

February 25, 2022

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: Michaella Gorospe, jcarroll, Jeremy Scott Collyard, Marcus Powell, Sharon Clouse, Drew Werth, Casandra Woodward, Shubhangi Agarwal, Anupama Subbakrishna, Revathi Ekambaram, Clark Short, Angela Pe

Project ID: 4512060294

ACZ Project ID: L71354

Kent Applegate:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on February 10, 2022. This project has been assigned to ACZ's project number, L71354. Please reference this number in all future inquiries.

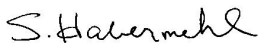
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L71354. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 March 27, 2022. 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: 4512060294
 Sample ID: 31-70R-02042022

ACZ Sample ID: **L71354-01**
 Date Sampled: 02/04/22 10:02
 Date Received: 02/10/22
 Sample Matrix: Groundwater

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	5	665			mg/L	0.5	2.5	02/22/22 11:06	aeH
Magnesium, dissolved	M200.7 ICP	5	357			mg/L	1	5	02/22/22 11:06	aeH
Potassium, dissolved	M200.7 ICP	5	13.2			mg/L	1	5	02/22/22 11:06	aeH
Sodium, dissolved	M200.7 ICP	5	595			mg/L	1	5	02/22/22 11:06	aeH

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	489			mg/L	2	20	02/17/22 0:00	eep
Carbonate as CaCO3		1	<2	U		mg/L	2	20	02/17/22 0:00	eep
Hydroxide as CaCO3		1	<2	U		mg/L	2	20	02/17/22 0:00	eep
Total Alkalinity		1	489			mg/L	2	20	02/17/22 0:00	eep
Chloride	SM4500Cl-E	20	950		*	mg/L	10	40	02/15/22 10:48	syw
Conductivity @25C	SM2510B	1	6560			umhos/cm	1	10	02/15/22 22:55	eep
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	15	33.3			mg/L	0.3	1.5	02/19/22 2:19	pjb
Residue, Filterable (TDS) @180C	SM2540C	5	5890			mg/L	100	200	02/10/22 12:36	eep
Sulfate	D516-02/07-11 - TURBIDIMETRIC	125	2610		*	mg/L	125	625	02/24/22 15:13	mjj1

Rio Algom Mining Company

Project ID: 4512060294
 Sample ID: 31-71-02042022

ACZ Sample ID: **L71354-02**
 Date Sampled: 02/04/22 10:56
 Date Received: 02/10/22
 Sample Matrix: Groundwater

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	5	568			mg/L	0.5	2.5	02/22/22 11:09	aeH
Magnesium, dissolved	M200.7 ICP	5	224			mg/L	1	5	02/22/22 11:09	aeH
Potassium, dissolved	M200.7 ICP	5	5.68			mg/L	1	5	02/22/22 11:09	aeH
Sodium, dissolved	M200.7 ICP	5	382			mg/L	1	5	02/22/22 11:09	aeH

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	255			mg/L	2	20	02/17/22 0:00	eep
Carbonate as CaCO3		1	<2	U		mg/L	2	20	02/17/22 0:00	eep
Hydroxide as CaCO3		1	<2	U		mg/L	2	20	02/17/22 0:00	eep
Total Alkalinity		1	255			mg/L	2	20	02/17/22 0:00	eep
Chloride	SM4500Cl-E	10	538		*	mg/L	5	20	02/15/22 10:33	syw
Conductivity @25C	SM2510B	1	4740			umhos/cm	1	10	02/15/22 23:05	eep
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1	<0.02	U		mg/L	0.02	0.1	02/19/22 1:53	pjb
Residue, Filterable (TDS) @180C	SM2540C	2	4220			mg/L	40	80	02/10/22 12:39	eep
Sulfate	D516-02/-07/-11 - TURBIDIMETRIC	120	2410		*	mg/L	120	600	02/24/22 15:15	mjj1

Rio Algom Mining Company

Project ID: 4512060294
 Sample ID: S-9-02042022

ACZ Sample ID: **L71354-03**
 Date Sampled: 02/04/22 16:45
 Date Received: 02/10/22
 Sample Matrix: Groundwater

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	10	380			mg/L	1	5	02/22/22 11:12	aeH
Magnesium, dissolved	M200.7 ICP	10	1410			mg/L	2	10	02/22/22 11:12	aeH
Potassium, dissolved	M200.7 ICP	10	15.6			mg/L	2	10	02/22/22 11:12	aeH
Sodium, dissolved	M200.7 ICP	10	1150			mg/L	2	10	02/22/22 11:12	aeH

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	1710			mg/L	2	20	02/17/22 0:00	eep
Carbonate as CaCO3		1	<2	U		mg/L	2	20	02/17/22 0:00	eep
Hydroxide as CaCO3		1	<2	U		mg/L	2	20	02/17/22 0:00	eep
Total Alkalinity		1	1710			mg/L	2	20	02/17/22 0:00	eep
Chloride	SM4500Cl-E	50	2480		*	mg/L	25	100	02/15/22 12:12	syw
Conductivity @25C	SM2510B	1	12900			umhos/cm	1	10	02/15/22 23:24	eep
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1	0.161			mg/L	0.02	0.1	02/19/22 1:55	pjb
Residue, Filterable (TDS) @180C	SM2540C	10	11700			mg/L	200	400	02/10/22 12:41	eep
Sulfate	D516-02/07-11 - TURBIDIMETRIC	250	4700		*	mg/L	250	1250	02/24/22 15:13	mjj1

Rio Algom Mining Company

Project ID: 4512060294
 Sample ID: 32-50 TRB-R-02072022

ACZ Sample ID: **L71354-04**
 Date Sampled: 02/07/22 11:30
 Date Received: 02/10/22
 Sample Matrix: Groundwater

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	5	535			mg/L	0.5	2.5	02/22/22 11:21	aeH
Magnesium, dissolved	M200.7 ICP	5	420			mg/L	1	5	02/22/22 11:21	aeH
Potassium, dissolved	M200.7 ICP	5	4.88	B		mg/L	1	5	02/22/22 11:21	aeH
Sodium, dissolved	M200.7 ICP	5	683			mg/L	1	5	02/22/22 11:21	aeH

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	468			mg/L	2	20	02/17/22 0:00	eep
Carbonate as CaCO3		1	<2	U		mg/L	2	20	02/17/22 0:00	eep
Hydroxide as CaCO3		1	<2	U		mg/L	2	20	02/17/22 0:00	eep
Total Alkalinity		1	468			mg/L	2	20	02/17/22 0:00	eep
Chloride	SM4500Cl-E	10	672		*	mg/L	5	20	02/15/22 11:15	syw
Conductivity @25C	SM2510B	1	6510			umhos/cm	1	10	02/15/22 23:36	eep
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	3	4.36			mg/L	0.06	0.3	02/19/22 2:21	pjb
Residue, Filterable (TDS) @180C	SM2540C	2	5820			mg/L	40	80	02/10/22 12:44	eep
Sulfate	D516-02/07-11 - TURBIDIMETRIC	125	3230		*	mg/L	125	625	02/24/22 15:17	mjj1

Rio Algom Mining Company

Project ID: 4512060294
 Sample ID: 5-02-02082022

ACZ Sample ID: **L71354-05**
 Date Sampled: 02/08/22 10:30
 Date Received: 02/10/22
 Sample Matrix: Groundwater

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	10	55.5			mg/L	1	5	02/22/22 11:25	aeH
Magnesium, dissolved	M200.7 ICP	10	679			mg/L	2	10	02/22/22 11:25	aeH
Potassium, dissolved	M200.7 ICP	10	8.19	B		mg/L	2	10	02/22/22 11:25	aeH
Sodium, dissolved	M200.7 ICP	10	529			mg/L	2	10	02/22/22 11:25	aeH

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	735			mg/L	2	20	02/18/22 0:00	eep
Carbonate as CaCO3		1	<2	U		mg/L	2	20	02/18/22 0:00	eep
Hydroxide as CaCO3		1	<2	U		mg/L	2	20	02/18/22 0:00	eep
Total Alkalinity		1	735			mg/L	2	20	02/18/22 0:00	eep
Chloride	SM4500Cl-E	20	1120		*	mg/L	10	40	02/15/22 10:50	syw
Conductivity @25C	SM2510B	1	6320			umhos/cm	1	10	02/15/22 23:59	eep
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1	1.42			mg/L	0.02	0.1	02/19/22 2:02	pjb
Residue, Filterable (TDS) @180C	SM2540C	10	12600			mg/L	200	400	02/10/22 12:47	eep
Sulfate	D516-02/07-11 - TURBIDIMETRIC	50	1750		*	mg/L	50	250	02/24/22 14:29	mjj1

Rio Algom Mining Company

Project ID: 4512060294
 Sample ID: AW-1-02082022

ACZ Sample ID: **L71354-06**
 Date Sampled: 02/08/22 16:12
 Date Received: 02/10/22
 Sample Matrix: Groundwater

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	5	654			mg/L	0.5	2.5	02/22/22 11:28	aeH
Magnesium, dissolved	M200.7 ICP	5	522			mg/L	1	5	02/22/22 11:28	aeH
Potassium, dissolved	M200.7 ICP	5	8.40			mg/L	1	5	02/22/22 11:28	aeH
Sodium, dissolved	M200.7 ICP	5	605			mg/L	1	5	02/22/22 11:28	aeH

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	620			mg/L	2	20	02/18/22 0:00	eep
Carbonate as CaCO3		1	<2	U		mg/L	2	20	02/18/22 0:00	eep
Hydroxide as CaCO3		1	<2	U		mg/L	2	20	02/18/22 0:00	eep
Total Alkalinity		1	620			mg/L	2	20	02/18/22 0:00	eep
Chloride	SM4500Cl-E	10	723		*	mg/L	5	20	02/15/22 11:15	syw
Conductivity @25C	SM2510B	1	7160			umhos/cm	1	10	02/16/22 0:10	eep
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	5	8.43			mg/L	0.1	0.5	02/19/22 2:23	pjb
Residue, Filterable (TDS) @180C	SM2540C	2	6600			mg/L	40	80	02/10/22 12:49	eep
Sulfate	D516-02/07-11 - TURBIDIMETRIC	125	3710		*	mg/L	125	625	02/24/22 15:17	mjj1

Rio Algom Mining Company

Project ID: 4512060294
 Sample ID: AW-2-02082022

ACZ Sample ID: **L71354-07**
 Date Sampled: 02/08/22 13:45
 Date Received: 02/10/22
 Sample Matrix: Groundwater

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	5	602			mg/L	0.5	2.5	02/22/22 11:31	aeH
Magnesium, dissolved	M200.7 ICP	5	190			mg/L	1	5	02/22/22 11:31	aeH
Potassium, dissolved	M200.7 ICP	5	3.75	B		mg/L	1	5	02/22/22 11:31	aeH
Sodium, dissolved	M200.7 ICP	5	711			mg/L	1	5	02/22/22 11:31	aeH

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	354			mg/L	2	20	02/18/22 0:00	eep
Carbonate as CaCO3		1	<2	U		mg/L	2	20	02/18/22 0:00	eep
Hydroxide as CaCO3		1	<2	U		mg/L	2	20	02/18/22 0:00	eep
Total Alkalinity		1	354			mg/L	2	20	02/18/22 0:00	eep
Chloride	SM4500Cl-E	10	292		*	mg/L	5	20	02/15/22 11:15	syw
Conductivity @25C	SM2510B	1	5570			umhos/cm	1	10	02/16/22 0:19	eep
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	4	7.54			mg/L	0.08	0.4	02/19/22 2:24	pjb
Residue, Filterable (TDS) @180C	SM2540C	5	4830			mg/L	100	200	02/10/22 12:52	eep
Sulfate	D516-02/07-11 - TURBIDIMETRIC	120	3350		*	mg/L	120	600	02/24/22 15:17	mjj1

Rio Algom Mining Company

Project ID: 4512060294
 Sample ID: 30-4 R-02092022

ACZ Sample ID: **L71354-08**
 Date Sampled: 02/09/22 09:45
 Date Received: 02/10/22
 Sample Matrix: Groundwater

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	5	563			mg/L	0.5	2.5	02/22/22 11:40	aeH
Magnesium, dissolved	M200.7 ICP	5	401			mg/L	1	5	02/22/22 11:40	aeH
Potassium, dissolved	M200.7 ICP	5	8.06			mg/L	1	5	02/22/22 11:40	aeH
Sodium, dissolved	M200.7 ICP	5	536			mg/L	1	5	02/22/22 11:40	aeH

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	481			mg/L	2	20	02/18/22 0:00	eep
Carbonate as CaCO3		1	<2	U		mg/L	2	20	02/18/22 0:00	eep
Hydroxide as CaCO3		1	<2	U		mg/L	2	20	02/18/22 0:00	eep
Total Alkalinity		1	481			mg/L	2	20	02/18/22 0:00	eep
Chloride	SM4500Cl-E	10	656			mg/L	5	20	02/15/22 11:15	syw
Conductivity @25C	SM2510B	1	6070			umhos/cm	1	10	02/16/22 0:31	eep
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	4	7.33			mg/L	0.08	0.4	02/19/22 2:25	pjb
Residue, Filterable (TDS) @180C	SM2540C	2	5710			mg/L	40	80	02/10/22 12:54	eep
Sulfate	D516-02/07-11 - TURBIDIMETRIC	125	2810		*	mg/L	125	625	02/24/22 14:29	mjj1

Rio Algom Mining Company

Project ID: 4512060294
 Sample ID: DUP-06-02082022

ACZ Sample ID: **L71354-09**
 Date Sampled: 02/08/22 00:00
 Date Received: 02/10/22
 Sample Matrix: Groundwater

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Calcium, dissolved	M200.7 ICP	5	600			mg/L	0.5	2.5	02/22/22 11:43	aeH
Magnesium, dissolved	M200.7 ICP	5	189			mg/L	1	5	02/22/22 11:43	aeH
Potassium, dissolved	M200.7 ICP	5	3.70	B		mg/L	1	5	02/22/22 11:43	aeH
Sodium, dissolved	M200.7 ICP	5	710			mg/L	1	5	02/22/22 11:43	aeH

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	371			mg/L	2	20	02/18/22 0:00	eep
Carbonate as CaCO3		1	<2	U		mg/L	2	20	02/18/22 0:00	eep
Hydroxide as CaCO3		1	<2	U		mg/L	2	20	02/18/22 0:00	eep
Total Alkalinity		1	371			mg/L	2	20	02/18/22 0:00	eep
Chloride	SM4500Cl-E	10	295			mg/L	5	20	02/15/22 12:11	syw
Conductivity @25C	SM2510B	1	5550			umhos/cm	1	10	02/16/22 0:40	eep
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	4	7.37			mg/L	0.08	0.4	02/19/22 2:26	pjb
Residue, Filterable (TDS) @180C	SM2540C	5	5370			mg/L	100	200	02/10/22 12:57	eep
Sulfate	D516-02/07-11 - TURBIDIMETRIC	25	607		*	mg/L	25	125	02/24/22 14:29	mjj1

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). 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. 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>

QUIVIRA

ACZ Project ID: **L71354**

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
WG536892													
WG536892PBW1	PBW	02/17/22 16:14				15.7	mg/L		-20	20			
WG536892LCSW3	LCSW	02/17/22 16:31	WC220202-3	820.0001		806.8	mg/L	98	90	110			
WG536892LCSW6	LCSW	02/17/22 19:07	WC220202-3	820.0001		811.1	mg/L	99	90	110			
WG536892PBW2	PBW	02/17/22 19:13				6.5	mg/L		-20	20			
WG536892LCSW9	LCSW	02/17/22 21:38	WC220202-3	820.0001		828.7	mg/L	101	90	110			
WG536892PBW3	PBW	02/17/22 21:44				6.3	mg/L		-20	20			
L71354-01DUP	DUP	02/17/22 23:16			489	507.8	mg/L				4	20	
L71379-01DUP	DUP	02/18/22 1:04			82.2	81.3	mg/L				1	20	
WG536892LCSW12	LCSW	02/18/22 1:32	WC220202-3	820.0001		831.1	mg/L	101	90	110			
WG536892PBW4	PBW	02/18/22 1:38				6.8	mg/L		-20	20			
WG536892LCSW15	LCSW	02/18/22 5:21	WC220202-3	820.0001		840.3	mg/L	102	90	110			

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG536957													
WG536957ICV	ICV	02/22/22 10:45	II220215-3	100		99.65	mg/L	100	95	105			
WG536957ICB	ICB	02/22/22 10:51				U	mg/L		-0.3	0.3			
WG536957LFB	LFB	02/22/22 11:03	II220215-2	67.99026		65.26	mg/L	96	85	115			
L71354-03AS	AS	02/22/22 11:15	II220215-2	679.9026	380	1013	mg/L	93	85	115			
L71354-03ASD	ASD	02/22/22 11:18	II220215-2	679.9026	380	1023	mg/L	95	85	115	1	20	

Chloride SM4500CI-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG536673													
WG536673ICB	ICB	02/15/22 10:08				U	mg/L		-1.5	1.5			
WG536673ICV	ICV	02/15/22 10:08	WI210503-1	54.89		57.96	mg/L	106	90	110			
WG536673LFB1	LFB	02/15/22 10:22	WI210908-11	29.97		32.39	mg/L	108	90	110			
L71380-03AS	AS	02/15/22 10:32	WI210908-11	29.97	48.3	76.47	mg/L	94	90	110			
L71380-04DUP	DUP	02/15/22 10:32			45.5	45.4	mg/L				0	20	
L71353-09AS	AS	02/15/22 10:48	20XCL	30	1590	1561.77	mg/L	-94	90	110			M3
L71354-01DUP	DUP	02/15/22 10:50			950	939.61	mg/L				1	20	
WG536673LFB2	LFB	02/15/22 11:13	WI210908-11	29.97		32.62	mg/L	109	90	110			

Conductivity @25C SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG536739													
WG536739LCSW2	LCSW	02/15/22 17:14	PCN65017	1408		1405	umhos/cm	100	90	110			
WG536739LCSW5	LCSW	02/15/22 21:26	PCN65017	1408		1396	umhos/cm	99	90	110			
L71354-04DUP	DUP	02/15/22 23:46			6510	6520	umhos/cm				0	20	
L71442-02DUP	DUP	02/16/22 1:34			1330	1331	umhos/cm				0	20	
WG536739LCSW8	LCSW	02/16/22 1:40	PCN65017	1408		1391	umhos/cm	99	90	110			
WG536739LCSW11	LCSW	02/16/22 5:04	PCN65017	1408		1382	umhos/cm	98	90	110			

QUIVIRA

ACZ Project ID: **L71354**

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.

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG536957													
WG536957ICV	ICV	02/22/22 10:45	II220215-3	100		95.49	mg/L	95	95	105			
WG536957ICB	ICB	02/22/22 10:51				U	mg/L		-0.6	0.6			
WG536957LFB	LFB	02/22/22 11:03	II220215-2	49.99828		49.65	mg/L	99	85	115			
L71354-03AS	AS	02/22/22 11:15	II220215-2	499.9828	1410	1912	mg/L	100	85	115			
L71354-03ASD	ASD	02/22/22 11:18	II220215-2	499.9828	1410	1918	mg/L	102	85	115	0	20	

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG537004													
WG537004ICV	ICV	02/18/22 23:15	WI211205-1	2.4161		2.252	mg/L	93	90	110			
WG537004ICB	ICB	02/18/22 23:17				U	mg/L		-0.02	0.02			
WG537008													
WG537008LFB	LFB	02/19/22 1:27	WI211001-5	2		2.001	mg/L	100	90	110			
L71353-09AS	AS	02/19/22 1:49	WI211001-5	2	U	2.014	mg/L	101	90	110			
L71354-01DUP	DUP	02/19/22 2:20			33.3	33.189	mg/L				0	20	

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG536957													
WG536957ICV	ICV	02/22/22 10:45	II220215-3	20		19.67	mg/L	98	95	105			
WG536957ICB	ICB	02/22/22 10:51				U	mg/L		-0.6	0.6			
WG536957LFB	LFB	02/22/22 11:03	II220215-2	99.95169		101.9	mg/L	102	85	115			
L71354-03AS	AS	02/22/22 11:15	II220215-2	999.5169	15.6	1017	mg/L	100	85	115			
L71354-03ASD	ASD	02/22/22 11:18	II220215-2	999.5169	15.6	1018	mg/L	100	85	115	0	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG536488													
WG536488PBW	PBW	02/10/22 12:00				U	mg/L		-20	20			
WG536488LCSW	LCSW	02/10/22 12:02	PCN64130	1000		992	mg/L	99	80	120			
L71354-09DUP	DUP	02/10/22 13:00			5370	5120	mg/L				5	10	

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG536957													
WG536957ICV	ICV	02/22/22 10:45	II220215-3	100		98.92	mg/L	99	95	105			
WG536957ICB	ICB	02/22/22 10:51				U	mg/L		-0.6	0.6			
WG536957LFB	LFB	02/22/22 11:03	II220215-2	100.0039		102.2	mg/L	102	85	115			
L71354-03AS	AS	02/22/22 11:15	II220215-2	1000.039	1150	2110	mg/L	96	85	115			
L71354-03ASD	ASD	02/22/22 11:18	II220215-2	1000.039	1150	2150	mg/L	100	85	115	2	20	

QUIVIRA

ACZ Project ID: **L71354**

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.

Sulfate

D516-02/-07/-11 - TURBIDIMETRIC

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG536921													
WG536921ICB	ICB	02/24/22 11:31				U	mg/L		-3	3			
WG536921ICV	ICV	02/24/22 11:31	WI220215-6	20.46		19.9	mg/L	97	90	110			
WG536921LFB	LFB	02/24/22 14:03	WI211230-5	9.95		9.9	mg/L	99	90	110			
L71354-01DUP	DUP	02/24/22 15:13			2610	2623.5	mg/L				1	20	
L71354-02AS	AS	02/24/22 15:15	SO4TURB	10.0000008	2410	2365.3	mg/L	-447	90	110			M3

Rio Algom Mining Company

ACZ Project ID: **L71354**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L71354-01	WG536673	Chloride	SM4500CI-E	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.
	WG536921	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.
L71354-02	WG536673	Chloride	SM4500CI-E	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.
	WG536921	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.
L71354-03	WG536673	Chloride	SM4500CI-E	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.
	WG536921	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.
L71354-04	WG536673	Chloride	SM4500CI-E	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.
	WG536921	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.
L71354-05	WG536673	Chloride	SM4500CI-E	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.
	WG536921	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.
L71354-06	WG536673	Chloride	SM4500CI-E	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.
	WG536921	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.
L71354-07	WG536673	Chloride	SM4500CI-E	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.
	WG536921	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.
L71354-08	WG536921	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.

Rio Algom Mining CompanyACZ Project ID: **L71354**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L71354-09	WG536921	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.

Rio Algom Mining Company

ACZ Project ID: **L71354**

No certification qualifiers associated with this analysis

Rio Algom Mining Company
 4512060294

ACZ Project ID: L71354
 Date Received: 02/10/2022 09:28
 Received By:
 Date Printed: 2/11/2022

Receipt Verification

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

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Are all labels on containers and are they intact and legible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) For preserved bottle types, was the pH checked and within limits? ¹	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12) Is there sufficient sample volume to perform all requested work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13) Is the custody seal intact on all containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14) Are samples that require zero headspace acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15) Are all sample containers appropriate for analytical requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16) Is there an Hg-1631 trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17) Is there a VOA trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18) Were all samples received within hold time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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?
6343	-0.3	<=6.0	15	N/A

Was ice present in the shipment container(s)?

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.

Rio Algom Mining Company
4512060294

ACZ Project ID: L71354
Date Received: 02/10/2022 09:28
Received By:
Date Printed: 2/11/2022

¹ 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), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).



Accredited Environmental Testing

2773 Downhill Drive Steamboat Springs, CO 80487 (970) 879-6590

L71354

CHAIN of CUSTODY

Report to:

Name: Kent Applegate
Company: Rio Algom Mining LLC
E-mail: Kent.Applegate@bhp.com

Address: 201 C Sante Fe Avenue
Grants NM 87020
Telephone: 505-801-1761

Copy of Report to:

Name: See Remarks
Company:

E-mail: See Remarks
Telephone:

Invoice to:

Name: Kent Applegate
Company: Rio Algom Mining LLC
E-mail: Kent.Applegate@bhp.com

Address: 201 C Sante Fe Avenue
Grants NM 87020
Telephone: 505-801-1761

Copy of Invoice to:

Name: See Remarks
Company:
E-mail: See Remarks

Address:
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES [checked] NO []

Are samples for SDWA Compliance Monitoring? Yes [] No [checked]

Sampler's Name: Kelly Hoehn
Sampler's Site Information State NM Zip code 87020 Time Zone MST
*Sampler's Signature:
*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #: BO48856
PO#: 4512060294
Reporting state for compliance testing:
Check box if samples include NRC licensed material? [checked]

ANALYSES REQUESTED (attach list or use quote number)

Table with columns: SAMPLE IDENTIFICATION, DATE:TIME, Matrix, # of Containers, NMED-DP-169, and multiple empty columns for analysis results.

Matrix SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please CC Report to email list. No time listed on DUP-04-02082022.
Please refer to ACZ's terms & conditions located on the reverse side of this COC.

Table with columns: RELINQUISHED BY, DATE:TIME, RECEIVED BY, DATE:TIME. Includes signatures and dates.

Qualtrax ID: 1984 Revision #: 2 White - Return with sample. Yellow - Retain for your records.

