

September 09, 2020

Report to:

Kent Applegate  
Rio Algom Mining Company  
P.O. Box 218  
Grants, NM 87020

Bill to:

Accounts Payable  
Rio Algom Mining Company  
P.O. Box 218  
Grants, NM 87020

cc: Clark Short, Angela Persico, Michaela Gorospe

Project ID: 4508122295

ACZ Project ID: L60730

Kent Applegate:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 08, 2020. This project has been assigned to ACZ's project number, L60730. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L60730. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after October 09, 2020. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Scott Habermehl has reviewed  
and approved this report.



### Rio Algom Mining Company

Project ID: 4508122295

Sample ID: 30-48 KD-R

ACZ Sample ID: **L60730-01**

Date Sampled: 08/06/20 09:31

Date Received: 08/08/20

Sample Matrix: Groundwater

#### Metals Analysis

| Parameter             | EPA Method            | Dilution | Result | Qual | XQ | Units | MDL    | PQL   | Date           | Analyst |
|-----------------------|-----------------------|----------|--------|------|----|-------|--------|-------|----------------|---------|
| Antimony, dissolved   | M200.8 ICP-MS         | 5        |        | U    |    | mg/L  | 0.002  | 0.01  | 08/21/20 7:45  | enb     |
| Arsenic, dissolved    | M200.8 ICP-MS         | 5        |        | U    |    | mg/L  | 0.001  | 0.005 | 08/21/20 7:45  | enb     |
| Barium, dissolved     | M200.7 ICP            | 1        | 0.013  | B    |    | mg/L  | 0.007  | 0.04  | 08/14/20 13:02 | jlw     |
| Beryllium, dissolved  | M200.8 ICP-MS         | 5        |        | U    |    | mg/L  | 0.0004 | 0.001 | 08/21/20 7:45  | enb     |
| Cadmium, dissolved    | M200.8 ICP-MS         | 5        |        | U    |    | mg/L  | 0.0003 | 0.001 | 08/21/20 7:45  | enb     |
| Calcium, dissolved    | M200.7 ICP            | 1        | 552    |      |    | mg/L  | 0.1    | 0.5   | 08/14/20 13:02 | jlw     |
| Iron, dissolved       | M200.7 ICP            | 1        | 3.21   |      |    | mg/L  | 0.06   | 0.2   | 08/14/20 13:02 | jlw     |
| Lead, dissolved       | M200.8 ICP-MS         | 5        |        | U    |    | mg/L  | 0.0005 | 0.003 | 08/21/20 7:45  | enb     |
| Magnesium, dissolved  | M200.7 ICP            | 1        | 216    |      |    | mg/L  | 0.2    | 1     | 08/14/20 13:02 | jlw     |
| Molybdenum, dissolved | M200.8 ICP-MS         | 5        | 0.021  |      |    | mg/L  | 0.001  | 0.003 | 08/21/20 7:45  | enb     |
| Nickel, dissolved     | M200.8 ICP-MS         | 5        |        | U    |    | mg/L  | 0.002  | 0.005 | 08/21/20 7:45  | enb     |
| Potassium, dissolved  | M200.7 ICP            | 1        | 9.0    |      |    | mg/L  | 0.2    | 1     | 08/14/20 13:02 | jlw     |
| Selenium, dissolved   | SM 3114 B, AA-Hydride | 1        |        | U    |    | mg/L  | 0.002  | 0.005 | 08/13/20 15:08 | slm     |
| Sodium, dissolved     | M200.7 ICP            | 1        | 388    |      |    | mg/L  | 0.2    | 1     | 08/14/20 13:02 | jlw     |
| Uranium, dissolved    | M200.8 ICP-MS         | 5        |        | U    | *  | mg/L  | 0.0005 | 0.003 | 08/21/20 7:45  | enb     |

#### Wet Chemistry

| Parameter                         | EPA Method                      | Dilution | Result | Qual | XQ | Units    | MDL   | PQL  | Date           | Analyst |
|-----------------------------------|---------------------------------|----------|--------|------|----|----------|-------|------|----------------|---------|
| Alkalinity as CaCO3               | SM2320B - Titration             |          |        |      |    |          |       |      |                |         |
| Bicarbonate as CaCO3              |                                 | 1        | 290    |      |    | mg/L     | 2     | 20   | 08/10/20 0:00  | emk     |
| Carbonate as CaCO3                |                                 | 1        |        | U    |    | mg/L     | 2     | 20   | 08/10/20 0:00  | emk     |
| Hydroxide as CaCO3                |                                 | 1        |        | U    |    | mg/L     | 2     | 20   | 08/10/20 0:00  | emk     |
| Total Alkalinity                  |                                 | 1        | 290    |      |    | mg/L     | 2     | 20   | 08/10/20 0:00  | emk     |
| Cation-Anion Balance              | Calculation                     |          |        |      |    |          |       |      |                |         |
| Cation-Anion Balance              |                                 |          | -1.6   |      |    | %        |       |      | 09/09/20 0:00  | calc    |
| Sum of Anions                     |                                 |          | 65     |      |    | meq/L    |       |      | 09/09/20 0:00  | calc    |
| Sum of Cations                    |                                 |          | 63     |      |    | meq/L    |       |      | 09/09/20 0:00  | calc    |
| Chloride                          | SM4500Cl-E                      | 10       | 517    |      |    | mg/L     | 5     | 20   | 08/14/20 12:37 | rbt     |
| Conductivity @25C                 | SM2510B                         | 1        | 4920   |      |    | umhos/cm | 1     | 10   | 08/22/20 0:02  | jck     |
| Cyanide, Total                    | D7511-09                        | 1        |        | U    | *  | mg/L     | 0.003 | 0.01 | 08/10/20 11:25 | rbt     |
| Nitrate/Nitrite as N              | M353.2 - H2SO4 preserved        | 1        | 0.06   | B    | *  | mg/L     | 0.02  | 0.1  | 08/27/20 1:52  | pjb     |
| Residue, Filterable (TDS) @180C   | SM2540C                         | 2        | 4170   |      |    | mg/L     | 40    | 80   | 08/11/20 18:19 | eep     |
| Sulfate                           | D516-02/-07/-11 - Turbidimetric | 120      | 2120   |      |    | mg/L     | 120   | 600  | 08/17/20 11:32 | rbt     |
| TDS (calculated)                  | Calculation                     |          | 3980   |      |    | mg/L     |       |      | 09/09/20 0:00  | calc    |
| TDS (ratio - measured/calculated) | Calculation                     |          | 1.05   |      |    |          |       |      | 09/09/20 0:00  | calc    |

### Rio Algom Mining Company

Project ID: 4508122295

Sample ID: 31-65 ALL

ACZ Sample ID: **L60730-02**

Date Sampled: 08/07/20 10:58

Date Received: 08/08/20

Sample Matrix: Groundwater

#### Inorganic Prep

| Parameter                 | EPA Method    | Dilution | Result | Qual | XQ | Units | MDL | PQL | Date           | Analyst |
|---------------------------|---------------|----------|--------|------|----|-------|-----|-----|----------------|---------|
| Total Hot Plate Digestion | M200.2 ICP-MS |          |        |      | *  |       |     |     | 08/26/20 10:20 | mfm     |

#### Metals Analysis

| Parameter             | EPA Method            | Dilution | Result | Qual | XQ | Units | MDL   | PQL   | Date           | Analyst |
|-----------------------|-----------------------|----------|--------|------|----|-------|-------|-------|----------------|---------|
| Calcium, dissolved    | M200.7 ICP            | 1        | 552    |      |    | mg/L  | 0.1   | 0.5   | 08/14/20 13:05 | jlw     |
| Iron, dissolved       | M200.7 ICP            | 1        | 182    |      |    | mg/L  | 0.06  | 0.2   | 08/14/20 13:05 | jlw     |
| Magnesium, dissolved  | M200.7 ICP            | 10       | 1540   |      |    | mg/L  | 2     | 10    | 08/17/20 10:22 | kja     |
| Molybdenum, dissolved | M200.8 ICP-MS         | 10       |        | U    |    | mg/L  | 0.002 | 0.005 | 08/21/20 7:48  | enb     |
| Nickel, dissolved     | M200.8 ICP-MS         | 10       | 0.117  |      |    | mg/L  | 0.004 | 0.01  | 08/21/20 7:48  | enb     |
| Potassium, dissolved  | M200.7 ICP            | 1        | 49.1   |      |    | mg/L  | 0.2   | 1     | 08/14/20 13:05 | jlw     |
| Selenium, dissolved   | SM 3114 B, AA-Hydride | 1        | 0.0042 | B    |    | mg/L  | 0.002 | 0.005 | 08/13/20 15:10 | slm     |
| Sodium, dissolved     | M200.7 ICP            | 10       | 1890   |      |    | mg/L  | 2     | 10    | 08/17/20 10:22 | kja     |
| Uranium, total        | M200.8 ICP-MS         | 10       | 0.075  |      |    | mg/L  | 0.001 | 0.005 | 08/27/20 14:58 | bsu     |

#### Wet Chemistry

| Parameter                         | EPA Method                      | Dilution | Result | Qual | XQ | Units    | MDL  | PQL  | Date           | Analyst |
|-----------------------------------|---------------------------------|----------|--------|------|----|----------|------|------|----------------|---------|
| Alkalinity as CaCO3               | SM2320B - Titration             |          |        |      |    |          |      |      |                |         |
| Bicarbonate as CaCO3              |                                 | 1        | 1830   |      |    | mg/L     | 2    | 20   | 08/10/20 0:00  | emk     |
| Carbonate as CaCO3                |                                 | 1        |        | U    |    | mg/L     | 2    | 20   | 08/10/20 0:00  | emk     |
| Hydroxide as CaCO3                |                                 | 1        |        | U    |    | mg/L     | 2    | 20   | 08/10/20 0:00  | emk     |
| Total Alkalinity                  |                                 | 1        | 1830   |      | *  | mg/L     | 2    | 20   | 08/10/20 0:00  | emk     |
| Cation-Anion Balance              | Calculation                     |          |        |      |    |          |      |      |                |         |
| Cation-Anion Balance              |                                 |          | -0.4   |      |    | %        |      |      | 09/09/20 0:00  | calc    |
| Sum of Anions                     |                                 |          | 250    |      |    | meq/L    |      |      | 09/09/20 0:00  | calc    |
| Sum of Cations                    |                                 |          | 248    |      |    | meq/L    |      |      | 09/09/20 0:00  | calc    |
| Chloride                          | SM4500Cl-E                      | 75       | 2410   |      |    | mg/L     | 40   | 200  | 08/14/20 12:46 | rbt     |
| Conductivity @25C                 | SM2510B                         | 1        | 17000  |      | *  | umhos/cm | 1    | 10   | 08/22/20 0:04  | jck     |
| Nitrate/Nitrite as N              | M353.2 - H2SO4 preserved        | 1        | 0.04   | B    | *  | mg/L     | 0.02 | 0.1  | 08/27/20 1:54  | pjb     |
| Residue, Filterable (TDS) @180C   | SM2540C                         | 5        | 14200  |      |    | mg/L     | 100  | 200  | 08/11/20 18:21 | eep     |
| Sulfate                           | D516-02/-07/-11 - Turbidimetric | 500      | 6950   |      |    | mg/L     | 500  | 2500 | 08/17/20 11:49 | rbt     |
| TDS (calculated)                  | Calculation                     |          | 14700  |      |    | mg/L     |      |      | 09/09/20 0:00  | calc    |
| TDS (ratio - measured/calculated) | Calculation                     |          | 0.97   |      |    |          |      |      | 09/09/20 0:00  | calc    |

### Rio Algom Mining Company

Project ID: 4508122295

Sample ID: 31-67 TRB

ACZ Sample ID: **L60730-03**

Date Sampled: 08/07/20 11:50

Date Received: 08/08/20

Sample Matrix: Groundwater

#### Metals Analysis

| Parameter             | EPA Method            | Dilution | Result | Qual | XQ | Units | MDL    | PQL   | Date           | Analyst |
|-----------------------|-----------------------|----------|--------|------|----|-------|--------|-------|----------------|---------|
| Calcium, dissolved    | M200.7 ICP            | 1        | 661    |      |    | mg/L  | 0.1    | 0.5   | 08/14/20 13:08 | jlw     |
| Iron, dissolved       | M200.7 ICP            | 1        | 0.20   |      |    | mg/L  | 0.06   | 0.2   | 08/14/20 13:08 | jlw     |
| Magnesium, dissolved  | M200.7 ICP            | 1        | 691    |      |    | mg/L  | 0.2    | 1     | 08/14/20 13:08 | jlw     |
| Molybdenum, dissolved | M200.8 ICP-MS         | 5        |        | U    |    | mg/L  | 0.001  | 0.003 | 08/21/20 7:51  | enb     |
| Nickel, dissolved     | M200.8 ICP-MS         | 5        | 0.007  |      |    | mg/L  | 0.002  | 0.005 | 08/21/20 7:51  | enb     |
| Potassium, dissolved  | M200.7 ICP            | 1        | 16.4   |      |    | mg/L  | 0.2    | 1     | 08/14/20 13:08 | jlw     |
| Selenium, dissolved   | SM 3114 B, AA-Hydride | 1        |        | U    |    | mg/L  | 0.002  | 0.005 | 08/13/20 15:17 | slm     |
| Sodium, dissolved     | M200.7 ICP            | 1        | 646    |      |    | mg/L  | 0.2    | 1     | 08/14/20 13:08 | jlw     |
| Uranium, dissolved    | M200.8 ICP-MS         | 5        | 0.0135 |      | *  | mg/L  | 0.0005 | 0.003 | 08/21/20 7:51  | enb     |

#### Wet Chemistry

| Parameter                         | EPA Method                      | Dilution | Result | Qual | XQ | Units    | MDL   | PQL  | Date           | Analyst |
|-----------------------------------|---------------------------------|----------|--------|------|----|----------|-------|------|----------------|---------|
| Alkalinity as CaCO3               | SM2320B - Titration             |          |        |      |    |          |       |      |                |         |
| Bicarbonate as CaCO3              |                                 | 1        | 962    |      |    | mg/L     | 2     | 20   | 08/10/20 0:00  | emk     |
| Carbonate as CaCO3                |                                 | 1        |        | U    |    | mg/L     | 2     | 20   | 08/10/20 0:00  | emk     |
| Hydroxide as CaCO3                |                                 | 1        |        | U    |    | mg/L     | 2     | 20   | 08/10/20 0:00  | emk     |
| Total Alkalinity                  |                                 | 1        | 962    |      |    | mg/L     | 2     | 20   | 08/10/20 0:00  | emk     |
| Cation-Anion Balance              | Calculation                     |          |        |      |    |          |       |      |                |         |
| Cation-Anion Balance              |                                 |          | 0.0    |      |    | %        |       |      | 09/09/20 0:00  | calc    |
| Sum of Anions                     |                                 |          | 119    |      |    | meq/L    |       |      | 09/09/20 0:00  | calc    |
| Sum of Cations                    |                                 |          | 119    |      |    | meq/L    |       |      | 09/09/20 0:00  | calc    |
| Chloride                          | SM4500Cl-E                      | 75       | 1010   |      |    | mg/L     | 40    | 200  | 08/14/20 12:46 | rbt     |
| Conductivity @25C                 | SM2510B                         | 1        | 8390   |      |    | umhos/cm | 1     | 10   | 08/22/20 0:07  | jck     |
| Cyanide, Total                    | D7511-09                        | 1        |        | U    |    | mg/L     | 0.003 | 0.01 | 08/10/20 11:27 | rbt     |
| Nitrate/Nitrite as N              | M353.2 - H2SO4 preserved        | 1        | 0.02   | B    | *  | mg/L     | 0.02  | 0.1  | 08/27/20 1:59  | pjb     |
| Residue, Filterable (TDS) @180C   | SM2540C                         | 5        | 7150   |      |    | mg/L     | 100   | 200  | 08/11/20 18:23 | eep     |
| Sulfate                           | D516-02/-07/-11 - Turbidimetric | 120      | 3390   |      | *  | mg/L     | 120   | 600  | 08/17/20 12:22 | rbt     |
| TDS (calculated)                  | Calculation                     |          | 7000   |      |    | mg/L     |       |      | 09/09/20 0:00  | calc    |
| TDS (ratio - measured/calculated) | Calculation                     |          | 1.02   |      |    |          |       |      | 09/09/20 0:00  | calc    |

**Report Header Explanations**

|                |  |
|----------------|--|
| <i>Batch</i>   | A distinct set of samples analyzed at a specific time  |
| <i>Found</i>   | Value of the QC Type of interest   |
| <i>Limit</i>   | Upper limit for RPD, in %.   |
| <i>Lower</i>   | Lower Recovery Limit, in % (except for LCSS, mg/Kg)  |
| <i>MDL</i>     | Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5).<br>Allows for instrument and annual fluctuations. |
| <i>PCN/SCN</i> | A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis   |
| <i>PQL</i>     | Practical Quantitation Limit. Synonymous with the EPA term "minimum level".  |
| <i>QC</i>      | True Value of the Control Sample or the amount added to the Spike  |
| <i>Rec</i>     | Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)   |
| <i>RPD</i>     | Relative Percent Difference, calculation used for Duplicate QC Types   |
| <i>Upper</i>   | Upper Recovery Limit, in % (except for LCSS, mg/Kg)  |
| <i>Sample</i>  | Value of the Sample of interest  |

**QC Sample Types**

|              |  |              |  |
|--------------|--|--------------|--|
| <i>AS</i>    | Analytical Spike (Post Digestion)                      | <i>LCSWD</i> | Laboratory Control Sample - Water Duplicate  |
| <i>ASD</i>   | Analytical Spike (Post Digestion) Duplicate            | <i>LFB</i>   | Laboratory Fortified Blank                   |
| <i>CCB</i>   | Continuing Calibration Blank                           | <i>LFM</i>   | Laboratory Fortified Matrix                  |
| <i>CCV</i>   | Continuing Calibration Verification standard           | <i>LFMD</i>  | Laboratory Fortified Matrix Duplicate        |
| <i>DUP</i>   | Sample Duplicate                                       | <i>LRB</i>   | Laboratory Reagent Blank                     |
| <i>ICB</i>   | Initial Calibration Blank                              | <i>MS</i>    | Matrix Spike                                 |
| <i>ICV</i>   | Initial Calibration Verification standard              | <i>MSD</i>   | Matrix Spike Duplicate                       |
| <i>ICSAB</i> | Inter-element Correction Standard - A plus B solutions | <i>PBS</i>   | Prep Blank - Soil                            |
| <i>LCSS</i>  | Laboratory Control Sample - Soil                       | <i>PBW</i>   | Prep Blank - Water                           |
| <i>LCSSD</i> | Laboratory Control Sample - Soil Duplicate             | <i>PQV</i>   | Practical Quantitation Verification standard |
| <i>LCSW</i>  | Laboratory Control Sample - Water                      | <i>SDL</i>   | Serial Dilution                              |

**QC Sample Type Explanations**

|                         |   |
|-------------------------|---|
| Blanks                  | Verifies that there is no or minimal contamination in the prep method or calibration procedure. |
| Control Samples         | Verifies the accuracy of the method, including the prep procedure.                              |
| Duplicates              | Verifies the precision of the instrument and/or method.   |
| Spikes/Fortified Matrix | Determines sample matrix interferences, if any.   |
| Standard                | Verifies the validity of the calibration.   |

**ACZ Qualifiers (Qual)**

|   |   |
|---|---|
| B | Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.   |
| H | Analysis exceeded method hold time. pH is a field test with an immediate hold time.   |
| L | Target analyte response was below the laboratory defined negative threshold.  |
| U | The material was analyzed for, but was not detected above the level of the associated value.<br>The associated value is either the sample quantitation limit or the sample detection limit. |

**Method References**

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
- (3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
- (4) EPA SW-846. Test Methods for Evaluating Solid Waste.
- (5) Standard Methods for the Examination of Water and Wastewater.

**Comments**

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
- (4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
- (5) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

<https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf>

Rio Algom Mining Company

ACZ Project ID: **L60730**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

**Alkalinity as CaCO3** SM2320B - Titration

| ACZ ID          | Type | Analyzed       | PCN/SCN    | QC       | Sample | Found | Units | Rec% | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|-------|-------|------|-------|-------|-----|-------|------|
| <b>WG503093</b> |      |                |            |          |        |       |       |      |       |       |     |       |      |
| WG503093PBW1    | PBW  | 08/10/20 17:17 |            |          |        | 7.1   | mg/L  |      | -20   | 20    |     |       |      |
| WG503093LCSW3   | LCSW | 08/10/20 17:37 | WC200723-2 | 820.0001 |        | 846   | mg/L  | 103  | 90    | 110   |     |       |      |
| WG503093LCSW6   | LCSW | 08/10/20 20:46 | WC200723-2 | 820.0001 |        | 869   | mg/L  | 106  | 90    | 110   |     |       |      |
| WG503093PBW2    | PBW  | 08/10/20 20:55 |            |          |        | U     | mg/L  |      | -20   | 20    |     |       |      |
| L60739-01DUP    | DUP  | 08/11/20 1:07  |            |          | 137    | 136   | mg/L  |      |       |       | 1   | 20    |      |
| WG503093LCSW9   | LCSW | 08/11/20 1:28  | WC200723-2 | 820.0001 |        | 853   | mg/L  | 104  | 90    | 110   |     |       |      |
| WG503093PBW3    | PBW  | 08/11/20 1:37  |            |          |        | U     | mg/L  |      | -20   | 20    |     |       |      |
| WG503093LCSW12  | LCSW | 08/11/20 5:06  | WC200723-2 | 820.0001 |        | 859   | mg/L  | 105  | 90    | 110   |     |       |      |
| WG503093PBW4    | PBW  | 08/11/20 5:16  |            |          |        | 2.1   | mg/L  |      | -20   | 20    |     |       |      |
| WG503093LCSW15  | LCSW | 08/11/20 6:28  | WC200723-2 | 820.0001 |        | 861   | mg/L  | 105  | 90    | 110   |     |       |      |

**Antimony, dissolved** M200.8 ICP-MS

| ACZ ID          | Type | Analyzed      | PCN/SCN    | QC     | Sample | Found  | Units | Rec% | Lower    | Upper   | RPD | Limit | Qual |
|-----------------|------|---------------|------------|--------|--------|--------|-------|------|----------|---------|-----|-------|------|
| <b>WG503760</b> |      |               |            |        |        |        |       |      |          |         |     |       |      |
| WG503760ICV     | ICV  | 08/21/20 7:20 | MS200812-2 | .02004 |        | .01911 | mg/L  | 95   | 90       | 110     |     |       |      |
| WG503760ICB     | ICB  | 08/21/20 7:23 |            |        |        | U      | mg/L  |      | -0.00088 | 0.00088 |     |       |      |
| WG503760LFB     | LFB  | 08/21/20 7:26 | MS200803-2 | .01    |        | .00987 | mg/L  | 99   | 85       | 115     |     |       |      |
| L60731-03AS     | AS   | 08/21/20 8:10 | MS200803-2 | .05    | U      | .0507  | mg/L  | 101  | 70       | 130     |     |       |      |
| L60731-03ASD    | ASD  | 08/21/20 8:13 | MS200803-2 | .05    | U      | .0516  | mg/L  | 103  | 70       | 130     | 2   | 20    |      |

**Arsenic, dissolved** M200.8 ICP-MS

| ACZ ID          | Type | Analyzed      | PCN/SCN    | QC     | Sample | Found  | Units | Rec% | Lower    | Upper   | RPD | Limit | Qual |
|-----------------|------|---------------|------------|--------|--------|--------|-------|------|----------|---------|-----|-------|------|
| <b>WG503760</b> |      |               |            |        |        |        |       |      |          |         |     |       |      |
| WG503760ICV     | ICV  | 08/21/20 7:20 | MS200812-2 | .05    |        | .04773 | mg/L  | 95   | 90       | 110     |     |       |      |
| WG503760ICB     | ICB  | 08/21/20 7:23 |            |        |        | U      | mg/L  |      | -0.00044 | 0.00044 |     |       |      |
| WG503760LFB     | LFB  | 08/21/20 7:26 | MS200803-2 | .05005 |        | .05014 | mg/L  | 100  | 85       | 115     |     |       |      |
| L60731-03AS     | AS   | 08/21/20 8:10 | MS200803-2 | .25025 | U      | .2523  | mg/L  | 101  | 70       | 130     |     |       |      |
| L60731-03ASD    | ASD  | 08/21/20 8:13 | MS200803-2 | .25025 | U      | .2637  | mg/L  | 105  | 70       | 130     | 4   | 20    |      |

**Barium, dissolved** M200.7 ICP

| ACZ ID          | Type | Analyzed       | PCN/SCN    | QC    | Sample | Found | Units | Rec% | Lower  | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-------|--------|-------|-------|------|--------|-------|-----|-------|------|
| <b>WG503200</b> |      |                |            |       |        |       |       |      |        |       |     |       |      |
| WG503200ICV     | ICV  | 08/14/20 12:22 | II200810-1 | 2     |        | 1.994 | mg/L  | 100  | 95     | 105   |     |       |      |
| WG503200ICB     | ICB  | 08/14/20 12:28 |            |       |        | U     | mg/L  |      | -0.021 | 0.021 |     |       |      |
| WG503200LFB     | LFB  | 08/14/20 12:41 | II200805-3 | .5005 |        | .5291 | mg/L  | 106  | 85     | 115   |     |       |      |
| L60611-04AS     | AS   | 08/14/20 12:50 | II200805-3 | .5005 | .102   | .5958 | mg/L  | 99   | 85     | 115   |     |       |      |
| L60611-04ASD    | ASD  | 08/14/20 12:53 | II200805-3 | .5005 | .102   | .5968 | mg/L  | 99   | 85     | 115   | 0   | 20    |      |

**Beryllium, dissolved** M200.8 ICP-MS

| ACZ ID          | Type | Analyzed      | PCN/SCN    | QC     | Sample | Found  | Units | Rec% | Lower     | Upper    | RPD | Limit | Qual |
|-----------------|------|---------------|------------|--------|--------|--------|-------|------|-----------|----------|-----|-------|------|
| <b>WG503760</b> |      |               |            |        |        |        |       |      |           |          |     |       |      |
| WG503760ICV     | ICV  | 08/21/20 7:20 | MS200812-2 | .05    |        | .04572 | mg/L  | 91   | 90        | 110      |     |       |      |
| WG503760ICB     | ICB  | 08/21/20 7:23 |            |        |        | U      | mg/L  |      | -0.000176 | 0.000176 |     |       |      |
| WG503760LFB     | LFB  | 08/21/20 7:26 | MS200803-2 | .05005 |        | .04741 | mg/L  | 95   | 85        | 115      |     |       |      |
| L60731-03AS     | AS   | 08/21/20 8:10 | MS200803-2 | .25025 | U      | .2327  | mg/L  | 93   | 70        | 130      |     |       |      |
| L60731-03ASD    | ASD  | 08/21/20 8:13 | MS200803-2 | .25025 | U      | .2428  | mg/L  | 97   | 70        | 130      | 4   | 20    |      |

**Rio Algom Mining Company**

ACZ Project ID: **L60730**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

**Cadmium, dissolved**

M200.8 ICP-MS

| ACZ ID          | Type | Analyzed      | PCN/SCN    | QC     | Sample | Found  | Units | Rec% | Lower    | Upper   | RPD | Limit | Qual |
|-----------------|------|---------------|------------|--------|--------|--------|-------|------|----------|---------|-----|-------|------|
| <b>WG503760</b> |      |               |            |        |        |        |       |      |          |         |     |       |      |
| WG503760ICV     | ICV  | 08/21/20 7:20 | MS200812-2 | .05    |        | .04815 | mg/L  | 96   | 90       | 110     |     |       |      |
| WG503760ICB     | ICB  | 08/21/20 7:23 |            |        |        | U      | mg/L  |      | -0.00011 | 0.00011 |     |       |      |
| WG503760LFB     | LFB  | 08/21/20 7:26 | MS200803-2 | .05005 |        | .0505  | mg/L  | 101  | 85       | 115     |     |       |      |
| L60731-03AS     | AS   | 08/21/20 8:10 | MS200803-2 | .25025 | U      | .2417  | mg/L  | 97   | 70       | 130     |     |       |      |
| L60731-03ASD    | ASD  | 08/21/20 8:13 | MS200803-2 | .25025 | U      | .2475  | mg/L  | 99   | 70       | 130     | 2   | 20    |      |

**Calcium, dissolved**

M200.7 ICP

| ACZ ID          | Type | Analyzed       | PCN/SCN    | QC      | Sample | Found | Units | Rec% | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|---------|--------|-------|-------|------|-------|-------|-----|-------|------|
| <b>WG503200</b> |      |                |            |         |        |       |       |      |       |       |     |       |      |
| WG503200ICV     | ICV  | 08/14/20 12:22 | II200810-1 | 100     |        | 97.51 | mg/L  | 98   | 95    | 105   |     |       |      |
| WG503200ICB     | ICB  | 08/14/20 12:28 |            |         |        | U     | mg/L  |      | -0.3  | 0.3   |     |       |      |
| WG503200LFB     | LFB  | 08/14/20 12:41 | II200805-3 | 67.9908 |        | 74.15 | mg/L  | 109  | 85    | 115   |     |       |      |
| L60611-04AS     | AS   | 08/14/20 12:50 | II200805-3 | 67.9908 | 30.3   | 98.95 | mg/L  | 101  | 85    | 115   |     |       |      |
| L60611-04ASD    | ASD  | 08/14/20 12:53 | II200805-3 | 67.9908 | 30.3   | 97.74 | mg/L  | 99   | 85    | 115   | 1   | 20    |      |

**Chloride**

SM4500Cl-E

| ACZ ID          | Type | Analyzed       | PCN/SCN    | QC     | Sample | Found | Units | Rec% | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|--------|--------|-------|-------|------|-------|-------|-----|-------|------|
| <b>WG503374</b> |      |                |            |        |        |       |       |      |       |       |     |       |      |
| WG503374ICB     | ICB  | 08/14/20 9:01  |            |        |        | U     | mg/L  |      | -1.5  | 1.5   |     |       |      |
| WG503374ICV     | ICV  | 08/14/20 9:01  | WI200506-2 | 55.055 |        | 57.61 | mg/L  | 105  | 90    | 110   |     |       |      |
| WG503374LFB1    | LFB  | 08/14/20 12:28 | WI200327-3 | 30.03  |        | 32.29 | mg/L  | 108  | 90    | 110   |     |       |      |
| L60719-14AS     | AS   | 08/14/20 12:28 | WI200327-3 | 30.03  | 1.9    | 33.52 | mg/L  | 105  | 90    | 110   |     |       |      |
| L60719-15DUP    | DUP  | 08/14/20 12:28 |            |        | 29.6   | 29.43 | mg/L  |      |       |       | 1   | 20    |      |
| WG503374LFB2    | LFB  | 08/14/20 13:08 | WI200327-3 | 30.03  |        | 31.41 | mg/L  | 105  | 90    | 110   |     |       |      |

**Conductivity @25C**

SM2510B

| ACZ ID          | Type | Analyzed       | PCN/SCN  | QC   | Sample | Found | Units    | Rec% | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|----------|------|--------|-------|----------|------|-------|-------|-----|-------|------|
| <b>WG503817</b> |      |                |          |      |        |       |          |      |       |       |     |       |      |
| WG503817LCSW2   | LCSW | 08/21/20 19:51 | PCN61372 | 1410 |        | 1420  | umhos/cm | 101  | 90    | 110   |     |       |      |
| WG503817LCSW5   | LCSW | 08/21/20 22:52 | PCN61372 | 1410 |        | 1410  | umhos/cm | 100  | 90    | 110   |     |       |      |
| L60823-01DUP    | DUP  | 08/22/20 0:28  |          |      | 2330   | 2340  | umhos/cm |      |       |       | 0   | 20    |      |
| WG503817LCSW8   | LCSW | 08/22/20 2:42  | PCN61372 | 1410 |        | 1400  | umhos/cm | 99   | 90    | 110   |     |       |      |
| WG503817LCSW11  | LCSW | 08/22/20 6:29  | PCN61372 | 1410 |        | 1400  | umhos/cm | 99   | 90    | 110   |     |       |      |
| WG503817LCSW14  | LCSW | 08/22/20 10:30 | PCN61372 | 1410 |        | 1390  | umhos/cm | 99   | 90    | 110   |     |       |      |

**Cyanide, Total**

D7511-09

| ACZ ID          | Type | Analyzed       | PCN/SCN    | QC    | Sample | Found | Units | Rec% | Lower  | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-------|--------|-------|-------|------|--------|-------|-----|-------|------|
| <b>WG503040</b> |      |                |            |       |        |       |       |      |        |       |     |       |      |
| WG503040ICV     | ICV  | 08/10/20 10:49 | WI200804-5 | .3003 |        | .2831 | mg/L  | 94   | 90     | 110   |     |       |      |
| WG503040ICB     | ICB  | 08/10/20 10:51 |            |       |        | U     | mg/L  |      | -0.003 | 0.003 |     |       |      |
| L60691-01AS     | AS   | 08/10/20 11:01 | WI200804-6 | .1    | U      | .095  | mg/L  | 95   | 84     | 116   |     |       |      |
| L60691-01ASD    | ASD  | 08/10/20 11:03 | WI200804-6 | .1    | U      | .0965 | mg/L  | 97   | 84     | 116   | 2   | 20    |      |
| WG503040LFB     | LFB  | 08/10/20 11:21 | WI200804-6 | .1    |        | .092  | mg/L  | 92   | 84     | 116   |     |       |      |

**Rio Algom Mining Company**

ACZ Project ID: **L60730**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

**Iron, dissolved**

M200.7 ICP

| ACZ ID          | Type | Analyzed       | PCN/SCN    | QC     | Sample | Found | Units | Rec% | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|--------|--------|-------|-------|------|-------|-------|-----|-------|------|
| <b>WG503200</b> |      |                |            |        |        |       |       |      |       |       |     |       |      |
| WG503200ICV     | ICV  | 08/14/20 12:22 | II200810-1 | 2      |        | 1.962 | mg/L  | 98   | 95    | 105   |     |       |      |
| WG503200ICB     | ICB  | 08/14/20 12:28 |            |        |        | U     | mg/L  |      | -0.18 | 0.18  |     |       |      |
| WG503200LFB     | LFB  | 08/14/20 12:41 | II200805-3 | 1.0018 |        | 1.097 | mg/L  | 110  | 85    | 115   |     |       |      |
| L60611-04AS     | AS   | 08/14/20 12:50 | II200805-3 | 1.0018 | .07    | 1.098 | mg/L  | 103  | 85    | 115   |     |       |      |
| L60611-04ASD    | ASD  | 08/14/20 12:53 | II200805-3 | 1.0018 | .07    | 1.103 | mg/L  | 103  | 85    | 115   | 0   | 20    |      |

**Lead, dissolved**

M200.8 ICP-MS

| ACZ ID          | Type | Analyzed      | PCN/SCN    | QC     | Sample | Found  | Units | Rec% | Lower    | Upper   | RPD | Limit | Qual |
|-----------------|------|---------------|------------|--------|--------|--------|-------|------|----------|---------|-----|-------|------|
| <b>WG503760</b> |      |               |            |        |        |        |       |      |          |         |     |       |      |
| WG503760ICV     | ICV  | 08/21/20 7:20 | MS200812-2 | .05    |        | .05105 | mg/L  | 102  | 90       | 110     |     |       |      |
| WG503760ICB     | ICB  | 08/21/20 7:23 |            |        |        | U      | mg/L  |      | -0.00022 | 0.00022 |     |       |      |
| WG503760LFB     | LFB  | 08/21/20 7:26 | MS200803-2 | .05005 |        | .05196 | mg/L  | 104  | 85       | 115     |     |       |      |
| L60731-03AS     | AS   | 08/21/20 8:10 | MS200803-2 | .25025 | U      | .2564  | mg/L  | 102  | 70       | 130     |     |       |      |
| L60731-03ASD    | ASD  | 08/21/20 8:13 | MS200803-2 | .25025 | U      | .2639  | mg/L  | 105  | 70       | 130     | 3   | 20    |      |

**Magnesium, dissolved**

M200.7 ICP

| ACZ ID          | Type | Analyzed       | PCN/SCN    | QC      | Sample | Found | Units | Rec% | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|---------|--------|-------|-------|------|-------|-------|-----|-------|------|
| <b>WG503200</b> |      |                |            |         |        |       |       |      |       |       |     |       |      |
| WG503200ICV     | ICV  | 08/14/20 12:22 | II200810-1 | 100     |        | 95.8  | mg/L  | 96   | 95    | 105   |     |       |      |
| WG503200ICB     | ICB  | 08/14/20 12:28 |            |         |        | U     | mg/L  |      | -0.6  | 0.6   |     |       |      |
| WG503200LFB     | LFB  | 08/14/20 12:41 | II200805-3 | 49.9996 |        | 52.64 | mg/L  | 105  | 85    | 115   |     |       |      |
| L60611-04AS     | AS   | 08/14/20 12:50 | II200805-3 | 49.9996 | 3.8    | 53.06 | mg/L  | 99   | 85    | 115   |     |       |      |
| L60611-04ASD    | ASD  | 08/14/20 12:53 | II200805-3 | 49.9996 | 3.8    | 52.38 | mg/L  | 97   | 85    | 115   | 1   | 20    |      |
| <b>WG503434</b> |      |                |            |         |        |       |       |      |       |       |     |       |      |
| WG503434ICV     | ICV  | 08/17/20 9:58  | II200810-1 | 100     |        | 98.85 | mg/L  | 99   | 95    | 105   |     |       |      |
| WG503434ICB     | ICB  | 08/17/20 10:04 |            |         |        | U     | mg/L  |      | -0.6  | 0.6   |     |       |      |
| WG503434LFB     | LFB  | 08/17/20 10:16 | II200805-3 | 49.9996 |        | 49.9  | mg/L  | 100  | 85    | 115   |     |       |      |
| L60783-02AS     | AS   | 08/17/20 10:41 | II200805-3 | 49.9996 | 41.7   | 89.98 | mg/L  | 97   | 85    | 115   |     |       |      |
| L60783-02ASD    | ASD  | 08/17/20 10:44 | II200805-3 | 49.9996 | 41.7   | 90.37 | mg/L  | 97   | 85    | 115   | 0   | 20    |      |

**Molybdenum, dissolved**

M200.8 ICP-MS

| ACZ ID          | Type | Analyzed      | PCN/SCN    | QC    | Sample | Found  | Units | Rec% | Lower    | Upper   | RPD | Limit | Qual |
|-----------------|------|---------------|------------|-------|--------|--------|-------|------|----------|---------|-----|-------|------|
| <b>WG503760</b> |      |               |            |       |        |        |       |      |          |         |     |       |      |
| WG503760ICV     | ICV  | 08/21/20 7:20 | MS200812-2 | .0199 |        | .02043 | mg/L  | 103  | 90       | 110     |     |       |      |
| WG503760ICB     | ICB  | 08/21/20 7:23 |            |       |        | U      | mg/L  |      | -0.00044 | 0.00044 |     |       |      |
| WG503760LFB     | LFB  | 08/21/20 7:26 | MS200803-2 | .0501 |        | .05208 | mg/L  | 104  | 85       | 115     |     |       |      |
| L60731-03AS     | AS   | 08/21/20 8:10 | MS200803-2 | .2505 | .397   | .6425  | mg/L  | 98   | 70       | 130     |     |       |      |
| L60731-03ASD    | ASD  | 08/21/20 8:13 | MS200803-2 | .2505 | .397   | .6465  | mg/L  | 100  | 70       | 130     | 1   | 20    |      |

**Nickel, dissolved**

M200.8 ICP-MS

| ACZ ID          | Type | Analyzed      | PCN/SCN    | QC  | Sample | Found  | Units | Rec% | Lower    | Upper   | RPD | Limit | Qual |
|-----------------|------|---------------|------------|-----|--------|--------|-------|------|----------|---------|-----|-------|------|
| <b>WG503760</b> |      |               |            |     |        |        |       |      |          |         |     |       |      |
| WG503760ICV     | ICV  | 08/21/20 7:20 | MS200812-2 | .05 |        | .0495  | mg/L  | 99   | 90       | 110     |     |       |      |
| WG503760ICB     | ICB  | 08/21/20 7:23 |            |     |        | U      | mg/L  |      | -0.00088 | 0.00088 |     |       |      |
| WG503760LFB     | LFB  | 08/21/20 7:26 | MS200803-2 | .05 |        | .05032 | mg/L  | 101  | 85       | 115     |     |       |      |
| L60731-03AS     | AS   | 08/21/20 8:10 | MS200803-2 | .25 | .002   | .2339  | mg/L  | 93   | 70       | 130     |     |       |      |
| L60731-03ASD    | ASD  | 08/21/20 8:13 | MS200803-2 | .25 | .002   | .2456  | mg/L  | 97   | 70       | 130     | 5   | 20    |      |



Rio Algom Mining Company

ACZ Project ID: **L60730**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

**Nitrate/Nitrite as N**

M353.2 - H2SO4 preserved

| ACZ ID          | Type | Analyzed       | PCN/SCN     | QC    | Sample | Found | Units | Rec% | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|-------------|-------|--------|-------|-------|------|-------|-------|-----|-------|------|
| <b>WG504085</b> |      |                |             |       |        |       |       |      |       |       |     |       |      |
| WG504085ICV     | ICV  | 08/26/20 23:49 | WI200815-1  | 2.416 |        | 2.41  | mg/L  | 100  | 90    | 110   |     |       |      |
| WG504085ICB     | ICB  | 08/26/20 23:50 |             |       |        | U     | mg/L  |      | -0.02 | 0.02  |     |       |      |
| <b>WG504087</b> |      |                |             |       |        |       |       |      |       |       |     |       |      |
| WG504087LFB1    | LFB  | 08/27/20 1:42  | WI200331-15 | 2     |        | 1.936 | mg/L  | 97   | 90    | 110   |     |       |      |
| L60545-04AS     | AS   | 08/27/20 1:45  | WI200331-15 | 2     | .05    | 2.04  | mg/L  | 100  | 90    | 110   |     |       |      |
| L60546-04DUP    | DUP  | 08/27/20 1:47  |             |       | U      | U     | mg/L  |      |       |       | 0   | 20    | RA   |
| WG504087LFB2    | LFB  | 08/27/20 2:23  | WI200331-15 | 2     |        | 1.979 | mg/L  | 99   | 90    | 110   |     |       |      |

**Potassium, dissolved**

M200.7 ICP

| ACZ ID          | Type | Analyzed       | PCN/SCN    | QC       | Sample | Found | Units | Rec% | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|-------|-------|------|-------|-------|-----|-------|------|
| <b>WG503200</b> |      |                |            |          |        |       |       |      |       |       |     |       |      |
| WG503200ICV     | ICV  | 08/14/20 12:22 | II200810-1 | 20       |        | 19.61 | mg/L  | 98   | 95    | 105   |     |       |      |
| WG503200ICB     | ICB  | 08/14/20 12:28 |            |          |        | U     | mg/L  |      | -0.6  | 0.6   |     |       |      |
| WG503200LFB     | LFB  | 08/14/20 12:41 | II200805-3 | 99.96847 |        | 107.5 | mg/L  | 108  | 85    | 115   |     |       |      |
| L60611-04AS     | AS   | 08/14/20 12:50 | II200805-3 | 99.96847 | 1.8    | 103.9 | mg/L  | 102  | 85    | 115   |     |       |      |
| L60611-04ASD    | ASD  | 08/14/20 12:53 | II200805-3 | 99.96847 | 1.8    | 101.3 | mg/L  | 100  | 85    | 115   | 3   | 20    |      |

**Residue, Filterable (TDS) @180C**

SM2540C

| ACZ ID          | Type | Analyzed       | PCN/SCN  | QC   | Sample | Found | Units | Rec% | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|----------|------|--------|-------|-------|------|-------|-------|-----|-------|------|
| <b>WG503167</b> |      |                |          |      |        |       |       |      |       |       |     |       |      |
| WG503167PBW     | PBW  | 08/11/20 18:00 |          |      |        | U     | mg/L  |      | -20   | 20    |     |       |      |
| WG503167LCSW    | LCSW | 08/11/20 18:02 | PCN61597 | 1000 |        | 982   | mg/L  | 98   | 80    | 120   |     |       |      |
| L60730-03DUP    | DUP  | 08/11/20 18:26 |          |      | 7150   | 6980  | mg/L  |      |       |       | 2   | 10    |      |

**Selenium, dissolved**

SM 3114 B, AA-Hydrde

| ACZ ID          | Type | Analyzed       | PCN/SCN     | QC    | Sample | Found | Units | Rec% | Lower  | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|-------------|-------|--------|-------|-------|------|--------|-------|-----|-------|------|
| <b>WG503277</b> |      |                |             |       |        |       |       |      |        |       |     |       |      |
| WG503277ICV     | ICV  | 08/13/20 12:43 | SE200702-2  | .025  |        | .026  | mg/L  | 104  | 90     | 110   |     |       |      |
| WG503277ICB     | ICB  | 08/13/20 12:45 |             |       |        | U     | mg/L  |      | -0.006 | 0.006 |     |       |      |
| <b>WG503279</b> |      |                |             |       |        |       |       |      |        |       |     |       |      |
| WG503279LRB     | LRB  | 08/13/20 14:26 |             |       |        | U     | mg/L  |      | -0.006 | 0.006 |     |       |      |
| WG503279LFB     | LFB  | 08/13/20 14:28 | SE200529-14 | .0225 |        | .0242 | mg/L  | 108  | 85     | 115   |     |       |      |
| L60729-03LFM    | LFM  | 08/13/20 15:04 | SE200529-14 | .0225 | U      | .0214 | mg/L  | 95   | 85     | 115   |     |       |      |
| L60729-03LFMD   | LFMD | 08/13/20 15:06 | SE200529-14 | .0225 | U      | .0219 | mg/L  | 97   | 85     | 115   | 2   | 20    |      |

**Rio Algom Mining Company**

ACZ Project ID: **L60730**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

**Sodium, dissolved**

M200.7 ICP

| ACZ ID          | Type | Analyzed       | PCN/SCN    | QC       | Sample | Found  | Units | Rec% | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|----------|--------|--------|-------|------|-------|-------|-----|-------|------|
| <b>WG503200</b> |      |                |            |          |        |        |       |      |       |       |     |       |      |
| WG503200ICV     | ICV  | 08/14/20 12:22 | II200810-1 | 100      |        | 98.73  | mg/L  | 99   | 95    | 105   |     |       |      |
| WG503200ICB     | ICB  | 08/14/20 12:28 |            |          |        | U      | mg/L  |      | -0.6  | 0.6   |     |       |      |
| WG503200LFB     | LFB  | 08/14/20 12:41 | II200805-3 | 100.0157 |        | 107.8  | mg/L  | 108  | 85    | 115   |     |       |      |
| L60611-04AS     | AS   | 08/14/20 12:50 | II200805-3 | 100.0157 | 8.4    | 109.5  | mg/L  | 101  | 85    | 115   |     |       |      |
| L60611-04ASD    | ASD  | 08/14/20 12:53 | II200805-3 | 100.0157 | 8.4    | 107.6  | mg/L  | 99   | 85    | 115   | 2   | 20    |      |
| <b>WG503434</b> |      |                |            |          |        |        |       |      |       |       |     |       |      |
| WG503434ICV     | ICV  | 08/17/20 9:58  | II200810-1 | 100      |        | 100.98 | mg/L  | 101  | 95    | 105   |     |       |      |
| WG503434ICB     | ICB  | 08/17/20 10:04 |            |          |        | U      | mg/L  |      | -0.6  | 0.6   |     |       |      |
| WG503434LFB     | LFB  | 08/17/20 10:16 | II200805-3 | 100.0157 |        | 102.4  | mg/L  | 102  | 85    | 115   |     |       |      |
| L60783-02AS     | AS   | 08/17/20 10:41 | II200805-3 | 100.0157 | 33.9   | 135.7  | mg/L  | 102  | 85    | 115   |     |       |      |
| L60783-02ASD    | ASD  | 08/17/20 10:44 | II200805-3 | 100.0157 | 33.9   | 135.4  | mg/L  | 101  | 85    | 115   | 0   | 20    |      |

**Sulfate**

D516-02/-07/-11 - Turbidimetric

| ACZ ID          | Type | Analyzed       | PCN/SCN    | QC         | Sample | Found | Units | Rec%  | Lower | Upper | RPD | Limit | Qual |
|-----------------|------|----------------|------------|------------|--------|-------|-------|-------|-------|-------|-----|-------|------|
| <b>WG503449</b> |      |                |            |            |        |       |       |       |       |       |     |       |      |
| WG503449ICB     | ICB  | 08/17/20 9:27  |            |            |        | U     | mg/L  |       | -3    | 3     |     |       |      |
| WG503449ICV     | ICV  | 08/17/20 9:27  | WI200812-2 | 20         |        | 20    | mg/L  | 100   | 90    | 110   |     |       |      |
| WG503449LFB     | LFB  | 08/17/20 10:28 | WI200803-1 | 10.01      |        | 11    | mg/L  | 110   | 90    | 110   |     |       |      |
| L60708-01AS     | AS   | 08/17/20 11:18 | SO4TURB5X  | 10         | 106    | 117   | mg/L  | 110   | 90    | 110   |     |       |      |
| L60708-02DUP    | DUP  | 08/17/20 11:18 |            |            | 110    | 109   | mg/L  |       |       |       | 1   | 20    |      |
| <b>WG503450</b> |      |                |            |            |        |       |       |       |       |       |     |       |      |
| WG503450ICB     | ICB  | 08/17/20 9:27  |            |            |        | U     | mg/L  |       | -3    | 3     |     |       |      |
| WG503450ICV     | ICV  | 08/17/20 9:27  | WI200812-2 | 20         |        | 20    | mg/L  | 100   | 90    | 110   |     |       |      |
| WG503450LFB     | LFB  | 08/17/20 12:11 | WI200803-1 | 10.01      |        | 10    | mg/L  | 100   | 90    | 110   |     |       |      |
| L60730-03DUP    | DUP  | 08/17/20 12:22 |            |            | 3390   | 3430  | mg/L  |       |       |       | 1   | 20    |      |
| L60731-01AS     | AS   | 08/17/20 12:22 | SO4TURB    | 10.0000008 | 2570   | 2370  | mg/L  | -2000 | 90    | 110   |     |       | M3   |

**Uranium, dissolved**

M200.8 ICP-MS

| ACZ ID          | Type | Analyzed      | PCN/SCN    | QC  | Sample | Found  | Units | Rec% | Lower    | Upper   | RPD | Limit | Qual |
|-----------------|------|---------------|------------|-----|--------|--------|-------|------|----------|---------|-----|-------|------|
| <b>WG503760</b> |      |               |            |     |        |        |       |      |          |         |     |       |      |
| WG503760ICV     | ICV  | 08/21/20 7:20 | MS200812-2 | .05 |        | .04847 | mg/L  | 97   | 90       | 110     |     |       |      |
| WG503760ICB     | ICB  | 08/21/20 7:23 |            |     |        | U      | mg/L  |      | -0.00022 | 0.00022 |     |       |      |
| WG503760LFB     | LFB  | 08/21/20 7:26 | MS200803-2 | .05 |        | .04917 | mg/L  | 98   | 85       | 115     |     |       |      |
| L60731-03AS     | AS   | 08/21/20 8:10 | MS200803-2 | .25 | 14.3   | 14.25  | mg/L  | -20  | 70       | 130     |     |       | M3   |
| L60731-03ASD    | ASD  | 08/21/20 8:13 | MS200803-2 | .25 | 14.3   | 14.42  | mg/L  | 48   | 70       | 130     | 1   | 20    | M3   |

**Uranium, total**

M200.8 ICP-MS

| ACZ ID          | Type | Analyzed       | PCN/SCN    | QC  | Sample | Found  | Units | Rec% | Lower    | Upper   | RPD | Limit | Qual |
|-----------------|------|----------------|------------|-----|--------|--------|-------|------|----------|---------|-----|-------|------|
| <b>WG504102</b> |      |                |            |     |        |        |       |      |          |         |     |       |      |
| WG504102ICV     | ICV  | 08/27/20 14:50 | MS200812-2 | .05 |        | .05038 | mg/L  | 101  | 90       | 110     |     |       |      |
| WG504102ICB     | ICB  | 08/27/20 14:52 |            |     |        | U      | mg/L  |      | -0.0003  | 0.0003  |     |       |      |
| WG504019LRB     | LRB  | 08/27/20 14:54 |            |     |        | U      | mg/L  |      | -0.00022 | 0.00022 |     |       |      |
| WG504019LFB     | LFB  | 08/27/20 14:56 | MS200803-2 | .05 |        | .04726 | mg/L  | 95   | 85       | 115     |     |       |      |
| L61022-03LFM    | LFM  | 08/27/20 15:05 | MS200803-2 | .05 | .0029  | .05374 | mg/L  | 102  | 70       | 130     |     |       |      |
| L61022-03LFMD   | LFMD | 08/27/20 15:07 | MS200803-2 | .05 | .0029  | .05407 | mg/L  | 102  | 70       | 130     | 1   | 20    |      |

Rio Algom Mining Company

ACZ Project ID: **L60730**

| ACZ ID           | WORKNUM  | PARAMETER                 | METHOD                          | QUAL   | DESCRIPTION   |
|------------------|----------|---------------------------|---------------------------------|--|---|
| <b>L60730-01</b> | WG503040 | Cyanide, Total            | D7511-09                        | Q3   | Sample received with improper or inadequate chemical preservation.  |
|                  | WG504087 | Nitrate/Nitrite as N      | M353.2 - H2SO4 preserved        | RA   | Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).                                 |
|                  | WG503760 | Uranium, dissolved        | M200.8 ICP-MS                   | M3   | The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable. |
| <b>L60730-02</b> | WG503817 | Conductivity @25C         | SM2510B                         | ZW   | Method deviation. The sample was centrifuged prior to analysis due to high solid content.   |
|                  | WG504087 | Nitrate/Nitrite as N      | M353.2 - H2SO4 preserved        | RA   | Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).                                 |
|                  | WG503093 | Total Alkalinity          | SM2320B - Titration             | ZW   | Method deviation. The sample was centrifuged prior to analysis due to high solid content.   |
|                  | WG504019 | Total Hot Plate Digestion | M200.2 ICP-MS                   | DD   | Sample required dilution due to matrix color or odor.   |
| M200.2 ICP-MS    |          |                           | DF                              | Sample required dilution due to high sediment.   |   |
| M200.2 ICP-MS    |          |                           | QA                              | Sample container with preservation type specified by the method was not available for analysis. Alternate sample container was used. |   |
| <b>L60730-03</b> | WG504087 | Nitrate/Nitrite as N      | M353.2 - H2SO4 preserved        | RA   | Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).                                 |
|                  | WG503450 | Sulfate                   | D516-02/-07/-11 - Turbidimetric | M3   | The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable. |
|                  | WG503760 | Uranium, dissolved        | M200.8 ICP-MS                   | M3   | The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable. |

### Rio Algom Mining Company

Project ID: 4508122295

Sample ID: 30-48 KD-R

Locator:

ACZ Sample ID: **L60730-01**

Date Sampled: 08/06/20 9:31

Date Received: 08/08/20

Sample Matrix: Groundwater

Gross Alpha - Corrected  
Calculation

Prep Method:

| Parameter               | Measure Date   | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|-------------------------|----------------|-----------|--------|------------|-----|-------|----|---------|
| Gross Alpha - Corrected | 09/09/20 10:45 |           | -1.1   |            |     | pCi/L |    | calc    |

Gross Alpha, dissolved  
M9310

Prep Method:

| Parameter              | Measure Date  | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|------------------------|---------------|-----------|--------|------------|-----|-------|----|---------|
| Gross Alpha, dissolved | 08/27/20 0:11 |           | -1.1   | 8.4        | 39  | pCi/L | *  | fdw     |

Lead 210, dissolved  
EICHROM, OTW01

Prep Method:

| Parameter           | Measure Date   | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|---------------------|----------------|-----------|--------|------------|-----|-------|----|---------|
| Lead 210, dissolved | 08/25/20 16:17 |           | 4.4    | 2.4        | 4.8 | pCi/L | *  | isn     |

Polonium 210, dissolved  
HASL Po-01-RC

Prep Method:

| Parameter               | Measure Date  | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|-------------------------|---------------|-----------|--------|------------|-----|-------|----|---------|
| Polonium 210, dissolved | 08/24/20 8:28 |           | 1.55   | 2.7        | 4.7 | pCi/L | *  | isn     |

Radium 226, dissolved  
M903.1

Prep Method:

| Parameter             | Measure Date  | Prep Date | Result | Error(+/-) | LLD  | Units | XQ | Analyst |
|-----------------------|---------------|-----------|--------|------------|------|-------|----|---------|
| Radium 226, dissolved | 09/01/20 0:23 |           | 2.6    | 0.23       | 0.13 | pCi/L | *  | amk     |

Radium 228, dissolved  
M9320

Prep Method:

| Parameter             | Measure Date   | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|-----------------------|----------------|-----------|--------|------------|-----|-------|----|---------|
| Radium 228, dissolved | 09/03/20 11:28 |           | 7.7    | 1.9        | 4.4 | pCi/L | *  | isn     |

**Rio Algom Mining Company**

Project ID: 4508122295

Sample ID: 30-48 KD-R

Locator:

ACZ Sample ID: **L60730-01**

Date Sampled: 08/06/20 9:31

Date Received: 08/08/20

Sample Matrix: *Groundwater*

Thorium 230, dissolved

Prep Method:

ESM 4506

| Parameter              | Measure Date   | Prep Date | Result | Error(+/-) | LLD  | Units | XQ | Analyst |
|------------------------|----------------|-----------|--------|------------|------|-------|----|---------|
| Thorium 230, dissolved | 08/19/20 16:19 |           | 0.466  | 0.41       | 0.64 | pCi/L | *  | djc     |

### Rio Algom Mining Company

Project ID: 4508122295

Sample ID: 31-65 ALL

Locator:

ACZ Sample ID: **L60730-02**

Date Sampled: 08/07/20 10:58

Date Received: 08/08/20

Sample Matrix: Groundwater

Gross Alpha, total  
M9310

Prep Method:

| Parameter          | Measure Date  | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|--------------------|---------------|-----------|--------|------------|-----|-------|----|---------|
| Gross Alpha, total | 08/27/20 0:12 |           | 130    | 87         | 530 | pCi/L | *  | fdw     |

Lead 210, dissolved  
EICHROM, OTW01

Prep Method:

| Parameter           | Measure Date   | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|---------------------|----------------|-----------|--------|------------|-----|-------|----|---------|
| Lead 210, dissolved | 08/25/20 18:56 |           | -4     | 3.3        | 7.3 | pCi/L | *  | isn     |

Radium 226, total  
M903.1

Prep Method:

| Parameter         | Measure Date  | Prep Date | Result | Error(+/-) | LLD  | Units | XQ | Analyst |
|-------------------|---------------|-----------|--------|------------|------|-------|----|---------|
| Radium 226, total | 09/01/20 0:25 |           | 0.66   | 0.4        | 0.68 | pCi/L | *  | amk     |

Radium 228, total  
M9320

Prep Method:

| Parameter         | Measure Date   | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|-------------------|----------------|-----------|--------|------------|-----|-------|----|---------|
| Radium 228, total | 08/31/20 17:04 |           | 1.4    | 1.1        | 2.7 | pCi/L | *  | fdw     |

Thorium 230, total  
ESM 4506

Prep Method:

| Parameter          | Measure Date   | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|--------------------|----------------|-----------|--------|------------|-----|-------|----|---------|
| Thorium 230, total | 08/19/20 16:19 |           | 1.04   | 1.2        | 2   | pCi/L | *  | djc     |

### Rio Algom Mining Company

Project ID: 4508122295

Sample ID: 31-67 TRB

Locator:

ACZ Sample ID: **L60730-03**

Date Sampled: 08/07/20 11:50

Date Received: 08/08/20

Sample Matrix: Groundwater

Gross Alpha - Corrected  
Calculation

Prep Method:

| Parameter               | Measure Date   | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|-------------------------|----------------|-----------|--------|------------|-----|-------|----|---------|
| Gross Alpha - Corrected | 09/09/20 10:45 |           | 9.0    |            |     | pCi/L |    | calc    |

Gross Alpha, dissolved  
M9310

Prep Method:

| Parameter              | Measure Date  | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|------------------------|---------------|-----------|--------|------------|-----|-------|----|---------|
| Gross Alpha, dissolved | 08/27/20 0:14 |           | 18     | 22         | 200 | pCi/L | *  | fdw     |

Lead 210, dissolved  
EICHROM, OTW01

Prep Method:

| Parameter           | Measure Date   | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|---------------------|----------------|-----------|--------|------------|-----|-------|----|---------|
| Lead 210, dissolved | 08/25/20 18:56 |           | -4.8   | 2.7        | 6.2 | pCi/L | *  | isn     |

Polonium 210, dissolved  
HASL Po-01-RC

Prep Method:

| Parameter               | Measure Date  | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|-------------------------|---------------|-----------|--------|------------|-----|-------|----|---------|
| Polonium 210, dissolved | 08/24/20 8:28 |           | -1.94  | 2.3        | 5.2 | pCi/L | *  | isn     |

Radium 226, dissolved  
M903.1

Prep Method:

| Parameter             | Measure Date  | Prep Date | Result | Error(+/-) | LLD  | Units | XQ | Analyst |
|-----------------------|---------------|-----------|--------|------------|------|-------|----|---------|
| Radium 226, dissolved | 09/08/20 0:02 |           | 3      | 0.2        | 0.11 | pCi/L |    | djc     |

Radium 228, dissolved  
M9320

Prep Method:

| Parameter             | Measure Date   | Prep Date | Result | Error(+/-) | LLD | Units | XQ | Analyst |
|-----------------------|----------------|-----------|--------|------------|-----|-------|----|---------|
| Radium 228, dissolved | 08/31/20 17:04 |           | 16     | 1.7        | 2.6 | pCi/L | *  | fdw     |

**Rio Algom Mining Company**

Project ID: 4508122295

Sample ID: 31-67 TRB

Locator:

ACZ Sample ID: **L60730-03**

Date Sampled: 08/07/20 11:50

Date Received: 08/08/20

Sample Matrix: *Groundwater*

Thorium 230, dissolved

Prep Method:

ESM 4506

| Parameter              | Measure Date   | Prep Date | Result | Error(+/-) | LLD  | Units | XQ | Analyst |
|------------------------|----------------|-----------|--------|------------|------|-------|----|---------|
| Thorium 230, dissolved | 08/19/20 16:19 |           | 0.319  | 0.31       | 0.49 | pCi/L | *  | djc     |



**Report Header Explanations**

|                   |  |
|-------------------|--|
| <i>Batch</i>      | A distinct set of samples analyzed at a specific time  |
| <i>Error(+/-)</i> | Calculated sample specific uncertainty   |
| <i>Found</i>      | Value of the QC Type of interest   |
| <i>Limit</i>      | Upper limit for RPD, in %.   |
| <i>LCL</i>        | Lower Control Limit, in % (except for LCSS, mg/Kg)   |
| <i>LLD</i>        | Calculated sample specific Lower Limit of Detection  |
| <i>PCN/SCN</i>    | A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis |
| <i>PQL</i>        | Practical Quantitation Limit   |
| <i>QC</i>         | True Value of the Control Sample or the amount added to the Spike                              |
| <i>Rec</i>        | Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)               |
| <i>RER</i>        | Relative Error Ratio, calculation used for Dup. QC taking into account the error factor.       |
| <i>RPD</i>        | Relative Percent Difference, calculation used for Duplicate QC Types                           |
| <i>UCL</i>        | Upper Control Limit, in % (except for LCSS, mg/Kg)   |
| <i>Sample</i>     | Value of the Sample of interest  |

**QC Sample Types**

|             |                                   |               |                                     |
|-------------|-----------------------------------|---------------|-------------------------------------|
| <i>DUP</i>  | Sample Duplicate                  | <i>MS/MSD</i> | Matrix Spike/Matrix Spike Duplicate |
| <i>LCSS</i> | Laboratory Control Sample - Soil  | <i>PBS</i>    | Prep Blank - Soil                   |
| <i>LCSW</i> | Laboratory Control Sample - Water | <i>PBW</i>    | Prep Blank - Water                  |

**QC Sample Type Explanations**

|                 |  |
|-----------------|--|
| Blanks          | Verifies that there is no or minimal contamination in the prep method procedure. |
| Control Samples | Verifies the accuracy of the method, including the prep procedure.               |
| Duplicates      | Verifies the precision of the instrument and/or method.                          |
| Matrix Spikes   | Determines sample matrix interferences, if any.                                  |

**ACZ Qualifiers (Qual)**

|   |                                     |
|---|-------------------------------------|
| H | Analysis exceeded method hold time. |
|---|-------------------------------------|

**Method Prefix Reference**

|     |   |
|-----|---|
| M   | EPA methodology, including those under SDWA, CWA, and RCRA    |
| SM  | Standard Methods for the Examination of Water and Wastewater. |
| D   | ASTM  |
| RP  | DOE   |
| ESM | DOE/ESM   |

**Comments**

- (1) Solid matrices are reported on a dry weight basis.
- (2) Preparation method: "Method" indicates preparation defined in analytical method.
- (3) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click:

<https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf>

Rio Algom Mining Company

ACZ Project ID: **L60730**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

**Gross Alpha, dissolved**

M9310

Units: pCi/L

| ACZ ID          | Type    | Analyzed | PCN/SCN  | QC  | Sample | Error | LLD | Found | Error | LLD | Rec% | Lower | Upper | RPD/RER | Limit | Qual |
|-----------------|---------|----------|----------|-----|--------|-------|-----|-------|-------|-----|------|-------|-------|---------|-------|------|
| <b>WG503775</b> |         |          |          |     |        |       |     |       |       |     |      |       |       |         |       |      |
| WG503775PBW     | PBW     | 08/27/20 |          |     |        |       |     | -0.82 | 0.92  | 11  |      |       | 22    |         |       |      |
| WG503775LCSWA   | LCSW    | 08/27/20 | PCN60283 | 100 |        |       |     | 110   | 9.1   | 12  | 110  | 67    | 144   |         |       |      |
| L60706-01MSA    | MS      | 08/27/20 | PCN60283 | 100 | -0.79  | 0.48  | 4.5 | 100   | 8.5   | 3.9 | 101  | 67    | 144   |         |       |      |
| L60706-01DUP    | DUP-RER | 08/27/20 |          |     | -0.79  | 0.48  | 4.5 | -1.5  | 0.41  | 7.4 |      |       |       | 1.12    | 2     |      |
| L60706-01DUP    | DUP-RPD | 08/27/20 |          |     | -0.79  | 0.48  | 4.5 | -1.5  | 0.41  | 7.4 |      |       |       | 62      | 20    | RG   |
| L60870-05DUP    | DUP-RER | 08/27/20 |          |     | 26     | 17    | 38  | 52    | 22    | 47  |      |       |       | 0.94    | 2     |      |
| L60870-05DUP    | DUP-RPD | 08/27/20 |          |     | 26     | 17    | 38  | 52    | 22    | 47  |      |       |       | 67      | 20    | RG   |

**Lead 210, dissolved**

EICHROM, OTW01

Units: pCi/L

| ACZ ID          | Type    | Analyzed | PCN/SCN  | QC     | Sample | Error | LLD | Found | Error | LLD | Rec% | Lower | Upper | RPD/RER | Limit | Qual |
|-----------------|---------|----------|----------|--------|--------|-------|-----|-------|-------|-----|------|-------|-------|---------|-------|------|
| <b>WG503216</b> |         |          |          |        |        |       |     |       |       |     |      |       |       |         |       |      |
| WG503216LCSW    | LCSW    | 08/25/20 | PCN59634 | 96.85  |        |       |     | 93    | 3.6   | 2.7 | 96   | 55    | 121   |         |       |      |
| WG503216PBW     | PBW     | 08/25/20 |          |        |        |       |     | -0.22 | 1.6   | 3.4 |      |       | 6.8   |         |       |      |
| L60729-01DUP    | DUP-RPD | 08/25/20 |          |        | -0.49  | 2.7   | 5.9 | -1.2  | 2.8   | 6   |      |       |       | 84      | 20    | RG   |
| L60695-03DUP    | DUP-RER | 08/25/20 |          |        | -4     | 2.7   | 6   | .86   | 2.8   | 5.8 |      |       |       | 1.25    | 2     |      |
| L60729-01DUP    | DUP-RER | 08/25/20 |          |        | -0.49  | 2.7   | 5.9 | -1.2  | 2.8   | 6   |      |       |       | 0.18    | 2     |      |
| L60730-01MS     | MS      | 08/25/20 | PCN59634 | 161.41 | 4.4    | 2.4   | 4.8 | 140   | 6.1   | 5.9 | 84   | 55    | 121   |         |       |      |
| L60695-03DUP    | DUP-RPD | 08/25/20 |          |        | -4     | 2.7   | 6   | .86   | 2.8   | 5.8 |      |       |       | 310     | 20    | RG   |

Rio Algom Mining Company

ACZ Project ID: **L60730**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

**Polonium 210, dissolved**

HASL Po-01-RC

Units: pCi/L

| ACZ ID          | Type    | Analyzed | PCN/SCN  | QC  | Sample | Error | LLD | Found | Error | LLD | Rec% | Lower | Upper | RPD/RER | Limit | Qual |
|-----------------|---------|----------|----------|-----|--------|-------|-----|-------|-------|-----|------|-------|-------|---------|-------|------|
| <b>WG503776</b> |         |          |          |     |        |       |     |       |       |     |      |       |       |         |       |      |
| L60695-01DUP    | DUP-RPD | 08/24/20 |          |     | -0.496 | 2.1   | 4.4 | -3.01 | 2.8   | 6.1 |      |       |       | 143     | 20    | RG   |
| L60695-01DUP    | DUP-RER | 08/24/20 |          |     | -0.496 | 2.1   | 4.4 | -3.01 | 2.8   | 6.1 |      |       |       | 0.72    | 2     |      |
| WG503776PBW     | PBW     | 08/24/20 |          |     |        |       |     | .485  | 2.2   | 4.1 |      |       | 8.2   |         |       |      |
| WG503776LCSW    | LCSW    | 08/24/20 | PCN59634 | 500 |        |       |     | 437   | 79    | 4.4 | 87   | 51    | 128   |         |       |      |
| L60870-05MS     | MS      | 08/24/20 | PCN59634 | 500 | -0.621 | 1.2   | 2.9 | 404   | 68    | 4.5 | 81   | 51    | 128   |         |       |      |
| L60870-02DUP    | DUP-RER | 08/24/20 |          |     | -0.186 | 1.8   | 3.7 | .283  | 1.5   | 2.9 |      |       |       | 0.2     | 2     |      |
| L60870-02DUP    | DUP-RPD | 08/24/20 |          |     | -0.186 | 1.8   | 3.7 | .283  | 1.5   | 2.9 |      |       |       | 967     | 20    | RG   |

**Radium 226, dissolved**

M903.1

Units: pCi/L

| ACZ ID          | Type    | Analyzed | PCN/SCN  | QC | Sample | Error | LLD  | Found | Error | LLD  | Rec% | Lower | Upper | RPD/RER | Limit | Qual |
|-----------------|---------|----------|----------|----|--------|-------|------|-------|-------|------|------|-------|-------|---------|-------|------|
| <b>WG503900</b> |         |          |          |    |        |       |      |       |       |      |      |       |       |         |       |      |
| WG503900PBW     | PBW     | 09/01/20 |          |    |        |       |      | .13   | 0.12  | 0.25 |      |       | 0.5   |         |       |      |
| WG503900LCSW    | LCSW    | 09/01/20 | PCN61539 | 20 |        |       |      | 19    | 0.54  | 0.11 | 95   | 43    | 148   |         |       |      |
| L60693-01DUP    | DUP-RPD | 09/01/20 |          |    | 1.8    | 0.21  | 0.17 | 1.8   | 0.27  | 0.29 |      |       |       | 0       | 20    |      |
| L60710-01MS     | MS      | 09/01/20 | PCN61539 | 20 | 0.69   | 0.15  | 0.1  | 20    | 0.63  | 0.11 | 97   | 43    | 148   |         |       |      |
| L60730-01DUP    | DUP-RPD | 09/01/20 |          |    | 2.6    | 0.23  | 0.13 | 4.2   | 0.34  | 0.15 |      |       |       | 47      | 20    | RM   |
| <b>WG504272</b> |         |          |          |    |        |       |      |       |       |      |      |       |       |         |       |      |
| WG504272PBW     | PBW     | 09/08/20 |          |    |        |       |      | .02   | 0.05  | 0.04 |      |       | 0.08  |         |       |      |
| WG504272LCSW    | LCSW    | 09/08/20 | PCN61539 | 20 |        |       |      | 15    | 0.47  | 0.1  | 75   | 43    | 148   |         |       |      |
| L60730-03DUP    | DUP-RPD | 09/08/20 |          |    | 3      | 0.2   | 0.11 | 2.7   | 0.19  | 0.06 |      |       |       | 11      | 20    |      |
| L60886-03DUP    | DUP-RPD | 09/08/20 |          |    | 23     | 0.52  | 0.13 | 25    | 0.53  | 0.04 |      |       |       | 8       | 20    |      |
| L60733-01MS     | MS      | 09/08/20 | PCN61539 | 20 | 0.22   | 0.08  | 0.08 | 19    | 0.48  | 0.04 | 94   | 43    | 148   |         |       |      |

Rio Algom Mining Company

ACZ Project ID: **L60730**

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

**Radium 228, dissolved**

M9320

Units: pCi/L

| ACZ ID          | Type    | Analyzed | PCN/SCN  | QC   | Sample | Error | LLD  | Found | Error | LLD  | Rec% | Lower | Upper | RPD/RER | Limit | Qual |
|-----------------|---------|----------|----------|------|--------|-------|------|-------|-------|------|------|-------|-------|---------|-------|------|
| <b>WG503967</b> |         |          |          |      |        |       |      |       |       |      |      |       |       |         |       |      |
| WG503967LCSW    | LCSW    | 08/31/20 | PCN61541 | 9.74 |        |       |      | 10    | 1.7   | 1.3  | 103  | 47    | 123   |         |       |      |
| WG503967PBW     | PBW     | 08/31/20 |          |      |        |       |      | -.44  | 0.53  | 0.58 |      |       | 1.16  |         |       |      |
| L60707-01DUP    | DUP-RPD | 08/31/20 |          |      | -0.14  | 1.1   | 2.7  | 1     | 1.1   | 2.6  |      |       |       | 265     | 20    | RG   |
| L60707-01DUP    | DUP-RER | 08/31/20 |          |      | -0.14  | 1.1   | 2.7  | 1     | 1.1   | 2.6  |      |       |       | 0.73    | 2     |      |
| L60746-03MS     | MS      | 08/31/20 | PCN61541 | 6.49 | 1.2    | 0.81  | 0.79 | 9.2   | 1.5   | 1.2  | 123  | 47    | 123   |         |       |      |
| L60870-05DUP    | DUP-RPD | 08/31/20 |          |      | 1.5    | 1.3   | 3    | .68   | 1.4   | 3.2  |      |       |       | 75      | 20    | RG   |
| L60870-05DUP    | DUP-RER | 08/31/20 |          |      | 1.5    | 1.3   | 3    | .68   | 1.4   | 3.2  |      |       |       | 0.43    | 2     |      |
| <b>WG504280</b> |         |          |          |      |        |       |      |       |       |      |      |       |       |         |       |      |
| WG504280LCSW    | LCSW    | 09/03/20 | PCN61541 | 9.73 |        |       |      | 10    | 1.1   | 0.75 | 103  | 47    | 123   |         |       |      |
| WG504280PBW     | PBW     | 09/03/20 |          |      |        |       |      | .36   | 0.38  | 0.38 |      |       | 0.76  |         |       |      |
| L60743-01MS     | MS      | 09/03/20 | PCN61541 | 9.73 | 0.63   | 0.87  | 1.9  | 12    | 1.2   | 1.9  | 117  | 47    | 123   |         |       |      |
| L60731-02DUP    | DUP-RPD | 09/03/20 |          |      | 3.5    | 0.94  | 2    | 3.3   | 0.88  | 1.8  |      |       |       | 6       | 20    |      |
| L60799-01DUP    | DUP-RPD | 09/03/20 |          |      | 1.2    | 0.72  | 1.7  | 1.2   | 0.74  | 2    |      |       |       | 0       | 20    |      |

**Thorium 230, total**

ESM 4506

Units: pCi/L

| ACZ ID          | Type    | Analyzed | PCN/SCN  | QC  | Sample  | Error | LLD  | Found | Error | LLD  | Rec% | Lower | Upper | RPD/RER | Limit | Qual |
|-----------------|---------|----------|----------|-----|---------|-------|------|-------|-------|------|------|-------|-------|---------|-------|------|
| <b>WG503732</b> |         |          |          |     |         |       |      |       |       |      |      |       |       |         |       |      |
| WG503732PBW     | PBW     | 08/19/20 |          |     |         |       |      | .158  | 0.22  | 0.38 |      |       | 0.76  |         |       |      |
| WG503732LCSW    | LCSW    | 08/19/20 | PCN58726 | 200 |         |       |      | 206   | 28    | 0.4  | 103  | 91    | 126   |         |       |      |
| L60729-01DUP    | DUP-RPD | 08/19/20 |          |     | 0.0272  | 0.22  | 0.43 | .224  | 0.34  | 0.59 |      |       |       | 157     | 20    | RG   |
| L60729-01DUP    | DUP-RER | 08/19/20 |          |     | 0.0272  | 0.22  | 0.43 | .224  | 0.34  | 0.59 |      |       |       | 0.49    | 2     |      |
| L60730-01DUP    | DUP-RER | 08/20/20 |          |     | 0.466   | 0.41  | 0.64 | .574  | 0.5   | 0.73 |      |       |       | 0.17    | 2     |      |
| L60730-01DUP    | DUP-RPD | 08/20/20 |          |     | 0.466   | 0.41  | 0.64 | .574  | 0.5   | 0.73 |      |       |       | 21      | 20    | RG   |
| L60729-03MS     | MS      | 08/20/20 | PCN58726 | 200 | -0.0581 | 0.29  | 0.58 | 178   | 24    | 0.36 | 89   | 91    | 126   |         |       | M2   |

Rio Algom Mining Company

ACZ Project ID: **L60730**

| ACZ ID    | WORKNUM                | PARAMETER               | METHOD         | QUAL   | DESCRIPTION  |
|-----------|------------------------|-------------------------|----------------|--|--|
| L60730-01 | WG503775               | Gross Alpha, dissolved  | M9310          | RG   | Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control.   |
|           | WG503216               | Lead 210, dissolved     | EICHROM, OTW01 | D1   | Sample required dilution due to matrix.  |
|           |                        |                         | EICHROM, OTW01 | RG   | Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control.   |
|           | WG503776               | Polonium 210, dissolved | HASL Po-01-RC  | RG   | Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control.   |
|           | WG503900               | Radium 226, dissolved   | M903.1         | RM   | For a water matrix, the duplicate precision assessment (RPD or RER) exceeded the control limit. High sediment, turbidity, or presence of an immiscible liquid attributed to non-homogeneity of the sample. |
|           | WG504280               | Radium 228, dissolved   | M9320          | DJ   | Sample dilution required due to insufficient sample.   |
| WG503732  | Thorium 230, dissolved | ESM 4506                | M2             | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.  |  |
|           |                        | ESM 4506                | RG             | Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control. |  |
| L60730-02 | WG503775               | Gross Alpha, total      | M9310          | RG   | Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control.   |
|           | WG503216               | Lead 210, dissolved     | EICHROM, OTW01 | D1   | Sample required dilution due to matrix.  |
|           |                        |                         | EICHROM, OTW01 | RG   | Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control.   |
|           | WG503900               | Radium 226, total       | M903.1         | D1   | Sample required dilution due to matrix.  |
|           |                        |                         | M903.1         | QB   | Method-specified preservation criteria cannot be met due to sample matrix.   |
|           |                        |                         | M903.1         | RM   | For a water matrix, the duplicate precision assessment (RPD or RER) exceeded the control limit. High sediment, turbidity, or presence of an immiscible liquid attributed to non-homogeneity of the sample. |
|           | WG503967               | Radium 228, total       | M9320          | RG   | Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control.   |
|           | WG503732               | Thorium 230, total      | ESM 4506       | DJ   | Sample dilution required due to insufficient sample.   |
| ESM 4506  |                        |                         | M2             | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.  |  |
| ESM 4506  |                        |                         | RG             | Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control. |  |
| L60730-03 | WG503775               | Gross Alpha, dissolved  | M9310          | RG   | Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control.   |
|           | WG503216               | Lead 210, dissolved     | EICHROM, OTW01 | D1   | Sample required dilution due to matrix.  |
|           |                        |                         | EICHROM, OTW01 | RG   | Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control.   |
|           | WG503776               | Polonium 210, dissolved | HASL Po-01-RC  | RG   | Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control.   |
|           | WG503967               | Radium 228, dissolved   | M9320          | RG   | Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control.   |
| WG503732  | Thorium 230, dissolved | ESM 4506                | M2             | Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.  |  |
|           |                        | ESM 4506                | RG             | Sample concentration is less than 5x LLD; RPD was not used for data validation. Replicate Error Ratio (RER) is less than 2. Precision judged to be in control. |  |

**Rio Algom Mining Company**

ACZ Project ID: **L60730**

Radiochemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

|                         |                |
|-------------------------|----------------|
| Lead 210, dissolved     | EICHROM, OTW01 |
| Polonium 210, dissolved | HASL Po-01-RC  |
| Thorium 230, dissolved  | ESM 4506       |
| Thorium 230, total      | ESM 4506       |

Rio Algom Mining Company  
 4508122295

ACZ Project ID: L60730  
 Date Received: 08/08/2020 10:12  
 Received By:  
 Date Printed: 8/11/2020

**Receipt Verification**

|   | YES | NO | NA |
|---|-----|----|----|
| 1) Is a foreign soil permit included for applicable samples?                                |     |    | X  |
| 2) Is the Chain of Custody form or other directive shipping papers present?                 | X   |    |    |
| 3) Does this project require special handling procedures such as CLP protocol?              |     | X  |    |
| 4) Are any samples NRC licensable material?   |     |    | X  |
| 5) If samples are received past hold time, proceed with requested short hold time analyses? | X   |    |    |
| 6) Is the Chain of Custody form complete and accurate?                                      | X   |    |    |
| 7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?   |     | X  |    |

**Samples/Containers**

|   | YES | NO | NA |
|---|-----|----|----|
| 8) Are all containers intact and with no leaks?   | X   |    |    |
| 9) Are all labels on containers and are they intact and legible?                        | X   |    |    |
| 10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time? | X   |    |    |
| 11) For preserved bottle types, was the pH checked and within limits? <sup>1</sup>      |     | X  |    |

L60730-02 Container B2307835 (GREEN CUBE): Added 10 mls nitric acid to the sub-sample. The pH is 4.

L60730-02 Container B2307835 (GREEN CUBE): Added 10 mls nitric acid to the sub-sample to adjust the pH to the appropriate range.

|  |   |  |   |
|--|---|--|---|
| 12) Is there sufficient sample volume to perform all requested work?   | X |  |   |
| 13) Is the custody seal intact on all containers?                      |   |  | X |
| 14) Are samples that require zero headspace acceptable?                |   |  | X |
| 15) Are all sample containers appropriate for analytical requirements? | X |  |   |
| 16) Is there an Hg-1631 trip blank present?                            |   |  | X |
| 17) Is there a VOA trip blank present?                                 |   |  | X |
| 18) Were all samples received within hold time?                        | X |  |   |

NA indicates Not Applicable

**Chain of Custody Related Remarks**

**Client Contact Remarks**

**Shipping Containers**

| Cooler Id | Temp (°C) | Temp Criteria (°C) | Rad (µR/Hr) | Custody Seal Intact? |
|-----------|-----------|--------------------|-------------|----------------------|
| 6662      | 17.7      | NA                 | 15          | Yes                  |
| 4903      | 0.7       | <=6.0              | 15          | Yes                  |

Was ice present in the shipment container(s)?

Rio Algom Mining Company  
4508122295

ACZ Project ID: L60730  
Date Received: 08/08/2020 10:12  
Received By:  
Date Printed: 8/11/2020

Yes - Wet ice was present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

<sup>1</sup> The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).



