

*Battle Mountain Resources, Inc.*  
San Luis Project  
P.O. Box 310  
San Luis, Colorado 81152-0310  
(719) 379-0798

March 19, 2018

Mr. Lucas West  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: Battle Mountain Resources, Inc.  
San Luis Project - San Luis, Colorado  
Annual Report and Fee 2017  
CMLRB Permit No. M-1988-112

Dear Mr. West:

Please find included the Battle Mountain Resources, Inc. (BMRI) "San Luis Project" (Permit No. M-1988-112) Annual Report and a site map as requested in the February 21, 2018 letter from the Colorado Division of Reclamation, Mining, and Safety (CDRMS) to Lawrence Fiske (BMRI). The following summarizes the operation, reclamation, permitted area, dam inspections, and site monitoring activities performed, as well as, any technical revisions and permit amendments made for the San Luis Project during 2017.

### **General Reclamation Activities**

Reclamation activities from 2017 included:

- Continued stormwater management on and adjacent to reclaimed and un-reclaimed mine land. Stormwater inspections were performed on May 18, 2017 and October 26, 2017, and any issues noted were corrected;
- Treatment of water from the West Pit and Rito Seco alluvial groundwater systems;
- Tailing facility storage pond, underdrain and leak detection system management;
- Surface and ground water management; and
- Installed new concrete water basin at water treatment plant.

### **Reclamation Areas**

BMRI did not perform any additional reclamation in 2017. Therefore, there are 82.5 acres of reclamation remaining, as summarized in Table 1.

**Table 1 - Summary of San Luis Project Reclamation**

<b>Area</b>	<b>Actual Disturbance (Acres)</b>	<b>Reclamation Completed Through 2015 (Acres)</b>	<b>Reclamation Completed In 2017 (Acres)</b>	<b>Remaining Reclamation (Acres)</b>
East Pit	20	20	0	0
West Pit	100	71.3	0	28.7
Waste Rock A	0	0	0	0
Waste Rock B	18	18	0	0
Waste Rock C	28	28	0	0
Waste Rock D	42	42	0	0
South Waste Rock	35	35	0	0
Mill Area	26	26	0	0
ESI Leach Pad	10	10	0	0
Borrow Area	5.5	0	0	5.5
Road Around Tailing Facility and Collection Pond	4	0	0	4
Tailing Facility Perimeter Road	12.9	0	0	12.9
Waste Rock C Access Road	3.7	3.7	0	0
Pink Gneiss Pit Haul Road	3.8	0	0	3.8
Tailing Facility	192	169.4	0	22.6
Tailing Collection Pond	5	0	0	5
Admin. Office Complex – Deeded lands to Costilla County Soil Conservation District (CCSCD)	3	3	0	0
<b>Total Area</b>	<b>508.9</b>	<b>426.4</b>	<b>0</b>	<b>82.5</b>

### Permitted Areas

BMRI did not request any additional land release from the permit area in 2017. The current Permit Area is approximately 1049.28 acres with the remaining disturbance within the permit area consisting of approximately 368.4 acres, as summarized in Table 2. The unreleased disturbance areas consist of both reclaimed and unreclaimed land.



**Table 2 - Summary of Permitted Areas**

Area	Permitted Disturbance (Acres)	Actual Disturbance Areas (Acres)	Disturbance Areas Released from Permit Area (Acres)	Disturbance Areas Remaining in Permit Area (Acres)
East Pit	20	20	20	0
West Pit	110	100	8.9	91.1
Waste Rock A	0	0	0	0
Waste Rock B	18	18	0	18
Waste Rock C	30	28	25.8	2.2
Waste Rock D	42	42	42	0
South Waste Rock	50	35	33.6	1.4
Mill Area	26	26	3.1	22.5
ESI Leach Pad	10	10	0	10
Borrow Area	11	5.5	0	5.5
Roads	30	24.4	3.7	20.7
Tailing Facility	192	192	0	192
Tailing Collection Pond	5	5	0	5
Admin. Office Complex – Deeded lands to Costilla County Soil Conservation District (CCSCD)	3	3	3	0
Total Area	547	508.9	140.1	368.4

### Dam Inspections

In 2014, BMI provided the first annual San Luis Project Tailings Dam Detailed Inspection Report (Detailed Inspection Report) (Miller Geotechnical Consultants, Inc., February 2014). The Detailed Inspection Report concluded that the Lined Tailing Facility's (LTF) dam is in good condition, but included recommendations for improvements to the South Diversion Ditch and the associated drop structure to minimize risks associated with stormwater during major precipitation events. In 2015, 2016, and 2017, Miller Geotechnical Consultants, Inc. completed hydrologic and geotechnical studies, and prepared design drawings and specifications for improvements to the South Diversion Ditch and drop structure in order to address the recommendations. The improvements included replacement of the existing drop structure with a larger reinforced concrete drop structure at the south embankment, and increasing the capacity of the South Diversion Ditch. BMRI submitted a proposed *Technical Revision* in February of 2017, for construction of a new drop structure on the south embankment of the tailings facility dam which CDRMS approved in Technical Revision 34 (TR-34) on March 23, 2017. Construction of the drop structure is anticipated to occur in the summer of 2018.

During 2017, quarterly dam inspections were performed as required in Technical Revision 33 (TR-33). The quarterly dam inspections were submitted previously to CDRMS and are also included in Appendix A of this report.

## Site Monitoring

Water level data, laboratory analytical results, and flows were submitted to CDRMS as part of the Monthly Reports throughout 2017, and are also included in Appendix B of this report. The flows for the LTF collection pond, underdrain, and WTP are slightly different than the Monthly Reports, due to differences in reporting time frames. During 2017, groundwater sampling and water level measurements were performed as required in Technical Revision 32 (TR-32). Sampling and laboratory analyses for groundwater monitoring well M-14 also continued in 2017 under the CDRMS approved Response Plan. M-14 will continue to be sampled and results reported as required in TR-32.

The LTF collection pond underdrain was monitored monthly and evacuated. The monthly leak-detection flows for 2017 ranged from a low of 25.1 gallons per day (gpd) to a high of 34.3 gpd. The average monthly leak-detection flow for 2017 was 29.6 gpd. The previously submitted Monthly Reports are included in Appendix B of this report. The collection pond underdrain water was sampled and analyzed quarterly and the laboratory analytical results were submitted to CDRMS in the Monthly and Quarterly Sampling Reports and are also included in Appendix B of this report.

The LTF underdrain flows were monitored monthly at the base of the embankment and the flows for 2017 ranged from a low of 35.3 gpm to a high of 40.0 gpm. The monthly average underdrain flow for 2017 was 38.2 gpm. The monthly underdrain flows were submitted previously to CDRMS as part of the Monthly Reports and are also included in Appendix B of this report.

The LTF system lysimeters were monitored monthly. The lysimeters were dry and no groundwater was present for sampling or analysis in 2017. The monthly lysimeter readings were submitted previously to CDRMS in the Monthly Reports and are also included in Appendix B of this report.

Approximately 104 tons of water treatment plant sludge was transferred from the drying pad to the tailings impoundment in July 2016. No additional sludge was transferred in 2017. The monthly sludge management information was submitted previously to the CDRMS in the Monthly Reports and is included in Appendix B of this report.

During 2017, BRMI managed the Rito Seco and West Pit alluvial hydrologic systems, in compliance with Technical Revision 26 (TR-26). BRMI measured the West Pit backfill monitoring wells weekly and the monthly average groundwater elevations were below the TR-26 required level of 8,582 feet above mean sea level (amsl). The groundwater table elevations and potentiometric surface maps, developed by Engineering Analytics, Inc., confirm the groundwater flow gradient was from the Rito Seco alluvium to the West Pit backfill during 2017. BRMI also performed monthly visual inspections for seepage in the historic seepage area along the Rito Seco Creek and no seeps were observed during 2017.

Additionally, the two groundwater capture wells (M-32 and M-33), were operated in conjunction with other groundwater table elevation control in the West Pit during 2017. Groundwater elevations were maintained equal to or lower than 8,540 feet amsl in wells M-

32 and M-33, as required under TR-26. Groundwater pumped from these wells was either treated at the West Pit Water Treatment Plant and discharged to the Rito Seco under the BMRI discharge permit, or pumped to the LTF for water management. In 2017, the West Pit water treatment plant treated and discharged a total of 97,105,199 gallons of water to the Rito Seco Creek. Additionally, a total of 8,179,900 gallons of water was transferred from the West Pit to the LTF.

Besides the Technical Revision 34, previously described in the Dam Inspection section above, there were no other Technical Revision(s) submitted for the 2017 calendar year.

Should additional information be required or if any clarifications are necessary, please contact me at (719) 379-0538.



Julio Madrid  
Sr. Supervisor Legacy Sites Closure and Reclamation

Cc: Lawrence Fiske, BMRI (electronic)  
Melissa Chalona, EA  
BMRI File

Enclosures:

Appendix A – Dam Inspection Reports  
Appendix B – Monthly Reports and Monthly and Quarterly Sampling  
Report Request  
Site Map

## Appendix A



**BATTLE MOUNTAIN RESOURCES, INC.**

**RECEIVED**

MAY 01 2017

**DIVISION OF RECLAMATION  
MINING AND SAFETY**

April 26, 2017

Mr. Wally Erickson  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: San Luis Project Tailing Dam Report 1<sup>st</sup> Quarter 2017, Technical Revision No. 33, ✓  
Permit No. M-1988-112

Dear Mr. Erickson:

✓ Battle Mountain Resources Inc. ("BMRI") is pleased to provide the San Luis Project Tailing Dam Report for the 1<sup>st</sup> Quarter 2017 in accordance with Technical Revision No. 33 to BMRI's Reclamation Permit.

Enclosed along with the inspection report are photos of the tailing dam, concrete drop structure and the under drain discharge area. Also included in the report are the tailing dam piezometer readings.

Should you have any questions, please do not hesitate to contact me at 719-379-0538.

Respectfully,

Julio F. Madrid  
Sr. Supervisor Legacy Sites Reclamation and Closure  
Battle Mountain Resources Inc.

cc: Larry Fiske BMRI  
David Carino BMRI

		INSPECTION PERIOD: <u>January 2017 thru March 2017</u>		page 1/1				
		INSPECTOR: <u>J. Madrid &amp; D. Carino</u>						
DAM: <u>SAN LUIS PROJECT TAILING DAM</u>				CHECK ACTION NEEDED				
AREA INSPECTED	ITEM NO.	CONDITION	YES	NO	OBSERVATIONS	MONITOR	INVESTIGATE	REPAIR
CREST	1	ANY SURFACE CRACKING?		✓				
	2	ANY UNUSUAL LOW AREAS?		✓				
	3	ANY RUTS OR PUDDLES?		✓				
	4	ANY HORIZONTAL OFFSET?		✓				
	5	NEED VEGETATION CONTROL?		✓				
UPSTREAM SLOPE & BEACH AREA	6	ANY SLIDES, SLOUGHS, SCARPS?		✓				
	7	ANY SINKHOLES OR UNUSUAL DEPRESSIONS?		✓				
	8	ANY EROSION ?		✓				
	9	CHANGES AT ABUTMENT CONTACTS?		✓				
	10	NEED VEGETATION CONTROL?		✓				
DOWNSTREAM SLOPE	11							
	12	ANY WET AREAS?		✓				
	13	ANY SLIDES, SLOUGHS, SCARPS?		✓				
	14	CHANGES AT DAM-ABUTMENT CONTACT?		✓				
	15	ANY EROSION?	✓		minor erosion on North grain area	✓		
	16	ANY UNUSUAL BULGING OR SLOPE MOVEMENT?		✓				
	17	NEED VEGETATION CONTROL?		✓				
SEEPAGE COLLECTION AND PUMPBACK SYSTEM	18							
	19	IS DRAIN OUTLET CLOGGED OR OBSTRUCTED?		✓				
	20	ARE DRAIN FLOWS MUDDY OR TURBID?		✓				
	21	IS EMBANKMENT WET AROUND DRAIN OUTLET?	✓		minor leakage around piping	✓		
	22	ANY PROBLEMS WITH COLLECTION POND?		✓				
	23	IS PUMPBACK SYSTEM WORKING PROPERLY?	✓					
DIVERSION CHANNEL AND DROP STRUCTURE	24							
	25	ANY EROSION?		✓				
	26	NEED VEGETATION CONTROL?		✓				
	27	ANY DEBRIS IN CHANNELS OR DROP STRUCTURE?		✓				
	28	ANY CRACKS OR DETERIORATION OF CONCRETE?		✓				
	29	ANY CORROSION OF PIPE?		✓				
	30							

ADDITIONAL COMMENTS (REFER TO ITEM NO. IF APPLICABLE):

QUARTERLY INSPECTION SUMMARY				
NAME OF DAM:	San Luis Project Tailing Dam		CO DRMS Permit #:	M-1988-112
REPORTING PERIOD:		thru	REPORT #:	
INSPECTION ITEMS				
Piezometer Levels	Included in report			PHOTOS
Drain Collection and Pumpback System Observations	system working properly			No
Seepage/Erosion Observations	minor erosion on North groin area (down stream)			Yes
Vegetation/Rodent/Other Maintenance Observations	None			No
Diversion System Observations	channel in good condition, No issues			Yes
RECOMMENDATIONS/COMMENTS				
Erosion in down stream area of North groin section, will be monitored.				
INSPECTION AND REPORTING PERSONNEL				
NAME	REPRESENTING		TITLE/ROLE	
Juliq Madrid	BMRI		Site Supervisor	
David Carino	BMRI		Site Manager	

<b>Piezometer</b>	<b>Date</b>	<b>Depth to Water (feet)</b>	<b>Total Depth (ft)</b>	<b>Volume of Water (ft)</b>
P6	1/31/17	Dry	72.46	0.00
P7	1/31/17	92.27	92.50	0.23
P8	1/31/17	96.65	97.51	0.86
P9	1/31/17	71.92	72.30	0.38
P10	1/31/17	57.62	58.30	0.68
P11	1/31/17	41.38	41.80	0.42
P12	1/31/17	41.69	41.71	0.02
P13	1/31/17	40.99	41.34	0.35
P14	1/31/17	Dry	41.24	0.00
P15	1/31/17	40.85	41.10	0.25

<b>Piezometer</b>	<b>Date</b>	<b>Depth to Water (feet)</b>	<b>Total Depth (ft)</b>	<b>Volume of Water (ft)</b>
P6	2/28/17	Dry	72.46	0.00
P7	2/28/17	92.29	92.50	0.21
P8	2/28/17	96.62	97.51	0.89
P9	2/28/17	71.96	72.30	0.34
P10	2/28/17	57.55	58.30	0.75
P11	2/28/17	41.39	41.80	0.41
P12	2/28/17	41.68	41.71	0.03
P13	2/28/17	40.98	41.34	0.36
P14	2/28/17	41.22	41.24	0.02
P15	2/28/17	40.85	41.10	0.25

<b>Piezometer</b>	<b>Date</b>	<b>Depth to Water (feet)</b>	<b>Total Depth (ft)</b>	<b>Volume of Water (ft)</b>
P6	3/31/17	Dry	72.46	0.00
P7	3/31/17	92.29	92.50	0.21
P8	3/31/17	96.93	97.51	0.58
P9	3/31/17	71.96	72.30	0.34
P10	3/31/17	57.56	58.30	0.74
P11	3/31/17	41.38	41.80	0.42
P12	3/31/17	41.67	41.71	0.04
P13	3/31/17	40.99	41.34	0.35
P14	3/31/17	41.21	41.24	0.03
P15	3/31/17	40.84	41.10	0.26



## **First Quarter 2017 Tailing Dam Inspection Photograph Details:**

Photos #1 and #2: West side of Tailing Dam looking East

Photo #3: Northwest groin area re-vegetation looking up from toe

Photo #4: Northwest groin area re-vegetation looking down from crest

Photo #5: Inlet of Concrete Drop Structure (South Diversion Channel)

Photo #6: Tailing Dam Roadway Southside look North

Photo #7: Under-drain pipeline collection system

Photo #8: East side Tailing Dam looking West

Photos #9 and #10: Tailing Impoundment from roadway on Tailing Dam looking East

Photos #11 and #12: South Diversion Channel



①





②









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10.05.2016





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#8





#9





#10





#11





#12





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✓  
BATTLE MOUNTAIN RESOURCES, INC.

**RECEIVED**

✓ OCT 11 2017

DIVISION OF RECLAMATION  
MINING AND SAFETY

October 06, 2017

Mr. Lucas J. West  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: San Luis Project Tailing Dam Report 2<sup>nd</sup> Quarter 2017, Technical Revision No. 33,  
Permit No. M-1988-112

Dear Mr. Erickson:

Battle Mountain Resources Inc. ("BMRI") is pleased to provide the San Luis Project Tailing Dam Report for the 2<sup>nd</sup> Quarter 2017 in accordance with Technical Revision No. 33 to BMRI's Reclamation Permit.

Enclosed along with the inspection report are photos of the tailing dam, concrete drop structure and the under drain discharge area.

Should you have any questions, please do not hesitate to contact me at 719-379-0538.

Respectfully,

Julio F. Madrid  
Sr. Supervisor Legacy Sites Reclamation and Closure  
Battle Mountain Resources Inc.

cc: Larry Fiske BMRI  
David Carino BMRI



August 18, 2017

**RECEIVED**

Project No. 2101.05.15

OCT 11 2017

Mr. Julio Madrid  
Battle Mountain Resources, Inc.  
P.O. Box 310  
San Luis, CO 81152-0310

DIVISION OF RECLAMATION  
MINING AND SAFETY

RE: 2017 2<sup>nd</sup> Quarter and Annual Dam Safety Inspection Report  
San Luis Tailings Dam  
CDRMS Permit No. M-1988-112



Dear Mr. Madrid,

At your request, Engineering Analytics, Inc. (EA) conducted the 2017 annual dam safety inspection for the San Luis Tailings Dam. The inspection was conducted on May 5 by Mark S. Abshire, P.E., in conformance with the Tailing Dam Safety Inspection and Reporting Program prepared by Miller Geotechnical Consultants, Inc. (MGC), dated March 12, 2013.

EA's inspection included review of the following historical project documents:

- San Luis Project Tailing Dam Detailed Inspection Report (MGC, February 2014)
- 2015 Annual Inspection Report (MGC, June 10, 2015)
- 2016 Annual Inspection Report (MGC, July 6, 2016), and
- 2017 Annual Inspection Report (MGC, April 26, 2017).

An overall site plan of the San Luis TSF is presented on Figure 1. Specific inspection results are detailed on the Tailing Dam Inspection Form (Attachment 1), and findings are presented on Figure 2. Photographs taken during the inspection are included as Attachment 2:

- Photos 1 - 21 Overall TSF site photos
- Photos 22 – 32 Photos of specific inspection findings.

## PREVIOUS FINDINGS

The primary issues identified in the 2016 annual inspection included the need for improvements to the South Diversion Channel, including replacement of the drop structure. Major regrading was conducted in late 2016 to increase the capacity of the channel, and replacement of the drop structure is scheduled for the spring of 2018. Additional minor items identified in 2016 included erosional rilling at the right downstream groin, and regrading of the area around the underdrain outfall to reduce ponding of surface water in that area.

## INSTRUMENTATION

**Piezometers:** Piezometer readings from June, 2016 through May, 2017 are presented graphically on Figure 3. The piezometers all indicate dry conditions or minor amounts of water present at the bottom caps of the casings due to moisture condensation. This behavior is consistent with historic observations. These observations indicate that the sub-drains are functioning, and that low phreatic conditions are maintained within the dam embankment. No abnormalities are indicated in the measurements.

**Underdrain:** Discharge rates from the underdrain system to the seepage collection pond from June, 2016 through May, 2017 are presented in Table 1. The recorded rates for the previous year are consistent with historical measurements, and show no abnormalities.

**Table 1 San Luis TSF Underdrain Flow Measurements: June 2016 - June 2017**

Date	Flow (gpm)
6/30/2016	38.5
7/25/2016	40.0
8/30/2016	39.0
9/29/2016	39.5
10/31/2016	38.0
11/30/2016	37.5
12/29/2016	37.5
1/31/2017	38.0
2/28/2017	38.5
3/30/2017	39.0
4/27/2017	35.3
5/31/2017	40.0
6/29/2017	40.0

## 2017 INSPECTION FINDINGS

The overall surficial conditions of the tailings dam at the time of the inspection were generally satisfactory, except for minor issues discussed in more detail below.

**Right Downstream Groin (Photos 22 – 25):** Vegetation was just beginning to emerge for the spring season at the time of the inspection, making the vegetation appear thin and sparse in the photos. The process of erosional rilling at the right downstream groin area is ongoing, but the condition is presently judged to be minor and appears to be less severe than what was described in previous reports. This area should be monitored closely to make sure erosion does not progress to detrimental levels.

The cross-berms and rock-lined down-drains have experienced minor erosion, in places exposing the geotextile fabric beneath the rock (Photo 24). Additionally, a shallow gully has formed at the base of the groin in this area (Photo 25). These areas should be repaired in 2017 to prepare the area for spring 2018 snowmelt.



**Lower Downstream Face (Photos 26-32):** The presence of minor erosional rilling and gullying was observed at the lower downstream face south of the underdrain outlet (Figure 2, Photo 27). The individual rills observed are discontinuous, and are frequently interrupted by brushy vegetation. The absence of significant sediment deposits on the left downstream groin liner indicates that erosion of the dam face is not problematic at this time (Photos 26, 28, 29, 30). The condition is presently judged to be minor; however, development of erosional rills and gulleys at the downstream face should be monitored closely to make sure erosion does not progress to detrimental levels.

**Brush/Debris/Vegetation Removal (Photos 19, 30):** Minor deposits of brush and sediment have started to accumulate in the drop structure outlet basin (Photo 19), and at the inlet of the access road culvert at the left downstream groin (Photo 30). Vegetation is beginning to develop in the drop structure outlet basin. This debris should be removed to maintain the capacity of these surface drainage features.

## CONCLUSIONS

Based on the observations described above, the overall surficial condition of the dam is judged to be 'Conditionally Satisfactory' pending completion of the minor improvements described herein and replacement of the drop structure in 2018. Please don't hesitate to call should you have questions or concerns regarding this inspection report.

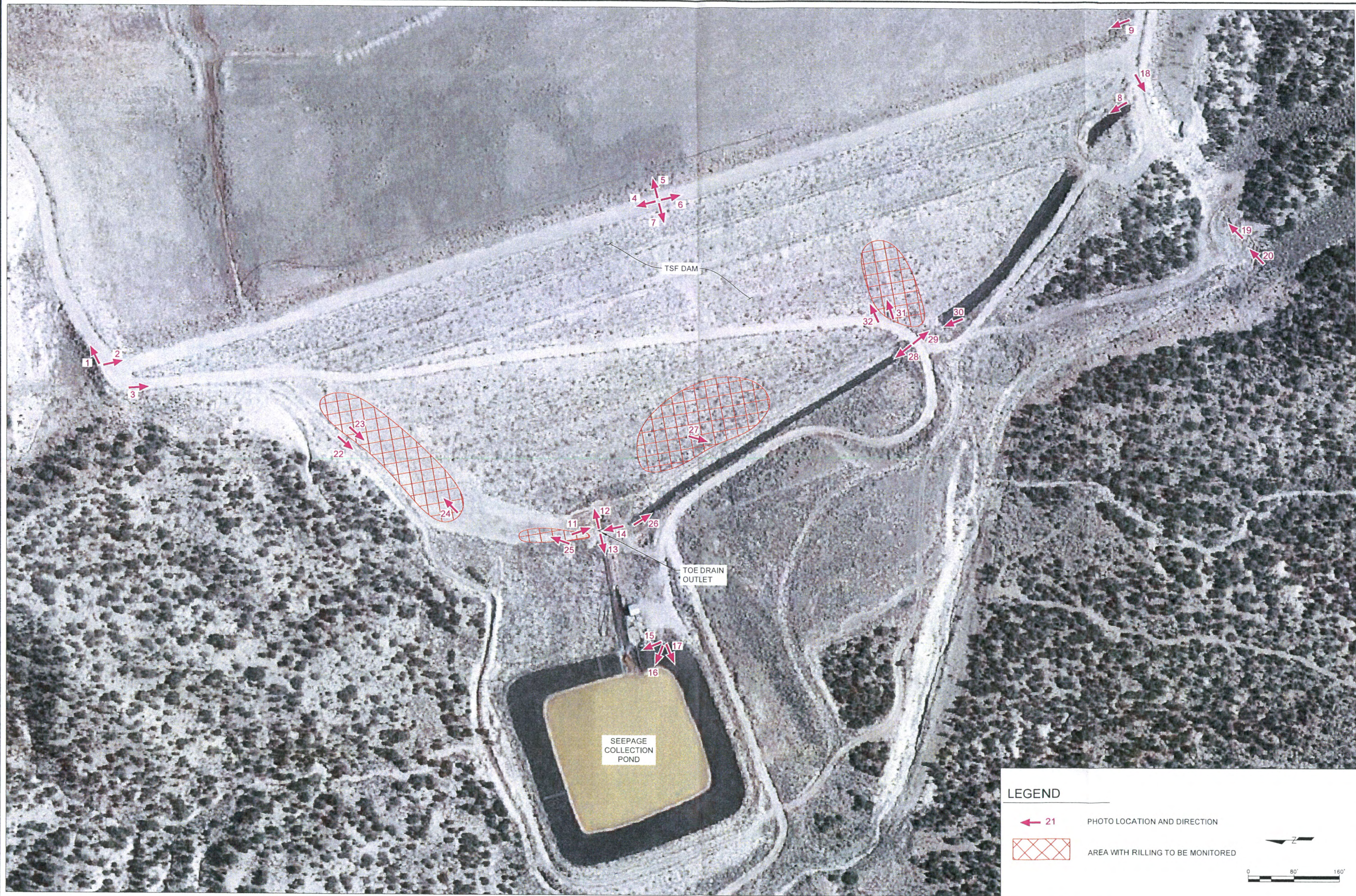
Respectfully Submitted,  
**Engineering Analytics, Inc.**



Mark S. Abshire, P.E.  
Senior Geotechnical Engineer



O:\05 San Luis\13 Ditch\Site General.dwg    SAVED: 8/14/17    PRINTED: 8/14/17



LEGEND



PHOTO LOCATION AND DIRECTION



AREA WITH RILLING TO BE MONITORED



NO	REVISION DESCR	DATE	BY

BATTLE MOUNTAIN RESOURCES, INC.  
SAN LUIS TAILINGS STORAGE FACILITY  
2017 ANNUAL DAM SAFETY INSPECTION

ISSUED BY

Project Number: 101 05 15

Drawn By: TB

Designed By: MSA

Approved By: MSA

Date: 8/10/2017

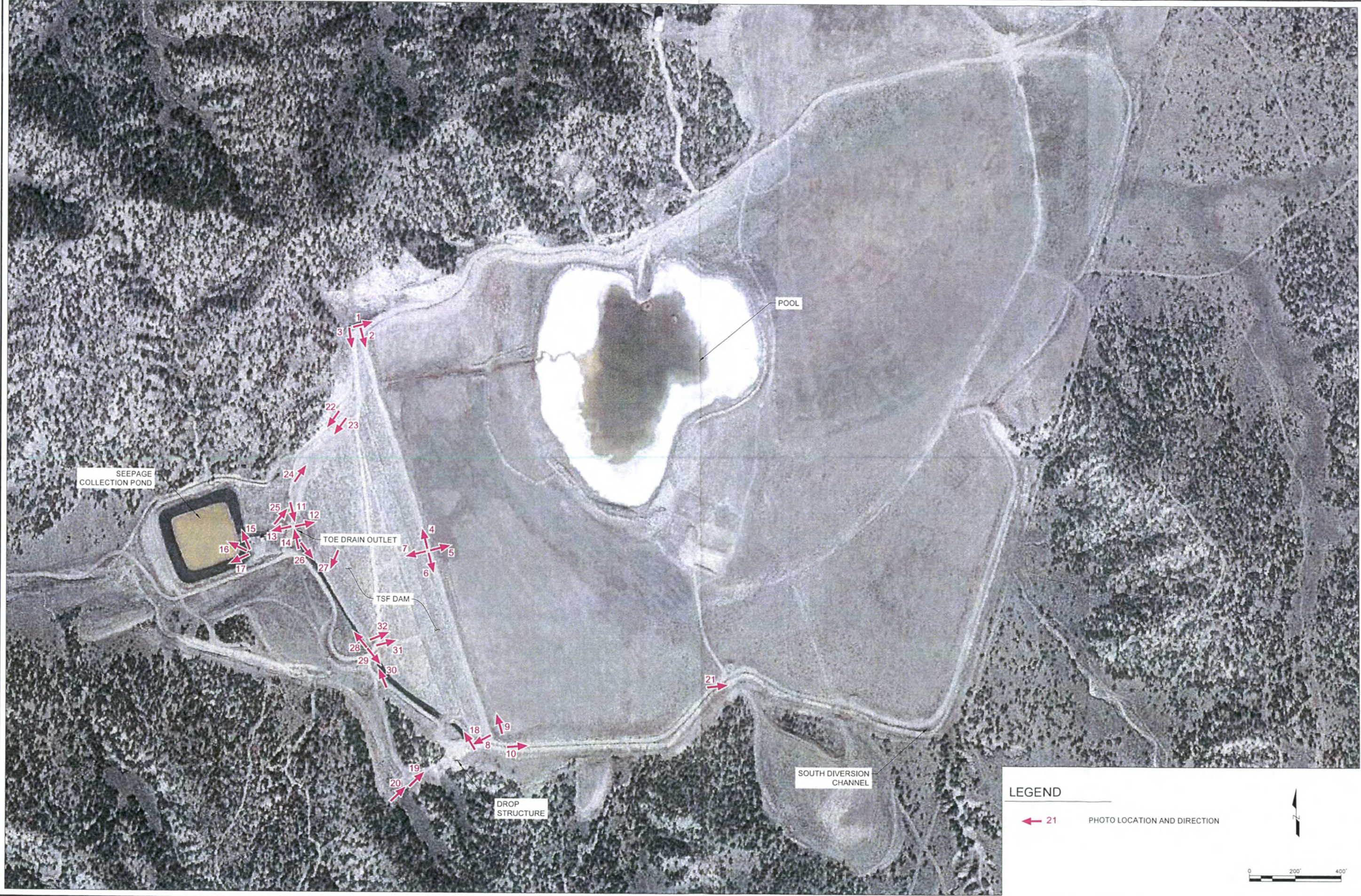
Scale: 1" = 160'

Engineering Analytics, Inc.  
1600 Specht Point Road, Suite 209  
Fort Collins, CO 80525  
(970) 486-3111

FIGURE 2



O:\05 San Luis\13 Ditch\Site General.dwg, SAVED: 8/14/17, PRINTED: 8/14/17



NO.	REVISION DESCR.	DATE	BY

THIS DRAWING INCLUDING ENGINEERING  
DESIGN AND SPECIFICATIONS IS  
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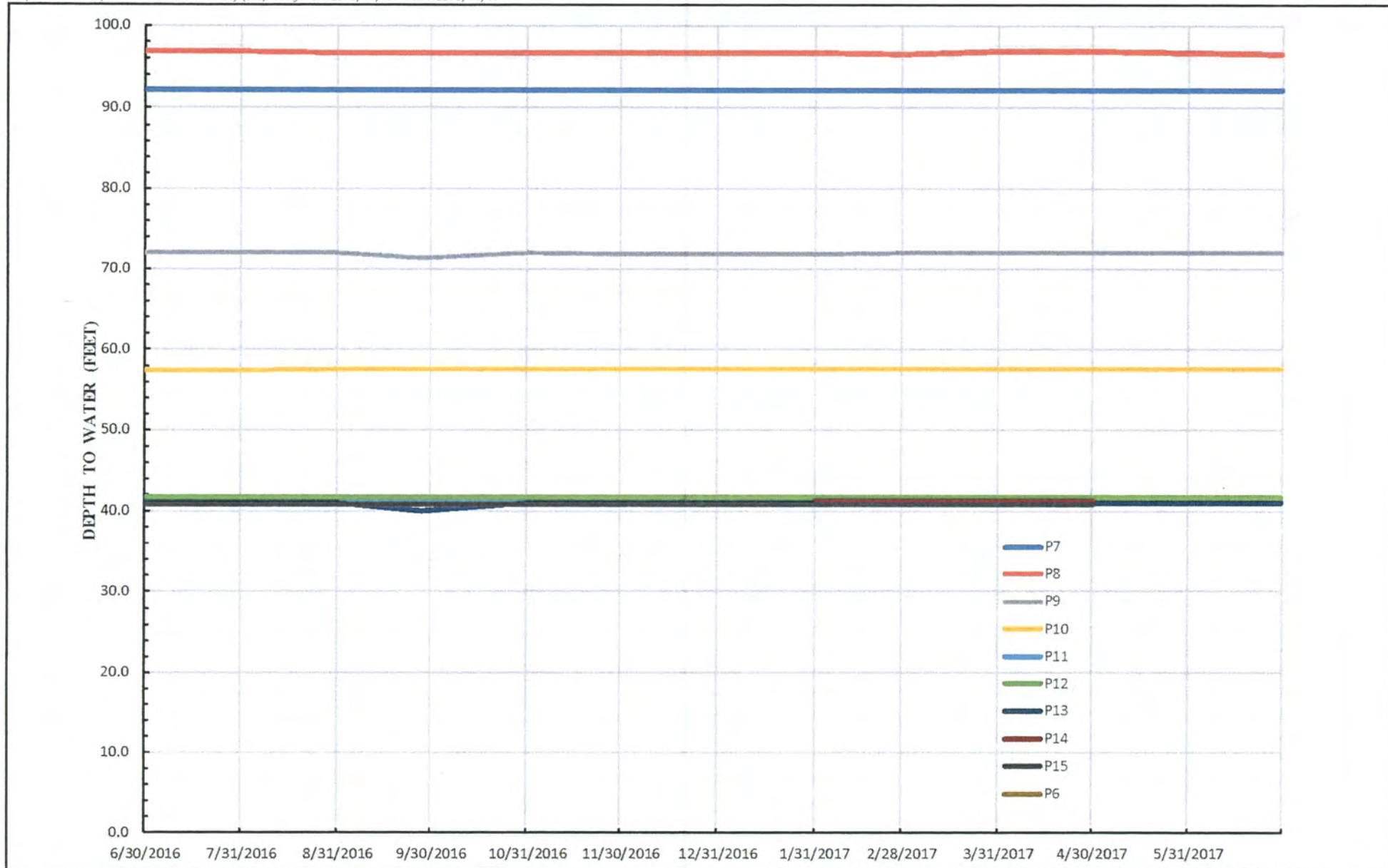
BATTLE MOUNTAIN RESOURCES, INC.  
SAN LUIS TAILINGS STORAGE FACILITY  
OVERALL SITE PLAN

Engineering Analytics, Inc.  
1600 Specht Point Road, Suite 209  
Fort Collins, CO 80525  
(970) 488-3111

Project Number: 101 05 15  
Drawn By: TB  
Designed By: MSA  
Approved By: MSA  
Date: 8/10/2017  
Scale: 1" = 400'

FIGURE 1





Project No. 101.05.15

August 2017

**ATTACHMENT 1**  
**SAN LUIS TAILINGS DAM**  
**Q2/ANNUAL DAM SAFETY INSPECTION FORM**  
**MAY 5, 2017**

**TAILINGS DAM INSPECTION FORM**

Name of Professional Conducting Inspection: Mark S. Abshire, PE		Colorado P.E. License No.: 33319	
Company Name and Address: Engineering Analytics, Inc. 1600 Specht Point Road, Suite 209 Fort Collins, Colorado 80525		Phone Nos.: 970-488-3111 (Office) 970-692-4265 (Cell) email: mabshire@enganalytics.com	
INSPECTION PREPARATION: I have reviewed all pertinent technical documentation related to this dam and site in the Owner's files: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    Comment:			
STATEMENT OF EXPERIENCE: I am experienced in the technical disciplines or I am working with other professionals experienced in the technical disciplines to properly inspect this dam and appurtenant works. Technical disciplines in addition to general civil engineering may include geotechnical, geological, hydrologic, hydraulics, and structural <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    Comment:			
YR COMPL 1993 Ph II, Raise 1 1995 Ph II, Raise 2	T                      R                      Sec Not Applicable- Sangre de Cristo Land Grant	COUNTY Costilla	DATE OF INSPECTION: May 5, 2017
DAM HEIGHT (FT) ~ 155	DAM LENGTH (FT) ~ 1,900	CREST WIDTH (FT) ~25	PREVIOUS INSPECTION: April 26, 2017 (2017 Q1) June 21, 2016 (2016 Annual)
FREEBOARD (FT) ~ 12	DRAINAGE AREA (AC)	CREST ELEV (FT) ~ 8620	NORMAL STORAGE (AF)    POOL SURFACE AREA (AC)
BEACH LENGTH ABOVE POOL (FT): ~600		DIVERSION CHANNEL CAPACITY (CFS): ~1,500	
OWNER: Battle Mountain Resources, Inc.		OWNER REPRESENTATIVE/CONTACT: Julio Madrid	
OWNER ADDRESS: P.O. Box 310 San Luis, Colorado 81152		OWNER CONTACT PHONE NOS.: 719-379-0538 (cell)	
FIELD CONDITIONS OBSERVED	WATER LEVEL BELOW DAM CREST: 12+    FT		
	GROUND MOISTURE CONDITION: <input checked="" type="checkbox"/> DRY <input type="checkbox"/> WET <input type="checkbox"/> SNOW COVER <input type="checkbox"/> OTHER		
Directions: Mark and X for conditions found and underline words that apply			
<b>UPSTREAM SLOPE AND BEACH AREA</b>			
<b>PROBLEMS NOTED:</b>			
<input checked="" type="checkbox"/> (0) NONE <input type="checkbox"/> (1) EROSION PROTECTION - Missing/ Sparse <input type="checkbox"/> (2) BEACH AREA WAVE EROSION <input type="checkbox"/> (3) CRACKS WITH DISPLACEMENT <input type="checkbox"/> (4) SINKHOLE <input type="checkbox"/> (5) APPEARS TOO STEEP <input type="checkbox"/> (6) DEPRESSIONS OR BULGES <input type="checkbox"/> (7) SLIDES <input type="checkbox"/> (8) ANIMAL BURROWS <input type="checkbox"/> (9) OTHER			
<b>CONDITIONS OBSERVED:</b> <input checked="" type="checkbox"/> GOOD <input type="checkbox"/> ACCEPTABLE <input type="checkbox"/> POOR			
<b>CREST</b>			
<b>PROBLEMS NOTED:</b>			
<input checked="" type="checkbox"/> (10) NONE <input type="checkbox"/> (11) RUTS OR PUDDLES <input type="checkbox"/> (12) EROSION <input type="checkbox"/> (13) CRACKS WITH DISPLACEMENT <input type="checkbox"/> (14) SINKHOLES <input type="checkbox"/> (15) NOT WIDE ENOUGH <input type="checkbox"/> (16) LOW AREA <input type="checkbox"/> (17) MISALIGNMENT <input type="checkbox"/> (18) IMPROPER SURFACE DRAINAGE <input type="checkbox"/> (19) OTHER			
<b>CONDITIONS OBSERVED:</b> <input checked="" type="checkbox"/> GOOD <input type="checkbox"/> ACCEPTABLE <input type="checkbox"/> POOR			
<b>DOWNSTREAM SLOPE</b>			
<b>PROBLEMS NOTED:</b>			
<input type="checkbox"/> (20) NONE <input type="checkbox"/> (21) LIVESTOCK DAMAGE <input checked="" type="checkbox"/> (22) EROSION OR GULLIES (R DS Groin) <input type="checkbox"/> (23) CRACKS WITH <input type="checkbox"/> (24) SINKHOLE <input type="checkbox"/> (25) APPEARS TOO STEEP <input type="checkbox"/> (26) DEPRESSIONS OR BULGES <input type="checkbox"/> (27) SLIDES <input type="checkbox"/> (28) SOFT AREAS <input checked="" type="checkbox"/> (29) OTHER Rilling at right downstream groin and lower downstream face south of underdrain outlet. Erosion of down-drains.			
<b>CONDITIONS OBSERVED:</b> <input type="checkbox"/> GOOD <input checked="" type="checkbox"/> ACCEPTABLE <input type="checkbox"/> POOR			



**TAILINGS DAM INSPECTION FORM**

Directions: Mark and X for conditions found and underline words that apply

**SEEPAGE AND DRAIN OUTFALL****PROBLEMS NOTED:**

- ☐ (30) NONE
 ☐ (31) SATURATED EMBANKMENT AREA
 ☐ (32) SEEPAGE EXITS ON DAM
 ☐ (33) SEEPAGE EXITS AT POINT SOURCE
 ☒ (34) MINOR PONDING OF PIPE LEAKAGE AT TOE

**DRAIN OUTFALL SEEN:** ☒ YES ☐ NO

- ☐ (35) FLOW ADJACENT TO DRAIN PIPE
 ☐ (36) DRAIN OUTFLOW TURBID
 ☐ (37) DRAIN DRY/OBSTRUCTED
 ☐ (38) OTHER

**SHOW LOCATION OF DRAIN ON SKETCH**

See Figure 1

**AND INDICATE AMOUNT AND QUALITY OF SEEPAGE**

Approximately 30 gpm clear flow (See Photo 15). Previously noted seepage face at toe drain is dry.

**CONDITIONS OBSERVED:**

- ☐ GOOD
 ☒ ACCEPTABLE
 ☐ POOR

**STORM WATER MANAGEMENT SYSTEM****PROBLEMS NOTED:**

- ☐ (40) NONE
 ☐ (41) NO EMERGENCY SPILLWAY
 ☐ (42) EROSION AT DROP STRUCTURE
 ☐ (43) CONCRETE DETERIORATED/UNDERMINED
 ☐ (45) STRUCTURE MAY BE TOO SMALL
 ☐ (46) DIVERSION CHANNEL EROSION
 ☐ (47) INADEQUATE CHANNEL FLOW CAPACITY
 ☐ (48) CHANNEL FLOW OBSTRUCTED
 ☒ (49) OTHER The south diversion channel was widened in 2016 in preparation for 2018 construction of a new spillway.

**CONDITIONS OBSERVED:**

- ☐ GOOD
 ☒ ACCEPTABLE
 ☐ POOR

**MONITORING****EXISTING INSTRUMENTATION FOUND:**

- ☐ (50) NONE
 ☐ (51) GAGE ROD IN POOL AREA
 ☒ (52) PIEZOMETERS
 ☐ (53) SEEPAGE WEIRS/FLUMES
 ☐ (54) SURVEY MONUMENTS
 ☐ (55) OTHER

**MONITORING OF INSTRUMENTATION:**

- ☐ (56) NO WEIRS/FLUMES
 ☒ (57) YES

**PERIODIC INSPECTIONS BY:**

- ☒ (58) OWNER
 ☐ (59) ENGINEER

**CONDITIONS OBSERVED:**

- ☒ GOOD
 ☐ ACCEPTABLE
 ☐ POOR

**MAINTENANCE AND REPAIRS****PROBLEMS NOTED:**

- ☐ (60) NONE
 ☐ (61) ACCESS ROAD NEEDS MAINTENANCE
 ☐ (62) CATTLE DAMAGE
 ☐ (63) BRUSH ON: UPSTREAM SLOPE/BEACH, CREST, DOWNSTREAM SLOPE, TOE
 ☐ (64) RODENT ACTIVITY ON: UPSTREAM SLOPE/BEACH, CREST, DOWNSTREAM SLOPE, TOE
 ☒ (65) OTHER Remove sediment and brush debris from drop structure outlet (Photo 19) and access road culvert inlet at left downstream groin (Photo 30).

**CONDITIONS OBSERVED:**

- ☐ GOOD
 ☒ ACCEPTABLE
 ☐ POOR

**OVERALL CONDITIONS**

Based on this inspection and recent file review, the overall surficial condition is determined to be:

- ☐ SATISFACTORY
 ☒ CONDITIONALLY SATISFACTORY
 ☐ UNSATISFACTORY

**TAILING DAM INSPECTION FORM**

ITEMS REQUIRING ACTION BY OWNER TO IMPROVE THE SAFETY OF THE DAM	
MAINTENANCE ●	MINOR REPAIR ●
MONITORING	
<input type="checkbox"/> (1) PROVIDE ADDITIONAL EROSION PROTECTION: _____	
<input checked="" type="checkbox"/> (2) CLEAR BRUSH FROM: Drop structure outlet (Photo 19) and access road culvert inlet at left downstream groin (Photo 30) (see Item 65)	
<input type="checkbox"/> (3) INITIATE RODENT CONTROL PROGRAM AND PROPERLY BACKFILL EXISTING HOLES: _____	
<input type="checkbox"/> (4) GRADE CREST TO A UNIFORM ELEVATION WITH DRAINAGE TO THE UPSTREAM SLOPE: _____	
<input type="checkbox"/> (5) PROVIDE SURFACE DRAINAGE FOR: _____	
<input checked="" type="checkbox"/> (6) MONITOR: Per Item 22, monitor rilling and gullying at right downstream groin (Photos 22, 23).	
<input checked="" type="checkbox"/> (7) OTHER: Per Item 29 at right downstream groin, repair cross berms and rock-lined down-drain channels where damaged by runoff (Photo 24). Repair and consider armoring the shallow gully at the base of the groin (Photo 25).	
<input type="checkbox"/> (8) OTHER: _____	
<input type="checkbox"/> (9) OTHER: _____	
<b>ENGINEERING ● EMPLOY AN ENGINEER EXPERIENCED IN DESIGN AND CONSTRUCTION OF DAMS TO:</b> <b>(Plans and specifications to be improved by CDRMS prior to construction.)</b>	
<input type="checkbox"/> (10) PREPARE PLANS AND SPECIFICATIONS FOR REHABILITATION OF THE DAM: _____	
<input type="checkbox"/> (11) PREPARE AS-BUILT DRAWINGS OF: _____	
<input type="checkbox"/> (12) PERFORM A GEOTECHNICAL INVESTIGATION TO EVALUATE THE STABILITY OF THE DAM: _____	
<input type="checkbox"/> (13) PERFORM A HYDROLOGIC STUDY TO DETERMINE REQUIRED SIZE OF FLOOD BYPASS/SPILLWAY: _____	
<input type="checkbox"/> (14) PREPARE PLANS AND SPECIFICATIONS FOR AN ADEQUATE SPILLWAY: _____	
<input type="checkbox"/> (15) SET UP OR IMPROVE MONITORING SYSTEM: _____	
<input type="checkbox"/> (16) OTHER: _____	
<input type="checkbox"/> (17) OTHER: _____	
<b>Recommended schedule for upgrades/implementation of recommendations (please prioritize and note importance of each):</b>	
<ul style="list-style-type: none"> <li>- Item 29 to be completed in 2017: At right downstream groin, repair cross berms and rock-lined down-drain channels where damaged by runoff, and repair the shallow gully at the base of the groin.</li> <li>- Item 65 to be completed in 2017: Removal of sediment and brush/debris from drop structure outlet, and access road culvert inlet at left downstream groin).</li> <li>- Items 22 and 29: Monitor progression of rill and gulley formation, and potentially at other areas on downstream face in subsequent 2017 and 2018 inspections.</li> </ul>	
<input checked="" type="checkbox"/> Photographs <input type="checkbox"/> Attachments	
<b>ENGINEER'S INSTRUCTION:</b> Instructed owner on the safety concerns with the structure and how to monitor and inspect the dam and appurtenant works in the interim period between the regulatory annual inspections. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Comment: _____	
Professional Engineer's Signature: _____ Date: _____	
Reviewed by: _____ Date: _____ Owner/Owner's Representative	



GUIDELINES FOR DETERMINING CONDITIONS		
CONDITIONS OBSERVED - APPLIES TO UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE		
<u>GOOD</u> In general, this part of the structure has a good appearance, and conditions observed in this area do not appear to threaten the safety of the dam.	<u>ACCEPTABLE</u> Although general cross-section is maintained, surfaces may be irregular, eroded, rutted, spalled, or otherwise not in new condition. Conditions in this area do not currently appear to threaten the safety of the dam.	<u>POOR</u> Conditions observed in this area appear to threaten the safety of the dam.
CONDITIONS OBSERVED - APPLIES TO SEEPAGE		
<u>GOOD</u> No evidence of uncontrolled seepage. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions did not appear to threaten the safety of the dam.	<u>ACCEPTABLE</u> Some seepage exists at areas other than the drain outfalls, or other designed drains. No unexplained increase in seepage. All seepage is clear. Seepage conditions observed do not currently appear to threaten the safety of the dam.	<u>POOR</u> Seepage conditions observed appear to threaten the safety of the dam. Examples: 1) Designed drain or seepage flows have increased without increases in pool level. 2) Drain or seepage flows contain sediment, i.e., muddy water or particles in Jars samples. 3) Widespread seepage, concentrated seepage, or ponding appears to threaten the safety of the dam.
CONDITIONS OBSERVED - APPLIES TO MONITORING		
<u>GOOD</u> Monitoring includes movement surveys, leakage measurements, and piezometer readings. Instrumentation is in reliable, working condition. A plan for monitoring the instrumentation and analyzing results by the owner's engineer is in effect. Periodic inspections by Owner's engineer.	<u>ACCEPTABLE</u> Monitoring includes movement surveys and leakage measurements. Instrumentation is in serviceable condition. A plan for monitoring instrumentation is in effect by owner. Periodic inspections by Owner or representative.	<u>POOR</u> Instrumentation and monitoring described under "ACCEPTABLE" here are not provided, or required periodic readings are not being made, or unexplained changes in readings are not reacted to by Owner.
CONDITIONS OBSERVED - APPLIES TO MAINTENANCE AND REPAIR		
<u>GOOD</u> Dam appears to receive effective on-going maintenance and repair, and only a few minor items may need to be addressed.	<u>ACCEPTABLE</u> Dam appears to receive maintenance, but some maintenance items need to be addressed. No major repairs are required.	<u>POOR</u> Dam does not appear to receive adequate maintenance. One or more items needing maintenance or repair has begun to threaten the safety of the dam.
OVERALL CONDITIONS		
<u>SATISFACTORY</u> The safety inspection indicates no conditions that appear to threaten the safety of the dam, and the dam is expected to perform satisfactorily under all design loading conditions. Most of the required monitoring is being performed.	<u>CONDITIONALLY SATISFACTORY</u> The safety inspection indicates symptoms of structural distress (seepage, evidence of minor displacements, etc.) which, if conditions worsen, could lead to the failure of the dam. Essential monitoring, inspection, and maintenance must be performed as a requirement for continued full storage in the impoundment area.	<u>UNSATISFACTORY</u> The safety inspection indicates definite signs of structural distress (excessive seepage, cracks, slides, sinkholes, severe deterioration, etc.), which could lead to the failure of the dam if the reservoir is used to full capacity. The dam is judged unsafe for full storage of water.

**ATTACHMENT 2**  
**SAN LUIS TAILINGS DAM**  
**Q2/ANNUAL DAM SAFETY INSPECTION**  
**MAY 5, 2017**  
**INSPECTION PHOTOS**





*Photo 1* North end of dam at right abutment, looking east along the access road. Note water pool location within normal limits.



*Photo 2* North end of dam at right abutment, looking south over upstream face, beach, and dam crest road.



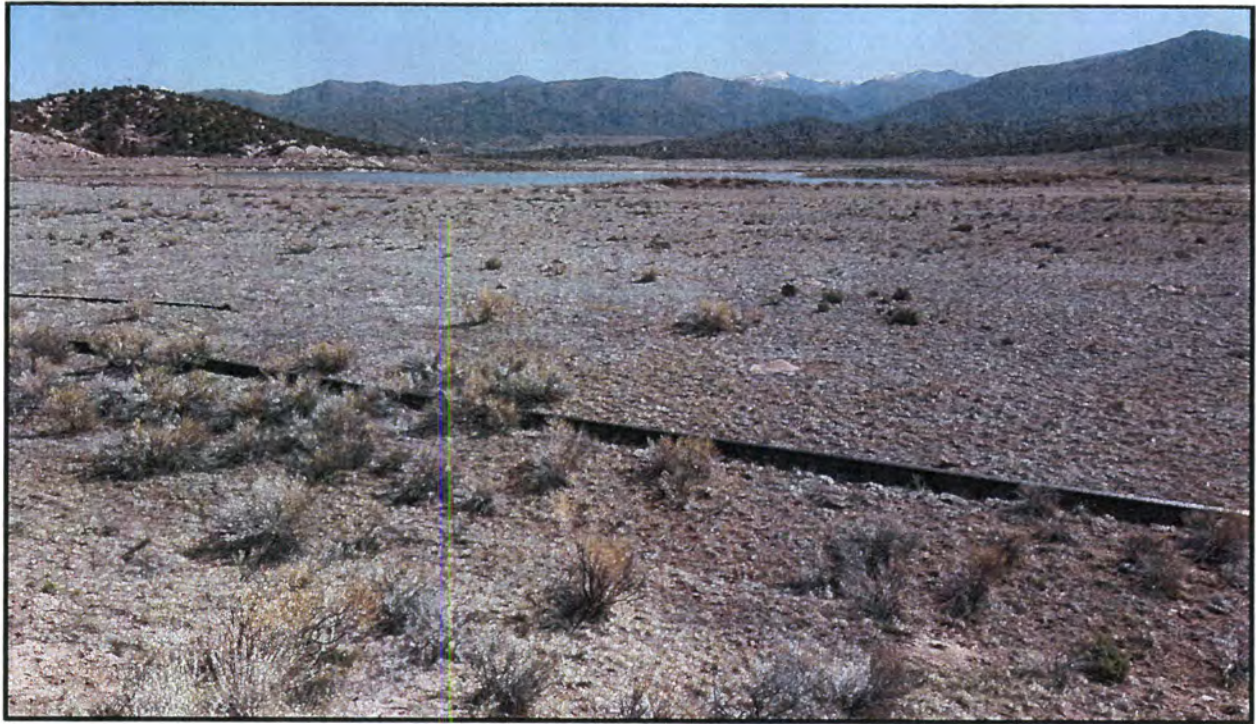


**Photo 3** North end of dam, looking southwest over the right downstream groin and downstream face. Note the recently (2016) regraded and re-seeded area in the foreground.

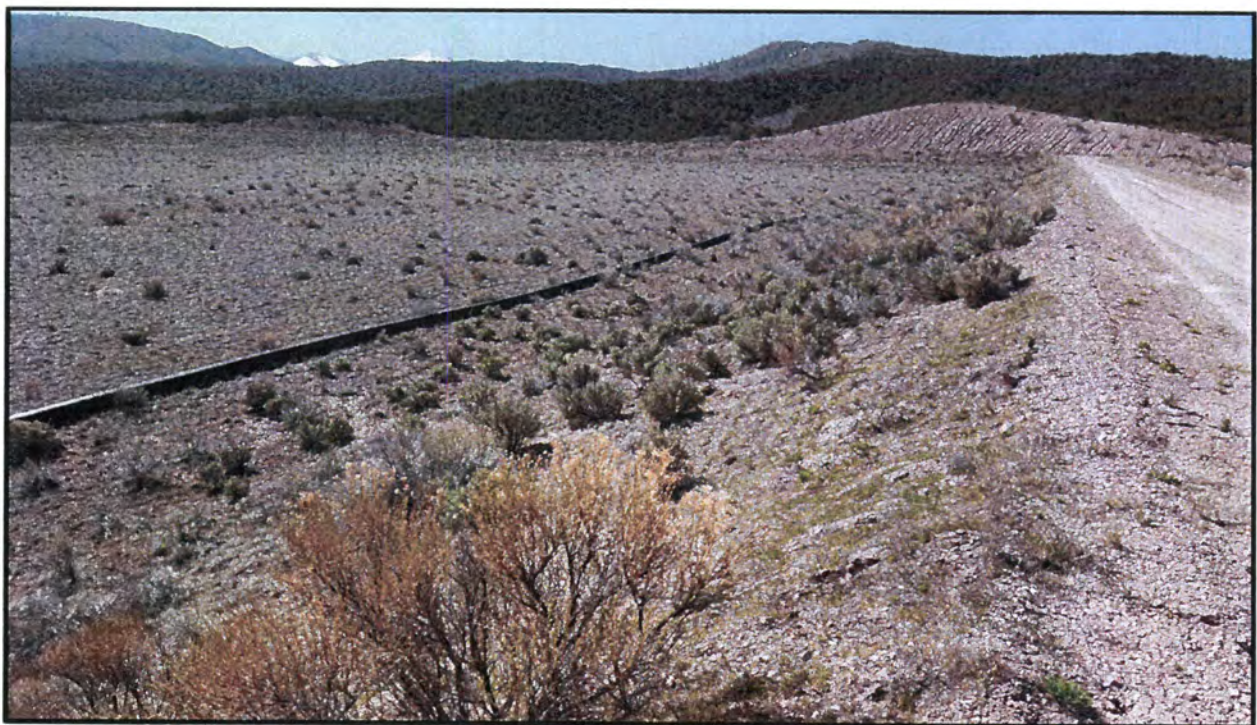


**Photo 4** Center of dam crest, looking north over upstream face, beach, and dam crest road.



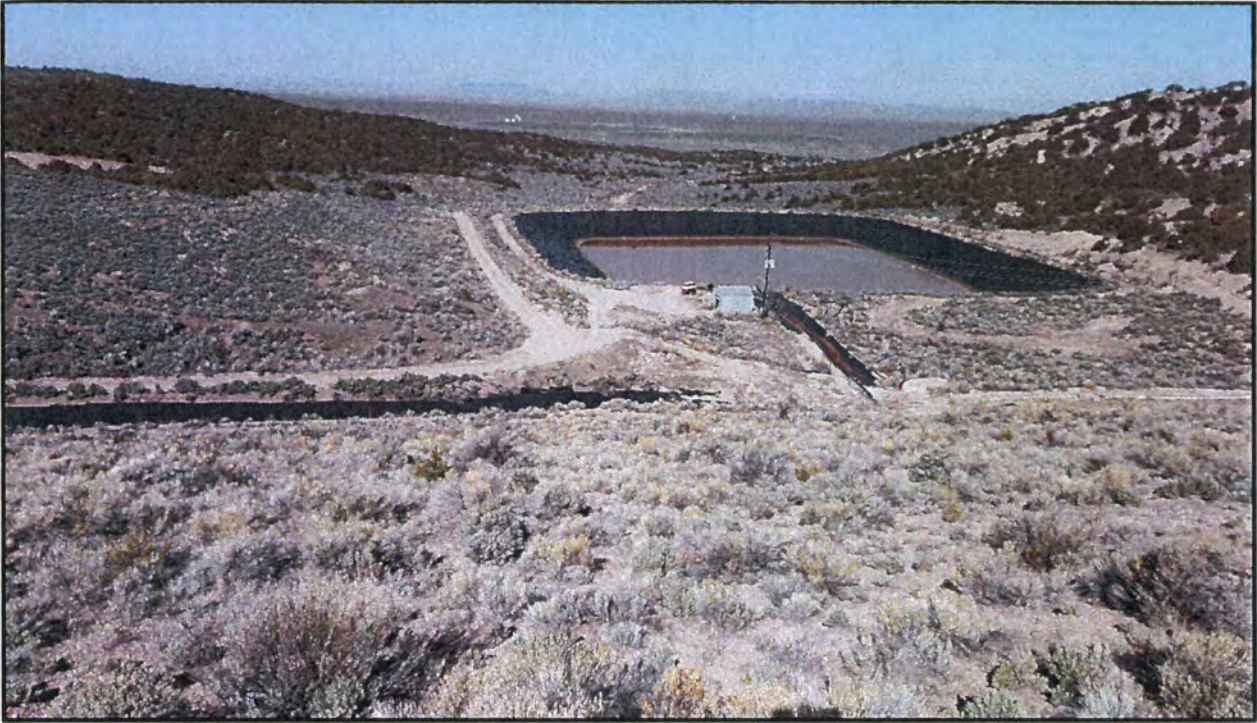


*Photo 5* Center of dam crest, looking east across tailings impoundment. Note water pool location within normal limits.



*Photo 6* Center of dam crest, looking south over upstream face, beach, and dam crest road.





*Photo 7* Center of dam crest, looking west across downstream face and seepage collection pond.



*Photo 8* South end of dam at left abutment, looking northwest over the left downstream groin and downstream face.





*Photo 9* South end of dam, looking north over upstream face, beach, and tailings impoundment.



*Photo 10* South end of dam, looking east over tailings impoundment and south diversion ditch.





*Photo 11* Looking south over toe drain discharge pipes. Note shallow standing water around pipes, but no seepage in the embankment above the pipes.



*Photo 12* Looking east over toe drain discharge pipes. Note 3 pipes draining to a manifold, then to a single outfall pipe.





*Photo 13* Looking west over toe drain outfall pipe toward seepage collection pond. Note that there is almost no water flowing along the pipe in the lined channel.

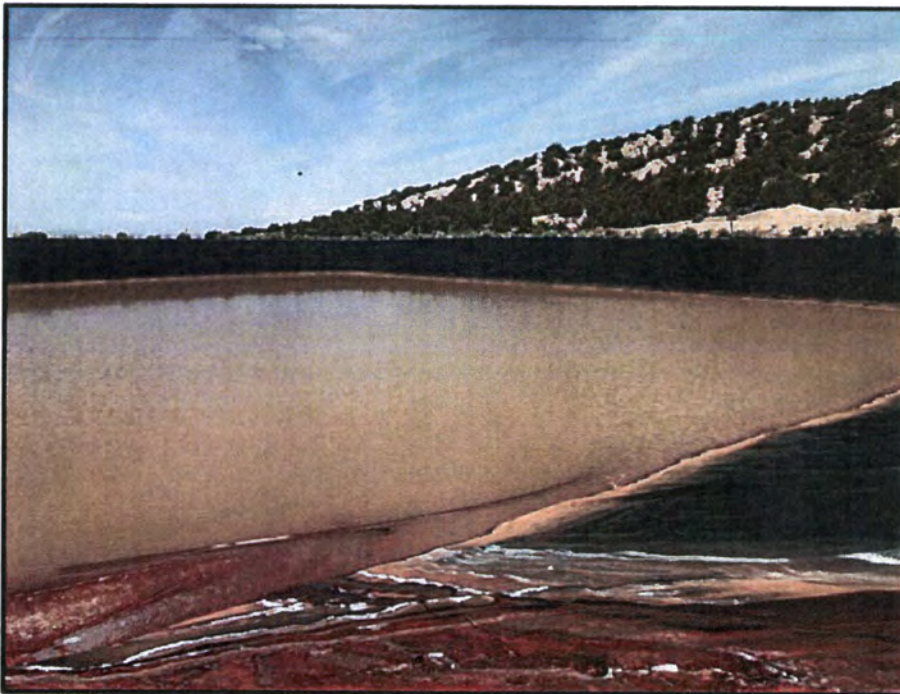


*Photo 14* Looking northeast over toe drain discharge pipes, right downstream groin, and right downstream face. Note minor erosional gully near the bottom of the groin along pumpback line.





*Photo 15* Looking north over toe drain outfall pipe discharging to the seepage collection pond.  
Note clear seepage discharge.



*Photo 16* Looking northwest across seepage collection pond.





*Photo 17* Looking west across seepage collection pond.

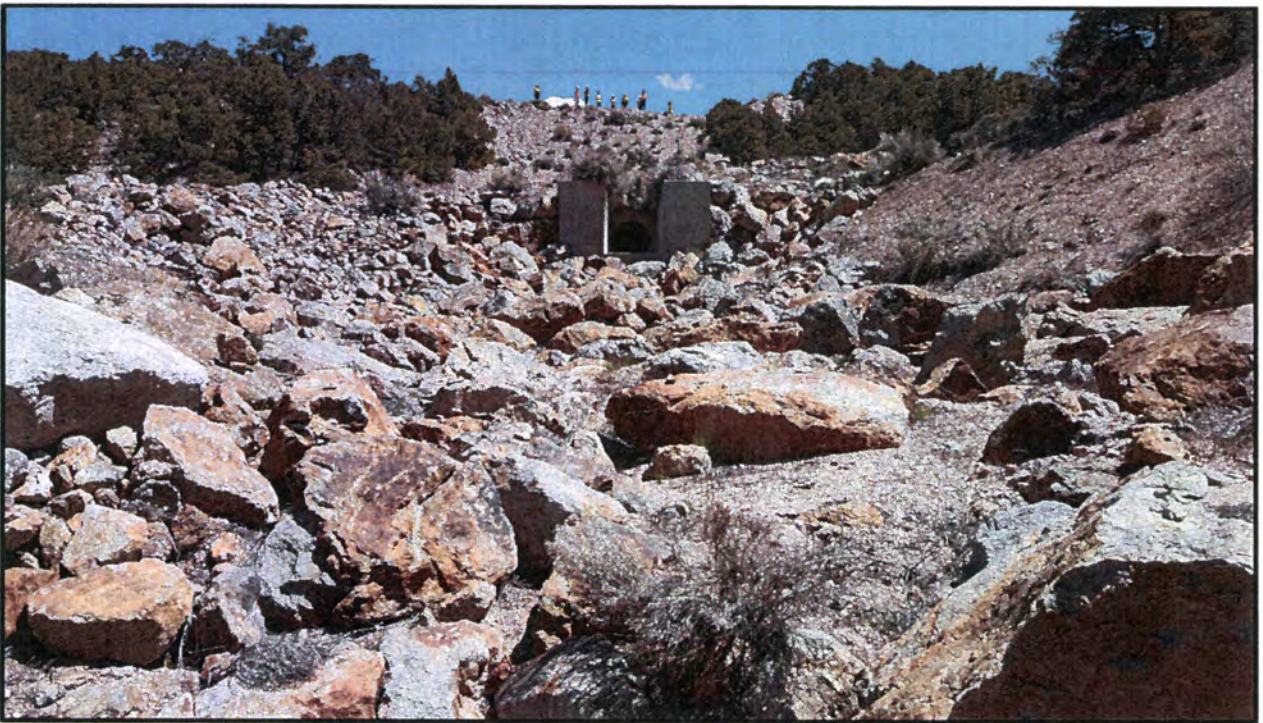


*Photo 18* Looking west across entrance to the drop structure for the south diversion channel.





*Photo 19* Looking east at the drop structure outlet. Note minor sediment buildup and bushy vegetation beginning to take root.

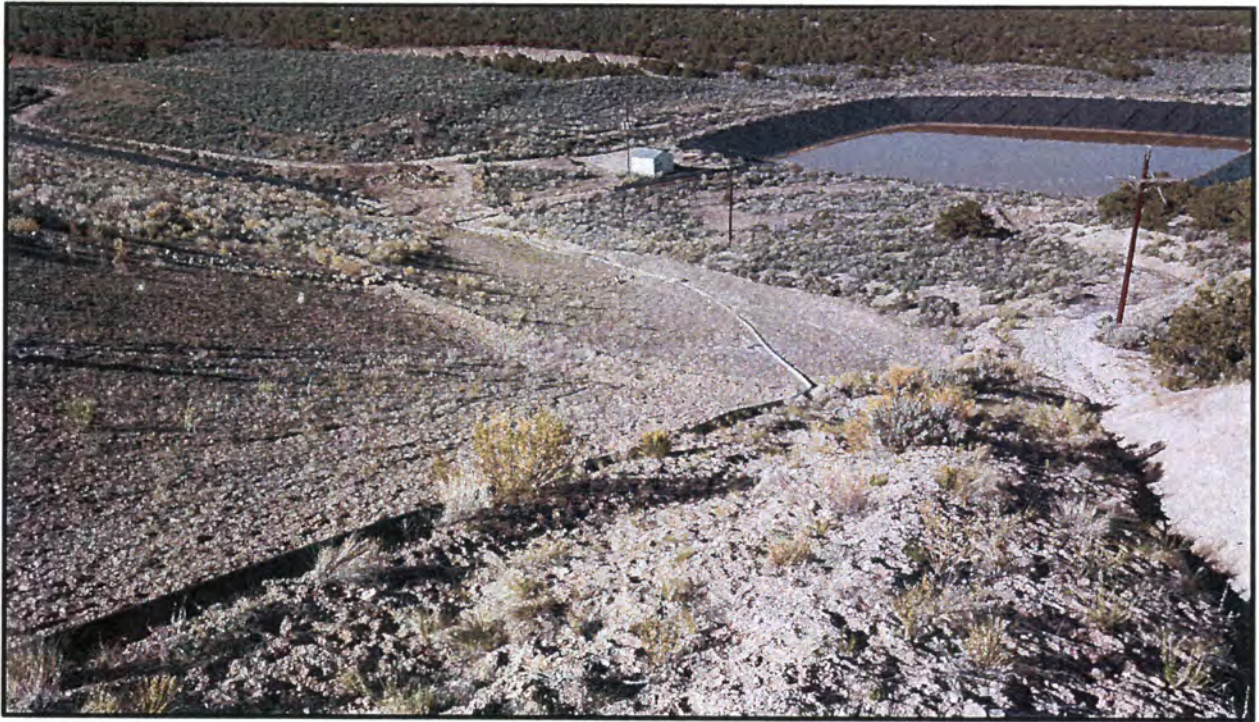


*Photo 20* Looking east over channel armoring below the drop structure outlet.





**Photo 21** South-central edge of TSF, looking east along the TSF access road and south diversion channel. Note the improved grading in the south diversion channel performed in late 2016 in preparation for 2018 spillway improvements.



**Photo 22** Looking southwest over the right downstream groin toward the seepage collection pond. Note minor erosional rilling developing in recently repaired and re-seeded area.





**Photo 23** Looking west over minor erosional rilling and gullying developing in recently repaired and re-seeded area at the right downstream groin. (Note white PVC seepage pumpback line at right side of photo.)



**Photo 24** Looking northeast over recently repaired and re-seeded area at the right downstream groin. Note the emergence of new vegetation in the area, and minor erosion of the rock-lined drainage path exposing the filter fabric beneath.





*Photo 25* Looking northeast from near the bottom of the right downstream groin. Note erosional gullying and the emergence of new vegetation in the area.



*Photo 26* Looking southeast from the bottom of the left downstream groin. Note the absence of significant sediment deposits on the liner along the groin.





*Photo 27* Minor erosional rilling at the lower portion of the downstream face south of the toe drain outlet. Note the hardhat resting in one of the rills.



*Photo 28* Looking northwest across the left downstream groin and lower downstream face from the access road. Note the absence of significant sediment deposits on the liner along the groin.





**Photo 29** Looking southeast up the left downstream groin from the access road. Note the absence of significant sediment deposits on the liner along the groin.



**Photo 30** Looking north at the culvert inlet for the access road crossing of the left downstream groin. Note the sediment and brush beginning to accumulate at the inlet.



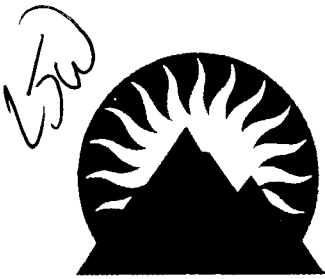


*Photo 31* Looking east from the access road just above the left downstream groin, showing development of an erosional gully.



*Photo 32* Looking northeast from the access road at the road cut just above the left downstream groin, showing minor erosional rilling.





BATTLE MOUNTAIN RESOURCES, INC.

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December 11, 2017

Mr. Lucas J. West  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

**RECEIVED**  
**DEC 14 2017**  
DIVISION OF RECLAMATION  
MINING AND SAFETY

Re: San Luis Project Tailing Dam Report 3<sup>rd</sup> Quarter 2017, Technical Revision No. 33,  
Permit No. M-1988-112

Dear Mr. West:

Battle Mountain Resources Inc. ("BMRI") is pleased to provide the San Luis Project Tailing Dam Report for the 3<sup>rd</sup> Quarter 2017 in accordance with Technical Revision No. 33 to BMRI's Reclamation Permit.

Enclosed along with the inspection report are photos of the tailing dam, concrete drop structure, under drain discharge area and piezometer readings.

Should you have any questions, please do not hesitate to contact me at 719-379-0538.

Respectfully,

Julio F. Madrid

Sr. Supervisor Legacy Sites Reclamation and Closure  
Battle Mountain Resources Inc.

cc: Larry Fiske BMRI  
David Carino BMRI



July 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	7/31/17	Dry	72.46	0.00
P7	7/31/17	92.28	92.50	0.22
P8	7/31/17	96.55	97.51	0.96
P9	7/31/17	71.96	72.30	0.34
P10	7/31/17	57.56	58.30	0.74
P11	7/31/17	41.38	41.80	0.42
P12	7/31/17	41.68	41.71	0.03
P13	7/31/17	41.01	41.34	0.33
P14	7/31/17	41.21	41.24	0.03
P15	7/31/17	40.85	41.10	0.25

August 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	8/31/17	Dry	72.46	0.00
P7	8/31/17	92.27	92.50	0.23
P8	8/31/17	96.59	97.51	0.92
P9	8/31/17	71.95	72.30	0.35
P10	8/31/17	57.55	58.30	0.75
P11	8/31/17	41.37	41.80	0.43
P12	8/31/17	41.68	41.71	0.03
P13	8/31/17	41.02	41.34	0.32
P14	8/31/17	41.21	41.24	0.03
P15	8/31/17	40.85	41.10	0.25

September 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	9/28/17	Dry	72.46	0.00
P7	9/28/17	92.28	92.50	0.22
P8	9/28/17	96.52	97.51	0.99
P9	9/28/17	71.96	72.30	0.34
P10	9/28/17	57.55	58.30	0.75
P11	9/28/17	41.38	41.80	0.42
P12	9/28/17	41.68	41.71	0.03
P13	9/28/17	41.03	41.34	0.31
P14	9/28/17	41.21	41.24	0.03
P15	9/28/17	40.84	41.10	0.26



		INSPECTION PERIOD: <u>July 2017</u> thru <u>September 2017</u>				page 1/1	
		INSPECTOR: <u>D. Carino</u>					
DAM: <u>SAN LUIS PROJECT TAILING DAM</u>						CHECK ACTION NEEDED	
AREA INSPECTED	ITEM NO.	CONDITION	YES	NO	OBSERVATIONS	MONITOR	INVESTIGATE REPAIR
CREST	1	ANY SURFACE CRACKING?		✓			
	2	ANY UNUSUAL LOW AREAS?		✓			
	3	ANY RUTS OR PUDDLES?		✓			
	4	ANY HORIZONTAL OFFSET?		✓			
	5	NEED VEGETATION CONTROL?		✓			
UPSTREAM SLOPE & BEACH AREA	6	ANY SLIDES, SLOUGHS, SCARPS?		✓			
	7	ANY SINKHOLES OR UNUSUAL DEPRESSIONS?		✓			
	8	ANY EROSION?		✓			
	9	CHANGES AT ABUTMENT CONTACTS?		✓			
	10	NEED VEGETATION CONTROL?		✓			
	11						
DOWNSTREAM SLOPE	12	ANY WET AREAS?		✓			
	13	ANY SLIDES, SLOUGHS, SCARPS?		✓			
	14	CHANGES AT DAM-ABUTMENT CONTACT?		✓			
	15	ANY EROSION?	✓		<u>minor erosion on N. Girth area</u>	✓	
	16	ANY UNUSUAL BULGING OR SLOPE MOVEMENT?		✓			
	17	NEED VEGETATION CONTROL?		✓			
	18						
SEEPAGE COLLECTION AND PUMPBACK SYSTEM	19	IS DRAIN OUTLET CLOGGED OR OBSTRUCTED?		✓			
	20	ARE DRAIN FLOWS MUDDY OR TURBID?		✓			
	21	IS EMBANKMENT WET AROUND DRAIN OUTLET?		✓			
	22	ANY PROBLEMS WITH COLLECTION POND?		✓			
	23	IS PUMPBACK SYSTEM WORKING PROPERLY?	✓				
	24						
DIVERSION CHANNEL AND DROP STRUCTURE	25	ANY EROSION?		✓			
	26	NEED VEGETATION CONTROL?		✓			
	27	ANY DEBRIS IN CHANNELS OR DROP STRUCTURE?		✓			
	28	ANY CRACKS OR DETERIORATION OF CONCRETE?		✓			
	29	ANY CORROSION OF PIPE?		✓			
	30						

ADDITIONAL COMMENTS (REFER TO ITEM NO. IF APPLICABLE):



QUARTERLY INSPECTION SUMMARY				
NAME OF DAM:	San Luis Project Tailing Dam		CO DRMS Permit #:	M-1988-112
REPORTING PERIOD:	July	thru	Sept	2017
			REPORT #:	
INSPECTION ITEMS				PHOTOS
Piezometer Levels	Included in report.			NO
Drain Collection and Pumpback System Observations	system working properly			Yes
Seepage/Erosion Observations	minor erosion on north groin area (down stream)			Yes
Vegetation/Rodent/Other Maintenance Observations	None			NO
Diversion System Observations	channel in good condition, no issues			Yes
RECOMMENDATIONS/COMMENTS				
INSPECTION AND REPORTING PERSONNEL				
NAME	REPRESENTING		TITLE/ROLE	
David Carino	BMRI		site manager	



### **Third Quarter 2017 Tailing Dam Inspection Photograph Details:**

Photo #1: Northwest groin area re-vegetation looking up from toe

Photo #2: Northwest groin area re-vegetation looking down from crest

Photo #3: Inlet of Concrete Drop Structure (South Diversion Channel)

Photo #4: Under-drain pipeline collection system

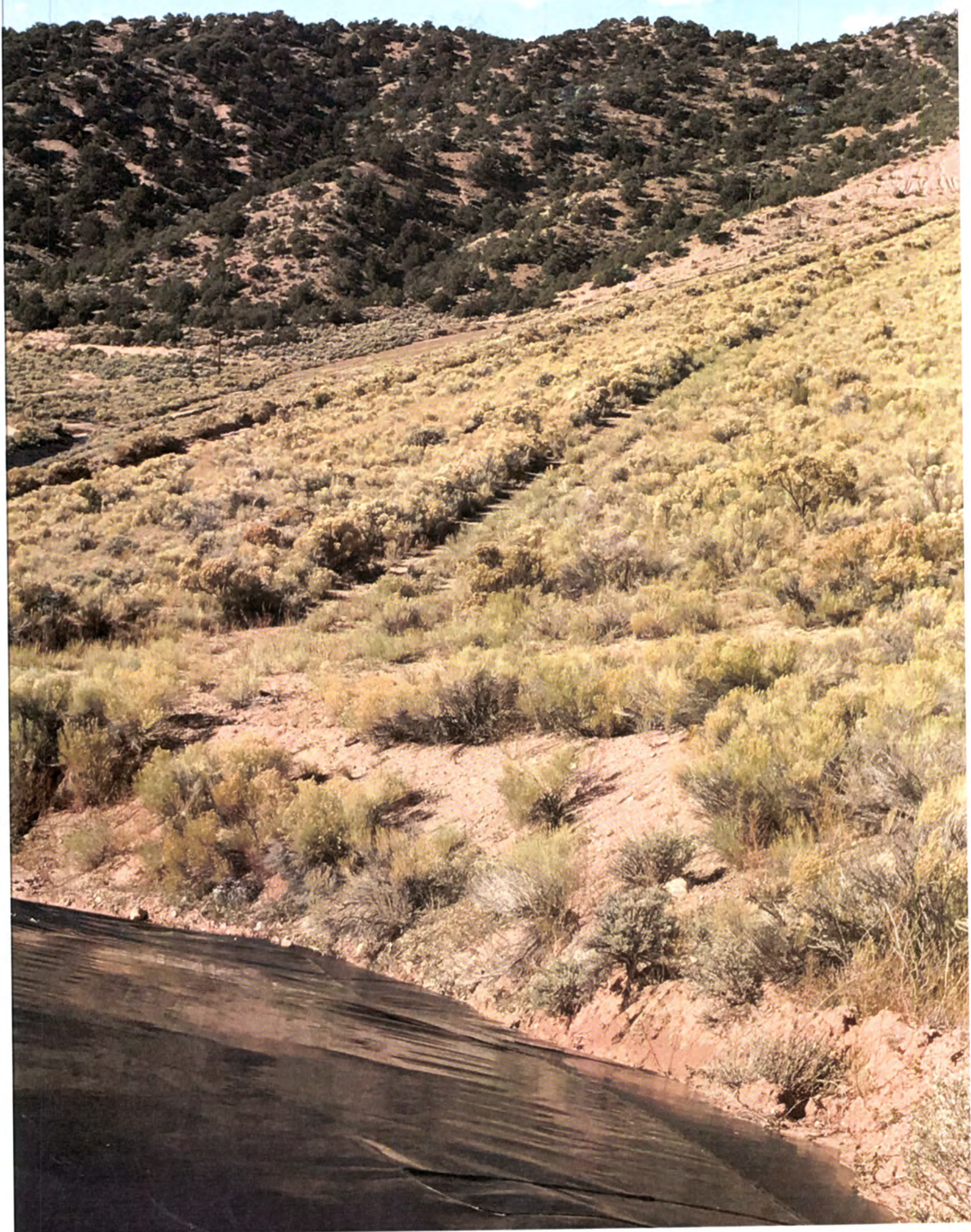
Photo #5: East side Tailing Dam looking West

Photos #6, #7 and #8: Tailing Impoundment from roadway on Tailing Dam looking East

Photos #9 and #10: South Diversion Channel



#1



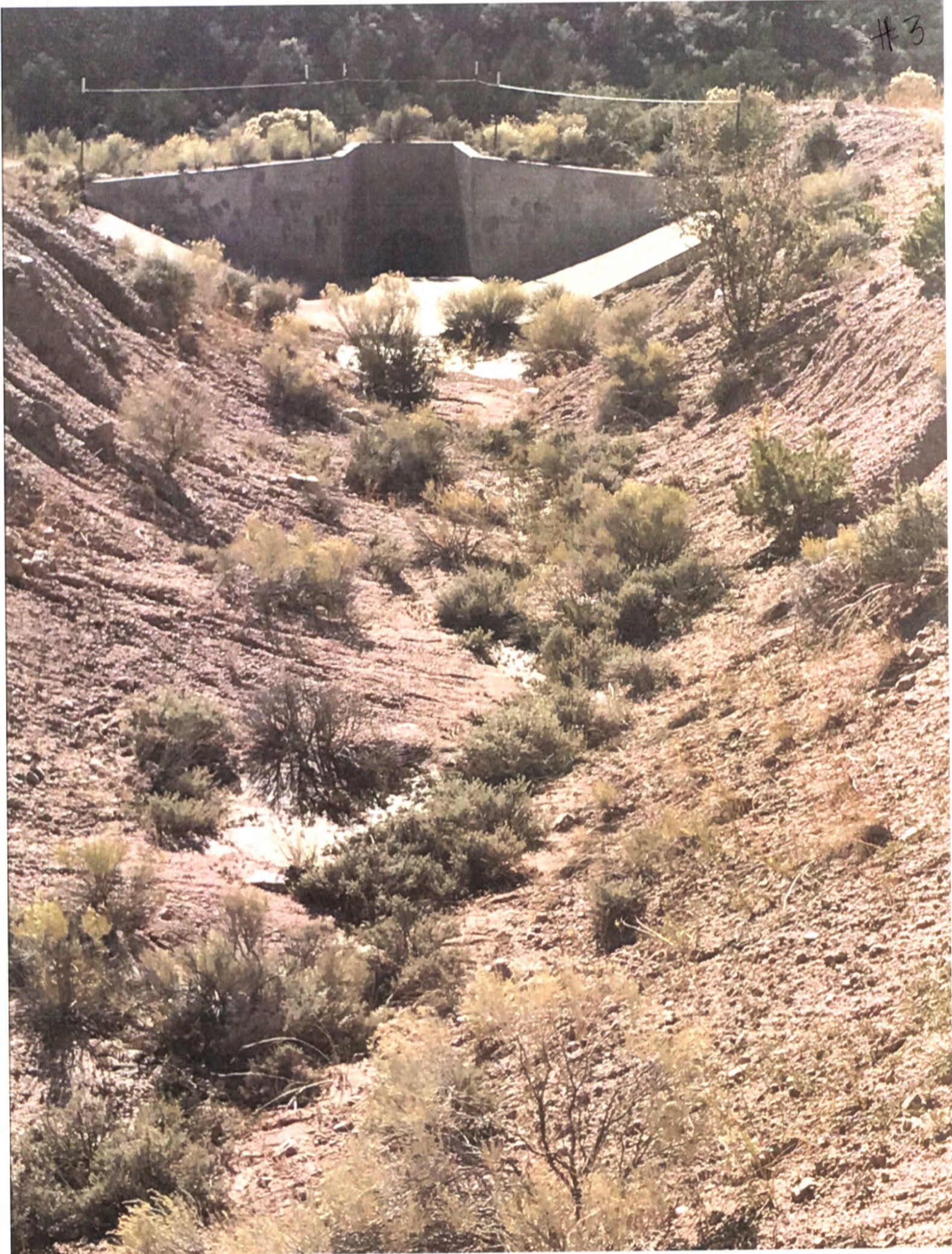


#2





#3



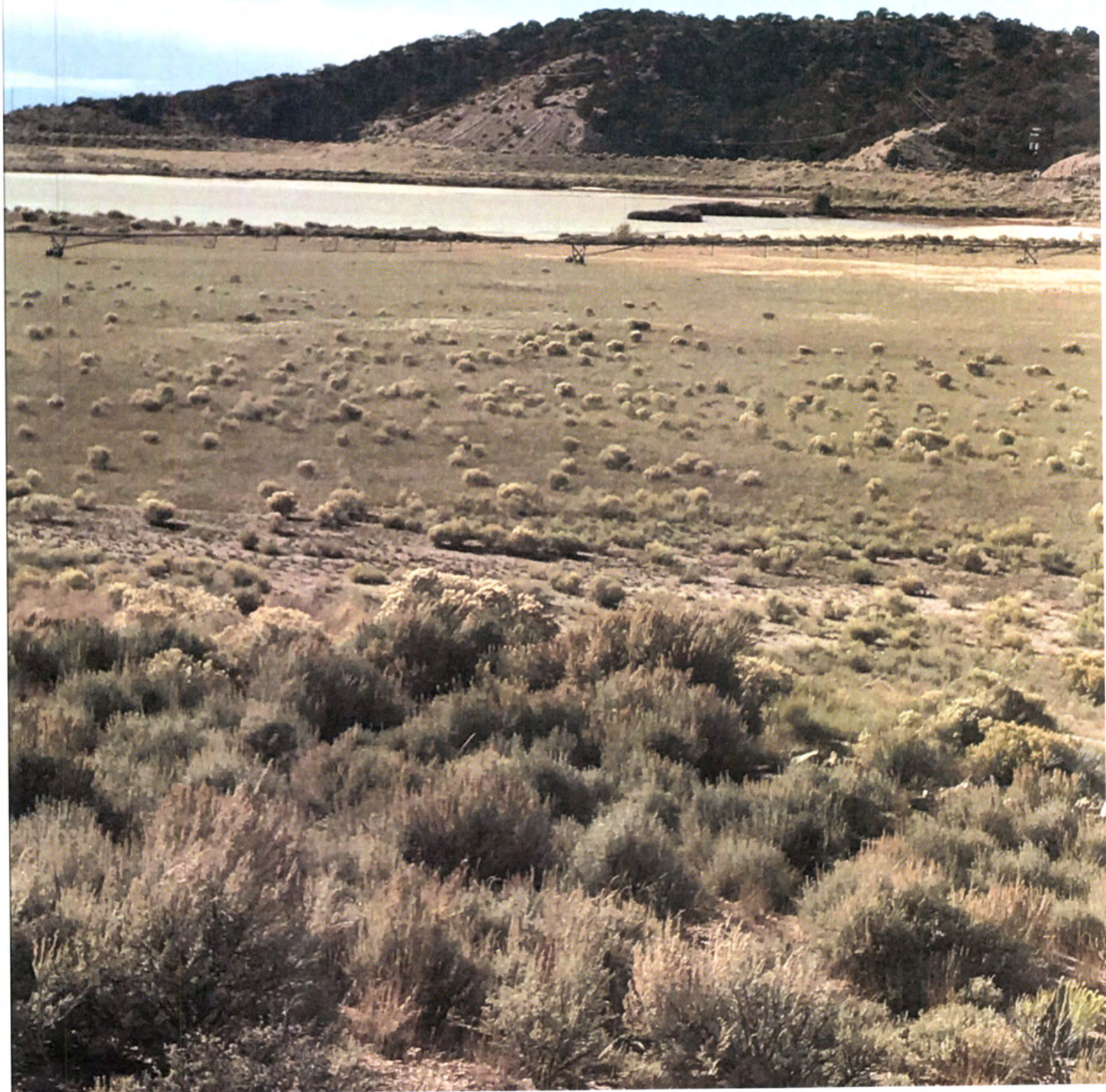


#4





#5



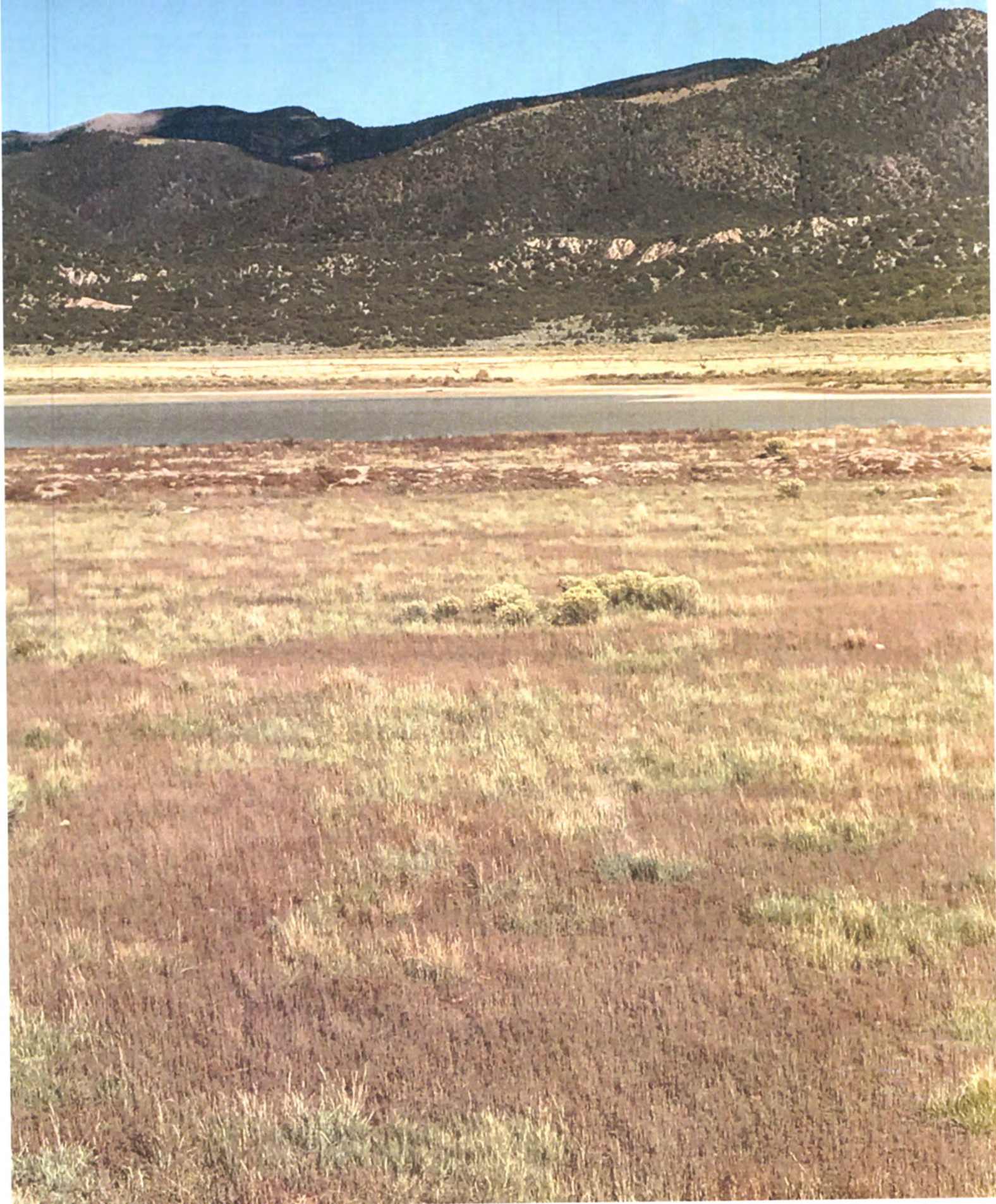


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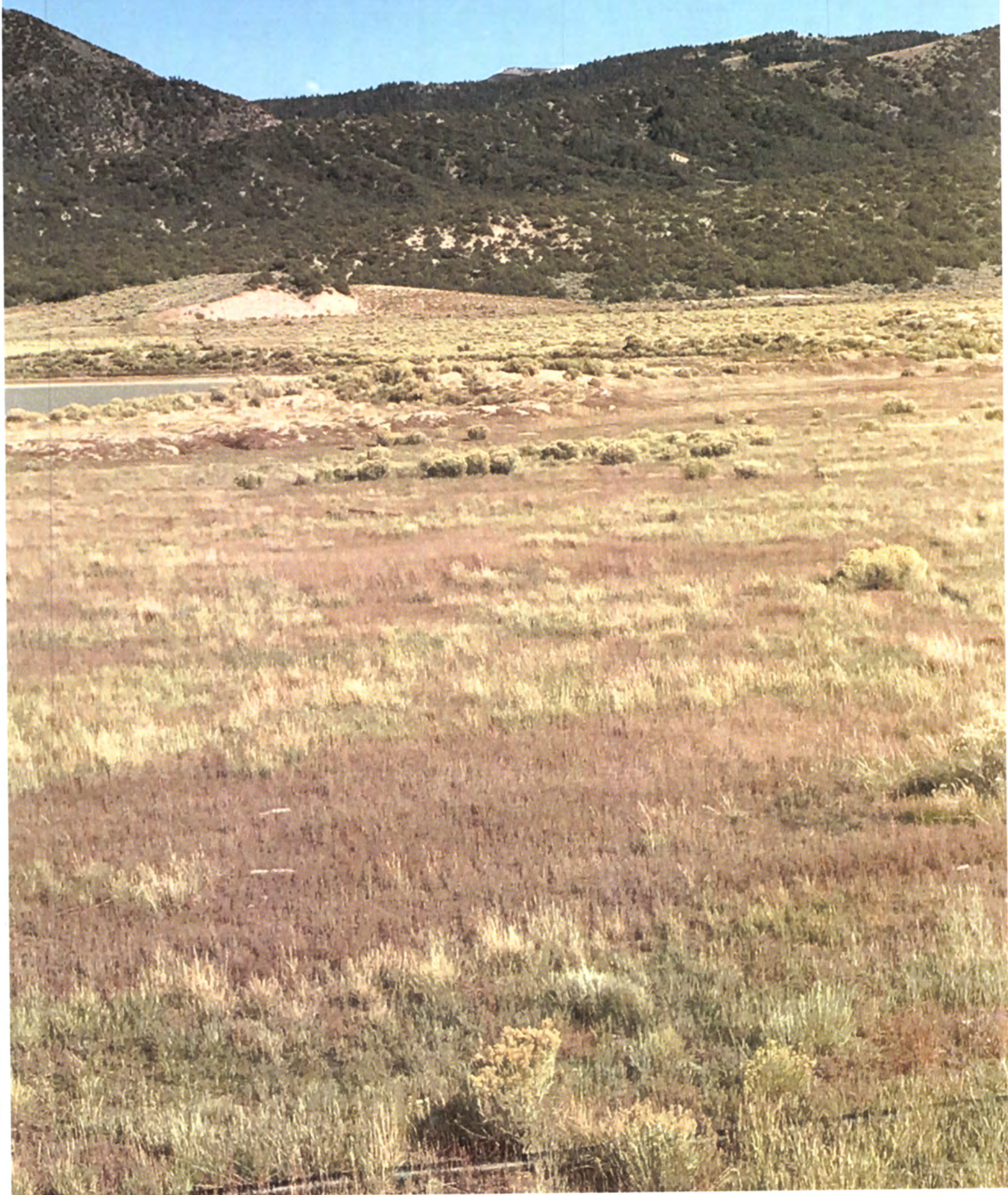


#7





#8





#9





#10







BATTLE MOUNTAIN RESOURCES, INC.

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**RECEIVED**

FEB 16 2018

DIVISION OF RECLAMATION  
MINING AND SAFETY

February 12, 2018

Mr. Lucas J. West  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: San Luis Project Tailing Dam Report 4<sup>th</sup> Quarter 2017, Technical Revision No. 33,  
Permit No. M-1988-112

Dear Mr. Erickson:

Battle Mountain Resources Inc. ("BMRI") is pleased to provide the San Luis Project Tailing Dam Report for the 4<sup>th</sup> Quarter 2017 in accordance with Technical Revision No. 33 to BMRI's Reclamation Permit.

Enclosed along with the inspection report are photos of the tailing dam, concrete drop structure, the under drain discharge area and monthly piezometer readings.

Should you have any questions, please do not hesitate to contact me at 719-379-0538.

Respectfully,

Julio F. Madrid  
Sr. Supervisor Legacy Sites Reclamation and Closure  
Battle Mountain Resources Inc.

cc: Larry Fiske BMRI  
David Carino BMRI



		INSPECTION PERIOD: <u>October 2-17 to December 2017</u>		page 1/1		
DAM: <u>SAN LUIS PROJECT TAILING DAM</u>		INSPECTOR:				
AREA INSPECTED	ITEM NO.	CONDITION	YES	NO	OBSERVATIONS	CHECK ACTION NEEDED
						MONITOR INVESTIGATE REPAIR
CREST	1	ANY SURFACE CRACKING?		✓		
	2	ANY UNUSUAL LOW AREAS?		✓		
	3	ANY RUTS OR PUDDLES?		✓		
	4	ANY HORIZONTAL OFFSET?		✓		
	5	NEED VEGETATION CONTROL?		✓		
UPSTREAM SLOPE & BEACH AREA	6	ANY SLIDES, SLOUGHS, SCARPS?		✓		
	7	ANY SINKHOLES OR UNUSUAL DEPRESSIONS?		✓		
	8	ANY EROSION?		✓		
	9	CHANGES AT ABUTMENT CONTACTS?		✓		
	10	NEED VEGETATION CONTROL?		✓		
DOWNSTREAM SLOPE	11					
	12	ANY WET AREAS?		✓		
	13	ANY SLIDES, SLOUGHS, SCARPS?		✓		
	14	CHANGES AT DAM-ABUTMENT CONTACT?		✓		
	15	ANY EROSION?	✓		minor erosion on North grain area	✓
	16	ANY UNUSUAL BULGING OR SLOPE MOVEMENT?		✓		
	17	NEED VEGETATION CONTROL?		✓		
SEEPAGE COLLECTION AND PUMPBACK SYSTEM	18					
	19	IS DRAIN OUTLET CLOGGED OR OBSTRUCTED?		✓		
	20	ARE DRAIN FLOWS MUDDY OR TURBID?		✓		
	21	IS EMBANKMENT WET AROUND DRAIN OUTLET?	✓		minor leakage around piping	✓
	22	ANY PROBLEMS WITH COLLECTION POND?		✓		
	23	IS PUMPBACK SYSTEM WORKING PROPERLY?	✓			
DIVERSION CHANNEL AND DROP STRUCTURE	24					
	25	ANY EROSION?		✓		
	26	NEED VEGETATION CONTROL?		✓		
	27	ANY DEBRIS IN CHANNELS OR DROP STRUCTURE?		✓		
	28	ANY CRACKS OR DETERIORATION OF CONCRETE?		✓		
	29	ANY CORROSION OF PIPE?		✓		
	30					

ADDITIONAL COMMENTS (REFER TO ITEM NO. IF APPLICABLE):



QUARTERLY INSPECTION SUMMARY				
NAME OF DAM:	San Luis Project Tailing Dam		CO DRMS Permit #:	M-1988-112
REPORTING PERIOD:	10/2017	thru	12/2017	REPORT #:
INSPECTION ITEMS				
Piezometer Levels	Included in report.			PHOTOS
Drain Collection and Pumpback System Observations	System working properly.			NO
Seepage/Erosion Observations	minor erosion on North groin area (down stream)			Yes
Vegetation/Rodent/Other Maintenance Observations	None			NO
Diversion System Observations	Channel in good Condition, no issues.			Yes
RECOMMENDATIONS/COMMENTS				
Erosion in the down stream area of North groin area section will be monitored				
INSPECTION AND REPORTING PERSONNEL				
NAME	REPRESENTING		TITLE/ROLE	
David Carino	BmRT		Site Manager	



#### **Fourth Quarter 2017 Tailing Dam Inspection Photograph Details:**

Photo #1: Looking East at West side of Main Embankment

Photo #2: Northwest groin area re-vegetation looking up from toe

Photo #3: Northwest groin area re-vegetation looking down from crest

Photo #4: Inlet of Concrete Drop Structure (South Diversion Channel)

Photo #5: Under-drain pipeline collection system

Photo #6: East side Tailing Dam looking West

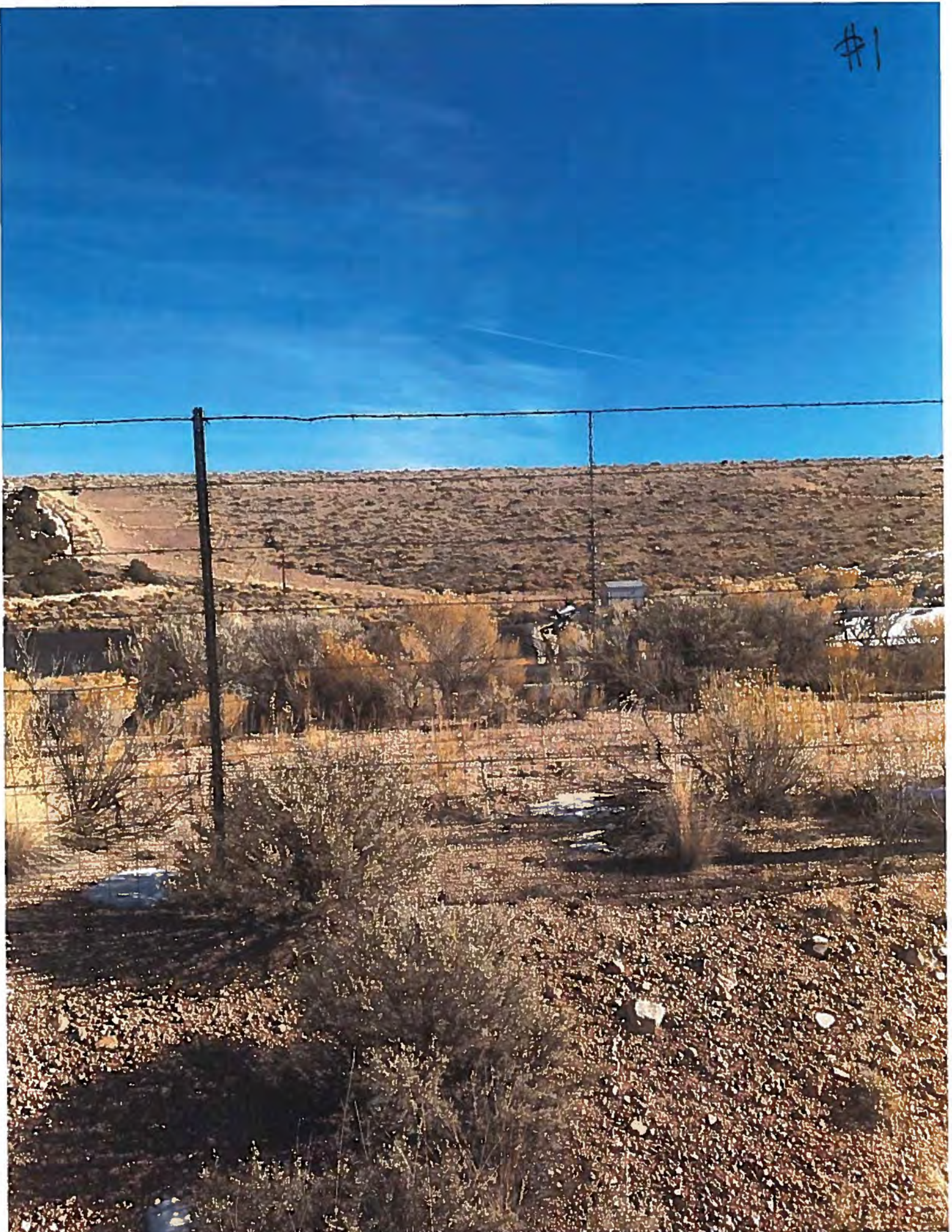
Photos #7, #8 and #9: Tailing Impoundment from roadway on Tailing Dam looking East

Photo #10: South side Tailing Dam road looking North.

Photos #11and #12: South Diversion Channel

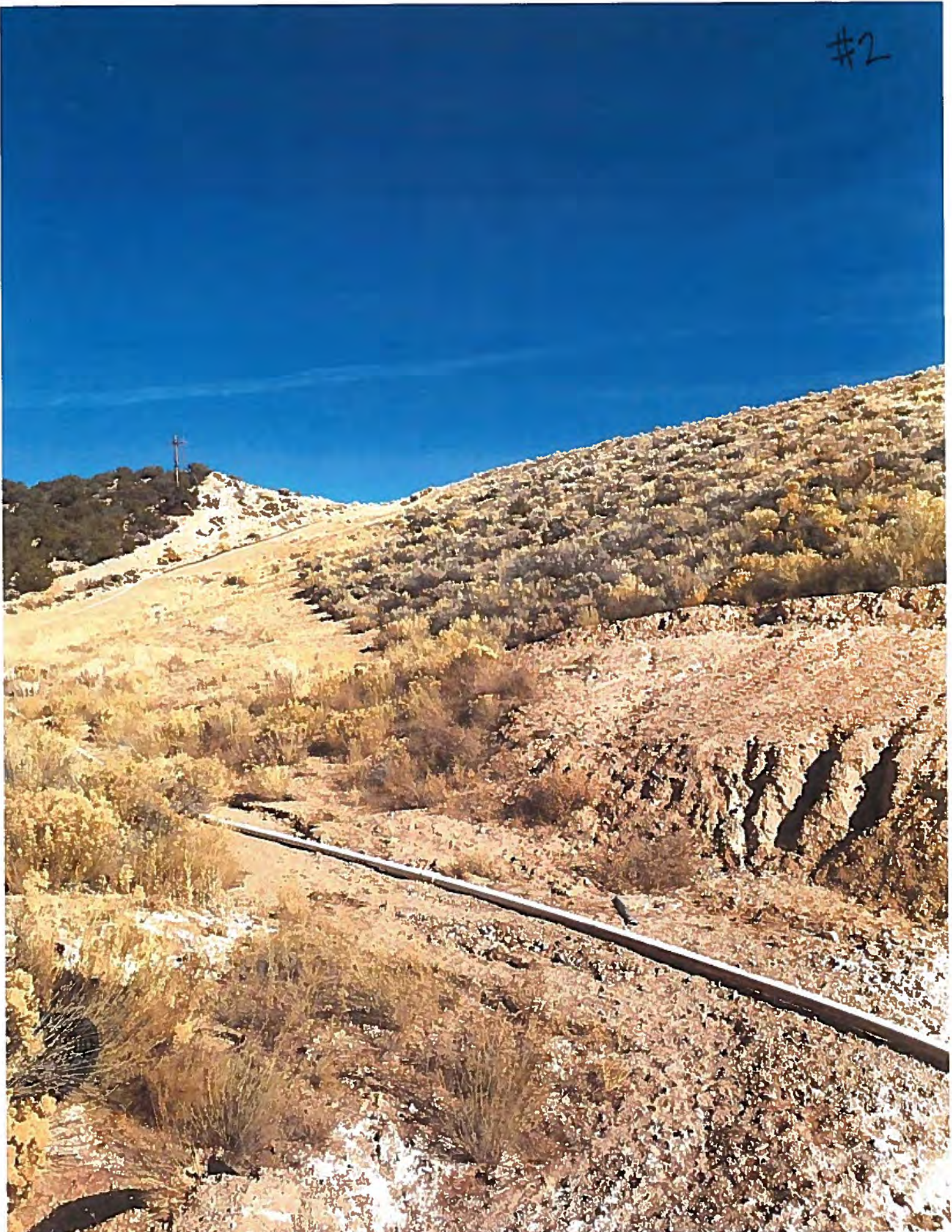


#1





#2



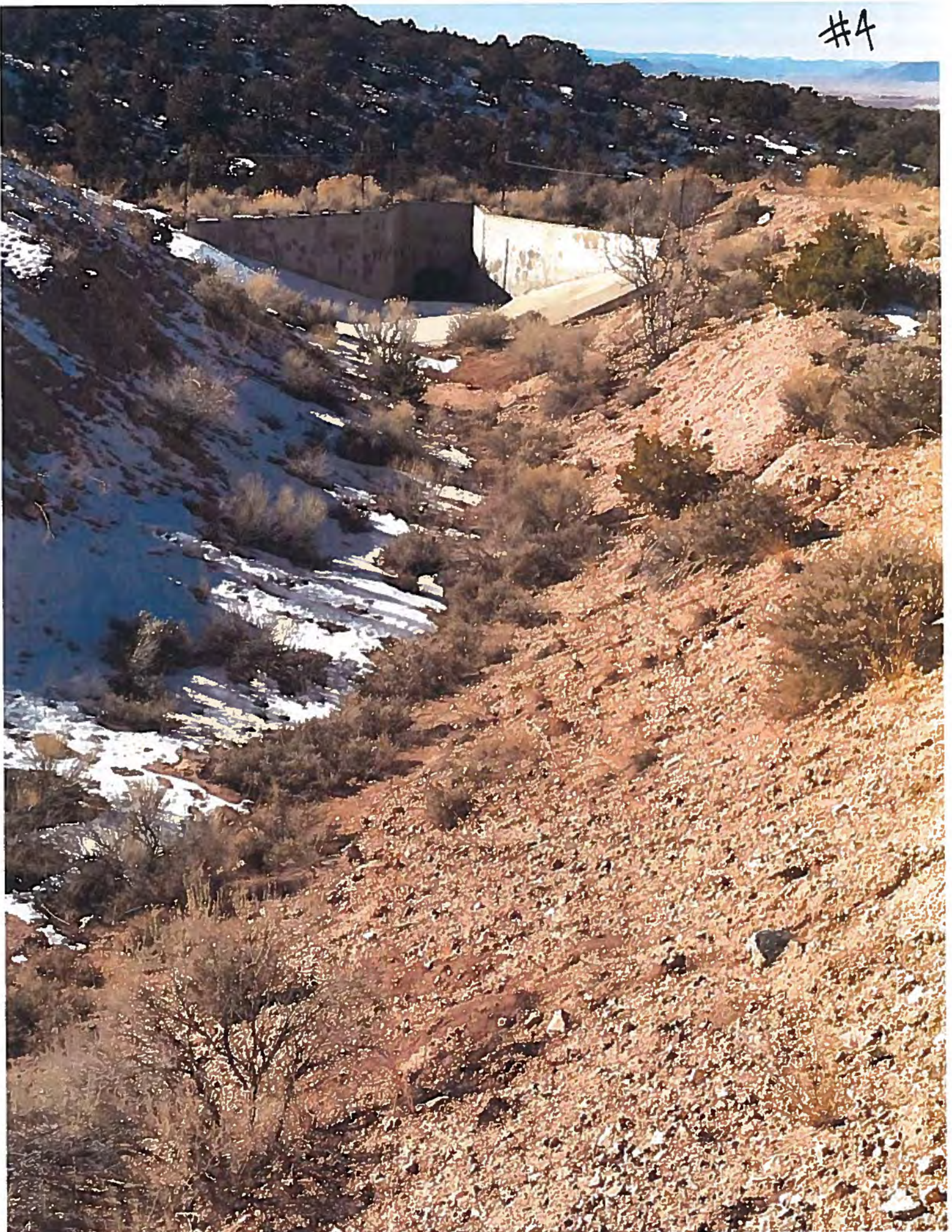


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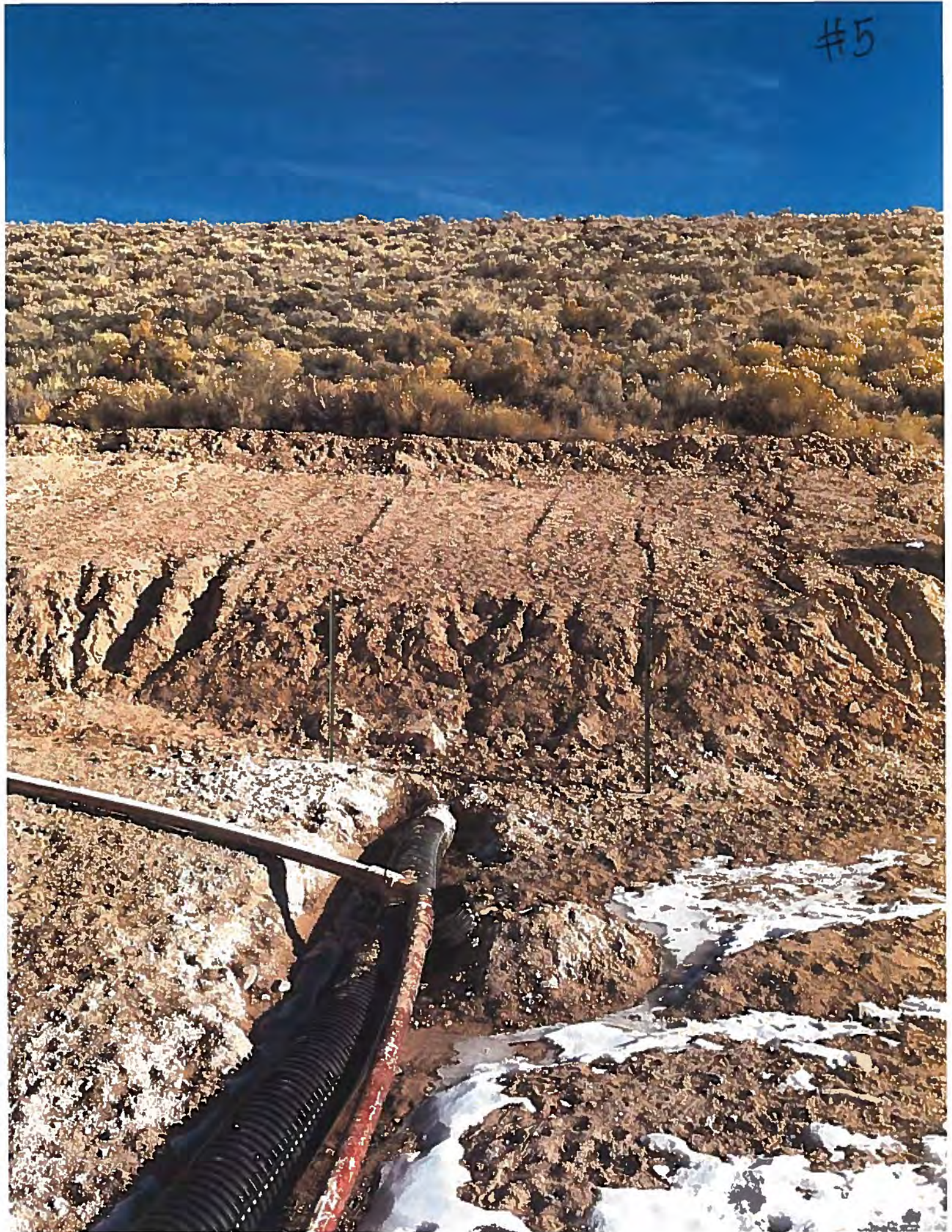


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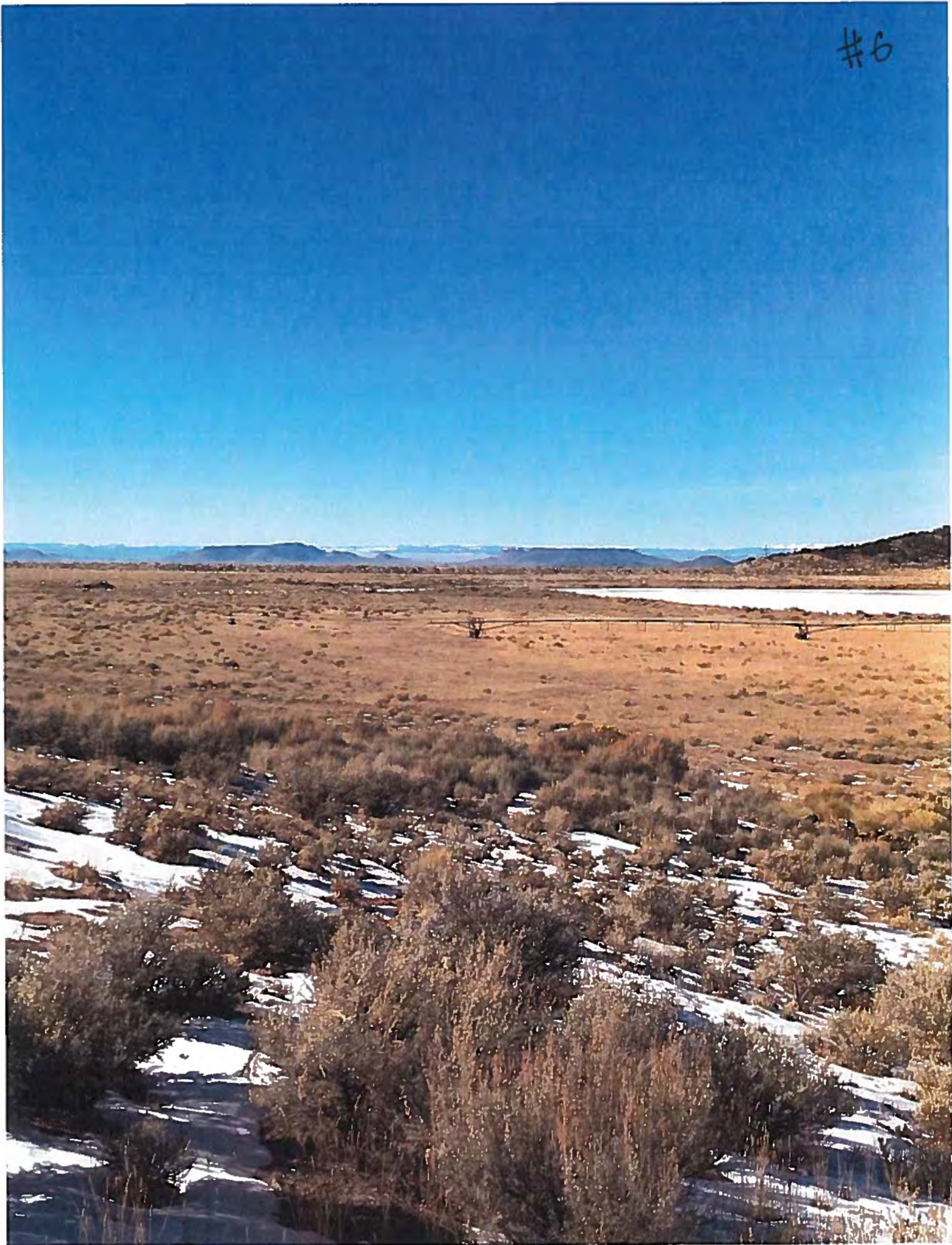


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#6



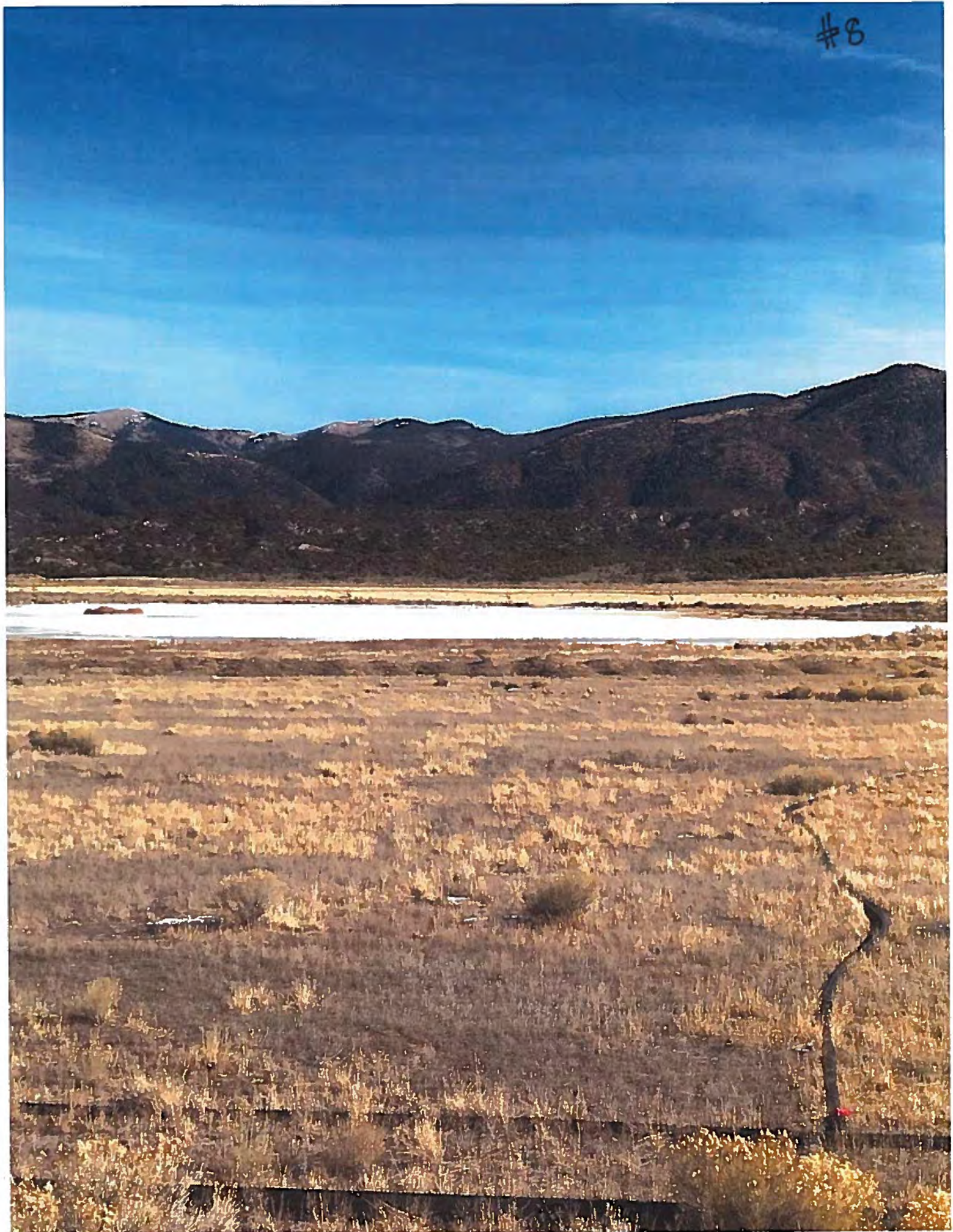


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#8

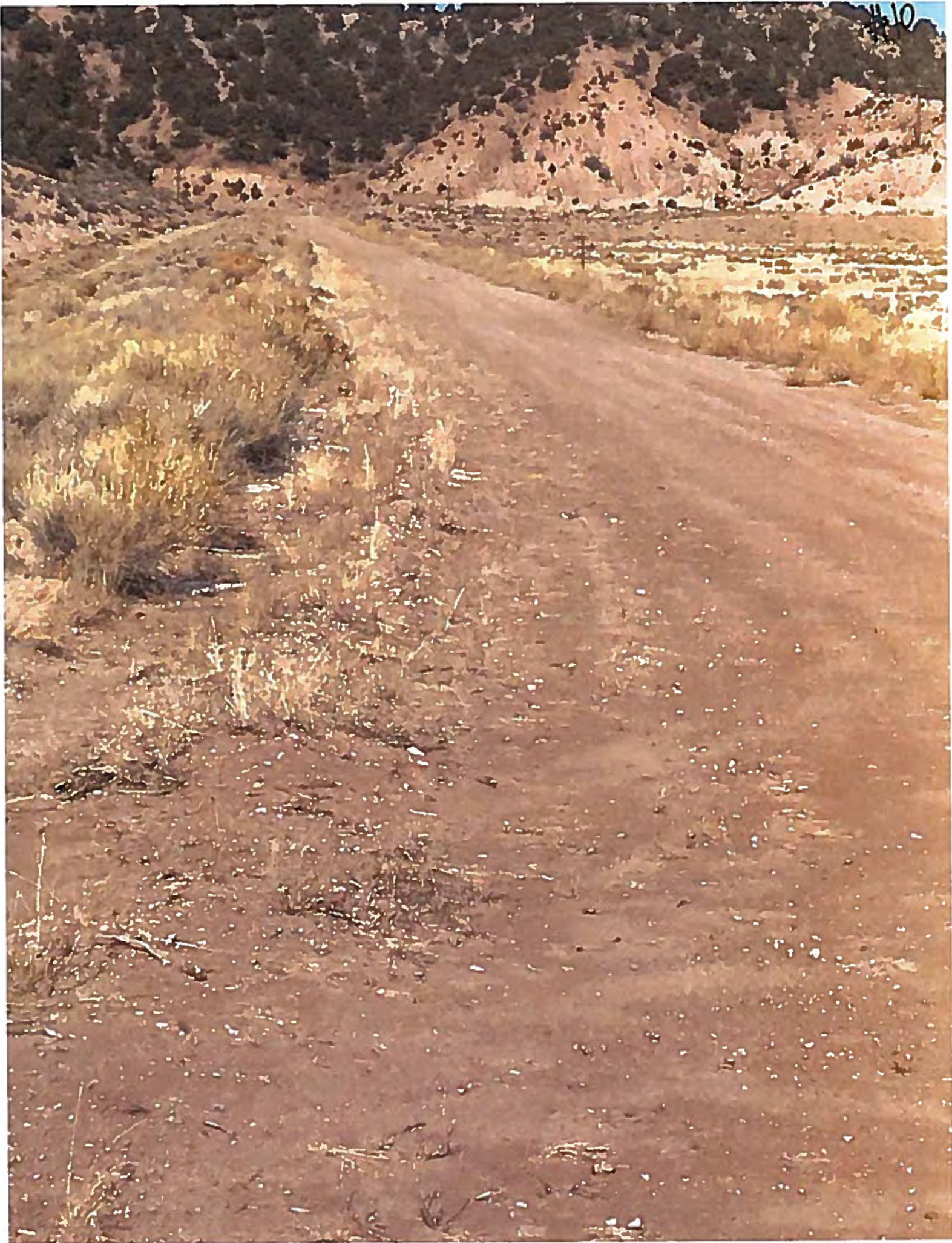




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#11





#12





## Appendix B





BATTLE MOUNTAIN RESOURCES, INC.

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FEB 10 2017

February 07, 2017

**DIVISION OF RECLAMATION  
MINING & SAFETY**

Mr. Wally Erickson  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No.M-88-112  
January 2017 Monthly Report

Dear Mr. Erickson:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI), San Luis Project for the month of January 2107.

Surface and ground water monitoring and analysis were completed for all required sites during the month per the terms and conditions of the TR-32 Quality Assurance and Quality Control (QA/QC) plan.

Vacuum on the tailing lysimeters was verified on January 31<sup>st</sup>, no water was present for sampling and subsequent analysis.

Depths to water were collected for the tailing impoundment main embankment piezometers and the West Pit monitoring wells on January 31<sup>st</sup>. The January tailing impoundment piezometer measurements identified these installations were either dry or contained less than 12 inches of water as illustrated in Table 2. Tables 1 and 2 below identify the depth to water measurements collected for each of the site monitoring wells, piezometers and lysimeters as required by the terms and conditions of the TR-32 QA/QC plan.

The leak detection system was measured on January 31<sup>st</sup>. A total of 900 gallons of water was excavated from the leak detection system yielding a monthly average of 27.2 gpad. The tailings pond under-drain measured 38 gpm.

During the month of January, the West Pit water treatment plant operated efficiently discharging a total of 7,539,300 gallons (23.14 acre-feet) of water to Rito Seco Creek and a total of 1,277,700 gallons (3.92 acre-feet) of water was transferred from the West Pit to the tailings impoundment. Seepage along Rito Seco Creek remained dry during the month.



Table 1-January 2017 Ground Water Monitoring Well and Lysimeter Depth to Water Measurements

Monitoring Site	Date	Depth to Water (feet)
M-4R	1/31/17	0
M-6	1/31/17	Dry
M-7	1/31/17	Dry
M-8	1/31/17	Dry
M-9	1/31/17	141.78
M-10	1/31/17	25.40
M-11R	1/31/17	40.93
M-12	1/31/17	175.27
M-13R	1/31/17	126.33
M-14	1/31/17	131.29
M-15	1/31/17	89.72
M-16	1/31/17	22.80
M-19	1/31/17	24.75
M-21	1/31/17	18.92
M-22	1/31/17	17.22
M-26	1/31/17	16.02
M-32	1/31/17	37.98
M-33	1/31/17	47.80
M-34	1/31/17	23.79
BF-4	1/31/17	24.86
BF-6	1/31/17	30.88
LS-1R	1/31/17	Dry
LS-2R	1/31/17	Dry
LS-3	1/31/17	Dry
LD-1R	1/31/17	Dry
LD-2R	1/31/17	Dry
LD-3	1/31/17	Dry

Table 2 – January 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	1/31/17	Dry	72.46	0.00
P7	1/31/17	92.27	92.50	0.23
P8	1/31/17	96.65	97.51	0.86
P9	1/31/17	71.92	72.30	0.38



Table 2 –January 2017 Tailing Disposal Area Piezometer Depth to Water  
Measurements (continued)

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P10	1/31/17	57.62	58.30	0.68
P11	1/31/17	41.38	41.80	0.42
P12	1/31/17	41.69	41.71	0.02
P13	1/31/17	40.99	41.34	0.35
P14	1/31/17	Dry	41.24	0.00
P15	1/31/17	40.85	41.10	0.25

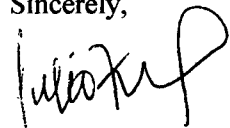
Table 3 below provides the calendar year 2017 sludge management for the San Luis site.

Table 3 - Water Treatment Plant Sludge Management Year to Date.

Date	Quantity	Sludge Management
July 2016	104 tons	Sludge transferred from drying pad to tailings impoundment.

Should you have any questions or comments, please do not hesitate to contact either myself at (719) 379-0798 or Mr. Larry Fiske at (303) 837-5676.

Sincerely,



Julio F. Madrid  
Sr. Supervisor Legacy Sites Reclamation and Closure

Cc: Larry Fiske  
File



BATTLE MOUNTAIN RESOURCES, INC.



Mr. Wally Erickson  
State of Colorado  
CDRMS  
1313 Sherman Street, Room 215  
Denver, CO 80203

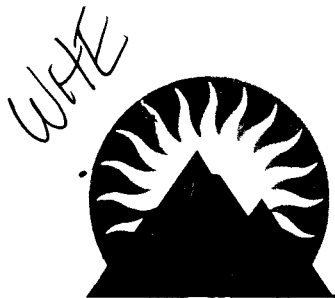
PO Box 310 • San Luis, Colorado 81152-0310 • (719) 379-0798 • Fax (719) 379-0713  
*Return Postage Guaranteed*

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**FEB 10 2017**

**DIVISION OF RECLAMATION  
MINING AND SAFETY**





**BATTLE MOUNTAIN RESOURCES, INC.**

---

March 08, 2017

**RECEIVED**

**MAR 14 2017**

**DIVISION OF RECLAMATION  
MINING & SAFETY**

Mr. Wally Erickson  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No.M-88-112  
February 2017 Monthly Report

Dear Mr. Erickson:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI), San Luis Project for the month of February 2107.

Surface and ground water monitoring and analysis were completed for all required sites during the month per the terms and conditions of the TR-32 Quality Assurance and Quality Control (QA/QC) plan.

Vacuum on the tailing lysimeters was verified on February 28<sup>th</sup>, no water was present for sampling and subsequent analysis.

Depths to water were collected for the tailing impoundment main embankment piezometers and the West Pit monitoring wells on February 28<sup>th</sup>. The February tailing impoundment piezometer measurements identified these installations were either dry or contained less than 12 inches of water as illustrated in Table 2. Tables 1 and 2 below identify the depth to water measurements collected for each of the site monitoring wells, piezometers and lysimeters as required by the terms and conditions of the TR-32 QA/QC plan.

The leak detection system was measured on February 28<sup>th</sup>. A total of 960 gallons of water was excavated from the leak detection system yielding a monthly average of 34.2 gpad. The tailings pond under-drain measured 38.5 gpm.

During the month of February, the West Pit water treatment plant operated efficiently discharging a total of 7,325,400 gallons (22.48 acre-feet) of water to Rito Seco Creek and a total of 587,800 gallons (1.80 acre-feet) of water was transferred from the West Pit to the tailings impoundment. Seepage along Rito Seco Creek remained dry during the month.



Table 1-February 2017 Ground Water Monitoring Well and Lysimeter Depth to Water Measurements

Monitoring Site	Date	Depth to Water (feet)
M-4R	2/28/17	0
M-6	2/28/17	Dry
M-7	2/28/17	Dry
M-8	2/28/17	Dry
M-9	2/28/17	141.47
M-10	2/28/17	25.35
M-11R	2/28/17	41.28
M-12	2/28/17	175.09
M-13R	2/28/17	126.06
M-14	2/28/17	131.15
M-15	2/28/17	89.46
M-16	2/28/17	22.82
M-19	2/28/17	23.88
M-21	2/28/17	18.46
M-22	2/28/17	16.97
M-26	2/28/17	16.72
M-32	2/28/17	45.23
M-33	2/28/17	51.93
M-34	2/28/17	23.81
BF-4	2/28/17	25.05
BF-6	2/28/17	30.98
LS-1R	2/28/17	Dry
LS-2R	2/28/17	Dry
LS-3	2/28/17	Dry
LD-1R	2/28/17	Dry
LD-2R	2/28/17	Dry
LD-3	2/28/17	Dry

Table 2 – February 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	2/28/17	Dry	72.46	0.00
P7	2/28/17	92.29	92.50	0.21
P8	2/28/17	96.62	97.51	0.89
P9	2/28/17	71.96	72.30	0.34



Table 2 –February 2017 Tailing Disposal Area Piezometer Depth to Water  
Measurements (continued)

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P10	2/28/17	57.55	58.30	0.75
P11	2/28/17	41.39	41.80	0.41
P12	2/28/17	41.68	41.71	0.03
P13	2/28/17	40.98	41.34	0.36
P14	2/28/17	41.22	41.24	0.02
P15	2/28/17	40.85	41.10	0.25

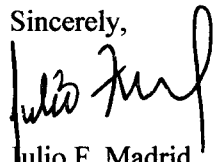
Table 3 below provides the calendar year 2017 sludge management for the San Luis site.

Table 3 - Water Treatment Plant Sludge Management Year to Date.

Date	Quantity	Sludge Management
July 2016	104 tons	Sludge transferred from drying pad to tailings impoundment.

Should you have any questions or comments, please do not hesitate to contact either myself at (719) 379-0798 or Mr. Larry Fiske at (303) 837-5676.

Sincerely,



Julio F. Madrid  
Sr. Supervisor Legacy Sites Reclamation and Closure

Cc: Larry Fiske  
File



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BATTLE MOUNTAIN RESOURCES, INC.

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APR 13 2017

DIVISION OF RECLAMATION  
MINING AND SAFETY

April 10, 2017

Mr. Wally Erickson  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No.M-88-112 ✓  
March 2017 Monthly Report

Dear Mr. Erickson:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI), San Luis Project for the month of March 2107.

Surface and ground water monitoring and analysis were completed for all required sites during the month per the terms and conditions of the TR-32 Quality Assurance and Quality Control (QA/QC) plan.

Vacuum on the tailing lysimeters was verified on March 30<sup>th</sup>, no water was present for sampling and subsequent analysis.

Depths to water were collected for the tailing impoundment main embankment piezometers and the West Pit monitoring wells on March 31<sup>st</sup>. The March tailing impoundment piezometer measurements identified these installations were either dry or contained less than 12 inches of water as illustrated in Table 2. Tables 1 and 2 below identify the depth to water measurements collected for each of the site monitoring wells, piezometers and lysimeters as required by the terms and conditions of the TR-32 QA/QC plan.

The leak detection system was measured on March 31<sup>st</sup>. A total of 880 gallons of water was excavated from the leak detection system yielding a monthly average of 28.3 gpad. The tailings pond under-drain measured 39 gpm.

During the month of March, the West Pit water treatment plant operated efficiently discharging a total of 8,656,500 gallons (26.57 acre-feet) of water to Rito Seco Creek and a total of 619,500 gallons (1.90 acre-feet) of water was transferred from the West Pit to the tailings impoundment. Seepage along Rito Seco Creek remained dry during the month.



Table 1-March 2017 Ground Water Monitoring Well and Lysimeter Depth to Water Measurements

Monitoring Site	Date	Depth to Water (feet)
M-4R	3/31/17	0
M-6	3/31/17	Dry
M-7	3/31/17	Dry
M-8	3/31/17	Dry
M-9	3/31/17	141.55
M-10	3/31/17	25.11
M-11R	3/31/17	40.96
M-12	3/31/17	175.18
M-13R	3/31/17	126.01
M-14	3/31/17	131.20
M-15	3/31/17	89.48
M-16	3/31/17	22.49
M-19	3/31/17	23.44
M-21	3/31/17	18.07
M-22	3/31/17	16.70
M-26	3/31/17	16.35
M-32	3/31/17	43.41
M-33	3/31/17	46.80
M-34	3/31/17	23.64
BF-4	3/31/17	25.11
BF-6	3/31/17	30.82
LS-1R	3/31/17	Dry
LS-2R	3/31/17	Dry
LS-3	3/31/17	Dry
LD-1R	3/31/17	Dry
LD-2R	3/31/17	Dry
LD-3	3/31/17	Dry

Table 2 – March 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	3/31/17	Dry	72.46	0.00
P7	3/31/17	92.29	92.50	0.21
P8	3/31/17	96.93	97.51	0.58
P9	3/31/17	71.96	72.30	0.34



Table 2 –March 2017 Tailing Disposal Area Piezometer Depth to Water  
Measurements (continued)

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P10	3/31/17	57.56	58.30	0.74
P11	3/31/17	41.38	41.80	0.42
P12	3/31/17	41.67	41.71	0.04
P13	3/31/17	40.99	41.34	0.35
P14	3/31/17	41.21	41.24	0.03
P15	3/31/17	40.84	41.10	0.26

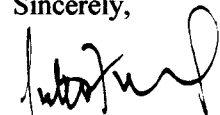
Table 3 below provides the calendar year 2017 sludge management for the San Luis site.

Table 3 - Water Treatment Plant Sludge Management Year to Date.

Date	Quantity	Sludge Management
July 2016	104 tons	Sludge transferred from drying pad to tailings impoundment.

Should you have any questions or comments, please do not hesitate to contact either myself at (719) 379-0798 or Mr. Larry Fiske at (303) 837-5676.

Sincerely,



Julio F. Madrid  
Sr. Supervisor Legacy Sites Reclamation and Closure

Cc: Larry Fiske  
File





✓  
BATTLE MOUNTAIN RESOURCES, INC.

---

May 09, 2017

**RECEIVED**

✓ MAY 16 2017

DIVISION OF RECLAMATION  
MINING AND SAFETY

Mr. Wally Erickson  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No.M-88-112 ✓  
April 2017 Monthly Report ✓

Dear Mr. Erickson:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI), San Luis Project for the month of April 2107.

Surface and ground water monitoring and analysis were completed for all required sites during the month per the terms and conditions of the TR-32 Quality Assurance and Quality Control (QA/QC) plan.

Vacuum on the tailing lysimeters was verified on April 27<sup>th</sup>, no water was present for sampling and subsequent analysis.

Depths to water were collected for the tailing impoundment main embankment piezometers and the West Pit monitoring wells on April 30<sup>th</sup>. The April tailing impoundment piezometer measurements identified these installations were either dry or contained less than 12 inches of water as illustrated in Table 2. Tables 1 and 2 below identify the depth to water measurements collected for each of the site monitoring wells, piezometers and lysimeters as required by the terms and conditions of the TR-32 QA/QC plan.

The leak detection system was measured on April 30<sup>th</sup>. A total of 920 gallons of water was excavated from the leak detection system yielding a monthly average of 35.3 gpad. The tailings pond under-drain measured 39.5 gpm.

During the month of April, the West Pit water treatment plant operated efficiently discharging a total of 8,831,999 gallons (27.11 acre-feet) of water to Rito Seco Creek and a total of 758,300 gallons (2.33 acre-feet) of water was transferred from the West Pit to the tailings impoundment. Seepage along Rito Seco Creek remained dry during the month.



Table 1-April 2017 Ground Water Monitoring Well and Lysimeter Depth to Water Measurements

Monitoring Site	Date	Depth to Water (feet)
M-4R	4/30/17	0
M-6	4/30/17	Dry
M-7	4/30/17	Dry
M-8	4/30/17	Dry
M-9	4/30/17	141.64
M-10	4/30/17	24.98
M-11R	4/30/17	40.66
M-12	4/30/17	175.27
M-13R	4/30/17	126.31
M-14	4/30/17	131.29
M-15	4/30/17	89.52
M-16	4/30/17	21.73
M-19	4/30/17	23.31
M-21	4/30/17	17.74
M-22	4/30/17	16.22
M-26	4/30/17	16.14
M-32	4/30/17	46.76
M-33	4/30/17	44.95
M-34	4/30/17	23.33
BF-4	4/30/17	24.89
BF-6	4/30/17	30.89
LS-1R	4/27/17	Dry
LS-2R	4/27/17	Dry
LS-3	4/27/17	Dry
LD-1R	4/27/17	Dry
LD-2R	4/27/17	Dry
LD-3	4/27/17	Dry

Table 2 – April 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	4/30/17	Dry	72.46	0.00
P7	4/30/17	92.28	92.50	0.22
P8	4/30/17	96.85	97.51	0.66
P9	4/30/17	71.96	72.30	0.34



Table 2 –April 2017 Tailing Disposal Area Piezometer Depth to Water  
Measurements (continued)

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P10	4/30/17	57.56	58.30	0.74
P11	4/30/17	41.39	41.80	0.41
P12	4/30/17	41.68	41.71	0.03
P13	4/30/17	41.00	41.34	0.34
P14	4/30/17	41.21	41.24	0.03
P15	4/30/17	40.88	41.10	0.22

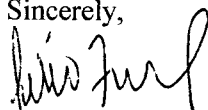
Table 3 below provides the calendar year 2017 sludge management for the San Luis site.

Table 3 - Water Treatment Plant Sludge Management Year to Date.

Date	Quantity	Sludge Management
July 2016	104 tons	Sludge transferred from drying pad to tailings impoundment.

Should you have any questions or comments, please do not hesitate to contact either myself at (719) 379-0798 or Mr. Larry Fiske at (303) 837-5676.

Sincerely,



Julio F. Madrid  
Sr. Supervisor Legacy Sites Reclamation and Closure

Cc: Larry Fiske  
File





BATTLE MOUNTAIN RESOURCES, INC.

June 07, 2017

RECEIVED

JUN 12 2017

DIVISION OF RECLAMATION  
MINING & SAFETY

→Mr. Wally Erickson  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No.M-88-112  
May 2017 Monthly Report

Dear Mr. Erickson:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI), San Luis Project for the month of May 2107.

Surface and ground water monitoring and analysis were completed for all required sites during the month per the terms and conditions of the TR-32 Quality Assurance and Quality Control (QA/QC) plan.

Vacuum on the tailing lysimeters was verified on May 31<sup>st</sup>, no water was present for sampling and subsequent analysis.

Depths to water were collected for the tailing impoundment main embankment piezometers and the West Pit monitoring wells on May 31<sup>st</sup>. The May tailing impoundment piezometer measurements identified these installations were either dry or contained less than 12 inches of water as illustrated in Table 2. Tables 1 and 2 below identify the depth to water measurements collected for each of the site monitoring wells, piezometers and lysimeters as required by the terms and conditions of the TR-32 QA/QC plan.

The leak detection system was measured on May 31<sup>st</sup>. A total of 880 gallons of water was excavated from the leak detection system yielding a monthly average of 25.1 gpad. The tailings pond under-drain measured 40 gpm.

During the month of May, the West Pit water treatment plant operated efficiently discharging a total of 9,840,800 gallons (30.20 acre-feet) of water to Rito Seco Creek and a total of 661,400 gallons (2.03 acre-feet) of water was transferred from the West Pit to the tailings impoundment. Seepage along Rito Seco Creek remained dry during the month.



Table 1-May 2017 Ground Water Monitoring Well and Lysimeter Depth to Water Measurements

Monitoring Site	Date	Depth to Water (feet)
M-4R	5/31/17	0
M-6	5/31/17	Dry
M-7	5/31/17	Dry
M-8	5/31/17	Dry
M-9	5/31/17	141.78
M-10	5/31/17	24.88
M-11R	5/31/17	40.69
M-12	5/31/17	175.30
M-13R	5/31/17	126.28
M-14	5/31/17	131.33
M-15	5/31/17	90.38
M-16	5/31/17	21.23
M-19	5/31/17	23.09
M-21	5/31/17	17.43
M-22	5/31/17	15.97
M-26	5/31/17	15.52
M-32	5/31/17	47.35
M-33	5/31/17	56.50
M-34	5/31/17	22.93
BF-4	5/31/17	24.91
BF-6	5/31/17	30.87
LS-1R	5/31/17	Dry
LS-2R	5/31/17	Dry
LS-3	5/31/17	Dry
LD-1R	5/31/17	Dry
LD-2R	5/31/17	Dry
LD-3	5/31/17	Dry

Table 2 – May 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	5/31/17	Dry	72.46	0.00
P7	5/31/17	92.28	92.50	0.22
P8	5/31/17	96.65	97.51	0.86
P9	5/31/17	71.96	72.30	0.34



Table 2 –May 2017 Tailing Disposal Area Piezometer Depth to Water  
Measurements (continued)

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P10	5/31/17	57.55	58.30	0.75
P11	5/31/17	41.38	41.80	0.42
P12	5/31/17	41.68	41.71	0.03
P13	5/31/17	41.00	41.34	0.34
P14	5/31/17	41.21	41.24	0.03
P15	5/31/17	40.86	41.10	0.24

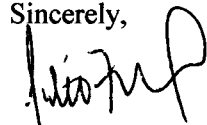
Table 3 below provides the calendar year 2017 sludge management for the San Luis site.

Table 3 - Water Treatment Plant Sludge Management Year to Date.

Date	Quantity	Sludge Management
July 2016	104 tons	Sludge transferred from drying pad to tailings impoundment.

Should you have any questions or comments, please do not hesitate to contact either myself at (719) 379-0798 or Mr. Larry Fiske at (303) 837-5676.

Sincerely,



Julio F. Madrid  
Sr. Supervisor Legacy Sites Reclamation and Closure

Cc: Larry Fiske  
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✓  
BATTLE MOUNTAIN RESOURCES, INC.

RECEIVED

✓ JUL 13 2017

DIVISION OF RECLAMATION  
MINING AND SAFETY

July 10, 2017

Mr. Wally Erickson/ Mr. Lucas J. West  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No.M-88-112 ✓  
June 2017 Monthly Report ✓

Dear Mr. Erickson and Mr. Lucas:

✓  
The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI), San Luis Project for the month of June 2107.

During the month of June, Mr. Erickson, Mr. Lucas and Mr. Means made a site visit to the San Luis-Battle Mountain Project in order to conduct a complete site inspection and also for preparation of Mr. Lucas taking over as site inspector for CDRMS.

Surface and ground water monitoring and analysis were completed for all required sites during the month per the terms and conditions of the TR-32 Quality Assurance and Quality Control (QA/QC) plan.

Vacuum on the tailing lysimeters was verified on June 29<sup>th</sup>, no water was present for sampling and subsequent analysis.

Depths to water were collected for the tailing impoundment main embankment piezometers and the West Pit monitoring wells on June 30<sup>th</sup>. The June tailing impoundment piezometer measurements identified these installations were either dry or contained less than 12 inches of water as illustrated in Table 2. Tables 1 and 2 below identify the depth to water measurements collected for each of the site monitoring wells, piezometers and lysimeters as required by the terms and conditions of the TR-32 QA/QC plan.

The leak detection system was measured on June 29<sup>th</sup>. A total of 870 gallons of water was excavated from the leak detection system yielding a monthly average of 30 gpad. The tailings pond under-drain measured 40 gpm.

During the month of June, the West Pit water treatment plant operated efficiently discharging a total of 8,831,999 gallons (27.11 acre-feet) of water to Rito Seco Creek and a total of 1,033,800 gallons (3.17 acre-feet) of water was transferred from the West Pit to the tailings impoundment. Seepage along Rito Seco Creek remained dry during the month.



Table 1-June 2017 Ground Water Monitoring Well and Lysimeter Depth to Water Measurements

Monitoring Site	Date	Depth to Water (feet)
M-4R	6/30/17	0
M-6	6/30/17	Dry
M-7	6/30/17	Dry
M-8	6/30/17	Dry
M-9	6/30/17	141.58
M-10	6/30/17	24.13
M-11R	6/30/17	40.43
M-12	6/30/17	175.12
M-13R	6/30/17	126.00
M-14	6/30/17	131.18
M-15	6/30/17	91.17
M-16	6/30/17	21.61
M-19	6/30/17	24.03
M-21	6/30/17	17.98
M-22	6/30/17	16.33
M-26	6/30/17	15.82
M-32	6/30/17	47.25
M-33	6/30/17	57.03
M-34	6/30/17	22.83
BF-4	6/30/17	24.95
BF-6	6/30/17	30.95
LS-1R	6/30/17	Dry
LS-2R	6/30/17	Dry
LS-3	6/30/17	Dry
LD-1R	6/30/17	Dry
LD-2R	6/30/17	Dry
LD-3	6/30/17	Dry

Table 2 – May 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	6/29/17	Dry	72.46	0.00
P7	6/29/17	92.28	92.50	0.22
P8	6/29/17	96.59	97.51	0.92
P9	6/29/17	71.96	72.30	0.34



Table 2 – June 2017 Tailing Disposal Area Piezometer Depth to Water  
Measurements (continued)

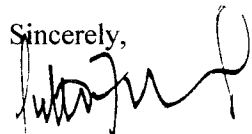
Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P10	6/29/17	57.55	58.30	0.75
P11	6/29/17	41.37	41.80	0.43
P12	6/29/17	41.67	41.71	0.04
P13	6/29/17	40.99	41.34	0.35
P14	6/29/17	41.21	41.24	0.03
P15	6/29/17	40.84	41.10	0.26

Table 3 below provides the calendar year 2017 sludge management for the San Luis site.

Table 3 - Water Treatment Plant Sludge Management Year to Date.

Date	Quantity	Sludge Management
July 2016	104 tons	Sludge transferred from drying pad to tailings impoundment.

Should you have any questions or comments, please do not hesitate to contact either myself at (719) 379-0798 or Mr. Larry Fiske at (303) 837-5676.

Sincerely,  


Julio F. Madrid  
Sr. Supervisor Legacy Sites Reclamation and Closure

Cc: Larry Fiske  
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BATTLE MOUNTAIN RESOURCES, INC.

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✓ AUG 15 2017

DIVISION OF RECLAMATION  
MINING AND SAFETY

August 9, 2017

Mr. Lucas J. West  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No.M-88-112 ✓  
July 2017 Monthly Report ✓

Dear Mr. Lucas:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI), San Luis Project for the month of July 2107.

Surface and ground water monitoring and analysis were completed for all required sites during the month per the terms and conditions of the TR-32 Quality Assurance and Quality Control (QA/QC) plan.

Vacuum on the tailing lysimeters was verified on July 31<sup>st</sup>, no water was present for sampling and subsequent analysis.

Depths to water were collected for the tailing impoundment main embankment piezometers and the West Pit monitoring wells on July 31<sup>st</sup>. The July tailing impoundment piezometer measurements identified these installations were either dry or contained less than 12 inches of water as illustrated in Table 2. Tables 1 and 2 below identify the depth to water measurements collected for each of the site monitoring wells, piezometers and lysimeters as required by the terms and conditions of the TR-32 QA/QC plan.

The leak detection system was measured on July 31<sup>st</sup>. A total of 880 gallons of water was excavated from the leak detection system yielding a monthly average of 28.3 gpad. The tailings pond under-drain measured 38.5 gpm.

During the month of July, the West Pit water treatment plant operated efficiently discharging a total of 7,983,300 gallons (24.50 acre-feet) of water to Rito Seco Creek and a total of 632,700 gallons (1.94 acre-feet) of water was transferred from the West Pit to the tailings impoundment. Seepage along Rito Seco Creek remained dry during the month.



Table 1-July 2017 Ground Water Monitoring Well and Lysimeter Depth to Water Measurements

Monitoring Site	Date	Depth to Water (feet)
M-4R	7/31/17	0
M-6	7/31/17	Dry
M-7	7/31/17	Dry
M-8	7/31/17	Dry
M-9	7/31/17	141.77
M-10	7/31/17	24.42
M-11R	7/31/17	40.44
M-12	7/31/17	175.28
M-13R	7/31/17	126.25
M-14	7/31/17	131.13
M-15	7/31/17	91.68
M-16	7/31/17	22.58
M-19	7/31/17	24.10
M-21	7/31/17	18.35
M-22	7/31/17	16.78
M-26	7/31/17	15.74
M-32	7/31/17	47.13
M-33	7/31/17	50.07
M-34	7/31/17	23.26
BF-4	7/31/17	24.95
BF-6	7/31/17	30.95
LS-1R	7/31/17	Dry
LS-2R	7/31/17	Dry
LS-3	7/31/17	Dry
LD-1R	7/31/17	Dry
LD-2R	7/31/17	Dry
LD-3	7/31/17	Dry

Table 2 – July 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	7/31/17	Dry	72.46	0.00
P7	7/31/17	92.28	92.50	0.22
P8	7/31/17	96.55	97.51	0.96
P9	7/31/17	71.96	72.30	0.34



Table 2 – July 2017 Tailing Disposal Area Piezometer Depth to Water  
Measurements (continued)

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P10	7/31/17	57.56	58.30	0.74
P11	7/31/17	41.38	41.80	0.42
P12	7/31/17	41.68	41.71	0.03
P13	7/31/17	41.01	41.34	0.33
P14	7/31/17	41.21	41.24	0.03
P15	7/31/17	40.85	41.10	0.25

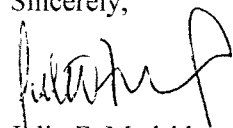
Table 3 below provides the calendar year 2017 sludge management for the San Luis site.

Table 3 - Water Treatment Plant Sludge Management Year to Date.

Date	Quantity	Sludge Management
July 2016	104 tons	Sludge transferred from drying pad to tailings impoundment.

Should you have any questions or comments, please do not hesitate to contact either myself at (719) 379-0798 or Mr. Larry Fiske at (303) 837-5676.

Sincerely,



Julio F. Madrid  
Sr. Supervisor Legacy Sites Reclamation and Closure

Cc: Larry Fiske  
File





✓  
**BATTLE MOUNTAIN RESOURCES, INC.**

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September 8, 2017

**RECEIVED**

✓ SEP 13 2017

**DIVISION OF RECLAMATION  
MINING AND SAFETY**

Mr. Lucas J. West  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No.M-88-112 ✓  
August 2017 Monthly Report ✓

Dear Mr. Lucas:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI), San Luis Project for the month of August 2107.

Surface and ground water monitoring and analysis were completed for all required sites during the month per the terms and conditions of the TR-32 Quality Assurance and Quality Control (QA/QC) plan.

Vacuum on the tailing lysimeters was verified on August 31<sup>st</sup>, no water was present for sampling and subsequent analysis.

Depths to water were collected for the tailing impoundment main embankment piezometers and the West Pit monitoring wells on August 31<sup>st</sup>. The August tailing impoundment piezometer measurements identified these installations were either dry or contained less than 12 inches of water as illustrated in Table 2. Tables 1 and 2 below identify the depth to water measurements collected for each of the site monitoring wells, piezometers and lysimeters as required by the terms and conditions of the TR-32 QA/QC plan.

The leak detection system was measured on August 31<sup>st</sup>. A total of 870 gallons of water was excavated from the leak detection system yielding a monthly average of 28.0 gpad. The tailings pond under-drain measured 38.0 gpm.

During the month of August, the West Pit water treatment plant operated efficiently discharging a total of 8,370,500 gallons (25.69 acre-feet) of water to Rito Seco Creek and a total of 532,300 gallons (1.63 acre-feet) of water was transferred from the West Pit to the tailings impoundment. Seepage along Rito Seco Creek remained dry during the month.



Table 1-August 2017 Ground Water Monitoring Well and Lysimeter Depth to Water Measurements

Monitoring Site	Date	Depth to Water (feet)
M-4R	8/31/17	0
M-6	8/31/17	Dry
M-7	8/31/17	Dry
M-8	8/31/17	Dry
M-9	8/31/17	141.67
M-10	8/31/17	25.77
M-11R	8/31/17	40.52
M-12	8/31/17	175.15
M-13R	8/31/17	126.14
M-14	8/31/17	131.21
M-15	8/31/17	92.14
M-16	8/31/17	22.98
M-19	8/31/17	23.96
M-21	8/31/17	18.03
M-22	8/31/17	16.74
M-26	8/31/17	15.76
M-32	8/31/17	47.90
M-33	8/31/17	56.96
M-34	8/31/17	23.58
BF-4	8/31/17	24.92
BF-6	8/31/17	30.96
LS-1R	8/31/17	Dry
LS-2R	8/31/17	Dry
LS-3	8/31/17	Dry
LD-1R	8/31/17	Dry
LD-2R	8/31/17	Dry
LD-3	8/31/17	Dry

Table 2 – August 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	8/31/17	Dry	72.46	0.00
P7	8/31/17	92.27	92.50	0.23
P8	8/31/17	96.59	97.51	0.92
P9	8/31/17	71.95	72.30	0.35



Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No. M-88-112  
August 2017 Monthly Report  
Page 3

Table 2 – August 2017 Tailing Disposal Area Piezometer Depth to Water  
Measurements (continued)

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P10	8/31/17	57.55	58.30	0.75
P11	8/31/17	41.37	41.80	0.43
P12	8/31/17	41.68	41.71	0.03
P13	8/31/17	41.02	41.34	0.32
P14	8/31/17	41.21	41.24	0.03
P15	8/31/17	40.85	41.10	0.25

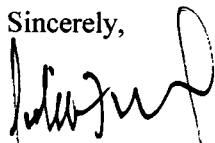
Table 3 below provides the calendar year 2017 sludge management for the San Luis site.

Table 3 - Water Treatment Plant Sludge Management Year to Date.

Date	Quantity	Sludge Management
July 2016	104 tons	Sludge transferred from drying pad to tailings impoundment.

Should you have any questions or comments, please do not hesitate to contact either myself at (719) 379-0798 or Mr. Larry Fiske at (303) 837-5676.

Sincerely,



Julio F. Madrid  
Sr. Supervisor Legacy Sites Reclamation and Closure

Cc: Larry Fiske  
File





✓  
**BATTLE MOUNTAIN RESOURCES, INC.**

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October 9, 2017

**RECEIVED**

✓ OCT 13 2017

**DIVISION OF RECLAMATION  
MINING AND SAFETY**

Mr. Lucas J. West  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No.M-88-112 ✓  
✓ September 2017 Monthly Report

Dear Mr. Lucas:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI), San Luis Project for the month of September 2107.

Surface and ground water monitoring and analysis were completed for all required sites during the month per the terms and conditions of the TR-32 Quality Assurance and Quality Control (QA/QC) plan.

Vacuum on the tailing lysimeters was verified on September 28<sup>th</sup>, no water was present for sampling and subsequent analysis.

Depths to water were collected for the tailing impoundment main embankment piezometers and the West Pit monitoring wells on September 28<sup>th</sup>. The September tailing impoundment piezometer measurements identified these installations were either dry or contained less than 12 inches of water as illustrated in Table 2. Tables 1 and 2 below identify the depth to water measurements collected for each of the site monitoring wells, piezometers and lysimeters as required by the terms and conditions of the TR-32 QA/QC plan.

The leak detection system was measured on September 28<sup>th</sup>. A total of 880 gallons of water was excavated from the leak detection system yielding a monthly average of 31.4 gpad. The tailings pond under-drain measured 38.2 gpm.

During the month of September, the West Pit water treatment plant operated efficiently discharging a total of 6,833,300gallons (20.97 acre-feet) of water to Rito Seco Creek and a total of 293,700 gallons (.90 acre-feet) of water was transferred from the West Pit to the tailings impoundment. Seepage along Rito Seco Creek remained dry during the month.



Table 1-September 2017 Ground Water Monitoring Well and Lysimeter Depth to Water Measurements

Monitoring Site	Date	Depth to Water (feet)
M-4R	9/28/17	0
M-6	9/28/17	Dry
M-7	9/28/17	Dry
M-8	9/28/17	Dry
M-9	9/28/17	141.73
M-10	9/28/17	25.83
M-11R	9/28/17	40.49
M-12	9/28/17	175.29
M-13R	9/28/17	126.14
M-14	9/28/17	131.30
M-15	9/28/17	92.04
M-16	9/28/17	23.15
M-19	9/28/17	23.85
M-21	9/28/17	17.95
M-22	9/28/17	16.67
M-26	9/28/17	15.69
M-32	9/28/17	50.07
M-33	9/28/17	48.65
M-34	9/28/17	23.63
BF-4	9/28/17	24.93
BF-6	9/28/17	30.94
LS-1R	9/28/17	Dry
LS-2R	9/28/17	Dry
LS-3	9/28/17	Dry
LD-1R	9/28/17	Dry
LD-2R	9/28/17	Dry
LD-3	9/28/17	Dry

Table 2 – September 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	9/28/17	Dry	72.46	0.00
P7	9/28/17	92.28	92.50	0.22
P8	9/28/17	96.52	97.51	0.99
P9	9/28/17	71.96	72.30	0.34



Table 2 – September 2017 Tailing Disposal Area Piezometer Depth to Water  
Measurements (continued)

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P10	9/28/17	57.55	58.30	0.75
P11	9/28/17	41.38	41.80	0.42
P12	9/28/17	41.68	41.71	0.03
P13	9/28/17	41.03	41.34	0.31
P14	9/28/17	41.21	41.24	0.03
P15	9/28/17	40.84	41.10	0.26

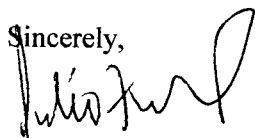
Table 3 below provides the calendar year 2017 sludge management for the San Luis site.

Table 3 - Water Treatment Plant Sludge Management Year to Date.

Date	Quantity	Sludge Management
July 2016	104 tons	Sludge transferred from drying pad to tailings impoundment.

Should you have any questions or comments, please do not hesitate to contact either myself at (719) 379-0798 or Mr. Larry Fiske at (303) 837-5676.

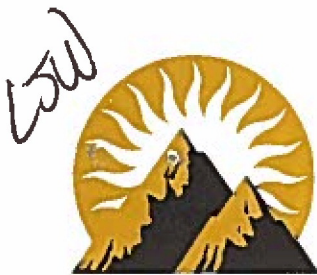
Sincerely,



Julio F. Madrid  
Sr. Supervisor Legacy Sites Reclamation and Closure

Cc: Larry Fiske  
File





**BATTLE MOUNTAIN RESOURCES, INC.**

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NOV 14 2017  
DIVISION OF RECLAMATION  
MINING AND SAFETY

November 9, 2017

**RECEIVED**

NOV 14 2017

DIVISION OF RECLAMATION  
MINING AND SAFETY

Mr. Lucas J. West  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No.M-88-112  
October 2017 Monthly Report

Dear Mr. Lucas:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI), San Luis Project for the month of October 2107.

Surface and ground water monitoring and analysis were completed for all required sites during the month per the terms and conditions of the TR-32 Quality Assurance and Quality Control (QA/QC) plan.

Vacuum on the tailing lysimeters was verified on October 31<sup>st</sup>, no water was present for sampling and subsequent analysis.

Depths to water were collected for the tailing impoundment main embankment piezometers and the West Pit monitoring wells on October 31<sup>st</sup>. The October tailing impoundment piezometer measurements identified these installations were either dry or contained less than 12 inches of water as illustrated in Table 2. Tables 1 and 2 below identify the depth to water measurements collected for each of the site monitoring wells, piezometers and lysimeters as required by the terms and conditions of the TR-32 QA/QC plan.

The leak detection system was measured on October 31<sup>st</sup>. A total of 950 gallons of water was excavated from the leak detection system yielding a monthly average of 27.9 gpad. The tailings pond under-drain measured 38.0 gpm.

During the month of October, the West Pit water treatment plant operated efficiently discharging a total of 8,075,800 gallons (24.79 acre-feet) of water to Rito Seco Creek and a total of 515,100 gallons (1.58 acre-feet) of water was transferred from the West Pit to the tailings impoundment. Seepage along Rito Seco Creek remained dry during the month.



Table 1-October 2017 Ground Water Monitoring Well and Lysimeter Depth to Water Measurements

Monitoring Site	Date	Depth to Water (feet)
M-4R	10/31/17	0
M-6	10/31/17	Dry
M-7	10/31/17	Dry
M-8	10/31/17	Dry
M-9	10/31/17	141.41
M-10	10/31/17	25.63
M-11R	10/31/17	40.38
M-12	10/31/17	175.02
M-13R	10/31/17	126.00
M-14	10/31/17	131.05
M-15	10/31/17	92.10
M-16	10/31/17	23.20
M-19	10/31/17	23.60
M-21	10/31/17	17.40
M-22	10/31/17	16.14
M-26	10/31/17	15.27
M-32	10/31/17	49.01
M-33	10/31/17	56.10
M-34	10/31/17	23.56
BF-4	10/31/17	24.86
BF-6	10/31/17	30.85
LS-1R	10/26/17	Dry
LS-2R	10/26/17	Dry
LS-3	10/26/17	Dry
LD-1R	10/26/17	Dry
LD-2R	10/26/17	Dry
LD-3	10/26/17	Dry

Table 2 – October 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	10/31/17	Dry	72.46	0.00
P7	10/31/17	92.29	92.50	0.21
P8	10/31/17	96.52	97.51	0.99
P9	10/31/17	71.96	72.30	0.34



Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No. M-88-112  
October 2017 Monthly Report  
Page 3

Table 2 – October 2017 Tailing Disposal Area Piezometer Depth to Water  
Measurements (continued)

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P10	10/31/17	57.56	58.30	0.74
P11	10/31/17	41.39	41.80	0.41
P12	10/31/17	41.68	41.71	0.03
P13	10/31/17	41.04	41.34	0.30
P14	10/31/17	41.21	41.24	0.03
P15	10/31/17	40.85	41.10	0.25

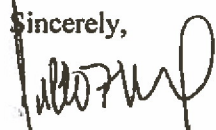
Table 3 below provides the calendar year 2017 sludge management for the San Luis site.

Table 3 - Water Treatment Plant Sludge Management Year to Date.

Date	Quantity	Sludge Management
July 2016	104 tons	Sludge transferred from drying pad to tailings impoundment.

Should you have any questions or comments, please do not hesitate to contact either myself at (719) 379-0798 or Mr. Larry Fiske at (303) 837-5676.

Sincerely,



Julio F. Madrid  
Sr Supervisor Legacy Sites Reclamation and Closure

Cc: Larry Fiske  
File





## BATTLE MOUNTAIN RESOURCES, INC.

---

December 7, 2017

Mr. Lucas J. West  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

**RECEIVED**  
**DEC 12 2017**  
**DIVISION OF RECLAMATION, MINING AND SAFETY**

Re: Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No. M-88-112  
November 2017 Monthly Report

Dear Mr. Lucas:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI), San Luis Project for the month of November 2107.

Surface and ground water monitoring and analysis were completed for all required sites during the month per the terms and conditions of the TR-32 Quality Assurance and Quality Control (QA/QC) plan.

Vacuum on the tailing lysimeters was verified on November 30<sup>th</sup>, no water was present for sampling and subsequent analysis.

Depths to water were collected for the tailing impoundment main embankment piezometers and the West Pit monitoring wells on November 30<sup>th</sup>. The November tailing impoundment piezometer measurements identified these installations were either dry or contained less than 12 inches of water as illustrated in Table 2. Tables 1 and 2 below identify the depth to water measurements collected for each of the site monitoring wells, piezometers and lysimeters as required by the terms and conditions of the TR-32 QA/QC plan.

The leak detection system was measured on November 30<sup>th</sup>. A total of 890 gallons of water was excavated from the leak detection system yielding a monthly average of 29.6 gpad. The tailings pond under-drain measured 37.5 gpm.

During the month of November, the West Pit water treatment plant operated efficiently discharging a total of 7,567,400 gallons (23.23 acre-feet) of water to Rito Seco Creek and a total of 723,800 gallons (2.22 acre-feet) of water was transferred from the West Pit to the tailings impoundment. Seepage along Rito Seco Creek remained dry during the month.



Table 1-November 2017 Ground Water Monitoring Well and Lysimeter Depth to Water Measurements

Monitoring Site	Date	Depth to Water (feet)
M-4R	11/30/17	0
M-6	11/30/17	Dry
M-7	11/30/17	Dry
M-8	11/30/17	Dry
M-9	11/30/17	141.51
M-10	11/30/17	25.63
M-11R	11/30/17	40.24
M-12	11/30/17	175.05
M-13R	11/30/17	125.99
M-14	11/30/17	131.42
M-15	11/30/17	92.22
M-16	11/30/17	23.26
M-19	11/30/17	23.92
M-21	11/30/17	17.32
M-22	11/30/17	16.00
M-26	11/30/17	15.18
M-32	11/30/17	47.53
M-33	11/30/17	55.05
M-34	11/30/17	23.59
BF-4	11/30/17	24.92
BF-6	11/30/17	30.89
LS-1R	11/30/17	Dry
LS-2R	11/30/17	Dry
LS-3	11/30/17	Dry
LD-1R	11/30/17	Dry
LD-2R	11/30/17	Dry
LD-3	11/30/17	Dry

Table 2 – November 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	11/30/17	Dry	72.46	0.00
P7	11/30/17	92.29	92.50	0.21
P8	11/30/17	96.53	97.51	0.98
P9	11/30/17	71.97	72.30	0.33



Table 2 – November 2017 Tailing Disposal Area Piezometer Depth to Water  
Measurements (continued)

<b>Piezometer</b>	<b>Date</b>	<b>Depth to Water (feet)</b>	<b>Total Depth (ft)</b>	<b>Volume of Water (ft)</b>
P10	11/30/17	57.56	58.30	0.74
P11	11/30/17	41.38	41.80	0.42
P12	11/30/17	41.68	41.71	0.03
P13	11/30/17	41.05	41.34	0.29
P14	11/30/17	41.21	41.24	0.03
P15	11/30/17	40.85	41.10	0.25

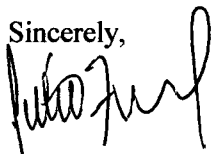
Table 3 below provides the calendar year 2017 sludge management for the San Luis site.

Table 3 - Water Treatment Plant Sludge Management Year to Date.

<b>Date</b>	<b>Quantity</b>	<b>Sludge Management</b>
July 2016	104 tons	Sludge transferred from drying pad to tailings impoundment.

Should you have any questions or comments, please do not hesitate to contact either myself at (719) 379-0798 or Mr. Larry Fiske at (303) 837-5676.

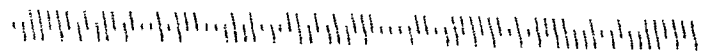
Sincerely,



Julio F. Madrid  
Sr. Supervisor Legacy Sites Reclamation and Closure

Cc: Larry Fiske  
File





**BATTLE MOUNTAIN RESOURCES, INC.**



**Mr. Lucas J. West**  
**CDRMS**  
**1313 Sherman Street, Room 215**  
**Denver, CO 80203**

PO Box 310 • San Luis, Colorado 81152-0310 • (719) 379-0798 • Fax (719) 379-0713  
*Return Postage Guaranteed*





BATTLE MOUNTAIN RESOURCES, INC.

January 9, 2018

**RECEIVED**

**JAN 12 2018**

**DIVISION OF RECLAMATION  
MINING AND SAFETY**

Mr. Lucas J. West  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

Re: Battle Mountain Resources Inc.  
San Luis Project  
CMLRB Permit No.M-88-112  
December 2017 Monthly Report

Dear Mr. Lucas:

The following summarizes monitoring and site activities at the Battle Mountain Resources Inc. (BMRI), San Luis Project for the month of December 2107.

Surface and ground water monitoring and analysis were completed for all required sites during the month per the terms and conditions of the TR-32 Quality Assurance and Quality Control (QA/QC) plan.

Vacuum on the tailing lysimeters was verified on December 28<sup>th</sup>, no water was present for sampling and subsequent analysis.

Depths to water were collected for the tailing impoundment main embankment piezometers and the West Pit monitoring wells on December 29<sup>th</sup>. The December tailing impoundment piezometer measurements identified these installations were either dry or contained less than 12 inches of water as illustrated in Table 2. Tables 1 and 2 below identify the depth to water measurements collected for each of the site monitoring wells, piezometers and lysimeters as required by the terms and conditions of the TR-32 QA/QC plan.

The leak detection system was measured on December 29<sup>th</sup>. A total of 880 gallons of water was excavated from the leak detection system yielding a monthly average of 30.3 gpad. The tailings pond under-drain measured 37.8 gpm.

During the month of December, the West Pit water treatment plant operated efficiently discharging a total of 6,690,500 gallons (20.53 acre-feet) of water to Rito Seco Creek and a total of 543,800 gallons (1.67 acre-feet) of water was transferred from the West Pit to the tailings impoundment. Seepage along Rito Seco Creek remained dry during the month.



Table 1-December 2017 Ground Water Monitoring Well and Lysimeter Depth to Water Measurements

Monitoring Site	Date	Depth to Water (feet)
M-4R	12/29/17	0
M-6	12/29/17	Dry
M-7	12/29/17	Dry
M-8	12/29/17	Dry
M-9	12/29/17	141.77
M-10	12/29/17	25.62
M-11R	12/29/17	40.12
M-12	12/29/17	175.24
M-13R	12/29/17	126.21
M-14	12/29/17	131.20
M-15	12/29/17	91.85
M-16	12/29/17	23.46
M-19	12/29/17	24.18
M-21	12/29/17	17.57
M-22	12/29/17	16.18
M-26	12/29/17	15.13
M-32	12/29/17	45.69
M-33	12/29/17	54.94
M-34	12/29/17	23.53
BF-4	12/29/17	24.98
BF-6	12/29/17	30.96
LS-1R	12/29/17	Dry
LS-2R	12/29/17	Dry
LS-3	12/29/17	Dry
LD-1R	12/29/17	Dry
LD-2R	12/29/17	Dry
LD-3	12/29/17	Dry

Table 2 – December 2017 Tailing Disposal Area Piezometer Depth to Water

Piezometer	Date	Depth to Water (feet)	Total Depth (ft)	Volume of Water (ft)
P6	12/29/17	Dry	72.46	0.00
P7	12/29/17	92.29	92.50	0.21
P8	12/29/17	96.53	97.51	0.98
P9	12/29/17	71.96	72.30	0.34



Table 2 – December 2017 Tailing Disposal Area Piezometer Depth to Water  
Measurements (continued)

<b>Piezometer</b>	<b>Date</b>	<b>Depth to Water (feet)</b>	<b>Total Depth (ft)</b>	<b>Volume of Water (ft)</b>
P10	12/29/17	57.55	58.30	0.75
P11	12/29/17	41.38	41.80	0.42
P12	12/29/17	41.68	41.71	0.03
P13	12/29/17	41.05	41.34	0.29
P14	12/29/17	41.21	41.24	0.03
P15	12/29/17	40.85	41.10	0.25

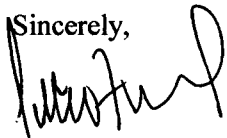
Table 3 below provides the calendar year 2017 sludge management for the San Luis site.

Table 3 - Water Treatment Plant Sludge Management Year to Date.

<b>Date</b>	<b>Quantity</b>	<b>Sludge Management</b>
July 2016	104 tons	Sludge transferred from drying pad to tailings impoundment.

Should you have any questions or comments, please do not hesitate to contact either myself at (719) 379-0798 or Mr. Larry Fiske at (303) 837-5676.

Sincerely,



Julio F. Madrid  
Sr Supervisor Legacy Sites Reclamation and Closure

Cc: Larry Fiske  
File



WHE

RECEIVED

✓ MAY 16 2017

DIVISION OF RECLAMATION  
MINING AND SAFETY

May 8, 2017

Mr. Wally Erickson  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, Colorado 80203

✓ Subject: ✓ Battle Mountain Resources, Inc. DMG Permit No. M-88-112  
✓ Monthly and Quarterly Sampling

Mr. Erickson:

Enclosed are the analytical results from SVL Analytical, Inc., Energy Laboratories and Seacrest Group for the recent monthly and quarterly sampling periods as specified in the April 1992 Abatement Plan. The cross-reference table between sample identification, sample types and sample locations are also attached.

All required sampling was completed. Analysis that have been received are enclosed and those that have not been received will be forwarded to you as soon as they are sent to me.

Sincerely:

*David S. Carino*

David S Carino  
Site Manager  
Closure and Reclamation

Enclosures  
cc: Larry Fiske  
File





www.svl.net

One Government Gulch - PO Box 929

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7A0045**  
Reported 17-Jan-17 14:10

Client Sample ID: **170104BMGRS1**SVL Sample ID: **X7A0045-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 04-Jan-17 09:00

Received: 05-Jan-17

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	16.5	mg/L	0.100	0.041		X701112	AS	01/13/17 09:41	
EPA 200.7	Magnesium	3.91	mg/L	0.20	0.08		X701112	AS	01/13/17 09:41	
EPA 200.7	Potassium	0.60	mg/L	0.50	0.19		X701112	AS	01/13/17 09:41	
EPA 200.7	Silica (SiO <sub>2</sub> )	12.5	mg/L	0.17	0.08		X702209	AS	01/16/17 11:27	
EPA 200.7	Sodium	3.13	mg/L	0.50	0.14		X701112	AS	01/13/17 09:41	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00115	5	X701155	KWH	01/10/17 09:28	D1
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000053		X702111	MWD	01/12/17 10:55	

**Metals (Total Recoverable)**

EPA 200.7	Iron	0.189	mg/L	0.100	0.020		X701111	AS	01/16/17 10:15	
EPA 200.7	Manganese	0.0214	mg/L	0.0080	0.0012		X701111	AS	01/16/17 10:15	

**Metals (Dissolved)**

EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X701150	AS	01/13/17 08:48	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X701150	AS	01/13/17 08:48	
EPA 200.7	Manganese	0.0110	mg/L	0.0080	0.0024		X701150	AS	01/13/17 08:48	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X701150	AS	01/13/17 08:48	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0002		X702019	KWH	01/11/17 07:34	

**Metals (Potentially Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X701151	AS	01/13/17 10:02	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X701151	AS	01/13/17 10:02	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X701151	AS	01/13/17 10:02	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X701151	AS	01/13/17 10:02	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X702016	KWH	01/11/17 09:11	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000025		X702016	KWH	01/11/17 09:11	

**Classical Chemistry Parameters**

EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.010		X702175	APH	01/13/17 14:30	
SM 2320B	Total Alkalinity	71.7	mg/L as CaCO <sub>3</sub>	1.0			X701127	DKS	01/06/17 09:21	
SM 2540 D	Total Susp Solids	< 5.0	mg/L	5.0			X701137	JDM	01/06/17 10:50	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	0.58	mg/L	0.20	0.03		X701158	DT	01/10/17 14:31	
EPA 300.0	Fluoride	0.689	mg/L	0.100	0.017		X701158	DT	01/10/17 14:31	
EPA 300.0	Sulfate as SO <sub>4</sub>	5.03	mg/L	0.30	0.14		X701158	DT	01/10/17 14:31	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 1.30 meq/L      Anion Sum: 1.59 meq/L      C/A Balance: -9.92 %

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

Kirby Gray  
Technical Director

Quarterly

Temp - 0.5 °C

P.H. - 7.11





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One Government Gulch - PO Box 929

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: BMSL - Routine  
Work Order X7A0048  
Reported 17-Jan-17 14:19

Client Sample ID: 170104BMGRS2

SVL Sample ID: X7A0048-01 (Surface Water)

Sample Report Page 1 of 2

Sampled: 04-Jan-17 10:15  
Received: 05-Jan-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	15.2	mg/L	0.100	0.041		X701112	AS	01/13/17 09:47	
EPA 200.7	Magnesium	4.02	mg/L	0.20	0.08		X701112	AS	01/13/17 09:47	
EPA 200.7	Potassium	0.78	mg/L	0.50	0.19		X701112	AS	01/13/17 09:47	
EPA 200.7	Silica (SiO <sub>2</sub> )	11.6	mg/L	0.17	0.08		X702209	AS	01/16/17 11:33	
EPA 200.7	Sodium	6.75	mg/L	0.50	0.14		X701112	AS	01/13/17 09:47	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00115	5	X701155	KWH	01/10/17 09:33	D1
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000053		X702111	MWD	01/12/17 11:02	

**Metals (Total Recoverable)**

EPA 200.7	Iron	0.156	mg/L	0.100	0.020		X701111	AS	01/16/17 10:33	
EPA 200.7	Manganese	0.0123	mg/L	0.0080	0.0012		X701111	AS	01/16/17 10:33	

**Metals (Dissolved)**

EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X701150	AS	01/13/17 09:22	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X701150	AS	01/13/17 09:22	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X701150	AS	01/13/17 09:22	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X701150	AS	01/13/17 09:22	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0002		X702019	KWH	01/11/17 07:49	

**Metals (Potentially Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X701151	AS	01/13/17 10:14	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X701151	AS	01/13/17 10:14	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X701151	AS	01/13/17 10:14	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X701151	AS	01/13/17 10:14	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X702016	KWH	01/11/17 09:21	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000025		X702016	KWH	01/11/17 09:21	

**Classical Chemistry Parameters**

EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.010		X702175	APH	01/13/17 14:36	
SM 2320B	Total Alkalinity	57.1	mg/L as CaCO <sub>3</sub>	1.0			X701127	DKS	01/06/17 09:43	
SM 2540 D	Total Susp. Solids	< 5.0	mg/L	5.0			X701137	JDM	01/06/17 10:50	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	1.99	mg/L	0.20	0.03		X701158	DT	01/10/17 17:11	
EPA 300.0	Fluoride	0.812	mg/L	0.100	0.017		X701158	DT	01/10/17 17:11	
EPA 300.0	Sulfate as SO <sub>4</sub>	12.9	mg/L	0.30	0.14		X701158	DT	01/10/17 17:11	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 1.41 meq/L      Anion Sum: 1.51 meq/L      C/A Balance: -3.41 %

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

Kirby Gray  
Technical Director

Quarterly

Temp - -0.2 °C

P.H. - 7.19

SVL holds the following certifications:

AZ:0538, CA:2080, ID ID00019 & ID00965 (Microbiology), NV:ID000192007A, UT(TNI):ID000192015-1, WA:C573

Work order Report Page 2 of 10





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One Government Gulch - PO Box 929

Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7A0045**  
Reported 17-Jan-17 14:10

Client Sample ID: **170104BMGRS5**SVL Sample ID: **X7A0045-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 04-Jan-17 10:50

Received: 05-Jan-17

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	19.2	mg/L	0.100	0.041		X701112	AS	01/13/17 09:44	
EPA 200.7	Magnesium	4.19	mg/L	0.20	0.08		X701112	AS	01/13/17 09:44	
EPA 200.7	Potassium	1.03	mg/L	0.50	0.19		X701112	AS	01/13/17 09:44	
EPA 200.7	Silica (SiO <sub>2</sub> )	12.4	mg/L	0.17	0.08		X702209	AS	01/16/17 11:30	
EPA 200.7	Sodium	11.6	mg/L	0.50	0.14		X701112	AS	01/13/17 09:44	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00115	5	X701155	KWH	01/10/17 09:31	D1
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000053		X702111	MWD	01/12/17 10:57	

**Metals (Total Recoverable)**

EPA 200.7	Iron	0.487	mg/L	0.100	0.020		X701111	AS	01/16/17 10:18	
EPA 200.7	Manganese	0.120	mg/L	0.0080	0.0012		X701111	AS	01/16/17 10:18	

**Metals (Dissolved)**

EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X701150	AS	01/13/17 08:57	
EPA 200.7	Iron	0.141	mg/L	0.100	0.039		X701150	AS	01/13/17 08:57	
EPA 200.7	Manganese	0.104	mg/L	0.0080	0.0024		X701150	AS	01/13/17 08:57	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X701150	AS	01/13/17 08:57	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0002		X702019	KWH	01/11/17 07:46	

**Metals (Potentially Dissolved)**

EPA 200.7	Aluminum	0.07	mg/L	0.04	0.03		X701151	AS	01/13/17 10:11	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X701151	AS	01/13/17 10:11	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X701151	AS	01/13/17 10:11	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X701151	AS	01/13/17 10:11	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X702016	KWH	01/11/17 09:18	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000025		X702016	KWH	01/11/17 09:18	

**Classical Chemistry Parameters**

EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.010		X702175	APH	01/13/17 14:33	
SM 2320B	Total Alkalinity	62.2	mg/L as CaCO <sub>3</sub>	1.0			X701127	DKS	01/06/17 09:39	
SM 2540 D	Total Susp Solids	< 5.0	mg/L	5.0			X701137	JDM	01/06/17 10:50	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	4.06	mg/L	0.20	0.03		X701158	DT	01/10/17 16:39	
EPA 300.0	Fluoride	0.908	mg/L	0.100	0.017		X701158	DT	01/10/17 16:39	
EPA 300.0	Sulfate as SO <sub>4</sub>	27.0	mg/L	0.30	0.14		X701158	DT	01/10/17 16:39	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 1.85 meq/L      Anion Sum: 1.97 meq/L      C/A Balance: -3.03 %

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

Kirby Gray  
Technical Director

Quarterly

Temp - -0.2 °C

pH - 7.33

SVL holds the following certifications:

AZ:0538, CA:2080, ID:ID00019 & ID00965 (Microbiology), NV:ID000192007A, UT(TNI):ID000192015-1, WA:C573

Work order Report Page 3 of 8





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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: BMSL - Routine

Work Order: X7A0022

Reported 17-Jan-17 13:58

Client Sample ID: 170103BMGM19

SVL Sample ID: X7A0022-01 (Ground Water)

Sample Report Page 1 of 1

Sampled: 03-Jan-17 08:30

Received 04-Jan-17

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	22.0	mg/L	0.100	0.041		X701112	AS	01/13/17 09:11	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.191	mg/L	0.100	0.039		X701110	AS	01/12/17 09:10	
EPA 200.7	Manganese	0.257	mg/L	0.0080	0.0024		X701110	AS	01/12/17 09:10	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X701108	KWH	01/10/17 08:59	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	101	mg/L	10			X701115	RS	01/05/17 10:10	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	1.02	mg/L	0.100	0.017		X701157	DT	01/06/17 18:12	
EPA 300.0	Sulfate as SO <sub>4</sub>	8.78	mg/L	0.30	0.14		X701157	DT	01/06/17 18:12	

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

Kirby Gray  
Technical Director

Quarterly

Temp 9.5 °C

P.H. 6.38





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Battle Mountain - San Luis  
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San Luis, CO 81152

Project Name: BMSL - Routine  
Work Order: X7A0022  
Reported: 17-Jan-17 13:58

Client Sample ID: 170103BMGM21

SVL Sample ID: X7A0022-02 (Ground Water)

Sample Report Page 1 of 1

Sampled: 03-Jan-17 09:10  
Received: 04-Jan-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	37.0	mg/L	0.100	0.041		X701112	AS	01/13/17 09:14	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X701110	AS	01/12/17 09:19	
EPA 200.7	Manganese	0.358	mg/L	0.0080	0.0024		X701110	AS	01/12/17 09:19	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X701108	KWH	01/10/17 09:01	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	158	mg/L	10			X701115	RS	01/05/17 10:10	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	1.40	mg/L	0.100	0.017		X701157	DT	01/06/17 18:42	
EPA 300.0	Sulfate as SO <sub>4</sub>	26.1	mg/L	0.30	0.14		X701157	DT	01/06/17 18:42	

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

Kirby Gray  
Technical Director

Quarterly

Temp - 8.4°C

P.H. - 6.72





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Project Name: BMSL - Routine

Work Order: X7A0022

Reported: 17-Jan-17 13:58

Client Sample ID: 170103BMGM24

SVL Sample ID: X7A0022-03 (Ground Water)

Sample Report Page 1 of 1

Sampled: 03-Jan-17 09:45

Received: 04-Jan-17

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	119	mg/L	0.100	0.041		X701112	AS	01/13/17 09:17	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	5.74	mg/L	0.100	0.039		X701110	AS	01/12/17 09:22	
EPA 200.7	Manganese	1.16	mg/L	0.0080	0.0024		X701110	AS	01/12/17 09:22	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X701108	KWH	01/10/17 09:04	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	596	mg/L	10			X701115	RS	01/05/17 10:10	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.680	mg/L	0.100	0.017		X701157	DT	01/06/17 19:12	
EPA 300.0	Sulfate as SO <sub>4</sub>	288	mg/L	3.00	1.40	10	X701157	DT	01/06/17 19:27	D2

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

Kirby Gray  
Technical Director

Quarterly

Temp - 8.0 °C

P.H. - 6.77



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San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order **X7A0022**  
Reported: 17-Jan-17 13:58

Client Sample ID: **170103BMGM11R**SVL Sample ID: **X7A0022-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 03-Jan-17 10:35  
Received: 04-Jan-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	100	mg/L	0.100	0.041		X701112	AS	01/13/17 09:20	
EPA 200.7	Magnesium	15.5	mg/L	0.20	0.08		X701112	AS	01/13/17 09:20	
EPA 200.7	Potassium	2.32	mg/L	0.50	0.19		X701112	AS	01/13/17 09:20	
EPA 200.7	Silica (SiO <sub>2</sub> )	18.1	mg/L	0.17	0.08		X702209	AS	01/16/17 11:19	
EPA 200.7	Sodium	22.4	mg/L	0.50	0.14		X701112	AS	01/13/17 09:20	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	314	mg/L	1.07	0.424		N/A		01/13/17 09:20	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X701110	AS	01/12/17 09:26	
EPA 200.7	Barium	0.0560	mg/L	0.0020	0.0010		X701110	AS	01/12/17 09:26	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X701110	AS	01/12/17 09:26	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X701110	AS	01/12/17 09:26	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X701110	AS	01/12/17 09:26	
EPA 200.7	Manganese	0.845	mg/L	0.0080	0.0024		X701110	AS	01/12/17 09:26	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X701110	AS	01/12/17 09:26	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X701110	AS	01/12/17 09:26	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00023		X701108	KWH	01/10/17 08:51	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X701108	KWH	01/10/17 08:51	
EPA 200.8	Lead	< 0.00500	mg/L	0.00500	0.000075		X701108	KWH	01/10/17 08:51	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0002		X701108	KWH	01/10/17 08:51	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000025		X701108	KWH	01/10/17 10:49	M2

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000053		X702110	MWD	01/12/17 09:58	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	200	mg/L as CaCO <sub>3</sub>	1.0			X701127	DKS	01/06/17 09:15	
SM 2540 C	Total Diss. Solids	454	mg/L	10			X701115	RS	01/05/17 10:10	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	5.36	mg/L	0.20	0.03		X701157	DT	01/06/17 14:13	
EPA 300.0	Fluoride	0.969	mg/L	0.100	0.017		X701157	DT	01/06/17 14:13	
EPA 300.0	Sulfate as SO <sub>4</sub>	167	mg/L	3.00	1.40	10	X701157	DT	01/06/17 14:28	D2

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 7.34 meq/L    Anion Sum: 7.68 meq/L    C/A Balance -2.26 %    Calculated TDS: 452    TDS/cTDS: 1.01

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

Kirby Gray  
Technical Director

Temp - 9.7 °C

P.H. - 7.23

Quarterly

SVL holds the following certifications:

AZ:0538, CA:2080, ID:ID00019 & ID00965 (Microbiology), NV:ID000192007A, UT(TNI):ID000192015-1, WA C573

Work order Report Page 5 of 11





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Battle Mountain - San Luis  
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San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order: **X7B0158**  
Reported: 22-Feb-17 14:51

Client Sample ID: **170208BMGBF4**SVL Sample ID: **X7B0158-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 08-Feb-17 09:05  
Received: 09-Feb-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	137	mg/L	0.100	0.041		X706210	AS	02/14/17 09:51	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.395	mg/L	0.100	0.039		X706212	AS	02/21/17 11:35	
EPA 200.7	Manganese	4.59	mg/L	0.0080	0.0024		X706212	AS	02/21/17 11:35	
EPA 200.8	Copper	0.312	mg/L	0.00300	0.00010		X706095	KWH	02/15/17 11:44	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	624	mg/L	10			X706187	JDM	02/10/17 16:10	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	4.40	mg/L	0.100	0.031		X706217	SMB	02/12/17 13:48	
EPA 300.0	Sulfate as SO <sub>4</sub>	246	mg/L	3.00	1.40	10	X706217	SMB	02/12/17 14:03	D2,M3

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

John Kern  
Laboratory Director

Quarterly

Temp - 10.1°C

P.H. - 6.75



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San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7B0158**  
Reported: 22-Feb-17 14:51

Client Sample ID: **170208BMGBF6**

Sampled: 08-Feb-17 09:45

SVL Sample ID: **X7B0158-02 (Ground Water)**

Received: 09-Feb-17

Sample Report Page 1 of 1

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	121	mg/L	0.100	0.041		X706210	DT	02/22/17 10:32	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	12.4	mg/L	0.100	0.039		X706212	AS	02/21/17 11:38	
EPA 200.7	Manganese	6.85	mg/L	0.0080	0.0024		X706212	AS	02/21/17 11:38	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X706095	KWH	02/15/17 11:46	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	569	mg/L	10			X706187	JDM	02/10/17 16:10	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	2.86	mg/L	0.100	0.031		X706217	SMB	02/12/17 15:48	
EPA 300.0	Sulfate as SO <sub>4</sub>	254	mg/L	3.00	1.40	10	X706217	SMB	02/12/17 16:03	D2

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

John Kern  
Laboratory Director

Temp - 10.9°C

P.H. - 6.27

Quarterly





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Project Name: BMSL - Routine

Work Order X7A0022

Reported: 17-Jan-17 13:58

Client Sample ID: 170103BMGRB

SVL Sample ID: X7A0022-06 (Ground Water)

Sample Report Page 1 of 1

Sampled: 03-Jan-17 10:45

Received: 04-Jan-17

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.041		X701112	AS	01/13/17 09:32	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X701110	AS	01/12/17 09:32	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X701110	AS	01/12/17 09:32	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X701108	KWH	01/10/17 09:09	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss Solids	< 10	mg/L	10			X701115	RS	01/05/17 10:10	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.017		X701157	DT	01/06/17 21:26	
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.14		X701157	DT	01/06/17 21:26	

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

**Kirby Gray**  
Technical Director



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Battle Mountain - San Luis  
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San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order **X7A0022**  
Reported 17-Jan-17 13:58

Client Sample ID: **170103BMGFB**SVL Sample ID: **X7A0022-05 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 03-Jan-17 10:30

Received: 04-Jan-17

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.041		X701112	AS	01/13/17 09:28	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X701110	AS	01/12/17 09:29	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X701110	AS	01/12/17 09:29	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X701108	KWH	01/10/17 09:06	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	< 10	mg/L	10			X701115	RS	01/05/17 10:10	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.017		X701157	DT	01/06/17 21:11	
EPA 300.0	Sulfate as SO <sub>4</sub>	0.34	mg/L	0.30	0.14		X701157	DT	01/06/17 21:11	

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

**Kirby Gray**  
Technical Director





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Battle Mountain - San Luis  
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**Project Name: BMSL - Routine**

Work Order: X7A0216

Reported 31-Jan-17 08:30

Client Sample ID: 170117BMGM16

SVL Sample ID: X7A0216-01 (Ground Water)

Sample Report Page 1 of 1

Sampled: 17-Jan-17 08:30

Received: 18-Jan-17

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	19.0	mg/L	0.100	0.041		X703137	DT	01/24/17 09:25	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X703135	DT	01/30/17 10:08	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X703135	DT	01/30/17 10:08	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X703138	KWH	01/24/17 10:29	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	93	mg/L	10			X703140	RS	01/19/17 08:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.609	mg/L	0.100	0.031		X703159	SMB	01/23/17 13:40	
EPA 300.0	Sulfate as SO <sub>4</sub>	10.1	mg/L	0.30	0.14		X703159	SMB	01/23/17 13:40	

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

John Kern  
Laboratory Director

Quarterly

Temp - 6.2 °C

P.H. - 6.37



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Project Name: **BMSL - Routine**  
Work Order **X7A0216**  
Reported 31-Jan-17 08:30

Client Sample ID: **170117BMGM22**SVL Sample ID: **X7A0216-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 17-Jan-17 08:55

Received: 18-Jan-17

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	52.0	mg/L	0.100	0.041		X703137	DT	01/24/17 09:29	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.381	mg/L	0.100	0.039		X703135	DT	01/30/17 10:17	
EPA 200.7	Manganese	0.205	mg/L	0.0080	0.0024		X703135	DT	01/30/17 10:17	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X703138	KWH	01/24/17 10:31	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	234	mg/L	10			X703140	RS	01/19/17 08:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	1.17	mg/L	0.100	0.031		X703159	SMB	01/23/17 12:11	
EPA 300.0	Sulfate as SO <sub>4</sub>	63.0	mg/L	3.00	1.40	10	X703159	SMB	01/23/17 12:26	D2,M3

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

John Kern  
Laboratory Director

Quarterly

Temp - 7.0 °C

pH - 6.67





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San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order **X7A0216**  
Reported: 31-Jan-17 08:30

Client Sample ID: **170117BMGM26**

SVL Sample ID: **X7A0216-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled 17-Jan-17 09:35  
Received: 18-Jan-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	26.9	mg/L	0.100	0.041		X703137	DT	01/24/17 09:32	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.375	mg/L	0.100	0.039		X703135	DT	01/30/17 10:21	
EPA 200.7	Manganese	0.249	mg/L	0.0080	0.0024		X703135	DT	01/30/17 10:21	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X703138	KWH	01/24/17 10:34	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	138	mg/L	10			X703140	RS	01/19/17 08:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.782	mg/L	0.100	0.031		X703159	SMB	01/23/17 15:40	
EPA 300.0	Sulfate as SO <sub>4</sub>	11.3	mg/L	0.30	0.14		X703159	SMB	01/23/17 15:40	

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

**John Kern**  
Laboratory Director

Quarterly

Temp - 8.3 °C

P.H. - 6.90



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Project Name: **BMSL - Routine**  
Work Order: **X7A0216**  
Reported: 31-Jan-17 08.30

Client Sample ID: **170117BMGM34**SVL Sample ID: **X7A0216-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 17-Jan-17 10:05  
Received: 18-Jan-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	21.1	mg/L	0.100	0.041		X703137	DT	01/24/17 09:36	
EPA 200.7	Magnesium	4.84	mg/L	0.20	0.08		X703137	DT	01/24/17 09:36	
EPA 200.7	Potassium	0.76	mg/L	0.50	0.19		X703137	DT	01/24/17 09:36	
EPA 200.7	Silica (SiO <sub>2</sub> )	14.3	mg/L	0.17	0.08		X703137	DT	01/24/17 09:36	
EPA 200.7	Sodium	7.21	mg/L	0.50	0.14		X703137	DT	01/24/17 09:36	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	72.6	mg/L	1.07	0.424		N/A		01/24/17 09:36	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X703135	DT	01/30/17 10:24	
EPA 200.7	Barium	0.0394	mg/L	0.0020	0.0010		X703135	DT	01/30/17 10:24	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X703135	DT	01/30/17 10:24	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X703135	DT	01/30/17 10:24	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X703135	DT	01/30/17 10:24	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X703135	DT	01/30/17 10:24	
EPA 200.7	Manganese	0.211	mg/L	0.0080	0.0024		X703135	DT	01/30/17 10:24	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X703135	DT	01/30/17 10:24	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X703135	DT	01/30/17 10:24	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00023		X703138	KWH	01/24/17 10:13	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X703138	KWH	01/24/17 10:13	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0002		X703138	KWH	01/24/17 10:13	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000025		X703138	KWH	01/24/17 10:13	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000053		X704136	MWD	01/26/17 11:18	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	72.6	mg/L as CaCO <sub>3</sub>	1.0			X702159	DKS	01/18/17 12:46	
SM 2540 C	Total Diss. Solids	98	mg/L	10			X703140	RS	01/19/17 08:50	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	2.76	mg/L	0.20	0.04		X703159	SMB	01/23/17 16:09	
EPA 300.0	Fluoride	0.508	mg/L	0.100	0.031		X703159	SMB	01/23/17 16:09	
EPA 300.0	Sulfate as SO <sub>4</sub>	19.1	mg/L	0.30	0.14		X703159	SMB	01/23/17 16:09	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 1.80 meq/L      Anion Sum: 1.95 meq/L      C/A Balance: -4.14 %      Calculated TDS: 114      TDS/cTDS: 0.86

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

John Kern  
Laboratory Director

Quarterly

Temp - 8.0 °C

pH - 6.84

SVL holds the following certifications:

AZ 0538, CA 2080, ID:ID00019 & ID00965 (Microbiology), NV ID000192007A, UT(TNI) ID000192015-1, WA.C573

Work order Report Page 5 of 10





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Project Name: **BMSL - Routine**  
Work Order: **X7A0216**  
Reported: 31-Jan-17 08:30

Client Sample ID: **170117BMGM10**SVL Sample ID: **X7A0216-05 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 17-Jan-17 10:35  
Received: 18-Jan-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	69.2	mg/L	0.100	0.041		X703137	DT	01/24/17 09:46	
EPA 200.7	Magnesium	8.78	mg/L	0.20	0.08		X703137	DT	01/24/17 09:46	
EPA 200.7	Potassium	1.51	mg/L	0.50	0.19		X703137	DT	01/24/17 09:46	
EPA 200.7	Silica (SiO <sub>2</sub> )	26.0	mg/L	0.17	0.08		X703137	DT	01/24/17 09:46	
EPA 200.7	Sodium	20.2	mg/L	0.50	0.14		X703137	DT	01/24/17 09:46	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	209	mg/L	1.07	0.424		N/A		01/24/17 09:46	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X703135	DT	01/30/17 10:27	
EPA 200.7	Barium	0.123	mg/L	0.0020	0.0010		X703135	DT	01/30/17 10:27	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X703135	DT	01/30/17 10:27	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X703135	DT	01/30/17 10:27	
EPA 200.7	Iron	1.10	mg/L	0.100	0.039		X703135	DT	01/30/17 10:27	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X703135	DT	01/30/17 10:27	
EPA 200.7	Manganese	0.874	mg/L	0.0080	0.0024		X703135	DT	01/30/17 10:27	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X703135	DT	01/30/17 10:27	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X703135	DT	01/30/17 10:27	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00023		X703138	KWH	01/24/17 10:36	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X703138	KWH	01/24/17 10:36	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0002		X703138	KWH	01/24/17 10:36	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000025		X703138	KWH	01/24/17 10:36	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000053		X704136	MWD	01/26/17 11:20	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	233	mg/L as CaCO <sub>3</sub>	1.0			X702159	DKS	01/18/17 12:51	
SM 2540 C	Total Diss. Solids	310	mg/L	10			X703140	RS	01/19/17 08:50	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	3.81	mg/L	0.20	0.04		X703159	SMB	01/23/17 16:39	
EPA 300.0	Fluoride	0.895	mg/L	0.100	0.031		X703159	SMB	01/23/17 16:39	
EPA 300.0	Sulfate as SO <sub>4</sub>	37.7	mg/L	0.30	0.14		X703159	SMB	01/23/17 16:39	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 5.17 meq/L	Anion Sum: 5.59 meq/L	C/A Balance: -3.95 %	Calculated TDS: 308	TDS/cTDS: 1.01
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This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern  
Laboratory Director

*Quarterly**Temp - 8.0 °C**P.H. - 6.98*

SVL holds the following certifications:

AZ:0538, CA:2080, ID:ID00019 &amp; ID00965 (Microbiology), NV:ID000192007A, UT(TNI):ID000192015-1, WA:C573

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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: BMSL - Routine  
Work Order: X7A0261  
Reported: 31-Jan-17 08:42

Client Sample ID: 170118BMGM9

SVL Sample ID: X7A0261-02 (Ground Water)

Sample Report Page 1 of 1

Sampled: 18-Jan-17 10:20  
Received: 19-Jan-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	85.0	mg/L	0.100	0.041		X703179	AS	01/27/17 08:59	
EPA 200.7	Magnesium	12.7	mg/L	0.20	0.08		X703179	AS	01/27/17 08:59	
EPA 200.7	Potassium	1.72	mg/L	0.50	0.19		X703179	AS	01/27/17 08:59	
EPA 200.7	Silica (SiO <sub>2</sub> )	30.5	mg/L	0.17	0.08		X703179	AS	01/27/17 08:59	
EPA 200.7	Sodium	24.9	mg/L	0.50	0.14		X703179	AS	01/27/17 08:59	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	265	mg/L	1.07	0.424		N/A		01/27/17 08:59	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X703175	DT	01/30/17 12:26	
EPA 200.7	Barium	0.121	mg/L	0.0020	0.0010		X703175	DT	01/30/17 12:26	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X703175	DT	01/30/17 12:26	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X703175	DT	01/30/17 12:26	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X703175	DT	01/30/17 12:26	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X703175	DT	01/30/17 12:26	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X703175	DT	01/30/17 12:26	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X703175	DT	01/30/17 12:26	
EPA 200.7	Zinc	0.387	mg/L	0.010	0.003		X703175	DT	01/30/17 12:26	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00023		X703186	KWH	01/24/17 11:01	
EPA 200.8	Copper	0.00403	mg/L	0.00300	0.00010		X703186	KWH	01/24/17 11:01	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0002		X703186	KWH	01/24/17 11:01	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000025		X703186	KWH	01/24/17 11:01	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000053		X704138	MWD	01/26/17 12:04	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	305	mg/L as CaCO <sub>3</sub>	1.0			X703187	DKS	01/23/17 09:33	
SM 2540 C	Total Diss. Solids	317	mg/L	10			X703170	JDM	01/20/17 16:10	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0031		X703209	DG	01/23/17 12:00	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	4.48	mg/L	0.20	0.04		X703192	SMB	01/25/17 16:15	
EPA 300.0	Fluoride	0.666	mg/L	0.100	0.031		X703192	SMB	01/25/17 16:15	
EPA 300.0	Sulfate as SO <sub>4</sub>	19.9	mg/L	0.30	0.14		X703192	SMB	01/25/17 16:15	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 6.43 meq/L    Anion Sum: 6.67 meq/L    C/A Balance: -1.81 %    Calculated TDS: 363    TDS/cTDS: 0.87

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

John Kern  
Laboratory Director

Quarterly

Temp. - 11.1 °C

P.H. - 7.12

SVL holds the following certifications.

AZ:0538, CA:2080, ID:ID00019 & ID00965 (Microbiology), NV:ID000192007A, UT(TNI):ID000192015-1, WA:C573

Work order Report Page 3 of 8





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Battle Mountain - San Luis  
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San Luis, CO 81152

Project Name: BMSL - Routine

Work Order: X7A0261

Reported: 31-Jan-17 08:42

Client Sample ID: 170118BMGM12

SVL Sample ID: X7A0261-01 (Ground Water)

Sample Report Page 1 of 1

Sampled: 18-Jan-17 09:05

Received: 19-Jan-17

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	52.9	mg/L	0.100	0.041		X703179	AS	01/27/17 08:50	
EPA 200.7	Magnesium	8.54	mg/L	0.20	0.08		X703179	AS	01/27/17 08:50	
EPA 200.7	Potassium	1.96	mg/L	0.50	0.19		X703179	AS	01/27/17 08:50	
EPA 200.7	Silica (SiO <sub>2</sub> )	23.8	mg/L	0.17	0.08		X703179	AS	01/27/17 08:50	
EPA 200.7	Sodium	13.6	mg/L	0.50	0.14		X703179	AS	01/27/17 08:50	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	167	mg/L	1.07	0.424		N/A		01/27/17 08:50	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X703175	DT	01/30/17 11:42	
EPA 200.7	Barium	0.154	mg/L	0.0020	0.0010		X703175	DT	01/30/17 11:42	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X703175	DT	01/30/17 11:42	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X703175	DT	01/30/17 11:42	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X703175	DT	01/30/17 11:42	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X703175	DT	01/30/17 11:42	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X703175	DT	01/30/17 11:42	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X703175	DT	01/30/17 11:42	
EPA 200.7	Zinc	0.318	mg/L	0.010	0.003		X703175	DT	01/30/17 11:42	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00023		X703186	KWH	01/24/17 10:44	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X703186	KWH	01/24/17 10:44	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0002		X703186	KWH	01/24/17 10:44	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000025		X703186	KWH	01/24/17 10:44	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000053		X704138	MWD	01/26/17 12:03	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	156	mg/L as CaCO <sub>3</sub>	1.0			X703187	DKS	01/23/17 09:28	
SM 2540 C	Total Diss. Solids	221	mg/L	10			X703170	JDM	01/20/17 16:10	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0031		X703209	DG	01/23/17 11:58	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	20.7	mg/L	2.00	0.39	10	X703192	SMB	01/25/17 16:02	D2
EPA 300.0	Fluoride	0.495	mg/L	0.100	0.031		X703192	SMB	01/25/17 15:49	
EPA 300.0	Sulfate as SO <sub>4</sub>	12.6	mg/L	0.30	0.14		X703192	SMB	01/25/17 15:49	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 4.00 meq/L

Anion Sum: 3.99 meq/L

C/A Balance: 0.15 %

Calculated TDS: 228

TDS/cTDS: 0.97

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

John Kern  
Laboratory Director

*Quarterly**Temp - 10.3 °C**pH - 7.14*

SVL holds the following certifications:

AZ:0538, CA:2080, ID:ID00019 &amp; ID00965 (Microbiology), NV:ID000192007A, UT(TNI):ID000192015-1, WA:C573

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Project Name: BMSL - Routine  
Work Order: X7A0261  
Reported: 31-Jan-17 08:42

Client Sample ID: 170118BMGM13R

SVL Sample ID: X7A0261-03 (Ground Water)

Sample Report Page 1 of 1

Sampled: 18-Jan-17 11:10  
Received: 19-Jan-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	93.0	mg/L	0.100	0.041		X703179	AS	01/27/17 09:02	
EPA 200.7	Magnesium	14.6	mg/L	0.20	0.08		X703179	AS	01/27/17 09:02	
EPA 200.7	Potassium	1.42	mg/L	0.50	0.19		X703179	AS	01/27/17 09:02	
EPA 200.7	Silica (SiO <sub>2</sub> )	24.9	mg/L	0.17	0.08		X703179	AS	01/27/17 09:02	
EPA 200.7	Sodium	32.1	mg/L	0.50	0.14		X703179	AS	01/27/17 09:02	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	292	mg/L	1.07	0.424		N/A		01/27/17 09:02	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X703175	DT	01/30/17 12:29	
EPA 200.7	Barium	0.130	mg/L	0.0020	0.0010		X703175	DT	01/30/17 12:29	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X703175	DT	01/30/17 12:29	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X703175	DT	01/30/17 12:29	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X703175	DT	01/30/17 12:29	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X703175	DT	01/30/17 12:29	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X703175	DT	01/30/17 12:29	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X703175	DT	01/30/17 12:29	
EPA 200.7	Zinc	0.626	mg/L	0.010	0.003		X703175	DT	01/30/17 12:29	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00023		X703186	KWH	01/24/17 11:04	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X703186	KWH	01/24/17 11:04	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0002		X703186	KWH	01/24/17 11:04	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000025		X703186	KWH	01/24/17 11:04	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000053		X704138	MWD	01/26/17 12:06	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	349	mg/L as CaCO <sub>3</sub>	1.0			X703187	DKS	01/23/17 09:41	
SM 2540 C	Total Diss. Solids	375	mg/L	10			X703170	JDM	01/20/17 16:10	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0031		X703209	DG	01/23/17 12:02	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	4.47	mg/L	0.20	0.04		X703192	SMB	01/25/17 16:41	
EPA 300.0	Fluoride	0.854	mg/L	0.100	0.031		X703192	SMB	01/25/17 16:41	
EPA 300.0	Sulfate as SO <sub>4</sub>	18.4	mg/L	0.30	0.14		X703192	SMB	01/25/17 16:41	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 7.30 meq/L      Anion Sum: 7.53 meq/L      C/A Balance: -1.52 %      Calculated TDS: 399      TDS/cTDS: 0.94

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

John Kern  
Laboratory Director

Quarterly

Temp - 11.9°C

P.H. - 7.14

SVL holds the following certifications.

AZ:0538, CA:2080, ID:ID00019 & ID00965 (Microbiology), NV:ID000192007A, UT(TNI):ID000192015-1, WA:C573

Work order Report Page 4 of 8





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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: BMSL - Routine

Work Order X7A0110

Reported: 24-Jan-17 11:40

Client Sample ID: 170110BMGM14

SVL Sample ID: X7A0110-01 (Ground Water)

Sample Report Page 1 of 1

Sampled: 10-Jan-17 09:35

Received: 11-Jan-17

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	184	mg/L	0.100	0.041		X702142	AS	01/20/17 09:19	
EPA 200.7	Magnesium	27.8	mg/L	0.20	0.08		X702142	AS	01/20/17 09:19	
EPA 200.7	Potassium	1.88	mg/L	0.50	0.19		X702142	AS	01/20/17 09:19	
EPA 200.7	Silica (SiO <sub>2</sub> )	28.4	mg/L	0.17	0.08		X702142	AS	01/20/17 09:19	
EPA 200.7	Sodium	28.5	mg/L	0.50	0.14		X702142	AS	01/20/17 09:19	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	573	mg/L	1.07	0.424		N/A		01/20/17 09:19	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X702137	DT	01/19/17 10:02	
EPA 200.7	Barium	0.365	mg/L	0.0020	0.0010		X702137	AS	01/18/17 11:54	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X702137	AS	01/18/17 11:54	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X702137	AS	01/18/17 11:54	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X702137	AS	01/18/17 11:54	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X702137	AS	01/18/17 11:54	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X702137	AS	01/18/17 11:54	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X702137	AS	01/18/17 11:54	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X702137	AS	01/18/17 11:54	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00023		X702135	KWH	01/13/17 08:44	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X702135	KWH	01/13/17 08:44	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0002		X702135	KWH	01/13/17 08:44	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000025		X702135	KWH	01/13/17 08:44	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000053		X703110	MWD	01/19/17 11:28	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	640	mg/L as CaCO <sub>3</sub>	1.0			X702159	DKS	01/18/17 12:14	
SM 2540 C	Total Diss. Solids	671	mg/L	10			X702190	RS	01/13/17 10:30	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0031		X703072	APH	01/19/17 11:48	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	8.03	mg/L	0.20	0.02		X702149	DT	01/13/17 15:58	
EPA 300.0	Fluoride	0.348	mg/L	0.100	0.031		X702149	DT	01/13/17 15:58	
EPA 300.0	Sulfate as SO <sub>4</sub>	24.4	mg/L	0.30	0.14		X702149	DT	01/13/17 15:58	

**Cation/Anion Balance and TDS Ratios**

Cation Sum 12.8 meq/L    Anion Sum 13.5 meq/L    C/A Balance -2.93 %    Calculated TDS 687    TDS/cTDS 0.98

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

John Kern  
Laboratory Director

Quarterly

Temp - 8.6 °C

P.H. - 6.71

SVL holds the following certifications:

AZ:0538, CA:2080, ID ID00019 & ID00965 (Microbiology), NV:ID000192007A, UT(TNI) ID000192015-1, WA:C573

Work order Report Page 2 of 6



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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order. **X7B0003**  
Reported 10-Feb-17 09:08

Client Sample ID: **170131BMGLD**SVL Sample ID: **X7B0003-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled 31-Jan-17 09:10  
Received 01-Feb-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	504	mg/L	0.100	0.041		X705164	AS	02/06/17 11:03	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X705164	AS	02/06/17 11:03	
EPA 200.7	Sodium	889	mg/L	5.00	1.40	10	X705164	AS	02/06/17 11:51	D2,M3
EPA 200.7	Zinc	0.010	mg/L	0.010	0.003		X705164	AS	02/06/17 11:03	
EPA 200.8	Copper	0.0548	mg/L	0.00300	0.00050	5	X705155	KWH	02/08/17 12:11	D1
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0031		X705150	APH	02/02/17 13:47	

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

**John Kern**  
Laboratory Director

Quarterly

Temp. - 7.3°C

pH. - 6.70





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Battle Mountain - San Luis  
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San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order: **X7B0003**  
Reported: 10-Feb-17 09 08

Client Sample ID: **170131BMGCOL**SVL Sample ID: **X7B0003-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 31-Jan-17 09:30  
Received: 01-Feb-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	484	mg/L	0.100	0.041		X705164	AS	02/06/17 11:11	M3
EPA 200.7	Iron	26.6	mg/L	0.100	0.039		X705164	AS	02/06/17 11:11	
EPA 200.7	Sodium	830	mg/L	5.00	1.40	10	X705164	AS	02/06/17 12:00	D2
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X705164	AS	02/06/17 11:11	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00050	5	X705155	KWH	02/08/17 12:14	D1

**Classical Chemistry Parameters**

SM 4500-CN-I	Cyanide (WAD)	0.0220	mg/L	0.0100	0.0031		X705150	APH	02/02/17 13:49	
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This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee

**John Kern**  
Laboratory Director

Quarterly

Temp - 8.5°C

P.H. - 6.70



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Project Name: **BMSL - Routine**  
Work Order: **X7B0003**  
Reported: 10-Feb-17 09:08

Client Sample ID: **170131BMGTAILS**SVL Sample ID: **X7B0003-03 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 31-Jan-17 11:10  
Received: 01-Feb-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	408	mg/L	0.100	0.041		X705164	AS	02/06/17 11:14	
EPA 200.7	Iron	4.00	mg/L	0.100	0.039		X705164	AS	02/06/17 11:14	
EPA 200.7	Sodium	835	mg/L	5.00	1.40	10	X705164	AS	02/06/17 12:03	D2
EPA 200.7	Zinc	0.056	mg/L	0.010	0.003		X705164	AS	02/06/17 11:14	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00115	5	X705155	KWH	02/08/17 12:04	D1
EPA 200.8	Copper	0.0606	mg/L	0.00300	0.00050	5	X705155	KWH	02/08/17 12:04	D1

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

John Kern  
Laboratory Director

Quarterly / Monthly

Temp - 0.1 °C

P.H. - 7.20





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Battle Mountain - San Luis  
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**Project Name: BMSL - Routine**  
Work Order **X7B0418**  
Reported 09-Mar-17 13:31

Client Sample ID: **170221BMGWD1**

Sampled. 21-Feb-17 08:45

SVL Sample ID: **X7B0418-04 (Surface Water)**

Sample Report Page 1 of 1

Received 22-Feb-17

Sampled By AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.173	mg/L	0.100	0.039		X708170	DT	03/09/17 11:51	
EPA 200.7	Manganese	0.0660	mg/L	0.0080	0.0024		X708170	DT	03/09/17 11:51	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X708170	DT	03/09/17 11:51	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00023		X708104	AS	03/03/17 10:51	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X708104	AS	03/03/17 10:51	
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0031		X708158	APH	02/23/17 12:51	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.567	mg/L	0.100	0.031		X708173	SMB	02/28/17 00:47	
EPA 300.0	Sulfate as SO <sub>4</sub>	12.1	mg/L	0.30	0.14		X708173	SMB	02/28/17 00:47	

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

Kirby Gray  
Technical Director

*Quarterly**Temp - -0.2°C**P.H. 7.59*



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Battle Mountain - San Luis  
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San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7B0418**  
Reported: 09-Mar-17 13.31

Client Sample ID: **170221BMGSRW**

Sampled: 21-Feb-17 09:25

SVL Sample ID: **X7B0418-05 (Ground Water)**

Received: 22-Feb-17

Sample Report Page 1 of 1

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X708109	DT	03/08/17 10:50	
EPA 200.7	Barium	0.0616	mg/L	0.0020	0.0010		X708109	DT	03/08/17 10:50	
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.009		X708109	DT	03/08/17 10:50	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X708109	DT	03/08/17 10:50	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X708109	DT	03/08/17 10:50	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X708109	DT	03/08/17 10:50	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X708109	DT	03/08/17 10:50	
EPA 200.7	Molybdenum	< 0.008	mg/L	0.008	0.003		X708109	DT	03/08/17 10:50	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X708109	DT	03/08/17 10:50	
EPA 200.7	Zinc	0.014	mg/L	0.010	0.003		X708109	DT	03/08/17 10:50	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00115	5	X708140	AS	03/06/17 12:24	D1
EPA 200.8	Cadmium	< 0.00050	mg/L	0.00050	0.00011	5	X708140	AS	03/06/17 12:24	D1
EPA 200.8	Copper	0.00353	mg/L	0.00300	0.00050	5	X708140	AS	03/06/17 12:24	D1
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0012	5	X708140	AS	03/06/17 12:24	D1
EPA 200.8	Silver	< 0.000400	mg/L	0.000400	0.000125	5	X708140	AS	03/06/17 12:24	D1
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000053		X709082	MWD	03/01/17 11:44	
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0031		X708158	APH	02/23/17 12:53	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.372	mg/L	0.100	0.031		X708173	SMB	02/28/17 01:17	

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

Kirby Gray  
Technical Director

Bi Yearly

Temp - 9.8°C

P.H. - 7.30





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Battle Mountain - San Luis  
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Project Name: **BMSL - Routine**  
Work Order: **X7B0418**  
Reported 09-Mar-17 13:31

Client Sample ID: **170221BMGSLTW**

Sampled: 21-Feb-17 10:05

SVL Sample ID: **X7B0418-06 (Ground Water)**

Received: 22-Feb-17

Sample Report Page 1 of 1

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X708109	DT	03/08/17 10:53	
EPA 200.7	Barium	0.0386	mg/L	0.0020	0.0010		X708109	DT	03/08/17 10:53	
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.009		X708109	DT	03/08/17 10:53	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X708109	DT	03/08/17 10:53	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X708109	DT	03/08/17 10:53	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X708109	DT	03/08/17 10:53	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X708109	DT	03/08/17 10:53	
EPA 200.7	Molybdenum	< 0.008	mg/L	0.008	0.003		X708109	DT	03/08/17 10:53	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X708109	DT	03/08/17 10:53	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X708109	DT	03/08/17 10:53	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00115	5	X708140	AS	03/06/17 12:33	D1
EPA 200.8	Cadmium	< 0.00050	mg/L	0.00050	0.00011	5	X708140	AS	03/06/17 12:33	D1
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00050	5	X708140	AS	03/06/17 12:33	D1
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0012	5	X708140	AS	03/06/17 12:33	D1
EPA 200.8	Silver	< 0.000400	mg/L	0.000400	0.000125	5	X708140	AS	03/06/17 12:33	D1
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000053		X709082	MWD	03/01/17 11:46	
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0031		X708158	APH	02/23/17 12:55	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.452	mg/L	0.100	0.031		X708173	SMB	02/28/17 01:32	

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

**Kirby Gray**  
Technical Director

Bi - yearly

Temp - 13.2 °C

P.H. - 7.61



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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order **X7B0053**  
Reported 14-Feb-17 14:32

Client Sample ID: **170201BMGFB**SVL Sample ID: **X7B0053-07 (Surface Water)**

Sample Report Page 1 of 1

Sampled 01-Feb-17 11:25  
Received 02-Feb-17  
Sampled By AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.041		X705230	DT	02/09/17 14:19	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X705227	DT	02/09/17 11:04	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X705227	DT	02/09/17 11:04	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X705224	KWH	02/09/17 08:10	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	< 10	mg/L	10			X705211	PRM	02/03/17 14:00	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.031		X705235	SMB	02/09/17 17:03	
EPA 300.0	Sulfate as SO <sub>4</sub>	< 0.30	mg/L	0.30	0.14		X705235	SMB	02/09/17 17:03	

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

**Kirby Gray**  
Technical Director





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Kellogg ID 83837-0929

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San Luis, CO 81152

**Project Name: BMSL - Routine**  
**Work Order X7B0053**  
**Reported 14-Feb-17 14:32**

Client Sample ID: **170201BMGRB**

Sampled 01-Feb-17 11:45

SVL Sample ID: **X7B0053-08 (Surface Water)**

Received: 02-Feb-17

Sample Report Page 1 of 1

Sampled By AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
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**Metals (Total)**

EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.041		X705230	DT	02/09/17 14:31	
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**Metals (Dissolved)**

EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X705227	DT	02/09/17 11:07	
EPA 200.7	Manganese	0.0105	mg/L	0.0080	0.0024		X705227	DT	02/09/17 11:07	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X705224	KWH	02/09/17 08:17	

**Classical Chemistry Parameters**

SM 2540 C	Total Diss. Solids	17	mg/L	10			X705211	PRM	02/03/17 14:00	
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**Anions by Ion Chromatography**

EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.031		X705235	SMB	02/09/17 17:16	
EPA 300.0	Sulfate as SO <sub>4</sub>	< 0.30	mg/L	0.30	0.14		X705235	SMB	02/09/17 17:16	

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

**Kirby Gray**  
Technical Director



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San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order **X7C0103**  
Reported **23-Mar-17 11:44**

Client Sample ID: **170306BMGRB**

Sampled: 06-Mar-17 10:45

SVL Sample ID: **X7C0103-08 (Surface Water)**

Received: 07-Mar-17

Sample Report Page 1 of 1

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.041		X710113	DT	03/21/17 14:17	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X710112	AS	03/21/17 13:28	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X710112	AS	03/21/17 13:28	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X710120	KWH	03/22/17 12:05	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	< 10	mg/L	10			X710102	prn	03/08/17 10:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.031		X710121	SMB	03/14/17 21:01	

**John Kern**  
Laboratory Director





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San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order: **X7C0103**  
Reported: 23-Mar-17 11:44

Client Sample ID: **170306BMGFB**

Sampled: 06-Mar-17 10:25

SVL Sample ID: **X7C0103-07 (Surface Water)**

Received: 07-Mar-17

Sample Report Page 1 of 1

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.041		X710113	DT	03/21/17 14:14	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X710112	AS	03/21/17 13:25	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X710112	AS	03/21/17 13:25	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00010		X710120	KWH	03/22/17 11:58	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	< 10	mg/L	10			X710102	prm	03/08/17 10:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.031		X710121	SMB	03/14/17 20:47	
EPA 300.0	Sulfate as SO <sub>4</sub>	0.32	mg/L	0.30	0.14		X710121	SMB	03/14/17 20:47	

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

**John Kern**  
Laboratory Director

WHE

**RECEIVED**

AUG 28 2017

DIVISION OF RECLAMATION  
MINING AND SAFETY

August 23, 2017

Mr. Wally Erickson  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, Colorado 80203

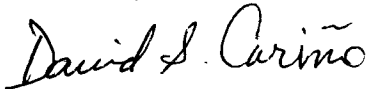
Subject: Battle Mountain Resources, Inc. DMG Permit No. M-88-112  
Monthly and Quarterly Sampling

Mr. Erickson:

Enclosed are the analytical results from SVL Analytical, Inc., Energy Laboratories and Seacrest Group for the recent monthly and quarterly sampling periods as specified in the April 1992 Abatement Plan. The cross-reference table between sample identification, sample types and sample locations are also attached.

All required sampling was completed. Analysis that have been received are enclosed and those that have not been received will be forwarded to you as soon as they are sent to me.

Sincerely:



David S Carino  
Site Manager  
Closure and Reclamation

Enclosures  
cc: Larry Fiske  
File





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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order **X7D0038**  
Reported **18-Apr-17 13:59**

Client Sample ID: **170403BMGRS1**SVL Sample ID: **X7D0038-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 03-Apr-17 08:00  
Received: 04-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	19.0	mg/L	0.100	0.041		X714155	AS	04/14/17 09:19	
EPA 200.7	Magnesium	4.59	mg/L	0.20	0.08		X714155	AS	04/14/17 09:19	
EPA 200.7	Potassium	0.81	mg/L	0.50	0.19		X714155	AS	04/14/17 09:19	
EPA 200.7	Silica (SiO <sub>2</sub> )	14.9	mg/L	0.17	0.08		X714155	AS	04/14/17 09:19	
EPA 200.7	Sodium	3.79	mg/L	0.50	0.14		X714155	AS	04/14/17 09:19	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X713234	KWH	04/07/17 10:11	
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X714180	MWD	04/06/17 14:56	

**Metals (Total Recoverable)**

EPA 200.7	Iron	0.481	mg/L	0.100	0.020		X714154	DT	04/13/17 12:19	
EPA 200.7	Manganese	0.0339	mg/L	0.0080	0.0012		X714154	DT	04/13/17 12:19	

**Metals (Dissolved)**

EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X714157	AS	04/17/17 08:45	
EPA 200.7	Iron	0.156	mg/L	0.100	0.039		X714157	AS	04/17/17 08:45	
EPA 200.7	Manganese	0.0134	mg/L	0.0080	0.0024		X714157	AS	04/17/17 08:45	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X714157	AS	04/17/17 08:45	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X714150	KWH	04/13/17 12:13	

**Metals (Potentially Dissolved)**

EPA 200.7	Aluminum	0.16	mg/L	0.04	0.03		X714158	AS	04/14/17 08:50	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X714158	AS	04/14/17 08:50	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X714158	AS	04/14/17 08:50	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X714158	AS	04/14/17 08:50	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X714148	KWH	04/13/17 09:23	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X714148	KWH	04/13/17 09:23	

**Classical Chemistry Parameters**

EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.004		X714264	APH	04/10/17 13:23	
SM 2320B	Total Alkalinity	62.0	mg/L as CaCO <sub>3</sub>	1.0			X714194	DKS	04/06/17 12:08	
SM 2540.D	Total Susp. Solids	< 5.0	mg/L	5.0			X714131	JDM	04/05/17 14:10	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	0.82	mg/L	0.20	0.05		X714162	SMB	04/10/17 15:24	
EPA 300.0	Fluoride	0.510	mg/L	0.100	0.031		X714162	SMB	04/10/17 15:24	
EPA 300.0	Sulfate as SO <sub>4</sub>	7.37	mg/L	0.30	0.12		X714162	SMB	04/10/17 15:24	

**Cation/Anion Balance and TDS Ratios**

Cation Sum 1.54 meq/L      Anion Sum 1.44 meq/L      C/A Balance: 3.14 %

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

John Kern  
Laboratory Director

Quarterly

Temp - 1.5 °C

P.H. - 7.49

SVL holds the following certifications

AZ 0538, CA.2080, ID.ID00019 & ID00965 (Microbiology), NV ID000192007A, UT(TNI) ID000192015-1, WA:C573

Work order Report Page 2 of 8



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Battle Mountain - San Luis  
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San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order **X7D0066**  
Reported 19-Apr-17 15:28

Client Sample ID: **170403BMGRS2**SVL Sample ID: **X7D0066-01 (Surface Water)**

Sample Report Page 1 of 2

Sampled: 03-Apr-17 08:30  
Received: 05-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	19.2	mg/L	0.100	0.041		X714155	AS	04/14/17 09:31	
EPA 200.7	Magnesium	4.71	mg/L	0.20	0.08		X714155	AS	04/14/17 09:31	
EPA 200.7	Potassium	0.88	mg/L	0.50	0.19		X714155	AS	04/14/17 09:31	
EPA 200.7	Silica (SiO <sub>2</sub> )	14.2	mg/L	0.17	0.08		X714155	AS	04/14/17 09:31	
EPA 200.7	Sodium	4.11	mg/L	0.50	0.14		X714155	AS	04/14/17 09:31	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X713234	KWH	04/07/17 10:16	
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X715026	MWD	04/12/17 13:12	
<b>Metals (Total Recoverable)</b>										
EPA 200.7	Iron	0.502	mg/L	0.100	0.020		X714193	AS	04/14/17 11:02	
EPA 200.7	Manganese	0.0268	mg/L	0.0080	0.0012		X714193	AS	04/14/17 11:02	
<b>Metals (Dissolved)</b>										
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X714192	AS	04/14/17 10:12	
EPA 200.7	Iron	0.158	mg/L	0.100	0.039		X714192	AS	04/14/17 10:12	
EPA 200.7	Manganese	0.0121	mg/L	0.0080	0.0024		X714192	AS	04/14/17 10:12	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X714192	AS	04/14/17 10:12	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X714188	KWH	04/14/17 08:00	
<b>Metals (Potentially Dissolved)</b>										
EPA 200.7	Aluminum	0.09	mg/L	0.04	0.03		X714158	AS	04/14/17 09:02	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X714158	AS	04/14/17 09:02	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X714158	AS	04/14/17 09:02	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X714158	AS	04/14/17 09:02	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X714148	KWH	04/13/17 09:33	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X714148	KWH	04/13/17 09:33	
<b>Classical Chemistry Parameters</b>										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.004		X714264	APH	04/10/17 13:42	
SM 2320B	Total Alkalinity	67.2	mg/L as CaCO <sub>3</sub>	1.0			X714194	DKS	04/06/17 12:17	
SM 2540 D	Total Susp. Solids	6.0	mg/L	5.0			X714198	RS	04/06/17 09:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Chloride	1.01	mg/L	0.20	0.05		X714204	SMB	04/10/17 11:30	
EPA 300.0	Fluoride	0.513	mg/L	0.100	0.031		X714204	SMB	04/10/17 11:30	
EPA 300.0	Sulfate as SO <sub>4</sub>	8.61	mg/L	0.30	0.12		X714204	SMB	04/10/17 11:30	
<b>Cation/Anion Balance and TDS Ratios</b>										
Cation Sum: 1.56 meq/L      Anion Sum: 1.58 meq/L      C/A Balance: -0.44 %										

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

John Kern  
Laboratory Director

Quarterly

Temp - 1.7°C

P.H. - 7.48

SVL holds the following certifications

AZ.0538, CA 2080, ID ID00019 &amp; ID00965 (Microbiology), NV ID000192007A, UT(TNI) ID000192015-1, WA C573

Work order Report Page 2 of 15





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**Project Name: BMSL - Routine**  
Work Order **X7D0038**  
Reported **18-Apr-17 13:59**

Client Sample ID: **170403BMGRS5**SVL Sample ID: **X7D0038-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 03-Apr-17 09:00  
Received: 04-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	22.2	mg/L	0.100	0.041		X714155	AS	04/14/17 09:28	
EPA 200.7	Magnesium	5.00	mg/L	0.20	0.08		X714155	AS	04/14/17 09:28	
EPA 200.7	Potassium	1.08	mg/L	0.50	0.19		X714155	AS	04/14/17 09:28	
EPA 200.7	Silica (SiO <sub>2</sub> )	15.9	mg/L	0.17	0.08		X714155	AS	04/14/17 09:28	
EPA 200.7	Sodium	4.66	mg/L	0.50	0.14		X714155	AS	04/14/17 09:28	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X713234	KWH	04/07/17 10:13	
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X714180	MWD	04/06/17 14:58	
<b>Metals (Total Recoverable)</b>										
EPA 200.7	Iron	0.822	mg/L	0.100	0.020		X714154	DT	04/13/17 12:22	
EPA 200.7	Manganese	0.0875	mg/L	0.0080	0.0012		X714154	DT	04/13/17 12:22	
<b>Metals (Dissolved)</b>										
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X714157	AS	04/17/17 08:48	
EPA 200.7	Iron	0.213	mg/L	0.100	0.039		X714157	AS	04/17/17 08:48	
EPA 200.7	Manganese	0.0719	mg/L	0.0080	0.0024		X714157	AS	04/17/17 08:48	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X714157	AS	04/17/17 08:48	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X714150	KWH	04/13/17 12:15	
<b>Metals (Potentially Dissolved)</b>										
EPA 200.7	Aluminum	0.17	mg/L	0.04	0.03		X714158	AS	04/14/17 08:58	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X714158	AS	04/14/17 08:58	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X714158	AS	04/14/17 08:58	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X714158	AS	04/14/17 08:58	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X714148	KWH	04/13/17 09:30	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X714148	KWH	04/13/17 09:30	
<b>Classical Chemistry Parameters</b>										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.004		X714264	APH	04/10/17 13:26	
SM 2320B	Total Alkalinity	73.3	mg/L as CaCO <sub>3</sub>	1.0			X714194	DKS	04/06/17 12:12	
SM 2540 D	Total Susp. Solids	11.0	mg/L	5.0			X714131	JDM	04/05/17 14:10	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Chloride	1.37	mg/L	0.20	0.05		X714162	SMB	04/10/17 15:39	
EPA 300.0	Fluoride	0.526	mg/L	0.100	0.031		X714162	SMB	04/10/17 15:39	
EPA 300.0	Sulfate as SO <sub>4</sub>	11.5	mg/L	0.30	0.12		X714162	SMB	04/10/17 15:39	
<b>Cation/Anion Balance and TDS Ratios</b>										
Cation Sum: 1.78 meq/L      Anion Sum: 1.77 meq/L      C/A Balance: 0.25 %										

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

John Kern  
Laboratory Director

Quarterly

Temp - 3.1°C

P.H. - 7.50

SVL holds the following certifications

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PO Box 310  
San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order **X7D0066**  
Reported 19-Apr-17 15:28

Client Sample ID: **170403BMGM19**SVL Sample ID: **X7D0066-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 03-Apr-17 10:10  
Received 05-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	20.1	mg/L	0.100	0.041		X714155	AS	04/14/17 09:37	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.279	mg/L	0.100	0.039		X714192	AS	04/14/17 10:24	
EPA 200.7	Manganese	0.247	mg/L	0.0080	0.0024		X714192	AS	04/14/17 10:24	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X714188	KWH	04/14/17 08:03	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	97	mg/L	10			X714199	RS	04/06/17 09:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.950	mg/L	0.100	0.031		X714204	SMB	04/10/17 21:52	
EPA 300.0	Sulfate as SO <sub>4</sub>	13.7	mg/L	0.30	0.12		X714204	SMB	04/10/17 21:52	

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

John Kern  
Laboratory Director

Quarterly

Temp - 7.9°C

P.H. - 6.79





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San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order **X7D0066**  
Reported 19-Apr-17 15:28

Client Sample ID: **170403BMGM21**

SVL Sample ID: **X7D0066-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 03-Apr-17 10:45  
Received 05-Apr-17  
Sampled By AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	35.0	mg/L	0.100	0.041		X714155	AS	04/14/17 09:40	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.121	mg/L	0.100	0.039		X714192	AS	04/14/17 10:27	
EPA 200.7	Manganese	0.343	mg/L	0.0080	0.0024		X714192	AS	04/14/17 10:27	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X714188	KWH	04/14/17 08:05	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	156	mg/L	10			X714199	RS	04/06/17 09:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	1.36	mg/L	0.100	0.031		X714204	SMB	04/10/17 12:08	
EPA 300.0	Sulfate as SO <sub>4</sub>	23.1	mg/L	0.30	0.12		X714204	SMB	04/10/17 12:08	

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

**John Kern**  
Laboratory Director

Quarterly

Temp - 9.4°C

P.H. - 6.85



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**Project Name: BMSL - Routine**  
Work Order **X7D0066**  
Reported 19-Apr-17 15:28

Client Sample ID: **170403BMGM24**

Sampled: 03-Apr-17 11:15

SVL Sample ID: **X7D0066-05 (Ground Water)**

Sample Report Page 1 of 1

Received: 05-Apr-17

Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	116	mg/L	0.100	0.041		X714155	AS	04/14/17 09:49	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	5.94	mg/L	0.100	0.039		X714192	AS	04/14/17 10:30	
EPA 200.7	Manganese	1.18	mg/L	0.0080	0.0024		X714192	AS	04/14/17 10:30	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X714188	KWH	04/14/17 08:15	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	582	mg/L	10			X714199	RS	04/06/17 09:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.636	mg/L	0.100	0.031		X714204	SMB	04/10/17 14:11	
EPA 300.0	Sulfate as SO <sub>4</sub>	255	mg/L	3.00	1.20	10	X714204	SMB	04/10/17 14:26	D2

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

**John Kern**  
Laboratory Director

Quarterly

Temp - 8.8°C

P.H. - 6.72





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**Project Name: BMSL - Routine**  
Work Order: **X7D0066**  
Reported: 19-Apr-17 15:28

Client Sample ID: **170403BMGM11R**SVL Sample ID: **X7D0066-06 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 03-Apr-17 11:50  
Received: 05-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	104	mg/L	0.100	0.041		X714155	AS	04/14/17 09:52	
EPA 200.7	Magnesium	15.8	mg/L	0.20	0.08		X714155	AS	04/14/17 09:52	
EPA 200.7	Potassium	2.35	mg/L	0.50	0.19		X714155	AS	04/14/17 09:52	
EPA 200.7	Silica (SiO <sub>2</sub> )	20.0	mg/L	0.17	0.08		X714155	AS	04/14/17 09:52	
EPA 200.7	Sodium	23.4	mg/L	0.50	0.14		X714155	AS	04/14/17 09:52	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	325	mg/L	1.07	0.424		N/A		04/14/17 09:52	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X714192	AS	04/14/17 10:39	
EPA 200.7	Barium	0.0624	mg/L	0.0020	0.0010		X714192	AS	04/14/17 10:39	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X714192	AS	04/14/17 10:39	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X714192	AS	04/14/17 10:39	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X714192	AS	04/14/17 10:39	
EPA 200.7	Manganese	0.969	mg/L	0.0080	0.0024		X714192	AS	04/14/17 10:39	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X714192	AS	04/14/17 10:39	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X714192	AS	04/14/17 10:39	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X714188	KWH	04/14/17 08:17	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X714188	KWH	04/14/17 08:17	
EPA 200.8	Lead	< 0.00500	mg/L	0.00500	0.000065		X714188	KWH	04/14/17 08:17	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X714188	KWH	04/14/17 08:17	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X714188	KWH	04/14/17 08:17	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X715025	MWD	04/10/17 14:51	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	199	mg/L as CaCO <sub>3</sub>	1.0			X714194	DKS	04/06/17 12:21	
SM 2540 C	Total Diss. Solids	466	mg/L	10			X714199	RS	04/06/17 09:50	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	5.44	mg/L	0.20	0.05		X714204	SMB	04/10/17 14:42	
EPA 300.0	Fluoride	0.918	mg/L	0.100	0.031		X714204	SMB	04/10/17 14:42	
EPA 300.0	Sulfate as SO <sub>4</sub>	170	mg/L	3.00	1.20	10	X714204	SMB	04/10/17 14:57	D2

**Cation/Anion Balance and TDS Ratios**

Cation Sum 7.61 meq/L    Anion Sum 7.72 meq/L    C/A Balance: -0.70 %    Calculated TDS: 461    TDS/cTDS: 1.01

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

John Kern  
Laboratory Director

Quarterny

Temp - 9.8°C

P.H. - 7.00

SVL holds the following certifications:

AZ:0538, CA:2080, ID ID00019 & ID00965 (Microbiology), NV ID000192007A, UT(TNI) ID000192015-1, WA.C573

Work order Report Page 8 of 15



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Project Name: **BMSL - Routine**  
Work Order: **X7D0401**  
Reported: 03-May-17 09:53

Client Sample ID: **170419BMGBF4**SVL Sample ID: **X7D0401-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 19-Apr-17 11:50  
Received: 20-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	129	mg/L	0.100	0.041		X716165	AS	04/27/17 11:09	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.464	mg/L	0.100	0.039		X716163	AS	04/27/17 11:09	
EPA 200.7	Manganese	4.24	mg/L	0.0080	0.0024		X716163	AS	04/27/17 11:09	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X716156	KWH	04/27/17 08:59	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	573	mg/L	10			X716192	JDM	04/21/17 15:25	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	5.37	mg/L	0.100	0.031		X716203	SMB	04/27/17 15:13	
EPA 300.0	Sulfate as SO <sub>4</sub>	240	mg/L	3.00	1.20	10	X716203	SMB	04/27/17 15:24	D2

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

John Kern  
Laboratory Director

Quarterly

Temp - 11.0 °C

P.H. - 6.69





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Project Name: **BMSL - Routine**  
Work Order: **X7D0401**  
Reported: 03-May-17 09:53

Client Sample ID: **170419BMGBF6**SVL Sample ID: **X7D0401-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 19-Apr-17 12:20  
Received: 20-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	226	mg/L	0.100	0.041		X716165	AS	04/27/17 11:12	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	52.6	mg/L	0.100	0.039		X716163	AS	04/27/17 11:12	
EPA 200.7	Manganese	20.7	mg/L	0.0080	0.0024		X716163	AS	04/27/17 11:12	
EPA 200.8	Copper	1.04	mg/L	0.00300	0.00011		X716156	KWH	04/27/17 09:06	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	1080	mg/L	10			X716192	JDM	04/21/17 15:25	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	12.0	mg/L	2.50	0.775	25	X716203	SMB	04/27/17 16:07	D2,M3
EPA 300.0	Sulfate as SO <sub>4</sub>	737	mg/L	7.50	3.00	25	X716203	SMB	04/27/17 16:07	D2,M3

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

John Kern  
Laboratory Director

Quarterly

Temp - 11.3 °C

P.H. - 5.76



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Project Name: **BMSL - Routine**  
Work Order: **X7E0172**  
Reported: **23-May-17 14:07**

Client Sample ID: **170508BMGRB**SVL Sample ID: **X7E0172-08 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-May-17 11:35  
Received: 09-May-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.041		X719126	AS	05/22/17 13:03	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X719125	AS	05/22/17 11:58	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X719125	AS	05/22/17 11:58	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X719131	KWH	05/17/17 12:06	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	< 10	mg/L	10			X719118	RS	05/10/17 12:05	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.031		X719109	SMB	05/17/17 20:33	
EPA 300.0	Sulfate as SO <sub>4</sub>	< 0.30	mg/L	0.30	0.12		X719109	SMB	05/17/17 20:33	

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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**Project Name: BMSL - Routine**  
**Work Order: X7E0172**  
**Reported: 23-May-17 14:07**

Client Sample ID: **170508BMGFB**SVL Sample ID: **X7E0172-07 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 08-May-17 11:20  
Received: 09-May-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.041		X719126	AS	05/22/17 12:48	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X719125	AS	05/22/17 11:55	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X719125	AS	05/22/17 11:55	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X719131	KWH	05/17/17 11:57	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	< 10	mg/L	10			X719118	RS	05/10/17 12:05	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.031		X719109	SMB	05/17/17 20:19	
EPA 300.0	Sulfate as SO <sub>4</sub>	0.30	mg/L	0.30	0.12		X719109	SMB	05/17/17 20:19	

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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**Project Name: BMSL - Routine**  
Work Order: **X7D0323**  
Reported: 01-May-17 10:22

Client Sample ID: **170417BMGM16**SVL Sample ID: **X7D0323-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 17-Apr-17 08:05  
Received: 18-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	18.9	mg/L	0.100	0.041		X716165	AS	04/27/17 10:26	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X716163	AS	04/27/17 10:26	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X716163	AS	04/27/17 10:26	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X716111	KWH	04/27/17 09:56	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	92	mg/L	10			X716105	JDM	04/19/17 14:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.681	mg/L	0.100	0.031		X716114	SMB	04/25/17 14:43	
EPA 300.0	Sulfate as SO <sub>4</sub>	9.28	mg/L	0.30	0.12		X716114	SMB	04/25/17 14:43	

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

**John Kern**  
Laboratory Director

Quarterly

Temp - 7.5°C

P.H. - 5.95





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Project Name: **BMSL - Routine**  
Work Order: **X7D0323**  
Reported: 01-May-17 10:22

Client Sample ID: **170417BMGM22**

SVL Sample ID: **X7D0323-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 17-Apr-17 08:40  
Received: 18-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	50.8	mg/L	0.100	0.041		X716165	AS	04/27/17 10:34	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.306	mg/L	0.100	0.039		X716163	AS	04/27/17 10:34	
EPA 200.7	Manganese	0.207	mg/L	0.0080	0.0024		X716163	AS	04/27/17 10:34	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X716111	KWH	04/27/17 09:58	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	228	mg/L	10			X716105	JDM	04/19/17 14:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	1.32	mg/L	0.100	0.031		X716114	SMB	04/25/17 15:27	
EPA 300.0	Sulfate as SO <sub>4</sub>	63.4	mg/L	3.00	1.20	10	X716114	SMB	04/25/17 15:38	D2,M3

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

John Kern  
Laboratory Director

Quarterly

Temp - 10.2°C

P.H. - 6.48



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Project Name: **BMSL - Routine**  
Work Order: **X7D0323**  
Reported: 01-May-17 10:22

Client Sample ID: **170417BMGM26**

SVL Sample ID: **X7D0323-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 17-Apr-17 09:10  
Received: 18-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	26.3	mg/L	0.100	0.041		X716165	AS	04/27/17 10:37	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.354	mg/L	0.100	0.039		X716163	AS	04/27/17 10:37	
EPA 200.7	Manganese	0.243	mg/L	0.0080	0.0024		X716163	AS	04/27/17 10:37	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X716111	KWH	04/27/17 10:00	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	131	mg/L	10			X716105	JDM	04/19/17 14:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.964	mg/L	0.100	0.031		X716114	SMB	04/25/17 16:11	
EPA 300.0	Sulfate as SO <sub>4</sub>	12.8	mg/L	0.30	0.12		X716114	SMB	04/25/17 16:11	

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

John Kern  
Laboratory Director

Quarterly

Temp - 8.7°C

P.H. - 6.72





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Project Name: **BMSL - Routine**  
Work Order: **X7D0323**  
Reported: 01-May-17 10:22

Client Sample ID: **170417BMGM34**SVL Sample ID: **X7D0323-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 17-Apr-17 09:40  
Received: 18-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	21.1	mg/L	0.100	0.041		X716165	AS	04/27/17 10:40	
EPA 200.7	Magnesium	5.17	mg/L	0.20	0.08		X716165	AS	04/27/17 10:40	
EPA 200.7	Potassium	0.69	mg/L	0.50	0.19		X716165	AS	04/27/17 10:40	
EPA 200.7	Silica (SiO <sub>2</sub> )	15.2	mg/L	0.17	0.08		X716165	AS	04/27/17 10:40	
EPA 200.7	Sodium	7.39	mg/L	0.50	0.14		X716165	AS	04/27/17 10:40	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	73.9	mg/L	1.07	0.424		N/A		04/27/17 10:40	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X716163	AS	04/28/17 08:17	
EPA 200.7	Barium	0.0401	mg/L	0.0020	0.0010		X716163	AS	04/27/17 10:40	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X716163	AS	04/27/17 10:40	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X716163	AS	04/27/17 10:40	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X716163	AS	04/27/17 10:40	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X716163	AS	04/27/17 10:40	
EPA 200.7	Manganese	0.210	mg/L	0.0080	0.0024		X716163	AS	04/27/17 10:40	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X716163	AS	04/27/17 10:40	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X716163	AS	04/27/17 10:40	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X716111	KWH	04/27/17 09:48	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X716111	KWH	04/27/17 09:48	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X716111	KWH	04/27/17 09:48	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X716111	KWH	04/27/17 09:48	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X717043	MWD	04/25/17 13:04	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	72.1	mg/L as CaCO <sub>3</sub>	10			X718015	DKS	05/01/17 07:41	
SM 2540 C	Total Diss. Solids	119	mg/L	10			X716105	JDM	04/19/17 14:50	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	2.97	mg/L	0.20	0.05		X716114	SMB	04/25/17 16:33	
EPA 300.0	Fluoride	0.638	mg/L	0.100	0.031		X716114	SMB	04/25/17 16:33	
EPA 300.0	Sulfate as SO <sub>4</sub>	19.6	mg/L	0.30	0.12		X716114	SMB	04/25/17 16:33	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 1.83 meq/L      Anion Sum: 1.97 meq/L      C/A Balance: -3.56 %      Calculated TDS: 116      TDS/cTDS: 1.03

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

John Kern  
Laboratory Director

Quarterly

Temp - 8.9°C

P.H. - 6.62



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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7D0323**  
Reported: 01-May-17 10:22

Client Sample ID: **170417BMGM10**SVL Sample ID: **X7D0323-05 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 17-Apr-17 10:10  
Received: 18-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	71.1	mg/L	0.100	0.041		X716165	AS	04/27/17 10:43	
EPA 200.7	Magnesium	9.75	mg/L	0.20	0.08		X716165	AS	04/27/17 10:43	
EPA 200.7	Potassium	1.50	mg/L	0.50	0.19		X716165	AS	04/27/17 10:43	
EPA 200.7	Silica (SiO <sub>2</sub> )	28.8	mg/L	0.17	0.08		X716165	AS	04/27/17 10:43	
EPA 200.7	Sodium	21.3	mg/L	0.50	0.14		X716165	AS	04/27/17 10:43	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	218	mg/L	1.07	0.424		N/A		04/27/17 10:43	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X716163	AS	04/28/17 08:24	
EPA 200.7	Barium	0.128	mg/L	0.0020	0.0010		X716163	AS	04/27/17 10:43	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X716163	AS	04/27/17 10:43	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X716163	AS	04/27/17 10:43	
EPA 200.7	Iron	1.13	mg/L	0.100	0.039		X716163	AS	04/27/17 10:43	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X716163	AS	04/27/17 10:43	
EPA 200.7	Manganese	0.888	mg/L	0.0080	0.0024		X716163	AS	04/27/17 10:43	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X716163	AS	04/27/17 10:43	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X716163	AS	04/27/17 10:43	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X716111	KWH	04/27/17 10:11	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X716111	KWH	04/27/17 10:11	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X716111	KWH	04/27/17 10:11	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X716111	KWH	04/27/17 10:11	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X717043	MWD	04/25/17 13:06	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	236	mg/L as CaCO <sub>3</sub>	1.0			X718015	DKS	05/01/17 07:48	
SM 2540 C	Total Diss. Solids	302	mg/L	10			X716105	JDM	04/19/17 14:50	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	4.45	mg/L	0.20	0.05		X716114	SMB	04/25/17 16:55	
EPA 300.0	Fluoride	1.16	mg/L	0.100	0.031		X716114	SMB	04/25/17 16:55	
EPA 300.0	Sulfate as SO <sub>4</sub>	40.8	mg/L	0.30	0.12		X716114	SMB	04/25/17 16:55	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 5.39 meq/L      Anion Sum: 5.75 meq/L      C/A Balance: -3.21 %      Calculated TDS: 320      TDS/cTDS: 0.94

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

John Kern  
Laboratory Director

Quarterly

Temp - 10.2°C

P.H. - 6.86





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San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7D0349**  
Reported: **03-May-17 09:28**

Client Sample ID: **170418BMGM9**SVL Sample ID: **X7D0349-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 18-Apr-17 09:30  
Received: 19-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	84.8	mg/L	0.100	0.041		X716165	AS	04/27/17 11:00	
EPA 200.7	Magnesium	13.1	mg/L	0.20	0.08		X716165	AS	04/27/17 11:00	
EPA 200.7	Potassium	1.48	mg/L	0.50	0.19		X716165	AS	04/27/17 11:00	
EPA 200.7	Silica (SiO <sub>2</sub> )	27.2	mg/L	0.17	0.08		X716165	AS	04/27/17 11:00	
EPA 200.7	Sodium	25.7	mg/L	0.50	0.14		X716165	AS	04/27/17 11:00	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	266	mg/L	1.07	0.424		N/A		04/27/17 11:00	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X716163	AS	04/28/17 08:30	
EPA 200.7	Barium	0.124	mg/L	0.0020	0.0010		X716163	AS	04/27/17 11:00	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X716163	AS	04/27/17 11:00	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X716163	AS	04/27/17 11:00	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X716163	AS	04/27/17 11:00	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X716163	AS	04/27/17 11:00	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X716163	AS	04/27/17 11:00	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X716163	AS	04/27/17 11:00	
EPA 200.7	Zinc	0.390	mg/L	0.010	0.003		X716163	AS	04/27/17 11:00	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X716156	KWH	04/27/17 08:51	
EPA 200.8	Copper	0.00419	mg/L	0.00300	0.00011		X716156	KWH	04/27/17 08:51	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X716156	KWH	04/27/17 08:51	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X716156	KWH	04/27/17 08:51	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X717043	MWD	04/25/17 13:15	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	304	mg/L as CaCO <sub>3</sub>	1.0			X718051	DKS	05/01/17 10:32	
SM 2540 C	Total Diss. Solids	356	mg/L	10			X716171	RS	04/20/17 10:45	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0031		X716176	APH	04/20/17 14:10	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	3.62	mg/L	0.20	0.05		X716181	SMB	04/25/17 22:09	
EPA 300.0	Fluoride	0.271	mg/L	0.100	0.031		X716181	SMB	04/25/17 22:09	
EPA 300.0	Sulfate as SO <sub>4</sub>	19.6	mg/L	0.30	0.12		X716181	SMB	04/25/17 22:09	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 6.48 meq/L      Anion Sum: 6.60 meq/L      C/A Balance: -0.87 %      Calculated TDS: 358      TDS/cTDS: 0.99

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

John Kern  
Laboratory Director

Quarterly

Temp - 13.9°C

P.H. - 6.99



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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7D0349**  
Reported: 03-May-17 09:28

Client Sample ID: **170418BMGM12**SVL Sample ID: **X7D0349-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 18-Apr-17 08:35  
Received: 19-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	52.4	mg/L	0.100	0.041		X716165	AS	04/27/17 10:46	
EPA 200.7	Magnesium	8.86	mg/L	0.20	0.08		X716165	AS	04/27/17 10:46	
EPA 200.7	Potassium	1.83	mg/L	0.50	0.19		X716165	AS	04/27/17 10:46	
EPA 200.7	Silica (SiO <sub>2</sub> )	22.1	mg/L	0.17	0.08		X716165	AS	04/27/17 10:46	
EPA 200.7	Sodium	13.6	mg/L	0.50	0.14		X716165	AS	04/27/17 10:46	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	167	mg/L	1.07	0.424		N/A		04/27/17 10:46	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X716163	AS	04/28/17 08:27	
EPA 200.7	Barium	0.159	mg/L	0.0020	0.0010		X716163	AS	04/27/17 10:46	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X716163	AS	04/27/17 10:46	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X716163	AS	04/27/17 10:46	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X716163	AS	04/27/17 10:46	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X716163	AS	04/27/17 10:46	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X716163	AS	04/27/17 10:46	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X716163	AS	04/27/17 10:46	
EPA 200.7	Zinc	0.327	mg/L	0.010	0.003		X716163	AS	04/27/17 10:46	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X716156	KWH	04/27/17 08:49	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X716156	KWH	04/27/17 08:49	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X716156	KWH	04/27/17 08:49	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X716156	KWH	04/27/17 08:49	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X717043	MWD	04/25/17 13:13	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	153	mg/L as CaCO <sub>3</sub>	1.0			X718051	DKS	05/01/17 11:45	
SM 2540 C	Total Diss. Solids	231	mg/L	10			X716171	RS	04/20/17 10:45	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0031		X716176	APH	04/20/17 14:08	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	18.9	mg/L	2.00	0.50	10	X716181	SMB	04/25/17 21:54	D2
EPA 300.0	Fluoride	0.289	mg/L	0.100	0.031		X716181	SMB	04/25/17 21:39	
EPA 300.0	Sulfate as SO <sub>4</sub>	12.9	mg/L	0.30	0.12		X716181	SMB	04/25/17 21:39	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 4.00 meq/L      Anion Sum: 3.87 meq/L      C/A Balance: 1.60 %      Calculated TDS: 223      TDS/cTDS: 1.04

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

John Kern  
Laboratory Director

Quarterly

Temp - 11.7 °C

P.H. - 7.16

SVL holds the following certifications:

AZ:0538, CA:2080, ID:ID00019 & ID00965 (Microbiology), NV ID000192007A, UT(TNI):ID000192015-1, WA:C573

Work order Report Page 2 of 8





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PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7D0349**  
Reported: 03-May-17 09:28

Client Sample ID: **170418BMGM13R**SVL Sample ID: **X7D0349-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled 18-Apr-17 10:30  
Received: 19-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	90.9	mg/L	0.100	0.041		X716165	AS	04/27/17 11:03	
EPA 200.7	Magnesium	15.2	mg/L	0.20	0.08		X716165	AS	04/27/17 11:03	
EPA 200.7	Potassium	1.23	mg/L	0.50	0.19		X716165	AS	04/27/17 11:03	
EPA 200.7	Silica (SiO <sub>2</sub> )	25.9	mg/L	0.17	0.08		X716165	AS	04/27/17 11:03	
EPA 200.7	Sodium	32.4	mg/L	0.50	0.14		X716165	AS	04/27/17 11:03	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	289	mg/L	1.07	0.424		N/A		04/27/17 11:03	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X716163	AS	04/28/17 08:43	
EPA 200.7	Barium	0.132	mg/L	0.0020	0.0010		X716163	AS	04/27/17 11:03	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X716163	AS	04/27/17 11:03	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X716163	AS	04/27/17 11:03	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X716163	AS	04/27/17 11:03	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X716163	AS	04/27/17 11:03	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X716163	AS	04/27/17 11:03	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X716163	AS	04/27/17 11:03	
EPA 200.7	Zinc	0.645	mg/L	0.010	0.003		X716163	AS	04/27/17 11:03	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X716156	KWH	04/27/17 08:54	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X716156	KWH	04/27/17 08:54	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X716156	KWH	04/27/17 08:54	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X716156	KWH	04/27/17 08:54	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X717043	MWD	04/25/17 13:21	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	350	mg/L as CaCO <sub>3</sub>	1.0			X718051	DKS	05/01/17 10:41	
SM 2540 C	Total Diss. Solids	383	mg/L	10			X716171	RS	04/20/17 10:45	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0031		X716176	APH	04/20/17 14:12	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	3.49	mg/L	0.20	0.05		X716181	SMB	04/25/17 22:39	
EPA 300.0	Fluoride	0.351	mg/L	0.100	0.031		X716181	SMB	04/25/17 22:39	
EPA 300.0	Sulfate as SO <sub>4</sub>	17.8	mg/L	0.30	0.12		X716181	SMB	04/25/17 22:39	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 7.25 meq/L	Anion Sum: 7.48 meq/L	C/A Balance: -1.53 %	Calculated TDS: 397	TDS/eTDS: 0.96
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This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern  
Laboratory Director

*Quarterly**Temp - 13.0°C**P.H. - 7.03*



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Battle Mountain - San Luis  
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San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7D0460**  
Reported **05-May-17 14:43**

Client Sample ID: **170424BMGLD**SVL Sample ID: **X7D0460-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 24-Apr-17 09:05  
Received: 25-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	514	mg/L	0.100	0.041		X717110	AS	05/03/17 12:55	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X717110	AS	05/03/17 12:55	
EPA 200.7	Sodium	892	mg/L	5.00	1.40	10	X717110	AS	05/03/17 13:21	D2,M3
EPA 200.7	Zinc	0.010	mg/L	0.010	0.003		X717110	AS	05/03/17 12:55	
EPA 200.8	Copper	0.0609	mg/L	0.00300	0.00055	5	X717095	KWH	05/03/17 08:07	D1

**Classical Chemistry Parameters**

SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X717154	APH	04/26/17 16:08	
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This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern  
Laboratory Director

Quarterly

Temp - 9.5 °C

P.H. - 6.85





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Kellogg ID 83837-0929

(208) 784-1258

Fax (208) 783-0891

Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

**Project Name: BMSL - Routine**  
**Work Order: X7D0460**  
**Reported: 05-May-17 14:43**

Client Sample ID: **170424BMGCOL**SVL Sample ID: **X7D0460-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 24-Apr-17 09:25  
Received: 25-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	504	mg/L	0.100	0.041		X717110	AS	05/03/17 13:05	
EPA 200.7	Iron	27.4	mg/L	0.100	0.039		X717110	AS	05/03/17 13:05	
EPA 200.7	Sodium	844	mg/L	5.00	1.40	10	X717110	AS	05/03/17 13:31	D2
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X717110	AS	05/03/17 13:05	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00055	5	X717095	KWH	05/03/17 08.09	D1
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	Cyanide (WAD)	0.0110	mg/L	0.0100	0.0021		X717154	APH	04/26/17 16:10	

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

**John Kern**  
Laboratory Director

*Quarterly**Temp - 10.0 °C**P.H. - 6.78*



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San Luis, CO 81152

**Project Name: BMSL - Routine**  
**Work Order: X7D0460**  
**Reported: 05-May-17 14:43**

Client Sample ID: **170424BMGTAILS**SVL Sample ID: **X7D0460-03 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 24-Apr-17 10 10  
Received: 25-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	458	mg/L	0.100	0.041		X717110	AS	05/03/17 13:09	
EPA 200.7	Iron	0.239	mg/L	0.100	0.039		X717110	AS	05/03/17 13:09	
EPA 200.7	Sodium	588	mg/L	0.50	0.14		X717110	AS	05/03/17 13:09	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X717110	AS	05/03/17 13:09	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X717095	KWH	05/03/17 08:00	D1
EPA 200.8	Copper	0.0381	mg/L	0.00300	0.00055	5	X717095	KWH	05/03/17 08:00	D1

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

**John Kern**  
Laboratory Director

Quarterly

Temp - 9.6°C

P.H. - 7.28





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**Project Name: BMSL - Routine**  
Work Order: **X7F0016**  
Reported: 14-Jun-17 13:55

Client Sample ID: **170531BMGTALES**

Sampled: 31-May-17 09:50

Received: 01-Jun-17

Sampled By: AT

SVL Sample ID: **X7F0016-01 (Surface Water)**

**Sample Report Page 1 of 1**

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X722235	KWH	06/14/17 07:46	D1

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

**John Kern**  
Laboratory Director

*Quarterly / Monthly*

*Temp - 15.3°C  
P.H. - 6.82*



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**Project Name: BMSL - Routine**  
Work Order: **X7D0401**  
Reported: 03-May-17 09:53

Client Sample ID: **170419BMGM14**SVL Sample ID: **X7D0401-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 19-Apr-17 10:40  
Received: 20-Apr-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	185	mg/L	0.100	0.041		X716165	AS	04/27/17 11:06	
EPA 200.7	Magnesium	29.7	mg/L	0.20	0.08		X716165	AS	04/27/17 11:06	
EPA 200.7	Potassium	1.88	mg/L	0.50	0.19		X716165	AS	04/27/17 11:06	
EPA 200.7	Silica (SiO <sub>2</sub> )	29.8	mg/L	0.17	0.08		X716165	AS	04/27/17 11:06	
EPA 200.7	Sodium	29.8	mg/L	0.50	0.14		X716165	AS	04/27/17 11:06	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	585	mg/L	1.07	0.424		N/A		04/27/17 11:06	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.03		X716163	AS	04/28/17 08:46	
EPA 200.7	Barium	0.375	mg/L	0.0020	0.0010		X716163	AS	04/27/17 11:06	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0009		X716163	AS	04/27/17 11:06	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0015		X716163	AS	04/27/17 11:06	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.039		X716163	AS	04/27/17 11:06	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0036		X716163	AS	04/27/17 11:06	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0024		X716163	AS	04/27/17 11:06	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0026		X716163	AS	04/27/17 11:06	
EPA 200.7	Zinc	0.013	mg/L	0.010	0.003		X716163	AS	04/27/17 11:06	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X716156	KWH	04/27/17 08:56	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X716156	KWH	04/27/17 08:56	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X716156	KWH	04/27/17 08:56	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X716156	KWH	04/27/17 08:56	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X717043	MWD	04/25/17 13:29	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	622	mg/L as CaCO <sub>3</sub>	1.0			X716177	DKS	04/27/17 08:11	
SM 2540 C	Total Diss. Solids	661	mg/L	10			X716192	JDM	04/21/17 15:25	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X717060	APH	04/25/17 14:49	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	10.1	mg/L	0.20	0.05		X716203	SMB	04/27/17 14:51	
EPA 300.0	Fluoride	1.11	mg/L	0.100	0.031		X716203	SMB	04/27/17 14:51	
EPA 300.0	Sulfate as SO <sub>4</sub>	29.3	mg/L	0.30	0.12		X716203	SMB	04/27/17 14:51	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 13.0 meq/L      Anion Sum: 13.4 meq/L      C/A Balance: -1.32 %      Calculated TDS: 690      TDS/cTDS: 0.96

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

John Kern  
Laboratory Director

Quarterly

Temp - 14.2°C

P.H. - 6.57

SVL holds the following certifications:

AZ:0538, CA:2080, ID:ID00019 & ID00965 (Microbiology), NV:ID000192007A, UT(TNI):ID000192015-1, WA:C573

Work order Report Page 2 of 8





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San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order: **X7E0477**  
Reported: 09-Jun-17 13:25

Client Sample ID: **170523BMGWD1**

SVL Sample ID: **X7E0477-05 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 23-May-17 08:35  
Received: 24-May-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Dissolved)</b>										
EPA 200.7	<b>Iron</b>	0.191	mg/L	0.100	0.045		X721217	DT	06/08/17 15:36	
EPA 200.7	<b>Manganese</b>	0.0421	mg/L	0.0080	0.0049		X721217	DT	06/08/17 15:36	
EPA 200.7	<b>Zinc</b>	< 0.010	mg/L	0.010	0.003		X721217	DT	06/08/17 15:36	
EPA 200.8	<b>Arsenic</b>	< 0.0100	mg/L	0.0100	0.00021		X721210	KWH	06/06/17 09:14	
EPA 200.8	<b>Copper</b>	< 0.00300	mg/L	0.00300	0.00011		X721210	KWH	06/06/17 09:14	
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	<b>Cyanide (WAD)</b>	< 0.0100	mg/L	0.0100	0.0021		X721179	APH	05/25/17 11:02	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	<b>Fluoride</b>	0.460	mg/L	0.100	0.031		X721226	SMB	06/08/17 00:07	
EPA 300.0	<b>Sulfate as SO4</b>	6.85	mg/L	0.30	0.12		X721226	SMB	06/08/17 00:07	

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

**John Kern**  
Laboratory Director

Quarterly

Temp - 6.2°C

P.H. - 7.33



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**Project Name: BMSL - Routine**  
**Work Order: X7F0108**  
**Reported: 22-Jun-17 13:14**

Client Sample ID: **170605BMGRB**SVL Sample ID: **X7F0108-08 (Surface Water)**

Sample Report Page 1 of 1

Sampled 05-Jun-17 10:50  
Received 06-Jun-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.041		X723128	AS	06/20/17 09:48	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X723124	AS	06/20/17 10:49	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X723124	AS	06/20/17 10:49	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X723117	KWH	06/22/17 09:38	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss Solids	< 10	mg/L	10			X723144	JDM	06/07/17 15:15	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.031		X723191	SMB	06/15/17 18:11	
EPA 300.0	Sulfate as SO <sub>4</sub>	0.30	mg/L	0.30	0.12		X723191	SMB	06/15/17 18:11	

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

**Kirby Gray**  
Technical Director





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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

**Project Name: BMSL - Routine**  
**Work Order: X7F0108**  
**Reported: 22-Jun-17 13:14**

Client Sample ID: **170605BMGFB**SVL Sample ID: **X7F0108-07 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 05-Jun-17 10:35  
Received: 06-Jun-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.041		X723128	AS	06/20/17 09:33	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X723124	AS	06/20/17 10:45	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X723124	AS	06/20/17 10:45	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X723117	KWH	06/22/17 09:36	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss Solids	< 10	mg/L	10			X723144	JDM	06/07/17 15:15	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.031		X723191	SMB	06/15/17 17:55	
EPA 300.0	Sulfate as SO <sub>4</sub>	< 0.30	mg/L	0.30	0.12		X723191	SMB	06/15/17 17:55	

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

**Kirby Gray**  
Technical Director

FR: Battle Mountain Resources, Inc

**RECEIVED**

FEB 27 2018

February 21, 2018

**DIVISION OF RECLAMATION  
MINING AND SAFETY**

Mr. Wally Erickson  
State of Colorado  
Division of Reclamation, Mining and Safety  
1313 Sherman Street, Room 215  
Denver, Colorado 80203

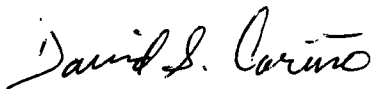
Subject: Battle Mountain Resources, Inc. DMG Permit No. M-88-112 ✓  
Monthly and Quarterly Sampling ✓

Mr. Erickson:

Enclosed are the analytical results from SVL Analytical, Inc., Energy Laboratories and Seacrest Group for the recent monthly and quarterly sampling periods as specified in the April 1992 Abatement Plan. The cross-reference table between sample identification, sample types and sample locations are also attached.

All required sampling was completed. Analysis that have been received are enclosed and those that have not been received will be forwarded to you as soon as they are sent to me.

Sincerely:



David S Carino  
Sr. Supervisor Legacy Sites  
Closure and Reclamation

Enclosures  
cc: Larry Fiske  
File





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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7G0067**  
Reported: **21-Jul-17 09:44**

Client Sample ID: **170705BMGRS1**SVL Sample ID: **X7G0067-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 05-Jul-17 08:05  
Received: 06-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	11.1	mg/L	0.100	0.040		X727156	AS	07/19/17 12:03	
EPA 200.7	Magnesium	2.92	mg/L	0.20	0.10		X727156	AS	07/19/17 12:03	
EPA 200.7	Potassium	0.59	mg/L	0.50	0.19		X727156	AS	07/19/17 12:03	
EPA 200.7	Silica (SiO <sub>2</sub> )	12.2	mg/L	0.17	0.11		X727156	AS	07/19/17 12:03	
EPA 200.7	Sodium	2.56	mg/L	0.50	0.17		X727156	AS	07/19/17 12:03	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X727153	KWH	07/17/17 12:36	D1
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X729139	MWD	07/20/17 11:44	

**Metals (Total Recoverable)**

EPA 200.7	Iron	0.294	mg/L	0.100	0.023		X727157	AS	07/18/17 10:13	
EPA 200.7	Manganese	0.0247	mg/L	0.0080	0.0025		X727157	AS	07/18/17 10:13	

**Metals (Dissolved)**

EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X727176	AS	07/19/17 11:16	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X727176	AS	07/19/17 11:16	
EPA 200.7	Manganese	0.0098	mg/L	0.0080	0.0049		X727176	AS	07/19/17 11:16	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X727176	AS	07/19/17 11:16	
EPA 200.8	Selenium	0.318	mg/L	0.0100	0.0004		X727168	KWH	07/17/17 08:38	M3

**Metals (Potentially Dissolved)**

EPA 200.7	Aluminum	0.08	mg/L	0.04	0.04		X727177	AS	07/19/17 10:37	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X727177	AS	07/19/17 10:37	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X727177	AS	07/19/17 10:37	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X727177	AS	07/19/17 10:37	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X727167	KWH	07/17/17 12:10	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X727167	KWH	07/17/17 12:10	

**Classical Chemistry Parameters**

EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.004		X728234	APH	07/13/17 15:10	
SM 2320B	Total Alkalinity	42.2	mg/L as CaCO <sub>3</sub>	1.0			X727159	DKS	07/07/17 08:54	
SM 2540 D	Total Susp. Solids	< 5.0	mg/L	5.0			X727145	JDM	07/07/17 13:10	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	0.29	mg/L	0.20	0.07		X727189	SMB	07/12/17 19:50	
EPA 300.0	Fluoride	0.277	mg/L	0.100	0.034		X727189	SMB	07/12/17 19:50	
EPA 300.0	Sulfate as SO <sub>4</sub>	3.35	mg/L	0.30	0.13		X727189	SMB	07/12/17 19:50	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 0.93 meq/L      Anion Sum: 0.94 meq/L      C/A Balance: -0.19 %

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

Kirby Gray  
Technical Director

Quarterly

Temp - 7.4 °C

P.H. - 7.22

SVL holds the following certifications:

AZ 0538, CA:2080, ID:ID00019 & ID00965 (Microbiology), NV ID000192007A, UT(TNI).ID000192015-1, WA:C573

Work order Report Page 2 of 8



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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order: **X7G0063**  
Reported: 21-Jul-17 09:42

Client Sample ID: **170705BMGRS2**SVL Sample ID: **X7G0063-01 (Surface Water)**

Sample Report Page 1 of 2

Sampled: 05-Jul-17 08:30  
Received: 06-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	11.3	mg/L	0.100	0.040		X727156	AS	07/19/17 11:34	
EPA 200.7	Magnesium	3.09	mg/L	0.20	0.10		X727156	AS	07/19/17 11:34	
EPA 200.7	Potassium	0.76	mg/L	0.50	0.19		X727156	AS	07/19/17 11:34	
EPA 200.7	Silica (SiO <sub>2</sub> )	13.9	mg/L	0.17	0.11		X727156	AS	07/19/17 11:34	
EPA 200.7	Sodium	4.22	mg/L	0.50	0.17		X727156	AS	07/19/17 11:34	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X727153	KWH	07/17/17 12:34	D1
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X729139	MWD	07/20/17 11:35	

**Metals (Total Recoverable)**

EPA 200.7	Iron	0.575	mg/L	0.100	0.023		X727157	AS	07/18/17 10:03	
EPA 200.7	Manganese	0.0528	mg/L	0.0080	0.0025		X727157	AS	07/18/17 10:03	

**Metals (Dissolved)**

EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X727176	AS	07/19/17 10:46	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X727176	AS	07/19/17 10:46	
EPA 200.7	Manganese	0.0165	mg/L	0.0080	0.0049		X727176	AS	07/19/17 10:46	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X727176	AS	07/19/17 10:46	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X727166	KWH	07/17/17 09:04	

**Metals (Potentially Dissolved)**

EPA 200.7	Aluminum	0.19	mg/L	0.04	0.04		X727177	AS	07/19/17 10:29	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X727177	AS	07/19/17 10:29	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X727177	AS	07/19/17 10:29	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X727177	AS	07/19/17 10:29	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X727167	KWH	07/17/17 12:03	
EPA 200.8	Silver	0.000190	mg/L	0.000100	0.000036		X727167	KWH	07/17/17 12:03	

**Classical Chemistry Parameters**

EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.004		X729028	APH	07/17/17 12:40	
SM 2320B	Total Alkalinity	39.9	mg/L as CaCO <sub>3</sub>	1.0			X727159	DKS	07/07/17 08:44	
SM 2540 D	Total Susp. Solids	12.0	mg/L	5.0			X727145	JDM	07/07/17 13:10	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	0.75	mg/L	0.20	0.07		X727189	SMB	07/12/17 16:43	
EPA 300.0	Fluoride	0.368	mg/L	0.100	0.034		X727189	SMB	07/12/17 16:43	
EPA 300.0	Sulfate as SO <sub>4</sub>	8.52	mg/L	0.30	0.13		X727189	SMB	07/12/17 16:43	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 1.05 meq/L      Anion Sum: 1.02 meq/L      C/A Balance: 1.45 %

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

**Kirby Gray**  
Technical Director

Quarterly

Temp - 9.2°C

p.H. - 7.22

SVL holds the following certifications:

AZ.0538, CA 2080, ID ID00019 & ID00965 (Microbiology), NV.ID000192007A, UT(TNI)-ID000192015-1, WA C573

Work order Report Page 2 of 15





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PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7G0067**  
Reported: 21-Jul-17 09:44

Client Sample ID: **170705BMGRS5**SVL Sample ID: **X7G0067-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 05-Jul-17 08:55  
Received: 06-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	12.5	mg/L	0.100	0.040		X727156	AS	07/19/17 12:06	
EPA 200.7	Magnesium	3.20	mg/L	0.20	0.10		X727156	AS	07/19/17 12:06	
EPA 200.7	Potassium	0.90	mg/L	0.50	0.19		X727156	AS	07/19/17 12:06	
EPA 200.7	Silica (SiO <sub>2</sub> )	16.9	mg/L	0.17	0.11		X727156	AS	07/19/17 12:06	
EPA 200.7	Sodium	2.84	mg/L	0.50	0.17		X727156	AS	07/19/17 12:06	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X727153	KWH	07/17/17 12:39	D1
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X729139	MWD	07/20/17 11:46	

**Metals (Total Recoverable)**

EPA 200.7	Iron	1.20	mg/L	0.100	0.023		X727157	AS	07/18/17 10:16	
EPA 200.7	Manganese	0.0715	mg/L	0.0080	0.0025		X727157	AS	07/18/17 10:16	

**Metals (Dissolved)**

EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X727176	AS	07/19/17 11:19	
EPA 200.7	Iron	0.159	mg/L	0.100	0.045		X727176	AS	07/19/17 11:19	
EPA 200.7	Manganese	0.0307	mg/L	0.0080	0.0049		X727176	AS	07/19/17 11:19	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X727176	AS	07/19/17 11:19	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X727168	KWH	07/17/17 08:56	

**Metals (Potentially Dissolved)**

EPA 200.7	Aluminum	0.27	mg/L	0.04	0.04		X727177	AS	07/19/17 10:40	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X727177	AS	07/19/17 10:40	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X727177	AS	07/19/17 10:40	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X727177	AS	07/19/17 10:40	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X727167	KWH	07/17/17 12:20	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X727167	KWH	07/17/17 12:20	

**Classical Chemistry Parameters**

EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.004		X728234	APH	07/13/17 15:13	
SM 2320B	Total Alkalinity	45.1	mg/L as CaCO <sub>3</sub>	1.0			X727159	DKS	07/07/17 08:57	
SM 2540 D	Total Susp. Solids	18.0	mg/L	5.0			X727145	JDM	07/07/17 13:10	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	0.41	mg/L	0.20	0.07		X727189	SMB	07/12/17 20:19	
EPA 300.0	Fluoride	0.301	mg/L	0.100	0.034		X727189	SMB	07/12/17 20:19	
EPA 300.0	Sulfate as SO <sub>4</sub>	4.10	mg/L	0.30	0.13		X727189	SMB	07/12/17 20:19	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 1.07 meq/L      Anion Sum: 1.01 meq/L      C/A Balance: 2.74 %

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

Kirby Gray  
Technical Director

Quarterly

Temp - 10.1°C

P.H. - 7.36

SVL holds the following certifications:

AZ:0538, CA:2080, ID-ID00019 & ID00965 (Microbiology), NV-ID000192007A, UT(TNI).ID000192015-1, WA:C573

Work order Report Page 3 of 8



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**Project Name: BMSL - Routine**  
Work Order: **X7G0063**  
Reported: 21-Jul-17 09:42

Client Sample ID: **170705BMGM19**SVL Sample ID: **X7G0063-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 05-Jul-17 10 10  
Received: 06-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	17.1	mg/L	0.100	0.040		X727156	AS	07/19/17 11 45	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.174	mg/L	0.100	0.045		X727176	AS	07/19/17 11 01	
EPA 200.7	Manganese	0.187	mg/L	0.0080	0.0049		X727176	AS	07/19/17 11 01	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X727166	KWH	07/17/17 09:09	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	91	mg/L	10			X727146	JDM	07/07/17 13:10	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.883	mg/L	0.100	0.034		X727189	SMB	07/12/17 17:41	
EPA 300.0	Sulfate as SO <sub>4</sub>	8.17	mg/L	0.30	0.13		X727189	SMB	07/12/17 17:41	

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

Kirby Gray  
Technical Director

Temp - 7.0 °C  
P.H. - 7.08

Quarterly  
Monthly





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**Project Name: BMSL - Routine**  
Work Order: **X7G0063**  
Reported: 21-Jul-17 09:42

Client Sample ID: **170705BMGM21**SVL Sample ID: **X7G0063-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled 05-Jul-17 10:35  
Received: 06-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	30.5	mg/L	0.100	0.040		X727156	AS	07/19/17 11:48	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X727176	AS	07/19/17 11:05	
EPA 200.7	Manganese	0.272	mg/L	0.0080	0.0049		X727176	AS	07/19/17 11:05	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X727166	KWH	07/17/17 09:12	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	141	mg/L	10			X727146	JDM	07/07/17 13:10	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	1.22	mg/L	0.100	0.034		X727189	SMB	07/12/17 17:55	
EPA 300.0	Sulfate as SO <sub>4</sub>	20.9	mg/L	0.30	0.13		X727189	SMB	07/12/17 17:55	

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

**Kirby Gray**  
Technical Director

Temp - 14.5°C  
P.H. - 6.84

Quarterly  
Monthly



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Project Name: **BMSL - Routine**  
Work Order: **X7G0063**  
Reported: 21-Jul-17 09:42

Client Sample ID: **170705BMGM24**SVL Sample ID: **X7G0063-05 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 05-Jul-17 11:10  
Received: 06-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	114	mg/L	0.100	0.040		X727156	AS	07/19/17 11:51	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	5.77	mg/L	0.100	0.045		X727176	AS	07/19/17 11:09	
EPA 200.7	Manganese	1.15	mg/L	0.0080	0.0049		X727176	AS	07/19/17 11:09	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X727166	KWH	07/17/17 09:20	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	573	mg/L	10			X727146	JDM	07/07/17 13:10	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.602	mg/L	0.100	0.034		X727189	SMB	07/12/17 18:24	
EPA 300.0	Sulfate as SO <sub>4</sub>	277	mg/L	3.00	1.30	10	X727189	SMB	07/12/17 18:38	D2

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

**Kirby Gray**  
Technical Director

Temp - 10.7°C

P.H. - 6.78

Quarterly  
Monthly





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Project Name: **BMSL - Routine**  
Work Order: **X7G0063**  
Reported: 21-Jul-17 09:42

Client Sample ID: **170705BMGM11R**SVL Sample ID: **X7G0063-06 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 05-Jul-17 11:40  
Received: 06-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	95.3	mg/L	0.100	0.040		X727156	AS	07/19/17 11:54	
EPA 200.7	Magnesium	15.2	mg/L	0.20	0.10		X727156	AS	07/19/17 11:54	
EPA 200.7	Potassium	2.35	mg/L	0.50	0.19		X727156	AS	07/19/17 11:54	
EPA 200.7	Silica (SiO <sub>2</sub> )	18.7	mg/L	0.17	0.11		X727156	AS	07/19/17 11:54	
EPA 200.7	Sodium	22.5	mg/L	0.50	0.17		X727156	AS	07/19/17 11:54	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	301	mg/L	1.07	0.503		N/A		07/19/17 11:54	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X727176	AS	07/19/17 11:12	
EPA 200.7	Barium	0.0551	mg/L	0.0020	0.0016		X727176	AS	07/19/17 11:12	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X727176	AS	07/19/17 11:12	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X727176	AS	07/19/17 11:12	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X727176	AS	07/19/17 11:12	
EPA 200.7	Manganese	0.882	mg/L	0.0080	0.0049		X727176	AS	07/19/17 11:12	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X727176	AS	07/19/17 11:12	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X727176	AS	07/19/17 11:12	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00042	2	X727166	KWH	07/17/17 09:50	D1
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00022	2	X727166	KWH	07/17/17 09:50	D1
EPA 200.8	Lead	< 0.00500	mg/L	0.00500	0.00013	2	X727166	KWH	07/17/17 09:50	D1
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0008	2	X727166	KWH	07/17/17 09:50	D1
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X727166	KWH	07/17/17 11:35	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X728038	MWD	07/11/17 11:48	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	189	mg/L as CaCO <sub>3</sub>	1.0		X727159	DKS	07/07/17 08:48	
SM 2540 C	Total Diss. Solids	447	mg/L	10		X727146	JDM	07/07/17 13:10	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	5.05	mg/L	0.20	0.07		X727189	SMB	07/12/17 19:21	
EPA 300.0	Fluoride	0.909	mg/L	0.100	0.034		X727189	SMB	07/12/17 19:21	
EPA 300.0	Sulfate as SO <sub>4</sub>	166	mg/L	3.00	1.30	10	X727189	SMB	07/12/17 19:36	D2

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 7.08 meq/L      Anion Sum: 7.42 meq/L      C/A Balance: -2.34 %      Calculated TDS: 439      TDS/cTDS: 1.02

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

Kirby Gray  
Technical Director

Temp - 11.0°C

P.H. - 7.01



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Project Name: **BMSL - Routine**  
Work Order: **X7G0334**  
Reported: 02-Aug-17 09:13

Client Sample ID: **170718BMGBF4**

SVL Sample ID: **X7G0334-08 (Ground Water)**

Sample Report Page 1 of 1

Sampled 18-Jul-17 10:30  
Received 19-Jul-17  
Sampled By AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	148	mg/L	0.100	0.040		X729116	AS	07/31/17 10:34	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.749	mg/L	0.100	0.045		X729197	AS	08/01/17 11:00	
EPA 200.7	Manganese	6.13	mg/L	0.0080	0.0049		X729197	AS	08/01/17 11:00	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X729189	AS	07/27/17 10:00	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	652	mg/L	10			X729195	RS	07/20/17 09:20	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	4.82	mg/L	0.100	0.034		X729218	SMB	07/24/17 12:41	
EPA 300.0	Sulfate as SO <sub>4</sub>	294	mg/L	3.00	1.30	10	X729218	SMB	07/24/17 12:50	D2

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

John Kern  
Laboratory Director

Quarterly

Temp - 10.2°C

P.H. - 6.42





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San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order: **X7G0334**  
Reported: 02-Aug-17 09:13

Client Sample ID: **170718BMGBF6**SVL Sample ID: **X7G0334-09 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 18-Jul-17 11:00  
Received: 19-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	193	mg/L	0.100	0.040		X729116	AS	07/31/17 10:37	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	31.5	mg/L	0.100	0.045		X729197	AS	08/01/17 11:03	
EPA 200.7	Manganese	16.0	mg/L	0.0080	0.0049		X729197	AS	08/01/17 11:03	
EPA 200.8	Copper	0.731	mg/L	0.00300	0.00011		X729189	AS	07/27/17 10:03	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	890	mg/L	10			X729195	RS	07/20/17 09:20	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	6.89	mg/L	2.50	0.850	25	X729218	SMB	07/24/17 13:08	D2
EPA 300.0	Sulfate as SO <sub>4</sub>	561	mg/L	7.50	3.25	25	X729218	SMB	07/24/17 13:08	D2

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

**John Kern**  
Laboratory Director

Quarterly

Temp - 12.1 °C

P.H. - 5.90



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**Project Name: BMSL - Routine**  
Work Order: **X7G0334**  
Reported: 02-Aug-17 09:13

Client Sample ID: **170718BMGRB**SVL Sample ID: **X7G0334-03 (Surface Water)**

Sample Report Page 1 of 1

Sampled 18-Jul-17 07:50  
Received 19-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.040		X729116	AS	07/31/17 10:10	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X729197	AS	08/01/17 10:38	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X729197	AS	08/01/17 10:38	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X729189	AS	07/27/17 09:25	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	< 10	mg/L	10			X729195	RS	07/20/17 09:20	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.034		X729218	SMB	07/24/17 11:12	
EPA 300.0	Sulfate as SO <sub>4</sub>	0.45	mg/L	0.30	0.13		X729218	SMB	07/24/17 11:12	

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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Battle Mountain - San Luis  
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San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7G0334**  
Reported 02-Aug-17 09:13

Client Sample ID: **170718BMGFB**

Sampled 18-Jul-17 07:35

Received 19-Jul-17

Sampled By: AT

SVL Sample ID: **X7G0334-02 (Surface Water)**

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.040		X729116	AS	07/31/17 10:07	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X729197	AS	08/01/17 10:35	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X729197	AS	08/01/17 10:35	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X729189	AS	07/27/17 09:22	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	< 10	mg/L	10			X729195	RS	07/20/17 09:20	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.034		X729218	SMB	07/24/17 11:03	
EPA 300.0	Sulfate as SO <sub>4</sub>	0.54	mg/L	0.30	0.13		X729218	SMB	07/24/17 11:03	

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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**Project Name: BMSL - Routine**  
Work Order: **X7G0334**  
Reported: 02-Aug-17 09:13

Client Sample ID: **170718BMGM16**SVL Sample ID: **X7G0334-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 18-Jul-17 07:40  
Received: 19-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	17.9	mg/L	0.100	0.040		X729116	AS	07/31/17 10:04	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X729197	AS	08/01/17 10:27	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X729197	AS	08/01/17 10:27	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X729189	AS	07/27/17 09:19	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	93	mg/L	10			X729195	RS	07/20/17 09:20	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.629	mg/L	0.100	0.034		X729218	SMB	07/24/17 10:36	
EPA 300.0	Sulfate as SO <sub>4</sub>	8.67	mg/L	0.30	0.13		X729218	SMB	07/24/17 10:36	M1

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

**John Kern**  
Laboratory Director

Quarterly

Temp - 7.8°C

p.H. - 6.29





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Project Name: **BMSL - Routine**  
Work Order: **X7G0334**  
Reported: 02-Aug-17 09:13

Client Sample ID: **170718BMGM22**SVL Sample ID: **X7G0334-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 18-Jul-17 08:15  
Received: 19-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	50.0	mg/L	0.100	0.040		X729116	AS	07/31/17 10:22	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.398	mg/L	0.100	0.045		X729197	AS	08/01/17 10:42	
EPA 200.7	Manganese	0.195	mg/L	0.0080	0.0049		X729197	AS	08/01/17 10:42	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X729189	AS	07/27/17 09:28	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	225	mg/L	10			X729195	RS	07/20/17 09:20	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	1.25	mg/L	0.100	0.034		X729218	SMB	07/24/17 11:21	
EPA 300.0	Sulfate as SO <sub>4</sub>	53.3	mg/L	3.00	1.30	10	X729218	SMB	07/24/17 11:30	D2

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

John Kern  
Laboratory Director

Quarterly

Temp - 11.3°C

P.H. - 6.64



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**Project Name: BMSL - Routine**  
Work Order: **X7G0334**  
Reported: 02-Aug-17 09:13

Client Sample ID: **170718BMGM26**SVL Sample ID: **X7G0334-05 (Ground Water)**

Sample Report Page 1 of 1

Sampled 18-Jul-17 08:40  
Received 19-Jul-17  
Sampled By AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	27.8	mg/L	0.100	0.040		X729116	AS	07/31/17 10:25	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.350	mg/L	0.100	0.045		X729197	AS	08/01/17 10:45	
EPA 200.7	Manganese	0.241	mg/L	0.0080	0.0049		X729197	AS	08/01/17 10:45	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X729189	AS	07/27/17 09:31	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	124	mg/L	10			X729195	RS	07/20/17 09:20	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.791	mg/L	0.100	0.034		X729218	SMB	07/24/17 11:57	
EPA 300.0	Sulfate as SO <sub>4</sub>	16.0	mg/L	0.30	0.13		X729218	SMB	07/24/17 11:57	

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

**John Kern**  
Laboratory Director

Temp - 12.1°C  
P.A. - 6.89

Quarterly





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Project Name: **BMSL - Routine**  
Work Order: **X7G0334**  
Reported: 02-Aug-17 09:13

Client Sample ID: **170718BMGM34**SVL Sample ID: **X7G0334-06 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 18-Jul-17 09:05  
Received: 19-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	21.1	mg/L	0.100	0.040		X729116	AS	07/31/17 10:28	
EPA 200.7	Magnesium	5.22	mg/L	0.20	0.10		X729116	AS	07/31/17 10:28	
EPA 200.7	Potassium	0.83	mg/L	0.50	0.19		X729116	AS	07/31/17 10:28	
EPA 200.7	Silica (SiO <sub>2</sub> )	14.2	mg/L	0.17	0.11		X729116	AS	07/31/17 10:28	
EPA 200.7	Sodium	7.74	mg/L	0.50	0.17		X729116	AS	07/31/17 10:28	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	74.3	mg/L	1.07	0.503		N/A		07/31/17 10:28	

<b>Metals (Dissolved)</b>										
EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X729197	AS	08/01/17 10:48	
EPA 200.7	Barium	0.0385	mg/L	0.0020	0.0016		X729197	AS	08/01/17 10:48	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X729197	AS	08/01/17 10:48	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X729197	AS	08/01/17 10:48	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X729197	AS	08/01/17 10:48	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X729197	AS	08/01/17 10:48	
EPA 200.7	Manganese	0.211	mg/L	0.0080	0.0049		X729197	AS	08/01/17 10:48	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X729197	AS	08/01/17 10:48	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X729197	AS	08/01/17 10:48	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X729189	AS	07/27/17 09:34	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X729189	AS	07/27/17 09:34	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X729189	AS	07/27/17 09:34	
EPA 200.8	Silver	< 0.000160	mg/L	0.000160	0.000072	2	X729189	KWH	07/31/17 07:20	D1,M2

<b>Metals (Filtered)</b>										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X730140	MWD	07/27/17 14:42	

<b>Classical Chemistry Parameters</b>										
SM 2320B	Total Alkalinity	66.7	mg/L as CaCO <sub>3</sub>	1.0			X729169	DKS	07/21/17 09:02	
SM 2540 C	Total Diss. Solids	115	mg/L	10			X729195	RS	07/20/17 09:20	

<b>Anions by Ion Chromatography</b>										
EPA 300.0	Chloride	2.66	mg/L	0.20	0.07		X729218	SMB	07/24/17 12:15	
EPA 300.0	Fluoride	0.535	mg/L	0.100	0.034		X729218	SMB	07/24/17 12:15	
EPA 300.0	Sulfate as SO <sub>4</sub>	18.7	mg/L	0.30	0.13		X729218	SMB	07/24/17 12:15	

<b>Cation/Anion Balance and TDS Ratios</b>										
Cation Sum: 1.85 meq/L		Anion Sum: 1.83 meq/L		C/A Balance: 0.79 %		Calculated TDS: 111		TDS/cTDS: 1.04		

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

John Kern  
Laboratory Director

Quarterly

Temp - 8.6°C

pH - 7.02



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Project Name: **BMSL - Routine**  
Work Order: **X7G0334**  
Reported **02-Aug-17 09:13**

Client Sample ID: **170718BMGM10**SVL Sample ID: **X7G0334-07 (Ground Water)**

Sample Report Page 1 of 1

Sampled 18-Jul-17 09:30  
Received 19-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	72.7	mg/L	0.100	0.040		X729116	AS	07/31/17 10:31	
EPA 200.7	Magnesium	9.83	mg/L	0.20	0.10		X729116	AS	07/31/17 10:31	
EPA 200.7	Potassium	1.65	mg/L	0.50	0.19		X729116	AS	07/31/17 10:31	
EPA 200.7	Silica (SiO <sub>2</sub> )	26.5	mg/L	0.17	0.11		X729116	AS	07/31/17 10:31	
EPA 200.7	Sodium	21.4	mg/L	0.50	0.17		X729116	AS	07/31/17 10:31	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	222	mg/L	1.07	0.503		N/A		07/31/17 10:31	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X729197	AS	08/01/17 10:57	
EPA 200.7	Barium	0.127	mg/L	0.0020	0.0016		X729197	AS	08/01/17 10:57	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X729197	AS	08/01/17 10:57	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X729197	AS	08/01/17 10:57	
EPA 200.7	Iron	1.11	mg/L	0.100	0.045		X729197	AS	08/01/17 10:57	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X729197	AS	08/01/17 10:57	
EPA 200.7	Manganese	0.901	mg/L	0.0080	0.0049		X729197	AS	08/01/17 10:57	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X729197	AS	08/01/17 10:57	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X729197	AS	08/01/17 10:57	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X729189	AS	07/27/17 09:57	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X729189	AS	07/27/17 09:57	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X729189	AS	07/27/17 09:57	
EPA 200.8	Silver	0.000253	mg/L	0.000160	0.000072	2	X729189	KWH	07/31/17 07:27	D1

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X730140	MWD	07/27/17 14:44	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	223	mg/L as CaCO <sub>3</sub>	1.0		X729169	DKS	07/21/17 09:06	
SM 2540 C	Total Diss. Solids	311	mg/L	10		X729195	RS	07/20/17 09:20	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	3.96	mg/L	0.20	0.07	X729218	SMB	07/24/17 12:23	
EPA 300.0	Fluoride	0.929	mg/L	0.100	0.034	X729218	SMB	07/24/17 12:23	
EPA 300.0	Sulfate as SO <sub>4</sub>	42.1	mg/L	0.30	0.13	X729218	SMB	07/24/17 12:23	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 5.49 meq/L      Anion Sum: 5.49 meq/L      C/A Balance: -0.04 %      Calculated TDS: 313      TDS/cTDS: 0.99

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

John Kern  
Laboratory Director

Quarterly

Temp - 9.2°C

P.H. - 7.02





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Project Name: **BMSL - Routine**  
Work Order: **X7G0290**  
Reported: 01-Aug-17 12:09

Client Sample ID: **170717BMGM9**

Sampled: 17-Jul-17 09:30

Received: 18-Jul-17

Sampled By: AT

SVL Sample ID: **X7G0290-02 (Ground Water)**

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	84.1	mg/L	0.100	0.040		X729116	AS	07/31/17 09:58	
EPA 200.7	Magnesium	12.7	mg/L	0.20	0.10		X729116	AS	07/31/17 09:58	
EPA 200.7	Potassium	1.65	mg/L	0.50	0.19		X729116	AS	07/31/17 09:58	
EPA 200.7	Silica (SiO <sub>2</sub> )	24.5	mg/L	0.17	0.11		X729116	AS	07/31/17 09:58	
EPA 200.7	Sodium	25.2	mg/L	0.50	0.17		X729116	AS	07/31/17 09:58	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	262	mg/L	1.07	0.503		N/A		07/31/17 09:58	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X729118	AS	08/01/17 09:49	
EPA 200.7	Barium	0.120	mg/L	0.0020	0.0016		X729118	AS	08/01/17 09:49	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X729118	AS	08/01/17 09:49	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X729118	AS	08/01/17 09:49	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X729118	AS	08/01/17 09:49	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X729118	AS	08/01/17 09:49	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X729118	AS	08/01/17 09:49	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X729118	AS	08/01/17 09:49	
EPA 200.7	Zinc	0.364	mg/L	0.010	0.003		X729118	AS	08/01/17 09:49	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X729154	AS	07/26/17 11:44	
EPA 200.8	Copper	0.00435	mg/L	0.00300	0.00011		X729154	AS	07/26/17 11:44	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X729154	AS	07/26/17 11:44	
EPA 200.8	Silver	0.000407	mg/L	0.000100	0.000036		X729154	AS	07/26/17 11:44	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X730140	MWD	07/27/17 14:34	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	291	mg/L as CaCO <sub>3</sub>	1.0			X729169	DKS	07/21/17 08:46	
SM 2540 C	Total Diss. Solids	344	mg/L	10			X729086	JDM	07/19/17 12:50	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X729052	APH	07/18/17 16:52	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	4.06	mg/L	0.20	0.07		X729128	SMB	07/21/17 12:31	
EPA 300.0	Fluoride	0.316	mg/L	0.100	0.034		X729128	SMB	07/21/17 12:31	
EPA 300.0	Sulfate as SO <sub>4</sub>	20.4	mg/L	0.30	0.13		X729128	SMB	07/21/17 12:31	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 6.40 meq/L    Anion Sum: 6.37 meq/L    C/A Balance: 0.23 %    Calculated TDS: 348    TDS/cTDS: 0.99

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

John Kern  
Laboratory Director

Quarterly

Temp - 18.1°C

pH - 7.09



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Project Name: **BMSL - Routine**  
Work Order: **X7G0290**  
Reported: 01-Aug-17 12:09

Client Sample ID: **170717BMGM12**SVL Sample ID: **X7G0290-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 17-Jul-17 08:40  
Received: 18-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	51.0	mg/L	0.100	0.040		X729116	AS	07/31/17 09:49	
EPA 200.7	Magnesium	8.61	mg/L	0.20	0.10		X729116	AS	07/31/17 09:49	
EPA 200.7	Potassium	1.85	mg/L	0.50	0.19		X729116	AS	07/31/17 09:49	
EPA 200.7	Silica (SiO <sub>2</sub> )	20.3	mg/L	0.17	0.11		X729116	AS	07/31/17 09:49	
EPA 200.7	Sodium	13.6	mg/L	0.50	0.17		X729116	AS	07/31/17 09:49	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	163	mg/L	1.07	0.503		N/A		07/31/17 09:49	
<b>Metals (Dissolved)</b>										
EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X729118	AS	08/01/17 09:41	
EPA 200.7	Barium	0.156	mg/L	0.0020	0.0016		X729118	AS	08/01/17 09:41	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X729118	AS	08/01/17 09:41	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X729118	AS	08/01/17 09:41	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X729118	AS	08/01/17 09:41	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X729118	AS	08/01/17 09:41	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X729118	AS	08/01/17 09:41	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X729118	AS	08/01/17 09:41	
EPA 200.7	Zinc	0.303	mg/L	0.010	0.003		X729118	AS	08/01/17 09:41	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X729154	AS	07/26/17 11:36	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X729154	AS	07/26/17 11:36	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X729154	AS	07/26/17 11:36	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X729154	AS	07/26/17 11:36	
<b>Metals (Filtered)</b>										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X730140	MWD	07/27/17 14:27	
<b>Classical Chemistry Parameters</b>										
SM 2320B	Total Alkalinity	148	mg/L as CaCO <sub>3</sub>	1.0			X729169	DKS	07/21/17 08:41	
SM 2540 C	Total Diss. Solids	208	mg/L	10			X729086	JDM	07/19/17 12:50	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X729052	APH	07/18/17 16:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Chloride	20.1	mg/L	2.00	0.70	10	X729128	SMB	07/21/17 11:46	D2
EPA 300.0	Fluoride	0.368	mg/L	0.100	0.034		X729128	SMB	07/21/17 11:37	
EPA 300.0	Sulfate as SO <sub>4</sub>	13.0	mg/L	0.30	0.13		X729128	SMB	07/21/17 11:37	M1
<b>Cation/Anion Balance and TDS Ratios</b>										
Cation Sum: 3.91 meq/L		Anion Sum: 3.81 meq/L		C/A Balance: 1.24 %		Calculated TDS: 218		TDS/cTDS: 0.96		

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

John Kern  
Laboratory Director

*Quarterly**Temp - 12.2°C**pH - 7.33*





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Project Name: **BMSL - Routine**  
Work Order: **X7G0290**  
Reported: 01-Aug-17 12:09

Client Sample ID: **170717BMGM13R**

Sampled: 17-Jul-17 10:10

Received: 18-Jul-17

Sampled By: AT

SVL Sample ID: **X7G0290-03 (Ground Water)**

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	90.5	mg/L	0.100	0.040		X729116	AS	07/31/17 10:01	
EPA 200.7	Magnesium	14.8	mg/L	0.20	0.10		X729116	AS	07/31/17 10:01	
EPA 200.7	Potassium	1.32	mg/L	0.50	0.19		X729116	AS	07/31/17 10:01	
EPA 200.7	Silica (SiO <sub>2</sub> )	23.6	mg/L	0.17	0.11		X729116	AS	07/31/17 10:01	
EPA 200.7	Sodium	32.4	mg/L	0.50	0.17		X729116	AS	07/31/17 10:01	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	287	mg/L	1.07	0.503		N/A		07/31/17 10:01	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X729118	AS	08/01/17 09:52	
EPA 200.7	Barium	0.128	mg/L	0.0020	0.0016		X729118	AS	08/01/17 09:52	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X729118	AS	08/01/17 09:52	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X729118	AS	08/01/17 09:52	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X729118	AS	08/01/17 09:52	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X729118	AS	08/01/17 09:52	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X729118	AS	08/01/17 09:52	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X729118	AS	08/01/17 09:52	
EPA 200.7	Zinc	0.574	mg/L	0.010	0.003		X729118	AS	08/01/17 09:52	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X729154	AS	07/26/17 11:47	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X729154	AS	07/26/17 11:47	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X729154	AS	07/26/17 11:47	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X729154	AS	07/26/17 11:47	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X730140	MWD	07/27/17 14:40	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	327	mg/L as CaCO <sub>3</sub>	10			X729169	DKS	07/21/17 08:54	
SM 2540 C	Total Diss. Solids	354	mg/L	10			X729086	JDM	07/19/17 12:50	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X729052	APH	07/18/17 16:54	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	3.97	mg/L	0.20	0.07		X729128	SMB	07/21/17 13:06	
EPA 300.0	Fluoride	0.405	mg/L	0.100	0.034		X729128	SMB	07/24/17 20:53	
EPA 300.0	Sulfate as SO <sub>4</sub>	18.2	mg/L	0.30	0.13		X729128	SMB	07/21/17 13:06	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 7.20 meq/L	Anion Sum: 7.05 meq/L	C/A Balance: 1.10 %	Calculated TDS: 381	TDS/cTDS: 0.93
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This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern  
Laboratory Director

*Quarterly**Temp - 14.2 °C**P.H. - 7.14*



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**Project Name: BMSL - Routine**  
**Work Order: X7H0010**  
**Reported: 14-Aug-17 13:03**

Client Sample ID: **170731BMGLD**SVL Sample ID: **X7H0010-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 31-Jul-17 08:40  
Received: 01-Aug-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	506	mg/L	0.100	0.040		X731107	DT	08/10/17 12:25	M3
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X731107	DT	08/10/17 12:25	
EPA 200.7	Sodium	872	mg/L	0.50	0.17		X731107	DT	08/10/17 12:25	M3
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X731107	DT	08/10/17 12:25	
EPA 200.8	Copper	0.0612	mg/L	0.00300	0.00055	5	X731101	KWH	08/11/17 09:53	
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	Cyanide (WAD)	0.0110	mg/L	0.0100	0.0021		X731132	APH	08/03/17 10:41	

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

**John Kern**  
Laboratory Director

*Quarterly**Temp - 14.6 °C**P.H. - 6.68*



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**Project Name: BMSL - Routine**  
Work Order: **X7H0010**  
Reported: 14-Aug-17 13:03

Client Sample ID: **170731BMGCOL**SVL Sample ID: **X7H0010-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 31-Jul-17 09:00  
Received: 01-Aug-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	512	mg/L	0.100	0.040		X731107	DT	08/10/17 12:35	
EPA 200.7	Iron	29.6	mg/L	0.100	0.045		X731107	DT	08/10/17 12:35	
EPA 200.7	Sodium	839	mg/L	0.50	0.17		X731107	DT	08/10/17 12:35	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X731107	DT	08/10/17 12:35	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00055	5	X731101	KWH	08/11/17 09:55	
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	Cyanide (WAD)	0.0280	mg/L	0.0100	0.0021		X731132	APH	08/03/17 10:43	

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

**John Kern**  
Laboratory Director

*Quarterly**Temp - 11.4°C**P.H. - 6.76*





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**Project Name: BMSL - Routine**  
Work Order: **X7H0010**  
Reported: 14-Aug-17 13:03

Client Sample ID: **170731BMGTAILS**SVL Sample ID: **X7H0010-03 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 31-Jul-17 10:10  
Received: 01-Aug-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	445	mg/L	0.100	0.040		X731107	DT	08/10/17 12:39	
EPA 200.7	Iron	1.97	mg/L	0.100	0.045		X731107	DT	08/10/17 12:39	
EPA 200.7	Sodium	1980	mg/L	5.00	1.70	10	X731107	DT	08/10/17 12:48	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X731107	DT	08/10/17 12:39	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X731101	KWH	08/11/17 09:46	
EPA 200.8	Copper	0.0447	mg/L	0.00300	0.00055	5	X731101	KWH	08/11/17 09:46	

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

**John Kern**  
Laboratory Director

*Quarterly**Temp - 20.8°C**P.H. - 6.82*



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Project Name: **BMSL - Routine**  
Work Order: **X7G0378**  
Reported: **02-Aug-17 14:28**

Client Sample ID: **170719BMGM14**SVL Sample ID: **X7G0378-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 19-Jul-17 10:35  
Received: 20-Jul-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	183	mg/L	0.100	0.040		X729116	AS	07/31/17 10:40	
EPA 200.7	Magnesium	29.2	mg/L	0.20	0.10		X729116	AS	07/31/17 10:40	
EPA 200.7	Potassium	1.98	mg/L	0.50	0.19		X729116	AS	07/31/17 10:40	
EPA 200.7	Silica (SiO <sub>2</sub> )	26.3	mg/L	0.17	0.11		X729116	AS	07/31/17 10:40	
EPA 200.7	Sodium	29.9	mg/L	0.50	0.17		X729116	AS	07/31/17 10:40	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	577	mg/L	1.07	0.503		N/A		07/31/17 10:40	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X729244	AS	08/02/17 08:37	
EPA 200.7	Barium	0.367	mg/L	0.0020	0.0016		X729244	AS	08/02/17 08:37	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X729244	AS	08/02/17 08:37	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X729244	AS	08/02/17 08:37	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X729244	AS	08/02/17 08:37	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X729244	AS	08/02/17 08:37	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X729244	AS	08/02/17 08:37	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X729244	AS	08/02/17 08:37	
EPA 200.7	Zinc	0.010	mg/L	0.010	0.003		X729244	AS	08/02/17 08:37	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X730060	KWH	08/02/17 12:26	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X730060	KWH	08/02/17 12:26	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X730060	KWH	08/02/17 12:26	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X730060	KWH	08/02/17 12:26	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X730140	MWD	07/27/17 15:00	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	608	mg/L as CaCO <sub>3</sub>	1.0			X729169	DKS	07/21/17 09:28	
SM 2540 C	Total Diss. Solids	652	mg/L	10			X729232	JDM	07/21/17 14:10	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X730086	APH	07/25/17 11:42	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	8.83	mg/L	0.20	0.07		X729250	SMB	07/25/17 15:47	
EPA 300.0	Fluoride	0.545	mg/L	0.100	0.034		X729250	SMB	07/25/17 15:47	
EPA 300.0	Sulfate as SO <sub>4</sub>	27.3	mg/L	0.30	0.13		X729250	SMB	07/25/17 15:47	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 12.9 meq/L	Anion Sum: 13.0 meq/L	C/A Balance: -0.37 %	Calculated TDS: 672	TDS/cTDS: 0.97
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This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern  
Laboratory Director

Quarterly

Temp - 17.1°C

P.H. - 6.59

SVL holds the following certifications:

AZ:0538, CA:2080, ID:ID00019 &amp; ID00965 (Microbiology), NV:ID000192007A, UT(TNI) ID000192015-1, WA:C573

Work order Report Page 2 of 6



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Project Name: **BMSL - Routine**  
Work Order: **X7H0544**  
Reported: 06-Sep-17 11:31

Client Sample ID: **170822BMGWD1**SVL Sample ID: **X7H0544-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 22-Aug-17 08:10  
Received: 23-Aug-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.237	mg/L	0.100	0.045		X734160	AS	09/05/17 10:36	
EPA 200.7	Manganese	0.0339	mg/L	0.0080	0.0049		X734160	AS	09/05/17 10:36	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X734160	AS	09/05/17 10:36	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X734185	KWH	08/29/17 10:03	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X734185	KWH	08/29/17 10:03	
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X734146	APH	08/24/17 12:30	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.433	mg/L	0.100	0.034		X734171	SMB	08/29/17 16:06	
EPA 300.0	Sulfate as SO <sub>4</sub>	9.86	mg/L	0.30	0.13		X734171	SMB	08/29/17 16:06	

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

John Kern  
Laboratory Director

*Quarterly**Temp - 12.8°C**P.H. - 6.84*





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Project Name: **BMSL - Routine**  
Work Order: **X7H0544**  
Reported: 06-Sep-17 11 31

Client Sample ID: **170822BMGSRW**SVL Sample ID: **X7H0544-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 22-Aug-17 09 45  
Received: 23-Aug-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X734167	DT	09/05/17 12:55	
EPA 200.7	Barium	0.0708	mg/L	0.0020	0.0016		X734167	DT	09/05/17 12:55	
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.007		X734167	DT	09/05/17 12:55	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X734167	DT	09/05/17 12:55	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X734167	DT	09/05/17 12:55	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X734167	DT	09/05/17 12:55	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X734167	DT	09/05/17 12:55	
EPA 200.7	Molybdenum	< 0.008	mg/L	0.008	0.003		X734167	DT	09/05/17 12:55	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X734167	DT	09/05/17 12:55	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X734167	DT	09/05/17 12:55	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X734143	KWH	09/01/17 06:51	D1
EPA 200.8	Cadmium	< 0.00050	mg/L	0.00050	0.00019	5	X734143	KWH	09/01/17 06:51	D1
EPA 200.8	Copper	0.00381	mg/L	0.00300	0.00055	5	X734143	KWH	09/01/17 06:51	D1
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0020	5	X734143	KWH	09/01/17 06:51	D1
EPA 200.8	Silver	< 0.000400	mg/L	0.000400	0.000180	5	X734143	KWH	09/01/17 06:51	D1
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X735013	MWD	08/28/17 11 42	
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X734146	APH	08/24/17 12:34	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.251	mg/L	0.100	0.034		X734171	SMB	08/29/17 18 29	

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

John Kern  
Laboratory Director

Bi - yearly

Temp - 12.1°C

P.H. - 6.80



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Project Name: **BMSL - Routine**  
Work Order: **X7H0544**  
Reported: 06-Sep-17 11:31

Client Sample ID: **170822BMGSLTW**SVL Sample ID: **X7H0544-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 22-Aug-17 10:15  
Received: 23-Aug-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X734167	DT	09/05/17 13:08	
EPA 200.7	Barium	0.0421	mg/L	0.0020	0.0016		X734167	DT	09/05/17 13:08	
EPA 200.7	Boron	< 0.040	mg/L	0.040	0.007		X734167	DT	09/05/17 13:08	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X734167	DT	09/05/17 13:08	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X734167	DT	09/05/17 13:08	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X734167	DT	09/05/17 13:08	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X734167	DT	09/05/17 13:08	
EPA 200.7	Molybdenum	< 0.008	mg/L	0.008	0.003		X734167	DT	09/05/17 13:08	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X734167	DT	09/05/17 13:08	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X734167	DT	09/05/17 13:08	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X734143	KWH	09/01/17 06:58	D1
EPA 200.8	Cadmium	< 0.00050	mg/L	0.00050	0.00019	5	X734143	KWH	09/01/17 06:58	D1
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00055	5	X734143	KWH	09/01/17 06:58	D1
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0020	5	X734143	KWH	09/01/17 06:58	D1
EPA 200.8	Silver	< 0.000400	mg/L	0.000400	0.000180	5	X734143	KWH	09/01/17 06:58	D1
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X735013	MWD	08/28/17 11:47	
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X734146	APH	08/24/17 12:36	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.382	mg/L	0.100	0.034		X734171	SMB	08/29/17 18:44	

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

John Kern  
Laboratory Director

Bi Yearly

Temp - 14.3°C

P.H. - 7.26



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Kellogg ID 83837-0929

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Fax (208) 783-0891

Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X710198**  
Reported: 25-Sep-17 09:43

Client Sample ID: **170907BMGMFB**SVL Sample ID: **X710198-07 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 07-Sep-17 10:35  
Received: 08-Sep-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.040		X737019	AS	09/22/17 09:35	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X737011	AS	09/22/17 08:41	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X737011	AS	09/22/17 08:41	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X737103	KWH	09/20/17 10:41	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss Solids	< 10	mg/L	10			X737080	RS	09/12/17 09:25	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.034		X737005	SMB	09/21/17 01:32	
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.13		X737005	SMB	09/21/17 01:32	

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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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X710198**  
Reported: 25-Sep-17 09:43

Client Sample ID: **170907BMGMRB**SVL Sample ID: **X710198-08 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 07-Sep-17 10:55  
Received: 08-Sep-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.040		X737019	AS	09/22/17 09:48	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X737011	AS	09/22/17 08:45	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X737011	AS	09/22/17 08:45	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X737103	KWH	09/20/17 10:44	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss Solids	< 10	mg/L	10			X737080	RS	09/12/17 09:25	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.034		X737005	SMB	09/21/17 01:48	
EPA 300.0	Sulfate as SO4	< 0.30	mg/L	0.30	0.13		X737005	SMB	09/21/17 01:48	

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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Project Name: **BMSL - Routine**  
Work Order: **X7J0028**  
Reported: 17-Oct-17 12:33

Client Sample ID: **171002BMGRS1**SVL Sample ID: **X7J0028-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled. 02-Oct-17 08:10  
Received 03-Oct-17  
Sampled By. AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	15.3	mg/L	0.100	0.040		X740165	DT	10/16/17 09:05	
EPA 200.7	Magnesium	3.95	mg/L	0.20	0.10		X740165	DT	10/16/17 09:05	
EPA 200.7	Potassium	0.81	mg/L	0.50	0.19		X740165	DT	10/16/17 09:05	
EPA 200.7	Silica (SiO <sub>2</sub> )	13.0	mg/L	0.17	0.11		X740165	AS	10/16/17 10:00	
EPA 200.7	Sodium	3.06	mg/L	0.50	0.17		X740165	DT	10/16/17 09:05	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X740143	KWH	10/12/17 12:39	D1
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X741030	SCM	10/09/17 17:54	

**Metals (Total Recoverable)**

EPA 200.7	Iron	0.375	mg/L	0.100	0.023		X740159	AS	10/16/17 09:12	
EPA 200.7	Manganese	0.0232	mg/L	0.0080	0.0025		X740159	AS	10/16/17 09:12	

**Metals (Dissolved)**

EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X740156	AS	10/17/17 08:56	
EPA 200.7	Iron	0.108	mg/L	0.100	0.045		X740156	AS	10/17/17 08:56	
EPA 200.7	Manganese	0.0094	mg/L	0.0080	0.0049		X740156	AS	10/17/17 08:56	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X740156	AS	10/17/17 08:56	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X740181	KWH	10/16/17 12:21	

**Metals (Potentially Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X740168	AS	10/17/17 07:51	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X740168	AS	10/17/17 07:51	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X740168	AS	10/17/17 07:51	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X740168	AS	10/17/17 07:51	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740179	KWH	10/16/17 08:09	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X740179	KWH	10/16/17 08:09	

**Classical Chemistry Parameters**

EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.005		X740282	APH	10/06/17 13:34	
SM 2320B	Total Alkalinity	55.8	mg/L as CaCO <sub>3</sub>	1.0			X740193	DKS	10/09/17 08:26	
SM 2540 D	Total Susp. Solids	5.0	mg/L	5.0			X740154	RS	10/04/17 12:50	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	0.81	mg/L	0.20	0.12		X740188	SMB	10/14/17 00:27	
EPA 300.0	Fluoride	0.399	mg/L	0.100	0.052		X740188	SMB	10/14/17 00:27	
EPA 300.0	Sulfate as SO <sub>4</sub>	3.79	mg/L	0.30	0.13		X740188	SMB	10/14/17 00:27	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 1.25 meq/L      Anion Sum: 1.24 meq/L      C/A Balance: 0.56 %

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

John Kern  
Laboratory Director

Quarterly

Temp - 4.8°C

pH - 7.51

SVL holds the following certifications:

AZ 0538, CA 2080, ID ID00019 & ID00965 (Microbiology), NV ID000192007A, UT (TNI) ID000192015-1, WA C573

Work order Report Page 2 of 8



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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7J0026**  
Reported 17-Oct-17 13:01

Client Sample ID: **171002BMGRS2**SVL Sample ID: **X7J0026-01 (Surface Water)**

Sample Report Page 1 of 2

Sampled 02-Oct-17 08:30  
Received 03-Oct-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	16.0	mg/L	0.100	0.040		X740165	DT	10/16/17 08:30	
EPA 200.7	Magnesium	4.11	mg/L	0.20	0.10		X740165	DT	10/16/17 08:30	
EPA 200.7	Potassium	0.92	mg/L	0.50	0.19		X740165	DT	10/16/17 08:30	
EPA 200.7	Silica (SiO <sub>2</sub> )	14.1	mg/L	0.17	0.11		X740165	AS	10/16/17 09:42	
EPA 200.7	Sodium	3.34	mg/L	0.50	0.17		X740165	DT	10/16/17 08:30	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X740143	KWH	10/12/17 12:36	D1
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X741200	SCM	10/12/17 09:11	

**Metals (Total Recoverable)**

EPA 200.7	Iron	0.556	mg/L	0.100	0.023		X740159	AS	10/16/17 09:08	
EPA 200.7	Manganese	0.0362	mg/L	0.0080	0.0025		X740159	AS	10/16/17 09:08	

**Metals (Dissolved)**

EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X740158	AS	10/17/17 08:02	
EPA 200.7	Iron	0.189	mg/L	0.100	0.045		X740158	AS	10/17/17 08:02	
EPA 200.7	Manganese	0.0160	mg/L	0.0080	0.0049		X740158	AS	10/17/17 08:02	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X740158	AS	10/17/17 08:02	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X740182	KWH	10/16/17 07:40	

**Metals (Potentially Dissolved)**

EPA 200.7	Aluminum	0.09	mg/L	0.04	0.04		X740168	AS	10/17/17 09:15	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X740168	AS	10/17/17 09:15	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X740168	AS	10/17/17 09:15	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X740168	AS	10/17/17 09:15	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740179	KWH	10/16/17 08:02	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X740179	KWH	10/16/17 08:02	

**Classical Chemistry Parameters**

EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.005		X740281	APH	10/06/17 11:56	
SM 2320B	Total Alkalinity	57.3	mg/L as CaCO <sub>3</sub>	1.0			X740193	DKS	10/09/17 08:09	
SM 2540 D	Total Susp. Solids	5.0	mg/L	5.0			X740154	RS	10/04/17 12:50	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	0.93	mg/L	0.20	0.12		X740188	SMB	10/13/17 21:20	
EPA 300.0	Fluoride	0.461	mg/L	0.100	0.052		X740188	SMB	10/13/17 21:20	
EPA 300.0	Sulfate as SO <sub>4</sub>	4.56	mg/L	0.30	0.13		X740188	SMB	10/13/17 21:20	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 1.32 meq/L      Anion Sum: 1.29 meq/L      C/A Balance: 1.27 %

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

John Kern  
Laboratory Director

Quarterly

Temp - 5.5 °C

pH - 7.49

SVL holds the following certifications:

AZ:0538, CA:2080, ID:ID00019 & ID00965 (Microbiology), NV:ID000192007A, UT(TNI) ID000192015-1, WA:C573

Work order Report Page 2 of 15





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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7J0028**  
Reported: 17-Oct-17 12:33

Client Sample ID: **171002BMGRS5**SVL Sample ID: **X7J0028-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled 02-Oct-17 08:55  
Received 03-Oct-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	19.4	mg/L	0.100	0.040		X740165	DT	10/16/17 09:08	
EPA 200.7	Magnesium	4.43	mg/L	0.20	0.10		X740165	DT	10/16/17 09:08	
EPA 200.7	Potassium	1.09	mg/L	0.50	0.19		X740165	DT	10/16/17 09:08	
EPA 200.7	Silica (SiO <sub>2</sub> )	15.9	mg/L	0.17	0.11		X740165	AS	10/16/17 10:04	
EPA 200.7	Sodium	3.89	mg/L	0.50	0.17		X740165	DT	10/16/17 09:08	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X740143	KWH	10/12/17 12:41	DI
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X741030	SCM	10/09/17 17:58	
<b>Metals (Total Recoverable)</b>										
EPA 200.7	Iron	0.864	mg/L	0.100	0.023		X740159	AS	10/16/17 09:15	
EPA 200.7	Manganese	0.0304	mg/L	0.0080	0.0025		X740159	AS	10/16/17 09:15	
<b>Metals (Dissolved)</b>										
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X740156	AS	10/17/17 09:04	
EPA 200.7	Iron	0.202	mg/L	0.100	0.045		X740156	AS	10/17/17 09:04	
EPA 200.7	Manganese	0.0217	mg/L	0.0080	0.0049		X740156	AS	10/17/17 09:04	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X740156	AS	10/17/17 09:04	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X740181	KWH	10/16/17 12:23	
<b>Metals (Potentially Dissolved)</b>										
EPA 200.7	Aluminum	0.09	mg/L	0.04	0.04		X740168	AS	10/17/17 09:28	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X740168	AS	10/17/17 09:28	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X740168	AS	10/17/17 09:28	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X740168	AS	10/17/17 09:28	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740179	KWH	10/16/17 08:11	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X740179	KWH	10/16/17 08:11	
<b>Classical Chemistry Parameters</b>										
EPA 350.1	Ammonia as N	< 0.030	mg/L	0.030	0.005		X740282	APH	10/06/17 13:37	
SM 2320B	Total Alkalinity	64.3	mg/L as CaCO <sub>3</sub>	1.0			X740193	DKS	10/09/17 08:30	
SM 2540 D	Total Susp. Solids	8.0	mg/L	5.0			X740154	RS	10/04/17 12:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Chloride	1.14	mg/L	0.20	0.12		X740188	SMB	10/14/17 00:54	
EPA 300.0	Fluoride	0.451	mg/L	0.100	0.052		X740188	SMB	10/14/17 00:54	
EPA 300.0	Sulfate as SO <sub>4</sub>	6.52	mg/L	0.30	0.13		X740188	SMB	10/14/17 00:54	
<b>Cation/Anion Balance and TDS Ratios</b>										
Cation Sum: 1.55 meq/L      Anion Sum: 1.48 meq/L      C/A Balance: 2.38 %										

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

John Kern  
Laboratory Director

Quarterly

Temp - 6.9 °C

P.H. - 7.49

SVL holds the following certifications:

AZ.0538, CA.2080, ID:ID00019 &amp; ID00965 (Microbiology), NV ID000192007A, UT(TNI):ID000192015-1, WA.C573

Work order Report Page 3 of 8



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San Luis, CO 81152

**Project Name: BMSL - Routine**  
**Work Order: X7J0026**  
**Reported: 17-Oct-17 13:01**

Client Sample ID: **171002BMGM19**

SVL Sample ID: **X7J0026-03 (Ground Water)**

**Sample Report Page 1 of 1**

Sampled: 02-Oct-17 10:25  
Received: 03-Oct-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	19.5	mg/L	0.100	0.040		X740165	DT	10/16/17 08:43	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.320	mg/L	0.100	0.045		X740158	AS	10/17/17 08:15	
EPA 200.7	Manganese	0.201	mg/L	0.0080	0.0049		X740158	AS	10/17/17 08:15	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740182	KWH	10/16/17 07:43	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	89	mg/L	10			X740148	RS	10/04/17 12:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	1.11	mg/L	0.100	0.052		X740188	SMB	10/13/17 22:27	
EPA 300.0	Sulfate as SO <sub>4</sub>	7.47	mg/L	0.30	0.13		X740188	SMB	10/13/17 22:27	

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

**John Kern**  
Laboratory Director

*Quarterly*

*Temp - 10.0 °C*

*P.H. - 6.80*



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San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7J0026**  
Reported: 17-Oct-17 13:01

Client Sample ID: **171002BMGM21**SVL Sample ID: **X7J0026-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 02-Oct-17 10:55  
Received: 03-Oct-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	31.2	mg/L	0.100	0.040		X740165	DT	10/16/17 08:46	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.147	mg/L	0.100	0.045		X740158	AS	10/17/17 08:47	
EPA 200.7	Manganese	0.252	mg/L	0.0080	0.0049		X740158	AS	10/17/17 08:47	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740182	KWH	10/16/17 07:45	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	125	mg/L	10			X740148	RS	10/04/17 12:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	1.32	mg/L	0.100	0.052		X740188	SMB	10/13/17 23:07	
EPA 300.0	Sulfate as SO <sub>4</sub>	16.7	mg/L	0.30	0.13		X740188	SMB	10/13/17 23:07	

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

John Kern  
Laboratory Director

Quarterly

Temp - 9.3°C

P.H. - 6.67





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Kellogg, ID 83837-0929

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Battle Mountain - San Luis  
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Project Name: **BMSL - Routine**  
Work Order: **X7J0026**  
Reported: 17-Oct-17 13:01

Client Sample ID: **171002BMGM24**  
SVL Sample ID: **X7J0026-05 (Ground Water)**

Sampled 02-Oct-17 11:25  
Received 03-Oct-17  
Sampled By: AT

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	117	mg/L	0.100	0.040		X740165	DT	10/16/17 08:49	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	5.65	mg/L	0.100	0.045		X740158	AS	10/17/17 08:51	
EPA 200.7	Manganese	1.20	mg/L	0.0080	0.0049		X740158	AS	10/17/17 08:51	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740182	KWH	10/16/17 07:48	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	565	mg/L	10			X740148	RS	10/04/17 12:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.822	mg/L	0.100	0.052		X740188	SMB	10/13/17 23:34	
EPA 300.0	Sulfate as SO <sub>4</sub>	279	mg/L	3.00	1.30	10	X740188	SMB	10/13/17 23:47	D2

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

John Kern  
Laboratory Director

Quarterly

Temp - 9.1°C

P.H. - 6.82



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Project Name: **BMSL - Routine**  
Work Order: **X7J0026**  
Reported: 17-Oct-17 13:01

Client Sample ID: **171002BMGM11R**SVL Sample ID: **X7J0026-06 (Ground Water)**

Sample Report Page 1 of 1

Sampled. 02-Oct-17 11:55  
Received. 03-Oct-17  
Sampled By. AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
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**Metals (Total)**

EPA 200.7	Calcium	97.3	mg/L	0.100	0.040		X740165	DT	10/16/17 08:53	
EPA 200.7	Magnesium	15.7	mg/L	0.20	0.10		X740165	DT	10/16/17 08:53	
EPA 200.7	Potassium	2.39	mg/L	0.50	0.19		X740165	DT	10/16/17 08:53	
EPA 200.7	Silica (SiO <sub>2</sub> )	19.3	mg/L	0.17	0.11		X740165	AS	10/16/17 09:56	
EPA 200.7	Sodium	23.5	mg/L	0.50	0.17		X740165	DT	10/16/17 08:53	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	308	mg/L	1.07	0.503		N/A		10/16/17 08:53	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X740158	AS	10/17/17 08:54	
EPA 200.7	Barium	0.0592	mg/L	0.0020	0.0016		X740158	AS	10/17/17 08:54	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X740158	AS	10/17/17 08:54	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X740158	AS	10/17/17 08:54	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X740158	AS	10/17/17 08:54	
EPA 200.7	Manganese	0.952	mg/L	0.0080	0.0049		X740158	AS	10/17/17 08:54	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X740158	AS	10/17/17 08:54	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X740158	AS	10/17/17 08:54	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X740182	KWH	10/16/17 07:50	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740182	KWH	10/16/17 07:50	
EPA 200.8	Lead	< 0.00500	mg/L	0.00500	0.000065		X740182	KWH	10/16/17 07:50	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X740182	KWH	10/16/17 07:50	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X740182	KWH	10/16/17 07:50	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X741063	SCM	10/09/17 18:38	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	201	mg/L as CaCO <sub>3</sub>	1.0			X740193	DKS	10/09/17 08:19	
SM 2540 C	Total Diss. Solids	431	mg/L	10			X740148	RS	10/04/17 12:50	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	5.48	mg/L	0.20	0.12		X740188	SMB	10/14/17 00:01	
EPA 300.0	Fluoride	1.14	mg/L	0.100	0.052		X740188	SMB	10/14/17 00:01	
EPA 300.0	Sulfate as SO <sub>4</sub>	163	mg/L	3.00	1.30	10	X740188	SMB	10/14/17 00:14	D2

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 7.27 meq/L      Anion Sum: 7.62 meq/L      C/A Balance: -2.36 %      Calculated TDS: 448      TDS/cTDS: 0.96

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

John Kern  
Laboratory Director

Quarterly

Temp - 10.8°C

pH - 7.00

SVL holds the following certifications:

AZ.0538, CA.2080, ID-ID00019 & ID00965 (Microbiology), NV.ID000192007A, UT(TNI).ID000192015-1, WA C573

Work order Report Page 8 of 15



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Project Name: **BMSL - Routine**  
Work Order: **X7J0055**  
Reported: 17-Oct-17 13:42

Client Sample ID: **171003BMGBF4**

SVL Sample ID: **X7J0055-06 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 02-Oct-17 10:20  
Received: 04-Oct-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	158	mg/L	0.100	0.040		X740165	DT	10/16/17 09:28	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.748	mg/L	0.100	0.045		X740231	AS	10/17/17 10:44	
EPA 200.7	Manganese	7.40	mg/L	0.0080	0.0049		X740231	AS	10/17/17 10:44	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740255	KWH	10/17/17 09:39	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	712	mg/L	10			X740219	JDM	10/05/17 19:00	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	5.33	mg/L	0.100	0.052		X740311	SMB	10/13/17 22:00	
EPA 300.0	Sulfate as SO <sub>4</sub>	313	mg/L	7.50	3.25	25	X740311	SMB	10/13/17 22:12	D2

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

John Kern  
Laboratory Director

Quarterly

Temp - 10.0 °C

P.H. - 6.60





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**Project Name: BMSL - Routine**  
Work Order: **X7J0055**  
Reported: 17-Oct-17 13:42

Client Sample ID: **171003BMGBF6**

Sampled: 02-Oct-17 10:45

Received: 04-Oct-17

Sampled By: AT

SVL Sample ID: **X7J0055-08 (Ground Water)**

**Sample Report Page 1 of 1**

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	167	mg/L	0.100	0.040		X740165	DT	10/16/17 09:35	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	21.0	mg/L	0.100	0.045		X740231	AS	10/17/17 10:51	
EPA 200.7	Manganese	12.6	mg/L	0.0080	0.0049		X740231	AS	10/17/17 10:51	
EPA 200.8	Copper	0.413	mg/L	0.00300	0.00011		X740255	KWH	10/17/17 09:48	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	741	mg/L	10			X740219	JDM	10/05/17 19:00	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	4.93	mg/L	0.100	0.052		X740311	SMB	10/13/17 22:36	
EPA 300.0	Sulfate as SO <sub>4</sub>	400	mg/L	7.50	3.25	25	X740311	SMB	10/13/17 22:48	D2

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

**John Kern**  
Laboratory Director

*Quarterly*

*Temp - 10.5°C*

*P.H. - 6.06*



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Project Name: **BMSL - Routine**  
Work Order: **X7J0055**  
Reported: 17-Oct-17 13:42

Client Sample ID: **171003BMGFB**SVL Sample ID: **X7J0055-07 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 02-Oct-17 10:40  
Received: 04-Oct-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.040		X740165	DT	10/16/17 09:32	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X740231	AS	10/17/17 10:47	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X740231	AS	10/17/17 10:47	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740255	KWH	10/17/17 09:46	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss Solids	< 10	mg/L	10			X740219	JDM	10/05/17 19:00	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.052		X740311	SMB	10/13/17 22:24	
EPA 300.0	Sulfate as SO <sub>4</sub>	< 0.30	mg/L	0.30	0.13		X740311	SMB	10/13/17 22:24	

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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San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order: **X7J0055**  
Reported: 17-Oct-17 13:42

Client Sample ID: **171003BMGRB**

SVL Sample ID: **X7J0055-09 (Surface Water)**

Sample Report Page 1 of 1

Sampled. 02-Oct-17 11:10  
Received 04-Oct-17  
Sampled By. AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.040		X740165	DT	10/16/17 09:49	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X740231	AS	10/17/17 10:54	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X740231	AS	10/17/17 10:54	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740255	KWH	10/17/17 09:51	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	12	mg/L	10			X740219	JDM	10/05/17 19:00	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.052		X740311	SMB	10/13/17 23:00	
EPA 300.0	Sulfate as SO <sub>4</sub>	< 0.30	mg/L	0.30	0.13		X740311	SMB	10/13/17 23:00	

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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Project Name: **BMSL - Routine**  
Work Order: **X7J0055**  
Reported: 17-Oct-17 13:42

Client Sample ID: **171003BMGM16**  
SVL Sample ID: **X7J0055-01 (Ground Water)**

Sampled: 02-Oct-17 07:55  
Received: 04-Oct-17  
Sampled By: AT

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	18.4	mg/L	0.100	0.040		X740165	DT	10/16/17 09:11	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.110	mg/L	0.100	0.045		X740231	AS	10/17/17 10:07	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X740231	AS	10/17/17 10:07	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740255	KWH	10/17/17 09:32	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	105	mg/L	10			X740219	JDM	10/05/17 19:00	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.706	mg/L	0.100	0.052		X740311	SMB	10/13/17 19:37	
EPA 300.0	Sulfate as SO <sub>4</sub>	10.0	mg/L	0.30	0.13		X740311	SMB	10/13/17 19:37	

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

John Kern  
Laboratory Director

Quarterly

Temp - 6.5 °C

P.H. - 6.09



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Project Name: **BMSL - Routine**  
Work Order: **X7J0055**  
Reported: 17-Oct-17 13:42

Client Sample ID: **171003BMGM22**  
SVL Sample ID: **X7J0055-02 (Ground Water)**

Sampled: 02-Oct-17 08:20  
Received: 04-Oct-17  
Sampled By: AT

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	49.9	mg/L	0.100	0.040		X740165	DT	10/16/17 09:15	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.351	mg/L	0.100	0.045		X740231	AS	10/17/17 10:30	
EPA 200.7	Manganese	0.193	mg/L	0.0080	0.0049		X740231	AS	10/17/17 10:30	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740255	KWH	10/17/17 09:34	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	236	mg/L	10			X740219	JDM	10/05/17 19:00	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	1.36	mg/L	0.100	0.052		X740311	SMB	10/13/17 20:13	
EPA 300.0	Sulfate as SO <sub>4</sub>	50.1	mg/L	0.30	0.13		X740311	SMB	10/13/17 20:13	

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

John Kern  
Laboratory Director

Quarterly

Temp - 9.2 °C

P.H. - 6.47



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Project Name: **BMSL - Routine**  
Work Order: **X7J0055**  
Reported: 17-Oct-17 13:42

Client Sample ID: **171003BMGM26**SVL Sample ID: **X7J0055-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled 02-Oct-17 08:45  
Received 04-Oct-17  
Sampled By AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	28.6	mg/L	0.100	0.040		X740165	DT	10/16/17 09:18	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.410	mg/L	0.100	0.045		X740231	AS	10/17/17 10:34	
EPA 200.7	Manganese	0.257	mg/L	0.0080	0.0049		X740231	AS	10/17/17 10:34	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740255	KWH	10/17/17 09:36	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	128	mg/L	10			X740219	JDM	10/05/17 19:00	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.874	mg/L	0.100	0.052		X740311	SMB	10/13/17 20:37	
EPA 300.0	Sulfate as SO <sub>4</sub>	12.8	mg/L	0.30	0.13		X740311	SMB	10/13/17 20:37	

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

John Kern  
Laboratory Director

*Quarterly**Temp - 8.4°C**P.H. - 6.71*





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Project Name: **BMSL - Routine**  
Work Order: **X7J0055**  
Reported: 17-Oct-17 13.42

Client Sample ID: **171003BMGM34**SVL Sample ID: **X7J0055-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 02-Oct-17 09:10  
Received: 04-Oct-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	21.6	mg/L	0.100	0.040		X740165	DT	10/16/17 09:22	
EPA 200.7	Magnesium	5.30	mg/L	0.20	0.10		X740165	DT	10/16/17 09:22	
EPA 200.7	Potassium	0.82	mg/L	0.50	0.19		X740165	DT	10/16/17 09:22	
EPA 200.7	Silica (SiO <sub>2</sub> )	14.7	mg/L	0.17	0.11		X740165	AS	10/16/17 10:08	
EPA 200.7	Sodium	7.73	mg/L	0.50	0.17		X740165	DT	10/16/17 09:22	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	75.7	mg/L	1.07	0.503		N/A		10/16/17 09:22	

<b>Metals (Dissolved)</b>										
EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X740231	AS	10/17/17 10:37	
EPA 200.7	Barium	0.0407	mg/L	0.0020	0.0016		X740231	AS	10/17/17 10:37	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X740231	AS	10/17/17 10:37	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X740231	AS	10/17/17 10:37	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X740231	AS	10/17/17 10:37	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X740231	AS	10/17/17 10:37	
EPA 200.7	Manganese	0.215	mg/L	0.0080	0.0049		X740231	AS	10/17/17 10:37	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X740231	AS	10/17/17 10:37	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X740231	AS	10/17/17 10:37	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X740255	KWH	10/17/17 09:22	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740255	KWH	10/17/17 09:22	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X740255	KWH	10/17/17 09:22	
EPA 200.8	Silver	< 0.000160	mg/L	0.000160	0.000072	2	X740255	KWH	10/17/17 12:04	D1

<b>Metals (Filtered)</b>										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X741231	SCM	10/13/17 11:28	

<b>Classical Chemistry Parameters</b>										
SM 2320B	Total Alkalinity	72.2	mg/L as CaCO <sub>3</sub>	1.0			X740193	DKS	10/09/17 08:53	
SM 2540 C	Total Diss. Solids	117	mg/L	10			X740219	JDM	10/05/17 19:00	

<b>Anions by Ion Chromatography</b>										
EPA 300.0	Chloride	2.55	mg/L	0.20	0.12		X740311	SMB	10/13/17 21:01	
EPA 300.0	Fluoride	0.641	mg/L	0.100	0.052		X740311	SMB	10/13/17 21:01	
EPA 300.0	Sulfate as SO <sub>4</sub>	17.2	mg/L	0.30	0.13		X740311	SMB	10/13/17 21:01	

<b>Cation/Anion Balance and TDS Ratios</b>										
Cation Sum: 1.89 meq/L		Anion Sum: 1.91 meq/L		C/A Balance: -0.54 %		Calculated TDS: 114		TDS/cTDS: 1.03		

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

John Kern  
Laboratory Director

Quarterly

Temp - 8.2°C

P.H. - 6.70

SVL holds the following certifications:

AZ 0538, CA 2080, ID ID00019 &amp; ID00965 (Microbiology), NV ID000192007A, UT (TNI) ID000192015-1, WA C573

Work order Report Page 5 of 14



One Government Gulch - PO Box 929

Kellogg, ID 83837-0929

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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7J0055**  
Reported: 17-Oct-17 13.42

Client Sample ID: **171003BMGM10**SVL Sample ID: **X7J0055-05 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 02-Oct-17 09:40  
Received: 04-Oct-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	74.2	mg/L	0.100	0.040		X740165	DT	10/16/17 09:25	
EPA 200.7	Magnesium	10.2	mg/L	0.20	0.10		X740165	DT	10/16/17 09:25	
EPA 200.7	Potassium	1.68	mg/L	0.50	0.19		X740165	DT	10/16/17 09:25	
EPA 200.7	Silica (SiO <sub>2</sub> )	28.2	mg/L	0.17	0.11		X740165	AS	10/16/17 10:21	
EPA 200.7	Sodium	22.4	mg/L	0.50	0.17		X740165	DT	10/16/17 09:25	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	227	mg/L	1.07	0.503		N/A		10/16/17 09:25	

<b>Metals (Dissolved)</b>										
EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X740231	AS	10/17/17 10:40	
EPA 200.7	Barium	0.131	mg/L	0.0020	0.0016		X740231	AS	10/17/17 10:40	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X740231	AS	10/17/17 10:40	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X740231	AS	10/17/17 10:40	
EPA 200.7	Iron	1.10	mg/L	0.100	0.045		X740231	AS	10/17/17 10:40	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X740231	AS	10/17/17 10:40	
EPA 200.7	Manganese	0.903	mg/L	0.0080	0.0049		X740231	AS	10/17/17 10:40	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X740231	AS	10/17/17 10:40	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X740231	AS	10/17/17 10:40	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X740255	KWH	10/17/17 09:29	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X740255	KWH	10/17/17 09:29	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X740255	KWH	10/17/17 09:29	
EPA 200.8	Silver	0.000337	mg/L	0.000160	0.000072	2	X740255	KWH	10/17/17 12:14	D1

<b>Metals (Filtered)</b>										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X741231	SCM	10/13/17 11:31	

<b>Classical Chemistry Parameters</b>										
SM 2320B	Total Alkalinity	236	mg/L as CaCO <sub>3</sub>	1.0			X740193	DKS	10/09/17 08:59	
SM 2540 C	Total Diss. Solids	300	mg/L	10			X740219	JDM	10/05/17 19:00	

<b>Anions by Ion Chromatography</b>										
EPA 300.0	Chloride	3.62	mg/L	0.20	0.12		X740311	SMB	10/13/17 21:37	
EPA 300.0	Fluoride	1.08	mg/L	0.100	0.052		X740311	SMB	10/13/17 21:37	
EPA 300.0	Sulfate as SO <sub>4</sub>	36.3	mg/L	0.30	0.13		X740311	SMB	10/13/17 21:37	

<b>Cation/Anion Balance and TDS Ratios</b>										
Cation Sum: 5.64 meq/L		Anion Sum: 5.63 meq/L		C/A Balance: 0.07 %		Calculated TDS: 319		TDS/cTDS: 0.94		

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

John Kern  
Laboratory Director

*Quarterly**Temp - 9.1 °C**P.H. - 7.02*



One Government Gulch - PO Box 929

Kellogg, ID 83837-0929

(208) 784-1258

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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7J0113**  
Reported: 19-Oct-17 14:47

Client Sample ID: **171004BMGM9**SVL Sample ID: **X7J0113-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 04-Oct-17 09:20  
Received: 05-Oct-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	82.9	mg/L	0.100	0.040		X740301	AS	10/16/17 11:03	
EPA 200.7	Magnesium	12.9	mg/L	0.20	0.10		X740301	AS	10/16/17 11:03	
EPA 200.7	Potassium	1.85	mg/L	0.50	0.19		X740301	AS	10/16/17 11:03	
EPA 200.7	Silica (SiO <sub>2</sub> )	28.2	mg/L	0.17	0.11		X740301	AS	10/16/17 11:03	
EPA 200.7	Sodium	26.0	mg/L	0.50	0.17		X740301	AS	10/16/17 11:03	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	260	mg/L	1.07	0.503		N/A		10/16/17 11:03	

<b>Metals (Dissolved)</b>										
EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X740300	AS	10/17/17 11:29	
EPA 200.7	Barium	0.132	mg/L	0.0020	0.0016		X740300	AS	10/17/17 11:29	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X740300	AS	10/17/17 11:29	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X740300	AS	10/17/17 11:29	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X740300	AS	10/17/17 11:29	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X740300	AS	10/17/17 11:29	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X740300	AS	10/17/17 11:29	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X740300	AS	10/17/17 11:29	
EPA 200.7	Zinc	0.388	mg/L	0.010	0.003		X740300	AS	10/17/17 11:29	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X741103	KWH	10/17/17 12:51	
EPA 200.8	Copper	0.00433	mg/L	0.00300	0.00011		X741103	KWH	10/17/17 12:51	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X741103	KWH	10/17/17 12:51	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X741103	KWH	10/17/17 12:51	

<b>Metals (Filtered)</b>										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X741231	SCM	10/13/17 11:55	

<b>Classical Chemistry Parameters</b>										
SM 2320B	Total Alkalinity	305	mg/L as CaCO <sub>3</sub>	1.0			X740193	DKS	10/09/17 09:22	
SM 2540 C	Total Diss. Solids	342	mg/L	10			X740264	JDM	10/05/17 19:25	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X741032	APH	10/09/17 13:37	

<b>Anions by Ion Chromatography</b>										
EPA 300.0	Chloride	3.99	mg/L	0.20	0.12		X740311	SMB	10/14/17 00:00	
EPA 300.0	Fluoride	0.451	mg/L	0.100	0.052		X740311	SMB	10/14/17 00:00	
EPA 300.0	Sulfate as SO <sub>4</sub>	19.3	mg/L	0.30	0.13		X740311	SMB	10/14/17 00:00	

<b>Cation/Anion Balance and TDS Ratios</b>										
Cation Sum: 6.40 meq/L		Anion Sum: 6.63 meq/L		C/A Balance: -1.80 %		Calculated TDS: 359		TDS/cTDS: 0.95		

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

John Kern  
Laboratory Director

*Quarterly**Temp - 12.5 °C**pH - 7.04*

SVL holds the following certifications:

AZ 0538, CA:2080, ID:ID00019 &amp; ID00965 (Microbiology), NV ID000192007A, UT(TNI) ID000192015-1, WA:CS73

Work order Report Page 3 of 8





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Kellogg, ID 83837-0929

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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7J0113**  
Reported: 19-Oct-17 14:47

Client Sample ID: **171004BMGM12**SVL Sample ID: **X7J0113-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 04-Oct-17 08:30  
Received: 05-Oct-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	50.1	mg/L	0.100	0.040		X740301	AS	10/16/17 10:51	
EPA 200.7	Magnesium	8.38	mg/L	0.20	0.10		X740301	AS	10/16/17 10:51	
EPA 200.7	Potassium	2.03	mg/L	0.50	0.19		X740301	AS	10/16/17 10:51	
EPA 200.7	Silica (SiO <sub>2</sub> )	21.4	mg/L	0.17	0.11		X740301	AS	10/16/17 10:51	
EPA 200.7	Sodium	13.6	mg/L	0.50	0.17		X740301	AS	10/16/17 10:51	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	160	mg/L	1.07	0.503		N/A		10/16/17 10:51	

<b>Metals (Dissolved)</b>										
EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X740300	AS	10/17/17 11:19	
EPA 200.7	Barium	0.172	mg/L	0.0020	0.0016		X740300	AS	10/17/17 11:19	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X740300	AS	10/17/17 11:19	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X740300	AS	10/17/17 11:19	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X740300	AS	10/17/17 11:19	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X740300	AS	10/17/17 11:19	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X740300	AS	10/17/17 11:19	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X740300	AS	10/17/17 11:19	
EPA 200.7	Zinc	0.335	mg/L	0.010	0.003		X740300	AS	10/17/17 11:19	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X741103	KWH	10/17/17 12:44	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X741103	KWH	10/17/17 12:44	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X741103	KWH	10/17/17 12:44	
EPA 200.8	Silver	0.000102	mg/L	0.000100	0.000036		X741103	KWH	10/17/17 12:44	

<b>Metals (Filtered)</b>										
EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X741231	SCM	10/13/17 11:54	

<b>Classical Chemistry Parameters</b>										
SM 2320B	Total Alkalinity	160	mg/L as CaCO <sub>3</sub>	1.0			X740193	DKS	10/09/17 09:16	
SM 2540 C	Total Diss. Solids	221	mg/L	10			X740306	PRM	10/06/17 11:43	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X741032	APH	10/09/17 13:35	

<b>Anions by Ion Chromatography</b>										
EPA 300.0	Chloride	18.8	mg/L	2.00	1.20	10	X740311	SMB	10/13/17 23:24	D2
EPA 300.0	Fluoride	0.448	mg/L	0.100	0.052		X740311	SMB	10/13/17 23:12	
EPA 300.0	Sulfate as SO <sub>4</sub>	12.5	mg/L	0.30	0.13		X740311	SMB	10/13/17 23:12	

<b>Cation/Anion Balance and TDS Ratios</b>										
Cation Sum: 3.85 meq/L		Anion Sum: 4.01 meq/L		C/A Balance: -2.02 %		Calculated TDS: 223		TDS/cTDS: 0.99		

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

John Kern  
Laboratory Director

Quarterly

Temp - 11.7°C

P.H. - 7.36

SVL holds the following certifications:

AZ.0538, CA:2080, ID.ID00019 &amp; ID00965 (Microbiology), NV ID000192007A, UT(TNI).ID000192015-1, WA C573

Work order Report Page 2 of 8



Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7J0113**  
Reported: 19-Oct-17 14:47

Client Sample ID: **171004BMGM13R**

Sampled: 04-Oct-17 10:10

Received: 05-Oct-17

Sampled By: AT

SVL Sample ID: **X7J0113-03 (Ground Water)**

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	85.5	mg/L	0.100	0.040		X740301	AS	10/16/17 11:07	
EPA 200.7	Magnesium	14.3	mg/L	0.20	0.10		X740301	AS	10/16/17 11:07	
EPA 200.7	Potassium	1.54	mg/L	0.50	0.19		X740301	AS	10/16/17 11:07	
EPA 200.7	Silica (SiO <sub>2</sub> )	25.0	mg/L	0.17	0.11		X740301	AS	10/16/17 11:07	
EPA 200.7	Sodium	32.0	mg/L	0.50	0.17		X740301	AS	10/16/17 11:07	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	272	mg/L	1.07	0.503		N/A		10/16/17 11:07	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X740300	AS	10/17/17 11:32	
EPA 200.7	Barium	0.141	mg/L	0.0020	0.0016		X740300	AS	10/17/17 11:32	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X740300	AS	10/17/17 11:32	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X740300	AS	10/17/17 11:32	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X740300	AS	10/17/17 11:32	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X740300	AS	10/17/17 11:32	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X740300	AS	10/17/17 11:32	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X740300	AS	10/17/17 11:32	
EPA 200.7	Zinc	0.635	mg/L	0.010	0.003		X740300	AS	10/17/17 11:32	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X741103	KWH	10/17/17 12:53	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X741103	KWH	10/17/17 12:53	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X741103	KWH	10/17/17 12:53	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X741103	KWH	10/17/17 12:53	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X741231	SCM	10/13/17 11:57	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	347	mg/L as CaCO <sub>3</sub>	1.0			X740193	DKS	10/09/17 09:30	
SM 2540 C	Total Diss. Solids	375	mg/L	10			X740264	JDM	10/05/17 19:25	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X741032	APH	10/09/17 13:39	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	3.98	mg/L	0.20	0.12		X740311	SMB	10/14/17 00:47	
EPA 300.0	Fluoride	0.699	mg/L	0.100	0.052		X740311	SMB	10/14/17 00:47	
EPA 300.0	Sulfate as SO <sub>4</sub>	17.6	mg/L	0.30	0.13		X740311	SMB	10/14/17 00:47	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 6.90 mcq/L	Anion Sum: 7.45 mcq/L	C/A Balance: -3.80 %	Calculated TDS: 389	TDS/cTDS: 0.96
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This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern  
Laboratory Director

*Quarterly**Temp - 12.5°C**P.H. - 7.04*



One Government Gulch - PO Box 929

Kellogg, ID 83837-0929

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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7K0044**  
Reported: 14-Nov-17 18:01

Client Sample ID: **171031BMGLD**

Sampled: 31-Oct-17 09:10

Received: 01-Nov-17

Sampled By: AT

SVL Sample ID: **X7K0044-01 (Ground Water)**

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	509	mg/L	0.100	0.040		X744186	DT	11/13/17 13:10	M3
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X744186	DT	11/13/17 13:10	
EPA 200.7	Sodium	904	mg/L	5.00	1.70	10	X744186	DT	11/13/17 15:19	D2,M3
EPA 200.7	Zinc	0.012	mg/L	0.010	0.003		X744186	DT	11/13/17 13:10	
EPA 200.8	Copper	0.0629	mg/L	0.00300	0.00055	5	X744177	KWH	11/10/17 08:59	D1
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X744149	APH	11/02/17 13:12	

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

**John Kern**  
Laboratory Director

*Quarterly**Temp - 11.4°C**P.H. - 6.61*





One Government Gulch - PO Box 929

Kellogg, ID 83837-0929

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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7K0044**  
Reported: 14-Nov-17 18:01

Client Sample ID: **171031BMGCOL**SVL Sample ID: **X7K0044-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled 31-Oct-17 09:25  
Received 01-Nov-17  
Sampled By AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	513	mg/L	0.100	0.040		X744186	DT	11/13/17 13:20	
EPA 200.7	Iron	29.8	mg/L	0.100	0.045		X744186	DT	11/13/17 13:20	
EPA 200.7	Sodium	843	mg/L	5.00	1.70	10	X744186	DT	11/13/17 15:29	D2
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X744186	DT	11/13/17 13:20	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00055	5	X744177	KWH	11/10/17 09:02	D1
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	Cyanide (WAD)	0.0240	mg/L	0.0100	0.0021		X744149	APH	11/02/17 13:14	

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

John Kern  
Laboratory Director

*Quarterly**Temp - 7.4 °C**P.H. - 6.84*



One Government Gulch - PO Box 929

Kellogg, ID 83837-0929

(208) 784-1258

[www.svl.net](http://www.svl.net)

Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

**Project Name: BMSL - Routine**

Work Order: **X7K0044**

Reported: 14-Nov-17 18:01

Client Sample ID: **171031BMGTAILS**

Sampled: 31-Oct-17 10:40

Received: 01-Nov-17

Sampled By: AT

SVL Sample ID: **X7K0044-03 (Surface Water)**

**Sample Report Page 1 of 1**

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	444	mg/L	0.100	0.040		X744186	DT	11/13/17 13:23	
EPA 200.7	Iron	1.23	mg/L	0.100	0.045		X744186	DT	11/13/17 13:23	
EPA 200.7	Sodium	858	mg/L	5.00	1.70	10	X744186	DT	11/13/17 15:32	D2
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X744186	DT	11/13/17 13:23	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00105	5	X744177	KWH	11/10/17 08:47	D1
EPA 200.8	Copper	0.0459	mg/L	0.00300	0.00055	5	X744177	KWH	11/10/17 08:47	D1

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

**John Kern**  
Laboratory Director

Quarterly  
Monthly

Temp - 3.2°C

P.H. - 7.72



One Government Gulch - PO Box 929

Kellogg, ID 83837-0929

(208) 784-1258

www.svl.net

Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7J0394**  
Reported: 02-Nov-17 15:30

Client Sample ID: **171017BMGM14**SVL Sample ID: **X7J0394-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 17-Oct-17 10:55  
Received: 18-Oct-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	170	mg/L	0.100	0.040		X742248	DT	11/01/17 14:17	
EPA 200.7	Magnesium	27.5	mg/L	0.20	0.10		X742248	DT	11/01/17 14:17	
EPA 200.7	Potassium	2.01	mg/L	0.50	0.19		X742248	DT	11/01/17 14:17	
EPA 200.7	Silica (SiO <sub>2</sub> )	27.4	mg/L	0.17	0.11		X742248	DT	11/01/17 14:17	
EPA 200.7	Sodium	27.8	mg/L	0.50	0.17		X742248	DT	11/01/17 14:17	
SM 2340B	Hardness (as CaCO <sub>3</sub> )	538	mg/L	1.07	0.503		N/A		11/01/17 14:17	

**Metals (Dissolved)**

EPA 200.7	Aluminum	< 0.04	mg/L	0.04	0.04		X742241	DT	11/02/17 12:44	
EPA 200.7	Barium	0.377	mg/L	0.0020	0.0016		X742241	DT	11/02/17 12:44	
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0008		X742241	DT	11/02/17 12:44	
EPA 200.7	Chromium	< 0.0060	mg/L	0.0060	0.0019		X742241	DT	11/02/17 12:44	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X742241	DT	11/02/17 12:44	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0052		X742241	DT	11/02/17 12:44	
EPA 200.7	Manganese	0.0104	mg/L	0.0080	0.0049		X742241	DT	11/02/17 12:44	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0027		X742241	DT	11/02/17 12:44	
EPA 200.7	Zinc	0.025	mg/L	0.010	0.003		X742241	DT	11/02/17 12:44	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X742233	KWH	10/31/17 11:41	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X742233	KWH	10/31/17 11:41	
EPA 200.8	Selenium	< 0.0100	mg/L	0.0100	0.0004		X742233	KWH	10/31/17 11:41	
EPA 200.8	Silver	< 0.000100	mg/L	0.000100	0.000036		X742233	KWH	10/31/17 11:41	

**Metals (Filtered)**

EPA 245.1	Mercury	< 0.00020	mg/L	0.00020	0.000076		X744012	MWD	10/31/17 09:19	
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**Classical Chemistry Parameters**

SM 2320B	Total Alkalinity	650	mg/L as CaCO <sub>3</sub>	1.0			X742029	DKS	10/20/17 08:35	
SM 2540 C	Total Diss. Solids	691	mg/L	10			X742244	RS	10/19/17 12:05	
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X742204	APH	10/19/17 13:13	

**Anions by Ion Chromatography**

EPA 300.0	Chloride	8.40	mg/L	0.20	0.12		X742321	SMB	11/01/17 09:49	
EPA 300.0	Fluoride	0.391	mg/L	0.100	0.052		X742321	SMB	11/01/17 09:49	
EPA 300.0	Sulfate as SO <sub>4</sub>	27.3	mg/L	0.30	0.13		X742321	SMB	11/01/17 09:49	

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 12.0 meq/L	Anion Sum: 13.8 meq/L	C/A Balance: -6.94 %	Calculated TDS: 681	TDS/cTDS: 1.01
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This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

John Kern  
Laboratory Director

*Quarterly**Temp - 14.1 °C**P.H. - 6.58*

SVL holds the following certifications:

AZ.0538, CA.2080, ID.ID00019 &amp; ID00965 (Microbiology), NV ID000192007A, UT(TNI) ID000192015-1, WA C573

Work order Report Page 2 of 6





One Government Gulch - PO Box 929

Kellogg, ID 83837-0929

(208) 784-1258

[www.svl.net](http://www.svl.net)

Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order: **X7K0189**  
Reported: 29-Nov-17 13:19

Client Sample ID: **171107BMGWD1**SVL Sample ID: **X7K0189-05 (Surface Water)**

Sample Report Page 1 of 1

Sampled 07-Nov-17 08:40  
Received 08-Nov-17  
Sampled By AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	0.195	mg/L	0.100	0.045		X745206	AS	11/17/17 09:49	
EPA 200.7	Manganese	0.0497	mg/L	0.0080	0.0049		X745206	AS	11/17/17 09:49	
EPA 200.7	Zinc	< 0.010	mg/L	0.010	0.003		X745206	AS	11/17/17 09:49	
EPA 200.8	Arsenic	< 0.0100	mg/L	0.0100	0.00021		X745204	KWH	11/22/17 10:20	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X745204	KWH	11/22/17 10:20	
<b>Classical Chemistry Parameters</b>										
SM 4500-CN-I	Cyanide (WAD)	< 0.0100	mg/L	0.0100	0.0021		X745214	APH	11/09/17 12:57	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	0.510	mg/L	0.100	0.052		X745268	SMB	11/28/17 22:55	
EPA 300.0	Sulfate as SO <sub>4</sub>	7.09	mg/L	0.30	0.13		X745268	SMB	11/28/17 22:55	

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

**John Kern**  
Laboratory Director

*Quarterly**Temp - 5.0 °C**P.H. - 7.47*



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Kellogg, ID 83837-0929

(208) 784-1258

www.svl.net

Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7K0065**  
Reported: 17-Nov-17 12:35

Client Sample ID: **171101BMGFB**SVL Sample ID: **X7K0065-07 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 01-Nov-17 11:15  
Received: 02-Nov-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.040		X744186	DT	11/13/17 15:02	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X744245	DT	11/14/17 10:14	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X744245	DT	11/14/17 10:14	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X744239	KWH	11/16/17 07:53	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss Solids	< 10	mg/L	10			X744250	JDM	11/03/17 14:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.052		X745084	SMB	11/15/17 18:32	
EPA 300.0	Sulfate as SO <sub>4</sub>	< 0.30	mg/L	0.30	0.13		X745084	SMB	11/15/17 18:32	

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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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **X7K0065**  
Reported: 17-Nov-17 12:35

Client Sample ID: **171101BMGRB**

Sampled: 01-Nov-17 11:35

Received: 02-Nov-17

Sampled By: AT

SVL Sample ID: **X7K0065-08 (Surface Water)**

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.040		X744186	DT	11/13/17 15:05	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X744245	DT	11/14/17 10:18	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X744245	DT	11/14/17 10:18	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X744239	KWH	11/16/17 08:00	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	< 10	mg/L	10			X744250	JDM	11/03/17 14:50	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.052		X745084	SMB	11/15/17 18:47	
EPA 300.0	Sulfate as SO <sub>4</sub>	< 0.30	mg/L	0.30	0.13		X745084	SMB	11/15/17 18:47	

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

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Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order: **X7L0230**  
Reported: 08-Jan-18 09.30

Client Sample ID: **171211BMGFB**SVL Sample ID: **X7L0230-05 (Surface Water)****Sample Report Page 1 of 1**

Sampled. 11-Dec-17 14:50  
Received. 13-Dec-17  
Sampled By. AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.040		X750151	DT	01/06/18 11:28	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X750194	AS	01/05/18 10:24	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X750194	AS	01/05/18 10:24	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X750204	KWH	01/02/18 11:46	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	< 10	mg/L	10			X750178	JDM	12/14/17 18:00	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.052		X751054	SMB	12/28/17 10:08	
EPA 300.0	Sulfate as SO <sub>4</sub>	< 0.30	mg/L	0.30	0.11		X751054	SMB	12/28/17 10:08	

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

[www.svl.net](http://www.svl.net)

Battle Mountain - San Luis  
PO Box 310  
San Luis, CO 81152

**Project Name: BMSL - Routine**  
Work Order: **X7L0230**  
Reported: 08-Jan-18 09:30

Client Sample ID: **171211BMGRB**

SVL Sample ID: **X7L0230-06 (Surface Water)**

Sample Report Page 1 of 1

Sampled 11-Dec-17 15:10  
Received 13-Dec-17  
Sampled By: AT

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
<b>Metals (Total)</b>										
EPA 200.7	Calcium	< 0.100	mg/L	0.100	0.040		X750151	DT	01/06/18 11:31	
<b>Metals (Dissolved)</b>										
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.045		X750194	AS	01/05/18 10:28	
EPA 200.7	Manganese	< 0.0080	mg/L	0.0080	0.0049		X750194	AS	01/05/18 10:28	
EPA 200.8	Copper	< 0.00300	mg/L	0.00300	0.00011		X750204	KWH	01/02/18 11:48	
<b>Classical Chemistry Parameters</b>										
SM 2540 C	Total Diss. Solids	< 10	mg/L	10			X750178	JDM	12/14/17 18:00	
<b>Anions by Ion Chromatography</b>										
EPA 300.0	Fluoride	< 0.100	mg/L	0.100	0.052		X751054	SMB	12/28/17 10:23	
EPA 300.0	Sulfate as SO <sub>4</sub>	< 0.30	mg/L	0.30	0.11		X751054	SMB	12/28/17 10:23	

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

**John Kern**  
Laboratory Director



## COLORADO

Division of Reclamation,  
Mining and Safety

Department of Natural Resources

1313 Sherman St. Room 215  
Denver, CO 80203

February 21, 2018

Lawrence Fiske  
Battle Mountain Resources, Inc.  
P.O. Box 310  
San Luis, CO 81152-0310

### **Annual Fee, Report and Map Due**

Under the terms of your Reclamation Permit and Colorado Statutes, you must submit an Annual Fee and Annual Report (including a map). You must pay the Annual Fee and submit an Annual Report each year until reclamation responsibility release is granted. The Annual Fee is not a renewal fee. The Fee and Report are for last year's exploration or mining and reclamation season, and must be paid even if your operation was inactive.

If you have requested reclamation responsibility release from the Division of Reclamation, Mining and Safety ("Division") but release has not been granted by the anniversary date listed below, the Annual Fee, Report and Map must be submitted. If the permit is released before the anniversary date, then by Statute, it is not necessary to pay an Annual Fee or submit an Annual Report for that year. The annual fee, report, and map are due on or before the Anniversary Date for the following operation:

Permit:	M-1988-112
Operation Name:	San Luis Project
Anniversary Date:	March 23, 2018
Total Fee Due:	\$1,150.00 (Due on or before your anniversary date)

If the complete annual fee submittal is not received on or before your anniversary date, the enforcement process will be initiated. Enforcement actions may result in civil penalties and possible revocation of your permit.

**Effective January 1, 2018, all annual report, map, and fees must be submitted electronically, using the Division's ePermitting system.**

To file your report, upload your map, and pay your fee online now, go to the link below:  
[https://dnrforms.state.co.us/Forms/DRMSeForms\\_LandingPage](https://dnrforms.state.co.us/Forms/DRMSeForms_LandingPage)





If you have not yet set up your ePermitting account, go to the link below to get started:

<http://mining.state.co.us/Pages/ePermitting.aspx>

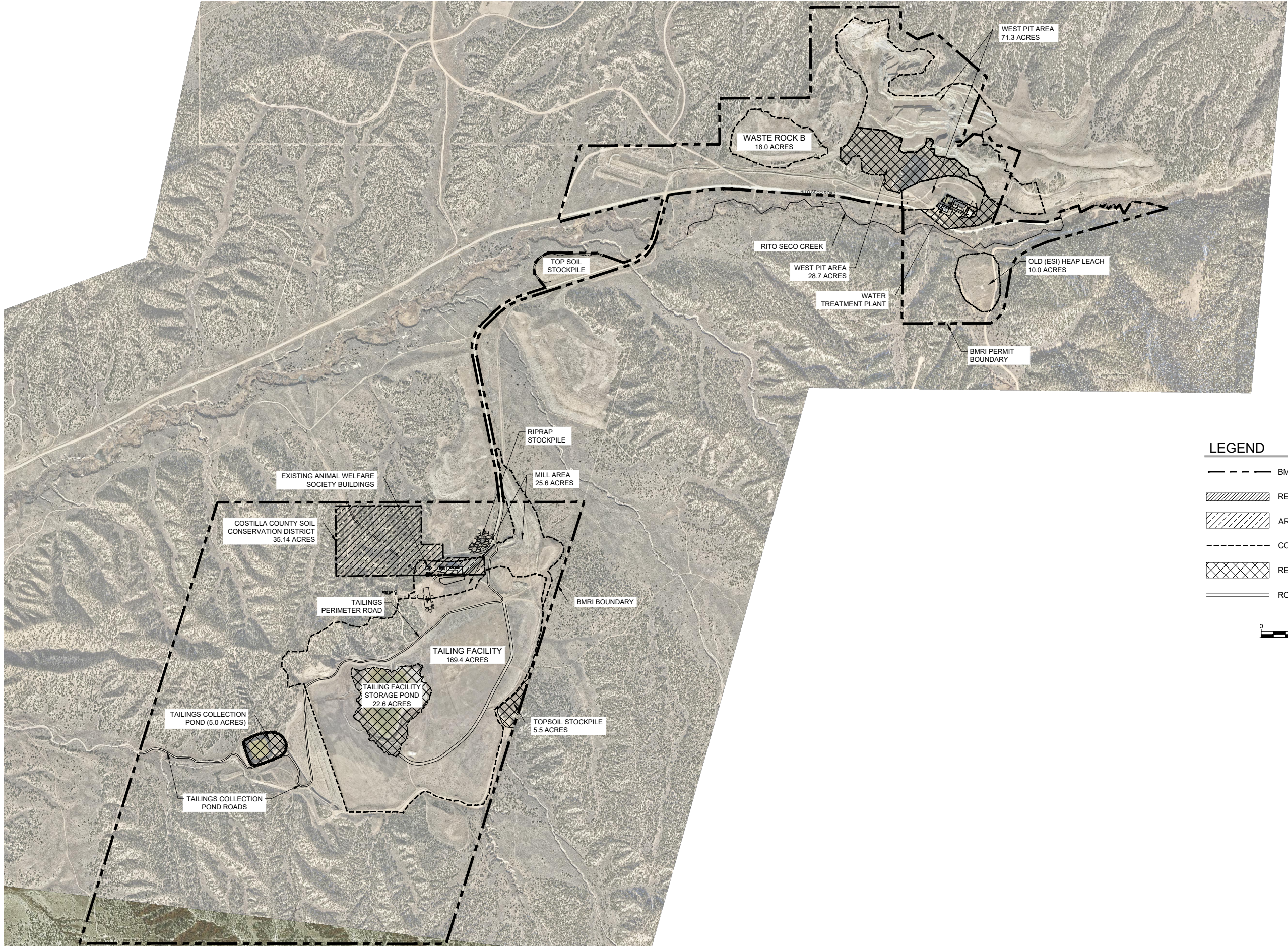
There are detailed instructions on how to file your report, upload your map, and pay your fee in the ePermitting User's Manual at:

<http://mining.state.co.us/Documents/DRMSePermittingManualVer1.pdf>

If you need additional information or have any questions, please contact Lucas J. West at the Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at (303) 866-3567 ext. 8187, or by email at [Lucas.west@state.co.us](mailto:Lucas.west@state.co.us).

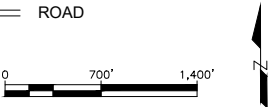


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LEGEND

- BMRI PERMIT BOUNDARY
- REQUESTED RELEASE AREAS
- AREA RELEASED IN 2014 AND 2015
- COMPLETED RECLAMATION AREAS
- REMAINING RECLAMATION AREAS
- ROAD



BATTLE MOUNTAIN RECLAMATION		NO	REVISION DESCR.	DATE	BY
2017 SAN LUIS PERMIT AREA					
EXHIBIT 1					
THE DRAWING, INCLUDING ENGINEERING, DESIGN, AND SPECIFICATIONS IS INTENDED SOLELY FOR THE PROJECT STATED IN THE TITLE BLOCK. IT MAY NOT BE REPRODUCED OR USED FOR OTHER PROJECTS WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. NO PROHIBITED.					
ISSUED BY:					
Project Number: 101.05.05					
Drawn By: TB					
Designed By: MLC					
Approved By: MLC					
Date: 3/20/2018					
Scale: 1" = 1400'					
Drawing Number:					
1.0					