet square, and the shaft is probably open to about its original depth. A rock dropped through the open mesh of the planks fell at least 5 seconds, then could be heard bouncing for several more seconds, indicating a depth of 450-600 feet. The area around the shaft has recently (within the past 5-10 years) been bulldozed, probably during construction of the cover structure. The surface of the waste dump has also been modified to some extent by this activity. The large dump measures 120 feet long, 60 feet wide, and 40-50
feet thick (Figure 3.22-4). It extends down to War Eagle Mountain Road. The disturbed area covers less than 1 acre.

3.22.4.2 Sample Locations

3.22.4.2.1 Solid Samples
No solid samples were collected.

3.22.4.2.2 Water Samples
No water samples were collected.

3.22.5 Structures
There are no structures at this site.

3.22.6 Safety

Although the shaft is covered, there are some gaps in the stone blocks stacked around the frame. Small children could easily crawl through these and fall into the shaft. Some of the crisscrossing boards are weathered and cracked. None of the boards are secured to the steel frame and could easily be removed. A fall into this shaft would be fatal.
Figure 3.22-1. Location of the Illinois Central Shaft, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.22-2. Sketch of the Illinois Central Shaft site.
Figure 3.22-3. Looking northwest at the covering over the Illinois Central shaft, which consists of a steel I-beam frame overlain with crisscrossing planks and surrounded by large blocks of granite. The planks are not secured to the steel frame (Roll K14, frame #21).

Figure 3.22-4. Looking southeast along the edge of the Illinois Central waste dump. The brown pile of rubble at the upper left is some of the recently disturbed material related to the excavation around the shaft. The waste piles in the distance are at the War Eagle shaft (Roll K14, frame #22).
3.23 PAUPER AND NEVERSWEAT MINES (Site Nos. JV-9, JV-11, and JV-12)


This section includes numerous workings along the west side of Stormy Ridge south of War Eagle Mountain. These were given individual field site numbers of B7239901 through B7239907. They probably are parts of the Pauper and Neversweat mines. Whenever possible, the names of the individual workings are identified.

3.23.1 Site Location and Access

These workings are on the west side of Stormy Ridge in the SE¼ of the SE¼ of section 8, the SW¼ of the SW¼ of section 9, and the E½ of the NE¼ of section 17, T. 5 S., R. 3 W., on the Cinnabar Mountain 7.5-minute quadrangle (Figure 3.23-1). Access is on an old jeep road paralleling the ridge. Most of the workings are at an elevation of 7500-7700 feet. The northern workings appear to be on BLM land while the southern workings appear to be on patented claims.

3.23.2 Geologic Features

Lindgren (1900) and Piper and Laney (1926) indicated these mines were thought to be on a southern continuation or a branch of the Poorman vein. These veins are fissure fillings or silicified shear zones in granite. The Never Sweat vein strikes N. 20º W. and dips about 70º-80º E. The California vein parallels the Never Sweat vein 200 feet to the east. The Flat vein at the Neversweat Mine strikes N. 5º W. and approximately dips 45º E. (Piper and Laney, 1926).

3.23.3 Site History

The Pauper Mine was operated in the 1870s (Statham, 1998). Four tons of ore containing $448 in gold and $209 in silver were produced in 1875 at the Pauper (Lindgren, 1900).

The Never Sweat Mining Company was incorporated July 6, 1922. Between then and 1925, the existing structures were refurbished, new buildings were constructed, and a mill was leased. After test runs, the mill was remodeled. The mine was shut down on August 22, 1925. The company forfeited its charter in 1932.

3.23.4 Environmental Conditions

3.23.4.1 Site Features

These sites were visited by Earl Bennett on July 23, 1999. A video segment describing most of the workings is on Owyhee County Videotape (Tape 2, index 1:24:12-1:30:55). Documenting photographs are Roll B5, frames 13-24, and Roll B6, frames 1-3.
Site No. B7239901:

This is most likely the Pauper Shaft (JV-9). This is the first significant opening going south on Stormy Ridge from War Eagle Mountain Road and is shown by a shaft symbol on the topographic map. The shaft has caved, forming a pit about 40 feet across and 30 feet deep (Figure 3.23-2). A flat area excavated into the slope adjacent to the pit most likely contained the headframe. The waste dump, consisting entirely of granite, is 40 feet long, 4 feet wide on top and 40-50 feet across the base, and 80 feet down the face (Figure 3.23-3). The disturbed area covers about 0.5 acre.

Site No. B7239902:

This shallow shaft (or deep prospect pit) is either part of the Pauper or the Neversweat workings. It is located 400-500 feet south of the previous shaft and about 60-70 feet higher in elevation. This shaft is also caved and forms a pit 15 feet long, 6 feet wide, and 12 feet deep (Figure 3.23-4). The waste dump is small, measuring 25 feet long, 25 feet wide, and only 5 feet thick. Part of a wooden headframe is on the edge of the dump (Figure 3.23-5). The disturbed area covers less than 0.25 acre.

Site No. B7239903:

This shaft is also either part of the Pauper or Neversweat workings, and is marked by a shaft symbol on the topographic map in the southeast corner of section 8. The workings consist of an open shaft with a large waste dump and numerous small, shallow prospect pits on the surrounding slope (Figure 3.23-6). Old timbers support part of the opening (Figure 3.23-7). A flat area on the north side of the shaft probably was for the headframe. A pile of boards are south of the shaft, and south of the boards is a pit or trench. The waste dump for the shaft is about 100 feet long, 15 feet wide, and 15 feet thick (Figure 3.23-8). The disturbed area covers about 0.5 acre.

Site No. B7239904:

This site, shown by a shaft symbol on the topographic map in the northeast corner of section 17, is most likely the Caldwell Shaft (JV-11) of the Neversweat Group. The main feature is a large pit with an opening in the south wall (Figure 3.23-9). This could be either a caved shaft with an adjoining stope or a caved stope. The pit is 30 feet by 25 feet across and about 20 feet deep (Figure 3.23-10). The top of the open tunnel or stope is about 10 feet below the edge of the pit (Figure 3.23-11). A shallow trench extending from the west side of the pit to the waste dump contains a pile of old boards and timbers (Figure 3.23-12). The dump is about 100 feet long parallel to the slope, 10 feet wide, and 10 feet thick. Below the dump and about 50 feet from each end are several prospect pits. The disturbed area covers about 0.75 acre.
Site No. B7239905:

This is the site of the main Neversweat adit and mill (JV-12). It is marked by the northern of three adit symbols on the topographic map. The site includes the adit, a large dump, a collapsed mill, and several collapsed buildings (Figure 3.23-13). The adit is caved and has a minor seep that disappears into the granitic material on the dump (Figure 3.23-14). The waste dump is about 130 feet long, with two lobes extending to the west. The dump has a maximum width of 75 feet and a thickness of 80 feet down the face. A rod mill is on the north side of the dump, just below the access road and on the north side of the collapsed mill building (Figure 3.23-15). Several other collapsed structures are in the vicinity. One is just south of the adit, and at least three more are further to the south along the access road. A concrete pad and associated scrap metal are on the south side of the dump below the road. No mill tailings were noted, but there may be some in the mountain mahogany below the mill. The disturbed area covers about 1.5 acres.

Site Nos. B7239906 and B7239907:

These two adits are the middle and southern of the three shown on the topographic map, and both are probably part of the Neversweat Group. These are both caved adits with small waste dumps. The adit at B7239907 has a minor seep. The waste dumps are about the same size, measuring 20 feet long, 5 feet wide, and 30 feet thick. An old dilapidated cabin was found in the gully below these two adits. The disturbed area covers less than 0.5 acre.

In addition to the above workings, there are numerous prospect pits and cuts along the ridge between the Pauper Shaft and Site No. B7239907. None of these are of any significance.

3.23.4.2 Sample Locations

3.23.4.2.1 Solid Samples
No solid samples were collected.

3.23.4.2.2 Water Samples
No water samples were collected.

3.23.5 Structures

Remains of a mill and several structures were found at Site No. B7239905. Figures 3.23-16, 3.23-17, and 3.23-18 are different views of the mill. A cabin site was found below Sites No. B7239906 and No. B7239907.

3.23.6 Safety

The shaft at Site No. B7239903 is open and has no warning signs or fences. At Site No. B7239904, the open tunnel/stope in the side of the pit could be entered. Both of these sites are easily accessible.
Figure 3.23-1. Location of the Pauper and Neversweat mines (Site Nos. B7239901 through B7239907), Owyhee County, Idaho (U.S. Geological Survey Cinnabar Mountain 7.5-minute topographic map).
Figure 3.23-2. Pit of the caved shaft at Site No. B7239901 (Roll B5, frame #11).

Figure 3.23-3. Waste dump at Site No. B7239901, looking northwest. Silver City and Florida Mountain are in the distance (Roll B5, frame #12).
Figure 3.23-4. Pit at the caved shaft at Site No. B7239902 (Roll B5, frame #13).

Figure 3.23-5. Waste dump at Site No. B7239902 (Roll B5, frame #14).
Figure 3.23-6. Sketch of Site No. B7239903.
Figure 3.23-7. View down at the open shaft at Site No. B7239903. Old timbers frame the opening (Roll B5, frame #15).

Figure 3.23-8. Waste dump at Site No. B7239903 (Roll B5, frame #16).
Figure 3.23-9. Sketch of Site No. B7239904.

prospect pit

large pit

trench

pile of boards

open adit on slope of pit

30 ft.
Figure 3.23-10. Large pit at Site No. B7239904 (Roll B5, frame #17).

Figure 3.23-11. Looking down at the tunnel or open stope on the south side of the pit at Site No. B7239904 (Roll B5, frame #18).
Figure 3.23-12. Timbers and boards in the trench west of the large pit at Site No. B7239904 (Roll B5, frame #20).
Figure 3.23-13. Sketch of Site No. B7239905.
Figure 3.23-14. Caved adit at Site No. B7239905 (Roll B5, frame #21).

Figure 3.23-15. Rod mill on the north end of the waste dump at Site No. B7239905 (Roll B5, frame #23).
Figure 3.23-16. Close-up of the rod mill at Site No. B7239905 (Roll B6, frame #1).

Figure 3.23-17. Part of the collapsed mill structure below the rod mill at Site No. B7239905 (Roll B6, frame #2).
Figure 3.23-18. Looking up at the collapsed mill structure above the rod mill at Site No. B7239905 (Roll B6, frame #3).
3.24 SOUTH POORMAN SHAFT (Site No. BO-194)

3.24.1 Site Location and Access

The South Poorman shaft is at the southwest end of War Eagle Mountain along War Eagle Mountain Road in the NW¼ of the SE¼ of the NE¼ of section 8, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.24-1). Originally the shaft collar was 15-20 feet above the road, but the area around the shaft has been excavated recently to road level. The shaft is in an area of mixed patented claims and BLM land.

3.24.2 Geologic Features

Piper and Laney (1926, p. 132-136) described the geology of the Poorman Mine as follows:

The Poorman vein strikes N. 2º-4º E. and stands nearly vertical; its apex crosses a spur ridge about 2,000 feet west of the summit of War Eagle Mountain . . . and descends sharply both northward and southward. The vein is a silicified shear zone which varies from a single quartz-filled fissure, 4 to 5 inches wide, to a zone of altered granite traversed by several quartz stringers, 1½ to 3 inches wide, the aggregate width being as much as 4½ feet. It may be traced at the surface for nearly a mile, as shown on the geologic map . . . and persists downward for about 950 feet in the Poorman Mine without change in character . . .

The dominant gangue mineral is quartz, usually of the massive type, although the occurrence of comb structure is attested by waste on the dump. Calcite accompanies the quartz locally . . .

The metallic species include native gold and silver, and the rich silver minerals, cerargyrite, pyrargyrite, proustite, polybasite, stephanite, and owyheeite (chemically a silver-bearing variety of jamesonite). Argentite (naumannite ?) is reported from the lower levels but not from the old bonanza stopes.

3.24.3 Site History

According to Lindgren (1900, p. 152):

The vein was discovered in 1865, and was worked continuously till 1873. The first 2,000 tons are reported to have yielded $547,000. Since that time it has been exploited at intervals—in 1885, 1896, 1897, and 1898. The production, as gathered from Raymond's reports, is as follows: 1866, $800,000; 1868-69, $168,000; 1870, $42,769; 1871, $18,127; 1872, $11,740; total, $1,040,636. The whole production to 1880 is reported to have been about $3,000,000. The developments consist of two nearly perpendicular shafts located on the highest spur crossed by the vein [the North Poorman (BO-179), section 3.26 of this report; and the South Poorman shaft], and by two tunnels driven from the north
Piper and Laney (1926, p. 134-135) noted:

The early operation of the [Poorman] mine was severely hindered by litigation and conflict between rival contenders. In 1874 it came into the hands of the Poorman Gold and Silver Mining Co., and was actively worked until the financial crash of 1876. . . . Sporadic activity by lessees occurred in 1880, 1882, and 1885, but the production was presumably small. In 1888 the property was acquired by English interests, and in 1895 the Poorman Gold Mines, Ltd., of London, commenced operations. Active prospecting, accompanied by extraction of a small quantity of ore, continued through 1902. The next year, however, operations were suspended and the property has remained idle since that time. The output of precious metals since 1900 is not known, but is probably not more than $100,000, so that the total production may be stated as $3,000,000.

Statham (1998, p. 22) reported:

In 1890 it was purchased by English interests and operated as the Poorman Gold Mines Ltd. until 1903. During this latter development, a Mill was constructed below Webfoot Rock which burned before it saw significant operation; and a second Mill was constructed on Jordan Creek at the mouth of Sawpit Creek [see section 3.43, Poorman Mill]. The ore from the mine was hauled out of the Belle Peck level and loaded into buckets of an aerial tramway and transferred over the ridge of the mountain to the mill, which was just about 1.5 miles.

The Consolidated Mine & Dredge Company held the property from about 1934 to 1936. Poorman Mines Corporation controlled the property from 1936 to 1938, although the company noted “mine just taken over for promotion and development.”

3.24.4 Environmental Conditions

3.24.4.1 Site Features

The South Poorman shaft was visited by John Kauffman on July 23, 1999. A video sequence describing the site is on Owyhee County Videotape (Tape 2, index 1:31:00-1:35:51). Documenting photographs are Roll K14, frames 23-25.

The main feature at this site is the shaft, although one caved adit and a possible caved adit were found on the slope below War Eagle Mountain Road (Figure 3.24-2). The area around the shaft has recently been excavated down to road level (a depth of 15-20 feet below the original collar level), and the opening covered with a steel I-beam frame overlain by crisscrossing planks.
(Figure 3.24-3). This construction is similar to that at the Illinois Central shaft and was probably done about the same time. Unlike at the Illinois Central, no large granite blocks were placed around the steel frame. There is a gap of about 1.5 feet between the surface and the steel frame, which leaves enough space to easily crawl through. A rock tossed into the shaft fell about 5 seconds before impact, or an estimated depth of 450 feet. Statham (1998) reports the shaft was 600 feet deep, so the bottom may be caved. A flat area above the shaft, carved into the granite outcrop, has a number of steel bars and bolts that probably were part of the headframe or hoist works. Two piles of waste rock are associated with the shaft. The first is adjacent to the west side of the shaft and extends northwest along War Eagle Mountain Road for about 110 feet (Figure 3.24-4). The width varies from 25 feet near the shaft to only 3 feet at the northwest tip. The thickness is about 20 feet down to the road, although some material continues down the slope below the road. The second part of the dump is a conical pile below the road (Figure 3.24-5). The pile is 50 feet in diameter, 20 feet high on the uphill side, and 50 feet or more on the downhill side.

Along an old access road below the conical waste dump is a caved adit with a small waste dump. East of the caved adit is another feature, either a small pit or short caved adit, with a very minor pile of waste rock. A shallow trough east of the very small dump is probably only a prospect trench on a small vein.

3.24.4.2 Sample Locations

3.24.4.2.1 Solid Samples
   No solid samples were collected.

3.24.4.2.2 Water Samples
   No water samples were collected.

3.24.5 Structures
   There are no structures.

3.24.6 Safety

There is an open gap of 1-1.5 feet below the steel frame and planks covering the shaft. This is enough space to crawl through, particularly for small children. A fall into the shaft, estimated at 450 feet, would be fatal. The shaft is beside War Eagle Mountain Road, which receives a significant amount of recreational use by tourists and sportsman. For overly curious or unsuspecting individuals, this shaft is a serious hazard.
Figure 3.24-1. Location of the South Poorman shaft, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.24-2. Sketch of the South Poorman shaft and associated workings.
Figure 3.24-3. Looking east at the covered South Poorman shaft. The planks are covering a steel frame, but the side beams of the frame are about 1-1.5 feet above the surface. The original collar is at the top of the outcrop behind the shaft. It was apparently excavated to road level at the time it was covered (Roll K14, frame #25).

Figure 3.24-4. Looking southeast across the top of the part of the waste dump north of War Eagle Mountain Road. The covered shaft is below the outcrop just left of center. The waste dump for the Pauper shaft is in the distance at the right, just above the patch of snow (Roll K14, frame #23).
Figure 3.24-5. Looking south at the conical waste dump below War Eagle Mountain Road. Jordan Creek is in the valley behind the dump (Roll K14, frame #24).
3.25 OWYHEE MINE (Owyhee Tunnel (Site No. BO-178); and Owyhee Shaft (Site No. BO-180))

3.25.1 Site Location and Access

The Owyhee shaft is at the west end of War Eagle Mountain ridge in the NE¼ of the SW¼ of the NE¼ of section 8, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.25-1). The shaft is on a broad, gently sloping bench just above where the slope steepens, and about 80 feet in elevation below War Eagle Mountain Road. The Owyhee tunnel, which was not visited, is about 400 feet in elevation below and to the west of the shaft, and is near the center ¼ section of the north half of section 8. According to the BLM land management map (scale 1:100,000), the workings are near the boundary of patented claims and BLM land.

3.25.2 Geologic Features

The Owyhee vein is similar in character to other veins on War Eagle Mountain, with a general north-south strike and a dip of 50º E. (Lindgren, 1900; Piper and Laney, 1926; Asher, 1968). Lindgren (1900) reported massive siderite on quartz in the Owyhee vein. As with other veins, the host rock is granite.

3.25.3 Site History

Although shown on their maps, neither Lindgren (1900) nor Piper and Laney (1926) discuss the Owyhee Mine. It was most likely discovered and developed during the same period as the other mines in the area.

3.25.4 Environmental Conditions

3.25.4.1 Site Features

The Owyhee Shaft was visited by John Kauffman on July 23, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 2, index 1:35:55-1:39:08). Documenting photographs are Roll K14, frame 26, and Roll K15, frames 1-2.

The Owyhee workings include a shaft and an adit (Figure 3.25-2). The adit, located about 400 feet in elevation below the shaft, was not visited but was videotaped (included in the segment for the Home Resort Prospect (section 3.39)) and photographed at a distance from the Home Resort Prospect (Figure 3.25-3). A second adit may be buried by the waste dump for the shaft.

The shaft is caved, forming an oblong pit 25 feet long, 20 feet wide, and 12 feet deep (Figure 3.25-4). A flat adjacent to the east side of the pit (Figure 3.25-5) contains large, threaded-steel rods, probably to hold the footings for the headframe. The waste dump has two overlapping levels, indicated by a bench about halfway down the face of the dump. Upright posts with a cross beam on the rim of the lower level (Figure 3.25-6) may be a trestle support from an adit buried beneath the shaft waste dump. The disturbed area for the shaft covers about 0.5 acre.
3.25.4.2 Sample Locations

3.25.4.2.1 Solid Samples
No solid samples were collected.

3.25.4.2.2 Water Samples
No water samples were collected.

3.25.5 Structures
No structures were found at this site.

3.25.6 Safety
No safety hazards were found.
Figure 3.25-1. Location of the Owyhee Mine (Owyhee shaft and tunnel), Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.25-2. Sketch of the Owyhee Mine workings.
Figure 3.25-3. Looking east up the west slope of War Eagle Mountain toward the waste dump for the Owyhee tunnel. Although difficult to see, the dump is in the gully near the center of the picture, about ¼ inch below the skyline. The waste dump for the Owyhee shaft, although not visible at this distance on the photograph, is on the skyline above and slightly to the right of the tunnel dump. This photograph was taken from the Home Resort Prospect (Roll K17, frame #6).

Figure 3.25-4. Looking south along the axis of the pit of the Owyhee shaft (Roll K15, frame #2).
Figure 3.25-5. Looking southeast over the Owyhee shaft at the flat where the headframe support bolts were found. The flat is just below the bare scarp on the slope at the center of the picture. The patch of white at the upper left is part of the waste dump for the South Poorman shaft (Roll K14, frame #26).

Figure 3.25-6. Looking northwest down the face of the waste dump for the Owyhee shaft. Upright posts with a cross beam on the lower part of the dump (seen to the right of the “point” of the dump in this picture) may be a trestle support for an adit buried under the shaft dump. Silver City is in the distance. The road in the valley is Jordan Creek Road (Roll K15, frame #1).
3.26 NORTH POORMAN SHAFT AND ASSOCIATED WORKINGS (Site No. BO-179)
    Alternate name—Hope.

3.26.1 Site Location and Access

The North Poorman shaft, several adits, and numerous prospects are on the northwest side of the west end of War Eagle Mountain, in the SW¼ of the NE¼ of the NE¼ of section 8, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.26-1). All of the workings are easily accessible from the War Eagle Mountain Road and short spur roads to the individual workings. Most or all of the workings are probably on patented claims surrounded by BLM land.

3.26.2 Geologic Features

See section 3.24.2 for a discussion of the geology of the Poorman Mine.

3.26.3 Site History

See section 3.24.3 for a discussion of the history of the Poorman Mine.

3.26.4 Environmental Conditions

3.26.4.1 Site Features

The North Poorman workings were visited by John Kauffman on July 24, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 2, index 1:39:13-1:45:20). Documenting photographs are Roll K15, frames 3-9.

The main workings at this site are a caved shaft and two caved adits. In addition, there are numerous pits, trenches, and minor adits, not all of which were visited (Figure 3.26-2). The caved shaft, just above War Eagle Mountain Road, forms a circular pit about 20 feet in diameter and 10 feet deep (Figure 3.26-3). Statham (1998) reported the shaft was originally 460 feet deep. On the east beside the pit are stacked blocks of cut granite, burnt timbers, and a pile of pieces of wire cable (Figures 3.26-4 and 3.26-5), all probably related to the foundation for the headframe and hoist. Bricks associated with the granite blocks indicate there may have been a furnace at the site. Some of the waste rock is built out adjacent to the west side of the shaft and extends down to War Eagle Mountain Road. This part of the dump is about 50 feet long, 20 feet wide, and 10-15 feet thick. Most of the material, however, was trammed across the road, forming a large conical pile 60 feet in diameter, 20 feet high on the uphill side, and 60-80 feet high on the downhill side (Figure 3.26-6).

Adit 1 is approximately 100 feet east of the shaft. A trough on the slope marks the location of the caved adit (Figure 3.26-7). A low rock retaining wall is on the east side of the entrance to the adit. The waste dump is 35 feet long, 20 feet wide, and 30 feet down the face. The toe of the dump reaches War Eagle Mountain Road (Figure 3.26-8).
Adit 2 is directly down the hill from Adit 1 and just below War Eagle Mountain Road. A short spur branching from War Eagle Mountain Road leads to the adit. A second spur branches from War Eagle Mountain Road further to the north and leads to the base of an old ore bin on the side of the waste dump. The trough of the caved adit and the ore bin can be seen in Figure 3.26-8. The waste dump is 30 feet long, 25 feet wide, and at least 40 feet down the face (Figure 3.26-9).

A third caved adit with a smaller waste dump is about 300 feet northwest of Adit 2 on a steep east-facing slope. The dump is roughly 25 feet long and 16 feet wide; it extends down the slope for 20 feet. The dump of another adit is visible in the trees below Adit 2 waste dump on Figure 3.26-9; this site was not visited. Numerous other prospect pits, trenches, and cuts were found both above the shaft and below War Eagle Mountain Road, but none were of any significance from a safety or environmental standpoint. Many of these are shown by prospect symbols on the topographic map.

### 3.26.4.2 Sample Locations

**3.26.4.2.1 Solid Samples**

No solid samples were collected.

**3.26.4.2.2 Water Samples**

No water samples were collected.

### 3.26.5 Structures

The ore bin on Adit 2 waste dump was the only structure found at the site.

### 3.26.6 Safety

None of the workings visited are open and those not visited appear to be minor prospects that should pose little or no hazard.
Figure 3.26-1. Location of the North Poorman Shaft and associated workings, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.26-2. Sketch of the North Poorman workings.
Figure 3.26-3. Looking into the pit of the caved North Poorman Shaft. The pit is about 20 feet in diameter and 10 feet deep (Roll K15, frame #3).

Figure 3.26-4. Cut granite blocks stacked east of the shaft. Numerous bricks (several on top of the blocks) at the site indicate there may have been a furnace at the site. Burnt beams from the headframe are at the lower right, and a pile of cut sections of 1-inch wire cable are at the lower left. View is to the north (Roll K15, frame #4).
Figure 3.26-5. Looking west from above the shaft. The shaft pit is at the center left. The cut wire cable and burnt beams are just below the pit, and the granite blocks are to the right of the pit. The conical waste dump for the shaft is at the right edge of the picture (Roll K15, frame #8).

Figure 3.26-6. Looking northwest at the conical waste dump for the shaft. War Eagle Mountain Road crosses the bottom of the picture (Roll K15, frame #5).
Figure 3.26-7. Looking southward at caved Adit 1. Note the rock retaining wall at the left entrance to the adit (Roll K15, frame #6).

Figure 3.26-8. Looking north from the top of the waste dump for Adit 1. War Eagle Mountain Road crosses below the dump and above the trough of caved Adit 2. The ore bin on the waste dump for Adit 2 is to the right of center of the picture. The waste dump for the third caved adit is barely visible in the trees at the far edge of the open slope on the left (Roll K15, frame #7).
Figure 3.26-9. View from below of the waste dumps of the main North Poorman workings. The waste dump for Adit 2 is at the center of the picture. The dump for Adit 1 is directly above the snow field. The conical pile from the shaft is to the right of the Adit 1 dump near the right edge of the picture. The site with the small dump in the trees below Adit 2 (lower left) was not visited (Roll K15, frame #9).
3.27 GENERAL CONNOR CLAIM (Site No. BO-186)

3.27.1 Site Location and Access

The General Connor workings are high on the northwest flank of War Eagle Mountain in the NW¼ of the NW¼ of section 9, and the NE¼ of the NE¼ of section 8, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.27-1). The General Conner is on an open slope about 150-200 feet in elevation below the west communications tower on War Eagle Mountain and about 200 feet above War Eagle Mountain Road. Access is by foot. The workings appear to be on BLM land just east of patented claims of the Poorman group.

3.27.2 Geologic Features

The General Connor vein is on the north extension of a vein system explored by the Stormy Hill and War Eagle mines. Asher (1968) reports the veins are narrow and produced only minor amounts of ore.

3.27.3 Site History

This vein was probably developed at the same time as the War Eagle and Stormy Hill mines.

3.27.4 Environmental Conditions

3.27.4.1 Site Features

The General Connor was visited by John Kauffman on July 24, 1999. A video segment describing the workings is on Owyhee County Videotape (Tape 2, index 1:45:24-1:48:08). Documenting photographs are Roll K15, frames 11-12.

Two caved adits, an open shaft (or stope), and several prospect pits were found at this site (Figure 3.27-2). Adit 1 is caved, forming a shallow trough up the slope for about 20 feet. The waste dump is 30 feet long, 9 feet wide, and 10 feet thick. A 3-foot-high rectangular rock wall with entry gaps is on the waste dump in front of the adit. A shallow prospect with a small pile of excavated material is on the slope above the adit.

The open “shaft” is about 300 feet northeast of Adit 1 and is shown by a shaft symbol on the topographic map. It may actually be a stope that is open to the surface, because it has almost no waste rock associated with it. The narrow opening is 3-4 feet wide and about 8 feet long at the surface. The estimated depth is at least 20 feet (Figure 3.27-3). A pit about 10 feet in diameter is on the slope immediately above the shaft and may also be a collapsed stope.

Adit 2 is about 50 feet in elevation below the shaft (Figure 3.27-4). This adit is also caved and also has part of a rock wall on the waste dump. The dump measures 45 feet long, 9 feet wide, and 15 feet thick.
A few other shallow pits were found in the vicinity, but they are of little significance.

The total disturbed area for the workings is less than 0.5 acre.

3.27.4.2 Sample Locations

3.27.4.2.1 Solid Samples
   No solid samples were collected.

3.27.4.2.2 Water Samples
   No water samples were collected.

3.27.5 Structures

Remnants of rock walls, possibly small shelters, were found at both adits. These were constructed on the waste dumps directly in front of the caved portals.

3.27.6 Safety

The open shaft or stope, with an estimated depth of at least 20 feet, is extremely hazardous. The vertical opening is abrupt with little indication of its presence.
Figure 3.27-1. Location of the General Conner Claim workings, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.27-2. Sketch of the General Connor workings.
Figure 3.27-3. Open shaft or stope at the General Connor Claim. The opening is at least 20 feet deep (Roll K15, frame #11).
Figure 3.27-4. Looking northwest toward Adit 2 at the General Connor Claim. The waste dump can be seen in the trees just below the center of the picture. The bare, massive granite outcrop at the upper left is Webfoot Rock (Roll K15, frame #12).
3.28 UNNAMED PROSPECT (Site No. K7249901; BO-472)

3.28.1 Site Location and Access

This prospect is about 500-600 feet N. 45° W. from the east communications tower on War Eagle Mountain in the NW¼ of the NW¼ of section 9, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.28-1). The workings can easily be reached by foot from the road to the top of the mountain. The site is on BLM land.

3.28.2 Geologic Features

These workings appear to be on a southern extension of the vein at the Ymir Mine.

3.28.3 Site History

Nothing is known about the history of these prospects.

3.28.4 Environmental Conditions

3.28.4.1 Site Features

This prospect was visited by John Kauffman on July 24, 1999. A video segment describing the workings is on Owyhee County Videotape (Tape 2, index 1:48:14-1:50:46). Documenting photographs are Roll K15, frames 13-14.

The prospect consists of a linear series of shallow prospects and one open shaft or stope on a narrow, northwest-trending vein situated on the slope below a low bench on the north side of War Eagle Mountain (Figure 3.28-2). The open shaft (or stope), at the southern end of the trend, is about 6 feet long and 4 feet wide, and it has vertical walls at least 20 feet deep (Figure 3.28-3). A small pile of excavated material is on the north rim of the opening. Continuing down the slope to the northwest for several hundred feet is a series of pits and cuts along the same trend (Figure 3.28-4). These are 3-5 feet deep with the excavated material piled to the sides. The disturbed area covers about 0.25 acre.

3.28.4.2 Sample Locations

3.28.4.2.1 Solid Samples

No solid samples were collected.

3.28.4.2.2 Water Samples

No water samples were collected.

3.28.5 Structures

There are no structures.
3.28.6 Safety

The open shaft or stope is difficult to see, even from a short distance. Sage and wildflowers grow to the edge of the vertical walls. With a depth of at least 20 feet, this opening poses a significant hazard. The shaft is easily accessible from the top of War Eagle Mountain.
Figure 3.28-1. Location of the unnamed prospect at Site No. K7249901, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.28-2. Sketch of the prospects at Site No. K7249901.
Figure 3.28-3. View into the open shaft or stope. Note the vegetation growing to, and even hanging over, the edge of the vertical walls (Roll K15, frame #13).
Figure 3.28-4. Looking down along the strike of the vein structure. Numerous shallow pits continue down the slope for several hundred feet. Webfoot Rock is the bare granite outcrop at the upper left of the picture (Roll K15, frame #14).
3.29 Ymir Mine (Site No. BO-187)
Alternate name—Liberty Mine.

3.29.1 Site Location and Access

The Ymir Mine is on the open north slope of War Eagle Mountain in the SW¼ of the SW¼ of
the SW¼ of section 4, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.29-1).
A jeep road that leads to the mine exits off the east side of War Eagle Mountain Road just north
of the North Poorman workings. The mine is on BLM land.

3.29.2 Geologic Features

The mine develops a northwest-trending quartz vein in granite, similar in character to other veins
on War Eagle Mountain.

3.29.3 Site History

Nothing was found about the early history of this mine, which was originally known as the
Liberty. It is shown on Lindgren’s (1900) map of the mines on War Eagle Mountain, so it had
been developed prior to 1900. Statham (1998, p. 24) briefly discussed the later history of the
mine:

The buildings visible at this stop [near the Belle Peck adit] are the remains of the
Ymir Camp, which was built in 1939 to house the miners working at the Ymir
mine. In fact Rusty Statham was responsible for much of the construction. An
Eastern Idaho based company, with the hopes of ‘striking it rich,’ undertook the
mining at the Ymir Mine. They leased the property from the Leonard family in
Silver City and proceeded to develop an earlier prospect [the Liberty] above us on
the north face of War Eagle Mountain. They salvaged lumber for mine timbering
and the camp construction by tearing down the Poorman Mill on Jordan Creek
and refurbished the Addie Mill for limited milling operations. As with many
before them, the enthusiasm was not matched by the value of the ore.

3.29.4 Environmental Conditions

3.29.4.1 Site Features

The Ymir Mine was visited by John Kauffman on July 24, 1999. A video segment describing the
property is on Owyhee County Videotape (Tape 2, index 1:50:50-1:55:52). Documenting
photographs are Roll K15, frames 15-21.

One adit was found at this site (Figure 3.29-2). A few, very minor prospects were also found on
the slope above the adit, more or less on strike with the prospects at Site No. K7249901 near the
top of the ridge. The adit is nearly caved (Figure 3.29-3), but has a small triangular opening.
(about 2 feet wide and 1 foot high) leading down into the tunnel (Figure 3.29-4). The waste dump has a long, main part that trends northwest and a smaller side finger that extends to the southwest. The main portion is 75 feet long, 6 feet wide on top but 40-50 feet across the base, and 30 feet thick. Wooden ties are on the narrow top of the dump (Figure 3.29-5). The side finger is 30 feet long, about 6 feet wide, and 15 feet thick. Several collapsed structures are on or near the dump. These include a collapsed cabin to the northeast of the adit (Figure 3.29-6), a collapsed shed near the side finger of the dump, and a collapsed ore bin/chute on the east side of the waste dump (Figure 3.29-7). West of the adit, along the access road, are an old metal frame for a hoisting (?) device (Figure 3.29-8) and a pile of beams and timbers. The disturbed area at this site covers about 0.5-0.75 acre.

3.29.4.2 Sample Locations

3.29.4.2.1 Solid Samples
   No solid samples were collected.

3.29.4.2.2 Water Samples
   No water samples were collected.

3.29.5 Structures

The collapsed cabin was a fair-sized structure. In addition to the old boards, there is a considerable amount of corrugated sheet metal (roofing), stove pipe, pieces of an old stove, and miscellaneous scrap metal. The ore bin has completely collapsed down the east side of the waste dump. Old boards against the south side of the smaller part of the dump were probably part of a small shed or work shop.

Near the Belle Peck adit of the Poorman Mine is the old Ymir camp (mentioned above in the section on history). The buildings were constructed in 1939 to house miners working at the Ymir Mine. Most are now collapsed or in severe disrepair.

3.29.6 Safety

The opening into the adit is small but could be easily enlarged to allow entry into the tunnel.
Figure 3.29-1. Location of the Ymir Mine, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.29-3. Looking southeast at the scarp on the slope at the Ymir adit. A small opening is near the bottom of the shadow in the center of the trough (Roll K15, frame #15).

Figure 3.29-4. Small, triangular opening into the Ymir adit (Roll K15, frame #16).
Figure 3.29-5. Looking southeast along the narrow top of the main part of the waste dump. Old wooden ties are still on the surface. The access road enters from the west (at the center right of the picture). War Eagle Mountain forms the skyline (Roll K15, frame #21).
Figure 3.29-6. Collapsed wooden cabin at the Ymir Mine. The adit is just to the right of the picture (Roll K15, frame #17).

Figure 3.29-7. Collapsed ore bin or chute on the east side of the main waste dump (Roll K15, frame #20).
Figure 3.29-8. Metal frame of some type of lifting (?) device, which is lying along the access road west of the adit (Roll K15, frame #18).
3.30 Oso Adit of the Poorman Mine (Site No. BO-181)
Alternate names—Poorman Mine; Davidson Group; Adelaide; Perseverance.

This is one of two main tunnels through which most of the ore was removed from the Poorman Mine. The other is the Belle Peck Adit (BO-174), which is described in Section 3.33.

3.30.1 Site Location and Access

The Oso Adit is at the corner of the first (lower) switchback on the western part of the War Eagle Mountain Road loop, in the NW¼ of the NE¼ of the NE¼ of section 8, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.30-1). The road cuts through the dump in front of the adit. The waste dump extends north into section 5. The adit appears to be on the patented Poorman claims adjacent to BLM land.

3.30.2 Geologic Features

See section 3.24.2 for a discussion of the geology of the Poorman Mine.

3.30.3 Site History

See section 3.24.3 for a discussion of the history of the Poorman Mine.

3.30.4 Environmental Conditions

3.30.4.1 Site Features

The Oso Adit was visited by John Kauffman on July 24, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 3, index 0:00:43-0:03:43). Documenting photographs are Roll K15, frames 22-23.

The Oso Adit is completely caved, and the exact location of the portal is difficult to determine because of erosion in the gully and slumping on the nearby slopes. However, it appears to be on the east side of the gully just above the switchback on War Eagle Mountain Road (Figure 3.30-2). A minor trickle of water is in the gully, but it may be coming from above and not out of the adit. The road has been cut down about 8-10 feet through the upper, eastern side of the dump (Figure 3.30-3). In addition to being modified by the road, the dump has a bulldozer cut across the face. On top, the dump is roughly 40 feet long by 40 feet wide with an indentation on the northwest side. The face extends at least 100 feet down the slope (Figure 3.30-4). Maximum thickness is estimated at 50 feet perpendicular to the slope. The disturbed area covers about 0.5 acre.

3.30.4.2 Sample Locations

3.30.4.2.1 Solid Samples

No solid samples were collected.
3.30.4.2.2 Water Samples
   No water samples were collected.

3.30.5 Structures
   No structures were found.

3.30.6 Safety
   No safety hazards were found.
Figure 3.30-1. Location of the Oso Adit of the Poorman Mine, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.30-2. Sketch of the Oso Adit and waste dump.
Figure 3.30-3. Looking northwest at the road cut through the waste dump for the Oso Adit. The photograph was taken from the corner of the switchback on War Eagle Mountain Road (Roll K15, frame #22).

Figure 3.30-4. Looking down the face of the waste dump for the Oso Adit. A bulldozer cut crosses the face just below the two small fir trees (Roll K15, frame #23).
3.31 UNNAMED PROSPECT (Site No. K7249902; BO-473)

The relationship of this adit to others in the vicinity is not known, but it is driven toward (and may be related to) the Mississippi adit to the east.

3.31.1 Site Location and Access

This unnamed adit is just above War Eagle Mountain Road, about ¼ mile south of where the road splits to loop around War Eagle Mountain, in the NE¼ of the SE¼ of the SE¼ of section 5, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.31-1). A short spur road to the adit splits off the east side of War Eagle Mountain Road (Figure 3.31-2). The opening, shown by an adit symbol on the topographic map, is either on a patented claim or BLM land.

3.31.2 Geologic Features

The prospect probably explores one of the narrow quartz veins in the granite. It may be on the Sunol claim shown on Lindgren’s (1900) map of the mines on War Eagle Mountain.

3.31.3 Site History

Nothing is known about the history of this prospect.

3.31.4 Environmental Conditions

3.31.4.1 Site Features

This prospect was visited by John Kauffman on July 24, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 3, index 0:03:47-0:06:36). Documenting photographs are Roll K15, frames 24-25, and Roll K16, frames 1-3.

The adit is open and was driven southeastward into the hill. A low mound of rock has sloughed in front of the opening from the outcrop above the portal (Figure 3.31-3). Water dammed behind the sloughed material covers the adit floor to a depth of about 6 inches (Figure 3.31-4). No water was flowing out of the adit at the time of the site visit. The waste dump is 30 feet long, 15 feet wide, and 20 feet down the face (Figure 3.31-5). About 50 feet north of the adit is an enclosure, 10 feet wide by 18 feet long, constructed of free-standing granite blocks (Figures 3.31-6 and 3.31-7). Parts of the wall have collapsed, but the standing portion is about 3-4 feet high. Some of the larger blocks appear to have been shaped. Next to the rock foundation on the north is a pile of old boards and sheet metal, which may be either the remains of the upper part of the enclosure or a separate structure. The disturbed area at this site covers less than 0.5 acre.

3.31.4.2 Sample Locations

3.31.4.2.1 Solid Samples

No solid samples were collected.
3.31.4.2.2 Water Samples

No water samples were collected.

3.31.5 Structures

The rock foundation was the only structure found. The pile of boards and sheet metal may have been part of the same structure or a separate shed.

3.31.6 Safety

The open adit is easily accessible from War Eagle Mountain Road. The rock in the adit appears to be very competent, but caving or collapse is always a potential hazard. In addition, the water covering the floor could obscure a shaft or stope.
Figure 3.31-1. Location of the Site No. K7249902, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.31-2. Sketch of Site No. K7249902.
Figure 3.31-3. Looking southeast at the open adit. A low pile of rock has sloughed from
the outcrop above the portal (Roll K15, frame #24).

Figure 3.31-4. View inside the adit. The floor is covered with a few inches of water
(Roll K15, frame #25).
Figure 3.31-5. Looking northward at the end of the waste dump. War Eagle Mountain Road is just below the trees at the far left of the dump (Roll K16, frame #3).

Figure 3.31-6. Free-standing rock enclosure north of the adit (Roll K16, frame #2).
Figure 3.31-7. Back wall of the rock enclosure, which is about 3-4 feet high. Some of the larger granite blocks appear to have been shaped (Roll K16, frame #1).
3.32 MISSISSIPPI MINE (Site No. BO-188)

3.32.1 Site Location and Access

The Mississippi Mine is on the lower north flank of War Eagle Mountain in the NW¼ of the SW¼ of the SW¼ of section 4, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle. The Y-shaped intersection of the War Eagle Mountain loop road is about ¼ mile north of the mine. An overgrown access road leads to the property from just south of the “Y”. The property is either on a patented claim or on BLM land.

3.32.2 Geologic Features

Lindgren (1900) mapped a north-northwest trending vein on the Mississippi claim.

3.32.3 Site History

Nothing is known about the history of the Mississippi Mine.

3.32.4 Environmental Conditions

3.32.4.1 Site Features

The Mississippi Mine was visited by John Kauffman on July 24, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 3, index 0:06:42-0:08:33). Documenting photographs are Roll K16, frames 4-5.

The exact location of the Mississippi adit could not be determined. Two small drainages with trough-like slumps both had the appearance of caved adits, and both are at the head of the waste dump (Figure 3.32-2). The western of the two slumps is probably the adit; a bare channel in this drainage indicates seasonal flow (Figure 3.32-3). The waste dump is 70 feet long, ranges from 20 feet wide at the south end (adit end) to only 4 feet wide at the north end, and has a maximum thickness of 15 feet. It is partly overgrown with brush and trees (Figure 3.32-4). Several strips of flat iron are scattered around the site. The disturbed area covers less than 0.5 acre.

3.32.4.2 Sample Locations

3.32.4.2.1 Solid Samples

No solid samples were collected.

3.32.4.2.2 Water Samples

No water samples were collected.

3.32.5 Structures

No structures were found at this site.
3.32.6 Safety

No safety hazards were found.
Figure 3.32-1. Location of the Mississippi Mine, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.32-2. Sketch of the Mississippi Mine.
Figure 3.32-3. Possible caved adit at the Mississippi, looking southeast. The dry channel indicates seasonal flow in the gully (Roll K16, frame #4).
Figure 3.32-4. Looking north at the side of the Mississippi waste dump (Roll K16, frame #5).
3.33 BELLE PECK ADIT OF THE POORMAN MINE (Site No. BO-174)

This is the second of two main tunnels through which most of the Poorman Mine ore was extracted. The other is the Oso Adit (BO-181), which is described in Section 3.30.

3.33.1 Site Location and Access

The Belle Peck Adit is south of upper Webfoot Gulch and west of the War Eagle Mountain Road in the NW¼ of the SE¼ of the SE¼ of section 5, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.33-1). A jeep road leads to the site from the Y-shaped intersection of the War Eagle Mountain loop road (Figure 3.33-2). The jeep road passes the site where the Ymir Camp was in the 1930s, then turns south past the mine dump. An all-terrain-vehicle road continues west from the Ymir Camp past the toe of the dump. The adit is on patented claims of the Poorman Group and is surrounded by BLM land.

3.33.2 Geologic Features

See section 3.24.2 for a discussion of the geology of the Poorman Mine.

3.33.3 Site History

See section 3.24.3 for a discussion of the history of the Poorman Mine.

3.33.4 Environmental Conditions

3.33.4.1 Site Features

The Belle Peck Adit was visited by John Kauffman on July 24, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 3, index 0:08:37-0:16:46). Documenting photographs are Roll K16, frames 6-11.

The adit is completely caved and is expressed as a long trough on the slope. The trough is filled with large boulders and smaller rock debris (Figure 3.33-3). Several rotten timbers are lying in front of the portal, and water is flowing from the beneath the caved debris at about 10 gallons per minute. The large waste dump consists of two parts, an upper part built northward along the access road, and a lower part built northwestward across a lower access road that divides the dump. This lower road was probably a haul road. A collapsed structure on the upper dump at the edge of the lower road appears to be an ore chute (Figure 3.33-4). The upper dump measures 240 feet long, 10-70 feet wide, and 30 feet thick; the lower part is 60 feet long, 25 feet wide on top, and a maximum of 70-85 feet thick (Figure 3.33-5). The disturbed area, including the Ymir Camp site, covers at least 5 acres.
3.33.4.2 Sample Locations

3.33.4.2.1 Solid Samples
No solid samples were collected.

3.33.4.2.2 Water Samples
Sample K7249903 was collected from the adit water.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Location</th>
<th>Specific Conductivity (µs)</th>
<th>Temperature (° F)</th>
<th>pH</th>
<th>Flow (gpm)</th>
<th>Analyzed (Yes/No)</th>
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</thead>
<tbody>
<tr>
<td>K7249903</td>
<td>Belle Peck Adit</td>
<td>92</td>
<td>45</td>
<td>8.13</td>
<td>10</td>
<td>Yes</td>
</tr>
</tbody>
</table>

3.33.4.2.3 Analytical Results

Water

Sample K7249903 from the Belle Peck adit exceeds both Aquatic Life standards for zinc, and exceeds the Aquatic Life Chronic and is within the range of the standards for the Secondary MCL for aluminum in the dissolved metal screen. In the test for mercury, the sample exceeds all standards.

3.33.5 Structures

The collapsed ore chute on the upper dump has previously been mentioned. Another collapsed structure along the access road is seen in Figure 3.33-5. Two rock enclosures were also found, one about 50 feet west of the adit and the other 100 feet north of the adit (Figure 3.33-6). Five or six structures, most of which are collapsed, are at the Ymir Camp (Figure 3.33-7), which is located several hundred yards north of the Belle Peck Adit. These buildings, constructed in the 1930s, served as a base camp during the operation of the Ymir Mine (BO-187).

3.33.6 Safety
No safety hazards were found.
Figure 3.33-1. Location of the Belle Peck Adit of the Poorman Mine, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.33-2. Sketch of the Belle Peck Adit site.
Figure 3.33-3. Looking south at the caved portal of the Belle Peck Adit. Timbers with old nails in the lower left are probably portal supports. The adit water flows from the center to lower right of the picture (Roll K16, frame #6).
Figure 3.33-4. Looking southeast at the upper part of the waste dump. The collapsed structure on the lower edge of the dump was probably an ore chute. The lower part of the dump is at the lower right edge of the picture (Roll K16, frame #8).

Figure 3.33-5. Looking southwest toward the lower part of the waste dump. The upper part is on the left. A collapsed structure is in the center foreground along the edge of the access road (Roll K16, frame #10).
Figure 3.33-6. One of two rock enclosures constructed near the adit, looking east. This one is about 100 feet north of the adit along the east edge of the access road (Roll K16, frame #7).

Figure 3.33-7. Looking northeast at one of several buildings at the site of the Ymir Camp. Although this part of the cabin is standing, the rear section (hidden in the trees) is nearly collapsed. Five or six other collapsed structures are nearby (Roll K16, frame #11).
3.34 WESTLAKE GROUP (Site No. BO-173)
Alternate names—Ruth Ann; Ruth Claim.

3.34.1 Site Location and Access

The Westlake Group is on the south side of Webfoot Gulch and west of the Belle Peck Adit in the SW¼ of the SE¼ of section 5, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.34-1). An old jeep road provides access to the property from the Y-shaped intersection on the War Eagle Mountain loop road. The jeep road goes past the Ymir Camp near the Belle Peck Adit, then around the ridge to the west. Past the Ymir Camp, the old road becomes an all-terrain-vehicle trail which continues past the Westlake workings down to Jordan Creek. The property appears to be on BLM land.

3.34.2 Geologic Features

The geology of this property is similar to others on War Eagle Mountain. Interstate Gold Mining Company's report to the Idaho Mine Inspector for 1935 notes “Quartz veins in Grano-diorite – fissure veins.”

3.34.3 Site History

The April 8, 1893, edition of the Owyhee Avalanche reported, “Rich Strikes. The Ruth, Oso and South Central all report rich strikes” (quoted from Statham, 1998, p. 22). In 1914, the Ruth Mining Company, Inc. (IGS mineral property files), reported the condition of the mine as follows:

[T]he development work now on said mining premises [the company's Ruth, Katie, and Frankie claims] and at the time said company took possession thereof, consists of a 1200 foot tunnel on the Ruth claim, with two raises therefrom, manways equipped with ladders, and other small drifts on the vein.

That the improvements on said mining premises consists of a blacksmith shop equipped with anvil, tools, etc., of the value of about $150,00 ($150.00 (?)). and cars and 1200 feet of track of value of about $250.

Interstate Gold Mining Company (incorporated in 1935) held a lease and bond on the Ruth and other claims of the former Ruth Mining Company from 1935 to 1938. In 1937, the purchase was noted as “Fifty thousand solars [dollars] to be paid by 15% royalty, with minimum of $200 per mo. Have paid total of $3300 on account.” However, after minimal work on the property, Interstate forfeited its corporate charter in 1938.
3.34.4 Environmental Conditions

3.34.4.1 Site Features

The Westlake Group was visited by John Kauffman on July 24, 1999. A video segment describing the property is on Owyhee County Videotape (Tape 3, index 0:16:51-0:22:55). Documenting photographs are Roll K16, frames 12-16.

Five adits and two prospect pits were found at this site (Figure 3.34-2). Two of the adits, Adits 1 and 2 of this report, are identified in Statham (1998) as the Ruth Ann and the Ruth, respectively. All of the workings except Adit 3 align on a northwest-southeast trend.

Adit 1, the Ruth Ann, is located at the end of a brushy spur road off the main trail and is shown by an adit symbol on the topographic map. The adit has a large opening 6 feet high and 5 feet wide, partly hidden by a thick stand of willows (Figure 3.34-3). A minor seep provides moisture, which supports the willows and a small patch of grass. The remains of a collapsed structure are beside the adit on the north (Figure 3.34-4). The waste dump is 40 feet long, 20 feet wide, and 20 feet thick.

Adit 2, the Ruth, is also at the end of a spur that branches from the main trail where it crosses the ridge to the north (Figure 3.34-2). This adit is also open and has a rock retaining wall built out from the portal (Figure 3.34-5). A minor seep trickles from the adit but disappears into the ground a few feet beyond the rock wall. The waste dump measures 65-70 feet long, 50-60 feet wide, and 50 feet down the face (Figures 3.34-6 and 3.34-7). The toe of the dump reaches the all-terrain-vehicle trail. Above and slightly north of the adit is a shallow prospect pit. A second pit is below the trail between Adits 1 and 2.

Adit 3 is a small, caved tunnel along the main all-terrain-vehicle trail in a small gully south of the toe of the waste dump for Adit 2. The caved adit is on the east side of the trail, and the small waste dump is on the west side.

Adit 4, which is caved, is about 100 feet in elevation above and east-southeast from Adit 2. The waste dump measures 18 feet long, 12 feet wide, and 20 feet down the face.

Caved Adit 5 is 30-40 feet in elevation above Adit 4. The waste dump for this adit measures 45 feet long, 35 feet wide, and 30 feet down the face. It extends downward to just above Adit 4.

The disturbed area for all the workings covers about 1-1.5 acres.

3.34.4.2 Sample Locations

3.34.4.2.1 Solid Samples

No solid samples were collected.
3.34.4.2.2 Water Samples
   No water samples were collected.

3.34.5 Structures

The collapsed structure at Adit 1 was the only one found at this site.

3.34.6 Safety

Adits 1 and 2 could easily be entered. The all-terrain-vehicle access trail receives a significant amount of recreational use, so visitors to these workings are likely. Fire rings at Adit 2 indicate that the site is used for camping.
Figure 3.34-1. Location of the Westlake Group, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.34-2. Sketch of the Westlake Group workings.
Figure 3.34-3. Looking east at open Adit 1 (the Ruth Ann), partly hidden behind the willows (Roll K16, frame #13).
Figure 3.34-4. Looking north across the waste dump for Adit 1. The adit is to the right behind the clump of willows. A collapsed structure is to the left of the willows (Roll K16, frame #12).
Figure 3.34-5. Looking southeast at open Adit 2 (the Ruth). A rock retaining wall was built along the entryway to the adit. A minor seep flows along the wall and disappears into the waste dump a few feet beyond the bottom of the picture (Roll K16, frame #15).
Figure 3.34-6. Looking southeast across the waste dump for Adit 2 toward the mouth of the adit (above the backpack, just left of center of the picture). A small prospect pit is above the adit to the left of the fir tree (Roll K16, frame #14).

Figure 3.34-7. Looking west across the waste dump for Adit 2. Rocks of a campfire ring are to the right of the backpack (Roll K16, frame #16).
3.35 BISHOP TUNNEL (1895) OF THE ADDIE CONSOLIDATED MINING CO. (Site No. BO-170)

3.35.1 Site Location and Access

The Bishop Tunnel and associated workings are in Webfoot Gulch, formerly Addie Gulch, near the center of the S½ of the SW¼ of section 5, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.35-1). An all-terrain-vehicle trail from Jordan Creek to War Eagle Mountain Road passes to the west of the workings. An old access road branches from the trail at a switchback on the south side of Webfoot Gulch and leads to the mine. The workings appear to be on patented claims surrounded by BLM land.

3.35.2 Geologic Features

The workings develop gold- and silver-bearing quartz veins in granite.

3.35.3 Site History

The Addie Mine and mill began operating around 1900 (Statham, 1998). In 1905, the Addie Consolidated Mining and Milling Co. reported to the Idaho Mine Inspector that the property had 2500 feet of tunnels and 200 feet of raises. Piper and Laney (1926) reported that Addie Consolidated started a second adit on the property after the company acquired the mine. In 1913, the Idaho Development Co. noted that the property had not operated “for a number of years except annual assessment work.” Two years later, the company stated that it “Holds no claims, only engaged in prospecting.”

Addie Mining Company was organized in 1939. The company leased the property from W. A. Lewis, of Silver City, Idaho and rehabilitated 1500 feet of workings. In addition, the company's report to the Idaho Mines Inspector noted:

On June 1st, leased 50 ton Potosi Mill at Silver City; also purchased a new 25 ton Gipson [Gibson (?)] Ball Mill and additional equipment; also purchased Ross Process Amalgamator, as well as a 240' Schramm Compressor and #7 Cameron Sinker Pump; Ingersol-Rand Station Pump; Complete Blacksmiths’ equipment; 1 Ford Truck; 1 Tugger Hoist; 1 ore car; Complete mining equipment; small tools; also purchased on contract, the Florence Claim (unpatented) one claim located in the heart of Silver City, Idaho, purchase price $10,000. The Company expects to be in production and close the sale of Capital Stock by July 15, 1939.

The company forfeited its charter in 1940.
3.35.4 Environmental Conditions

3.35.4.1 Site Features

This site was visited by John Kauffman on July 25, 1999. A video sequence describing the property is on Owyhee County Videotape (Tape 3, index 0:22:58-0:27:27). Documenting photographs are Roll K16, frames 17-20.

Five caved adits were found at this site. One of these is probably the Bishop Tunnel, another adit should be the tunnel started by Addie Consolidated around 1900, and the others, subsidiary prospect adits (Figure 3.35-2). Three are on the north side of Webfoot Gulch and two are along the old access road on the south side of the gulch.

Adit 1 appears to have been the Bishop Tunnel. The trough formed by the caved adit has several old timbers in the rubble (Figure 3.35-3). A large waste dump extends to the east and northwest of the adit. It is about 400 feet long, 6-60 feet wide, and 10-50 feet thick (Figure 3.35-4); the widest portion is at the east end. Northwest of Adit 1, the dump narrows to about 6 feet wide in front of caved Adit 2, then widens again on the northwest end to about 40 feet.

Adit 2 is about 100 feet to the northwest of Adit 1. It may be the second Addie Consolidated tunnel mentioned above. Rock debris has sloughed down to cover the opening (Figure 3.35-5). A 2-inch-in-diameter metal pipe protrudes through the dump below Adit 2 and drains a minor amount of water into a large wooden-slat tank (Figure 3.35-6). The flow from the pipe is no more than 1 gallon per minute. The northwest end of the waste dump (noted above for Adit 1) may be, in part, material from Adit 2.

Adit 3 appears to have been a short prospect adit about 50 feet east of Adit 1. A small, thin pad of material from this tunnel is built out onto the main waste dump. A very minor seep forms a damp, grassy area in front of the adit.

Adits 4 and 5 are on the south side of the drainage and about 75 feet apart. The waste dumps are similar in size and shape, measuring about 15-20 feet long, 10-12 feet wide, and 8-10 feet thick.

3.35.4.2 Sample Locations

3.35.4.2.1 Solid Samples

A sample (K7259901) was collected from the edge of the main waste dump where it is being eroded by the creek in Webfoot Gulch.

<table>
<thead>
<tr>
<th>Sample No.</th>
<th>Location</th>
<th>Analyzed (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K7259901</td>
<td>Bishop Tunnel waste dump</td>
<td>Yes</td>
</tr>
</tbody>
</table>
3.35.4.2.2 Water Samples
No water samples were collected.

3.35.4.2.3 Analytical Results

Solid Sample

Sample K7259901 has slightly elevated levels of arsenic, copper, and lead in the element screen. In the TCLP for metals test, cadmium showed a slight amount of leaching.

3.35.5 Structures

The only structure found was the wooden water tank below Adit 2. Originally there was a mill at or near this site, but it was not found. A minor amount of scrap metal and a few boards are scattered around the site.

3.35.6 Safety
No safety hazards were found.
Figure 3.35-1. Location of the Bishop Tunnel (1895) of the Addie Consolidated Mining Company, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.35-2. Sketch of the Addie Consolidated Mining Company workings.
Figure 3.35-3. Looking northeast at the trough of caved Adit 1, probably the Bishop Tunnel. Several old timbers are in the trough (Roll K16, frame #17).
Figure 3.35-4. Looking northwest along the face of the main part of the waste dump near Adit 1 (Roll K16, frame #20).
Figure 3.35-5. Looking east at caved Adit 2 (Roll K16, frame #18).
Figure 3.35-6. Looking down the face of the waste dump in front of Adit 2. A pipe protruding through the dump drains into a large wooden tank (in the shade at the foot of the dump). Flow from the pipe is no more than 1 gallon per minute. The tank does not appear to be holding water (Roll K16, frame #19).
3.36 UNNAMED PROSPECT (Site No. K7259902; BO-474)

3.36.1 Site Location and Access

This prospect was not visited but was videotaped from the east side of Jordan Creek. Two adits, shown on the topographic map, are on the slope west of Jordan Creek about ½ mile south of Silver City in the SW¼ of the SE¼ of the SE¼ of section 6, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.36-1). An old jeep road leads to the workings from Jordan Creek. The prospects are on BLM land.

3.36.2 Geologic Features

The upper adit appears to be near the granite-rhyolite contact, and the waste dump is dark brown in color. The lower adit is probably in granite, as indicated by the light gray to nearly white waste dump.

3.36.3 Site History

Nothing is known about the history of this prospect. It may be related to the Potosi Mine.

3.36.4 Environmental Conditions

3.36.4.1 Site Features

The two adits at this site were documented by John Kauffman on July 25, 1999. A video sequence taken from the east side of Jordan Creek is on Owyhee County Videotape (Tape 3, index 0:27:31-0:29:14). Documenting photograph is Roll K16, frame 21.

Two adits and associated waste dumps are on the slope about 200 feet above Jordan Creek Road (Figure 3.36-2). Although not visited directly, one adit was obviously open and the other is possibly open. The upper, open adit has the larger of the two waste dumps. This dump has a brownish color compared to the very light colored dump of the lower tunnel. The lower dump is very small, indicating a short adit. Through binoculars, the lower adit appeared to have a small opening. The disturbed area at this site covers less than 0.25 acre.

3.36.4.2 Sample Locations

3.36.4.2.1 Solid Samples
No solid samples were collected.

3.36.4.2.2 Water Samples
No water samples were collected.
3.36.5 Structures

No structures were seen at this site.

3.36.6 Safety

The open, upper adit could be entered. The size of the waste dump indicates at least 50 feet of workings. The lower adit may also be open, but is probably no more than 25 feet in length.
Figure 3.36-1. Location of the Unnamed Prospect, Site No. K7259902, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.36-2. Looking west across Jordan Creek at two minor workings on the slope above Jordan Creek Road. The road is visible at the bottom center of the picture. Although difficult to see, the upper, open adit is a black spot at the left edge of the bare slope (to the right of the trees at the center of the picture). The lower adit is slightly to the right, marked by two white spots. The upper white spot is a scarp at the adit, and the lower spot is the waste dump. The Florida Mountain pit of the De Lamar Mine is on the skyline at the right (Roll K16, frame #21).
3.37 VILLAGE BLACKSMITH PROSPECT (Site No. BO-176)
Alternate name—New Year.

3.37.1 Site Location and Access

The Village Blacksmith is about ¾ mile southeast of Silver City on the east side of Jordan Creek in the E½ of the NW¼ of the NW¼ of section 8, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.37-1). The workings are at an elevation of about 6500 feet on a gulch that is unnamed on the topographic map; however, Statham (1998) refers to this as Village Blacksmith gulch. An old access trail, shown on the topographic map, leads to the site. The prospect is either on patented claims or on BLM land.

3.37.2 Geologic Features

The Village Blacksmith, Illinois Central, Red Jacket, and other parallel veins strike N. 25-40º W. and dip 70-90º, usually eastward. The veins vary from simple filled fissures to silicified shear zones. The filling is dominantly quartz, locally accompanied by calcite, sericite, epidote, and chlorite (Piper and Laney, 1926).

3.37.3 Site History

Village Blacksmith, Inc., was incorporated in 1931. In 1933, the property had about 2,000 feet of workings. The company did very little work at the mine, and it forfeited its charter in 1938.

3.37.4 Environmental Conditions

3.37.4.1 Site Features

The Village Blacksmith Prospect was visited by John Kauffman on July 25, 1999. A video sequence describing the property is on Owyhee County Videotape (Tape 3, index 0:29:19-0:34:32). Documenting photographs are Roll K16, frames 22-25.

This prospect consists of a long north-south-trending stope (parts of which are open to the surface) and an open adit (Figure 3.37-2). The northern end of the stope, on the north slope of the gulch, is open. The cut is 4-6 feet wide, 25 feet long, and 15-20 feet deep with vertical walls (Figure 3.37-3). To the south, the opening grades into a shallow trough about 50-75 feet long. After a short gap, the stope continues another 75-100 feet to the south, although it is not open to the surface the entire length. The depth varies, with the sides sloughed or caved in places, but generally the trough is 5-20 feet deep. Waste rock is piled along the west side of the stope at several places (Figure 3.37-4). The largest pile is about 15 feet long, 10 feet wide, and 15-20 feet thick. The adit, near the bottom of the gulch, was driven nearly perpendicular to the south end of the stope. The adit is open (Figure 3.37-5), but weathered granite debris has washed in and filled much of the opening. The adit appears to terminate at the stope, a relatively short distance to the...
east. The dump for the adit is 35 feet long, 12 feet wide, and 15-20 feet thick (Figure 3.37-6). The disturbed area covers less than 0.5 acre.

3.37.4.2 Sample Locations

3.37.4.2.1 Solid Samples
No solid samples were collected.

3.37.4.2.2 Water Samples
No water samples were collected.

3.37.5 Structures
No structures were found.

3.37.6 Safety

The open north end of the stope has very steep walls, and the opening is very abrupt and difficult to see on the brushy slope. The open adit is nearly filled with fine granitic debris, is relatively short, and does not pose much of a hazard.
Figure 3.37-1. Location of the Village Blacksmith Prospect, Owyhee County, Idaho
(U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.37-2. Sketch of the Village Blacksmith Prospect.
Figure 3.37-3. View down into the deep opening at the north end of the stope (Roll K16, frame #22).
Figure 3.37-4. Looking north at one of the waste piles from the stope, just north of the adit (Roll K16, frame #24).
Figure 3.37-5. Looking east at the open mouth of the adit (Roll K16, frame #23).
Figure 3.37-6. Looking north at the waste dump for the adit (just right of center). The waste dump for the stope shown in Figure 3.37-4 is just above and to the left of the adit dump (Roll K16, frame #25).
3.38 DELUGE CLAIM (Site No. BO-175)

3.38.1 Site Location and Access

The Deluge Claim adit is about 150 feet in elevation below the Village Blacksmith Prospect near the center of the NW¼ of the NW¼ of section 8, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.38-1). A trail labeled as a four-wheel-drive road on the topographic map crosses the slope 400-500 feet below the prospect, which is noted on the map by an “X”. An obscure trail to the property probably originates along the four-wheel-drive trail. The prospect is either on patented claims or on BLM land.

3.38.2 Geologic Features

The Deluge adit is on a north-northeast-trending vein (Piper and Laney, 1926). This structure parallels the Poorman vein, but is ¼ miles to the west.

3.38.3 Site History

Nothing known about the history of the Deluge.

3.38.4 Environmental Conditions

3.38.4.1 Site Features

The Deluge Claim was visited by John Kauffman on July 25, 1999. A video segment describing the prospect is on Owyhee County Videotape (Tape 3, index 0:34:37-0:37:20). Documenting photographs are Roll K17, frames 12-13.

One caved adit with a large waste dump was found on the north side of the gully (Figure 3.38-2). The adit forms a northwest-southeast trough extending 75 feet up the slope (Figure 3.38-3). Rails extend out from the adit and curve to the west across the waste dump (Figure 3.38-4). Boards and scrap metal from a collapsed structure are on the northwest end of the dump beside the rails. The triangular dump measures 100 feet long, 60 feet wide, and 20 feet thick. It extends to the bottom of the dry gully. Low brush and mountain mahogany cover parts of the dump. The disturbed area covers about 0.5 acre.

3.38.4.2 Sample Locations

3.38.4.2.1 Solid Samples

No solid samples were collected.

3.38.4.2.2 Water Samples

No water samples were collected.
3.38.5 Structures

The collapsed structure on the waste dump was the only one found at this site. Stovepipe, scrap metal, old tin cans and broken glass are scattered about.

3.38.6 Safety

No safety hazards were found.
Figure 3.38-1. Location of the Deluge Claim, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.38-2. Sketch of the Deluge Claim adit.
Figure 3.38-3. Looking northwest up the trough of the caved Deluge Claim adit (Roll K17, frame #12).
Figure 3.38-4. Looking southwest across the waste dump from the mouth of the caved adit. The collapsed structure, probably a cabin or workshop, is at the right. Rails extending from the adit to the end of the dump are to the left of center (Roll K17, frame #13).
3.39 HOME RESORT MINE (Site No. K7259903; BO-475)

3.39.1 Site Location and Access

This mine, identified as the Home Resort on Statham (1998), is located in Blacksmith Gulch (identified as Whiskey Gulch on Statham’s map) in the NW¼ of the SE¼ of the NW¼ of section 8, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.39-1). There is an old access trail to the property heading south across Blacksmith Gulch. It most likely connects with the four-wheel-drive trail shown on the topographic map that angles uphill to the southeast from Jordan Creek. These workings appear to be on patented claims surrounded by BLM land.

3.39.2 Geologic Features

The Home Resort workings are probably on the southeast continuation of the Village Blacksmith vein.

3.39.3 Site History

Nothing is known about the history of this property.

3.39.4 Environmental Conditions

3.39.4.1 Site Features

The Home Resort Mine was visited by John Kauffman on July 25, 1999. A video sequence describing the workings is on Owyhee County Videotape (Tape 3, index 0:37:23-0:44:49). Documenting photographs are Roll K17, frames 1-9.

Six adits, an open stope, and several pits, trenches, or collapsed stopes were found at this site (Figure 3.39-2). A series of stopes (or stopes and trenches) extends uphill north of Blacksmith Gulch along a N. 15-25º W. trend (Figure 3.39-3). At the northern end, near the top of the spur ridge, a section of the stope with very steep walls is open to a depth of at least 25-30 feet (Figure 3.39-4). Farther down the slope is a series of trenches or pits. These openings are possibly collapsed portions of the stope.

Adit 1, located near the bottom of the gully, is completely caved. Ore car wheels are lying in front of the adit on the waste dump (Figure 3.39-5). The dump measures 25 feet long, 15 feet wide, and 15-20 feet down the face (Figure 3.39-6).

Adit 2 is located approximately 150 feet up the gully from Adit 1. It was driven southeastward into the hill on the south side of the gulch. Although the adit appears caved from a distance (Figure 3.39-7), there is a small opening above a pile of collapsed rock in front of the adit (Figure 3.39-8). A very minor seep from the adit supports a thick stand of willows. The dump, measuring 60 feet long, 35 feet wide, and 15 feet thick, was built out into the gulch (Figure 3.39-9).
Adits 3 and 4 are located further up the gulch from Adit 2. Both are caved and have relatively small waste dumps.

Adit 5 (on the south side of the gulch and about on strike with the stope and Adit 1) is also caved. The waste dump, which is somewhat overgrown with brush, measures roughly 30 feet long, 15-18 feet wide, and 10-15 feet thick. Several shallow pits are below and to the north of the dump.

Adit 6 is down the gulch from Adits 1 and 5. This caved adit has a large dump (measuring 60 feet long, 60 feet wide, and 15 feet thick) that was built out across a side gully. Old cans, scrap metal, broken glass, tobacco cans, and other miscellaneous materials are scattered about.

The total disturbed area at these workings covers about 1-1.5 acres.

3.39.4.2 Sample Locations

3.39.4.2.1 Solid Samples
   No solid samples were collected.

3.39.4.2.2 Water Samples
   No water samples were collected.

3.39.5 Structures
   No structures were found.

3.39.6 Safety

The deep, open stope at the northern end of the workings is nearly hidden in the brush and has nearly vertical walls. It would be extremely difficult, if not impossible, to climb out of this stope without assistance. The small opening at Adit 2 could easily be enlarged to gain access.
Figure 3.39-1. Location of the Home Resort Mine, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.39-2. Sketch of the Home Resort Mine workings.
Figure 3.39-3. Looking southeast down the trend of the open stopes and trenches, with their associated small waste piles (Roll K17, frame #1).

Figure 3.39-4. View into the open stope at the northern end of the vein (Roll K17, frame #2).
Figure 3.39-5. Ore car wheels lying in the gully in front of Adit 1 (Roll K17, frame #4).

Figure 3.39-6. Looking east at the face of the waste dump for Adit 1 (Roll K17, frame #3).
Figure 3.39-7. Looking southeast at the rock outcrop above Adit 2. The small opening is at the base of the rock behind the small clump of wildflowers (Roll K17, frame #7).
Figure 3.39-8. Small opening into Adit 2 (Roll K17, frame #8).

Figure 3.39-9. Looking north at the face of the waste dump for Adit 2 (Roll K17, frame #9).
3.40 WHISKEY PROSPECT (Site No. B7249903; BO-476)

3.40.1 Site Location and Access

This prospect is on the south side of Blacksmith Gulch about 300 feet east of Jordan Creek near the center of the west edge of section 8, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.40-1). The site is marked by a shaft symbol on the topographic map. Access is on the Jordan Creek Road about 1 mile south of Silver City. The property is near the boundary of BLM land to the east and patented claims to the west along Jordan Creek.

3.40.2 Geologic Features

The Whiskey Prospect may be on the southward continuation of the Deluge vein.

3.40.3 Site History

Statham (1998, p. 25) reported:

The first vein located in the Owyhees was the Whiskey Gulch Mine in July 1863. This mine is located directly across from the mouth of Sawpit Creek and not far from the 1895 Poorman Mill.

3.40.4 Environmental Conditions

3.40.4.1 Site Features

The Whiskey Prospect was visited by Earl Bennett on July 24, 1999. No video was taken at this site. Documenting photograph is Roll B7, frame 14.

This site consists of a water-filled shaft and a small waste dump. Several old timbers are floating in the water in the shaft (Figure 3.40-2). It could not be determined how deep the shaft is open below the water level. The waste dump is about 20 feet in diameter and 20 feet thick. An old cabin is north of the shaft on the north side of the gulch. The disturbed area is less than 0.25 acre.

3.40.4.2 Sample Locations

3.40.4.2.1 Solid Samples

No solid samples were collected.

3.40.4.2.2 Water Samples

No water samples were collected.

3.40.5 Structures

The cabin north of the shaft was the only structure found at the site.
3.40.6 Safety

The shaft appears to be open, although filled with water. Jordan Creek Road is frequently used by outdoor enthusiasts visiting the Silver City area. The site is easily accessible and the waste dump is visible from the road.
Figure 3.40-1. Location of the Whiskey Prospect, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.40-2. Water-filled shaft at the Whiskey Prospect (Roll B7, frame #14).
3.41 UNNAMED PROSPECT (Site No. B7249904; BO-477)

3.41.1 Site Location and Access

This unnamed prospect is on an all-terrain-vehicle trail along the slope east of Jordan Creek, in the SW¼ of the NW¼ of the NW¼ of section 8, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.41-1). Access to the site is via the trail that splits from the Jordan Creek Road about ½ mile south of Silver City. The prospect is about ¼ mile south along the trail from the crossing at Jordan Creek. The site is probably on BLM land.

3.41.2 Geologic Features

This prospect is near the Deluge and may be on a small, subsidiary vein.

3.41.3 Site History

Nothing is known about the history of this prospect.

3.41.4 Environmental Conditions

3.41.4.1 Site Features

This prospect was visited by Earl Bennett on July 24, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 3, index 0:44:53-0:47:05). Documenting photograph is Roll B7, frames 15-16.

The prospect is probably a caved shaft beside the trail (Figure 3.41-2). The pit is about 8-10 feet deep (Figure 3.41-3) with some recent garbage and metal in the bottom. The waste dump is spread out in the bushes along the slope on the west side of the trail. No measurement of the dump was made, but it represents enough material for at least 50 feet of workings. The disturbed area covers less than 0.25 acre.

3.41.4.2 Sample Locations

3.41.4.2.1 Solid Samples

No solid samples were collected.

3.41.4.2.2 Water Samples

No water samples were collected.

3.41.5 Structures

No structures were found.
3.41.6 Safety

Although not a major concern, the pit is adjacent to the trail which receives a significant amount of use by visitors on trail bikes and all-terrain vehicles. Inattentive or careless riders could be injured if they went off the edge and into the pit.
Figure 3.41-1. Location of Unnamed Prospect, Site No. B7249904, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.41-2. Well-used trail adjacent to the caved shaft at Site No. B7249904 (Roll B7, frame #15).

Figure 3.41-3. View into the pit of the caved shaft at Site No. B7249904 (Roll B7, frame #16).
3.42 POTOSI MINE (Site No. BO-158)
Alternate name—Silver City Mine.

3.42.1 Site Location and Access

The Potosi Mine, identified as the Silver City Mine on the topographic map, is on the south side of Long Gulch in the S½ of the N½ of the SE¼ of section 6, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.42-1). The mine is just south of the town of Silver City (Figure 3.42-2) and is accessible on a dirt road that splits from Jordan Creek Road at the south edge of town. The Potosi appears to be on BLM land.

3.42.2 Geologic Features

Lindgren (1900, p. 157) reported:

The vein here lies in granite, but continues in the overlying basalt, in which, however, only a few bunches of ore were found. Nearly the whole of the production comes from the granite. The mine is developed by a tunnel and a shaft 300 feet deep located at the mouth of the tunnel. The vein is from 6 to 12 inches wide. The ore contains principally silver, with relatively little gold.

3.42.3 Site History

Lindgren (1900, p. 157) noted that the Potosi “was chiefly worked from 1875 to 1877, though developments have been continued on it at various other times on a small scale. . . . In Raymond’s report of 1869 a production of 160 tons, containing $38 per ton, is credited to it. In the report of 1885 a production of 11 ounces of gold and 2,000 ounces of silver is given. The mine has not been worked during the last few years.”

3.42.4 Environmental Conditions

3.42.4.1 Site Features

The Potosi Mine was visited by John Kauffman on July 25, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 3, index 0:47:07-0:51:25). Documenting photographs are Roll K17, frames 14-23.

The mine consists of a caved shaft, an open adit, and a large waste dump (Figure 3.42-3). Although caved, the shaft is at least 15 feet deep, with steep walls on three sides. The headwall is about 20-25 feet high (Figures 3.42-4 and 3.42-5). A few strands of barbed wire fencing have been strung around part of the shaft. Thirty feet west of the shaft is an open adit (Figure 3.42-6). Inside, the competent rock stands open with no supporting timbers (Figure 3.42-7). The waste dumps for the shaft and adit are combined, forming a large, flat pile parallel to Long Gulch. A notch in the face of the dump marks the division of the material from the two workings. The
dump is about 165 feet long, a maximum of 50 feet wide, and 50 feet thick (Figures 3.42-8 and 3.42-9). The toe extends nearly to the bottom of the gulch. The remains of a stamp mill are below the northeast end of the dump (Figure 3.42-10). No tailings were noted, but some may be obscured by the vegetation around the mill. The disturbed area at the site covers about 1 acre.

3.42.4.2 Sample Locations

3.42.4.2.1 Solid Samples

No solid samples were collected.

3.42.4.2.2 Water Samples

No water samples were collected.

3.42.5 Structures

The only structure found was the remains of the stamp mill.

3.42.6 Safety

Although caved, the shaft is 15-25 feet deep and has vertical walls on three sides. The few strands of barbed wire around the shaft do little to discourage people from getting too close to the opening. The open adit is competent, but large blocks of rock on the floor indicate caving is a possibility. The workings are easily accessible from Silver City, which is a popular attraction for tourists, including families with small children (Figures 3.42-11 and 3.42-12).
Figure 3.42-1. Location of the Potosi Mine, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.42-2. View to the northeast of Silver City from the Potosi Mine. The mine dump above the city in the distance is at the Morning Star Mine, which was not visited for this project (Roll K17, frame #19).
Figure 3.42-3. Sketch of the Potosi Mine.
Figure 3.42-4. Looking south at the shaft headwall of the Potosi Mine (Roll K17, frame #14).
Figure 3.42-5. View into the pit of the caved shaft at the Potosi Mine. The pit is 15-25 feet deep (Roll K17, frame #15).
Figure 3.42-6. Looking south at the open adit at the Potosi Mine (Roll K17, frame #16).
Figure 3.42-7. View inside the Potosi adit. Although the rock is competent, a number of large rocks have fallen onto the adit floor (Roll K17, frame #17).
Figure 3.42-8. Looking southwest across the surface of the combined waste dumps for the Potosi shaft and adit. The shaft is to the left of the backpack (Roll K17, frame #20).

Figure 3.42-9. Looking south at the Potosi waste dump from Silver City (Roll K17, frame #21).
Figure 3.42-10. Remains of the old stamp mill at the Potosi Mine. The upright beams house the cam shaft. The cam shaft wheel is made of wood. A collapsed ore bin is to the right of the cam housing. Silver City is at the upper left (Roll K17, frame #18).

Figure 3.42-11. The Idaho Hotel in Silver City. The town attracts numerous tourists during the summer months (Roll K17, frame #22).
Figure 3.42-12. View to the northwest along the main street of Silver City. The hotel annex is at the right edge of the picture. Note the tourists with several small children (Roll K17, frame #23).
3.43 POORMAN MILL (Site No. K7259904)

3.43.1 Site Location and Access

The Poorman Mill site is about 1 mile south of Silver City near the mouth of Sawpit Gulch in the SE¼ of the NE¼ of section 7, T. 5 S., R. 3 W., on the Silver City 7.5-minute quadrangle (Figure 3.43-1). Remnants of the mill are on the east side of Jordan Creek Road between the road and Jordan Creek (Figure 3.43-2). The site is probably on patented claims near the boundary with BLM land.

3.43.2 Geologic Features

The Poorman Mill site is in an area that is underlain by Cretaceous granitic rocks (Mitchell and Bennett, 1979).

3.43.3 Site History

The *Owyhee Avalanche* for October 4, 1895 reported (quoted in Statham, 1998, p. 23):

The new Poorman Mill - A fine new mill of the Poorman Gold Mine Ltd. is practically completed and now in operation. It is erected upon the site of the Leonard mill on Jordan Creek. It is 1.5 miles below the mines connected by a cable tramway. The building is 100 feet long, 61 feet wide and 69 feet high. The mill is constructed of heavy timbers and is a model of convenience.

The tram that conveys the ore from the mine [is] on an endless cable 3 miles long, running over pulleys upon towers at stated intervals, from which is suspended 110 buckets, holding about 100 pounds each. The buckets are loaded at the mine by shovels as they pass the ore platform, and upon reaching the Mill are dumped automatically as they pass the ore receiving room. Each bucket is provided with a latch lever, which strikes a rod at the proper point, releasing the lock and allowing the bottom of the bucket to swing downward and discharge its load. A counter weight closes the trap door. The tram was designed to run on gravity, but a heavy upgrade from the mine over the intervening bluff, and another lift at the mill, makes it necessary to attach power at the Mill.

3.43.4 Environmental Conditions

3.43.4.1 Site Features

The Poorman Mill site was visited by John Kauffman on July 25, 1999. A video segment describing the site is on Owyhee County Videotape (Tape 3, index 0:51:28-0:53:15). Documenting photographs are Roll K17, frames 10-11.

Only the rock foundation and concrete footings for the mill remain (Figures 3.43-3 and 3.43-4). A few pieces of scrap metal were also found. No tailings were noted at the site.
3.43.4.2 Sample Locations

3.43.4.2.1 Solid Samples
   No solid samples were collected.

3.43.4.2.2 Water Samples
   No water samples were collected.

3.43.5 Structures

   The footings and rock foundations were the only remaining parts of the mill. No other structures were found at the site.

3.43.6 Safety
   No safety hazards were found.
Figure 3.43-1. Location of the Poorman Mill site, Owyhee County, Idaho (U.S. Geological Survey Silver City 7.5-minute topographic map).
Figure 3.43-2. Sketch of the Poorman Mill site.
Figure 3.43-3. Rock foundation of the Poorman mill, looking southwest. Some of the granite blocks were shaped to fit. Jordan Creek Road passes just above the wall (Roll K17, frame #10).

Figure 3.43-4. Footings for the Poorman mill, with steel bolts below the rock foundation (Roll K17, frame #11).
References


Appendix A

GPS Locations
Table A-1. GPS readings for abandoned mine sites in the Silver City-War Eagle Mountain area.

<table>
<thead>
<tr>
<th>Site No.</th>
<th>Site Name</th>
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<th>Longitude</th>
<th>Comments</th>
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<td>BO-192</td>
<td>Cape Horn Mine</td>
<td>43° 00.808'</td>
<td>116° 41.986'</td>
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<td>BO-207</td>
<td>Red Jacket Shaft 1885</td>
<td>43° 00.465'</td>
<td>116° 42.098'</td>
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<td>BO-200</td>
<td>San Juan Tunnel 1885</td>
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<td>San Juan Tunnel</td>
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<td>San Juan Shaft</td>
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<td>116° 42.267'</td>
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<td>K7219901</td>
<td>Unnamed Prospect</td>
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<td>116° 42.338</td>
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<tr>
<td>BO-197</td>
<td>War Eagle Mine</td>
<td>43° 00.280'</td>
<td>116° 42.369'</td>
<td>@ shaft</td>
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<tr>
<td>BO-183</td>
<td>Silver Cord Group</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>adit 1</td>
<td>42° 59.888'</td>
<td>116° 42.708'</td>
<td>probably part of Pauper Mine, JV-9</td>
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<td>Silver Cord Mine, main shaft</td>
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407
Table A-1 (continued). GPS readings for abandoned mine sites in the Silver City-War Eagle Mountain area.

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<td>Ymir Mine</td>
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<td>Mississippi Mine</td>
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Appendix C
Geochemical Data
ACCURACY OF GEOCHEMICAL DATA

The following information was received on the subject of the accuracy and the detection limits for the geochemical data presented in this report:

Date: Fri, 24 Oct 1997 10:48:23 PST8PDT
From: Kim Anderson <kanderson@asl.fs.uidaho.edu>
To: Ruth E Vance <rvance@uidaho.edu>
Subject: Re: detection limit accuracy

That is something I put together some years ago for another client. Also Greg Moller [Technical Director, Analytical Sciences Laboratory] had input. Other than that, the refs are included in the discussions I sent [discussion titled “Practical Quantitation Limits”; see next page].

Good Luck
Kim,

Kim A. Anderson, Ph.D.
Asst. Prof. / Food Science and Toxicology Dept.
Chief Chemist / Analytical Sciences Laboratory
University of Idaho
Moscow, Idaho 83844-2201
208-885-7900/FAX 209-885-8937
Practical Quantitation Limits

Sensitivity of an analytical method is often based on its ability to reproducibly detect target analytes above the method noise level. Several similar definitions of this Minimum Detection Level or Limit (MDL) or Limit of Detection (LOD) are currently used. According to the American Chemical Society (ACS) (Principles of Environmental Analysis, p 9):

**Limit of detection (LOD)** "is defined as the lowest concentration level that can be determined as statistically different from the blank".

**Instrument detection limit (IDL)** "is the smallest signal above background noise that an instrument can detect reliably and is often equivalent to the LOD".

**Method detection limit (MDL)** "is the lowest concentration of analyte that can that a method can detect reliably in either a sample or a blank".

ACS recommends the value of LOD to be $3\sigma$ for a 99% confidence level, where $\sigma$ is the standard deviation of the measurement.

**Limit of Quantitation (LOQ)** "is defined as the level above which quantitative results may be obtained with a specified degree of confidence".

ACS recommends an LOQ of $10\sigma$ and this imparts a quantitative measurement uncertainty of +/-30% in the measured value at this 99% confidence level. ACS contends "quantitative interpretation, decision-making and regulatory actions should be limited to data at or above the limit of quantitation". In particular, ACS states: "Analytical chemists must always emphasize to the public that the single most important characteristic of any result obtained from one or more analytical measurements is an adequate statement of its uncertainty level. Lawyers usually attempt to dispense with uncertainty and try to obtain unequivocal statements; therefore, an uncertainty interval must be clearly defined in cases involving litigation and/or enforcement proceedings. Otherwise, a value of 1.001 without a specified uncertainty, for example, may be viewed as legally exceeding a permissible level of 1."

EPA Methods used for regulatory enforcement use the same definition of MDL. "The method detection limit is defined as the minimum concentration of a substance that can be measured and reported with 99% confidence that the value is above zero". Since performance of analytical methodology and therefore detection limits vary significantly with non-controllable laboratory to laboratory variables such as the exact type of analytical instrumentation, EPA promulgates the concept of Practical Quantitation Limits (PQL). A PQL is equal to the MDL multiplied by a factor of ten or greater and are published as a general guide to laboratory method performance. The factors can range from ten to ten thousand depending on sample matrix and are intended to allow the laboratory the flexibility to determine the relative performance of an analytical method in a more complex sample matrix. In confirmation of laboratory variability, EPA methods as well as other published analytical methods often estimate detection limits and quantitation limits using a bench-level expert, performance estimate.
Recognition of the 'average performance' nature of the PQL guidelines, EPA states that PQL's "are the lowest concentrations of analytes in (samples) that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The PQL's listed are generally stated to one significant figure. CAUTION: The PQL values in many cases are based only on a general estimate for the method and not on a determination for the individual compounds; PQL's are not a part of the regulation (40 CFR Part 264 Appendix IX, Footnote 6)."
### Water Samples

#### Dissolved Metals Screen (EPA 200.7)

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<th>Sample No.</th>
<th>Location</th>
<th>Al (ppm)</th>
<th>Ba (ppm)</th>
<th>Be (ppm)</th>
<th>Cd (ppm)</th>
<th>Ca (ppm)</th>
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<td>BDL</td>
<td>1.900</td>
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#### Total Recoverable Metals Screen (EPA 200.7)

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<td>Mg (ppm)</td>
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**Element Screen (EPA 3050)**

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### TCLP for Metals (EPA 1311)

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