Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Bureau of Land Management Property in the Mackay Region, Custer County, Idaho

Virginia S. Gillerman
Tamara S. Schiappa
Site Inspection Report for the Abandoned and Inactive Mines in Idaho on U.S. Bureau of Land Management Property in the Mackay Region, Custer County, Idaho

Virginia S. Gillerman
Tamara S. Schiappa

Staff Reports present timely information for public distribution. This publication may not conform to the agency's standards.
Report originally prepared in 2002 for the U.S. Bureau of Land Management
Under Participating Agreement No.1422-D910-A3-0206, Task Order #4

Field Inspection conducted by Tracy Morrison and Tamra A. Schiappa
TABLE OF CONTENTS

INTRODUCTION ........................................................................................................... 1

LOCATION .................................................................................................................. 1

GEOLOGY .................................................................................................................... 1

HAZARD ASSESSMENT .............................................................................................. 5
  Summary .................................................................................................................... 5

SITE DESCRIPTIONS ................................................................................................. 6
  Site ID-0084-00026 ............................................................................................... 6
  Site ID-0084-00027 ............................................................................................... 6
  Site ID-0084-00028 ............................................................................................... 7
  Site ID-0084-00029 ............................................................................................... 7

REFERENCES ............................................................................................................... 8

SITE INSPECTION REPORTS ...................................................................................... 9
  Site ID-0084-00026 Unnamed ............................................................................... 10
  Site ID-0084-00027 Cossack Tunnel ..................................................................... 21
  Site ID-0084-00028 Unnamed ............................................................................... 30
  Site ID-0084-00029 Unnamed ............................................................................... 39

ILLUSTRATIONS

TABLES
  Table 1: Location data for properties in the Mackay Region ................................. 4
  Table 2: Summary of physical and environmental hazards of sites ...................... 5

FIGURES

  Figure 1. Location map of the AML sites in the Mackay Region ............................ 3
  Figure 26-1: Site 26 location map ......................................................................... 13
  Figure 26-2: Adit #1, Caved. View looking 270 degrees ...................................... 18
  Figure 26-3: Adit #2, Caved. View looking 270 degrees ...................................... 19
  Figure 26-4: Adit #2, Caved. View looking 260 degrees ...................................... 20
INTRODUCTION

This report summarizes data collected from four prospects and abandoned mines evaluated in the Mackay Resource area during the 2001 summer field season. Site selection was based on a priority list developed by the BLM Challis Resource Area. The site visits focused primarily on physical hazards, but also included a comprehensive evaluation of possible environmental degradation. Data were collected using a Trimble Asset Surveyor GPS receiver, and when necessary, with Garmin handheld GPS units.

LOCATION

Prospects and abandoned mine sites evaluated during this study are located in Custer County, Idaho, in the Mackay Region (Figure 1). All prospects occur in the Alder Creek mining district, along and southwest of the Big Lost River corridor. The Alder Creek district consisted of several large mines including the Empire Mine (1902-1975) which was a major copper producer in the area. The properties evaluated in this study are located adjacent to or close by the Empire Mine property. All of the properties are located on the Idaho Falls 1:100,000 Quadrangle. Location details are provided in Table 1.

GEOLOGY

Kemp and Gunther (1907), Umpleby (1917), Ross (1930), and Nelson and Ross (1968;1969), were the first to initially study the ore deposits and map the geology of the Alder Creek mining district, Mackay region. More recent studies include Skipp et al., 1979; Wilson et al., 1988; and Wilson et al., 1995. Worl and Johnson (1995) published a geologic map of the geologic terranes of the Hailey 1° X 2° Quadrangle and the western part of the Idaho Falls 1° X 2° quadrangle, which is the most recent coverage of the study area.

The geology of the Mackay area consists mainly of Paleozoic carbonate rocks intruded by Tertiary plutons and overlain by Eocene Challis Volcanics. The Paleozoic strata is comprised of Early Mississippian to Early Permian formations including: the White Knob Limestone, Copper Basin, McGowan Creek, Middle Canyon, Scott Peak, South Creek, Surrret Canyon, Bluebird Mountain, and Snaky Canyon Formations. All of these rocks are interpreted as being deposited within a foreland basin setting varying from flysch deposits to shallow open marine carbonates, carbonate buildups and calcareous siltstones, sandstones and conglomerates (Wilson et al., 1988). The Tertiary plutons consist of porphyritic granites, granodiorites, quartz diorites, and leucogranites and are exposed in the White Knob Mountains and along the southeastern and western Copper Basin margins (Nelson and Ross, 1968; 1969, and Wilson et al., 1988). The extrusive Eocene Challis Volcanics include andesitic to rhyolitic flows, breccias and tuffs (Wilson et al., 1988). The majority of the mines in the area lie near the contact between the Early Mississippian White Knob Limestone and the Eocene Mackay stock (Nelson and Ross, 1968; 1969, and Mitchell, 1997).

Cretaceous thrust plates are the main underlying structures in south-central Idaho. The White Knob thrust plate underlies the Mackay region (Wilson et al., 1995). The Paleozoic sedimentary strata are folded into anticlines and synclines that trend north-northwest due to the Cretaceous thrusting in this area (Wilson et al., 1995). Numerous northeast-trending faults
related to the Trans-Challis fault system dissect the area controlling the local horsts, faults, intrusions, and dike swarms (Wilson et al., 1988; Wilson et al., 1995).

Three types of mineral deposits have been identified in the Mackay area and include: skarn deposits, polymetallic veins in the Paleozoic sedimentary rocks, and polymetallic veins in the volcanic rocks (Wilson et al., 1988). In the Alder Creek area, copper was the main commodity in the skarn deposits that was mined. Other deposits recovered contained lead, zinc, silver, gold, tungsten, and molybdenum (Nelson and Ross, 1969; Wilson et al., 1988, Wilson et al., 1995).
Table 1: Location data for properties in the Mackay Region (all are in UTM Zone 12).

<table>
<thead>
<tr>
<th>AML Site Number</th>
<th>Property Name</th>
<th>Site ID UTM Easting</th>
<th>Site ID UTM Northing</th>
<th>Quadrangle</th>
<th>Township</th>
<th>Range</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID-0840-00026</td>
<td>Unnamed</td>
<td>287,210 E</td>
<td>4,863,613 N</td>
<td>Mackay Reservoir</td>
<td>7 N</td>
<td>24E</td>
<td>NW NE 31</td>
</tr>
<tr>
<td>ID-0840-00027</td>
<td>Cossack Tunnel</td>
<td>286,655 E</td>
<td>4,863,242 N</td>
<td>Mackay Reservoir</td>
<td>7 N</td>
<td>24 E</td>
<td>NW SW 31</td>
</tr>
<tr>
<td>ID-0840-00028</td>
<td>Unnamed</td>
<td>288,046 E</td>
<td>4,865,716 N</td>
<td>Mackay Reservoir</td>
<td>7 N</td>
<td>24 E</td>
<td>NE NE 30</td>
</tr>
<tr>
<td>ID-0840-00029</td>
<td>Unnamed</td>
<td>286,707 E</td>
<td>4866361 N</td>
<td>Mackay Reservoir</td>
<td>7 N</td>
<td>24 E</td>
<td>NW SW 19</td>
</tr>
</tbody>
</table>
HAZARD ASSESSMENT
Summary

No major significant health or environmental hazards were noted in the properties visited during the course of this field evaluation. Most hazards noted are minor risks associated with horizontal mine openings. Access to the Cossack Tunnel (ID-0084-00027) has the potential for greatest concern since it is located right off of Rio Grande Canyon road, a major access road to the Challis National Forest and recreational sites. The mine opening is visible from the road but a hazard sign is located near the entrance. Table 2 summarizes the hazards noted.

Table 2: Summary of physical and environmental hazards of sites in the Mackay area.

<table>
<thead>
<tr>
<th>AML Site Number</th>
<th>IGS Number</th>
<th>Property Name</th>
<th>Open or Partially Open Adits</th>
<th>Open Shafts</th>
<th>Open Stopes</th>
<th>Aquatic Environmental Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID-0840-00026</td>
<td>No Reference</td>
<td>Unnamed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ID-0840-00027</td>
<td>No Reference</td>
<td>Cossack Tunnel</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ID-0840-00028</td>
<td>No Reference</td>
<td>Unnamed</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>ID-0840-00029</td>
<td>No Reference</td>
<td>Unnamed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
SITE DESCRIPTIONS

Site ID-0084-00026

Unnamed Site 26 occurs along the southwest side of the Big Lost River, approximately 1 mile southwest of Mackay (Table 1; Figure 1). Access to the property is achieved by crossing to the south side of the river on Rio Grande Canyon Road for approximately 1 mile and parking in the turn out on the north side of road, then hiking on an abandoned mining road to the adits. The property is located on the hill slope above the abandoned road. Various dump remnants have been left near the adits. Theumps are mainly covered by vegetation.

Hazards at this site are limited to three caved adits. The dumps of the adits are barely visible from the abandoned mining road off of Rio Grande Canyon road, but the caved adits are not. Each abandoned adit has some minor remnants of wood and other debris. The property occurs entirely on BLM-administered land. No environmental degradation was noted and the subtly visible openings do not pose a serious human health threat. Therefore, no remediation is necessary.

Site ID-0084-00027

The Cossack Tunnel, Site 27, is located on the southwest side of the Big Lost River approximately one-half mile south of Site 26 (Table 1; Figure 1). The property is accessible by following the Rio Grande Canyon Road out of Mackay approximately 1.5 miles. The Cossack Tunnel can be seen from the Rio Grande Canyon Road and lies approximately 1000 feet from the road. The Cossack Tunnel is located adjacent to and was the lowest level of the Empire Mine site which lies on private property. The tunnel reached a total of approximately 6,000 feet long and produced several thousand tons of copper ore during the Empire Mines’ history (Mitchell, 1997). The waste rock from the tunnel can also be seen from the road. However, at the time it was difficult to tell whether the waste rock was from the tunnel, from the flotation mill, or from the heap leach operation that was located on private property adjacent to BLM land.

The only hazard is the one fairly large open tunnel; however, a sign explaining the risks associated with the entrance to the tunnel is posted near the opening. The property occurs entirely on BLM-administered land. No flowing water occurs on the property. No significant environmental degradation was noted, however, there was an acrid smell and discolored tailings near the property that were probably associated with the Empire Mill. This could pose problems since the area appeared to have been frequently utilized as a motocross track. The portal can easily be closed with a gate and possible fencing around the tails is recommended to deter off-road vehicle use.
Site ID-0084-00028

Unnamed Site 28 occurs along the west side of the Big Lost River approximately 3 miles southwest of Mackay (Table 1; Figure 1). Access to the property is achieved by crossing to the south side of the river on Rio Grande Canyon Road and turning north on Blaze Canyon Road for approximately 3 miles, and parking on the north side of the road. The property is located on the hill slope above Blaze Canyon Road. Various dump remnants have been left near the open adit. The dumps are covered with minor amounts of vegetation.

A single open adit and associated dump are located at this site which is easily accessed from Blaze Canyon Road. No flowing water occurs on the property. Hazards at this site include one open and accessible adit. The property occurs entirely on BLM-administered land. Remediation could be limited to gating the open adit and or installing a fence. No other significant environmental degradation was noted.

Site ID-0084-00029

Unnamed Site 29 occurs along the west side of the Big Lost River, approximately 3 miles southwest of Mackay (Table 1; Figure 1). Access to the property is achieved by crossing to the south side of the river on Rio Grande Canyon Road and turning north on Blaze Canyon Road for approximately 3 miles. Continue to follow Blaze Canyon to a fork in the road, turn left and proceed for 200 feet. The adit is located on the north side of the hill. A small dump and associated caved adit occupy this site. Vegetation covers the area, hiding the site to the casual observer.

A single closed adit and small dump are located at this site a few hundred feet from Blaze Canyon Road. No flowing water is present on the property, and no environmental degradation was noted. The property occurs entirely on BLM-administered land. The adit is not clearly visible from the road. No remediation is required.
REFERENCES


SITE INSPECTION REPORTS
FOR A
PORTION OF THE MACKAY AREA
BUREAU OF LAND MANAGEMENT
ABANDONED/INACTIVE MINE LAND INVENTORY
FIELD CHECKLIST

A. SITE IDENTIFICATION
ID Number: 1 0 0 8 4 0 0 2 6
Site/Mine Name: Unnamed
Primary Commodity: 170, 260, 540 (Cu, Au, Ag)
IGS Number: None

B. LOCATION DATA
USGS Quad: Mackay Reservoir LAT: ___________ LONG: ___________ OR
UTM Coord: 4863613 N 0287210 E Zone 12 AND
Township: 7N Range: 24 E Section: 31 Subdivision: NW NE
Meridian: 09 County: Custer
Surface: BLM X / Non-BLM ___ Mineral Estate: BLM X / Non-BLM ___

C. ACCESS
Visible from: Nearest road 3 / Trail 3 / Population center 1
Access by: 2wd ___ / 4wd ___ / Hike x / Other ___
Access disturbance in need of reclamation: Length ___ / Width ___ / Acres ___
Road Log: Rio Grande Canyon Road 1 mile and park in turn out, Hike on mining road to adits.
Recent human use: N Describe:

D. SITE DESCRIPTION
Acreage: >5 Elevation: 6600
General slope (degrees): 0-10 ___ / 11-35 x / >35 ___
Floodplain: Disturbance in ___ / Adjacent to ___ / NA x
Recent mineral activity: N Describe:

E. MINING/EXPLORATION FEATURES (Provide numbers of features)
Open adits ___ / Closed adits 3 / Open inclines ___ / Closed inclines ___
Open shafts ___ / Closed shafts ___ / Stopes ___
Other openings ___ Type ___
Trenches ___ Length ___ / Prospects ___ / Open drill holes ___
Pits >30 ft. deep ___ / Pits <30 ft. deep ___ / Pit highwall length ___
Waste dumps: <0.1 ac ___ / 0.1 - 5 ac ___ / >5 ac ___
Tailings: <0.1 ac ___ / 0.1 - 5 ac ___ / >5 ac ___
Heaps ___ / Dredge ___
Ponds ___ / Dams ___
Mills ___ Type ___ / ___ / ___
Explosives ___ Describe:
Equipment/Machinery ___ / Headframes ___ / Trestles/tramways ___
Powerlines ___
Structures ___ Type ___
Condition: Good ___ / Fair ___ / Poor ___ / Number Locked ___
Homesites ___
Other: ___

(08/97, swm)
ENVIRONMENTAL FEATURES

VEGETATION
Vegetation: Healthy X / Stressed ___ / Dead ___ / Nonexistent ___
Evidence of natural revegetation: ___ / Describe: Brush and grass.

ANIMALS
Evidence: X ___ / Presence: ___ / Describe: Deer scat

GEOLOGY
Staining of soils N Describe: 
Sulfide minerals N Type(s): 
Tailings: Confined ___ / Unconfined ___ / Unknown ___

HYDROLOGY
(No water sources)
Water flowing from workings: ___
Standing water in workings: ___
Water through/over tailings: ___
Waste rock: ___
Ore: ___

Adjacent water sources:
Ground water: Type ___ pH ___ Conductivity ___ Flow (GPM) ___ Sketch # ___
Surface water: Type ___ pH ___ Conductivity ___ Flow (GPM) ___ Distance ___
Surface H2O above site: Type ___ pH ___ Conductivity ___ Flow (GPM) ___
Surface H2O below site: Type ___ pH ___ Conductivity ___ Flow (GPM) ___

Evidence of aquatic life ___ Location: ___ Describe: ___

Water bed color: White ___ / Yellow ___ / Yellow-Orange ___ / Orange ___
Brown ___ / Green ___ / Grey-Black ___ / Other ___

Samples collected: ___ Sketch #(s): ___

G. POTENTIAL HAZARDOUS MATERIALS (Provide numbers of features)

Chemical piles or spills ___ / Acid or Chemical odor ___ / Asbestos ___
Petrochemical Products ___ / Dump sites ___
Power Substations ___ / Transformers ___

Barrels, Tanks, Containers ___ Leaking ___ Contents: ___
Evidence of Underground Storage Tanks ___ Describe: ___

Other: ___

RADIATION
Background ___ Sketch # ___ mR/hr gamma ___ WL alpha ___
Adit/Incline ___ ___ ___ ___
Shaft ___ ___ ___ ___
Other: ___ ___ ___ ___

(03/95)
H. RECLAMATION

SITE CONDITIONS
Erosion: Rills ______/ Gullies ______/ Sheetwash ______
Unstable Rock ______/ Slope instability ______/ Wind erosion ______

MITIGATION STATUS
None ______/ Fencing ______/ Signs ______/ Safety hazards mitigated ______
Other: __________________________

Mitigation condition: Good ______/ Fair ______/ Poor ______
Site ID tags: ______/ Locations: __________________________

OPTIONAL: Identify the critical reclamation measures needed:

____ Cable nets, grates ______ Topsoil, soil amendments
____ Permanent seal ______ Revegetation
____ Gates ______ Stabilize/destroy structures
____ Backfill openings, pit ______ Drainage control
____ Recontour ______ Water treatment
____ Fences ______ Wildlife closure
____ Warning signs ______ No action
____ Plug open drill holes ______ Trash / clean up
____ Other: __________________________

I. SITE SKETCH
Show orientation, approximate scale, access route, adjacent drainages, and locations of features on attached sketch map. Use the feature symbols provided in the map legend on page 6.

J. GLOBAL POSITIONING SYSTEM DATA NA______ Rover File name: _____________
K. PHOTOGRAPHS
Number of photographs taken: 4: Roll 01-8; Frame # 15, 16, 17 and 18

L. ACTION
Site requires immediate investigation ______by: Law Enforcement ______/ BLM ______
HAZMAT ______/ Other __________________________

Reason: __________________________
________________________________
________________________________
________________________________
________________________________
________________________________
________________________________
(03/95)
Figure 26-1: Site 26 location map.
M. FEATURES - PROVIDE DIMENSIONS IN FEET.

<table>
<thead>
<tr>
<th>Feature</th>
<th>UTM or Length</th>
<th>UTM or Width</th>
<th>Height or Depth</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adit 1 (caved)</td>
<td>E0287244</td>
<td>N4863764</td>
<td>Way point 10</td>
<td>None</td>
</tr>
<tr>
<td>Dump 1</td>
<td>20 ft</td>
<td>10 ft</td>
<td>5 ft</td>
<td>None</td>
</tr>
<tr>
<td>Adit 2 (caved)</td>
<td>E0287194</td>
<td>N486622</td>
<td>Way Point 11</td>
<td>None</td>
</tr>
<tr>
<td>Adit 3 (caved)</td>
<td>E0287188</td>
<td>N4863652</td>
<td>Way Point 12</td>
<td>None</td>
</tr>
<tr>
<td>Dump 2 (adits 2 and 3)</td>
<td>40 ft</td>
<td>20 ft</td>
<td>10 ft</td>
<td>None</td>
</tr>
</tbody>
</table>

Field Notes:

INSPECTED BY: Tamra Schiappa
TITLE: Geologist
DATE: 8/17/2001

INSPECTED BY: Tracy Morrison
TITLE: Geologist
DATE: 8/17/2001

(03/95)
<table>
<thead>
<tr>
<th>Roll Number</th>
<th>Frame Number</th>
<th>Direction</th>
<th>Location/Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-8</td>
<td>15</td>
<td>270</td>
<td>Adit 1 (caved)</td>
</tr>
<tr>
<td>01-8</td>
<td>16</td>
<td>270</td>
<td>Adit 2</td>
</tr>
<tr>
<td>01-8</td>
<td>17</td>
<td>262</td>
<td>Adit 2</td>
</tr>
<tr>
<td>01-8</td>
<td>18</td>
<td>270</td>
<td>Adit 3 (Caved)</td>
</tr>
</tbody>
</table>
A. SITE IDENTIFICATION
Other BLM ID Number: ________________________________
Locatable _____ / Leasable _____ / Salable _____
Operator (last known): ________________________________
Commodities: Primary __________________ / Secondary __________________
Other Agency ID Number: ____________________________ Agency: __________________

B. LOCATION DATA
Site is in _____ or within a mile _____ of:
ACEC _____ / WSA _____ / Wilderness Area _____ / Riparian Area _____
Nominated for Designation to National Wild & Scenic River System _____

C. ACCESS
Distance in Miles to Closest Public:
Road ______ Dwelling _____ School _____
Potable Water _______ Water Source ______ Trail _____
Campground/Picnic Area _____ Other Public Use _____

D. SITE DESCRIPTION
Nearest named drainage: ____________________________ Distance: _______

G. POTENTIAL HAZARDOUS MATERIALS
Site is under regulatory action _____
CERCLIS Number ____________________________ OR
Federal Docket Number ____________________________

H. RECLAMATION: Closure Information
Clearances: Threatened & Endangered Species __________________________
Cultural Resources __________________________
Historic __________________________
Other __________________________

Date reclamation completed: __________________________ Cost: __________________________
Type of closure: __________________________ Comments: __________________________

Monitoring frequency: _______ Dates of monitoring visits:

(Note: The letters for the items above correspond to those on pp. 1 - 3 of this Checklist)

(03/95)
I. INTERVIEWS

Name ____________________________
Address ____________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Phone ____________________________________
Affiliation ________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Comments: __________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Name ____________________________
Address ____________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Phone ____________________________________
Affiliation ________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Comments: __________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Name ____________________________
Address ____________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Phone ____________________________________
Affiliation ________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Comments: __________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Figure 26-2: Adit #1, Caved. View looking 270 degrees. (Roll 01-8, Neg #1438, Frame 15; photograph by Tracy Morrison; August 17, 2001).
Figure 26-3: Adit #2, Caved. View looking 270 degrees. (Roll 01-8, Neg #1438, Frame 16; photograph by Tracy Morrison, August 17, 2001).
Figure 26-4: Adit #2, Caved. View looking 260 degrees. (Roll 01-8, Neg #1438, Frame 17; photograph by Tracy Morrison; August 17, 2001).

Figure 26-5: Adit #3, Caved. View looking 270 degrees. (Roll 01-8, Neg #1438, Frame 18; photograph by Tracy Morrison; August 17, 2001).
A. SITE IDENTIFICATION
ID Number: 1 D - 0 0 8 4 - 0 0 0 2 7
Site/Mine Name: Cossack Tunnel Primary Commodity: 170 (Cu) none recovered
IGS Number: None

B. LOCATION DATA
USGS Quad: Mackay Reservoir LAT: ___________ LONG: ___________ OR
UTM Coord: 4863242 N 0286655 E Zone 12 AND
Township: 7N Range: 24E Section: 31 Subdivision: NW SW
Meridian: 08 County: Custer
Surface: BLM X / Non-BLM ___ Mineral Estate: BLM X / Non-BLM ___

C. ACCESS
Visible from: Nearest road 3 / Trail 3 / Population center 3
Access by: 2wd ___ / 4wd ___ / Hike X / Other ___
Access disturbance in need of reclamation: Length 4 ft / Width 4 ft / Acres >.5
Road Log: Rio Grande Canyon Road 1.2 miles west. Tunnel is visible on the south side of the road.
Recent human use: Y Describe: Motorcycle tracks on the tailings.

D. SITE DESCRIPTION
Acreage: >5 ___ Elevation: 6892
General slope (degrees): 0-10 X / 11-35 ___ / >35 ___
Floodplain: Disturbance in ___ / Adjacent to X / NA ___
Recent mineral activity N ___ Describe: 

E. MINING/EXPLORATION FEATURES (Provide numbers of features)
Open adits 1 / Closed adits ___ / Open inclines ___ / Closed inclines ___
Open shafts ___ / Closed shafts ___ / Stopes ___
Other openings ___ Type ___
Trenches ___ Length _______ / Prospects ___ / Open drill holes ___
Pits >30 ft. deep ___ / Pits <30 ft. deep ___ / Pit highwall length _______
Waste dumps: <0.1 ac ___ / 0.1 - 5 ac ___ / >5 ac ___
Tailings: <0.1 ac X / 0.1 - 5 ac ___ / >5 ac ___
Heaps ___ / Dredge ___
Ponds ___ / Dams ___
Mills ___ Type ___ ___ ___ ___ ___
Explosives ___ Describe: 
Equipment/Machinery ___ / Headframes ___ / Trestles/tramways ___
Powerlines ___
Structures ___ Type ___
Condition: Good ___ / Fair ___ / Poor ___ / Number Locked ___
Homesites ___
Other: ___

(08/97, swm)
F. ENVIRONMENTAL FEATURES

VEGETATION
Vegetation: Healthy / Stressed X / Dead / Nonexistent
Evidence of natural revegetation: N / Describe: 

ANIMALS
Evidence: X / Presence: / Describe: Deer scat

GEOLOGY
Staining of soils X / Describe: Fe, Sulfur
Sulfide minerals Type(s): 
Tailings: Confined / Unconfined / Unknown

HYDROLOGY
(No water present)

#
Water flowing from workings: 
Standing water in workings: 
Water through/over tailings:
  waste rock: 
  ore: 
Adjacent water sources: Type / pH / Conductivity / Flow (GPM) / Distance
  Ground water: 
  Surface water: 
  Surface H2O above site: 
  Surface H2O below site: 
Evidence of aquatic life Location: Describe:

Water bed color: White / Yellow / Yellow-Orange / Orange
  Brown / Green / Grey-Black / Other

Samples collected: Sketch #(s):

G. POTENTIAL HAZARDOUS MATERIALS (Provide numbers of features)

Chemical piles or spills / Acid or Chemical odor / Asbestos
Petrochemical Products / Dump sites
Power Substations / Transformers

Barrels, Tanks, Containers Leaking Contents:
Evidence of Underground Storage Tanks Describe:

Other:

RADIATION
Background Sketch # mR/hr gamma WL alpha
Adit/Incline
Shaft
Other: 

(03/95)
H. RECLAMATION

SITE CONDITIONS
Erosion: Rills N / Gullies N / Sheetwash N
Unstable Rock N / Slope instability N / Wind erosion N

MITIGATION STATUS
None ____ / Fencing ____ / Signs X / Safety hazards mitigated Other: ____________________________

Mitigation condition: Good X / Fair ____ / Poor ____
Site ID tags: ____ / Locations: ____________________________

OPTIONAL: Identify the critical reclamation measures needed:

____ Cable nets, grates _____ Topsoil, soil amendments
____ Permanent seal _____ Revegetation
____ Gates _____ Stabilize/destroy structures
____ Backfill openings, pit _____ Drainage control
____ Recontour _____ Water treatment
____ Fences _____ Wildlife closure
____ Warning signs _____ No action
____ Plug open drill holes _____ Trash / clean up
____ Other: Recommend closure of the adit.

I. SITE SKETCH
Show orientation, approximate scale, access route, adjacent drainages, and locations of features on attached sketch map. Use the feature symbols provided in the map legend on page 6.

J. GLOBAL POSITIONING SYSTEM DATA NA Rover File name: ____________________________

K. PHOTOGRAPHS 1, 01-9 #19

L. ACTION
Site requires immediate investigation X by: Law Enforcement ____ / BLM X
HAZMAT ____ / Other ____________________________

Reason: Open adit approximately 100 ft from the road and clearly visible.

(03/95)
Figure 27-1: Cossack Tunnel location map.
M. FEATURES - PROVIDE DIMENSIONS IN FEET.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Length</th>
<th>Width</th>
<th>Height or Depth</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adit 1 (open)</td>
<td>4 ft</td>
<td>5 ft</td>
<td></td>
<td>Yes, sign present</td>
</tr>
<tr>
<td>Tailings</td>
<td>200 ft</td>
<td>100 ft</td>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>

Field Notes:

Sign on tree next to tunnel, warning individuals to stay out. Tunnel opens up to approx. 100' or more. Hard to tell specifically where the dump is located since the present dump encompasses all talus and dumps from sites west of tunnel. Many tire tracks present around tunnel and on dump/tailings/waste from motorcycles.

INSPECTED BY: Tamra Schiappa  TITLE: Geologist  DATE: 08/17/2001
INSPECTED BY: Tracy Morrison  TITLE: Geologist  DATE: 08/17/2001  

(03/95)
BLM AML INVENTORY FIELD CHECKLIST
PHOTO LOG

ID Number: 0084-00027
IGS: none

Fill out the following for each photo:

<table>
<thead>
<tr>
<th>Roll Number</th>
<th>Frame Number</th>
<th>Direction</th>
<th>Location/Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-8</td>
<td>19</td>
<td>190</td>
<td>Adit 1 (open)</td>
</tr>
</tbody>
</table>

(03/95)
BLM AML INVENTORY
SUPPLEMENTAL OFFICE DATA SHEET

ID Number: 0084-00027
IGS: none

A. SITE IDENTIFICATION
Other BLM ID Number: ____________________________
Locatable _____ / Leasable _____ / Salable _____
Operator (last known): ____________________________
Commodities: Primary ___________________________ / Secondary ___________________________
Other Agency ID Number: _________________________ Agency: ____________________________

B. LOCATION DATA
Site is in _____ or within a mile _____ of:
ACEC _____ / WSA _____ / Wilderness Area _____ / Riparian Area _____
Nominated for Designation to National Wild & Scenic River System _____

C. ACCESS
Distance in Miles to Closest Public:
Road ______ Dwelling ______ School ______
Potable Water ______ Water Source ______ Trail ______
Campground/Picnic Area ______ Other Public Use ______

D. SITE DESCRIPTION
Nearest named drainage: ___________________________ Distance: _______

G. POTENTIAL HAZARDOUS MATERIALS
Site is under regulatory action ______
CERCLIS Number ____________________________ OR
Federal Docket Number ____________________________

H. RECLAMATION: Closure Information
Clearances: Threatened & Endangered Species ___________________________
Cultural Resources ___________________________
Historic ___________________________
Other ___________________________

Date reclamation completed: __________________________
Type of closure: ____________________________ Cost: __________________________
Comments: ___________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

Monitoring frequency: _______ Dates of monitoring visits:
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

(Note: The letters for the items above correspond to those on pp. 1 - 3 of this Checklist)

(03/95)
BLM AML INVENTORY
SUPPLEMENTAL OFFICE DATA SHEET

ID Number: 0084-00027
IGS: none

I. INTERVIEWS

Name ____________________________
Address ________________________________________________________

Phone ____________________________
Affiliation _________________________________________________________

Comments: _________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Name ____________________________
Address ________________________________________________________

Phone ____________________________
Affiliation _________________________________________________________

Comments: _________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Name ____________________________
Address ________________________________________________________

Phone ____________________________
Affiliation _________________________________________________________

Comments: _________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
Figure 27-2: Cossack Tunnel, Adit #1 open with a sign posted. View looking 190 degrees. (Roll 01-8, Neg #1438, Frame 19; photograph by Tracy Morrison, August 18, 2001).
A. SITE IDENTIFICATION
ID Number: 1 D - 0 0 8 4 - 0 0 2 8
Site/Mine Name: Unnamed Primary Commodity: 170 (Cu)
IGS Number: None

B. LOCATION DATA
USGS Quad: Mackay Reservoir LAT: ______ LONG: ______ OR
UTM Coord: 4865716 N 0288046 E Zone 12 AND
Township: 7N Range: 24E Section: 30 Subdivision: NE NE
Meridian: 08 County: Custer
Surface: BLM X / Non-BLM ___ Mineral Estate: BLM X / Non-BLM ___

C. ACCESS
Visible from: Nearest road 3 / Trail ___ / Population center 0
Access by: 2wd ___ / 4wd 3 / Hike ___ / Other ___
Access disturbance in need of reclamation: Length ___ / Width ___ / Acres ___
Road Log: Rio Grande Canyon Road to Blaze Canyon, 3 miles to dump.

Recent human use: N Describe: ____________________________

D. SITE DESCRIPTION
Acreage: >.5 __________________ Elevation: 6887
General slope (degrees): 0-10 X / 11-35 ___ / >35 ___
Floodplain: Disturbance in ___ / Adjacent to X / NA ___
Recent mineral activity N Describe: ______________________

E. MINING/EXPLORATION FEATURES (Provide numbers of features)
Open adits 1 / Closed adits ___ / Open inclines ___ / Closed inclines ___
Open shafts ___ / Closed shafts ___ / Stopes ___
Other openings ___ Type ___
Trenches ___ Length ___ / Prospects ___ / Open drill holes ___
Pits >30 ft. deep ___ / Pits <30 ft. deep ___ / Pit highwall length ______
Waste dumps: <0.1 ac ___ / 0.1 - 5 ac ___ / >5 ac ___
Tailings: <0.1 ac ___ / 0.1 - 5 ac ___ / >5 ac ___
Heaps ___ / Dredge ___
Ponds ___ / Dams ___
Mills ___ Type ____, ____, ___
Explosives ___ Describe: ____________________________
Equipment/Machinery ___ / Headframes ___ / Trestles/trimways ___
Powerlines ___
Structures ___ Type ___
Condition: Good ___ / Fair ___ / Poor ___ / Number Locked ___
Homesites ___
Other: ____________________________

(08/97, swm)
F. ENVIRONMENTAL FEATURES

VEGETATION
Vegetation: Healthy X / Stressed ____ / Dead ____ / Nonexistent ____
Evidence of natural revegetation: X / Describe: Sage brush, other native bushes and native grasses

ANIMALS
Evidence: X / Presence: ____ / Describe: Deer Scat

GEOLOGY
Staining of soils N Describe:
Sulfide minerals N Type(s):
Tailings: Confined ____ / Unconfined ____ / Unknown ____

HYDROLOGY
(No water present) pH Conductivity Flow (GPM) Sketch

# Water flowing from workings: ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
Standing water in workings: ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
Water through/over tailings: ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
  waste rock: ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
  ore: ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

Adjacent water sources:
  Ground water: Type pH Conductivity Flow (GPM) Distance
  Surface water: ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
  Surface H2O above site: ___ ___ ___ ___ ___ ___ ___ ___ ___ ___
  Surface H2O below site: ___ ___ ___ ___ ___ ___ ___ ___ ___ ___

Evidence of aquatic life ____ Location: _________ Describe: _________

Water bed color: White ____ / Yellow ____ / Yellow-Orange ____ / Orange ____
  Brown ____ / Green ____ / Grey-Black ____ / Other ______

Samples collected: ____ Sketch #(#): _________

G. POTENTIAL HAZARDOUS MATERIALS (Provide numbers of features)

Chemical piles or spills ____ / Acid or Chemical odor ____ / Asbestos ____
Petrochemical Products ____ / Dump sites ____
Power Substations ____ / Transformers ____

Barrels, Tanks, Containers ____ Leaking ____ Contents: _________
Evidence of Underground Storage Tanks ____ Describe: _________

Other: _________

RADIATION Sketch # mR/hr gamma WL alpha
Background _________ _________ _________ _________
Adit/Incline _________ _________ _________ _________
Shaft _________ _________ _________ _________
Other: _________ _________ _________ _________

(03/95)
H. RECLAMATION

SITE CONDITIONS
Erosion: Rills / Gullies / Sheetwash
Unstable Rock / Slope instability / Wind erosion

MITIGATION STATUS
None / Fencing / Signs / Safety hazards mitigated
Other:

Mitigation condition: Good / Fair / Poor
Site ID tags: / Locations:

OPTIONAL: Identify the critical reclamation measures needed:

_____ Cable nets, grates
_____ Permanent seal
_____ Gates
_____ Backfill openings, pit
_____ Recontour
_____ Fences
_____ Warning signs
_____ Plug open drill holes
_____ Topsoil, soil amendments
_____ Revegetation
_____ Stabilize/destroy structures
_____ Drainage control
_____ Water treatment
_____ Wildlife closure
_____ No action
_____ Trash / clean up
_____ Other:

I. SITE SKETCH
Show orientation, approximate scale, access route, adjacent drainages, and locations of features on attached sketch map. Use the feature symbols provided in the map legend on page 6.

J. GLOBAL POSITIONING SYSTEM DATA NA Rover File name:

K. PHOTOGRAPHS
Number of photographs taken: 1, 01-8; Frame # 20

L. ACTION
Site requires immediate investigation by: Law Enforcement / BLM
HAZMAT / Other
Reason:

(03/95)
Figure 28-1: Site 28 location map.
M. FEATURES - PROVIDE DIMENSIONS IN FEET.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Length</th>
<th>Width</th>
<th>Height or Depth</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adit 1 (open)</td>
<td>4 ft</td>
<td>4 ft</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Dump 1</td>
<td>20 ft</td>
<td>50 ft</td>
<td>5 ft</td>
<td>None</td>
</tr>
</tbody>
</table>

Field Notes:

INSPECTED BY: Tamra Schiappa
TITLE: Geologist
DATE: 08/18/2001

INSPECTED BY: Tracy Morrison
TITLE: Geologist
DATE: 08/18/2001

(03/95)
BLM AML INVENTORY FIELD CHECKLIST
PHOTO LOG

ID Number: 0084-00028
IGS: None

Fill out the following for each photo:

<table>
<thead>
<tr>
<th>Roll Number</th>
<th>Frame Number</th>
<th>Direction</th>
<th>Location/Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-8</td>
<td>20</td>
<td>45</td>
<td>Adit 1 (open)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(03/95)
BLM AML INVENTORY
SUPPLEMENTAL OFFICE DATA SHEET

ID Number: 0084-00028
IGS: None

A. SITE IDENTIFICATION
Other BLM ID Number:
Locatable ____ / Leasable ____ / Salable ____
Operator (last known):
Commodities: Primary ______ / Secondary ______
Other Agency ID Number: __________________________ Agency: __________________________

B. LOCATION DATA
Site is in _____ or within a mile _____ of:
ACEC _____ / WSA _____ / Wilderness Area _____ / Riparian Area _____
Nominated for Designation to National Wild & Scenic River System _____

C. ACCESS
Distance in Miles to Closest Public:
Road ______
Potable Water ______
Campground/Picnic Area ______
Dwelling ______
Water Source ______
Other Public Use ______
School ______
Trail ______

D. SITE DESCRIPTION
Nearest named drainage: __________________________ Distance: _______

G. POTENTIAL HAZARDOUS MATERIALS
Site is under regulatory action _____
CERCLIS Number __________________________ OR
Federal Docket Number _______________________

H. RECLAMATION: Closure Information
Clearances:
Threatened & Endangered Species __________________________
Cultural Resources __________________________
Historic __________________________
Other __________________________

Date reclamation completed: __________________________
Type of closure: __________________________ Cost: __________________________
Comments: __________________________

Monitoring frequency: ________ Dates of monitoring visits:

(Note: The letters for the items above correspond to those on pp. 1 - 3 of this Checklist)

(03/95)
I. INTERVIEWS

Name __________________________________________
Address _______________________________________

Phone
Affiliation _____________________________________

Comments: __________________________________________
________________________________________________________
________________________________________________________
________________________________________________________

Name __________________________________________
Address _______________________________________

Phone
Affiliation _____________________________________

Comments: __________________________________________
________________________________________________________
________________________________________________________
________________________________________________________

Name __________________________________________
Address _______________________________________

Phone
Affiliation _____________________________________

Comments: __________________________________________
________________________________________________________
________________________________________________________
________________________________________________________
Figure 28-2: Adit #1 open. View looking 035 degrees. (Roll 01-8, Neg #1438, Frame 20; photograph by Tracy Morrison, August 18, 2001).
A. SITE IDENTIFICATION
ID Number: 1 D - 0 0 8 4 - 0 0 0 2 9
Site/Mine Name: Unnamed Primary Commodity: 170 (Cu)
IGS Number: None

B. LOCATION DATA
USGS Quad: Mackay Reservoir LAT: ___________ LONG: ___________ OR
UTM Coord: 4866361 N 0286707 E Zone 12 AND
Township: 7N Range: 24E Section: 19 Subdivision: NW SW Meridian: 08
County: Custer
Surface: BLM X / Non-BLM ___ Mineral Estate: BLM X / Non-BLM ___

C. ACCESS
Visible from: Nearest road 0 / Trail ___ / Population center 0
Access by: 2wd ___ / 4wd ___ / Hike X / Other ___
Access disturbance in need of reclamation: Length ___ / Width ___ / Acres ___
Road Log: Follow Blaze Canyon Road to fork in the road, turn left and proceed for 200 ft. The adit is located on the hillside to the North
Recent human use: N Describe: _________________________

D. SITE DESCRIPTION
Acres: > .5 Elevation: 6509
General slope (degrees): 0-10 ___ / 11-35 X / >35 ___
Floodplain: Disturbance in ___ / Adjacent to ___ / NA X
Recent mineral activity N Describe: _________________________

E. MINING/EXPLORATION FEATURES (Provide numbers of features)
Open adits ____ / Closed adits 1 / Open inclines ____ / Closed inclines ____
Open shafts ____ / Closed shafts ____ / Stopes ___
Other openings Type _________________________
Trenches ___ Length _______ / Prospects ___ / Open drill holes ___
Pits >30 ft. deep ___ / Pits <30 ft. deep ___ / Pit highwall length ______
Waste dumps: <.1 ac 1 / 0.1 - 5 ac ____ / >5 ac ___
Tailings: <.1 ac ___ / 0.1 - 5 ac ____ / >5 ac ___
Heaps ____ / Dredge ___
Ponds ____ / Dams ___
Mills ____ Type ____, ____, ___
Explosives ____ Describe: _________________________
Equipment/Machinery ____ / Headframes ____ / Trestles/tramways ____
Powerlines ___
Structures ____ Type _________________________
Condition: Good ____ / Fair ____ / Poor ____ / Number Locked ___
Homesites ___
Other: _________________________

(08/97, swm)
BLM AML INVENTORY FIELD CHECKLIST

ID Number: 0084-00029
IGS: none

F. ENVIRONMENTAL FEATURES

VEGETATION
Vegetation: Healthy X / Stressed / Dead / Nonexistent
Evidence of natural revegetation: X / Describe: Sage brush and native grasses

ANIMALS
Evidence: X / Presence: / Describe: Deer scat

GEOLOGY
Staining of soils N / Describe: 
Sulfide minerals N / Type(s): 
Tailings: Confined / Unconfined / Unknown

HYDROLOGY
(No water present)
Water flowing from workings: ______ pH ______ Conductivity ______ Flow (GPM) ______ Sketch # ______
Standing water in workings: ______ ______ ______ ______
Water through/over tailings: ______ pH ______ Conductivity ______ Flow (GPM) ______ Sketch # ______
waste rock: ______ ______ ______ ______
ore: ______ ______ ______ ______

Adjacent water sources:
Ground water: ______ ______ ______ ______
Surface water: ______ ______ ______ ______
Surface H2O above site: ______ ______ ______ ______
Surface H2O below site: ______ ______ ______ ______

Evidence of aquatic life ______ Location: ______ Describe: ______

Water bed color: White / Yellow / Yellow-Orange / Orange / Brown / Green / Grey-Black / Other ______

Samples collected: ______ Sketch #(s): ______

G. POTENTIAL HAZARDOUS MATERIALS (Provide numbers of features)

Chemical piles or spills / Acid or Chemical odor / Asbestos ______
Petrochemical Products / Dump sites ______
Power Substations / Transformers ______

Barrels, Tanks, Containers Leaking Contents:
Evidence of Underground Storage Tanks Describe: ______

Other: ______

RADIATION
Background ______ Sketch # ______ mR/hr gamma ______ WL alpha ______
Adit/Incline ______ ______ ______ ______
Shaft ______ ______ ______ ______
Other: ______ ______ ______ ______ (03/95)
H. RECLAMATION

SITE CONDITIONS
Erosion: Rills N / Gullies N / Sheetwash N
Unstable Rock N / Slope instability N / Wind erosion N

MITIGATION STATUS
None / X / Fencing / Signs / Safety hazards mitigated
Other: ____________________________

Mitigation condition: Good / Fair / Poor
Site ID tags: _____ / Locations: ____________________________

OPTIONAL: Identify the critical reclamation measures needed:

_____ Cable nets, grates
_____ Permanent seal
_____ Gates
_____ Backfill openings, pit
_____ Recontour
_____ Fences
_____ Warning signs
_____ Plug open drill holes
_____ Other: Only one caved adit

_____ Topsoil, soil amendments
_____ Revegetation
_____ Stabilize/destroy structures
_____ Drainage control
_____ Water treatment
_____ Wildlife closure
_____ No action
_____ Trash / clean up

I. SITE SKETCH
Show orientation, approximate scale, access route, adjacent drainages, and locations of features on attached sketch map. Use the feature symbols provided in the map legend on page 6.

J. GLOBAL POSITIONING SYSTEM DATA NA Rover File name: ____________

K. PHOTOGRAPHS
Number of photographs taken: 1, Roll # 01-8; frame #21

L. ACTION
Site requires immediate investigation _____by: Law Enforcement _____ / BLM _____
HAZMAT _____ / Other ____________________________

Reason: __________________________________________
____________________________________________________
____________________________________________________
____________________________________________________

(03/95)
Figure 29-1: Site 29 location map.
M. FEATURES - PROVIDE DIMENSIONS IN FEET.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Length</th>
<th>Width</th>
<th>Height or Depth</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adit 1 (caved)</td>
<td>4 ft</td>
<td>4 ft</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Dump</td>
<td>25 ft</td>
<td>30 ft</td>
<td>5 ft</td>
<td>None</td>
</tr>
</tbody>
</table>

Field Notes:

INSPECTED BY: **Tamra Schiappa**  TITLE: Geologist  DATE: 08/17/01

INSPECTED BY: **Tracy Morrison**  TITLE: Geologist  DATE: 08/17/01
### BLM AML INVENTORY FIELD CHECKLIST

**PHOTO LOG**

**ID Number:** 0084-00029  
**IGS:** none

Fill out the following for each photo:

<table>
<thead>
<tr>
<th>Roll Number</th>
<th>Frame Number</th>
<th>Direction</th>
<th>Location/Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-8</td>
<td>21</td>
<td>90</td>
<td>Adit 1 (caved)</td>
</tr>
</tbody>
</table>

(03/95)
BLM AML INVENTORY
SUPPLEMENTAL OFFICE DATA SHEET

ID Number: 0084-00029
IGS: none

A. SITE IDENTIFICATION
Other BLM ID Number: __________________________
Locatable _____ / Leasable _____ / Salable _____
Operator (last known): __________________________
Commodities: Primary __________________________ / Secondary __________________________
Other Agency ID Number: __________________________________________ Agency: __________

B. LOCATION DATA
Site is in _____ or within a mile _____ of:
ACEC _____ / WSA _____ / Wilderness Area _____ / Riparian Area _____
Nominated for Designation to National Wild & Scenic River System _____

C. ACCESS
Distance in Miles to Closest Public:
Road ______ Dwelling ______ School ______
Potable Water _______ Water Source ______ Trail ______
Campground/Picnic Area ______ Other Public Use ______

D. SITE DESCRIPTION
Nearest named drainage: __________________________ Distance: ________

G. POTENTIAL HAZARDOUS MATERIALS
Site is under regulatory action _____
CERCLIS Number __________________________ OR
Federal Docket Number __________________________

H. RECLAMATION: Closure Information
Clearances: Threatened & Endangered Species __________________________
Cultural Resources __________________________
Historic __________________________
Other __________________________

Date reclamation completed: __________________________ Cost: __________________________
Type of closure: __________________________ Comments: __________________________

Monitoring frequency: _______ Dates of monitoring visits: __________________________
________________________
________________________

(NOTE: The letters for the items above correspond to those on pp. 1 - 3 of this Checklist)

(03/95)
I. INTERVIEWS

Name ________________________________
Address _______________________________________________________________________

Phone _______________________________________________________________________
Affiliation ___________________________________________________________________

Comments: ___________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

Name ________________________________
Address _______________________________________________________________________

Phone _______________________________________________________________________
Affiliation ___________________________________________________________________

Comments: ___________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

Name ________________________________
Address _______________________________________________________________________

Phone _______________________________________________________________________
Affiliation ___________________________________________________________________

Comments: ___________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
Figure 29-2: Adit #1, Caved. View looking 90 degrees. (Roll 01-8, Neg #1438, Frame 21; photograph by Tracy Morrison, August 17, 2001).