



**BATTLE MOUNTAIN RESOURCES, INC.**

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February 18, 2014

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. and Energy Laboratories 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  
Environmental Representative III

Enclosures

cc: Larry Fiske  
File

**RECEIVED**

FEB 21 2014

Division of Reclamation,  
Mining & Safety

**MONTHLY, QUARTERLY AND SEMI-ANNUAL SAMPLING**

| <b>SAMPLE I.D</b> | <b>SAMPLE TYPE</b> | <b>SAMPLE LOCATION</b> | <b>PH</b> |
|-------------------|--------------------|------------------------|-----------|
| 131016BMGBF4      | QUARTERLY          | BF-4                   | 6.81      |
| 131016BMGBF6      | QUARTERLY          | BF-6                   | 6.41      |
| 131021BMGM9       | QUARTERLY          | M-9                    | 7.34      |
| 131021BMGM13R     | QUARTERLY          | M-13R                  | 7.24      |
| 131028BMGM16      | QUARTERLY          | M-16                   | 6.82      |
| 131028BMGM22      | QUARTERLY          | M-22                   | 7.24      |
| 131028BMGM10      | QUARTERLY          | M-10                   | 7.74      |
| 131028BMGM34      | QUARTERLY          | M-34                   | 6.88      |
| 131031BMGLD       | QUARTERLY          | LEAK DETECTION         | 6.92      |
| 131031BMGTAILS    | MONTHLY/QUARTERLY  | TAILINGS POND          | 7.86      |
| 131031BMGCOL      | QUARTERLY          | COLLECTION POND        | 7.42      |
| 131125BMGTAILS    | MONTHLY            | TAILINGS POND          | 7.91      |
| 131202BMGWD1      | QUARTERLY          | WD-1                   | 7.73      |
| 131202BMGFB       |                    | FIELD BLANK            |           |
| 131202BMGRB       |                    | RINSE BLANK            |           |
| 131209BMGFB       |                    | FIELD BLANK            |           |
| 131209BMGRB       |                    | RINSE BLANK            |           |
| 131209BMGM26      | QUARTERLY          | M-26                   | 7.23      |
| 131230BMGTAILS    | MONTHLY            | TAILINGS POND          | 7.34      |
| 140102BMGRS1      | QUARTERLY          | RS-1                   | 7.67      |
| 140102BMGRS2      | QUARTERLY          | RS-2                   | 7.42      |
| 140102BMGRS5      | QUARTERLY          | RS-5                   | 7.51      |
| 140102BMGFB       |                    | FIELD BLANK            |           |
| 140102BMGRB       |                    | RINSE BLANK            |           |
| 140108BMGM19      | QUARTERLY          | M-19                   | 6.65      |
| 140108BMGM21      | QUARTERLY          | M-21                   | 6.84      |
| 140108BMGM24      | QUARTERLY          | M-24                   | 7.26      |
| 140108MGM11R      | QUARTERLY          | M-11R                  | 7.2       |

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Division of Reclamation,  
Mining & Safety



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: **W3J0453**  
Reported: 01-Nov-13 12:04

Client Sample ID: **131016BMGBF4**SVL Sample ID: **W3J0453-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 16-Oct-13 15:05

Received: 18-Oct-13

Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Metals (Total)**

|           |         |     |      |       |       |  |         |    |                |  |
|-----------|---------|-----|------|-------|-------|--|---------|----|----------------|--|
| EPA 200.7 | Calcium | 138 | mg/L | 0.040 | 0.015 |  | W343009 | AS | 10/30/13 14:20 |  |
|-----------|---------|-----|------|-------|-------|--|---------|----|----------------|--|

**Metals (Dissolved)**

|           |           |        |      |         |          |  |         |     |                |  |
|-----------|-----------|--------|------|---------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Iron      | 1.27   | mg/L | 0.060   | 0.023    |  | W343007 | TJK | 10/31/13 14:44 |  |
| EPA 200.7 | Manganese | 4.87   | mg/L | 0.0040  | 0.0010   |  | W343007 | TJK | 10/31/13 14:44 |  |
| EPA 200.8 | Copper    | 0.0491 | mg/L | 0.00300 | 0.000061 |  | W342319 | KWH | 10/28/13 06:39 |  |

**Classical Chemistry Parameters**

|           |                    |     |      |    |  |  |         |     |                |  |
|-----------|--------------------|-----|------|----|--|--|---------|-----|----------------|--|
| SM 2540 C | Total Diss. Solids | 535 | mg/L | 10 |  |  | W343023 | JDM | 10/22/13 11:25 |  |
|-----------|--------------------|-----|------|----|--|--|---------|-----|----------------|--|

**Anions by Ion Chromatography**

|           |                            |      |      |      |      |    |         |     |                |    |
|-----------|----------------------------|------|------|------|------|----|---------|-----|----------------|----|
| EPA 300.0 | Fluoride                   | 6.59 | mg/L | 2.50 | 0.55 | 25 | W344214 | AEW | 10/30/13 18:55 | D2 |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | 282  | mg/L | 7.50 | 0.52 | 25 | W344214 | AEW | 10/30/13 18:55 | D2 |

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

**Kirby Gray**  
Technical Director

BF-4  
Temp - 10.0 °C  
p.H. - 6.81

Quarterly



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: W3J0453**  
**Reported: 01-Nov-13 12:04**

Client Sample ID: **131016BMGBF6**SVL Sample ID: **W3J0453-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 16-Oct-13 16:17  
Received: 18-Oct-13  
Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Metals (Total)**

|           |         |     |      |       |       |  |         |    |                |  |
|-----------|---------|-----|------|-------|-------|--|---------|----|----------------|--|
| EPA 200.7 | Calcium | 196 | mg/L | 0.040 | 0.015 |  | W343009 | AS | 10/30/13 14:30 |  |
|-----------|---------|-----|------|-------|-------|--|---------|----|----------------|--|

**Metals (Dissolved)**

|           |           |       |      |         |          |  |         |     |                |  |
|-----------|-----------|-------|------|---------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Iron      | 31.4  | mg/L | 0.060   | 0.023    |  | W343007 | TJK | 10/31/13 14:47 |  |
| EPA 200.7 | Manganese | 16.0  | mg/L | 0.0040  | 0.0010   |  | W343007 | TJK | 10/31/13 14:47 |  |
| EPA 200.8 | Copper    | 0.512 | mg/L | 0.00300 | 0.000061 |  | W342319 | KWH | 10/28/13 06:40 |  |

**Classical Chemistry Parameters**

|           |                    |     |      |    |  |  |         |     |                |  |
|-----------|--------------------|-----|------|----|--|--|---------|-----|----------------|--|
| SM 2540 C | Total Diss. Solids | 802 | mg/L | 10 |  |  | W343023 | JDM | 10/22/13 11:25 |  |
|-----------|--------------------|-----|------|----|--|--|---------|-----|----------------|--|

**Anions by Ion Chromatography**

|           |                            |      |      |      |      |    |         |     |                |    |
|-----------|----------------------------|------|------|------|------|----|---------|-----|----------------|----|
| EPA 300.0 | Fluoride                   | 8.48 | mg/L | 2.50 | 0.55 | 25 | W344214 | AEW | 10/30/13 19:17 | D2 |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | 514  | mg/L | 7.50 | 0.52 | 25 | W344214 | AEW | 10/30/13 19:17 | D2 |

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

**Kirby Gray**  
Technical Director

BF-6  
Temp - 10.6 °C  
P.H. - 6.41

Quarterly



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

Project Name: **BMSL - Routine**  
Work Order: **W3J0523**  
Reported: 06-Nov-13 09:19

Client Sample ID: **131021BMGM9**SVL Sample ID: **W3J0523-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 21-Oct-13 12:30  
Received: 23-Oct-13  
Sampled By: AT

| Method                | Analyte                          | Result | Units | RL    | MDL   | Dilution | Batch   | Analyst | Analyzed       | Notes |
|-----------------------|----------------------------------|--------|-------|-------|-------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b> |                                  |        |       |       |       |          |         |         |                |       |
| EPA 200.7             | Calcium                          | 85.6   | mg/L  | 0.040 | 0.015 |          | W343227 | TJK     | 11/05/13 11:38 | M3    |
| EPA 200.7             | Magnesium                        | 13.3   | mg/L  | 0.060 | 0.039 |          | W343227 | TJK     | 11/05/13 11:38 |       |
| EPA 200.7             | Potassium                        | 1.76   | mg/L  | 0.50  | 0.13  |          | W343227 | TJK     | 11/05/13 11:38 |       |
| EPA 200.7             | Silica (SiO <sub>2</sub> )       | 22.7   | mg/L  | 0.17  | 0.05  |          | W343227 | TJK     | 11/05/13 11:38 | M1,R4 |
| EPA 200.7             | Sodium                           | 27.2   | mg/L  | 0.50  | 0.08  |          | W343227 | TJK     | 11/05/13 11:38 |       |
| SM 2340B              | Hardness (as CaCO <sub>3</sub> ) | 269    | mg/L  | 0.347 | 0.198 |          | N/A     |         | 11/05/13 11:38 |       |

**Metals (Dissolved)**

|           |           |            |      |          |          |  |         |     |                |  |
|-----------|-----------|------------|------|----------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Aluminum  | < 0.040    | mg/L | 0.040    | 0.031    |  | W343225 | TJK | 11/05/13 09:50 |  |
| EPA 200.7 | Barium    | 0.119      | mg/L | 0.0020   | 0.0005   |  | W343225 | TJK | 11/04/13 13:45 |  |
| EPA 200.7 | Cadmium   | < 0.0020   | mg/L | 0.0020   | 0.0007   |  | W343225 | TJK | 11/04/13 13:45 |  |
| EPA 200.7 | Chromium  | < 0.0060   | mg/L | 0.0060   | 0.0015   |  | W343225 | TJK | 11/04/13 13:45 |  |
| EPA 200.7 | Iron      | < 0.060    | mg/L | 0.060    | 0.023    |  | W343225 | TJK | 11/04/13 13:45 |  |
| EPA 200.7 | Lead      | < 0.0075   | mg/L | 0.0075   | 0.0023   |  | W343225 | TJK | 11/04/13 13:45 |  |
| EPA 200.7 | Manganese | < 0.0040   | mg/L | 0.0040   | 0.0010   |  | W343225 | TJK | 11/04/13 13:45 |  |
| EPA 200.7 | Nickel    | < 0.010    | mg/L | 0.010    | 0.003    |  | W343225 | TJK | 11/04/13 13:45 |  |
| EPA 200.7 | Zinc      | 0.472      | mg/L | 0.0100   | 0.0023   |  | W343225 | TJK | 11/04/13 13:45 |  |
| EPA 200.8 | Arsenic   | < 0.0100   | mg/L | 0.0100   | 0.0003   |  | W343243 | KWH | 10/31/13 08:06 |  |
| EPA 200.8 | Copper    | 0.00333    | mg/L | 0.00300  | 0.000061 |  | W343243 | KWH | 10/31/13 08:06 |  |
| EPA 200.8 | Selenium  | < 0.0100   | mg/L | 0.0100   | 0.00026  |  | W343243 | KWH | 10/31/13 08:06 |  |
| EPA 200.8 | Silver    | < 0.000100 | mg/L | 0.000100 | 0.000012 |  | W343243 | KWH | 10/31/13 08:06 |  |
| EPA 245.1 | Mercury   | < 0.00020  | mg/L | 0.00020  | 0.000045 |  | W344083 | STA | 11/04/13 13:26 |  |

**Classical Chemistry Parameters**

|                |                    |          |                           |        |        |  |         |     |                |  |
|----------------|--------------------|----------|---------------------------|--------|--------|--|---------|-----|----------------|--|
| SM 2320B/2310B | Total Alkalinity   | 287      | mg/L as CaCO <sub>3</sub> | 1.0    |        |  | W344282 | DKS | 10/31/13 08:51 |  |
| SM 2540 C      | Total Diss. Solids | 353      | mg/L                      | 10     |        |  | W343267 | JDM | 10/24/13 17:35 |  |
| SM 4500-CN-I   | Cyanide (WAD)      | < 0.0100 | mg/L                      | 0.0100 | 0.0017 |  | W344029 | VRH | 10/29/13 10:35 |  |

**Anions by Ion Chromatography**

|           |                            |      |      |      |      |  |         |     |                |  |
|-----------|----------------------------|------|------|------|------|--|---------|-----|----------------|--|
| EPA 300.0 | Chloride                   | 3.82 | mg/L | 0.20 | 0.04 |  | W344366 | AEW | 11/01/13 22:09 |  |
| EPA 300.0 | Fluoride                   | 0.32 | mg/L | 0.10 | 0.02 |  | W344366 | AEW | 11/01/13 22:09 |  |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | 20.3 | mg/L | 0.30 | 0.02 |  | W344366 | AEW | 11/01/13 22:09 |  |

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 6.61 meq/L      Anion Sum: 6.28 meq/L      C/A Balance: 2.59 %      Calculated TDS: 325      TDS/cTDS: 1.09

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

Kirby Gray  
Technical Director

Quarterly

M-9  
Temp - 12.4°C  
P.A. - 7.34



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Battle Mountain - San Luis  
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Project Name: **BMSL - Routine**  
Work Order: **W3J0523**  
Reported: 06-Nov-13 09:19

Client Sample ID: **121021BMGM13R**SVL Sample ID: **W3J0523-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 21-Oct-13 15:45  
Received: 23-Oct-13  
Sampled By: AT

| Method                | Analyte                          | Result | Units | RL    | MDL   | Dilution | Batch   | Analyst | Analyzed       | Notes |
|-----------------------|----------------------------------|--------|-------|-------|-------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b> |                                  |        |       |       |       |          |         |         |                |       |
| EPA 200.7             | Calcium                          | 94.9   | mg/L  | 0.040 | 0.015 |          | W343227 | TJK     | 11/05/13 11:55 |       |
| EPA 200.7             | Magnesium                        | 16.0   | mg/L  | 0.060 | 0.039 |          | W343227 | TJK     | 11/05/13 11:55 |       |
| EPA 200.7             | Potassium                        | 1.55   | mg/L  | 0.50  | 0.13  |          | W343227 | TJK     | 11/05/13 11:55 |       |
| EPA 200.7             | Silica (SiO <sub>2</sub> )       | 24.2   | mg/L  | 0.17  | 0.05  |          | W343227 | TJK     | 11/05/13 11:55 |       |
| EPA 200.7             | Sodium                           | 35.9   | mg/L  | 0.50  | 0.08  |          | W343227 | TJK     | 11/05/13 11:55 |       |
| SM 2340B              | Hardness (as CaCO <sub>3</sub> ) | 303    | mg/L  | 0.347 | 0.198 |          | N/A     |         | 11/05/13 11:55 |       |

**Metals (Dissolved)**

|           |           |            |      |          |          |  |         |     |                |  |
|-----------|-----------|------------|------|----------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Aluminum  | < 0.040    | mg/L | 0.040    | 0.031    |  | W343225 | TJK | 11/05/13 09:53 |  |
| EPA 200.7 | Barium    | 0.133      | mg/L | 0.0020   | 0.0005   |  | W343225 | TJK | 11/04/13 13:48 |  |
| EPA 200.7 | Cadmium   | < 0.0020   | mg/L | 0.0020   | 0.0007   |  | W343225 | TJK | 11/04/13 13:48 |  |
| EPA 200.7 | Chromium  | < 0.0060   | mg/L | 0.0060   | 0.0015   |  | W343225 | TJK | 11/04/13 13:48 |  |
| EPA 200.7 | Iron      | < 0.060    | mg/L | 0.060    | 0.023    |  | W343225 | TJK | 11/04/13 13:48 |  |
| EPA 200.7 | Lead      | < 0.0075   | mg/L | 0.0075   | 0.0023   |  | W343225 | TJK | 11/04/13 13:48 |  |
| EPA 200.7 | Manganese | < 0.0040   | mg/L | 0.0040   | 0.0010   |  | W343225 | TJK | 11/04/13 13:48 |  |
| EPA 200.7 | Nickel    | < 0.010    | mg/L | 0.010    | 0.003    |  | W343225 | TJK | 11/04/13 13:48 |  |
| EPA 200.7 | Zinc      | 0.640      | mg/L | 0.0100   | 0.0023   |  | W343225 | TJK | 11/04/13 13:48 |  |
| EPA 200.8 | Arsenic   | < 0.0100   | mg/L | 0.0100   | 0.0003   |  | W343243 | KWH | 10/31/13 08:19 |  |
| EPA 200.8 | Copper    | < 0.00300  | mg/L | 0.00300  | 0.000061 |  | W343243 | KWH | 10/31/13 08:19 |  |
| EPA 200.8 | Selenium  | < 0.0100   | mg/L | 0.0100   | 0.00026  |  | W343243 | KWH | 10/31/13 08:19 |  |
| EPA 200.8 | Silver    | < 0.000100 | mg/L | 0.000100 | 0.000012 |  | W343243 | KWH | 10/31/13 08:19 |  |
| EPA 245.1 | Mercury   | < 0.00020  | mg/L | 0.00020  | 0.000045 |  | W344083 | STA | 11/04/13 13:28 |  |

**Classical Chemistry Parameters**

|                |                    |          |                           |        |        |  |         |     |                |  |
|----------------|--------------------|----------|---------------------------|--------|--------|--|---------|-----|----------------|--|
| SM 2320B/2310B | Total Alkalinity   | 332      | mg/L as CaCO <sub>3</sub> | 10     |        |  | W344282 | DKS | 10/31/13 08:59 |  |
| SM 2540 C      | Total Diss. Solids | 386      | mg/L                      | 10     |        |  | W343267 | JDM | 10/24/13 17:35 |  |
| SM 4500-CN-I   | Cyanide (WAD)      | < 0.0100 | mg/L                      | 0.0100 | 0.0017 |  | W344029 | VRH | 10/29/13 10:37 |  |

**Anions by Ion Chromatography**

|           |                            |      |      |      |      |  |         |     |                |  |
|-----------|----------------------------|------|------|------|------|--|---------|-----|----------------|--|
| EPA 300.0 | Chloride                   | 3.72 | mg/L | 0.20 | 0.04 |  | W344366 | AEW | 11/01/13 22:30 |  |
| EPA 300.0 | Fluoride                   | 0.56 | mg/L | 0.10 | 0.02 |  | W344366 | AEW | 11/01/13 22:30 |  |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | 19.5 | mg/L | 0.30 | 0.02 |  | W344366 | AEW | 11/01/13 22:30 |  |

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 7.68 meq/L    Anion Sum: 7.17 meq/L    C/A Balance: 3.41 %    Calculated TDS: 371    TDS/cTDS: 1.04

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

Kirby Gray  
Technical Director

Quarterly

M-13R

Temp - 13.1°C  
P.H. - 7.24



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: **W3J0740**  
Reported: 13-Nov-13 14:02

Client Sample ID: **131028BMGM16**SVL Sample ID: **W3J0740-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 28-Oct-13 10:05  
Received: 30-Oct-13  
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  | 0.040   | 0.015    |          | W344242 | AS      | 11/12/13 16:39 |       |
| <b>Metals (Dissolved)</b>             |                            |           |       |         |          |          |         |         |                |       |
| EPA 200.7                             | Iron                       | < 0.060   | mg/L  | 0.060   | 0.023    |          | W344260 | TJK     | 11/12/13 16:19 |       |
| EPA 200.7                             | Manganese                  | < 0.0040  | mg/L  | 0.0040  | 0.0010   |          | W344260 | TJK     | 11/12/13 16:19 |       |
| EPA 200.8                             | Copper                     | < 0.00300 | mg/L  | 0.00300 | 0.000061 |          | W344273 | KWH     | 11/11/13 10:45 |       |
| <b>Classical Chemistry Parameters</b> |                            |           |       |         |          |          |         |         |                |       |
| SM 2540 C                             | Total Diss. Solids         | 106       | mg/L  | 10      |          |          | W344279 | RS      | 10/31/13 09:50 |       |
| <b>Anions by Ion Chromatography</b>   |                            |           |       |         |          |          |         |         |                |       |
| EPA 300.0                             | Fluoride                   | 0.70      | mg/L  | 0.10    | 0.02     |          | W346117 | AEW     | 11/12/13 16:35 |       |
| EPA 300.0                             | Sulfate as SO <sub>4</sub> | 14.1      | mg/L  | 0.30    | 0.02     |          | W346117 | AEW     | 11/12/13 16:35 |       |

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

**John Kern**  
Laboratory Director

M-16

Temp - 8.7°C

pH - 6.82

Quarterly



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Kellogg ID 83837-0929

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PO Box 310  
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Project Name: **BMSL - Routine**  
Work Order: **W3J0740**  
Reported: 13-Nov-13 14:02

Client Sample ID: **131028BMGM22**SVL Sample ID: **W3J0740-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 28-Oct-13 11:30

Received: 30-Oct-13

Sampled By: AT

| Method                                | Analyte                    | Result    | Units | RL      | MDL      | Dilution | Batch   | Analyst | Analyzed       | Notes |
|---------------------------------------|----------------------------|-----------|-------|---------|----------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b>                 |                            |           |       |         |          |          |         |         |                |       |
| EPA 200.7                             | Calcium                    | 55.7      | mg/L  | 0.040   | 0.015    |          | W344242 | AS      | 11/12/13 16:45 |       |
| <b>Metals (Dissolved)</b>             |                            |           |       |         |          |          |         |         |                |       |
| EPA 200.7                             | Iron                       | 0.310     | mg/L  | 0.060   | 0.023    |          | W344260 | TJK     | 11/12/13 16:27 |       |
| EPA 200.7                             | Manganese                  | 0.193     | mg/L  | 0.0040  | 0.0010   |          | W344260 | TJK     | 11/12/13 16:27 |       |
| EPA 200.8                             | Copper                     | < 0.00300 | mg/L  | 0.00300 | 0.000061 |          | W344273 | KWH     | 11/11/13 10:46 |       |
| <b>Classical Chemistry Parameters</b> |                            |           |       |         |          |          |         |         |                |       |
| SM 2540 C                             | Total Diss. Solids         | 258       | mg/L  | 10      |          |          | W344279 | RS      | 10/31/13 09:50 |       |
| <b>Anions by Ion Chromatography</b>   |                            |           |       |         |          |          |         |         |                |       |
| EPA 300.0                             | Fluoride                   | 1.29      | mg/L  | 0.10    | 0.02     |          | W346117 | AEW     | 11/12/13 16:46 |       |
| EPA 300.0                             | Sulfate as SO <sub>4</sub> | 84.4      | mg/L  | 1.50    | 0.10     | 5        | W346117 | AEW     | 11/13/13 11:39 | D2    |

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

John Kern  
Laboratory Director

M-22  
temp - 10.4 °C  
pH - 7.24



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: **W3J0740**  
Reported: 13-Nov-13 14:02

Client Sample ID: **131028BMGM10**SVL Sample ID: **W3J0740-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 28-Oct-13 15:40

Received: 30-Oct-13

Sampled By: AT

| Method                | Analyte                          | Result | Units | RL    | MDL   | Dilution | Batch   | Analyst | Analyzed       | Notes |
|-----------------------|----------------------------------|--------|-------|-------|-------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b> |                                  |        |       |       |       |          |         |         |                |       |
| EPA 200.7             | Calcium                          | 66.5   | mg/L  | 0.040 | 0.015 |          | W344242 | AS      | 11/12/13 16:57 |       |
| EPA 200.7             | Magnesium                        | 8.92   | mg/L  | 0.060 | 0.039 |          | W344242 | AS      | 11/12/13 16:57 |       |
| EPA 200.7             | Potassium                        | 1.65   | mg/L  | 0.50  | 0.13  |          | W344242 | AS      | 11/12/13 16:57 |       |
| EPA 200.7             | Silica (SiO <sub>2</sub> )       | 27.0   | mg/L  | 0.17  | 0.05  |          | W344242 | AS      | 11/12/13 16:57 |       |
| EPA 200.7             | Sodium                           | 21.6   | mg/L  | 0.50  | 0.08  |          | W344242 | AS      | 11/12/13 16:57 |       |
| SM 2340B              | Hardness (as CaCO <sub>3</sub> ) | 203    | mg/L  | 0.347 | 0.198 |          | N/A     |         | 11/12/13 16:57 |       |

**Metals (Dissolved)**

|           |           |            |      |          |          |   |         |     |                |    |
|-----------|-----------|------------|------|----------|----------|---|---------|-----|----------------|----|
| EPA 200.7 | Aluminum  | < 0.040    | mg/L | 0.040    | 0.031    |   | W344260 | TJK | 11/12/13 16:33 |    |
| EPA 200.7 | Barium    | 0.124      | mg/L | 0.0020   | 0.0005   |   | W344260 | TJK | 11/12/13 16:33 |    |
| EPA 200.7 | Cadmium   | < 0.0020   | mg/L | 0.0020   | 0.0007   |   | W344260 | TJK | 11/12/13 16:33 |    |
| EPA 200.7 | Chromium  | < 0.0060   | mg/L | 0.0060   | 0.0015   |   | W344260 | TJK | 11/12/13 16:33 |    |
| EPA 200.7 | Iron      | 1.32       | mg/L | 0.060    | 0.023    |   | W344260 | TJK | 11/12/13 16:33 |    |
| EPA 200.7 | Lead      | < 0.0075   | mg/L | 0.0075   | 0.0023   |   | W344260 | TJK | 11/12/13 16:33 |    |
| EPA 200.7 | Manganese | 0.935      | mg/L | 0.0040   | 0.0010   |   | W344260 | TJK | 11/12/13 16:33 |    |
| EPA 200.7 | Nickel    | < 0.010    | mg/L | 0.010    | 0.003    |   | W344260 | TJK | 11/12/13 16:33 |    |
| EPA 200.7 | Zinc      | < 0.0100   | mg/L | 0.0100   | 0.0023   |   | W344260 | TJK | 11/12/13 16:33 |    |
| EPA 200.8 | Arsenic   | < 0.0100   | mg/L | 0.0100   | 0.0003   |   | W344273 | KWH | 11/11/13 10:48 |    |
| EPA 200.8 | Copper    | < 0.00300  | mg/L | 0.00300  | 0.000061 |   | W344273 | KWH | 11/11/13 10:48 |    |
| EPA 200.8 | Selenium  | < 0.0100   | mg/L | 0.0100   | 0.00026  |   | W344273 | KWH | 11/11/13 10:48 |    |
| EPA 200.8 | Silver    | < 0.000160 | mg/L | 0.000160 | 0.000024 | 2 | W344273 | KWH | 11/12/13 07:00 | D1 |
| EPA 245.1 | Mercury   | < 0.00020  | mg/L | 0.00020  | 0.000045 |   | W345232 | STA | 11/11/13 13:25 |    |

**Classical Chemistry Parameters**

|                |                    |     |                           |     |  |         |     |                |  |
|----------------|--------------------|-----|---------------------------|-----|--|---------|-----|----------------|--|
| SM 2320B/2310B | Total Alkalinity   | 222 | mg/L as CaCO <sub>3</sub> | 1.0 |  | W344282 | DKS | 10/31/13 09:24 |  |
| SM 2540 C      | Total Diss. Solids | 307 | mg/L                      | 10  |  | W344279 | RS  | 10/31/13 09:50 |  |

**Anions by Ion Chromatography**

|           |                            |      |      |      |      |         |     |                |  |
|-----------|----------------------------|------|------|------|------|---------|-----|----------------|--|
| EPA 300.0 | Chloride                   | 11.6 | mg/L | 0.20 | 0.04 | W346117 | AEW | 11/12/13 17:08 |  |
| EPA 300.0 | Fluoride                   | 0.89 | mg/L | 0.10 | 0.02 | W346117 | AEW | 11/12/13 17:08 |  |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | 34.8 | mg/L | 0.30 | 0.02 | W346117 | AEW | 11/12/13 17:08 |  |

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 5.12 meq/L    Anion Sum: 5.53 meq/L    C/A Balance: -3.88 %    Calculated TDS: 279    TDS/cTDS: 1.10

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

John Kern  
Laboratory Director

M-10  
Temp - 9.8°C  
P.H. - 7.74

Quarterly



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Battle Mountain Resources Inc  
**Project:** San Luis  
**Lab ID:** C13101137-002  
**Client Sample ID:** 131028BMGM10

**Report Date:** 11/15/13  
**Collection Date:** 10/28/13 15:40  
**Date Received:** 10/31/13  
**Matrix:** Aqueous

| Analyses                     | Result | Units | Qualifiers | RL | MCL/<br>QCL | Method | Analysis Date / By   |
|------------------------------|--------|-------|------------|----|-------------|--------|----------------------|
| <b>RADIONUCLIDES - TOTAL</b> |        |       |            |    |             |        |                      |
| Gross Alpha                  | 1.5    | pCi/L | U          |    | E900.0      |        | 11/11/13 18:57 / lbb |
| Gross Alpha precision (±)    | 1.3    | pCi/L |            |    | E900.0      |        | 11/11/13 18:57 / lbb |
| Gross Alpha MDC              | 2.0    | pCi/L |            |    | E900.0      |        | 11/11/13 18:57 / lbb |
| Gross Beta                   | 1.6    | pCi/L | U          |    | E900.0      |        | 11/11/13 18:57 / lbb |
| Gross Beta precision (±)     | 1.6    | pCi/L |            |    | E900.0      |        | 11/11/13 18:57 / lbb |
| Gross Beta MDC               | 2.6    | pCi/L |            |    | E900.0      |        | 11/11/13 18:57 / lbb |

M-10

Quarterly

**Report Definitions:**  
RL - Analyte reporting limit.  
QCL - Quality control limit.  
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.  
U - Not detected at minimum detectable concentration



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: **W3J0740**  
Reported: 13-Nov-13 14:02

Client Sample ID: **131028BMGM34**SVL Sample ID: **W3J0740-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 28-Oct-13 14:20  
Received: 30-Oct-13  
Sampled By: AT

| Method                | Analyte                          | Result | Units | RL    | MDL   | Dilution | Batch   | Analyst | Analyzed       | Notes |
|-----------------------|----------------------------------|--------|-------|-------|-------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b> |                                  |        |       |       |       |          |         |         |                |       |
| EPA 200.7             | Calcium                          | 18.7   | mg/L  | 0.040 | 0.015 |          | W344242 | AS      | 11/12/13 16:51 |       |
| EPA 200.7             | Magnesium                        | 4.56   | mg/L  | 0.060 | 0.039 |          | W344242 | AS      | 11/12/13 16:51 |       |
| EPA 200.7             | Potassium                        | 0.95   | mg/L  | 0.50  | 0.13  |          | W344242 | AS      | 11/12/13 16:51 |       |
| EPA 200.7             | Silica (SiO <sub>2</sub> )       | 14.4   | mg/L  | 0.17  | 0.05  |          | W344242 | AS      | 11/12/13 16:51 |       |
| EPA 200.7             | Sodium                           | 7.36   | mg/L  | 0.50  | 0.08  |          | W344242 | AS      | 11/12/13 16:51 |       |
| SM 2340B              | Hardness (as CaCO <sub>3</sub> ) | 65.3   | mg/L  | 0.347 | 0.198 |          | N/A     |         | 11/12/13 16:51 |       |

**Metals (Dissolved)**

|           |           |            |      |          |          |   |         |     |                |    |
|-----------|-----------|------------|------|----------|----------|---|---------|-----|----------------|----|
| EPA 200.7 | Aluminum  | < 0.040    | mg/L | 0.040    | 0.031    |   | W344260 | TJK | 11/12/13 16:30 |    |
| EPA 200.7 | Barium    | 0.0372     | mg/L | 0.0020   | 0.0005   |   | W344260 | TJK | 11/12/13 16:30 |    |
| EPA 200.7 | Cadmium   | < 0.0020   | mg/L | 0.0020   | 0.0007   |   | W344260 | TJK | 11/12/13 16:30 |    |
| EPA 200.7 | Chromium  | < 0.0060   | mg/L | 0.0060   | 0.0015   |   | W344260 | TJK | 11/12/13 16:30 |    |
| EPA 200.7 | Iron      | < 0.060    | mg/L | 0.060    | 0.023    |   | W344260 | TJK | 11/12/13 16:30 |    |
| EPA 200.7 | Lead      | < 0.0075   | mg/L | 0.0075   | 0.0023   |   | W344260 | TJK | 11/12/13 16:30 |    |
| EPA 200.7 | Manganese | 0.188      | mg/L | 0.0040   | 0.0010   |   | W344260 | TJK | 11/12/13 16:30 |    |
| EPA 200.7 | Nickel    | < 0.010    | mg/L | 0.010    | 0.003    |   | W344260 | TJK | 11/12/13 16:30 |    |
| EPA 200.7 | Zinc      | < 0.0100   | mg/L | 0.0100   | 0.0023   |   | W344260 | TJK | 11/12/13 16:30 |    |
| EPA 200.8 | Arsenic   | < 0.0100   | mg/L | 0.0100   | 0.0003   |   | W344273 | KWH | 11/11/13 10:29 |    |
| EPA 200.8 | Copper    | < 0.00300  | mg/L | 0.00300  | 0.000061 |   | W344273 | KWH | 11/11/13 10:29 |    |
| EPA 200.8 | Selenium  | < 0.0100   | mg/L | 0.0100   | 0.00026  |   | W344273 | KWH | 11/11/13 10:29 |    |
| EPA 200.8 | Silver    | < 0.000160 | mg/L | 0.000160 | 0.000024 | 2 | W344273 | KWH | 11/12/13 06:55 | D1 |
| EPA 245.1 | Mercury   | < 0.00020  | mg/L | 0.00020  | 0.000045 |   | W345232 | STA | 11/11/13 13:23 |    |

**Classical Chemistry Parameters**

|                |                    |      |                           |     |  |         |     |                |  |
|----------------|--------------------|------|---------------------------|-----|--|---------|-----|----------------|--|
| SM 2320B/2310B | Total Alkalinity   | 66.0 | mg/L as CaCO <sub>3</sub> | 1.0 |  | W344282 | DKS | 10/31/13 09:19 |  |
| SM 2540 C      | Total Diss. Solids | 99   | mg/L                      | 10  |  | W344279 | RS  | 10/31/13 09:50 |  |

**Anions by Ion Chromatography**

|           |                            |      |      |      |      |         |     |                |  |
|-----------|----------------------------|------|------|------|------|---------|-----|----------------|--|
| EPA 300.0 | Chloride                   | 3.01 | mg/L | 0.20 | 0.04 | W346117 | AEW | 11/12/13 16:57 |  |
| EPA 300.0 | Fluoride                   | 0.54 | mg/L | 0.10 | 0.02 | W346117 | AEW | 11/12/13 16:57 |  |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | 14.1 | mg/L | 0.30 | 0.02 | W346117 | AEW | 11/12/13 16:57 |  |

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 1.66 meq/L    Anion Sum: 1.73 meq/L    C/A Balance: -1.80 %    Calculated TDS: 89    TDS/cTDS: 1.11

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

John Kern  
Laboratory Director

M-34

Quarterly

Temp 9.3°C

p.H. 6.88



## LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Battle Mountain Resources Inc  
**Project:** San Luis  
**Lab ID:** C13101137-001  
**Client Sample ID:** 131028BMGM34

**Report Date:** 11/15/13  
**Collection Date:** 10/28/13 14:20  
**Date Received:** 10/31/13  
**Matrix:** Aqueous

| Analyses                     | Result | Units | Qualifiers | RL | MCL/<br>QCL | Method | Analysis Date / By   |
|------------------------------|--------|-------|------------|----|-------------|--------|----------------------|
| <b>RADIONUCLIDES - TOTAL</b> |        |       |            |    |             |        |                      |
| Gross Alpha                  | 0.2    | pCi/L | U          |    | E900.0      |        | 11/11/13 18:57 / lbb |
| Gross Alpha precision (±)    | 0.9    | pCi/L |            |    | E900.0      |        | 11/11/13 18:57 / lbb |
| Gross Alpha MDC              | 1.4    | pCi/L |            |    | E900.0      |        | 11/11/13 18:57 / lbb |
| Gross Beta                   | -1     | pCi/L | U          |    | E900.0      |        | 11/11/13 18:57 / lbb |
| Gross Beta precision (±)     | 1.6    | pCi/L |            |    | E900.0      |        | 11/11/13 18:57 / lbb |
| Gross Beta MDC               | 2.6    | pCi/L |            |    | E900.0      |        | 11/11/13 18:57 / lbb |

M-34

Quarterly

**Report Definitions:**  
RL - Analyte reporting limit.  
QCL - Quality control limit.  
MDC - Minimum detectable concentration

MCL - Maximum contaminant level.  
ND - Not detected at the reporting limit.  
U - Not detected at minimum detectable concentration



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: **W3K0009**  
Reported: 14-Nov-13 14:43

Client Sample ID: **131031BMGTALES**SVL Sample ID: **W3K0009-03 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 31-Oct-13 10:30  
Received: 01-Nov-13  
Sampled By: AT

| Method                | Analyte | Result   | Units | RL      | MDL     | Dilution | Batch   | Analyst | Analyzed       | Notes |
|-----------------------|---------|----------|-------|---------|---------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b> |         |          |       |         |         |          |         |         |                |       |
| EPA 200.7             | Calcium | 422      | mg/L  | 0.040   | 0.015   |          | W345006 | AS      | 11/12/13 16:14 |       |
| EPA 200.7             | Iron    | 0.552    | mg/L  | 0.060   | 0.023   |          | W345006 | AS      | 11/12/13 16:14 |       |
| EPA 200.7             | Sodium  | 566      | mg/L  | 0.50    | 0.08    |          | W345006 | AS      | 11/12/13 16:14 |       |
| EPA 200.7             | Zinc    | < 0.0100 | mg/L  | 0.0100  | 0.0023  |          | W345006 | AS      | 11/12/13 16:14 |       |
| EPA 200.8             | Arsenic | < 0.0100 | mg/L  | 0.0100  | 0.0008  | 2.5      | W345007 | DT      | 11/13/13 15:27 |       |
| EPA 200.8             | Copper  | 0.0192   | mg/L  | 0.00300 | 0.00015 | 2.5      | W345007 | DT      | 11/13/13 15:27 |       |

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

John Kern  
Laboratory Director

Monthly - Quarterly  
Tailings Pond

Temp - 2.2°C  
P.H. - 7.86



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: **W3K0009**  
Reported: 14-Nov-13 14:43

Client Sample ID: **131031BMGLD**SVL Sample ID: **W3K0009-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 31-Oct-13 09:15  
Received: 01-Nov-13  
Sampled By: AT

| Method                | Analyte | Result  | Units | RL      | MDL     | Dilution | Batch   | Analyst | Analyzed       | Notes |
|-----------------------|---------|---------|-------|---------|---------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b> |         |         |       |         |         |          |         |         |                |       |
| EPA 200.7             | Calcium | 472     | mg/L  | 0.040   | 0.015   |          | W345006 | AS      | 11/12/13 15:58 |       |
| EPA 200.7             | Iron    | < 0.060 | mg/L  | 0.060   | 0.023   |          | W345006 | AS      | 11/12/13 15:58 |       |
| EPA 200.7             | Sodium  | 755     | mg/L  | 5.00    | 0.83    | 10       | W345006 | AS      | 11/12/13 16:36 | D2,M3 |
| EPA 200.7             | Zinc    | 0.0248  | mg/L  | 0.0100  | 0.0023  |          | W345006 | AS      | 11/12/13 15:58 |       |
| EPA 200.8             | Copper  | 0.0727  | mg/L  | 0.00300 | 0.00015 | 2.5      | W345007 | DT      | 11/13/13 15:21 |       |

**Classical Chemistry Parameters**

|              |               |          |      |        |        |  |         |     |                |  |
|--------------|---------------|----------|------|--------|--------|--|---------|-----|----------------|--|
| SM 4500-CN-I | Cyanide (WAD) | < 0.0100 | mg/L | 0.0100 | 0.0017 |  | W345095 | VRH | 11/05/13 13:41 |  |
|--------------|---------------|----------|------|--------|--------|--|---------|-----|----------------|--|

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

John Kern  
Laboratory Director

Leak Detection

Temp - 11.2°C

p.H - 6.92

Quarterly



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: **W3K0009**  
Reported: 14-Nov-13 14:43

Client Sample ID: **131031BMGCOL**SVL Sample ID: **W3K0009-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 31-Oct-13 09:35  
Received: 01-Nov-13  
Sampled By: AT

| Method                | Analyte | Result   | Units | RL      | MDL     | Dilution | Batch   | Analyst | Analyzed       | Notes |
|-----------------------|---------|----------|-------|---------|---------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b> |         |          |       |         |         |          |         |         |                |       |
| EPA 200.7             | Calcium | 487      | mg/L  | 0.040   | 0.015   |          | W345006 | AS      | 11/12/13 16 02 | M3    |
| EPA 200.7             | Iron    | 20.6     | mg/L  | 0.060   | 0.023   |          | W345006 | AS      | 11/12/13 16 02 |       |
| EPA 200.7             | Sodium  | 772      | mg/L  | 5.00    | 0.83    | 10       | W345006 | AS      | 11/12/13 16 39 | D2,M3 |
| EPA 200.7             | Zinc    | < 0.0100 | mg/L  | 0.0100  | 0.0023  |          | W345006 | AS      | 11/12/13 16 02 |       |
| EPA 200.8             | Copper  | 0.00552  | mg/L  | 0.00300 | 0.00015 | 2.5      | W345007 | DT      | 11/13/13 15 25 |       |

**Classical Chemistry Parameters**

|              |               |       |      |        |        |  |         |     |                |  |
|--------------|---------------|-------|------|--------|--------|--|---------|-----|----------------|--|
| SM 4500-CN-I | Cyanide (WAD) | 0.137 | mg/L | 0.0100 | 0.0017 |  | W345095 | VRH | 11/05/13 13 43 |  |
|--------------|---------------|-------|------|--------|--------|--|---------|-----|----------------|--|

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

John Kern  
Laboratory Director

Collection Pond  
Temp - 8.5°C  
P.H. - 7.42

Quarterly



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: **W3K0560**  
Reported: 04-Dec-13 11:57

Client Sample ID: **131125 BMGTAILS**SVL Sample ID: **W3K0560-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 25-Nov-13 13:40

Received: 26-Nov-13

Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Metals (Total)**

|           |         |          |      |        |        |     |         |     |                |  |
|-----------|---------|----------|------|--------|--------|-----|---------|-----|----------------|--|
| EPA 200.8 | Arsenic | < 0.0100 | mg/L | 0.0100 | 0.0008 | 2.5 | W349008 | KWH | 12/04/13 08:13 |  |
|-----------|---------|----------|------|--------|--------|-----|---------|-----|----------------|--|

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

**John Kern**  
Laboratory Director

Tailings Pond

Temp - 1.4°C

pH - 7.91

Monthly



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 / SAN LUIS**Work Order: **W3L0046**

Reported: 18-Dec-13 09:39

Client Sample ID: **131202BMGWD1**SVL Sample ID: **W3L0046-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 02-Dec-13 10:15

Received: 04-Dec-13

Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Metals (Dissolved)**

|           |           |           |      |         |          |  |         |     |                |  |
|-----------|-----------|-----------|------|---------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Iron      | 0.238     | mg/L | 0.060   | 0.023    |  | W349178 | TJK | 12/11/13 16:41 |  |
| EPA 200.7 | Manganese | 0.116     | mg/L | 0.0040  | 0.0013   |  | W349178 | TJK | 12/11/13 16:41 |  |
| EPA 200.7 | Zinc      | < 0.0100  | mg/L | 0.0100  | 0.0023   |  | W349178 | TJK | 12/11/13 16:41 |  |
| EPA 200.8 | Arsenic   | < 0.0100  | mg/L | 0.0100  | 0.0003   |  | W349193 | KWH | 12/16/13 07:59 |  |
| EPA 200.8 | Copper    | < 0.00300 | mg/L | 0.00300 | 0.000061 |  | W349193 | KWH | 12/16/13 07:59 |  |

**Classical Chemistry Parameters**

|              |               |          |      |        |        |  |         |     |                |  |
|--------------|---------------|----------|------|--------|--------|--|---------|-----|----------------|--|
| SM 4500-CN-I | Cyanide (WAD) | < 0.0100 | mg/L | 0.0100 | 0.0017 |  | W350014 | VRH | 12/09/13 13:43 |  |
|--------------|---------------|----------|------|--------|--------|--|---------|-----|----------------|--|

**Anions by Ion Chromatography**

|           |                |      |      |      |      |  |         |     |                |  |
|-----------|----------------|------|------|------|------|--|---------|-----|----------------|--|
| EPA 300.0 | Fluoride       | 0.67 | mg/L | 0.10 | 0.02 |  | W351041 | AEW | 12/16/13 15:41 |  |
| EPA 300.0 | Sulfate as SO4 | 13.0 | mg/L | 0.30 | 0.02 |  | W351041 | AEW | 12/16/13 15:41 |  |

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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WD-1

Temp - 0°C  
pH - 7.73

Quarterly



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

**Project Name: BMSL - Routine / SAN LUIS**Work Order: **W3L0046**

Reported: 18-Dec-13 09:39

Client Sample ID: **131202BMGFB**SVL Sample ID: **W3L0046-03 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 02-Dec-13 10:20

Received: 04-Dec-13

Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Metals (Dissolved)**

|           |           |           |      |         |          |  |         |     |                |  |
|-----------|-----------|-----------|------|---------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Iron      | < 0.060   | mg/L | 0.060   | 0.023    |  | W349178 | TJK | 12/11/13 16:47 |  |
| EPA 200.7 | Manganese | < 0.0040  | mg/L | 0.0040  | 0.0013   |  | W349178 | TJK | 12/11/13 16:47 |  |
| EPA 200.7 | Zinc      | < 0.0100  | mg/L | 0.0100  | 0.0023   |  | W349178 | TJK | 12/11/13 16:47 |  |
| EPA 200.8 | Arsenic   | < 0.0100  | mg/L | 0.0100  | 0.0003   |  | W349193 | KWH | 12/16/13 08:00 |  |
| EPA 200.8 | Copper    | < 0.00300 | mg/L | 0.00300 | 0.000061 |  | W349193 | KWH | 12/16/13 08:00 |  |

**Classical Chemistry Parameters**

|              |               |          |      |        |        |  |         |     |                |  |
|--------------|---------------|----------|------|--------|--------|--|---------|-----|----------------|--|
| SM 4500-CN-I | Cyanide (WAD) | < 0.0100 | mg/L | 0.0100 | 0.0017 |  | W350014 | VRH | 12/09/13 13:45 |  |
|--------------|---------------|----------|------|--------|--------|--|---------|-----|----------------|--|

**Anions by Ion Chromatography**

|           |                            |        |      |      |      |  |         |     |                |  |
|-----------|----------------------------|--------|------|------|------|--|---------|-----|----------------|--|
| EPA 300.0 | Fluoride                   | < 0.10 | mg/L | 0.10 | 0.02 |  | W351041 | AEW | 12/16/13 13:36 |  |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | < 0.30 | mg/L | 0.30 | 0.02 |  | W351041 | AEW | 12/16/13 13:36 |  |

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 / SAN LUIS**Work Order: **W3L0046**

Reported: 18-Dec-13 09:39

Client Sample ID: **131202BMGRB**SVL Sample ID: **W3L0046-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 02-Dec-13 09:00

Received: 04-Dec-13

Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Metals (Dissolved)**

|           |           |           |      |         |          |  |         |     |                |  |
|-----------|-----------|-----------|------|---------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Iron      | < 0.060   | mg/L | 0.060   | 0.023    |  | W349178 | TJK | 12/11/13 16:36 |  |
| EPA 200.7 | Manganese | < 0.0040  | mg/L | 0.0040  | 0.0013   |  | W349178 | TJK | 12/11/13 16:36 |  |
| EPA 200.7 | Zinc      | < 0.0100  | mg/L | 0.0100  | 0.0023   |  | W349178 | TJK | 12/11/13 16:36 |  |
| EPA 200.8 | Arsenic   | < 0.0100  | mg/L | 0.0100  | 0.0003   |  | W349193 | KWH | 12/16/13 07:57 |  |
| EPA 200.8 | Copper    | < 0.00300 | mg/L | 0.00300 | 0.000061 |  | W349193 | KWH | 12/16/13 07:57 |  |

**Classical Chemistry Parameters**

|              |               |          |      |        |        |  |         |     |                |  |
|--------------|---------------|----------|------|--------|--------|--|---------|-----|----------------|--|
| SM 4500-CN-I | Cyanide (WAD) | < 0.0100 | mg/L | 0.0100 | 0.0017 |  | W350014 | VRH | 12/09/13 13:41 |  |
|--------------|---------------|----------|------|--------|--------|--|---------|-----|----------------|--|

**Anions by Ion Chromatography**

|           |                |        |      |      |      |  |         |     |                |  |
|-----------|----------------|--------|------|------|------|--|---------|-----|----------------|--|
| EPA 300.0 | Fluoride       | < 0.10 | mg/L | 0.10 | 0.02 |  | W351041 | AEW | 12/16/13 15:30 |  |
| EPA 300.0 | Sulfate as SO4 | < 0.30 | mg/L | 0.30 | 0.02 |  | W351041 | AEW | 12/16/13 15:30 |  |

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**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: **W3L0156**  
Reported: 23-Dec-13 14:08

Client Sample ID: **131209BMGRB**SVL Sample ID: **W3L0156-01 (Surface Water)**

Sample Report Page 2 of 2

Sampled: 09-Dec-13 09:00  
Received: 10-Dec-13  
Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Anions by Ion Chromatography**

|           |                            |        |      |      |      |  |         |     |                |  |
|-----------|----------------------------|--------|------|------|------|--|---------|-----|----------------|--|
| EPA 300.0 | Chloride                   | < 0.20 | mg/L | 0.20 | 0.04 |  | W351201 | AEW | 12/19/13 20:24 |  |
| EPA 300.0 | Fluoride                   | < 0.10 | mg/L | 0.10 | 0.02 |  | W351201 | AEW | 12/19/13 20:24 |  |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | < 0.30 | mg/L | 0.30 | 0.02 |  | W351201 | AEW | 12/19/13 20:24 |  |

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 0.02 meq/L    Anion Sum: 0.02 meq/L    C/A Balance: -10.79 %    Calculated TDS: 0

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: W3L0156**  
**Reported: 23-Dec-13 14:08**

Client Sample ID: **131209BMGFB**SVL Sample ID: **W3L0156-03 (Surface Water)**

Sample Report Page 2 of 2

Sampled: 09-Dec-13 09:40

Received: 10-Dec-13

Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Anions by Ion Chromatography**

|           |                |        |      |      |      |  |         |     |                |  |
|-----------|----------------|--------|------|------|------|--|---------|-----|----------------|--|
| EPA 300.0 | Chloride       | < 0.20 | mg/L | 0.20 | 0.04 |  | W351201 | AEW | 12/19/13 21:58 |  |
| EPA 300.0 | Fluoride       | < 0.10 | mg/L | 0.10 | 0.02 |  | W351201 | AEW | 12/19/13 21:58 |  |
| EPA 300.0 | Sulfate as SO4 | < 0.30 | mg/L | 0.30 | 0.02 |  | W351201 | AEW | 12/19/13 21:58 |  |

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 0.02 meq/L    Anion Sum: 0.02 meq/L    C/A Balance: -20.41 %    Calculated TDS: 0

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: **W3L0156**  
Reported: 23-Dec-13 14:08

Client Sample ID: **131209BMGFB**SVL Sample ID: **W3L0156-03 (Surface Water)**

Sample Report Page 1 of 2

Sampled: 09-Dec-13 09:40  
Received: 10-Dec-13  
Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Metals (Total)**

|           |                                  |            |      |          |          |     |         |     |                |  |
|-----------|----------------------------------|------------|------|----------|----------|-----|---------|-----|----------------|--|
| EPA 200.7 | Aluminum                         | < 0.040    | mg/L | 0.040    | 0.031    |     | W350117 | DT  | 12/20/13 13:40 |  |
| EPA 200.7 | Barium                           | < 0.0020   | mg/L | 0.0020   | 0.0005   |     | W350117 | DT  | 12/20/13 13:40 |  |
| EPA 200.7 | Boron                            | < 0.040    | mg/L | 0.040    | 0.010    |     | W350117 | DT  | 12/20/13 13:40 |  |
| EPA 200.7 | Calcium                          | < 0.040    | mg/L | 0.040    | 0.015    |     | W350117 | DT  | 12/20/13 13:44 |  |
| EPA 200.7 | Chromium                         | < 0.0060   | mg/L | 0.0060   | 0.0015   |     | W350117 | DT  | 12/20/13 13:40 |  |
| EPA 200.7 | Iron                             | < 0.060    | mg/L | 0.060    | 0.023    |     | W350117 | DT  | 12/20/13 13:40 |  |
| EPA 200.7 | Magnesium                        | < 0.200    | mg/L | 0.200    | 0.039    |     | W350117 | DT  | 12/20/13 13:44 |  |
| EPA 200.7 | Manganese                        | < 0.0040   | mg/L | 0.0040   | 0.0013   |     | W350117 | DT  | 12/20/13 13:40 |  |
| EPA 200.7 | Nickel                           | < 0.010    | mg/L | 0.010    | 0.003    |     | W350117 | DT  | 12/20/13 13:40 |  |
| EPA 200.7 | Potassium                        | < 0.50     | mg/L | 0.50     | 0.13     |     | W350117 | DT  | 12/20/13 13:40 |  |
| EPA 200.7 | Silica (SiO <sub>2</sub> )       | < 0.17     | mg/L | 0.17     | 0.06     |     | W350117 | DT  | 12/20/13 13:40 |  |
| EPA 200.7 | Sodium                           | < 0.50     | mg/L | 0.50     | 0.08     |     | W350117 | DT  | 12/20/13 13:44 |  |
| EPA 200.7 | Zinc                             | < 0.0100   | mg/L | 0.0100   | 0.0023   |     | W350117 | DT  | 12/20/13 13:40 |  |
| EPA 200.8 | Arsenic                          | < 0.0100   | mg/L | 0.0100   | 0.0008   | 2.5 | W350120 | KWH | 12/23/13 08:20 |  |
| EPA 200.8 | Cadmium                          | < 0.00030  | mg/L | 0.00030  | 0.000075 | 2.5 | W350120 | KWH | 12/23/13 08:20 |  |
| EPA 200.8 | Copper                           | < 0.00300  | mg/L | 0.00300  | 0.00015  | 2.5 | W350120 | KWH | 12/23/13 08:20 |  |
| EPA 200.8 | Lead                             | < 0.00500  | mg/L | 0.00500  | 0.000120 | 2.5 | W350120 | KWH | 12/23/13 08:20 |  |
| EPA 200.8 | Selenium                         | < 0.0100   | mg/L | 0.0100   | 0.00065  | 2.5 | W350120 | KWH | 12/23/13 08:20 |  |
| EPA 200.8 | Silver                           | < 0.000200 | mg/L | 0.000200 | 0.00003  | 2.5 | W350120 | KWH | 12/23/13 08:20 |  |
| EPA 245.1 | Mercury                          | < 0.00020  | mg/L | 0.00020  | 0.000045 |     | W351067 | STA | 12/18/13 14:29 |  |
| SM 2340B  | Hardness (as CaCO <sub>3</sub> ) | < 0.923    | mg/L | 0.923    | 0.198    |     | N/A     |     | 12/20/13 13:44 |  |

**Metals (Dissolved)**

|           |           |            |      |          |          |  |         |     |                |  |
|-----------|-----------|------------|------|----------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Aluminum  | < 0.040    | mg/L | 0.040    | 0.031    |  | W350109 | TJK | 12/16/13 12:31 |  |
| EPA 200.7 | Barium    | < 0.0020   | mg/L | 0.0020   | 0.0005   |  | W350109 | TJK | 12/16/13 12:31 |  |
| EPA 200.7 | Boron     | < 0.040    | mg/L | 0.040    | 0.010    |  | W350109 | TJK | 12/16/13 12:31 |  |
| EPA 200.7 | Chromium  | < 0.0060   | mg/L | 0.0060   | 0.0015   |  | W350109 | TJK | 12/16/13 12:31 |  |
| EPA 200.7 | Iron      | < 0.060    | mg/L | 0.060    | 0.023    |  | W350109 | TJK | 12/16/13 12:31 |  |
| EPA 200.7 | Manganese | < 0.0040   | mg/L | 0.0040   | 0.0013   |  | W350109 | TJK | 12/16/13 12:31 |  |
| EPA 200.7 | Nickel    | < 0.010    | mg/L | 0.010    | 0.003    |  | W350109 | TJK | 12/16/13 12:31 |  |
| EPA 200.7 | Zinc      | < 0.0100   | mg/L | 0.0100   | 0.0023   |  | W350109 | TJK | 12/16/13 12:31 |  |
| EPA 200.8 | Arsenic   | < 0.0100   | mg/L | 0.0100   | 0.0003   |  | W350126 | KWH | 12/17/13 08:10 |  |
| EPA 200.8 | Cadmium   | < 0.00030  | mg/L | 0.00030  | 0.00003  |  | W350126 | KWH | 12/17/13 08:10 |  |
| EPA 200.8 | Copper    | < 0.00300  | mg/L | 0.00300  | 0.000061 |  | W350126 | KWH | 12/17/13 08:10 |  |
| EPA 200.8 | Lead      | < 0.00500  | mg/L | 0.00500  | 0.000048 |  | W350126 | KWH | 12/17/13 08:10 |  |
| EPA 200.8 | Selenium  | < 0.0100   | mg/L | 0.0100   | 0.00026  |  | W350126 | KWH | 12/17/13 08:10 |  |
| EPA 200.8 | Silver    | < 0.000100 | mg/L | 0.000100 | 0.000012 |  | W350126 | KWH | 12/17/13 08:10 |  |
| EPA 245.1 | Mercury   | < 0.00020  | mg/L | 0.00020  | 0.000045 |  | W351076 | STA | 12/19/13 14:36 |  |

**Classical Chemistry Parameters**

|                |                      |          |                           |        |        |  |         |     |                |  |
|----------------|----------------------|----------|---------------------------|--------|--------|--|---------|-----|----------------|--|
| EPA 335.4      | Cyanide (total)      | < 0.0100 | mg/L                      | 0.0100 | 0.0019 |  | W350134 | VRH | 12/11/13 14:24 |  |
| EPA 350.1      | Ammonia as N         | < 0.030  | mg/L                      | 0.030  | 0.008  |  | W350156 | ARP | 12/17/13 13:37 |  |
| EPA 353.2      | Nitrate/Nitrite as N | < 0.050  | mg/L                      | 0.050  | 0.017  |  | W350211 | ARP | 12/18/13 16:04 |  |
| SM 2320B/2310B | Total Alkalinity     | < 1.0    | mg/L as CaCO <sub>3</sub> | 1.0    |        |  | W350129 | AGF | 12/11/13 08:56 |  |
| SM 2320B/2310B | Bicarbonate          | < 1.0    | mg/L as CaCO <sub>3</sub> | 1.0    |        |  | W350129 | AGF | 12/11/13 08:56 |  |
| SM 2320B/2310B | Carbonate            | < 1.0    | mg/L as CaCO <sub>3</sub> | 1.0    |        |  | W350129 | AGF | 12/11/13 08:56 |  |
| SM 2540 C      | Total Diss. Solids   | < 10     | mg/L                      | 10     |        |  | W350130 | JDM | 12/11/13 13:55 |  |
| SM 2540 D      | Total Susp. Solids   | < 5.0    | mg/L                      | 5.0    |        |  | W350132 | JDM | 12/11/13 13:55 |  |
| SM 4500-CN-I   | Cyanide (WAD)        | < 0.0100 | mg/L                      | 0.0100 | 0.0017 |  | W350136 | VRH | 12/11/13 14:58 |  |

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SVL holds the following certifications:

AZ:0538, CA:2080, FL(NELAC):E87993, ID:ID00019 &amp; ID00965 (Microbiology), NV:ID000192007A, WA:C573

Work order Report Page 6 of 14



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

Project Name: **BMSL - Routine**  
Work Order: **W3L0156**  
Reported: 23-Dec-13 14:08

Client Sample ID: **131209BMGRB**SVL Sample ID: **W3L0156-01 (Surface Water)**

Sample Report Page 1 of 2

Sampled: 09-Dec-13 09:00  
Received: 10-Dec-13  
Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Metals (Total)**

|           |                                  |            |      |          |          |     |         |     |                |  |
|-----------|----------------------------------|------------|------|----------|----------|-----|---------|-----|----------------|--|
| EPA 200.7 | Aluminum                         | < 0.040    | mg/L | 0.040    | 0.031    |     | W350117 | DT  | 12/20/13 13:28 |  |
| EPA 200.7 | Barium                           | < 0.0020   | mg/L | 0.0020   | 0.0005   |     | W350117 | DT  | 12/20/13 13:28 |  |
| EPA 200.7 | Boron                            | < 0.040    | mg/L | 0.040    | 0.010    |     | W350117 | DT  | 12/20/13 13:28 |  |
| EPA 200.7 | Calcium                          | < 0.040    | mg/L | 0.040    | 0.015    |     | W350117 | DT  | 12/20/13 13:34 |  |
| EPA 200.7 | Chromium                         | < 0.0060   | mg/L | 0.0060   | 0.0015   |     | W350117 | DT  | 12/20/13 13:28 |  |
| EPA 200.7 | Iron                             | < 0.060    | mg/L | 0.060    | 0.023    |     | W350117 | DT  | 12/20/13 13:28 |  |
| EPA 200.7 | Magnesium                        | < 0.200    | mg/L | 0.200    | 0.039    |     | W350117 | DT  | 12/20/13 13:34 |  |
| EPA 200.7 | Manganese                        | < 0.0040   | mg/L | 0.0040   | 0.0013   |     | W350117 | DT  | 12/20/13 13:28 |  |
| EPA 200.7 | Nickel                           | < 0.010    | mg/L | 0.010    | 0.003    |     | W350117 | DT  | 12/20/13 13:28 |  |
| EPA 200.7 | Potassium                        | < 0.50     | mg/L | 0.50     | 0.13     |     | W350117 | DT  | 12/20/13 13:28 |  |
| EPA 200.7 | Silica (SiO <sub>2</sub> )       | < 0.17     | mg/L | 0.17     | 0.06     |     | W350117 | DT  | 12/20/13 13:28 |  |
| EPA 200.7 | Sodium                           | < 0.50     | mg/L | 0.50     | 0.08     |     | W350117 | DT  | 12/20/13 13:34 |  |
| EPA 200.7 | Zinc                             | < 0.0100   | mg/L | 0.0100   | 0.0023   |     | W350117 | DT  | 12/20/13 13:28 |  |
| EPA 200.8 | Arsenic                          | < 0.0100   | mg/L | 0.0100   | 0.0008   | 2.5 | W350120 | KWH | 12/23/13 08:02 |  |
| EPA 200.8 | Cadmium                          | < 0.00030  | mg/L | 0.00030  | 0.000075 | 2.5 | W350120 | KWH | 12/23/13 08:02 |  |
| EPA 200.8 | Copper                           | < 0.00300  | mg/L | 0.00300  | 0.00015  | 2.5 | W350120 | KWH | 12/23/13 08:02 |  |
| EPA 200.8 | Lead                             | < 0.00500  | mg/L | 0.00500  | 0.000120 | 2.5 | W350120 | KWH | 12/23/13 08:02 |  |
| EPA 200.8 | Selenium                         | < 0.0100   | mg/L | 0.0100   | 0.00065  | 2.5 | W350120 | KWH | 12/23/13 08:02 |  |
| EPA 200.8 | Silver                           | < 0.000200 | mg/L | 0.000200 | 0.00003  | 2.5 | W350120 | KWH | 12/23/13 08:02 |  |
| EPA 245.1 | Mercury                          | < 0.00020  | mg/L | 0.00020  | 0.000045 |     | W351067 | STA | 12/18/13 14:18 |  |
| SM 2340B  | Hardness (as CaCO <sub>3</sub> ) | < 0.923    | mg/L | 0.923    | 0.198    |     | N/A     |     | 12/20/13 13:34 |  |

**Metals (Dissolved)**

|           |           |            |      |          |          |  |         |     |                |  |
|-----------|-----------|------------|------|----------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Aluminum  | < 0.040    | mg/L | 0.040    | 0.031    |  | W350109 | TJK | 12/16/13 12:25 |  |
| EPA 200.7 | Barium    | < 0.0020   | mg/L | 0.0020   | 0.0005   |  | W350109 | TJK | 12/16/13 12:25 |  |
| EPA 200.7 | Boron     | < 0.040    | mg/L | 0.040    | 0.010    |  | W350109 | TJK | 12/16/13 12:25 |  |
| EPA 200.7 | Chromium  | < 0.0060   | mg/L | 0.0060   | 0.0015   |  | W350109 | TJK | 12/16/13 12:25 |  |
| EPA 200.7 | Iron      | < 0.060    | mg/L | 0.060    | 0.023    |  | W350109 | TJK | 12/16/13 12:25 |  |
| EPA 200.7 | Manganese | < 0.0040   | mg/L | 0.0040   | 0.0013   |  | W350109 | TJK | 12/16/13 12:25 |  |
| EPA 200.7 | Nickel    | < 0.010    | mg/L | 0.010    | 0.003    |  | W350109 | TJK | 12/16/13 12:25 |  |
| EPA 200.7 | Zinc      | < 0.0100   | mg/L | 0.0100   | 0.0023   |  | W350109 | TJK | 12/16/13 12:25 |  |
| EPA 200.8 | Arsenic   | < 0.0100   | mg/L | 0.0100   | 0.0003   |  | W350126 | KWH | 12/17/13 08:03 |  |
| EPA 200.8 | Cadmium   | < 0.00030  | mg/L | 0.00030  | 0.00003  |  | W350126 | KWH | 12/17/13 08:03 |  |
| EPA 200.8 | Copper    | < 0.00300  | mg/L | 0.00300  | 0.000061 |  | W350126 | KWH | 12/17/13 08:03 |  |
| EPA 200.8 | Lead      | < 0.00500  | mg/L | 0.00500  | 0.000048 |  | W350126 | KWH | 12/17/13 08:03 |  |
| EPA 200.8 | Selenium  | < 0.0100   | mg/L | 0.0100   | 0.00026  |  | W350126 | KWH | 12/17/13 08:03 |  |
| EPA 200.8 | Silver    | < 0.000100 | mg/L | 0.000100 | 0.000012 |  | W350126 | KWH | 12/17/13 08:03 |  |
| EPA 245.1 | Mercury   | < 0.00020  | mg/L | 0.00020  | 0.000045 |  | W350114 | STA | 12/17/13 13:45 |  |

**Classical Chemistry Parameters**

|                |                      |          |                           |        |        |  |         |     |                |  |
|----------------|----------------------|----------|---------------------------|--------|--------|--|---------|-----|----------------|--|
| EPA 335.4      | Cyanide (total)      | < 0.0100 | mg/L                      | 0.0100 | 0.0016 |  | W351032 | VRH | 12/17/13 08:29 |  |
| EPA 350.1      | Ammonia as N         | 0.057    | mg/L                      | 0.030  | 0.008  |  | W350156 | ARP | 12/17/13 13:34 |  |
| EPA 353.2      | Nitrate/Nitrite as N | < 0.050  | mg/L                      | 0.050  | 0.017  |  | W350211 | ARP | 12/18/13 15:56 |  |
| SM 2320B/2310B | Total Alkalinity     | < 1.0    | mg/L as CaCO <sub>3</sub> | 1.0    |        |  | W350129 | AGF | 12/11/13 08:47 |  |
| SM 2320B/2310B | Bicarbonate          | < 1.0    | mg/L as CaCO <sub>3</sub> | 1.0    |        |  | W350129 | AGF | 12/11/13 08:47 |  |
| SM 2320B/2310B | Carbonate            | < 1.0    | mg/L as CaCO <sub>3</sub> | 1.0    |        |  | W350129 | AGF | 12/11/13 08:47 |  |
| SM 2540 C      | Total Diss. Solids   | < 10     | mg/L                      | 10     |        |  | W350130 | JDM | 12/11/13 13:55 |  |
| SM 2540 D      | Total Susp. Solids   | < 5.0    | mg/L                      | 5.0    |        |  | W350132 | JDM | 12/11/13 13:55 |  |
| SM 4500-CN-I   | Cyanide (WAD)        | < 0.0100 | mg/L                      | 0.0100 | 0.0019 |  | W351031 | VRH | 12/17/13 09:51 |  |

Raise Blank



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: **W3L0179**  
Reported: 26-Dec-13 13:02

Client Sample ID: **131209BMGM26**SVL Sample ID: **W3L0179-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 09-Dec-13 13:45  
Received: 11-Dec-13  
Sampled By: AT

| Method                                | Analyte            | Result    | Units | RL      | MDL      | Dilution | Batch   | Analyst | Analyzed       | Notes |
|---------------------------------------|--------------------|-----------|-------|---------|----------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b>                 |                    |           |       |         |          |          |         |         |                |       |
| EPA 200.7                             | Calcium            | 24.5      | mg/L  | 0.040   | 0.015    |          | W350167 | DT      | 12/20/13 11:21 |       |
| <b>Metals (Dissolved)</b>             |                    |           |       |         |          |          |         |         |                |       |
| EPA 200.7                             | Iron               | 0.399     | mg/L  | 0.060   | 0.023    |          | W350164 | AS      | 12/16/13 18:21 |       |
| EPA 200.7                             | Manganese          | 0.275     | mg/L  | 0.0040  | 0.0013   |          | W350164 | AS      | 12/16/13 18:21 |       |
| EPA 200.8                             | Copper             | < 0.00300 | mg/L  | 0.00300 | 0.000061 |          | W350149 | KWH     | 12/17/13 08:20 |       |
| <b>Classical Chemistry Parameters</b> |                    |           |       |         |          |          |         |         |                |       |
| SM 2540 C                             | Total Diss. Solids | 126       | mg/L  | 10      |          |          | W350172 | RS      | 12/12/13 09:30 |       |
| <b>Anions by Ion Chromatography</b>   |                    |           |       |         |          |          |         |         |                |       |
| EPA 300.0                             | Fluoride           | 0.80      | mg/L  | 0.10    | 0.02     |          | W352029 | AEW     | 12/23/13 17:18 |       |
| EPA 300.0                             | Sulfate as SO4     | 11.4      | mg/L  | 0.30    | 0.02     |          | W352029 | AEW     | 12/23/13 17:18 |       |

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

Kirby Gray  
Technical Director

M-26  
Temp - 8.2°C  
pH - 7.23



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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: W3L0493****Reported: 13-Jan-14 11:51**Client Sample ID: **131230BMGTALES**SVL Sample ID: **W3L0493-02 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 30-Dec-13 11:50

Received: 31-Dec-13

Sampled By: AT

| 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 | 0.0008 | 2.5      | W401001 | KWH     | 01/08/14 07:37 |       |

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

**John Kern**  
Laboratory Director

Tailings Pond

monthly

Temp - 2.6°C  
pH - 7.34



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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: **W4A0028**  
Reported: 17-Jan-14 09:05

Client Sample ID: **140102BMGRS1**SVL Sample ID: **W4A0028-03 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 02-Jan-14 10:30

Received: 03-Jan-14

Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Metals (Total)**

|           |                            |           |      |         |          |     |         |     |                |  |
|-----------|----------------------------|-----------|------|---------|----------|-----|---------|-----|----------------|--|
| EPA 200.7 | Calcium                    | 16.2      | mg/L | 0.040   | 0.015    |     | W402001 | TJK | 01/09/14 13:15 |  |
| EPA 200.7 | Magnesium                  | 3.82      | mg/L | 0.200   | 0.039    |     | W402001 | TJK | 01/09/14 13:15 |  |
| EPA 200.7 | Potassium                  | 0.66      | mg/L | 0.50    | 0.13     |     | W402001 | TJK | 01/09/14 13:15 |  |
| EPA 200.7 | Silica (SiO <sub>2</sub> ) | 12.2      | mg/L | 0.17    | 0.06     |     | W402001 | TJK | 01/09/14 13:15 |  |
| EPA 200.7 | Sodium                     | 3.42      | mg/L | 0.50    | 0.08     |     | W402001 | TJK | 01/09/14 13:15 |  |
| EPA 200.8 | Arsenic                    | < 0.0100  | mg/L | 0.0100  | 0.0008   | 2.5 | W402006 | KWH | 01/08/14 07:02 |  |
| EPA 245.1 | Mercury                    | < 0.00020 | mg/L | 0.00020 | 0.000045 |     | W402159 | STA | 01/10/14 10:51 |  |

**Metals (Total Recoverable)**

|           |           |        |      |        |        |  |         |    |                |  |
|-----------|-----------|--------|------|--------|--------|--|---------|----|----------------|--|
| EPA 200.7 | Iron      | 0.164  | mg/L | 0.060  | 0.012  |  | W402002 | DT | 01/07/14 13:03 |  |
| EPA 200.7 | Manganese | 0.0222 | mg/L | 0.0040 | 0.0006 |  | W402002 | DT | 01/07/14 13:03 |  |

**Metals (Dissolved)**

|           |           |          |      |        |         |  |         |     |                |  |
|-----------|-----------|----------|------|--------|---------|--|---------|-----|----------------|--|
| EPA 200.7 | Chromium  | < 0.0060 | mg/L | 0.0060 | 0.0015  |  | W401055 | DT  | 01/10/14 12:51 |  |
| EPA 200.7 | Iron      | < 0.060  | mg/L | 0.060  | 0.023   |  | W401055 | DT  | 01/10/14 12:51 |  |
| EPA 200.7 | Manganese | 0.0120   | mg/L | 0.0040 | 0.0013  |  | W401055 | DT  | 01/10/14 12:51 |  |
| EPA 200.7 | Nickel    | < 0.010  | mg/L | 0.010  | 0.003   |  | W401055 | DT  | 01/10/14 12:51 |  |
| EPA 200.8 | Selenium  | < 0.0100 | mg/L | 0.0100 | 0.00026 |  | W402012 | KWH | 01/08/14 06:20 |  |

**Metals (Potentially Dissolved)**

|           |          |            |      |          |          |  |         |     |                |  |
|-----------|----------|------------|------|----------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Aluminum | < 0.040    | mg/L | 0.040    | 0.031    |  | W401054 | AS  | 01/09/14 16:45 |  |
| EPA 200.7 | Cadmium  | < 0.0020   | mg/L | 0.0020   | 0.0007   |  | W401054 | AS  | 01/09/14 16:45 |  |
| EPA 200.7 | Lead     | < 0.0075   | mg/L | 0.0075   | 0.0027   |  | W401054 | AS  | 01/09/14 16:45 |  |
| EPA 200.7 | Zinc     | < 0.0100   | mg/L | 0.0100   | 0.0023   |  | W401054 | AS  | 01/09/14 16:45 |  |
| EPA 200.8 | Copper   | < 0.00300  | mg/L | 0.00300  | 0.000061 |  | W402009 | KWH | 01/08/14 06:50 |  |
| EPA 200.8 | Silver   | < 0.000100 | mg/L | 0.000100 | 0.000012 |  | W402009 | KWH | 01/08/14 06:50 |  |

**Classical Chemistry Parameters**

|                |                    |       |                           |       |       |  |         |     |                |  |
|----------------|--------------------|-------|---------------------------|-------|-------|--|---------|-----|----------------|--|
| EPA 350.1      | Ammonia as N       | 0.053 | mg/L                      | 0.030 | 0.008 |  | W402136 | ARP | 01/10/14 12:32 |  |
| SM 2320B/2310B | Total Alkalinity   | 60.1  | mg/L as CaCO <sub>3</sub> | 1.0   |       |  | W402074 | DKS | 01/10/14 08:40 |  |
| SM 2540 D      | Total Susp. Solids | < 5.0 | mg/L                      | 5.0   |       |  | W402016 | RS  | 01/06/14 11:10 |  |

**Anions by Ion Chromatography**

|           |                            |      |      |      |      |  |         |     |                |  |
|-----------|----------------------------|------|------|------|------|--|---------|-----|----------------|--|
| EPA 300.0 | Chloride                   | 0.54 | mg/L | 0.20 | 0.04 |  | W403137 | AEW | 01/15/14 18:52 |  |
| EPA 300.0 | Fluoride                   | 0.53 | mg/L | 0.10 | 0.02 |  | W403137 | AEW | 01/15/14 18:52 |  |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | 5.19 | mg/L | 0.30 | 0.02 |  | W403137 | AEW | 01/15/14 18:52 |  |

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 1.30 meq/L      Anion Sum: 1.35 meq/L      C/A Balance: -2.07 %

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

John Kern  
Laboratory Director

RS-1  
Temp - 0°C  
pH - 7.67

Quarterly



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: W4A0034  
Reported: 17-Jan-14 09:14

Client Sample ID: 140102BMGRS2

SVL Sample ID: W4A0034-03 (Surface Water)

Sample Report Page 1 of 1

Sampled: 02-Jan-14 09:25

Received: 03-Jan-14

Sampled By: AT

| Method                | Analyte                    | Result    | Units | RL      | MDL      | Dilution | Batch   | Analyst | Analyzed       | Notes |
|-----------------------|----------------------------|-----------|-------|---------|----------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b> |                            |           |       |         |          |          |         |         |                |       |
| EPA 200.7             | Calcium                    | 18.3      | mg/L  | 0.040   | 0.015    |          | W402001 | TJK     | 01/09/14 13:31 |       |
| EPA 200.7             | Magnesium                  | 4.59      | mg/L  | 0.200   | 0.039    |          | W402001 | TJK     | 01/09/14 13:31 |       |
| EPA 200.7             | Potassium                  | 1.01      | mg/L  | 0.50    | 0.13     |          | W402001 | TJK     | 01/09/14 13:31 |       |
| EPA 200.7             | Silica (SiO <sub>2</sub> ) | 15.6      | mg/L  | 0.17    | 0.06     |          | W402001 | TJK     | 01/09/14 13:31 |       |
| EPA 200.7             | Sodium                     | 5.20      | mg/L  | 0.50    | 0.08     |          | W402001 | TJK     | 01/09/14 13:31 |       |
| EPA 200.8             | Arsenic                    | < 0.0100  | mg/L  | 0.0100  | 0.0008   | 2.5      | W402006 | KWH     | 01/08/14 07:11 |       |
| EPA 245.1             | Mercury                    | < 0.00020 | mg/L  | 0.00020 | 0.000045 |          | W402159 | STA     | 01/10/14 10:56 |       |

**Metals (Total Recoverable)**

|           |           |        |      |        |        |  |         |    |                |  |
|-----------|-----------|--------|------|--------|--------|--|---------|----|----------------|--|
| EPA 200.7 | Iron      | 0.575  | mg/L | 0.060  | 0.012  |  | W402002 | DT | 01/07/14 13:06 |  |
| EPA 200.7 | Manganese | 0.0606 | mg/L | 0.0040 | 0.0006 |  | W402002 | DT | 01/07/14 13:06 |  |

**Metals (Dissolved)**

|           |           |          |      |        |         |  |         |     |                |  |
|-----------|-----------|----------|------|--------|---------|--|---------|-----|----------------|--|
| EPA 200.7 | Chromium  | < 0.0060 | mg/L | 0.0060 | 0.0015  |  | W402005 | AS  | 01/09/14 17:29 |  |
| EPA 200.7 | Iron      | 0.147    | mg/L | 0.060  | 0.023   |  | W402005 | AS  | 01/09/14 17:29 |  |
| EPA 200.7 | Manganese | 0.0147   | mg/L | 0.0040 | 0.0013  |  | W402005 | AS  | 01/09/14 17:29 |  |
| EPA 200.7 | Nickel    | < 0.010  | mg/L | 0.010  | 0.003   |  | W402005 | AS  | 01/09/14 17:29 |  |
| EPA 200.8 | Selenium  | < 0.0100 | mg/L | 0.0100 | 0.00026 |  | W402012 | KWH | 01/08/14 06:28 |  |

**Metals (Potentially Dissolved)**

|           |          |            |      |          |          |  |         |     |                |  |
|-----------|----------|------------|------|----------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Aluminum | 0.112      | mg/L | 0.040    | 0.031    |  | W401054 | AS  | 01/09/14 16:48 |  |
| EPA 200.7 | Cadmium  | < 0.0020   | mg/L | 0.0020   | 0.0007   |  | W401054 | AS  | 01/09/14 16:48 |  |
| EPA 200.7 | Lead     | < 0.0075   | mg/L | 0.0075   | 0.0027   |  | W401054 | AS  | 01/09/14 16:48 |  |
| EPA 200.7 | Zinc     | < 0.0100   | mg/L | 0.0100   | 0.0023   |  | W401054 | AS  | 01/09/14 16:48 |  |
| EPA 200.8 | Copper   | < 0.00300  | mg/L | 0.00300  | 0.000061 |  | W402009 | KWH | 01/08/14 06:51 |  |
| EPA 200.8 | Silver   | < 0.000100 | mg/L | 0.000100 | 0.000012 |  | W402009 | KWH | 01/08/14 06:51 |  |

**Classical Chemistry Parameters**

|                |                    |       |                           |       |       |  |         |     |                |  |
|----------------|--------------------|-------|---------------------------|-------|-------|--|---------|-----|----------------|--|
| EPA 350.1      | Ammonia as N       | 0.066 | mg/L                      | 0.030 | 0.008 |  | W402136 | ARP | 01/10/14 12:36 |  |
| SM 2320B/2310B | Total Alkalinity   | 64.7  | mg/L as CaCO <sub>3</sub> | 1.0   |       |  | W402074 | DKS | 01/10/14 08:47 |  |
| SM 2540 D      | Total Susp. Solids | 11.0  | mg/L                      | 5.0   |       |  | W402016 | RS  | 01/06/14 11:10 |  |

**Anions by Ion Chromatography**

|           |                            |      |      |      |      |  |         |     |                |  |
|-----------|----------------------------|------|------|------|------|--|---------|-----|----------------|--|
| EPA 300.0 | Chloride                   | 1.23 | mg/L | 0.20 | 0.04 |  | W403137 | AEW | 01/15/14 22:42 |  |
| EPA 300.0 | Fluoride                   | 0.63 | mg/L | 0.10 | 0.02 |  | W403137 | AEW | 01/15/14 22:42 |  |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | 9.25 | mg/L | 0.30 | 0.02 |  | W403137 | AEW | 01/15/14 22:42 |  |

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 1.57 meq/L      Anion Sum: 1.55 meq/L      C/A Balance: 0.42 %

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

John Kern  
Laboratory Director

RS-2  
Temp - 0.1°C  
pH - 7.42



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: **W4A0028**  
Reported: 17-Jan-14 09:05

Client Sample ID: **140102BMGRS5**SVL Sample ID: **W4A0028-01 (Surface Water)**

Sample Report Page 1 of 1

Sampled: 02-Jan-14 10:00  
Received: 03-Jan-14  
Sampled By: AT

| Method                | Analyte                    | Result    | Units | RL      | MDL      | Dilution | Batch   | Analyst | Analyzed       | Notes |
|-----------------------|----------------------------|-----------|-------|---------|----------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b> |                            |           |       |         |          |          |         |         |                |       |
| EPA 200.7             | Calcium                    | 24.1      | mg/L  | 0.040   | 0.015    |          | W402001 | TJK     | 01/09/14 12:58 |       |
| EPA 200.7             | Magnesium                  | 5.17      | mg/L  | 0.200   | 0.039    |          | W402001 | TJK     | 01/09/14 12:58 |       |
| EPA 200.7             | Potassium                  | 1.21      | mg/L  | 0.50    | 0.13     |          | W402001 | TJK     | 01/09/14 12:58 |       |
| EPA 200.7             | Silica (SiO <sub>2</sub> ) | 15.7      | mg/L  | 0.17    | 0.06     |          | W402001 | TJK     | 01/09/14 12:58 |       |
| EPA 200.7             | Sodium                     | 8.67      | mg/L  | 0.50    | 0.08     |          | W402001 | TJK     | 01/09/14 12:58 |       |
| EPA 200.8             | Arsenic                    | < 0.0100  | mg/L  | 0.0100  | 0.0008   | 2.5      | W402006 | KWH     | 01/08/14 06:57 |       |
| EPA 245.1             | Mercury                    | < 0.00020 | mg/L  | 0.00020 | 0.000045 |          | W402159 | STA     | 01/10/14 10:45 |       |

**Metals (Total Recoverable)**

|           |           |       |      |        |        |  |         |    |                |  |
|-----------|-----------|-------|------|--------|--------|--|---------|----|----------------|--|
| EPA 200.7 | Iron      | 0.765 | mg/L | 0.060  | 0.012  |  | W402002 | DT | 01/07/14 12:44 |  |
| EPA 200.7 | Manganese | 0.218 | mg/L | 0.0040 | 0.0006 |  | W402002 | DT | 01/07/14 12:44 |  |

**Metals (Dissolved)**

|           |           |          |      |        |         |  |         |     |                |  |
|-----------|-----------|----------|------|--------|---------|--|---------|-----|----------------|--|
| EPA 200.7 | Chromium  | < 0.0060 | mg/L | 0.0060 | 0.0015  |  | W401055 | DT  | 01/10/14 12:44 |  |
| EPA 200.7 | Iron      | 0.218    | mg/L | 0.060  | 0.023   |  | W401055 | DT  | 01/10/14 12:44 |  |
| EPA 200.7 | Manganese | 0.193    | mg/L | 0.0040 | 0.0013  |  | W401055 | DT  | 01/10/14 12:44 |  |
| EPA 200.7 | Nickel    | < 0.010  | mg/L | 0.010  | 0.003   |  | W401055 | DT  | 01/10/14 12:44 |  |
| EPA 200.8 | Selenium  | < 0.0100 | mg/L | 0.0100 | 0.00026 |  | W402012 | KWH | 01/08/14 06:18 |  |

**Metals (Potentially Dissolved)**

|           |          |            |      |          |          |  |         |     |                |  |
|-----------|----------|------------|------|----------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Aluminum | 0.095      | mg/L | 0.040    | 0.031    |  | W401054 | AS  | 01/09/14 16:36 |  |
| EPA 200.7 | Cadmium  | < 0.0020   | mg/L | 0.0020   | 0.0007   |  | W401054 | AS  | 01/09/14 16:36 |  |
| EPA 200.7 | Lead     | < 0.0075   | mg/L | 0.0075   | 0.0027   |  | W401054 | AS  | 01/09/14 16:36 |  |
| EPA 200.7 | Zinc     | < 0.0100   | mg/L | 0.0100   | 0.0023   |  | W401054 | AS  | 01/09/14 16:36 |  |
| EPA 200.8 | Copper   | < 0.00300  | mg/L | 0.00300  | 0.000061 |  | W402009 | KWH | 01/08/14 06:42 |  |
| EPA 200.8 | Silver   | < 0.000100 | mg/L | 0.000100 | 0.000012 |  | W402009 | KWH | 01/08/14 06:42 |  |

**Classical Chemistry Parameters**

|                |                    |       |                           |       |       |  |         |     |                |  |
|----------------|--------------------|-------|---------------------------|-------|-------|--|---------|-----|----------------|--|
| EPA 350.1      | Ammonia as N       | 0.093 | mg/L                      | 0.030 | 0.008 |  | W402136 | ARP | 01/10/14 12:31 |  |
| SM 2320B/2310B | Total Alkalinity   | 78.4  | mg/L as CaCO <sub>3</sub> | 1.0   |       |  | W402074 | DKS | 01/10/14 08:34 |  |
| SM 2540 D      | Total Susp. Solids | 9.0   | mg/L                      | 5.0   |       |  | W402016 | RS  | 01/06/14 11:10 |  |

**Anions by Ion Chromatography**

|           |                            |      |      |      |      |  |         |     |                |  |
|-----------|----------------------------|------|------|------|------|--|---------|-----|----------------|--|
| EPA 300.0 | Chloride                   | 3.21 | mg/L | 0.20 | 0.04 |  | W403137 | AEW | 01/15/14 18:29 |  |
| EPA 300.0 | Fluoride                   | 0.82 | mg/L | 0.10 | 0.02 |  | W403137 | AEW | 01/15/14 18:29 |  |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | 19.6 | mg/L | 0.30 | 0.02 |  | W403137 | AEW | 01/15/14 18:29 |  |

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 2.07 meq/L      Anion Sum: 2.11 meq/L      C/A Balance: -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

RS-5  
Temp - 0°C  
pH - 7.51



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: **W4A0034**  
Reported: 17-Jan-14 09:14

Client Sample ID: **140102BMGFB**SVL Sample ID: **W4A0034-04 (Surface Water)**

Sample Report Page 1 of 2

Sampled: 02-Jan-14 09:35

Received: 03-Jan-14

Sampled By: AT

| Method                | Analyte                          | Result     | Units | RL       | MDL      | Dilution | Batch   | Analyst | Analyzed       | Notes |
|-----------------------|----------------------------------|------------|-------|----------|----------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b> |                                  |            |       |          |          |          |         |         |                |       |
| EPA 200.7             | Aluminum                         | < 0.040    | mg/L  | 0.040    | 0.031    |          | W402001 | TJK     | 01/09/14 13:47 |       |
| EPA 200.7             | Barium                           | < 0.0020   | mg/L  | 0.0020   | 0.0005   |          | W402001 | TJK     | 01/09/14 13:47 |       |
| EPA 200.7             | Boron                            | < 0.040    | mg/L  | 0.040    | 0.010    |          | W402001 | TJK     | 01/09/14 13:47 |       |
| EPA 200.7             | Calcium                          | < 0.040    | mg/L  | 0.040    | 0.015    |          | W402001 | TJK     | 01/09/14 13:47 |       |
| EPA 200.7             | Chromium                         | < 0.0060   | mg/L  | 0.0060   | 0.0015   |          | W402001 | TJK     | 01/09/14 13:47 |       |
| EPA 200.7             | Iron                             | < 0.060    | mg/L  | 0.060    | 0.023    |          | W402001 | TJK     | 01/09/14 13:47 |       |
| EPA 200.7             | Magnesium                        | < 0.200    | mg/L  | 0.200    | 0.039    |          | W402001 | TJK     | 01/09/14 13:47 |       |
| EPA 200.7             | Manganese                        | < 0.0040   | mg/L  | 0.0040   | 0.0013   |          | W402001 | TJK     | 01/09/14 13:47 |       |
| EPA 200.7             | Nickel                           | < 0.010    | mg/L  | 0.010    | 0.003    |          | W402001 | TJK     | 01/09/14 13:47 |       |
| EPA 200.7             | Potassium                        | < 0.50     | mg/L  | 0.50     | 0.13     |          | W402001 | TJK     | 01/09/14 13:47 |       |
| EPA 200.7             | Silica (SiO <sub>2</sub> )       | < 0.17     | mg/L  | 0.17     | 0.06     |          | W402001 | TJK     | 01/09/14 13:47 |       |
| EPA 200.7             | Sodium                           | < 0.50     | mg/L  | 0.50     | 0.08     |          | W402001 | TJK     | 01/09/14 13:47 |       |
| EPA 200.7             | Zinc                             | < 0.0100   | mg/L  | 0.0100   | 0.0023   |          | W402001 | TJK     | 01/09/14 13:47 |       |
| EPA 200.8             | Arsenic                          | < 0.0100   | mg/L  | 0.0100   | 0.0008   | 2.5      | W402006 | KWH     | 01/08/14 07:15 |       |
| EPA 200.8             | Cadmium                          | < 0.00030  | mg/L  | 0.00030  | 0.000075 | 2.5      | W402006 | KWH     | 01/08/14 07:15 |       |
| EPA 200.8             | Copper                           | < 0.00300  | mg/L  | 0.00300  | 0.00015  | 2.5      | W402006 | KWH     | 01/08/14 07:15 |       |
| EPA 200.8             | Lead                             | < 0.00500  | mg/L  | 0.00500  | 0.000120 | 2.5      | W402006 | KWH     | 01/08/14 07:15 |       |
| EPA 200.8             | Selenium                         | < 0.0100   | mg/L  | 0.0100   | 0.00065  | 2.5      | W402006 | KWH     | 01/08/14 07:15 |       |
| EPA 200.8             | Silver                           | < 0.000200 | mg/L  | 0.000200 | 0.00003  | 2.5      | W402006 | KWH     | 01/08/14 07:15 |       |
| EPA 245.1             | Mercury                          | < 0.00020  | mg/L  | 0.00020  | 0.000045 |          | W402159 | STA     | 01/10/14 10:58 |       |
| SM 2340B              | Hardness (as CaCO <sub>3</sub> ) | < 0.923    | mg/L  | 0.923    | 0.198    |          | N/A     |         | 01/09/14 13:47 |       |

**Metals (Dissolved)**

|           |           |            |      |          |          |  |         |     |                |  |
|-----------|-----------|------------|------|----------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Aluminum  | < 0.040    | mg/L | 0.040    | 0.031    |  | W402005 | AS  | 01/09/14 17:32 |  |
| EPA 200.7 | Barium    | < 0.0020   | mg/L | 0.0020   | 0.0005   |  | W402005 | AS  | 01/09/14 17:32 |  |
| EPA 200.7 | Boron     | < 0.040    | mg/L | 0.040    | 0.010    |  | W402005 | AS  | 01/09/14 17:32 |  |
| EPA 200.7 | Chromium  | < 0.0060   | mg/L | 0.0060   | 0.0015   |  | W402005 | AS  | 01/09/14 17:32 |  |
| EPA 200.7 | Iron      | < 0.060    | mg/L | 0.060    | 0.023    |  | W402005 | AS  | 01/09/14 17:32 |  |
| EPA 200.7 | Manganese | < 0.0040   | mg/L | 0.0040   | 0.0013   |  | W402005 | AS  | 01/09/14 17:32 |  |
| EPA 200.7 | Nickel    | < 0.010    | mg/L | 0.010    | 0.003    |  | W402005 | AS  | 01/09/14 17:32 |  |
| EPA 200.7 | Zinc      | < 0.0100   | mg/L | 0.0100   | 0.0023   |  | W402005 | AS  | 01/09/14 17:32 |  |
| EPA 200.8 | Arsenic   | < 0.0100   | mg/L | 0.0100   | 0.0003   |  | W402012 | KWH | 01/08/14 06:29 |  |
| EPA 200.8 | Cadmium   | < 0.00030  | mg/L | 0.00030  | 0.00003  |  | W402012 | KWH | 01/08/14 06:29 |  |
| EPA 200.8 | Copper    | < 0.00300  | mg/L | 0.00300  | 0.000061 |  | W402012 | KWH | 01/08/14 06:29 |  |
| EPA 200.8 | Lead      | < 0.00500  | mg/L | 0.00500  | 0.000048 |  | W402012 | KWH | 01/08/14 06:29 |  |
| EPA 200.8 | Selenium  | < 0.0100   | mg/L | 0.0100   | 0.00026  |  | W402012 | KWH | 01/08/14 06:29 |  |
| EPA 200.8 | Silver    | < 0.000100 | mg/L | 0.000100 | 0.000012 |  | W402012 | KWH | 01/08/14 06:29 |  |
| EPA 245.1 | Mercury   | < 0.00020  | mg/L | 0.00020  | 0.000045 |  | W402117 | STA | 01/09/14 13:27 |  |

**Classical Chemistry Parameters**

|                |                      |          |                           |        |        |  |         |     |                |  |
|----------------|----------------------|----------|---------------------------|--------|--------|--|---------|-----|----------------|--|
| EPA 335.4      | Cyanide (total)      | < 0.0100 | mg/L                      | 0.0100 | 0.0016 |  | W402150 | VRH | 01/09/14 12:44 |  |
| EPA 350.1      | Ammonia as N         | 0.043    | mg/L                      | 0.030  | 0.008  |  | W402136 | ARP | 01/10/14 13:19 |  |
| EPA 353.2      | Nitrate/Nitrite as N | < 0.050  | mg/L                      | 0.050  | 0.017  |  | W402028 | ARP | 01/08/14 12:21 |  |
| SM 2320B/2310B | Total Alkalinity     | < 1.0    | mg/L as CaCO <sub>3</sub> | 1.0    |        |  | W402020 | DKS | 01/06/14 10:03 |  |
| SM 2320B/2310B | Bicarbonate          | < 1.0    | mg/L as CaCO <sub>3</sub> | 1.0    |        |  | W402020 | DKS | 01/06/14 10:03 |  |
| SM 2320B/2310B | Carbonate            | < 1.0    | mg/L as CaCO <sub>3</sub> | 1.0    |        |  | W402020 | DKS | 01/06/14 10:03 |  |
| SM 2540 C      | Total Diss. Solids   | < 10     | mg/L                      | 10     |        |  | W402015 | RS  | 01/06/14 11:10 |  |
| SM 2540 D      | Total Susp. Solids   | < 5.0    | mg/L                      | 5.0    |        |  | W402016 | RS  | 01/06/14 11:10 |  |
| SM 4500-CN-I   | Cyanide (WAD)        | < 0.0100 | mg/L                      | 0.0100 | 0.0019 |  | W402029 | VRH | 01/06/14 12:44 |  |

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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: **W4A0034**  
Reported: 17-Jan-14 09:14

Client Sample ID: **140102BMGFB**SVL Sample ID: **W4A0034-04 (Surface Water)**

Sample Report Page 2 of 2

Sampled: 02-Jan-14 09:35

Received: 03-Jan-14

Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Anions by Ion Chromatography**

|           |                            |        |      |      |      |  |         |     |                |  |
|-----------|----------------------------|--------|------|------|------|--|---------|-----|----------------|--|
| EPA 300.0 | Chloride                   | < 0.20 | mg/L | 0.20 | 0.04 |  | W403137 | AEW | 01/15/14 22:54 |  |
| EPA 300.0 | Fluoride                   | < 0.10 | mg/L | 0.10 | 0.02 |  | W403137 | AEW | 01/15/14 22:54 |  |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | < 0.30 | mg/L | 0.30 | 0.02 |  | W403137 | AEW | 01/15/14 22:54 |  |

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 0.02 meq/L      Anion Sum: 0.02 meq/L      C/A Balance: -13.39 %      Calculated TDS: 0

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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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: **W4A0034**  
Reported: 17-Jan-14 09:14

Client Sample ID: **140102BMGRB**SVL Sample ID: **W4A0034-01 (Surface Water)**

Sample Report Page 1 of 2

Sampled: 02-Jan-14 08:40  
Received: 03-Jan-14  
Sampled By: **AT**

| Method                | Analyte                          | Result     | Units | RL       | MDL      | Dilution | Batch   | Analyst | Analyzed       | Notes |
|-----------------------|----------------------------------|------------|-------|----------|----------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b> |                                  |            |       |          |          |          |         |         |                |       |
| EPA 200.7             | Aluminum                         | < 0.040    | mg/L  | 0.040    | 0.031    |          | W402001 | TJK     | 01/09/14 13:20 |       |
| EPA 200.7             | Barium                           | < 0.0020   | mg/L  | 0.0020   | 0.0005   |          | W402001 | TJK     | 01/09/14 13:20 |       |
| EPA 200.7             | Boron                            | < 0.040    | mg/L  | 0.040    | 0.010    |          | W402001 | TJK     | 01/09/14 13:20 |       |
| EPA 200.7             | Calcium                          | < 0.040    | mg/L  | 0.040    | 0.015    |          | W402001 | TJK     | 01/09/14 13:20 |       |
| EPA 200.7             | Chromium                         | < 0.0060   | mg/L  | 0.0060   | 0.0015   |          | W402001 | TJK     | 01/09/14 13:20 |       |
| EPA 200.7             | Iron                             | < 0.060    | mg/L  | 0.060    | 0.023    |          | W402001 | TJK     | 01/09/14 13:20 |       |
| EPA 200.7             | Magnesium                        | < 0.200    | mg/L  | 0.200    | 0.039    |          | W402001 | TJK     | 01/09/14 13:20 |       |
| EPA 200.7             | Manganese                        | < 0.0040   | mg/L  | 0.0040   | 0.0013   |          | W402001 | TJK     | 01/09/14 13:20 |       |
| EPA 200.7             | Nickel                           | < 0.010    | mg/L  | 0.010    | 0.003    |          | W402001 | TJK     | 01/09/14 13:20 |       |
| EPA 200.7             | Potassium                        | < 0.50     | mg/L  | 0.50     | 0.13     |          | W402001 | TJK     | 01/09/14 13:20 |       |
| EPA 200.7             | Silica (SiO <sub>2</sub> )       | < 0.17     | mg/L  | 0.17     | 0.06     |          | W402001 | TJK     | 01/09/14 13:20 |       |
| EPA 200.7             | Sodium                           | < 0.50     | mg/L  | 0.50     | 0.08     |          | W402001 | TJK     | 01/09/14 13:20 |       |
| EPA 200.7             | Zinc                             | < 0.0100   | mg/L  | 0.0100   | 0.0023   |          | W402001 | TJK     | 01/09/14 13:20 |       |
| EPA 200.8             | Arsenic                          | < 0.0100   | mg/L  | 0.0100   | 0.0008   | 2.5      | W402006 | KWH     | 01/08/14 06:44 |       |
| EPA 200.8             | Cadmium                          | < 0.00030  | mg/L  | 0.00030  | 0.000075 | 2.5      | W402006 | KWH     | 01/08/14 06:44 |       |
| EPA 200.8             | Copper                           | < 0.00300  | mg/L  | 0.00300  | 0.00015  | 2.5      | W402006 | KWH     | 01/08/14 06:44 |       |
| EPA 200.8             | Lead                             | < 0.00500  | mg/L  | 0.00500  | 0.000120 | 2.5      | W402006 | KWH     | 01/08/14 06:44 |       |
| EPA 200.8             | Selenium                         | < 0.0100   | mg/L  | 0.0100   | 0.00065  | 2.5      | W402006 | KWH     | 01/08/14 06:44 |       |
| EPA 200.8             | Silver                           | < 0.000200 | mg/L  | 0.000200 | 0.00003  | 2.5      | W402006 | KWH     | 01/08/14 06:44 |       |
| EPA 245.1             | Mercury                          | < 0.00020  | mg/L  | 0.00020  | 0.000045 |          | W402159 | STA     | 01/10/14 10:53 |       |
| SM 2340B              | Hardness (as CaCO <sub>3</sub> ) | < 0.923    | mg/L  | 0.923    | 0.198    |          | N/A     |         | 01/09/14 13:20 |       |

**Metals (Dissolved)**

|           |           |            |      |          |          |  |         |     |                |  |
|-----------|-----------|------------|------|----------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Aluminum  | < 0.040    | mg/L | 0.040    | 0.031    |  | W402005 | AS  | 01/09/14 17:18 |  |
| EPA 200.7 | Barium    | < 0.0020   | mg/L | 0.0020   | 0.0005   |  | W402005 | AS  | 01/09/14 17:18 |  |
| EPA 200.7 | Boron     | < 0.040    | mg/L | 0.040    | 0.010    |  | W402005 | AS  | 01/09/14 17:18 |  |
| EPA 200.7 | Chromium  | < 0.0060   | mg/L | 0.0060   | 0.0015   |  | W402005 | AS  | 01/09/14 17:18 |  |
| EPA 200.7 | Iron      | < 0.060    | mg/L | 0.060    | 0.023    |  | W402005 | AS  | 01/09/14 17:18 |  |
| EPA 200.7 | Manganese | < 0.0040   | mg/L | 0.0040   | 0.0013   |  | W402005 | AS  | 01/09/14 17:18 |  |
| EPA 200.7 | Nickel    | < 0.010    | mg/L | 0.010    | 0.003    |  | W402005 | AS  | 01/09/14 17:18 |  |
| EPA 200.7 | Zinc      | < 0.0100   | mg/L | 0.0100   | 0.0023   |  | W402005 | AS  | 01/09/14 17:18 |  |
| EPA 200.8 | Arsenic   | < 0.0100   | mg/L | 0.0100   | 0.0003   |  | W402012 | KWH | 01/08/14 06:21 |  |
| EPA 200.8 | Cadmium   | < 0.00030  | mg/L | 0.00030  | 0.00003  |  | W402012 | KWH | 01/08/14 06:21 |  |
| EPA 200.8 | Copper    | < 0.00300  | mg/L | 0.00300  | 0.000061 |  | W402012 | KWH | 01/08/14 06:21 |  |
| EPA 200.8 | Lead      | < 0.00500  | mg/L | 0.00500  | 0.000048 |  | W402012 | KWH | 01/08/14 06:21 |  |
| EPA 200.8 | Selenium  | < 0.0100   | mg/L | 0.0100   | 0.00026  |  | W402012 | KWH | 01/08/14 06:21 |  |
| EPA 200.8 | Silver    | < 0.000100 | mg/L | 0.000100 | 0.000012 |  | W402012 | KWH | 01/08/14 06:21 |  |
| EPA 245.1 | Mercury   | < 0.00020  | mg/L | 0.00020  | 0.000045 |  | W402117 | STA | 01/09/14 13:24 |  |

**Classical Chemistry Parameters**

|                |                      |          |                           |        |        |  |         |     |                |  |
|----------------|----------------------|----------|---------------------------|--------|--------|--|---------|-----|----------------|--|
| EPA 335.4      | Cyanide (total)      | < 0.0100 | mg/L                      | 0.0100 | 0.0016 |  | W402150 | VRH | 01/09/14 12:40 |  |
| EPA 350.1      | Ammonia as N         | 0.056    | mg/L                      | 0.030  | 0.008  |  | W402136 | ARP | 01/10/14 12:33 |  |
| EPA 353.2      | Nitrate/Nitrite as N | < 0.050  | mg/L                      | 0.050  | 0.017  |  | W402028 | ARP | 01/08/14 12:18 |  |
| SM 2320B/2310B | Total Alkalinity     | < 1.0    | mg/L as CaCO <sub>3</sub> | 1.0    |        |  | W402020 | DKS | 01/06/14 10:02 |  |
| SM 2320B/2310B | Bicarbonate          | < 1.0    | mg/L as CaCO <sub>3</sub> | 1.0    |        |  | W402020 | DKS | 01/06/14 10:02 |  |
| SM 2320B/2310B | Carbonate            | < 1.0    | mg/L as CaCO <sub>3</sub> | 1.0    |        |  | W402020 | DKS | 01/06/14 10:02 |  |
| SM 2540 C      | Total Diss. Solids   | < 10     | mg/L                      | 10     |        |  | W402015 | RS  | 01/06/14 11:10 |  |
| SM 2540 D      | Total Susp. Solids   | < 5.0    | mg/L                      | 5.0    |        |  | W402016 | RS  | 01/06/14 11:10 |  |
| SM 4500-CN-I   | Cyanide (WAD)        | < 0.0100 | mg/L                      | 0.0100 | 0.0019 |  | W402029 | VRH | 01/06/14 12:34 |  |

Rinse Blank



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: **W4A0034**  
Reported: 17-Jan-14 09:14

Client Sample ID: **140102BMGRB**SVL Sample ID: **W4A0034-01 (Surface Water)**

Sample Report Page 2 of 2

Sampled: 02-Jan-14 08:40  
Received: 03-Jan-14  
Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Anions by Ion Chromatography**

|           |                            |        |      |      |      |  |         |     |                |  |
|-----------|----------------------------|--------|------|------|------|--|---------|-----|----------------|--|
| EPA 300.0 | Chloride                   | < 0.20 | mg/L | 0.20 | 0.04 |  | W403137 | AEW | 01/15/14 21:45 |  |
| EPA 300.0 | Fluoride                   | < 0.10 | mg/L | 0.10 | 0.02 |  | W403137 | AEW | 01/15/14 21:45 |  |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | < 0.30 | mg/L | 0.30 | 0.02 |  | W403137 | AEW | 01/15/14 21:45 |  |

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 0.02 meq/L      Anion Sum: 0.02 meq/L      C/A Balance: -10.97 %      Calculated TDS: 0

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

**John Kern**  
Laboratory Director

Rinse Blank



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: **W4A0128**  
Reported: 21-Jan-14 10:18

Client Sample ID: **140108BMGM19**SVL Sample ID: **W4A0128-01 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 08-Jan-14 09:40  
Received: 09-Jan-14  
Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Metals (Total)**

|           |         |      |      |       |       |  |         |     |                |  |
|-----------|---------|------|------|-------|-------|--|---------|-----|----------------|--|
| EPA 200.7 | Calcium | 24.3 | mg/L | 0.040 | 0.015 |  | W402184 | TJK | 01/13/14 12:57 |  |
|-----------|---------|------|------|-------|-------|--|---------|-----|----------------|--|

**Metals (Dissolved)**

|           |           |           |      |         |          |  |         |     |                |  |
|-----------|-----------|-----------|------|---------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Iron      | 0.255     | mg/L | 0.060   | 0.023    |  | W402179 | AS  | 01/12/14 11:18 |  |
| EPA 200.7 | Manganese | 0.297     | mg/L | 0.0040  | 0.0013   |  | W402179 | AS  | 01/12/14 11:18 |  |
| EPA 200.8 | Copper    | < 0.00300 | mg/L | 0.00300 | 0.000061 |  | W403008 | KWH | 01/15/14 09:30 |  |

**Classical Chemistry Parameters**

|           |                    |     |      |    |  |  |         |    |                |  |
|-----------|--------------------|-----|------|----|--|--|---------|----|----------------|--|
| SM 2540 C | Total Diss. Solids | 104 | mg/L | 10 |  |  | W402196 | RS | 01/10/14 13:50 |  |
|-----------|--------------------|-----|------|----|--|--|---------|----|----------------|--|

**Anions by Ion Chromatography**

|           |                            |      |      |      |      |  |         |     |                |  |
|-----------|----------------------------|------|------|------|------|--|---------|-----|----------------|--|
| EPA 300.0 | Fluoride                   | 1.06 | mg/L | 0.10 | 0.02 |  | W403269 | AEW | 01/19/14 03:33 |  |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | 8.74 | mg/L | 0.30 | 0.02 |  | W403269 | AEW | 01/19/14 03:33 |  |

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

John Kern  
Laboratory Director

M-19

Temp - 10.8°C  
pH - 6.65

Quarterly



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: **W4A0128**  
Reported: 21-Jan-14 10:18

Client Sample ID: **140108BMGM21**SVL Sample ID: **W4A0128-02 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 08-Jan-14 10:05

Received: 09-Jan-14

Sampled By: AT

| Method                                | Analyte                    | Result    | Units | RL      | MDL      | Dilution | Batch   | Analyst | Analyzed       | Notes |
|---------------------------------------|----------------------------|-----------|-------|---------|----------|----------|---------|---------|----------------|-------|
| <b>Metals (Total)</b>                 |                            |           |       |         |          |          |         |         |                |       |
| EPA 200.7                             | Calcium                    | 40.3      | mg/L  | 0.040   | 0.015    |          | W402184 | TJK     | 01/13/14 13:00 |       |
| <b>Metals (Dissolved)</b>             |                            |           |       |         |          |          |         |         |                |       |
| EPA 200.7                             | Iron                       | 0.081     | mg/L  | 0.060   | 0.023    |          | W402179 | AS      | 01/12/14 11:24 |       |
| EPA 200.7                             | Manganese                  | 0.373     | mg/L  | 0.0040  | 0.0013   |          | W402179 | AS      | 01/12/14 11:24 |       |
| EPA 200.8                             | Copper                     | < 0.00300 | mg/L  | 0.00300 | 0.000061 |          | W403008 | KWH     | 01/15/14 09:35 |       |
| <b>Classical Chemistry Parameters</b> |                            |           |       |         |          |          |         |         |                |       |
| SM 2540 C                             | Total Diss. Solids         | 161       | mg/L  | 10      |          |          | W402196 | RS      | 01/10/14 13:50 |       |
| <b>Anions by Ion Chromatography</b>   |                            |           |       |         |          |          |         |         |                |       |
| EPA 300.0                             | Fluoride                   | 1.39      | mg/L  | 0.10    | 0.02     |          | W403269 | AEW     | 01/19/14 03:43 |       |
| EPA 300.0                             | Sulfate as SO <sub>4</sub> | 34.6      | mg/L  | 0.30    | 0.02     |          | W403269 | AEW     | 01/19/14 03:43 |       |

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

John Kern  
Laboratory Director

M-21  
Temp - 7.4°C  
pH - 6.84



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: **W4A0128**  
Reported: 21-Jan-14 10:18

Client Sample ID: **140108BMGM24**SVL Sample ID: **W4A0128-03 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 08-Jan-14 10:30  
Received: 09-Jan-14  
Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Metals (Total)**

|           |         |     |      |       |       |  |         |     |                |  |
|-----------|---------|-----|------|-------|-------|--|---------|-----|----------------|--|
| EPA 200.7 | Calcium | 146 | mg/L | 0.040 | 0.015 |  | W402184 | TJK | 01/13/14 13:03 |  |
|-----------|---------|-----|------|-------|-------|--|---------|-----|----------------|--|

**Metals (Dissolved)**

|           |           |           |      |         |          |  |         |     |                |  |
|-----------|-----------|-----------|------|---------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Iron      | 7.00      | mg/L | 0.060   | 0.023    |  | W402179 | AS  | 01/12/14 11:29 |  |
| EPA 200.7 | Manganese | 1.31      | mg/L | 0.0040  | 0.0013   |  | W402179 | AS  | 01/12/14 11:29 |  |
| EPA 200.8 | Copper    | < 0.00300 | mg/L | 0.00300 | 0.000061 |  | W403008 | KWH | 01/15/14 09:39 |  |

**Classical Chemistry Parameters**

|           |                    |     |      |    |  |  |         |    |                |  |
|-----------|--------------------|-----|------|----|--|--|---------|----|----------------|--|
| SM 2540 C | Total Diss. Solids | 683 | mg/L | 10 |  |  | W402196 | RS | 01/10/14 13:50 |  |
|-----------|--------------------|-----|------|----|--|--|---------|----|----------------|--|

**Anions by Ion Chromatography**

|           |                            |      |      |      |      |    |         |     |                |    |
|-----------|----------------------------|------|------|------|------|----|---------|-----|----------------|----|
| EPA 300.0 | Fluoride                   | 0.81 | mg/L | 0.10 | 0.02 |    | W403269 | AEW | 01/19/14 04:11 |    |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | 343  | mg/L | 7.50 | 0.52 | 25 | W403269 | AEW | 01/19/14 04:20 | D2 |

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

John Kern  
Laboratory Director

M-24  
Temp - 8.1°C  
pH - 7.26



One Government Gulch - PO Box 929

Kellogg ID 83837-0929

(208) 784-1258

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Battle Mountain - San Luis  
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San Luis, CO 81152

Project Name: **BMSL - Routine**  
Work Order: **W4A0128**  
Reported: 21-Jan-14 10:18

Client Sample ID: **140108BMGM11R**SVL Sample ID: **W4A0128-04 (Ground Water)**

Sample Report Page 1 of 1

Sampled: 08-Jan-14 10:55  
Received: 09-Jan-14  
Sampled By: AT

| Method | Analyte | Result | Units | RL | MDL | Dilution | Batch | Analyst | Analyzed | Notes |
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|
|--------|---------|--------|-------|----|-----|----------|-------|---------|----------|-------|

**Metals (Total)**

|           |                                  |      |      |       |       |  |         |     |                |    |
|-----------|----------------------------------|------|------|-------|-------|--|---------|-----|----------------|----|
| EPA 200.7 | Calcium                          | 121  | mg/L | 0.040 | 0.015 |  | W402184 | TJK | 01/13/14 13:06 | M3 |
| EPA 200.7 | Magnesium                        | 19.8 | mg/L | 0.200 | 0.039 |  | W402184 | TJK | 01/13/14 13:06 |    |
| EPA 200.7 | Potassium                        | 2.73 | mg/L | 0.50  | 0.13  |  | W402184 | TJK | 01/13/14 13:06 |    |
| EPA 200.7 | Silica (SiO <sub>2</sub> )       | 24.2 | mg/L | 0.17  | 0.06  |  | W402184 | TJK | 01/13/14 13:06 |    |
| EPA 200.7 | Sodium                           | 27.5 | mg/L | 0.50  | 0.08  |  | W402184 | TJK | 01/13/14 13:06 |    |
| SM 2340B  | Hardness (as CaCO <sub>3</sub> ) | 385  | mg/L | 0.923 | 0.198 |  | N/A     |     | 01/13/14 13:06 |    |

**Metals (Dissolved)**

|           |           |            |      |          |          |  |         |     |                |  |
|-----------|-----------|------------|------|----------|----------|--|---------|-----|----------------|--|
| EPA 200.7 | Aluminum  | < 0.040    | mg/L | 0.040    | 0.031    |  | W402179 | AS  | 01/12/14 11:35 |  |
| EPA 200.7 | Barium    | 0.0826     | mg/L | 0.0020   | 0.0005   |  | W402179 | AS  | 01/12/14 12:00 |  |
| EPA 200.7 | Cadmium   | < 0.0020   | mg/L | 0.0020   | 0.0007   |  | W402179 | AS  | 01/12/14 12:00 |  |
| EPA 200.7 | Chromium  | < 0.0060   | mg/L | 0.0060   | 0.0015   |  | W402179 | AS  | 01/12/14 12:00 |  |
| EPA 200.7 | Iron      | 0.148      | mg/L | 0.060    | 0.023    |  | W402179 | AS  | 01/12/14 11:35 |  |
| EPA 200.7 | Manganese | 1.22       | mg/L | 0.0040   | 0.0013   |  | W402179 | AS  | 01/12/14 11:35 |  |
| EPA 200.7 | Nickel    | < 0.010    | mg/L | 0.010    | 0.003    |  | W402179 | AS  | 01/12/14 12:00 |  |
| EPA 200.7 | Zinc      | < 0.0100   | mg/L | 0.0100   | 0.0023   |  | W402179 | AS  | 01/12/14 12:00 |  |
| EPA 200.8 | Arsenic   | < 0.0100   | mg/L | 0.0100   | 0.0003   |  | W403008 | KWH | 01/15/14 09:44 |  |
| EPA 200.8 | Copper    | < 0.00300  | mg/L | 0.00300  | 0.000061 |  | W403008 | KWH | 01/15/14 09:44 |  |
| EPA 200.8 | Lead      | < 0.00500  | mg/L | 0.00500  | 0.000048 |  | W403008 | KWH | 01/15/14 09:44 |  |
| EPA 200.8 | Selenium  | < 0.0100   | mg/L | 0.0100   | 0.00026  |  | W403008 | KWH | 01/15/14 09:44 |  |
| EPA 200.8 | Silver    | < 0.000100 | mg/L | 0.000100 | 0.000012 |  | W403008 | KWH | 01/15/14 09:44 |  |
| EPA 245.1 | Mercury   | < 0.00020  | mg/L | 0.00020  | 0.000045 |  | W403085 | STA | 01/15/14 12:29 |  |

**Classical Chemistry Parameters**

|                |                    |     |                           |     |  |  |         |     |                |  |
|----------------|--------------------|-----|---------------------------|-----|--|--|---------|-----|----------------|--|
| SM 2320B/2310B | Total Alkalinity   | 205 | mg/L as CaCO <sub>3</sub> | 1.0 |  |  | W402074 | DKS | 01/10/14 08:53 |  |
| SM 2540 C      | Total Diss. Solids | 510 | mg/L                      | 10  |  |  | W402196 | RS  | 01/10/14 13:50 |  |

**Anions by Ion Chromatography**

|           |                            |      |      |      |      |    |         |     |                |    |
|-----------|----------------------------|------|------|------|------|----|---------|-----|----------------|----|
| EPA 300.0 | Chloride                   | 8.00 | mg/L | 0.20 | 0.04 |    | W403269 | AEW | 01/19/14 04:30 |    |
| EPA 300.0 | Fluoride                   | 1.02 | mg/L | 0.10 | 0.02 |    | W403269 | AEW | 01/19/14 04:30 |    |
| EPA 300.0 | Sulfate as SO <sub>4</sub> | 209  | mg/L | 3.00 | 0.21 | 10 | W403269 | AEW | 01/19/14 04:39 | D2 |

**Cation/Anion Balance and TDS Ratios**

Cation Sum: 8.99 meq/L      Anion Sum: 8.73 meq/L      C/A Balance: 1.48 %      Calculated TDS: 512      TDS/cTDS: 1.00

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

John Kern  
Laboratory Director

M11-R

Temp- 8.5°C  
pH- 7.20

Quantity