STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706 • (208) 373-0502

C.L. "Butch" Otter, Governor
Toni Hardesty, Director

June 27, 2011

Mr. Jim Egnew
Payette National Forest Supervisor's Office
800 West Lakeside Avenue
McCall, ID 83638

Subject: Site Assessment of the Alaska Mine, Cuprum Area, Adams County, Idaho

Dear Mr. Egnew:

The Idaho Department of Environmental Quality (DEQ) has completed a review of historical mining data and geological information for the above referenced mixed ownership lands near Cuprum, Idaho. During the visit, mine site activities such as shafts, collapsed tunnels, adits, tailings piles/waste dumps, and collapsed structures were observed and mapped in order to provide a comprehensive analysis necessary to complete an Abbreviated Preliminary Assessment (APA).

The APA is used to help site investigators determine if their findings result in a determination of No Remedial Action Planned (NRAP), or if additional analysis is warranted. The APA documents the rationale for the decision on whether further steps in the site investigation process are required under the Federal Comprehensive Environmental Response, Compensation and Liabilities Act (CERCLA). If additional analysis was warranted, a Preliminary Assessment (PA) would have been prepared for this site.

PAs are conducted in accordance with CERCLA. The reasons to complete a PA include:

1) To identify those sites which are not Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) caliber because they do not pose a threat to public health or the environment (No Remedial Action Planned (NRAP));

2) To determine if there is a need for removal actions or other programmatic management of sites;

3) To determine if a Site Investigation, which is a more detailed site characterization, is needed; and/or

4) To gather data to facilitate later evaluation of the release of hazardous substances through the Hazard Ranking System (HRS).

DEQ has also completed PAs under contract with the U.S. Environmental Protection Agency in order to identify risks to human health and the environment and make recommendations to land owners regarding how risks might be managed, if necessary.

DEQ offers the following health and safety recommendations relating to the aforementioned mine. Open adits pose a safety hazard to the general public who often wish to enter and explore them.

Attached is the APA for the Alaska Mine. Although the Alaska Mine is located on private property and DEQ did not have permission from the landowner to access, DEQ utilized an unmarked open road which runs through the property to conduct an assessment. This road is open to recreationists and is not marked against trespass.

The APA contains mine history, limited geological information, a site photograph, and maps of the property. Based on this information, DEQ is recommending the Alaska Mine property status be designated as No Remedial Action Planned (NRAP).

If you have any comments or questions about this site, the report, DEQ's recommendations, or if I may be of any other assistance, contact me at (208) 373-0554.

Sincerely,

Bruce A. Schuld
Mine Waste Projects Coordinator
Waste Management and Remediation Division

Attachment

cc: Ken Marcy – U.S. Environmental Protection Agency
Alaska Mine File

ABBREVIATED PRELIMINARY ASSESSMENT

This is an Abbreviated Preliminary Assessment (APA) for the Alaska Mine near Cuprum, Idaho. This document provides the rationale for the determination of No Remedial Action Planned (NRAP) or if additional analysis or site investigation is necessary for the Alaska Mine. Additional sheets are attached which contain relevant information including historical data, site photographs, and maps generated during the site visit or desktop research.

Preparer: Daniel D. Stewart **Date:** 6/9/11
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(208) 983-0808
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Site Name: Alaska Mine

Previous Names (aka): Alaska Tungsten Mine, Idaho Copper Mining Co., Maud S., Mountain King, Alaska, Cleavland Fraction, Cleavland, Copper Crescent Lode, Norma Lode, and Mountain Queen Lode

Site Owner: Meridian Hill Resources, LLC

Address: P.O. Box 579
Centralia, WA 98531

Site Location: From Council, Idaho turn northwest on National forest development (Nfd) road 200 to Cuprum, Idaho (the road to the Oxbow Dam on the Snake River). Follow Nfd 200 until it intersects with Nfd 105, turn right and continue through Cuprum for approximately five miles to the Alaska Mine. The Alaska Mine is approximately 50 miles from Council.

Township 21 North, Range 3 West, Section 25

Latitude: 45.13361^{o}N **Longitude:** -116.64657^{o}W

Describe the release (or potential release) and its probable nature:

This site was investigated for potential releases of heavy metals and sediment from mine waste dumps and potential discharges of other deleterious materials, such as petroleum products and ore processing chemicals.

The Alaska Mine is located on private land with USFS mixed ownership. The adit is open and may be an attractive nuisance. The area is well vegetated around the adit with no sign of water

discharging from the adit during the time of DEQ's site visit. A second adit was collapsed with no water discharging.

The Alaska Adit is open and there were no signs posted against trespass at the time of DEQ's site visit.

Part 1 - Superfund Eligibility Evaluation

If all answers are "no" go on to Part 2, otherwise proceed to Part 3.	**YES**	**NO**
1. Is the site currently in CERCLIS or an "alias" of another site?		**x**
2. Is the site being addressed by some other remedial program (Federal, State, or Tribal)?		**x**
3. Are the hazardous substances that may be released from the site regulated under a statutory exclusion (e.g., petroleum, natural gas, natural gas liquids, synthetic gas usable for fuel, normal application of fertilizer, release located in a workplace, naturally occurring, or regulated by the NRC, UMTRCA, or OSHA)?		**x**
4. Are the hazardous substances that may be released from the site excluded by policy considerations (i.e., deferred to RCRA corrective action)?		**x**
5. Is there sufficient documentation to demonstrate that there is no potential for a release that constitutes risk to human or ecological receptors? (*e.g., comprehensive remedial investigation equivalent data showing no release above ARARs, completed removal action, documentation showing that no hazardous substance releases have occurred, or an EPA approved risk assessment completed)?*	**x**	

Please explain all "yes" answer(s):

A site inspection involving direct observations confirmed contaminants of concern do not exist in concentrations that present a threat to human health or the environment. There are no noticeable waste dumps on site and it appears most, if not all, of the ore was removed from the area.

Part 2 - Initial Site Evaluation

For Part 2, if information is not available to make a "yes" or "no" response, further investigation may be needed. In these cases, determine whether an APA is appropriate. Exhibit 1 parallels the questions in Part 2. Use Exhibit 1 to make decisions in Part 3.

If the answer is "no" to any of questions 1, 2, or 3, proceed directly to Part 3.	**YES**	**NO**
1. Does the site have a release or a potential to release?		**x**
2. Does the site have uncontained sources containing CERCLA eligible substances?		**x**
3. Does the site have documented on-site, adjacent, or nearby targets?		**x**

If the answers to questions 1, 2, and 3 above were all "yes" then answer the questions below before proceeding to Part 3.	**YES**	**NO**
4. Does documentation indicate that a target (e.g., drinking water wells, drinking surface water intakes, etc.) has been exposed to a hazardous substance released from the site?		**x**
5. Is there an apparent release at the site with no documentation of exposed targets, but there are targets on site or immediately adjacent to the site?		**x**
6. Is there an apparent release and no documented on-site targets or targets immediately adjacent to the site, but there are nearby targets (e.g., targets within one mile)?		**x**
7. Is there no indication of a hazardous substance release, and there are uncontained sources containing CERCLA hazardous substances, but there is a potential to release with targets present on site or in proximity to the site?		**x**

Notes:

During the site assessment, DEQ used references from several different documents including USGS maps, county tax rolls, and historical reports that have spelled numerous claim names, town sites and/or geographic features differently from one and another. DEQ's use of the different spellings is to remain in context with the reference used for each given section of text written in this report.

Exhibit 1 – Site Assessment Decision Guidelines for a Site

Exhibit 1 identifies different types of site information and provides some possible recommendations for further site assessment activities based on that information. The assessor should use Exhibit 1 in determining the need for further action at the site, based on the answers to the questions in Part 2. Please use your professional judgment when evaluating a site. Your judgment may be different from the general recommendations for a site given below. **(Circle or highlight responses)**

Suspected/Documented Site Conditions		**APA**	**Full PA**	**PA/SI**	**SI**
1. Releases or potential to release are not documented at the site.		Yes			
2. Uncontained sources with CERCLA-eligible substances have not been documented as being present on the site. (i.e., they do exist at site)		Yes			
3. On-site, adjacent, or nearby receptors are not present.		Yes			
4. There is no documentation or observations made leading to the conclusion that a sensitive receptor is present or may have been exposed (e.g., drinking water system user inside four mile TDL)	Option 1: APA	Yes			
5. There is documentation that a sensitive receptor has been exposed to a hazardous substance released from the site.	Option 2: Full PA or PA/SI	No			
6. There is an apparent release at the site with no documentation of targets, but there are targets on site or immediately adjacent to the site.	Option 1: APA SI	No			
	Option 2: PA/SI	No			
7. There is an apparent release and no documented on-site targets and no documented targets immediately adjacent to the site, but there are nearby targets. Nearby targets are those targets that are located within one mile of the site and have a relatively high likelihood of exposure to a hazardous substance migration from the site.		No			
8. There are: no indications of a hazardous substance release; uncontained sources containing CERCLA hazardous substances; but there is a potential to release with targets present on site or in proximity to the site.		No			

Part 3 - EPA Site Assessment Decision

When completing Part 3, use Part 2 and Exhibit 1 to select the appropriate decision. For example, if the answer to question 1 in Part 2 was "no," then an APA may be performed and the "NRAP" box below should be checked. Additionally, if the answer to question 4 in Part 2 is "yes," then you have two options (as indicated in Exhibit 1): Option 1 -- conduct an APA and check the "Lower Priority SI" or "Higher Priority SI" box below; or Option 2 -- proceed with a combined PA/SI assessment.

Check the box that applies based on the conclusions of the APA:

x	No Remedial Action Planned (NRAP)		Defer to NRC
	Higher Priority SI		Refer to Removal Program
	Lower Priority SI		Site is being addressed as part of another CERCLIS site
	Defer to RCRA Subtitle C		Other:

DEQ Reviewer:

Bruce A. Schuld — 6/24/11

Bruce A. Schuld — Date

Please Explain the Rationale for Your Decision:

There are no direct airborne or surface or ground water pathways to any potable water sources or residences. There are several recreational home sites within two miles and the town of Cuprum has the nearest full time residences. Cuprum is at least five miles from the Alaska Mine. The nearest surface water pathway is Indian Creek, which is approximately one mile from the mine. The mine site is a dry site with no water present. No evidence of ore or mineralized rock remained at the site.

As a result of our observations, DEQ is recommending this site be designated as "No Remedial Action Planned" (NRAP).

Attachments:

Historical Information
Maps

Historical Information

The following was taken from *Mining Geology of the Seven Devils Region; Idaho Bureau of Mines and Geology Pamphlet No. 97, Earl F. Cook, 1954, 31 p*:

TUNGSTEN DEPOSITS

Alaska mine

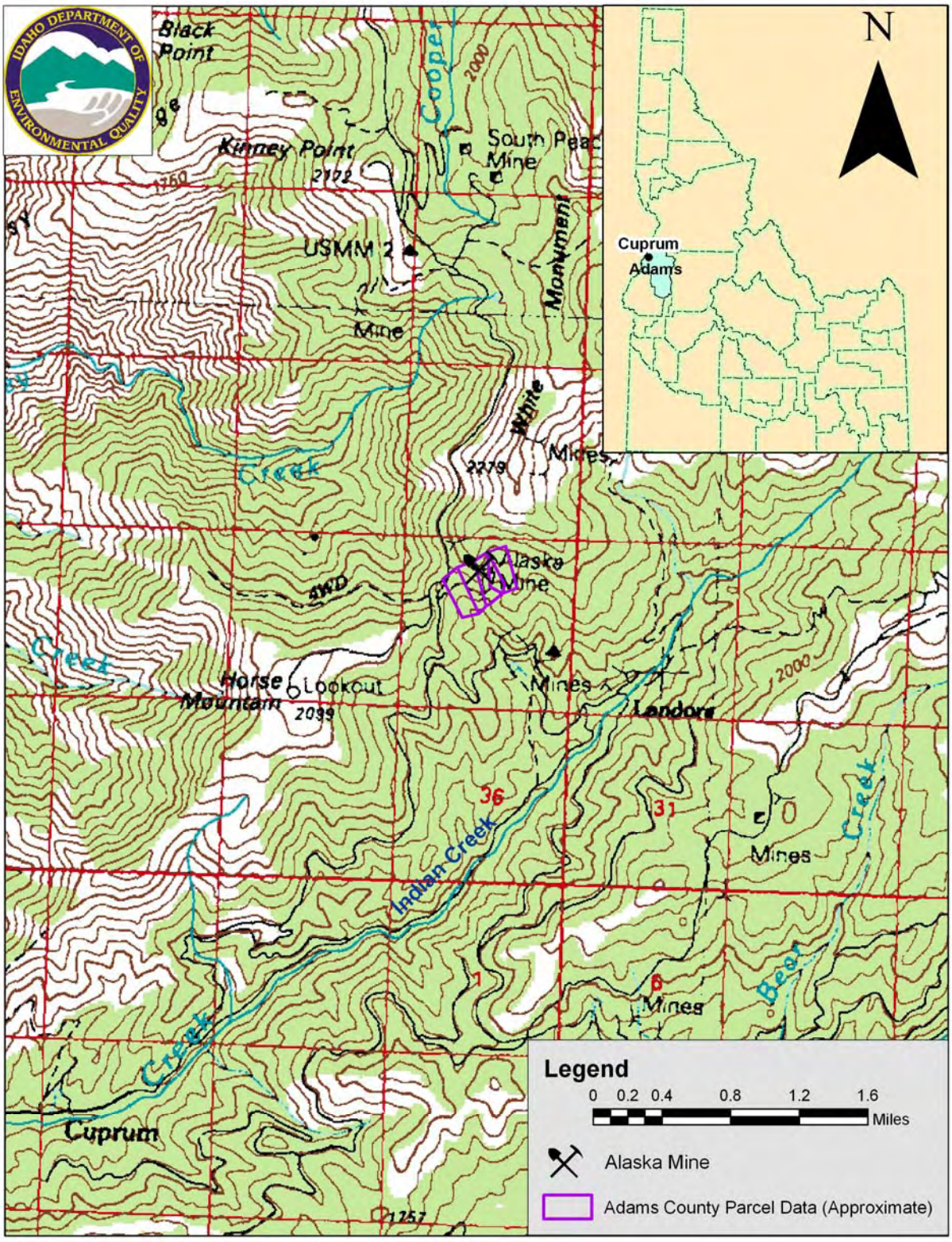
The only producing mine in the Seven Devils region during 1953 was the Alaska tungsten mine, located just southeast of Lockwood Saddle about 5 miles by road north of Cuprum. The Alaska claims were patented as copper claims in the 1890's, but no copper has been produced in many years. Production of tungsten ore began in 1952 with the shipment of 36 tons of ore containing 1.84 per cent W03 (tungstic oxide). In 1953, 241 tons of 1.57 % W03 ore were shipped. Because of the high content of molybdenum, the ore is subject to a price penalty. To compensate for losses during milling, only 80 percent of the tungsten content is paid for. Despite these factors the production of the two summers yielded $16,650 before transportation and milling charges. Production is from a new opening on a hillside a few hundred feet from the nearest copper workings. Here a slab of limestone at least 60 feet wide, striking N. 5° W. and dipping 78° east, has been engulfed in quartz diorite with the formation of tactite zones in which the tungsten is found. The tungsten mineral is a molybdenum-rich scheelite of the isomorphous scheelite-powellite series. Powellite, the molybdate end of the series, was first reported from the Peacock mine of the Seven Devils (Melville, 1891), having never before been found in nature.

A face 40 feet wide was opened on the hillside, showing alternating bands of tactite and marble from one to 15 feet in width. Of the 40 feet in the face, 6 to 10 feet are marble, the rest tactite. The tungsten values are limited, however, to one of the tactite bands, about five feet wide, which was sampled by the Idaho Bureau of Mines and Geology and found to contain 2.2 per cent W03. A 24-foot sample across most of the remainder of the exposed tactite gave only 0.05 percent W03. A stringer of copper mineralization, mainly malachite and azurite, occurs along one of the tactite-marble contacts. Other assays across this same face give 2.40 percent W03 for the ore zone and from 0.01 to 0.88 percent for other parts of the face. A tactite zone forty feet wide at the level of the access road and within the "lime dike", yielded assays of 0.32 to 0.91 percent W03, the weighted average being 0.53 percent.

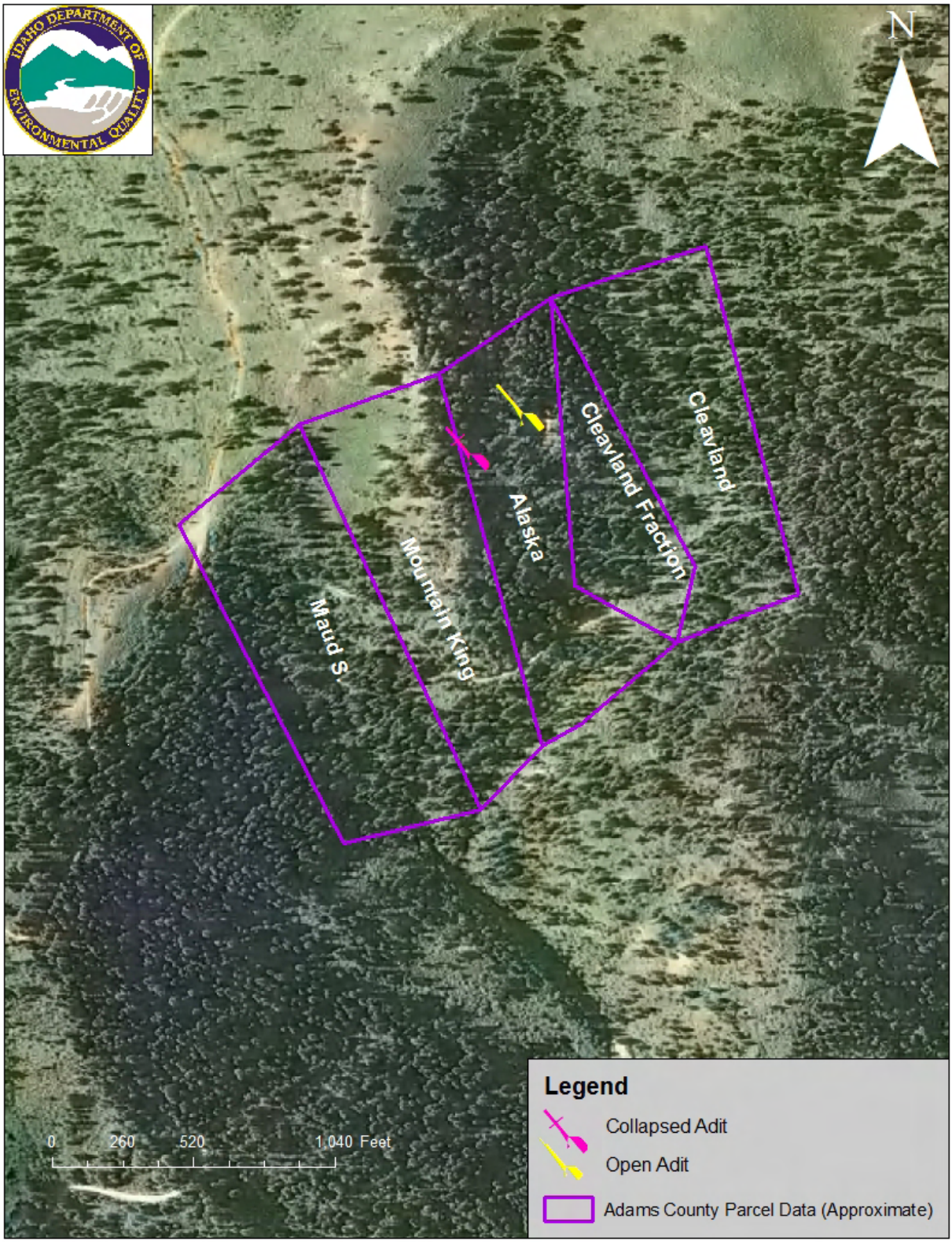
Examination of a rock thin section shows scheelite-powellite filling interstices between garnet, epidote, and diopside crystals. The scheelite-powellite is later than the lime silicates and has apparently deposited in fractured tactite, largely replacing residual calcite. Cannon and Grimaldi (1953, p. 909-910) apparently believe that much of the powellite in the Seven Devils is of secondary origin, having replaced molybdenite, the primary mineral. The copper mineralization is much later than the tungsten and has been guided by post-tungsten fractures. Therefore, the only relationship between the two is that they both occur in the tactite. Locally, there is considerable coarsely crystalline quartz and secondary calcite in the tactite, both very late, low-temperature minerals. Some post-copper fractures are filled by epidote or quartz-epidote veinlets. The geologic map of the property shows that the limestone slab of the mine area is probably a faulted-off portion of the large "lime dike" which forms a conspicuous ridge southeast of

Lockwood Saddle. The chances of extension of this tabular block along strike appear excellent but the persistence of the tungsten, controlled as it is by local fractures in the tactite, is unpredictable. Only more exploration, which is certainly justified and necessary, will tell the story. This is an excellent prospect and may develop into a good mine. At present, the operators are having difficulty finding a buyer who will accept the high-molybdenum ore, but this should be only a temporary setback. The need is for exploration to develop enough ore reserves to justify a mill in order to reduce transportation charges which, during the summer of 1953, amounted to $23 per ton of ore.

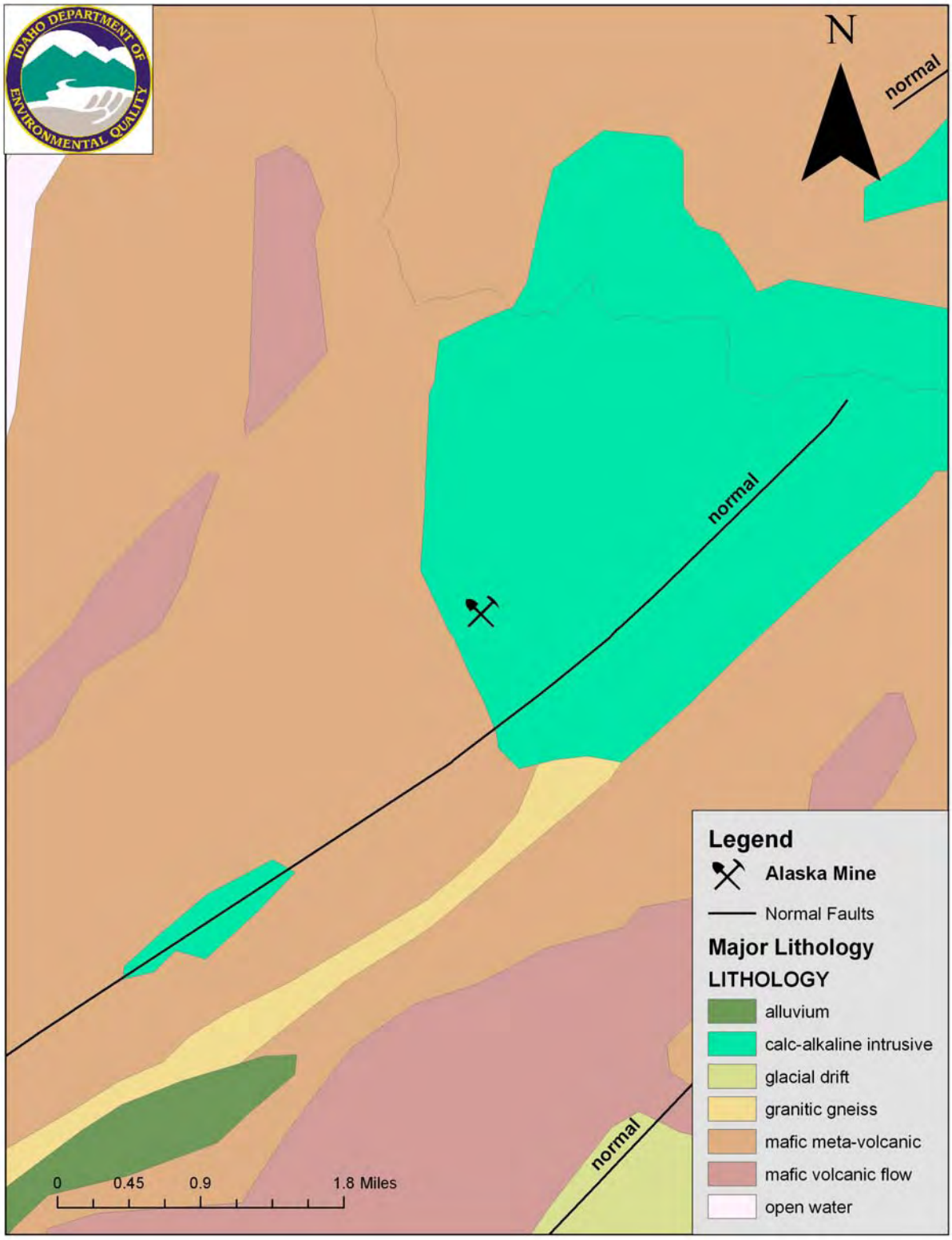
Maps



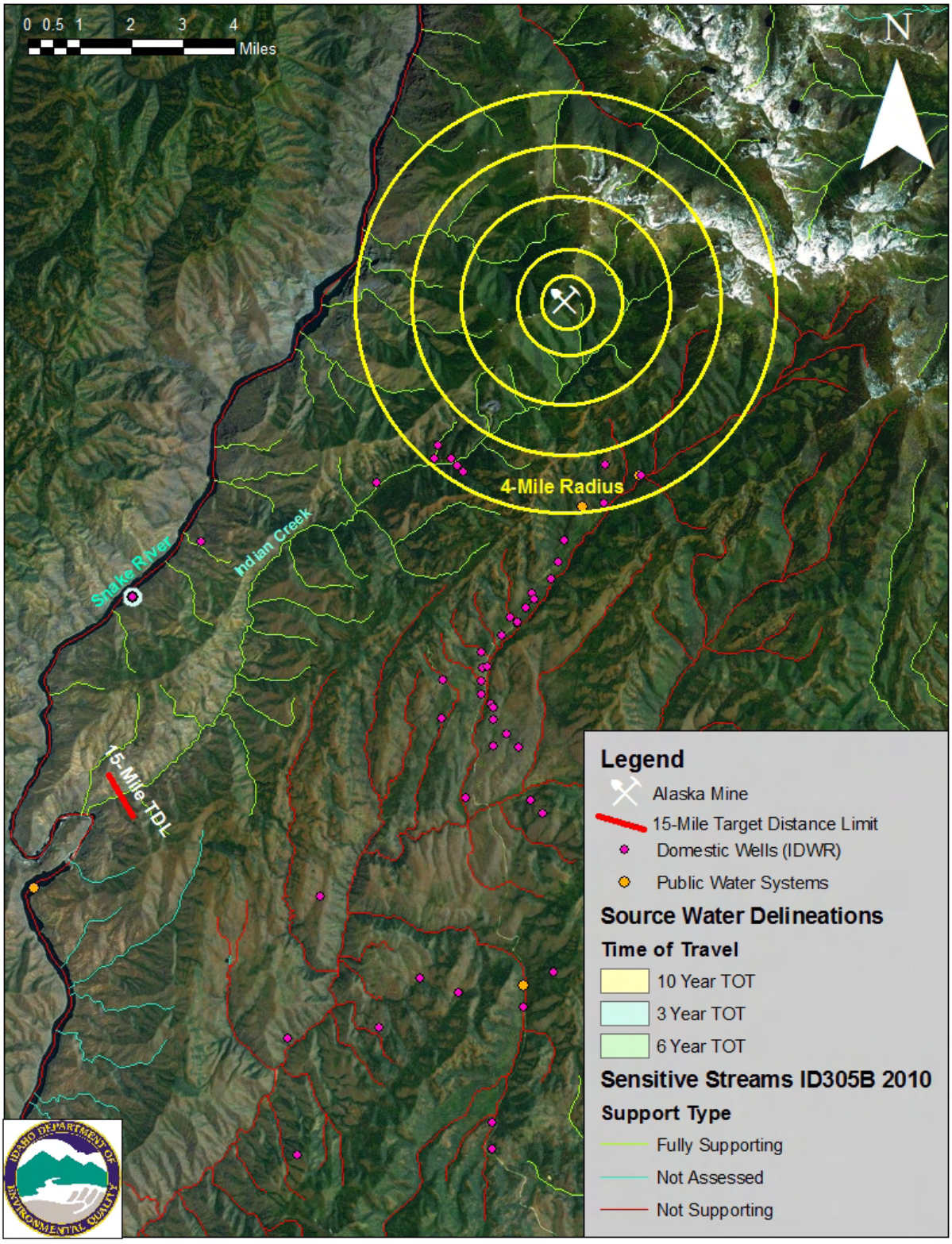
Map 1. Location of the Alaska Mine with Adams County 2010 Parcel Data Overlay (Map Source: USGS 100k Quads)



Map 2. Alaska Mine claim with adits identified and adjacent claims (Map Source: 2009 Natural Color 1-meter National Agriculture Imagery Program (NAIP) Idaho Map)



Map 3. Major lithology of Alaska Mine and surrounding area (Map Sources: SDE Feature Class, USGS 1995 and Idaho DEQ GIS ArcSDE 9.2 Geodatabase)



Map 4. One public water system is located within the four mile radius; however it is segregated by structural geology. No significant wetlands exist within the 4-mile radius or 15-mile target distance limit (TDL). Indian Creek is fully supported. (Map Source: World Imagery ArcGIS)

Map 5. Sensitive species within four mile radius and surrounding area. Species of concern: non-game animals and plants. (Map Sources: SDE Feature Dataset, Animal Conservation Database and Idaho DEQ GIS ArcSDE 9.2 Geodatabase)