STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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

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

November 30, 2007

Don Ayers
404 Halstead St.
Caldwell, ID 83605

RE: Site Assessment of the Mattie Quartz Nos. 2 and 4 and Harrison No. 2 patented mining claims

Dear Mr. Ayers:

The Idaho Department of Environmental Quality (IDEQ) has completed a review of historical mining data and geological information, and completed a site visit to the Mattie Quartz and Harrison patented mining claims. During the site visit, former mining sites were evaluated and photographs were collected for documentation in a Preliminary Assessment (PA).

PAs are conducted according to the federal Comprehensive Environmental Response, Compensation and Liabilities Act (CERCLA). The reasons to complete a PA include:

1) To identify those sites which are not eligible for CERCLIS 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 through the Hazard Ranking System (HRS)

IDEQ has 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.

No samples were collected during the site visit because no mine waste dumps or open adits were observed. Based on existing conditions and residential uses of the properties, no potential risks to human health and the environment were identified. There was no

evidence of acid mine drainage or impacted surface waters. Subsequent to our analysis IDEQ has determined that No Remedial Action is Planned (NRAP) for this property.

However, based on the historical information regarding mine development and production, IDEQ recommends that your future development plans incorporate risk management provisions for any residential home sites, and to protect worker health and safety from potential risks associated with heavy metals which may be present. IDEQ did not note any dangerous openings or other physical hazards which should be managed or closed.

Attached is the Abbreviated Preliminary Assessment Checklist for the property area which summarizes how IDEQ came to its NRAP recommendation for the property. Photos of the subject area are also attached. Maps showing the property parcels, area geology, nearby ground water wells, nearby threatened and endangered species, nearby surface water bodies and wetlands are attached. Several gold prospects existed in this area, however, limited historical information on the former mine sites was found. The Mattie Quartz mine had limited production and was worked during the early 1900's up until 1933. Excerpts from A. Anderson's "Geology and Ore Deposits of Boise Basin, Idaho," 1947 USGS report is also included.

IDEQ very much appreciates your cooperation and approval for our access, and looks forward to addressing any questions you may have regarding our findings. Please call me if you have any comments, questions, or I may be of any other assistance. We very much appreciate any feedback you can give us relative to our services.

Sincerely,

Bruce A. Schuld
Mine Waste Projects Coordinator

attachments

cc: Ken Marcie – U.S. Environmental Protection Agency
USDA Forest Service, Boise National Forest
file

Photo 1: View of disturbed area near former Mattie Quartz adit. Wood debris pile is present near disturbed soil.

Photo 2: View of thick vegetation in dry gulch near Mattie Quartz

Photo No. 3: View of wood debris pile near Mattie Quartz

Photo No. 4: Forested hillside near Gem of the Mountains site

Photo No. 5: Wood debris near former workings on North facing slope of Harrison claim

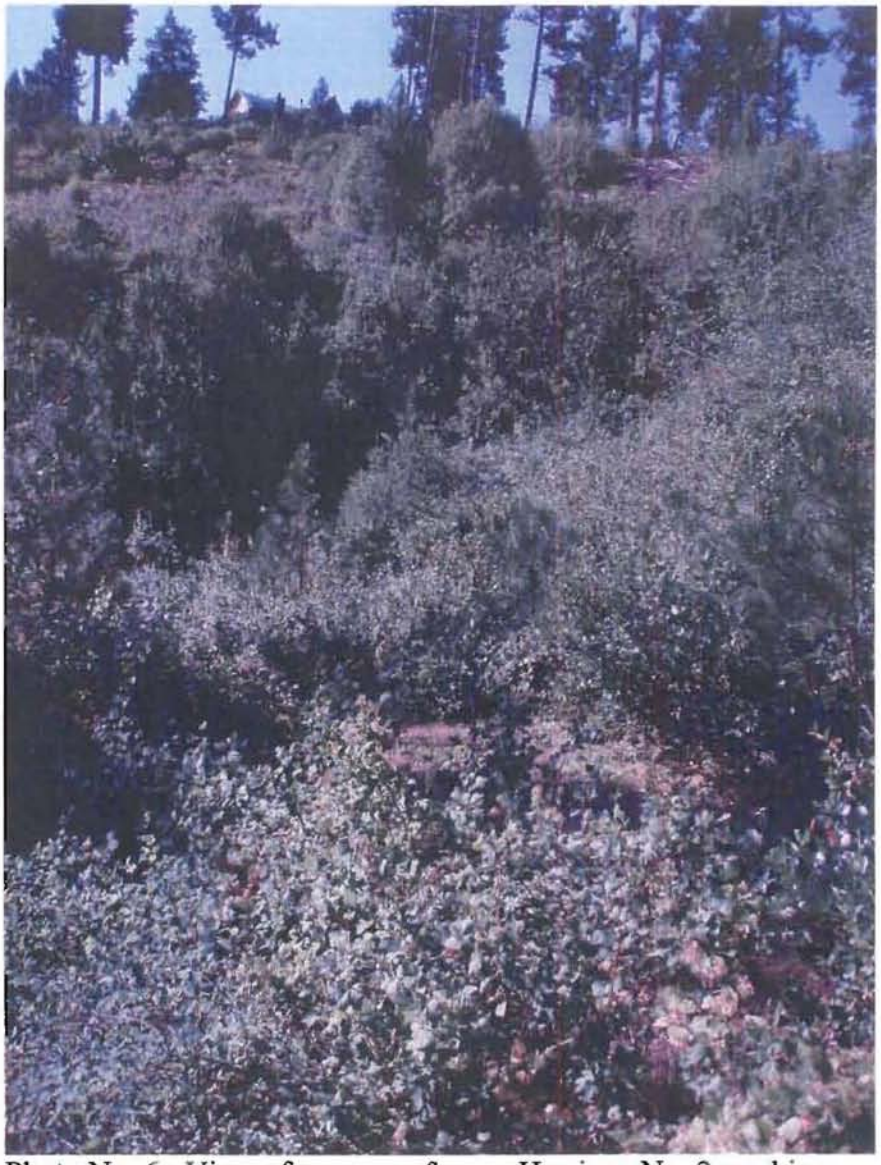
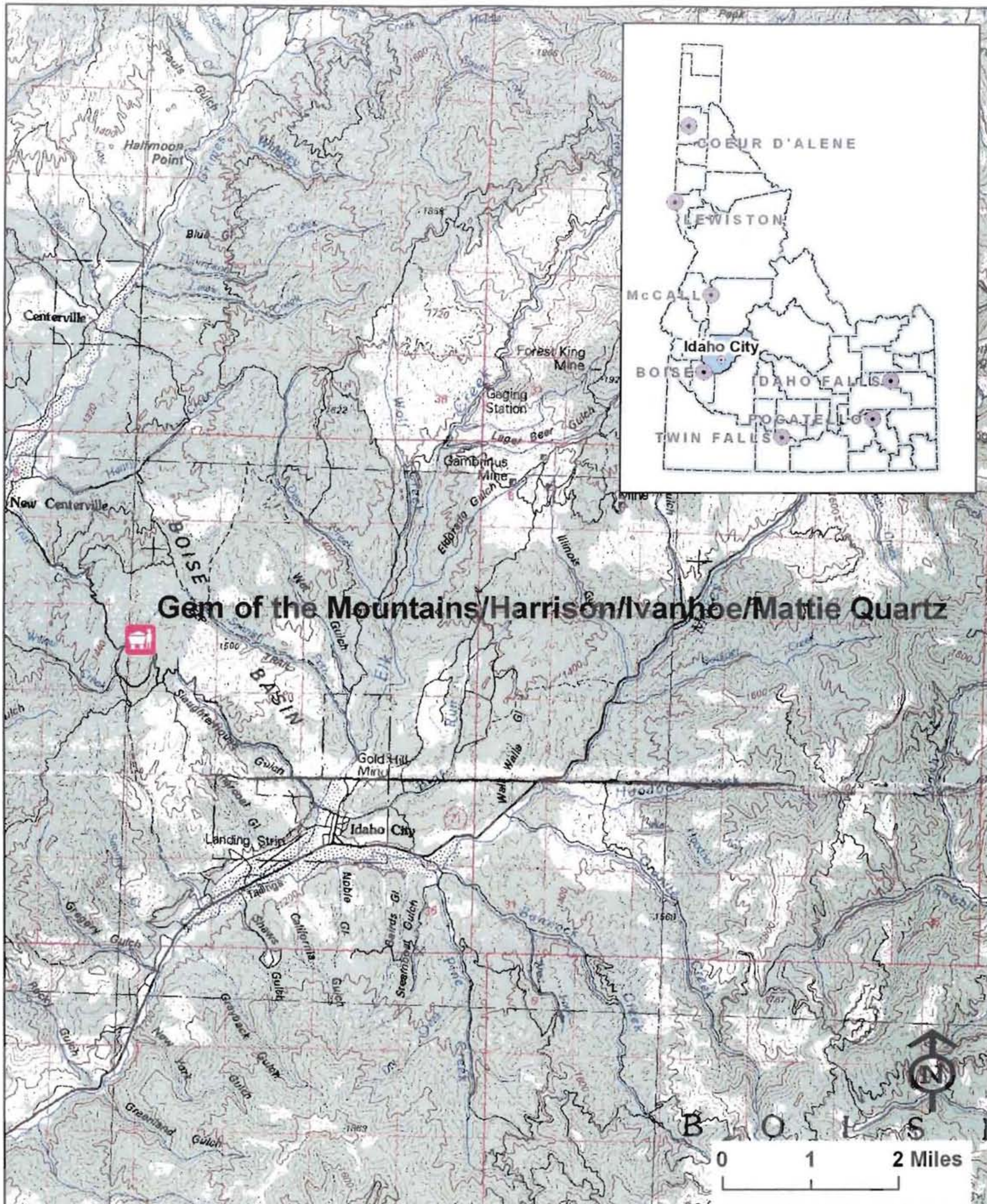
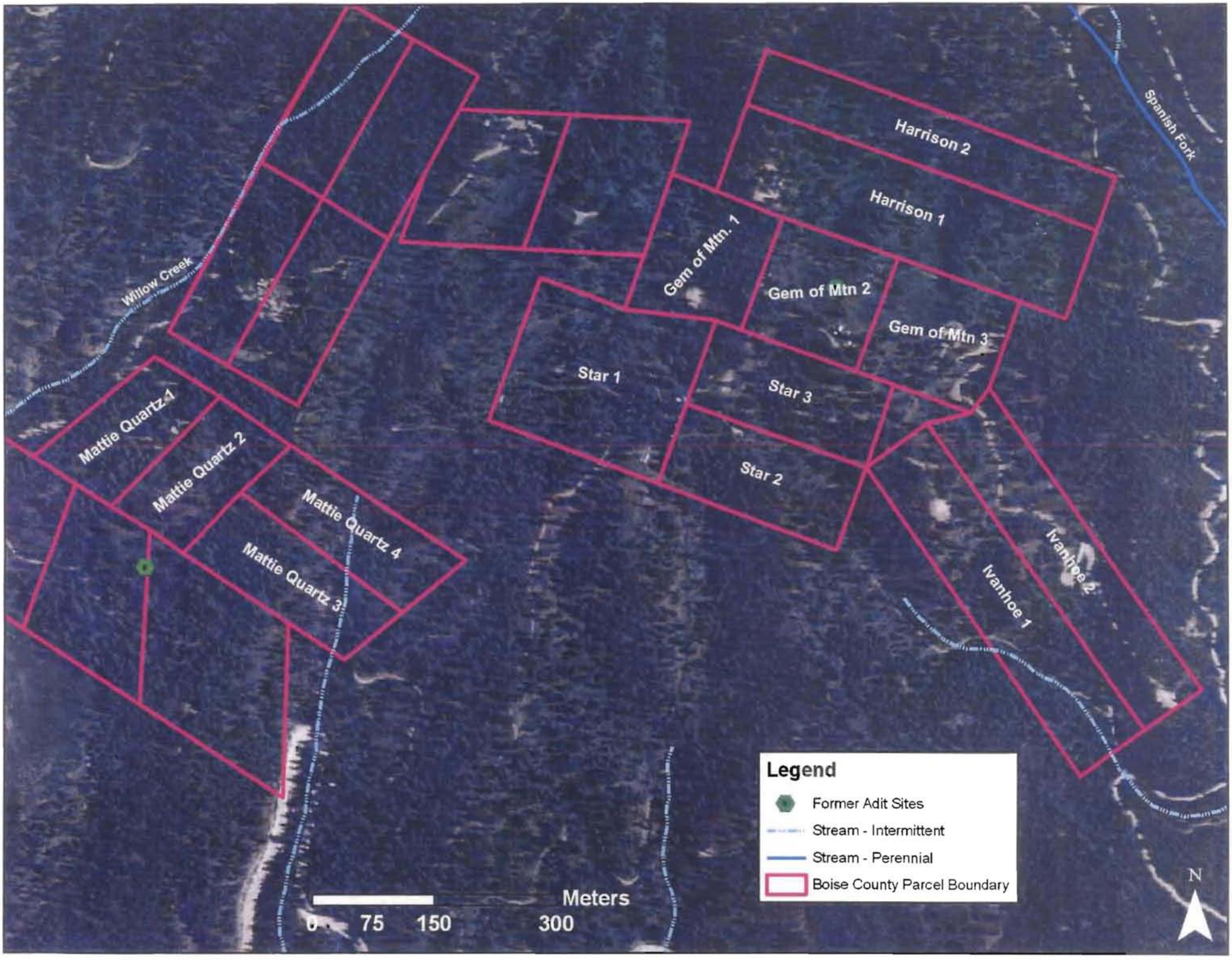
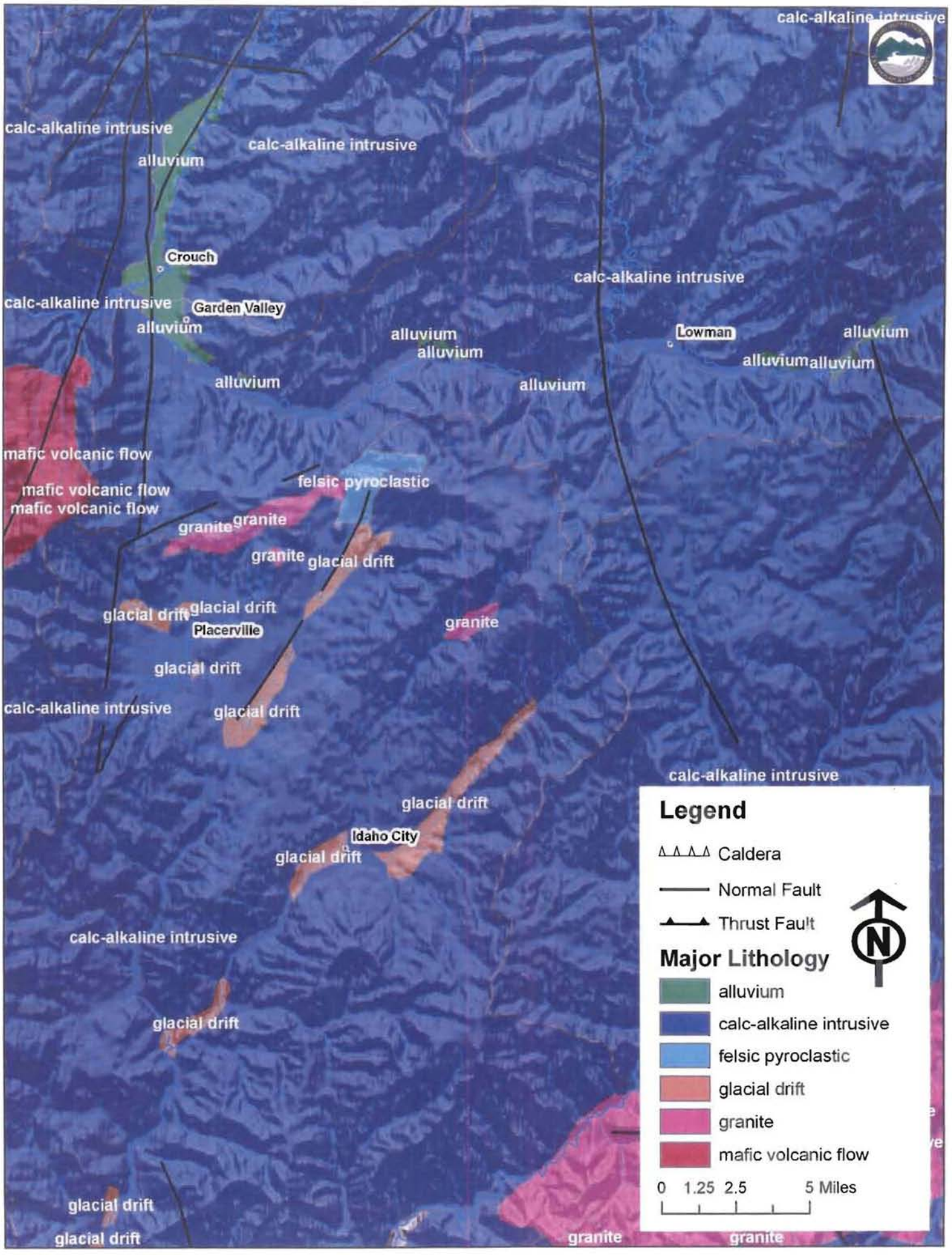


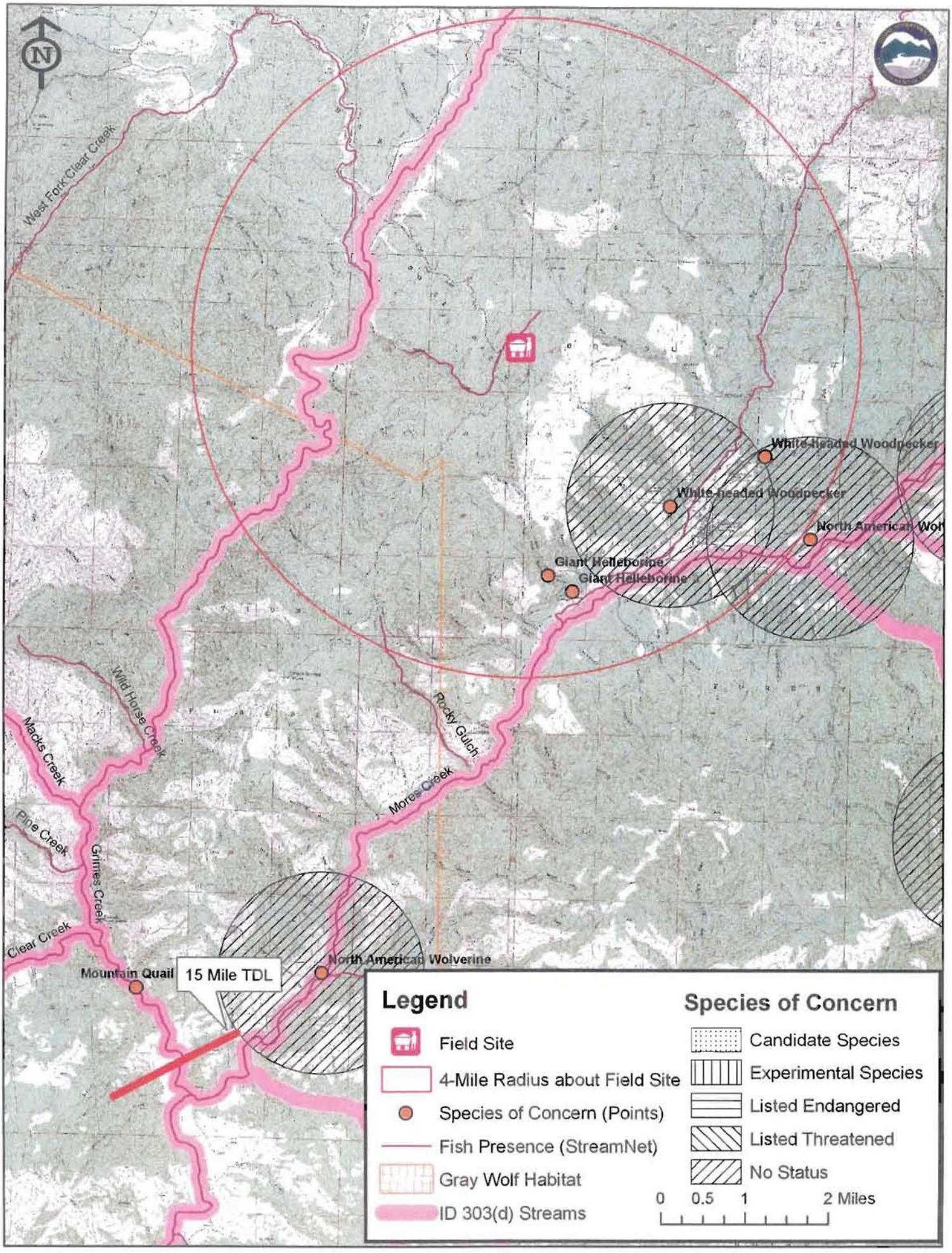
Photo No. 6: View of area near former Harrison No. 2 workings

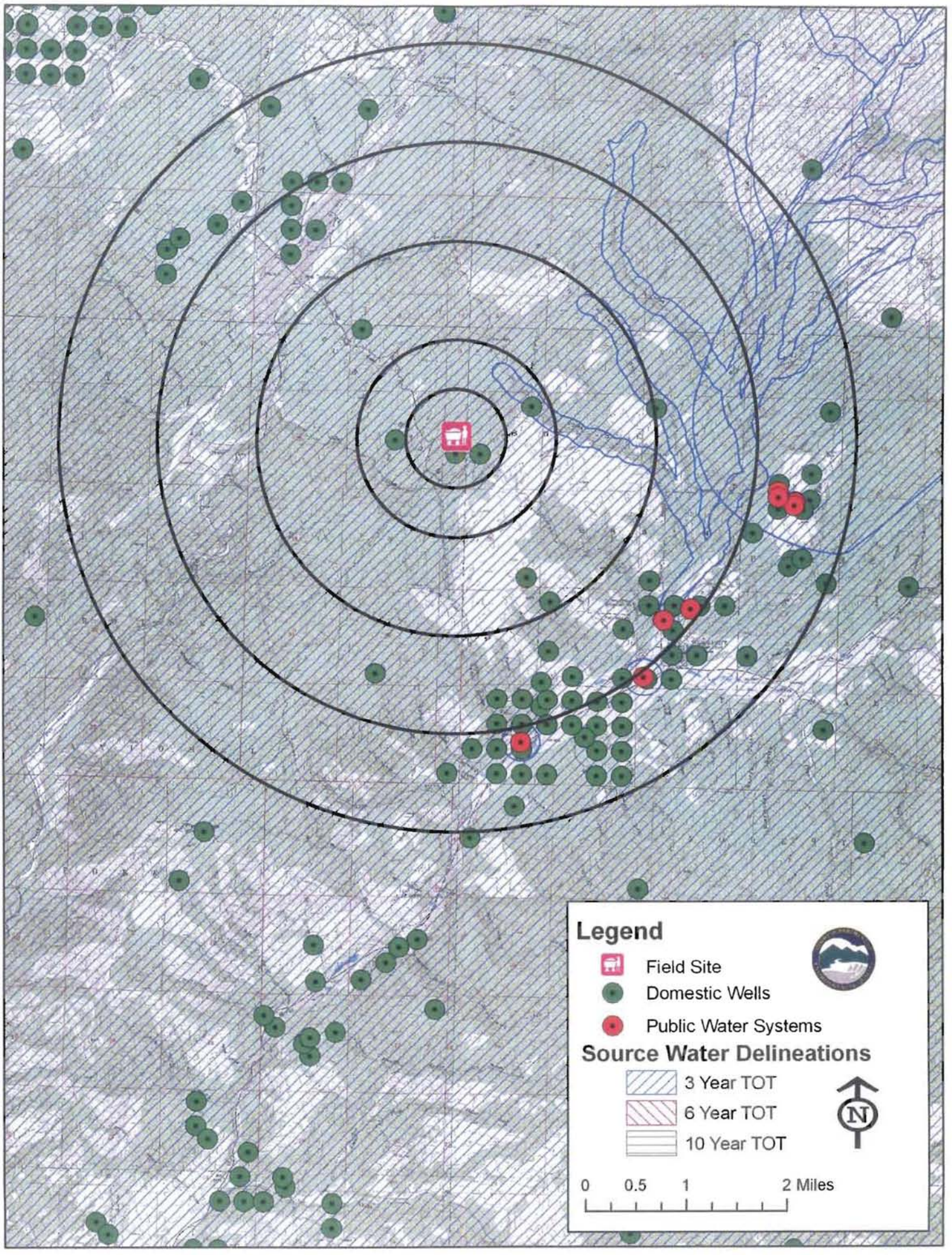


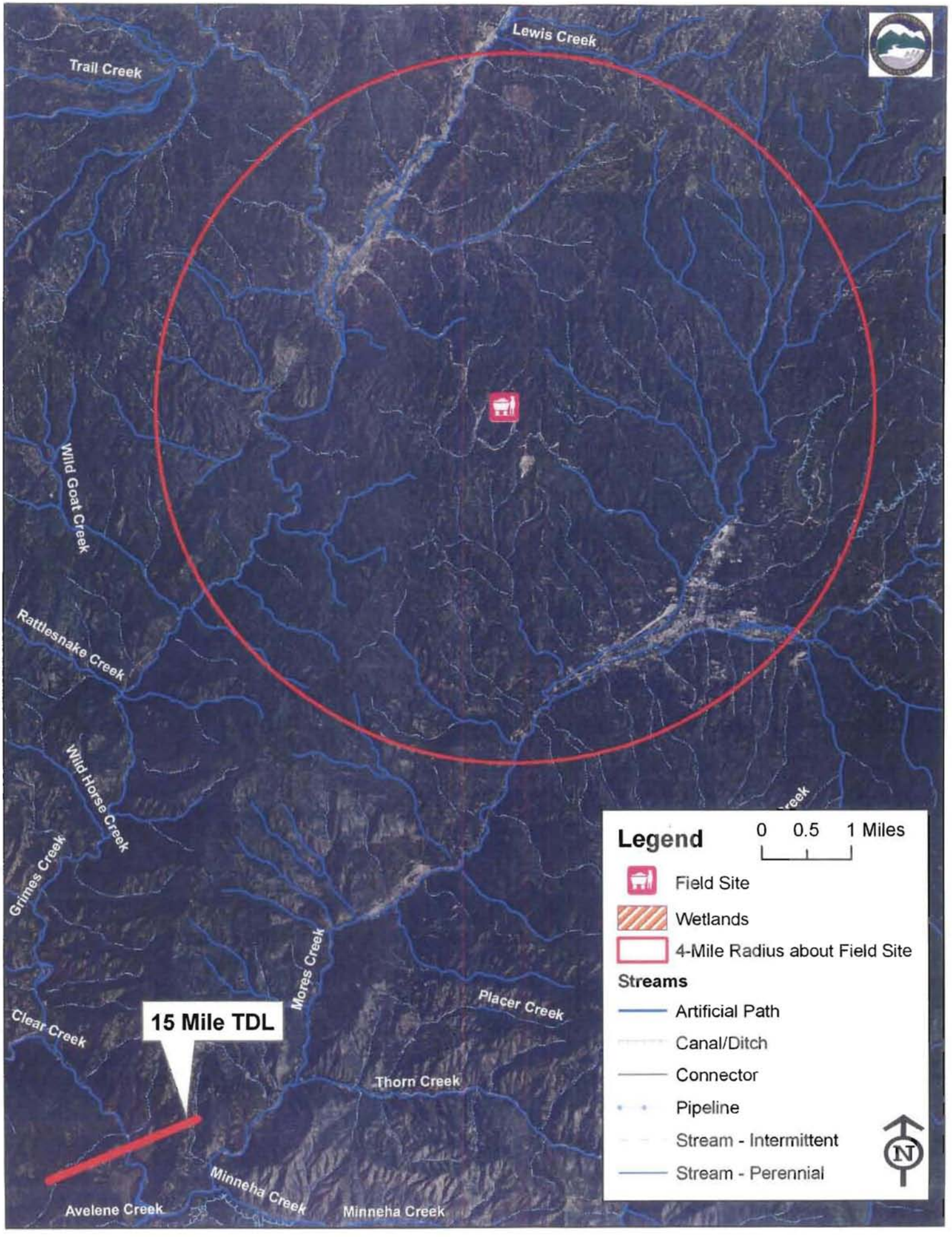
Gem of the Mountains/Harrison/Ivanhoe/Mattie Quartz
Centerville
New Centerville
Halfmoon Point
BOISE BASIN
Forest King Mine
Gaging Station
Gambrinus Mine
Gold Hill Mine
Idaho City
Landing Strip
Tailings
Eldorado Gulch
Gregory Gulch
Greenland Gulch
Grayback Gulch
New York Gulch
California Gulch
Noble Gl
Bairds Gl
Steamboat Gulch
Slaughterhouse Gulch
Bannock
Creek
B O I S
COEUR D'ALENE
LEWISTON
McCALL
Idaho City
BOISE
IDAHO FALLS
POCATELLO
TWIN FALLS
0
1
2 Miles
N


Harrison 2
Harrison 1
Spanish Fork
Willow Creek
Gem of Mtn. 1
Gem of Mtn 2
Gem of Mtn 3
Star 1
Star 3
Star 2
Mattie Quartz 1
Mattie Quartz 2
Mattie Quartz 4
Mattie Quartz 3
Ivanhoe 2
Ivanhoe 1
Legend
Former Adit Sites
Stream - Intermittent
Stream - Perennial
Boise County Parcel Boundary
N
Meters
0
75
150
300


calc-alkaline intrusive
calc-alkaline intrusive
alluvium
calc-alkaline intrusive
Crouch
calc-alkaline intrusive
Garden Valley
alluvium
alluvium
alluvium
alluvium
alluvium
Lowman
alluvium
alluvium
alluvium
mafic volcanic flow
felsic pyroclastic
mafic volcanic flow
mafic volcanic flow
granite
granite
granite
glacial drift
glacial drift
glacial drift
Placerville
granite
glacial drift
calc-alkaline intrusive
glacial drift
calc-alkaline intrusive
glacial drift
Idaho City
glacial drift
calc-alkaline intrusive
glacial drift
glacial drift
glacial drift
granite
granite
Legend
Caldera
Normal Fault
Thrust Fault
N
Major Lithology
alluvium
calc-alkaline intrusive
felsic pyroclastic
glacial drift
granite
mafic volcanic flow
0 1.25 2.5 5 Miles


West Fork Clear Creek
White-headed Woodpecker
White-headed Woodpecker
North American Wol
Giant Helleborine
Giant Helleborine
Wild Horse Creek
Rocky Gulch
Macks Creek
Mores Creek
Pine Creek
Grimes Creek
Clear Creek
Mountain Quail
15 Mile TDL
North American Wolverine
Legend
Field Site
4-Mile Radius about Field Site
Species of Concern (Points)
Fish Presence (StreamNet)
Gray Wolf Habitat
ID 303(d) Streams
Species of Concern
Candidate Species
Experimental Species
Listed Endangered
Listed Threatened
No Status
0 0.5 1 2 Miles


Legend
Field Site
Domestic Wells
Public Water Systems
Source Water Delineations
3 Year TOT
6 Year TOT
10 Year TOT
N
0 0.5 1 2 Miles


Lewis Creek
Trail Creek
Wild Goat Creek
Rattlesnake Creek
Wild Horse Creek
Grimes Creek
Mores Creek
Placer Creek
Clear Creek
15 Mile TDL
Thorn Creek
Minneha Creek
Avelene Creek
Minneha Creek
Legend
0 0.5 1 Miles
Field Site
Wetlands
4-Mile Radius about Field Site
Streams
Artificial Path
Canal/Ditch
Connector
Pipeline
Stream - Intermittent
Stream - Perennial
N

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGY AND ORE DEPOSITS OF BOISE BASIN, IDAHO

Prepared in cooperation with the
IDAHO BUREAU OF MINES AND GEOLOGY

GEOLOGICAL SURVEY BULLETIN 944–C

it was possible to trace the main vein for about 800 feet. Some old workings on the west end of the vein had been abandoned, and the more recent work had been confined to tunneling on the east end beneath outcrops near the bottom of the gulch. The more recent work is reported to total more than 360 feet of crosscuts and drifts.

Some ore was mined a number of years ago, and according to unverified reports the stamp mill recovery on 35 tons of the better ore was approximately $30 per ton.

At least two veins are known to occur on the property, but the Cash Register is the only one that has received much attention. It occupies a prominent fissure zone trending N. 80° E. and dipping 40° SE. and is reported to range from 9 to 30 inches in thickness, much of it composed of low-grade ore but here and there with pockets of high-grade ore. At one place the vein is reported to be cut off by a dike along a fault striking N. 20° E. The other vein is reported to have been opened for 180 feet in the crosscut to the Cash Register vein and to range from 3 to 8 feet in thickness. It is composed of massive white quartz, part of which has a low gold content.

The ore is more or less typical of the early Tertiary (?) ore, and most of it is the early coarse-grained massive quartz with scattered grains of pyrite and arsenopyrite confined to small and widely spaced shoots. In places this filling has apparently been somewhat fractured and the fractures healed by the younger comb quartz. This younger quartz with its associated gold determines the position of the richer pockets.

MATTIE MINE

The Mattie mine, formerly the Lippencott and Warner, is at the head of Willow Creek, about 4 miles northwest of Idaho City. The mine was worked in the early days, but nothing was learned of its early history. It was reopened by the Engineer Mines Co. in 1923 after a long period of idleness. The new operation, however, was shortlived. Except for some surface work in 1932 and 1933, the mine has since been idle. The workings comprise a tunnel, two shafts, one of which is 60 feet deep, a winze on the lower level, and enough drifts with the tunnel to total 600 feet. These workings were not accessible in 1932.

Two lodes cross the property, but only the Mattie lode has received much atention. The Mattie strikes about N. 55° W. and dips 35° SW.; the other strikes N. 10° W. and dips 45 SW. Much of the Mattie lode is reported to consist of crushed and fractured aplite and quartz monzonite with scattered seams and stringers of quartz. It contained an ore shoot about 40 feet long, which was followed

downward by the winze for 100 feet.[81] The quartz apparently belongs to the young stage of deposition and contains scattered cubes of limonite pseudomorphic after pyrite.

SUMMIT MINE

The Summit mine is on the long ridge between Elk Creek and Grimes Creek, about 2½ miles southeast of Old Centerville. It was discovered in the nineties by tracing the placer gold of Deer Creek to its source and was later prospected by shaft and drifts. The shaft was retimbered in 1933, but the absence of ladders made it impossible to go underground.

The lode, like most of those in the Gambrinus district, strikes west-northwest and dips about 45° SW. According to Lindgren the deposit is contained in a zone of sheared and crushed granitic rock as much as 18 feet across with an ore shoot 4 feet thick and 60 feet long containing thin seams of quartz rich in gold.[82]

ABBREVIATED PRELIMINARY ASSESSMENT CHECKLIST

This checklist can be used to help the site investigator determine if an Abbreviated Preliminary Assessment (APA) is warranted. This checklist should document the rationale for the decision on whether further steps in the site investigation process are required under CERCLA. Use additional sheets, if necessary.

Checklist Preparer: Pete Johansen Idaho DEQ (Name/Title) 11/20/07 (Date)
1410 N. Hilton, Boise, ID 83706 (Address) (208)373-0230 (Phone)
www.deq.idaho.gov (E-Mail Address)

Site Name: Mattie Quatz/Harrison

Previous Names (if any):

Site Location: 3 miles NW of Idaho City, ID (Street)
T 6N, R 5E, Sec 16 (City) , (ST) (Zip) -

Latitude: N 43° 51' 46" **Longitude:** W 115° 52' 32"

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.

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 potentially released at 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 potentially released at the site excluded by policy considerations (i.e., deferred to RCRA corrective action)?		x
5. Is there sufficient documentation to demonstrate that no potential for a release that could cause adverse environmental or human health impacts exists (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).
Historical records research and site visit confirmed that contaminants of concern do not exist in concentrations that present a threat to human health or the environment.

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 1 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:

Recreational homesites are located within the subject area; however, there are no potential risks to human health or the environment. Very little mining activities occurred in this area and no waste dumps, adits, or discharges were observed.

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. You will 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 judgement when evaluating a site. Your judgement may be different from the general recommendations for a site given below.

Suspected/Documented Site Conditions		APA	Full PA	PA/SI	SI
1. There are no releases or potential to release.		**Yes**	No	No	No
2. No uncontained sources with CERCLA-eligible substances are present on site.		**Yes**	No	No	No
3. There are no on-site, adjacent, or nearby targets.		Yes	**No**	No	No
4. There is documentation indicating that a target (e.g., drinking water wells, drinking surface water intakes, etc.) has been exposed to a hazardous substance released from the site.	Option 1: APA SI	**Yes**	No	No	Yes
	Option 2: PA/SI	No	No	Yes	NA
5. 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	Yes	No	No	Yes
	Option 2: PA/SI	**No**	No	Yes	NA
6. 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 1 mile of the site and have a relatively high likelihood of exposure to a hazardous substance migration from the site.		**No**	Yes	No	No
7. There is 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.		**No**	Yes	No	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 "NFRAP" 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	NFRAP		Refer to Removal Program - further site assessment needed
	Higher Priority SI		Refer to Removal Program - NFRAP
	Lower Priority SI		Site is being addressed as part of another CERCLIS site
	Defer to RCRA Subtitle C		Other: _____
	Defer to NRC		

Regional EPA Reviewer: _____ _____

Print Name/Signature Date

PLEASE EXPLAIN THE RATIONALE FOR YOUR DECISION: Subject area consists of forested hilltops containing private residences. No surface water drainages were observed. No evidence of significant historic mining activities was observed. No potential releases or threats to human health and the environment were observed.

NOTES: