STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

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

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

May 20, 2009

Mr. Tom Blanchard
City Administrator
City of Bellevue
Box 825
Bellevue, Idaho 83313

RE: Site Assessment of the Roadside Mine.

Dear Mr. Blanchard:

The Idaho Department of Environmental Quality (IDEQ) has completed a review of historical mining data and geological information of the above referenced mine and claim. Subsequent to that review, IDEQ conducted a site visit of the Roadside Mine. During the site visit, mining facilities were mapped and sampled to complete the analysis necessary to complete an Abbreviated Preliminary Assessment

PAs are conducted according to the Federal Comprehensive Environmental Response, Compensation and Liabilities Act. The reasons to complete a Preliminary Assessment include:

1) To identify those sites which are not 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).

IDEQ 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. IDEQ evaluated the Roadside Mine at the request of the City of Bellevue as it is a "mixed" ownership site, some of which is private lands being annexed by the City of Bellevue. The City of Bellevue obtained property access for IDEQ to complete this assessment.

Based on a number of factors discussed in the following report, IDEQ has determined that No Remedial Action is Planned (NRAP) for this property. However, metal concentrations in a sample collected in the lower most waste dump indicate that access restrictions or a sign, at the bottom of the mine road, may be appropriate. A sign, if posted, should advise hikers that frequent or sustained direct exposure to mine tailings may have adverse health effects. Using this type of access restriction or advisory is strictly at yours and the U.S. Bureau of Land Management's discretion.

Attached is an Abbreviated Preliminary Assessment Checklist. The checklist was used because it was relatively obvious that this site would likely no score through the Hazard Ranking System. Also enclosed is copy of a mine history, limited geologic information, data results, and maps of the property and surrounding area, and a brief checklist of how IDEQ came to its determination that the property status is NRAP.

Although DEQ has made this determination, it is appropriate to point out several aspects of the site that warrant some consideration. These include:

1) The mine has an upper and a lower adit. **The lower adit is a dangerous opening, which is very accessible to the public and therefore should be closed or gated by BLM to prevent physical injuries to the curious.** Because upper dump was so small, DEQ did not climb up to it to inspect it or the opening. BLM should check to see if this adit is open or closed.

2) There is minimal water discharge from the lower adit. Metals concentrations in ponded water inside the adit indicate that the water quality is not a hazard to humans or animals. The water does not appear to pose any threat to down gradient water systems or domestic wells. However, this is not to suggest that such systems are not routinely tested to evaluate their quality. It does not appear that this is a significant resource for water, in fact it is likely seasonal and has just enough volume top sustain the willows outside the lower adit.

3) There are some abandoned solid wastes including oil cans and car parts. This indicates that like, many inactive and abandoned mine sites in Blaine County, the mine is used as an illegal dump. Although this would not be a priority site for DEQ or the Health District, cleanup and maintenance of this site is warranted.

4) Concentrations of metals in mine wastes outside of the lower adit would warrant additional site assessment or remedial actions if the immediate mine site were being considered for development as a residence. However, it appears that the only discussions about this material were related to the potential uses as road grade material.

IDEQ strongly discourages use of these wastes unless it involved placing pavement over the mine waste used as a road base.

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 (208-373-0554) if you have any comments, questions, or if I may be of any other assistance.

Sincerely,

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

Attachments

cc: Ken Marcie – U.S. Environmental Protection Agency
Mike Choat - Galena Engineering Box 317 N. River St Hailey, ID 83333
Jeff Pfaefle - Box 420 Ketchum, ID 83343
Tim Fuller – BLM Shoshone District, 400 West F Street, Shoshone, ID 83352
Steve Moore BLM 1387 Vinnell Way Boise, Idaho 83709
Roadside Mine File

ROADSIDE MINE
SITE CONDITIONS

The Roadside Mine appears to be an exploration development in the Milligen Formation that crops out on the north slope of Slaughter House Gulch approximately 2.5 miles northeast of Bellevue. Although the two adits and the majority of the waste dumps that total less than 1,000 cubic yards are predominantly on BLM administered public lands, the lower dump is partially on private land that has been annexed by the City of Bellevue. The private land is being considered for development of both residential properties and public open space. The City of Bellevue requested IDEQ's assessment of the IAM to in order for the City to understand potential risks associated with the mine.

The toe of the lower dump is one private property. The dump itself has been the target of illegal dumping of solid wastes, particularly car parts. The old car frame pictured above is more symbolic of the record of history for this illegal use. The wastes should be removed and the site managed properly. (Schuld, April 2009)

Orange flagging near the toe of the lower dump indicates the border between public and private lands.

The lower adit of the Roadside is open and represents a dangerous physical hazard that is frequently visited by local residents and transients. **This adit should be closed.** The adit has ponded drainage inside which was sampled. There are no indications or analysis that demonstrate that this drainage is of poor quality, nor that it impacts local water supplies or other beneficial use. The drainage appears seasonal and is of insufficient volume to represent any type of developable source.

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: Bruce Schuld Idaho DEQ (Name/Title) 5/20/09 (Date)
1410 N. Hilton, Boise, ID 83706 (Address) (208)373-0554 (Phone)
www.deq.idaho.gov (E-Mail Address)

Site Name: Roadside Mine

Previous Names (if any): _____

Site Location: Slaughter House Gulch Approx. 2.5 NE of Bellevue

Township T2N Range R19E Section 19

Latitude: N 43.49342° " _____ **Longitude:** W "114.23093° _____

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: _____

Slaughter House Gulch is a dry drainage that is periodically wet due to spring thaw of snow pack. Although the lower portal of the Roadside Mine does contain ponded waters (at least at eth time of the visit) it does not appear to be a significant source that could sustain any beneficial uses except for the few willows present at the opening. As is typical of surface and ground water in the Big Wood River Basin, metals do not appear soluble and are not transported in solution. However, as is typical of mine dumps in the Milligen Formation surrounding the Big Wood River Basin, metals, particularly arsenic, cadmium, lead, manganese and silver exceed Idaho's "Initial Default Threshold Levels" (IDTLs), which indicates that if the site were intended to be developed for as a residential site additional site assessment and risk analysis would be warranted. Never-the-lees, soe discussion locally indicated that the dumps might be on some interest for use as road fill. This is very inadvisable as it would put in an environment where fugitive dust emissions and heavy metals concentrations would pose a risk to human receptors

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: _____

Limited mining activity appears to have occurred on the subject site. No impacts from the small waste dump were observed. The discharge from the Roadside adits contained metals concentrations below the cold water chronic and acute limits. No significant threats to human health and the environment were observed.

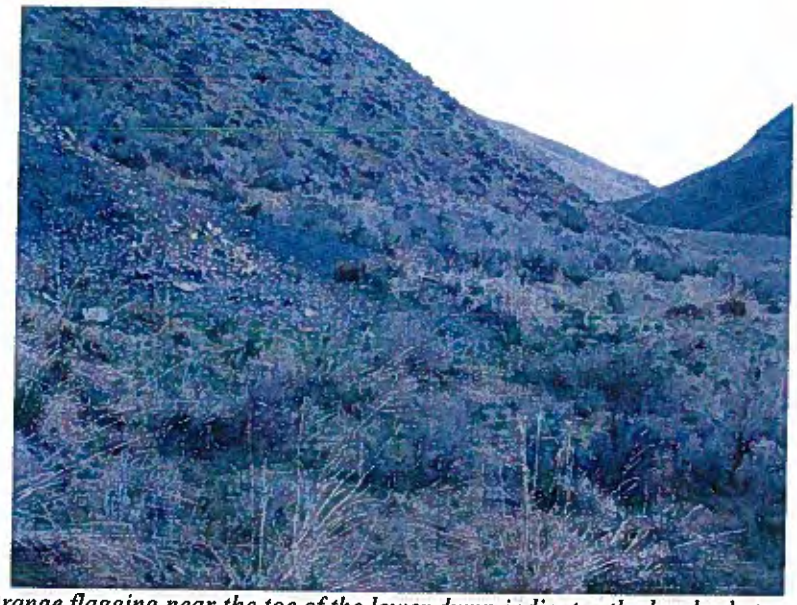
NOTES:

The Lower Roadside Adit represents a significant physical hazard, which should be prioritized by BLM for closure or fencing, particularly since the area is slated for residential developments. No observations of the upper adit were made since that waste dump did not appear to exceed the 500 cubic yard threshold. DEQ recommends that BLM evaluate that upper adit to determine whether it is open or closed and whether or not it should be closed.

ROADSIDE MINE SITE CONDITIONS

The Roadside Mine appears to be an exploration development in the Milligen Formation that crops out on the north slope of Slaughter House Gulch approximately 2.5 miles northeast of Belleview. Although the two adits and the majority of the waste dumps that total less than 1,000 cubic yards are predominantly on BLM administered public lands, the lower dump is partially on private land that has been annexed by the City of Belleview. The private land is being considered for development of both residential properties and public open space. The City of Belleview requested IDEQ's assessment of the IAM to in order for the City to understand potential risks associated with the mine.

The toe of the lower dump is one private property. The dump itself has been the target of illegal dumping of solid wastes, particularly car parts. The old car frame pictured above is more symbolic of the record of history for this illegal use. The wastes should be removed and the site managed properly. (Schuld, April 2009)



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	Defer to NRC		

Regional EPA Reviewer: _____ _____

Print Name/Signature Date

PLEASE EXPLAIN THE RATIONALE FOR YOUR DECISION: _____

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Table 1: Total Recoverable Metals Analysis (Mg/Kg)

Roadside Mine, Blaine County, Soil Samples				
Description	IDTLs Units: Mg/Kg	EPA Region 6 HHSLs	Sample No. RMBGSS-1	Sample No. RMSS-1
Antimony	4.77	31	7.6	3.5
Arsenic	0.391	23	26.1	26.2
Cadmium	1.35	39	2.86	1.72
Chromium	2130	NSA	9.13	1.80
Copper	921	3,100	42.1	41.2
Iron	5.76	55,000	28,300	19,700
Lead	49.6	400	59.7	524
Manganese	223	3,500	764	241
Mercury	0.00509	23	<4.0	<4.0
Silver	0.189	390	1.05	2.29
Zinc	886	23,000	513	161

* Method Detection Limit (MDL)

Table 2: Total Recoverable Metals Analysis (Mg/L)

Roadside Mine, Blaine County, Water Sample					
Description	IDTLs MCL by default, (RB)Risk Based Units: Mg/L	National Primary Drinking Water Standards * Secondary DW Standards	IDEQ Cold Water Biota Standard Acute	IDEQ Cold Water Biota Standard Chronic	Sample No. RMGW-1
Antimony	.006	.006	NSA	NSA	<0.020
Arsenic	.01	.01	0.34	0.15	<0.025
Cadmium	.005	.005	0.0013 (H)	0.0006 (H)	<0.0020
Chromium	0.1	0.1	NSA	NSA	<0.0060
Copper	1.30	1.30	0.017 (H)	0.011 (H)	<0.010
Iron	NSA	.3*	NSA	NSA	<0.060
Lead	.015	.015	0.065 (H)	0.0025 (H)	<0.0075
Manganese	.25 (RB)	05	NSA	NSA	<0.0040
Mercury	.002	.002	.0021	.000012 (T)	<0.00020
Selenium	.05	.05	.020 (T)	.005 (T)	<0.040
Silver	.0521 (RB)	.10*	0.00034 (H)	NSA	<0.0050
Zinc	3.13 (RB)	5.*	0.120 (H)	0.120 (H)	.410

Secondary MCL (T) – Standard in Total (H) – Hardness dependent @ 25 mg/L.

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Boise
Work Order: **W9E0015**
Reported: 15-May-09 14:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received
RMBGSS-1	W9E0015-01	Soil	24-Apr-09 09:30	BS	01-May-2009
RMSS-1	W9E0015-02	Soil	24-Apr-09 10:00	BS	01-May-2009
RMGW-1	W9E0015-03	Surface Water	24-Apr-09 09:46	TE	01-May-2009

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

(Q6) SVL received the following containers outside of published EPA guidelines for preservation temperatures (0-6°C).
The guidelines do not pertain to nitric-preserved metals.

Default Cooler (Received Temperature: 10.4°C)

Labnumber	Container	Client ID	Labnumber	Container	Client ID
W9E0015-01 A	Bag, cloth	RMBGSS-1	W9E0015-02 A	Bag, cloth	RMSS-1
W9E0015-03 A	Filtered nitric HDPE	RMGW-1			

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Boise
Work Order: **W9E0015**
Reported: 15-May-09 14:46

Client Sample ID: **RMBGSS-1**
SVL Sample ID: **W9E0015-01 (Soil)**

Sampled: 24-Apr-09 09:30
Received: 01-May-09
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	**Antimony**	7.6	mg/kg	2.0	0.4		W919249	DG	05/11/09 12:09	
EPA 6010B	**Arsenic**	26.1	mg/kg	2.5	0.6		W919249	DG	05/11/09 12:09	
EPA 6010B	**Cadmium**	2.86	mg/kg	0.20	0.08		W919249	DG	05/11/09 12:09	
EPA 6010B	**Chromium**	9.13	mg/kg	0.60	0.05		W919249	DG	05/11/09 12:09	
EPA 6010B	**Copper**	42.1	mg/kg	1.00	0.12		W919249	DG	05/11/09 12:08	
EPA 6010B	**Iron**	28300	mg/kg	6.0	1.5		W919249	DG	05/11/09 12:07	
EPA 6010B	**Lead**	59.7	mg/kg	0.75	0.37		W919249	DG	05/11/09 12:09	
EPA 6010B	**Manganese**	764	mg/kg	0.40	0.19		W919249	DG	05/11/09 12:07	
EPA 6010B	**Selenium**	< 4.0	mg/kg	4.0	0.6		W919249	DG	05/11/09 12:09	
EPA 6010B	**Silver**	1.05	mg/kg	0.50	0.05		W919249	DG	05/11/09 12:08	
EPA 6010B	**Zinc**	513	mg/kg	1.00	0.31		W919249	DG	05/11/09 12:08	
Mercury by SW846 Methods										
EPA 7471A	**Mercury**	0.033	mg/kg	0.033	0.006		W918182	JAA	05/05/09 10:28	
Percent Solids										
Percent Solids	**% Solids**	97.7	%				W919285	HB	05/08/09 10:25	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director

One Government Gulch - PO Box 929 Kellogg ID 83837-0929 (208) 784-1258 Fax (208) 783-0891

IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Boise
Work Order: **W9E0015**
Reported: 15-May-09 14:46

Client Sample ID: **RMSS-1**
SVL Sample ID: **W9E0015-02 (Soil)**

Sampled: 24-Apr-09 10:00
Received: 01-May-09
Sampled By: BS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	**Antimony**	3.5	mg/kg	2.0	0.4		W919249	DG	05/11/09 12:29	
EPA 6010B	**Arsenic**	26.2	mg/kg	2.5	0.6		W919249	DG	05/11/09 12:29	
EPA 6010B	**Cadmium**	1.72	mg/kg	0.20	0.08		W919249	DG	05/11/09 12:29	
EPA 6010B	**Chromium**	1.80	mg/kg	0.60	0.05		W919249	DG	05/11/09 12:29	
EPA 6010B	**Copper**	41.2	mg/kg	1.00	0.12		W919249	DG	05/11/09 12:29	
EPA 6010B	**Iron**	19700	mg/kg	6.0	1.5		W919249	DG	05/11/09 12:28	
EPA 6010B	**Lead**	524	mg/kg	0.75	0.37		W919249	DG	05/11/09 12:29	
EPA 6010B	**Manganese**	241	mg/kg	0.40	0.19		W919249	DG	05/11/09 12:28	
EPA 6010B	Selenium	< 4.0	mg/kg	4.0	0.6		W919249	DG	05/11/09 12:29	
EPA 6010B	**Silver**	2.29	mg/kg	0.50	0.05		W919249	DG	05/11/09 12:29	
EPA 6010B	**Zinc**	161	mg/kg	1.00	0.31		W919249	DG	05/11/09 12:29	
Mercury by SW846 Methods										
EPA 7471A	**Mercury**	0.855	mg/kg	0.033	0.006		W918182	JAA	05/05/09 10:29	
Percent Solids										
Percent Solids	**% Solids**	99.8	%				W919285	HB	05/08/09 10:25	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Boise
Work Order: **W9E0015**
Reported: 15-May-09 14:46

Client Sample ID: **RMGW-1**
SVL Sample ID: **W9E0015-03 (Surface Water)**

Sampled: 24-Apr-09 09:46
Received: 01-May-09
Sampled By: TE

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Antimony	< 0.020	mg/L	0.020	0.004		W919107	DG	05/15/09 12:32	
EPA 200.7	Arsenic	< 0.025	mg/L	0.025	0.006		W919107	DG	05/15/09 12:32	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0010		W919107	DG	05/15/09 12:32	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0010		W919107	DG	05/15/09 12:32	
EPA 200.7	Copper	< 0.010	mg/L	0.010	0.004		W919107	DG	05/15/09 12:32	
EPA 200.7	Iron	< 0.060	mg/L	0.060	0.020		W919107	DG	05/15/09 12:30	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0039		W919107	DG	05/15/09 12:32	
EPA 200.7	Manganese	< 0.0040	mg/L	0.0040	0.0013		W919107	DG	05/15/09 12:30	
EPA 200.7	Selenium	< 0.040	mg/L	0.040	0.013		W919107	DG	05/15/09 12:32	
EPA 200.7	Silver	< 0.0050	mg/L	0.0050	0.0004		W919107	DG	05/15/09 12:32	
EPA 200.7	Zinc	0.410	mg/L	0.0100	0.0019		W919107	DG	05/15/09 12:32	
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.00006		W919038	JAA	05/05/09 14:00	

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern
Laboratory Director

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Boise
Work Order: **W9E0015**
Reported: 15-May-09 14:46

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods								
EPA 6010B	Antimony	mg/kg	<2.0	0.4	2.0	W919249	11-May-09	
EPA 6010B	Arsenic	mg/kg	<2.5	0.6	2.5	W919249	11-May-09	
EPA 6010B	Cadmium	mg/kg	<0.20	0.08	0.20	W919249	11-May-09	
EPA 6010B	Chromium	mg/kg	<0.60	0.05	0.60	W919249	11-May-09	
EPA 6010B	Copper	mg/kg	<1.00	0.12	1.00	W919249	11-May-09	
EPA 6010B	Iron	mg/kg	<6.0	1.5	6.0	W919249	11-May-09	
EPA 6010B	Lead	mg/kg	<0.75	0.37	0.75	W919249	11-May-09	
EPA 6010B	Manganese	mg/kg	<0.40	0.19	0.40	W919249	11-May-09	
EPA 6010B	Selenium	mg/kg	<4.0	0.6	4.0	W919249	11-May-09	
EPA 6010B	Silver	mg/kg	<0.50	0.05	0.50	W919249	11-May-09	
EPA 6010B	Zinc	mg/kg	<1.00	0.31	1.00	W919249	11-May-09	
Mercury by SW846 Methods								
EPA 7471A	Mercury	mg/kg	<0.033	0.006	0.033	W918182	05-May-09	
Metals (Dissolved)								
EPA 200.7	Antimony	mg/L	<0.020	0.004	0.020	W919107	15-May-09	
EPA 200.7	Arsenic	mg/L	<0.025	0.006	0.025	W919107	15-May-09	
EPA 200.7	Cadmium	mg/L	<0.0020	0.0010	0.0020	W919107	15-May-09	
EPA 200.7	Chromium	mg/L	<0.0060	0.0010	0.0060	W919107	15-May-09	
EPA 200.7	Copper	mg/L	<0.010	0.004	0.010	W919107	15-May-09	
EPA 200.7	Iron	mg/L	<0.060	0.020	0.060	W919107	15-May-09	
EPA 200.7	Lead	mg/L	<0.0075	0.0039	0.0075	W919107	15-May-09	
EPA 200.7	Manganese	mg/L	<0.0040	0.0013	0.0040	W919107	15-May-09	
EPA 200.7	Selenium	mg/L	<0.040	0.013	0.040	W919107	15-May-09	
EPA 200.7	Silver	mg/L	<0.0050	0.0004	0.0050	W919107	15-May-09	
EPA 200.7	Zinc	mg/L	<0.0100	0.0019	0.0100	W919107	15-May-09	
EPA 245.1	Mercury	mg/L	<0.00020	0.00006	0.00020	W919038	05-May-09	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods									
EPA 6010B	Antimony	mg/kg	95.7	100	95.7	80 - 120	W919249	11-May-09	
EPA 6010B	Arsenic	mg/kg	98.5	100	98.5	80 - 120	W919249	11-May-09	
EPA 6010B	Cadmium	mg/kg	94.1	100	94.1	80 - 120	W919249	11-May-09	
EPA 6010B	Chromium	mg/kg	95.3	100	95.3	80 - 120	W919249	11-May-09	
EPA 6010B	Copper	mg/kg	93.6	100	93.6	80 - 120	W919249	11-May-09	
EPA 6010B	Iron	mg/kg	964	1000	96.4	80 - 120	W919249	11-May-09	
EPA 6010B	Lead	mg/kg	91.5	100	91.5	80 - 120	W919249	11-May-09	
EPA 6010B	Manganese	mg/kg	101	100	101	80 - 120	W919249	11-May-09	
EPA 6010B	Selenium	mg/kg	88.9	100	88.9	80 - 120	W919249	11-May-09	
EPA 6010B	Silver	mg/kg	4.76	5.00	95.2	80 - 120	W919249	11-May-09	
EPA 6010B	Zinc	mg/kg	91.4	100	91.4	80 - 120	W919249	11-May-09	
Mercury by SW846 Methods									
EPA 7471A	Mercury	mg/kg	0.882	0.833	106	80 - 120	W918182	05-May-09	
Metals (Dissolved)									
EPA 200.7	Antimony	mg/L	0.931	1.00	93.1	85 - 115	W919107	15-May-09	
EPA 200.7	Arsenic	mg/L	0.935	1.00	93.5	85 - 115	W919107	15-May-09	
EPA 200.7	Cadmium	mg/L	0.946	1.00	94.6	85 - 115	W919107	15-May-09	
EPA 200.7	Chromium	mg/L	1.01	1.00	101	85 - 115	W919107	15-May-09	
EPA 200.7	Copper	mg/L	0.998	1.00	99.8	85 - 115	W919107	15-May-09	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Boise
Work Order: **W9E0015**
Reported: 15-May-09 14:46

Quality Control - LABORATORY CONTROL SAMPLE Data (Continued)

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved) (Continued)									
EPA 200.7	Iron	mg/L	9.43	10.0	94.3	85 - 115	W919107	15-May-09	
EPA 200.7	Lead	mg/L	0.991	1.00	99.1	85 - 115	W919107	15-May-09	
EPA 200.7	Manganese	mg/L	0.940	1.00	94.0	85 - 115	W919107	15-May-09	
EPA 200.7	Selenium	mg/L	1.02	1.00	102	85 - 115	W919107	15-May-09	
EPA 200.7	Silver	mg/L	0.0487	0.0500	97.4	85 - 115	W919107	15-May-09	
EPA 200.7	Zinc	mg/L	0.959	1.00	95.9	85 - 115	W919107	15-May-09	
EPA 245.1	Mercury	mg/L	0.00496	0.00500	99.2	85 - 115	W919038	05-May-09	

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Dissolved)									
EPA 200.7	Antimony	mg/L	<0.020	<0.020	UDL	20	W919107	15-May-09	
EPA 200.7	Arsenic	mg/L	<0.025	<0.025	UDL	20	W919107	15-May-09	
EPA 200.7	Cadmium	mg/L	<0.0020	<0.0020	UDL	20	W919107	15-May-09	
EPA 200.7	Chromium	mg/L	<0.0060	<0.0060	UDL	20	W919107	15-May-09	
EPA 200.7	Copper	mg/L	0.013	0.014	2.9	20	W919107	15-May-09	
EPA 200.7	Iron	mg/L	<0.060	<0.060	UDL	20	W919107	15-May-09	
EPA 200.7	Lead	mg/L	<0.0075	<0.0075	UDL	20	W919107	15-May-09	
EPA 200.7	Manganese	mg/L	0.0091	0.0087	4.3	20	W919107	15-May-09	
EPA 200.7	Selenium	mg/L	<0.040	<0.040	<RL	20	W919107	15-May-09	
EPA 200.7	Silver	mg/L	<0.0050	<0.0050	UDL	20	W919107	15-May-09	
EPA 200.7	Zinc	mg/L	0.0159	0.0153	3.6	20	W919107	15-May-09	
EPA 245.1	Mercury	mg/L	<0.00020	<0.00020	UDL	20	W919038	05-May-09	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	Antimony	mg/kg	59.6	7.6	100	51.9	75 - 125	W919249	11-May-09	M2
EPA 6010B	Arsenic	mg/kg	126	26.1	100	100	75 - 125	W919249	11-May-09	
EPA 6010B	Cadmium	mg/kg	94.7	2.86	100	91.8	75 - 125	W919249	11-May-09	
EPA 6010B	Chromium	mg/kg	107	9.13	100	97.5	75 - 125	W919249	11-May-09	
EPA 6010B	Copper	mg/kg	139	42.1	100	97.0	75 - 125	W919249	11-May-09	
EPA 6010B	Iron	mg/kg	30700	28300	1000	R > 4S	75 - 125	W919249	11-May-09	M3
EPA 6010B	Lead	mg/kg	138	59.7	100	78.1	75 - 125	W919249	11-May-09	
EPA 6010B	Manganese	mg/kg	808	764	100	R > 4S	75 - 125	W919249	11-May-09	M3
EPA 6010B	Selenium	mg/kg	91.3	<4.0	100	89.7	75 - 125	W919249	11-May-09	
EPA 6010B	Silver	mg/kg	6.03	1.05	5.00	99.6	75 - 125	W919249	11-May-09	
EPA 6010B	Zinc	mg/kg	630	513	100	118	75 - 125	W919249	11-May-09	
Mercury by SW846 Methods										
EPA 7471A	Mercury	mg/kg	0.167	<0.033	0.167	100	75 - 125	W918182	05-May-09	
Metals (Dissolved)										
EPA 200.7	Antimony	mg/L	0.979	<0.021	1.00	97.9	70 - 130	W919107	15-May-09	
EPA 200.7	Arsenic	mg/L	0.961	<0.026	1.00	96.1	70 - 130	W919107	15-May-09	
EPA 200.7	Cadmium	mg/L	0.933	<0.0021	1.00	93.3	70 - 130	W919107	15-May-09	
EPA 200.7	Chromium	mg/L	1.00	<0.0063	1.00	100	70 - 130	W919107	15-May-09	
EPA 200.7	Copper	mg/L	1.13	0.014	1.00	112	70 - 130	W919107	15-May-09	

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Boise
Work Order: **W9E0015**
Reported: 15-May-09 14:46

Quality Control - MATRIX SPIKE Data (Continued)

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved) (Continued)										
EPA 200.7	Iron	mg/L	9.42	<0.063	10.0	94.2	70 - 130	W919107	15-May-09	
EPA 200.7	Lead	mg/L	1.02	<0.0079	1.00	102	70 - 130	W919107	15-May-09	
EPA 200.7	Manganese	mg/L	0.954	0.0087	1.00	94.6	70 - 130	W919107	15-May-09	
EPA 200.7	Selenium	mg/L	1.18	<0.042	1.00	116	70 - 130	W919107	15-May-09	
EPA 200.7	Silver	mg/L	0.0518	<0.0052	0.0500	104	70 - 130	W919107	15-May-09	
EPA 200.7	Zinc	mg/L	0.946	0.0153	1.00	93.1	70 - 130	W919107	15-May-09	
EPA 245.1	Mercury	mg/L	0.00093	<0.00020	0.00100	93.0	70 - 130	W919038	05-May-09	
EPA 245.1	Mercury	mg/L	0.00090	<0.00020	0.00100	90.0	70 - 130	W919038	05-May-09	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	Antimony	mg/kg	58.5	59.6	100	1.8	20	W919249	11-May-09	
EPA 6010B	Arsenic	mg/kg	123	126	100	2.4	20	W919249	11-May-09	
EPA 6010B	Cadmium	mg/kg	94.3	94.7	100	0.4	20	W919249	11-May-09	
EPA 6010B	Chromium	mg/kg	106	107	100	0.6	20	W919249	11-May-09	
EPA 6010B	Copper	mg/kg	138	139	100	0.7	20	W919249	11-May-09	
EPA 6010B	Iron	mg/kg	29200	30700	1000	4.7	20	W919249	11-May-09	
EPA 6010B	Lead	mg/kg	137	138	100	0.3	20	W919249	11-May-09	
EPA 6010B	Manganese	mg/kg	882	808	100	8.9	20	W919249	11-May-09	
EPA 6010B	Selenium	mg/kg	90.4	91.3	100	1.0	20	W919249	11-May-09	
EPA 6010B	Silver	mg/kg	5.97	6.03	5.00	0.9	20	W919249	11-May-09	
EPA 6010B	Zinc	mg/kg	618	630	100	1.9	20	W919249	11-May-09	
Mercury by SW846 Methods										
EPA 7471A	Mercury	mg/kg	0.165	0.167	0.167	1.0	20	W918182	05-May-09	

Quality Control - POST DIGESTION SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Total) by EPA 6000/7000 Methods										
EPA 6010B	Antimony	mg/L	0.8	<2.0	1.00	70.7	75 - 125	W919249	11-May-09	M2

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IDEQ (Boise)
1410 N. Hilton
Boise, ID 83706

Project Name: Boise
Work Order: **W9E0015**
Reported: 15-May-09 14:46

Notes and Definitions

M2	Matrix spike recovery was low, but the LCS recovery was acceptable.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
R > 4S	% recovery not applicable, sample concentration more than four times greater than spike level
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

CHAIN OF CUSTODY RECORD

Page ___ of ___

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FOR SVL USE ONLY
SVL JOB #

TEMP on Receipt: W9E0015

Table 1. -- Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other_____

Report to Company:	Idaho DEQ
Contact:	Bruce Schmid
Address:	1410 N. Hilton Boise, ID.
Phone Number:	208-373-0554
FAX Number:	208-373-0154
E-mail:	Bruce.Schmid@deq.idaho.gov

Invoice Sent To:	Idaho DEQ
Contact:	Bruce Schmid
Address:	1410 N. Hilton Boise, ID. 83706
Phone Number:	(208) 373-0554
FAX Number:	(208) 373-0154
PO#:	

Project Name: Roadside Mine

Sampler's Signature: _____

Indicate State of sample origination: Idaho **USACE?** ☐ Yes ☐ No

	Sample ID Please take care to distinguish between: 1 and I 2 and Z 5 and S Ø and O Thanks!	Collection: Date	Collection: Time	Collected by: (Init.)	Misc.: Matrix Type (From Table 1)	Misc.: No. of Containers	Preservative(s): Unpreserved	HNO_3 Filtered	HNO_3 Unfiltered	HCl	H_2SO_4	NaOH	Other (Specify)	Analyses Required: Tot Arsenic	Tot Cadmium	Tot. Copper	Tot. Iron	Tot. Manganese	Tot. Mercury	Tot. Lead	Tot. Silver	Tot. Zinc	Tot. Antimony	Rush Instructions (Days)	Comments
* 1	RMBGSS-1	4/24/09	9:30am	BS	3	1								X	X	X	X	X	X	X	X	X	X		* Please also include Total Chromium & Tot. Selenium
* 2	RMSS-1	4/24/09	10:00am	BS	3	1								X	X	X	X	X	X	X	X	X	X		
3	RMGW-1	4/24/09	9:40am	TE	1	1		X						X	X	X	X	X	X	X	X	X	X		
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Relinquished by: _____ Date: 4/30/09 Time: _____ Received by: _____

Relinquished by: _____ Date: _____ Time: _____ Received by: R. Stukenberg Date: 5/1/09 Time: 11:20

* Sample Reject: ☐ Return ☐ Dispose ☐ Store (30 Days)

White: LAB COPY Yellow: CUSTOMER COPY SVL-COC 9/05

* no Time on sample labels. RS 5/1/09

A.L. Anderson 10/1950
Detailed geology ... Mineral Hill & Warm Springs

the fracture zone contains some tremolite and the fractures within, some seams of limonitic iron oxides.

SUNRISE (BLACK JACK)

The Sunrise, formerly the Black Jack, relocated and renamed early in 1949, is at the edge of Big Wood River Valley about 2 miles southeast of Bellevue (Fig. 2). The workings include four rather long tunnels, all blocked but one. The tunnel is between 500 and 600 feet long.

All tunnels are in the Milligen formation and the dump material is as black as coal. The open tunnel passes through an anticlinal fold into black argillites dipping 60° E. These argillites contain sporadically distributed bunches, pods, and irregular vein-like bodies of white, barren quartz. A much disturbed zone, striking northwest and dipping 30° NE. on the slope above, contains a quartz vein a foot or more wide in which there is some pyrite and arsenopyrite.

Some old workings on a property to the north—several short tunnels of which one is open—are in steeply, easterly-dipping shales. The open tunnel discloses that the shales are cut by a flat, 2 to 4-inch quartz vein which dips 10° E. Farther in the tunnel is a steeply dipping fault occupied by an altered basic dike.

MEMORIAL

The Memorial is on the slope bordering Big Wood River about 1½ miles southeast of Hailey (Fig. 2). The property was active some years ago and again in 1947. The workings consist of a number of tunnels, inclines, and cuts. The one open tunnel contains about 330 feet of work.

Development has been confined to two rather closely spaced veins, both in limestones and sandstones of the Wood River formation. The lower vein strikes about N. 30° W. and dips 32° - 40° NE. It appears to be more extensively explored than the other and may be traced along the slope for several hundred feet by the long line of inclines, cuts, and short tunnels, some of which pass through the vein into the hanging wall. The vein is confined between well-defined walls, and where exposed, contains a band of limonitic oxides from 2 to 10 inches wide. The open tunnel, one of several below the outcrop and second from the lowest, may pass through the vein but if so the vein is unmineralized. The tunnel extends through one fault, which strikes N. 30° W. and dips 40° NE., and then a second fault which strikes N. 60° W. and dips 48° NE.

The second vein appears to have a more northerly trend than the other and dips 40°-46° NE. This vein also has good walls and as much as 2 to 10 inches of limonitic material.

ROADSIDE

The Roadside is along the road in Slaughterhouse Gulch about 2½ miles above Bellevue (Fig. 2). The development consists of two tunnels, both inaccessible. Nothing was learned of the tunnel lengths nor of the history of the property. It was relocated in July, 1947.

The tunnels are driven in black Milligen formation, apparently to explore a 2-foot zone of shearing exposed in a small cut above the upper tunnel. This zone strikes about N. 80° E., dips 35° W., and contains some limonitic stains. The black argillite exposed on the dump of the lower tunnel contains some scattered thin seams of quartz with pyrite, but otherwise there is little evidence of mineralization.

CONSTANTINE

The Constantine is in upper Constantine Gulch, a tributary of Slaughterhouse Gulch about 1½ miles northeast of Bellevue (Fig. 2). Development consists of two caved tunnels on the south side of Constantine Gulch and two or three smaller ones on the north side. They are in the blackish Milligen argillites. Some quartz float was noted in the gulch but no quartz was seen in place. The tunnels are reported to have been driven to explore a gold-quartz vein.

SILVER WING

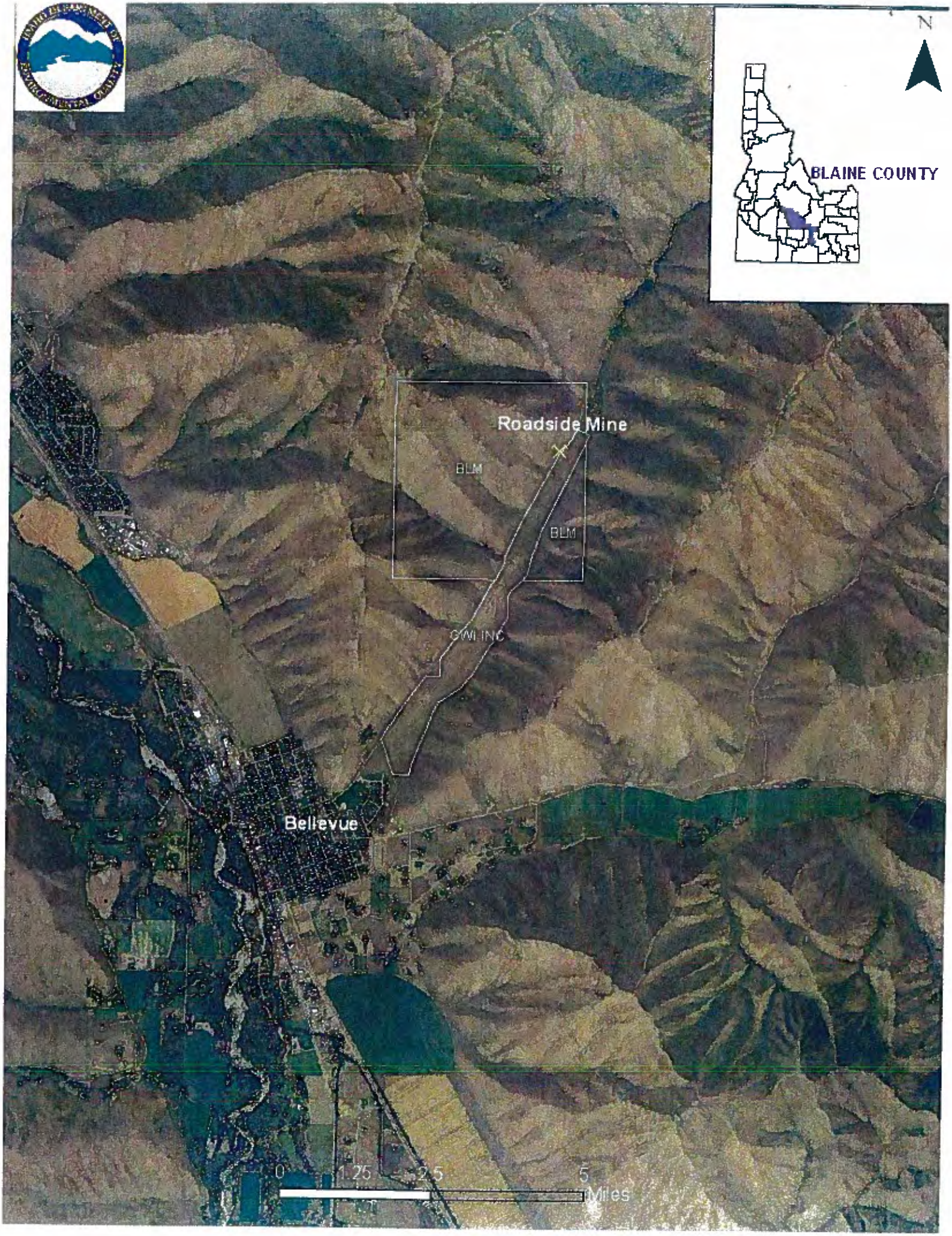
The Silver Wing is on the southeast side of Slaughterhouse Gulch about 1 mile from Bellevue (Fig. 2). The workings include several tunnels, one near the floor of the gulch and the others on the slope 100 feet above. About $30,000 worth of ore has been reported shipped from the mine.

The deposit is in the Milligen formation and is along a fissure or fracture zone which strikes about N. 80° W. and dips 50° SW. Ore was not seen in place, but some partly oxidized galena with quartz remains on the dump of one of the cuts.

STORM PETREL

The Storm Petrel lies in Slaughterhouse Gulch just east of the Silver Wing. The property comprises two claims, each on a separate vein and each with several caved tunnels and cuts.

On one of the claims the vein or fracture zone strikes N. 80° W. and dips 20° - 50° SW. The disturbed zone is up to 6 feet wide and consists of sheared grayish shales of the Milligen formation, locally unmineralized. Some gossan, however, is present on one of the dumps.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Roadside Mine
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BLM
CWI INC
Bellevue
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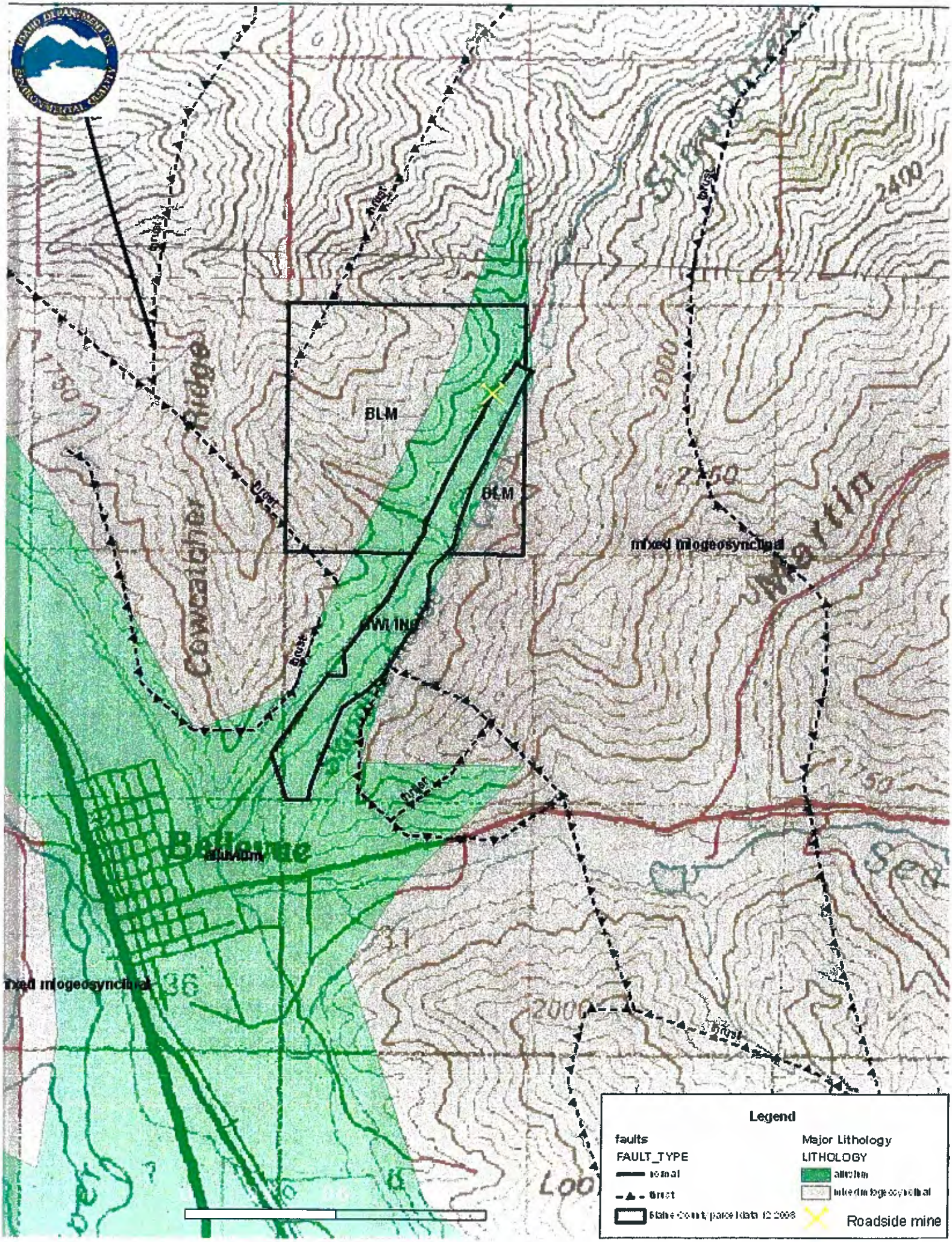
2.5
5
Miles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BLM
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alluvium
mixed miogeosynclinal
Legend
faults
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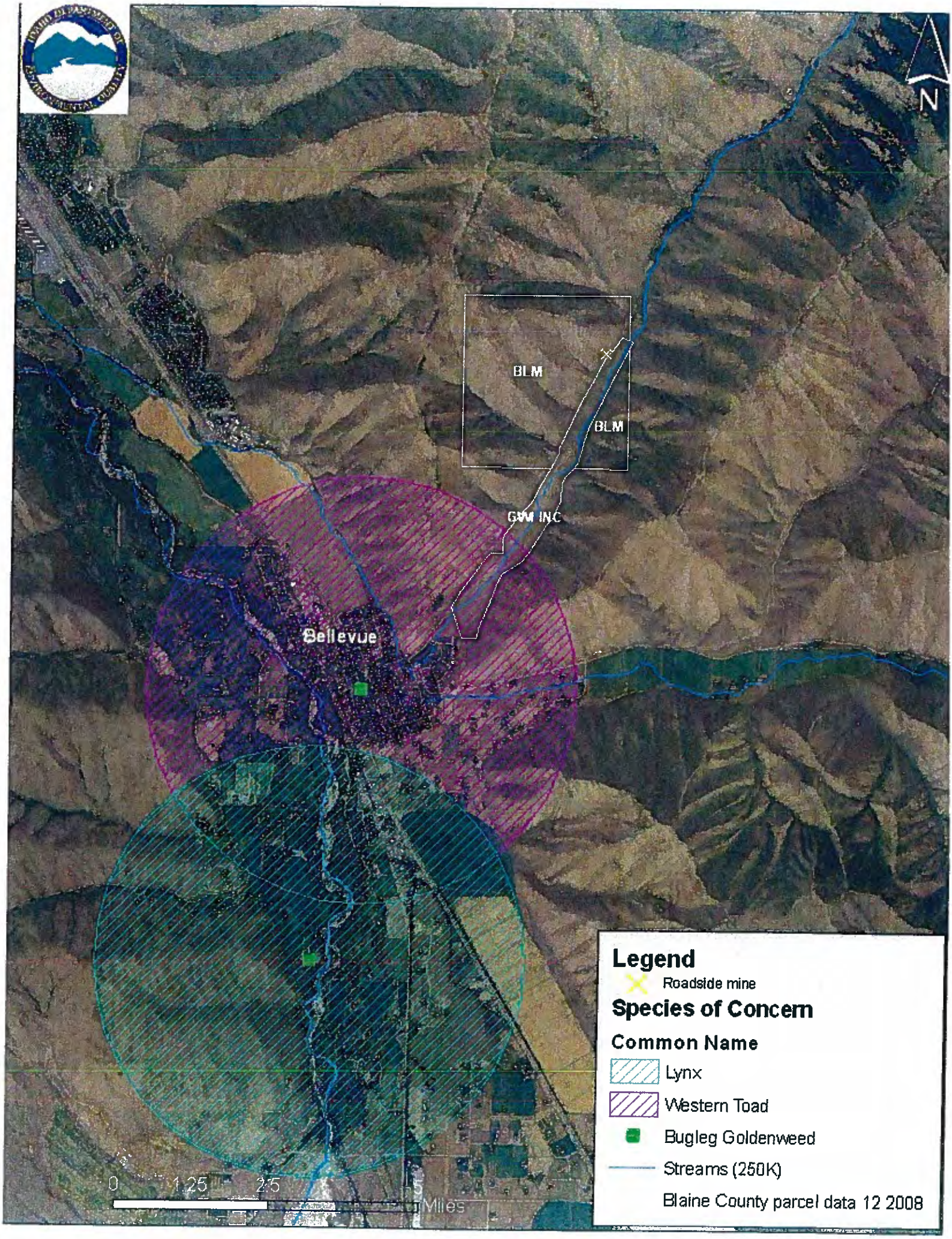
thrust
State Count, parcel data © 2006
Major Lithology
LITHOLOGY
alluvium
mixed miogeosynclinal
Roadside mine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BLM
GW INC
Bellevue
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2.5
Miles
Legend
Roadside mine
Species of Concern
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Western Toad
Bugleg Goldenweed
Streams (250K)
Blaine County parcel data 12 2008


N
BLM
BLM
GWMINC
Bellevue
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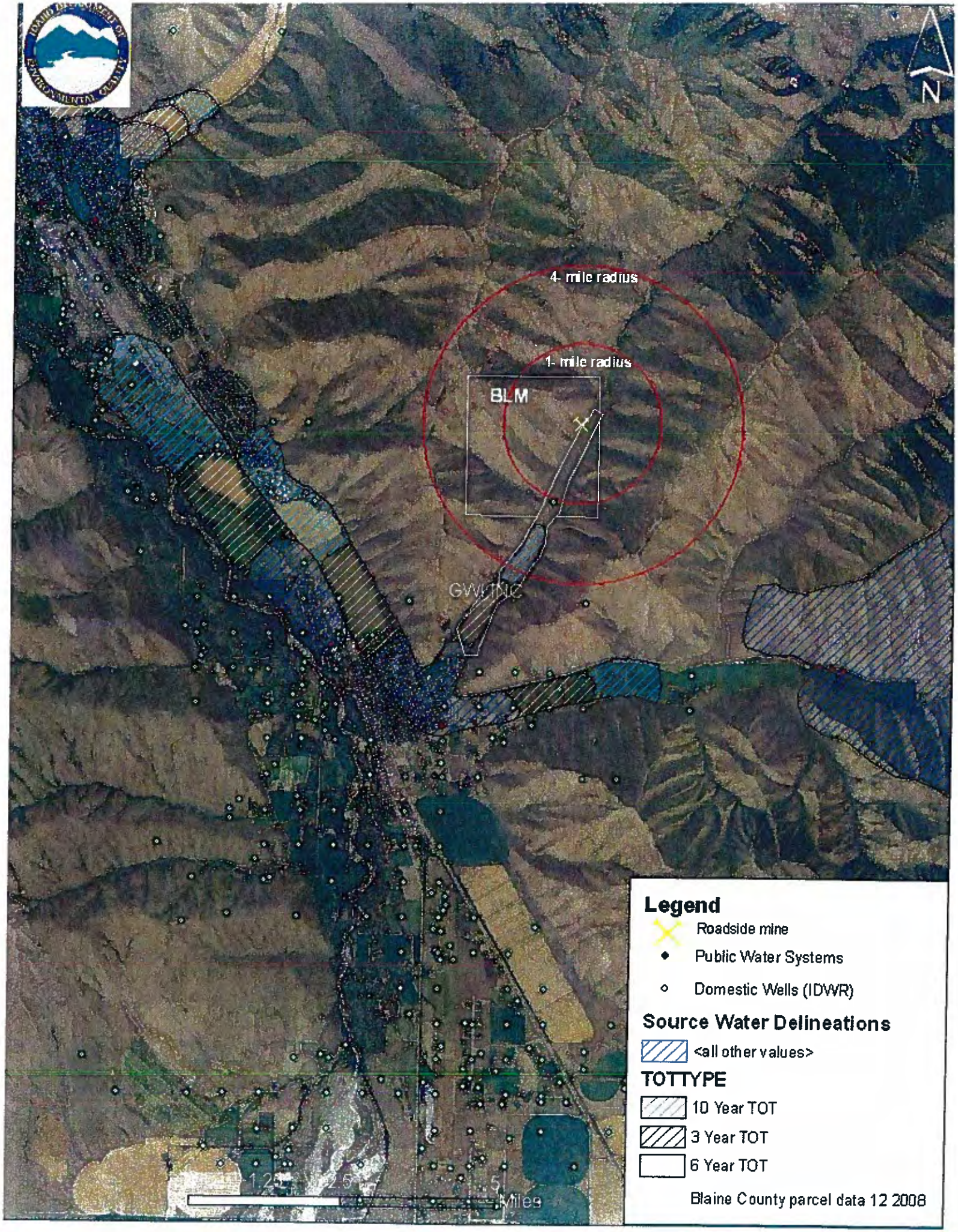
1.25
2.5
5
Miles
Legend
Roadside mine
Streams (250K)
Blaine County parcel data 12 2008


4- mile radius
1- mile radius
BLM
GWMA
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Legend
Roadside mine
Public Water Systems
Domestic Wells (IDWR)
Source Water Delineations
<all other values>
TOTTYPE
10 Year TOT
3 Year TOT
6 Year TOT
Blaine County parcel data 12 2008
1.25
2.5
5
Miles