ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

April 20, 2023

Report to:
Kara Haas
South32
749 Harshaw Rd
Patagonia, AZ 85624

cc: Nick Connell

Bill to:
Accounts Payable
South32 Hermosa Inc.
2210 E Fort Lowell Road
Tucson, AZ 85719

Project ID: 4542523524
ACZ Project ID: L79447

Kara Haas:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on March 24, 2023. This project has been assigned to ACZ's project number, L79447. 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 L79447. 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 April 09, 2025. 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.

Mark McNeal

Mark McNeal has reviewed and approved this report.

South32
Project ID: 4542523524
Sample ID: MW-9-20230321

ACZ Sample ID: ***L79447-01***
Date Sampled: *03/21/23 12:40*
Date Received: *03/24/23*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								03/29/23 13:28	aps
Total Hot Plate Digestion	M200.2 ICP-MS								04/06/23 12:09	kja
Total Hot Plate Digestion	M200.2 ICP								04/06/23 12:10	aeh

South32
Project ID: 4542523524
Sample ID: MW-9-20230321

ACZ Sample ID: ***L79447-01***
Date Sampled: *03/21/23 12:40*
Date Received: *03/24/23*
Sample Matrix: *Groundwater*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.8 ICP-MS	1	<0.005	U		mg/L	0.005	0.015	04/10/23 16:17	bcc
Aluminum, total	M200.8 ICP-MS	1	0.240			mg/L	0.005	0.015	04/11/23 9:01	bcc
Antimony, dissolved	M200.8 ICP-MS	1	0.00466			mg/L	0.0004	0.002	04/10/23 16:17	bcc
Antimony, total	M200.8 ICP-MS	1	0.00489			mg/L	0.0004	0.002	04/13/23 18:05	kja
Arsenic, dissolved	M200.8 ICP-MS	1	0.00702			mg/L	0.0002	0.001	04/10/23 16:17	bcc
Arsenic, total	M200.8 ICP-MS	1	0.00744			mg/L	0.0002	0.001	04/11/23 9:01	bcc
Barium, dissolved	M200.7 ICP	1	0.0224	B		mg/L	0.009	0.035	04/11/23 1:27	keh1
Barium, total	M200.7 ICP	1	0.0304	B		mg/L	0.009	0.035	04/12/23 12:02	keh1
Beryllium, dissolved	M200.8 ICP-MS	1	<0.00008	U	*	mg/L	0.00008	0.00025	04/10/23 16:17	bcc
Beryllium, total	M200.8 ICP-MS	1	<0.00008	U		mg/L	0.00008	0.00025	04/11/23 9:01	bcc
Boron, dissolved	M200.7 ICP	1	0.135			mg/L	0.03	0.1	04/11/23 1:27	keh1
Boron, total	M200.7 ICP	1	0.134			mg/L	0.03	0.1	04/12/23 12:02	keh1
Cadmium, dissolved	M200.8 ICP-MS	1	<0.00005	U		mg/L	0.00005	0.00025	04/10/23 16:17	bcc
Cadmium, total	M200.8 ICP-MS	1	0.000110	B		mg/L	0.00005	0.00025	04/11/23 9:01	bcc
Calcium, dissolved	M200.7 ICP	1	34.8			mg/L	0.1	0.5	04/11/23 1:27	keh1
Calcium, total	M200.7 ICP	1	34.9			mg/L	0.1	0.5	04/12/23 12:02	keh1
Chromium, dissolved	M200.8 ICP-MS	1	0.00199	B		mg/L	0.0005	0.002	04/10/23 16:17	bcc
Chromium, total	M200.8 ICP-MS	1	0.00255			mg/L	0.0005	0.002	04/11/23 9:01	bcc
Cobalt, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	04/11/23 1:27	keh1
Cobalt, total	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	04/12/23 12:02	keh1
Copper, dissolved	M200.8 ICP-MS	1	<0.0008	U		mg/L	0.0008	0.002	04/10/23 16:17	bcc
Copper, total	M200.8 ICP-MS	1	0.00211			mg/L	0.0008	0.002	04/11/23 9:01	bcc
Iron, dissolved	M200.7 ICP	1	<0.06	U		mg/L	0.06	0.15	04/11/23 1:27	keh1
Iron, total	M200.7 ICP	1	0.343			mg/L	0.06	0.15	04/12/23 12:02	keh1
Lead, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.0005	04/10/23 16:17	bcc
Lead, total	M200.8 ICP-MS	1	0.0140			mg/L	0.0001	0.0005	04/11/23 9:01	bcc
Magnesium, dissolved	M200.7 ICP	1	0.70	B		mg/L	0.2	1	04/11/23 1:27	keh1
Magnesium, total	M200.7 ICP	1	0.98	B		mg/L	0.2	1	04/12/23 12:02	keh1
Manganese, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	04/11/23 1:27	keh1
Manganese, total	M200.7 ICP	1	0.125			mg/L	0.01	0.05	04/12/23 12:02	keh1
Mercury, dissolved	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	04/05/23 12:10	mlh
Mercury, total	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	04/05/23 9:50	mlh
Nickel, dissolved	M200.7 ICP	1	<0.008	U		mg/L	0.008	0.04	04/11/23 1:27	keh1
Nickel, total	M200.7 ICP	1	<0.008	U		mg/L	0.008	0.04	04/12/23 12:02	keh1
Potassium, dissolved	M200.7 ICP	1	0.87	B		mg/L	0.2	1	04/11/23 1:27	keh1
Potassium, total	M200.7 ICP	1	1.14			mg/L	0.2	1	04/12/23 12:02	keh1
Selenium, dissolved	M200.8 ICP-MS	1	0.00049			mg/L	0.0001	0.00025	04/10/23 16:17	bcc
Selenium, total	M200.8 ICP-MS	1	0.00039			mg/L	0.0001	0.00025	04/11/23 9:01	bcc
Silica, dissolved	M200.7 ICP	1	19.7			mg/L	0.2	1	04/11/23 1:27	keh1
Silica, total	M200.7 ICP	1	21.0		*	mg/L	0.2	1	04/12/23 12:02	keh1
Silver, dissolved	M200.8 ICP-MS	2	<0.0002	U	*	mg/L	0.0002	0.001	04/19/23 15:24	bcc
Silver, total	M200.8 ICP-MS	1	0.00277			mg/L	0.0001	0.0005	04/11/23 9:01	bcc
Sodium, dissolved	M200.7 ICP	1	82.8			mg/L	0.2	1	04/11/23 1:27	keh1

South32
Project ID: 4542523524
Sample ID: MW-9-20230321

ACZ Sample ID: ***L79447-01***
Date Sampled: *03/21/23 12:40*
Date Received: *03/24/23*
Sample Matrix: *Groundwater*

Sodium, total	M200.7 ICP	1	80.3			mg/L	0.2	1	04/12/23 12:02	keh1
Thallium, dissolved	M200.8 ICP-MS	1	0.00019	B		mg/L	0.0001	0.0005	04/10/23 16:17	bcc
Thallium, total	M200.8 ICP-MS	1	0.00024	B		mg/L	0.0001	0.0005	04/11/23 9:01	bcc
Uranium, dissolved	M200.8 ICP-MS	1	0.00550			mg/L	0.0001	0.0005	04/10/23 16:17	bcc
Uranium, total	M200.8 ICP-MS	1	0.00624			mg/L	0.0001	0.0005	04/11/23 9:01	bcc
Zinc, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	04/11/23 1:27	keh1
Zinc, total	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	04/12/23 12:02	keh1

Subcontract

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Miscellaneous subcontract	Subcontracted Work									

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	83.5			mg/L	2	20	03/30/23 0:00	jck
Carbonate as CaCO3		1	<2	U		mg/L	2	20	03/30/23 0:00	jck
Hydroxide as CaCO3		1	<2	U		mg/L	2	20	03/30/23 0:00	jck
Total Alkalinity		1	83.5		*	mg/L	2	20	03/30/23 0:00	jck
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			04/20/23 0:00	calc
Sum of Anions			5.5			meq/L			04/20/23 0:00	calc
Sum of Cations			5.5			meq/L			04/20/23 0:00	calc
Chloride	SM4500Cl-E	1	4.18		*	mg/L	1	2	03/28/23 10:59	bls
Conductivity @25C	SM2510B	1	547			umhos/cm	1	10	03/30/23 9:17	jck
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5	<0.003	U	*	mg/L	0.003	0.01	03/29/23 17:08	gkk
Fluoride	SM4500F-C	1	0.23	B		mg/L	0.15	0.35	04/13/23 23:30	jck
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		90			mg/L	0.2	5	04/20/23 0:00	calc
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1	0.190		*	mg/L	0.02	0.1	04/08/23 2:54	pjb
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1	<0.05	U	*	mg/L	0.05	0.2	03/30/23 14:54	mrd
pH (lab)	SM4500H+ B									
pH		1	6.9	H		units	0.1	0.1	03/30/23 0:00	jck
pH measured at		1	22.5			C	0.1	0.1	03/30/23 0:00	jck
Residue, Filterable (TDS) @180C	SM2540C	1	364			mg/L	20	40	03/28/23 21:19	jck
Sulfate	D516-02/-07/-11 - TURBIDIMETRIC	5	175		*	mg/L	5	25	04/11/23 15:19	gkk
TDS (calculated)	Calculation		375			mg/L			04/20/23 0:00	calc
TDS (ratio - measured/calculated)	Calculation		0.97						04/20/23 0:00	calc

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

REP001.03.15.02

AZMINING

ACZ Project ID: ***L79447***

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
WG563043													
WG563043PBW1	PBW	03/29/23 19:27				8.2	mg/L		-20	20			
WG563043LCSW3	LCSW	03/29/23 19:48	WC230324-1	820.0001		832.8	mg/L	102	90	110			
WG563043LCSW6	LCSW	03/29/23 23:06	WC230324-1	820.0001		846.4	mg/L	103	90	110			
WG563043PBW2	PBW	03/29/23 23:14				9.7	mg/L		-20	20			
WG563043LCSW9	LCSW	03/30/23 2:18	WC230324-1	820.0001		861.8	mg/L	105	90	110			
WG563043PBW3	PBW	03/30/23 2:26				10	mg/L		-20	20			
WG563043LCSW12	LCSW	03/30/23 5:44	WC230324-1	820.0001		837.1	mg/L	102	90	110			
WG563043PBW4	PBW	03/30/23 5:52				10.2	mg/L		-20	20			
WG563043LCSW15	LCSW	03/30/23 8:57	WC230324-1	820.0001		867.2	mg/L	106	90	110			
WG563043PBW5	PBW	03/30/23 9:05				10	mg/L		-20	20			
L79524-04DUP	DUP	03/30/23 10:27			U	U	mg/L				0	20	RA
WG563043LCSW18	LCSW	03/30/23 10:49	WC230324-1	820.0001		859.8	mg/L	105	90	110			

Aluminum, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563740													
WG563740ICV	ICV	04/10/23 15:50	MS230328-2	.1		.1036	mg/L	104	90	110			
WG563740ICB	ICB	04/10/23 15:52				U	mg/L		-0.011	0.011			
WG563740LFB	LFB	04/10/23 15:53	MS230329-2	.050065		.0492	mg/L	98	85	115			
L79447-01AS	AS	04/10/23 16:19	MS230329-2	.050065	U	.0503	mg/L	100	70	130			
L79447-01ASD	ASD	04/10/23 16:21	MS230329-2	.050065	U	.0511	mg/L	102	70	130	2	20	

Aluminum, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563751													
WG563751ICV	ICV	04/11/23 8:42	MS230328-2	.1		.0971	mg/L	97	90	110			
WG563751ICB	ICB	04/11/23 8:43				U	mg/L		-0.015	0.015			
WG563551LRB	LRB	04/11/23 8:45				U	mg/L		-0.011	0.011			
WG563551LFB	LFB	04/11/23 8:47	MS230329-2	.050065		.0496	mg/L	99	85	115			
L79447-01LFM	LFM	04/11/23 9:07	MS230329-2	.050065	.24	.3047	mg/L	129	70	130			
L79447-01LFMD	LFMD	04/11/23 9:08	MS230329-2	.050065	.24	.3019	mg/L	124	70	130	1	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563740													
WG563740ICV	ICV	04/10/23 15:50	MS230328-2	.0201		.01915	mg/L	95	90	110			
WG563740ICB	ICB	04/10/23 15:52				.00053	mg/L		-0.00088	0.00088			
WG563740LFB	LFB	04/10/23 15:53	MS230329-2	.01		.01019	mg/L	102	85	115			
L79447-01AS	AS	04/10/23 16:19	MS230329-2	.01	.00466	.01415	mg/L	95	70	130			
L79447-01ASD	ASD	04/10/23 16:21	MS230329-2	.01	.00466	.01462	mg/L	100	70	130	3	20	

AZMINING

ACZ Project ID: ***L79447***

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.

Antimony, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG564079													
WG564079ICV	ICV	04/13/23 17:58	MS230410-7	.0201		.02007	mg/L	100	90	110			
WG564079ICB	ICB	04/13/23 17:59				U	mg/L		-0.0012	0.0012			
WG563551LRB	LRB	04/13/23 18:01				U	mg/L		-0.00088	0.00088			
WG563551LFB	LFB	04/13/23 18:03	MS230329-2	.01		.00993	mg/L	99	85	115			
L79447-01LFM	LFM	04/13/23 18:07	MS230329-2	.01	.00489	.01505	mg/L	102	70	130			
L79447-01LFMD	LFMD	04/13/23 18:08	MS230329-2	.01	.00489	.01473	mg/L	98	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
WG563740													
WG563740ICV	ICV	04/10/23 15:50	MS230328-2	.05		.05048	mg/L	101	90	110			
WG563740ICB	ICB	04/10/23 15:52				U	mg/L		-0.00044	0.00044			
WG563740LFB	LFB	04/10/23 15:53	MS230329-2	.0501		.05158	mg/L	103	85	115			
L79447-01AS	AS	04/10/23 16:19	MS230329-2	.0501	.00702	.06071	mg/L	107	70	130			
L79447-01ASD	ASD	04/10/23 16:21	MS230329-2	.0501	.00702	.06096	mg/L	108	70	130	0	20	

Arsenic, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563751													
WG563751ICV	ICV	04/11/23 8:42	MS230328-2	.05		.04669	mg/L	93	90	110			
WG563751ICB	ICB	04/11/23 8:43				U	mg/L		-0.0006	0.0006			
WG563551LRB	LRB	04/11/23 8:45				U	mg/L		-0.00044	0.00044			
WG563551LFB	LFB	04/11/23 8:47	MS230329-2	.0501		.05	mg/L	100	85	115			
L79447-01LFM	LFM	04/11/23 9:07	MS230329-2	.0501	.00744	.05872	mg/L	102	70	130			
L79447-01LFMD	LFMD	04/11/23 9:08	MS230329-2	.0501	.00744	.05854	mg/L	102	70	130	0	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563808													
WG563808ICV	ICV	04/11/23 0:55	II230331-1	2		1.9815	mg/L	99	95	105			
WG563808ICB	ICB	04/11/23 1:01				U	mg/L		-0.027	0.027			
WG563808LFB	LFB	04/11/23 1:14	II230407-2	.501		.4992	mg/L	100	85	115			
L79447-01AS	AS	04/11/23 1:30	II230407-2	.501	.0224	.5203	mg/L	99	85	115			
L79447-01ASD	ASD	04/11/23 1:33	II230407-2	.501	.0224	.533	mg/L	102	85	115	2	20	

Barium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563929													
WG563929ICV	ICV	04/12/23 11:23	II230328-1	2		2.0135	mg/L	101	95	105			
WG563929ICB	ICB	04/12/23 11:29				U	mg/L		-0.027	0.027			
WG563560LRB	LRB	04/12/23 11:41				U	mg/L		-0.0198	0.0198			
WG563560LFB	LFB	04/12/23 11:44	II230317-6	.501		.5157	mg/L	103	85	115			
L79448-01LFM	LFM	04/12/23 12:08	II230317-6	.501	.0218	.5538	mg/L	106	70	130			
L79448-01LFMD	LFMD	04/12/23 12:17	II230317-6	.501	.0218	.5608	mg/L	108	70	130	1	20	

AZMINING

ACZ Project ID: ***L79447***

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.

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563740													
WG563740ICV	ICV	04/10/23 15:50	MS230328-2	.05		.05172	mg/L	103	90	110			
WG563740ICB	ICB	04/10/23 15:52				U	mg/L		-0.000176	0.000176			
WG563740LFB	LFB	04/10/23 15:53	MS230329-2	.05005		.051702	mg/L	103	85	115			
L79447-01AS	AS	04/10/23 16:19	MS230329-2	.05005	U	.045833	mg/L	92	70	130			
L79447-01ASD	ASD	04/10/23 16:21	MS230329-2	.05005	U	.046557	mg/L	93	70	130	2	20	

Beryllium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563751													
WG563751ICV	ICV	04/11/23 8:42	MS230328-2	.05		.047294	mg/L	95	90	110			
WG563751ICB	ICB	04/11/23 8:43				U	mg/L		-0.00024	0.00024			
WG563551LRB	LRB	04/11/23 8:45				U	mg/L		-0.000176	0.000176			
WG563551LFB	LFB	04/11/23 8:47	MS230329-2	.05005		.049198	mg/L	98	85	115			
L79447-01LFM	LFM	04/11/23 9:07	MS230329-2	.05005	U	.043691	mg/L	87	70	130			
L79447-01LFMD	LFMD	04/11/23 9:08	MS230329-2	.05005	U	.043398	mg/L	87	70	130	1	20	

Boron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563808													
WG563808ICV	ICV	04/11/23 0:55	II230331-1	2		2.089	mg/L	104	95	105			
WG563808ICB	ICB	04/11/23 1:01				U	mg/L		-0.09	0.09			
WG563808LFB	LFB	04/11/23 1:14	II230407-2	.5005		.511	mg/L	102	85	115			
L79447-01AS	AS	04/11/23 1:30	II230407-2	.5005	.135	.679	mg/L	109	85	115			
L79447-01ASD	ASD	04/11/23 1:33	II230407-2	.5005	.135	.702	mg/L	113	85	115	3	20	

Boron, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563929													
WG563929ICV	ICV	04/12/23 11:23	II230328-1	2		2.09	mg/L	105	95	105			
WG563929ICB	ICB	04/12/23 11:29				U	mg/L		-0.09	0.09			
WG563560LRB	LRB	04/12/23 11:41				U	mg/L		-0.066	0.066			
WG563560LFB	LFB	04/12/23 11:44	II230317-6	.5005		.51	mg/L	102	85	115			
L79448-01LFM	LFM	04/12/23 12:08	II230317-6	.5005	U	.564	mg/L	113	70	130			
L79448-01LFMD	LFMD	04/12/23 12:17	II230317-6	.5005	U	.576	mg/L	115	70	130	2	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563740													
WG563740ICV	ICV	04/10/23 15:50	MS230328-2	.05		.051204	mg/L	102	90	110			
WG563740ICB	ICB	04/10/23 15:52				U	mg/L		-0.00011	0.00011			
WG563740LFB	LFB	04/10/23 15:53	MS230329-2	.05005		.050811	mg/L	102	85	115			
L79447-01AS	AS	04/10/23 16:19	MS230329-2	.05005	U	.052228	mg/L	104	70	130			
L79447-01ASD	ASD	04/10/23 16:21	MS230329-2	.05005	U	.052754	mg/L	105	70	130	1	20	

AZMINING

ACZ Project ID: ***L79447***

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, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563751													
WG563751ICV	ICV	04/11/23 8:42	MS230328-2	.05		.04919	mg/L	98	90	110			
WG563751ICB	ICB	04/11/23 8:43				U	mg/L		-0.00015	0.00015			
WG563551LRB	LRB	04/11/23 8:45				U	mg/L		-0.00011	0.00011			
WG563551LFB	LFB	04/11/23 8:47	MS230329-2	.05005		.050191	mg/L	100	85	115			
L79447-01LFM	LFM	04/11/23 9:07	MS230329-2	.05005	.00011	.050688	mg/L	101	70	130			
L79447-01LFMD	LFMD	04/11/23 9:08	MS230329-2	.05005	.00011	.050378	mg/L	100	70	130	1	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563808													
WG563808ICV	ICV	04/11/23 0:55	II230331-1	100		99.18	mg/L	99	95	105			
WG563808ICB	ICB	04/11/23 1:01				U	mg/L		-0.3	0.3			
WG563808LFB	LFB	04/11/23 1:14	II230407-2	67.99026		69.45	mg/L	102	85	115			
L79447-01AS	AS	04/11/23 1:30	II230407-2	67.99026	34.8	104.8	mg/L	103	85	115			
L79447-01ASD	ASD	04/11/23 1:33	II230407-2	67.99026	34.8	105.7	mg/L	104	85	115	1	20	

Calcium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563929													
WG563929ICV	ICV	04/12/23 11:23	II230328-1	100		97.21	mg/L	97	95	105			
WG563929ICB	ICB	04/12/23 11:29				U	mg/L		-0.3	0.3			
WG563560LRB	LRB	04/12/23 11:41				U	mg/L		-0.22	0.22			
WG563560LFB	LFB	04/12/23 11:44	II230317-6	67.99026		67.18	mg/L	99	85	115			
L79448-01LFM	LFM	04/12/23 12:08	II230317-6	67.99026	474	527.6	mg/L	79	70	130			
L79448-01LFMD	LFMD	04/12/23 12:17	II230317-6	67.99026	474	532.8	mg/L	86	70	130	1	20	

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG562883													
WG562883ICB	ICB	03/28/23 10:31				U	mg/L		-3	3			
WG562883ICV	ICV	03/28/23 10:31	WI220502-12	54.945		55.9	mg/L	102	90	110			
WG562883LFB	LFB	03/28/23 10:57	WI230202-6	30		29.33	mg/L	98	90	110			
L79429-01AS	AS	03/28/23 10:59	WI230202-6	30	2.02	31.26	mg/L	97	90	110			
L79429-02DUP	DUP	03/28/23 10:59			2.32	2.2	mg/L				5	20	RA

Chromium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563740													
WG563740ICV	ICV	04/10/23 15:50	MS230328-2	.05		.04999	mg/L	100	90	110			
WG563740ICB	ICB	04/10/23 15:52				U	mg/L		-0.0011	0.0011			
WG563740LFB	LFB	04/10/23 15:53	MS230329-2	.0501		.04979	mg/L	99	85	115			
L79447-01AS	AS	04/10/23 16:19	MS230329-2	.0501	.00199	.05034	mg/L	97	70	130			
L79447-01ASD	ASD	04/10/23 16:21	MS230329-2	.0501	.00199	.05067	mg/L	97	70	130	1	20	

AZMINING

ACZ Project ID: ***L79447***

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.

Chromium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563751													
WG563751ICV	ICV	04/11/23 8:42	MS230328-2	.05		.04713	mg/L	94	90	110			
WG563751ICB	ICB	04/11/23 8:43				U	mg/L		-0.0015	0.0015			
WG563551LRB	LRB	04/11/23 8:45				U	mg/L		-0.0011	0.0011			
WG563551LFB	LFB	04/11/23 8:47	MS230329-2	.0501		.049	mg/L	98	85	115			
L79447-01LFM	LFM	04/11/23 9:07	MS230329-2	.0501	.00255	.04936	mg/L	93	70	130			
L79447-01LFMD	LFMD	04/11/23 9:08	MS230329-2	.0501	.00255	.05003	mg/L	95	70	130	1	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563808													
WG563808ICV	ICV	04/11/23 0:55	II230331-1	2.006		1.955	mg/L	97	95	105			
WG563808ICB	ICB	04/11/23 1:01				U	mg/L		-0.06	0.06			
WG563808LFB	LFB	04/11/23 1:14	II230407-2	.5005		.493	mg/L	99	85	115			
L79447-01AS	AS	04/11/23 1:30	II230407-2	.5005	U	.495	mg/L	99	85	115			
L79447-01ASD	ASD	04/11/23 1:33	II230407-2	.5005	U	.506	mg/L	101	85	115	2	20	

Cobalt, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563929													
WG563929ICV	ICV	04/12/23 11:23	II230328-1	2.006		1.979	mg/L	99	95	105			
WG563929ICB	ICB	04/12/23 11:29				U	mg/L		-0.06	0.06			
WG563560LRB	LRB	04/12/23 11:41				U	mg/L		-0.044	0.044			
WG563560LFB	LFB	04/12/23 11:44	II230317-6	.5005		.505	mg/L	101	85	115			
L79448-01LFM	LFM	04/12/23 12:08	II230317-6	.5005	U	.542	mg/L	108	70	130			
L79448-01LFMD	LFMD	04/12/23 12:17	II230317-6	.5005	U	.544	mg/L	109	70	130	0	20	

Conductivity @25C SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563043													
WG563043LCSW2	LCSW	03/29/23 19:33	PCN624166	1410		1392	umhos/cm	99	90	110			
WG563043LCSW5	LCSW	03/29/23 22:51	PCN624166	1410		1387	umhos/cm	98	90	110			
WG563043LCSW8	LCSW	03/30/23 2:03	PCN624166	1410		1385	umhos/cm	98	90	110			
WG563043LCSW11	LCSW	03/30/23 5:30	PCN624166	1410		1376	umhos/cm	98	90	110			
WG563043LCSW14	LCSW	03/30/23 8:42	PCN624166	1410		1362	umhos/cm	97	90	110			
L79524-04DUP	DUP	03/30/23 10:27			7750	7730	umhos/cm				0	20	
WG563043LCSW17	LCSW	03/30/23 10:34	PCN624166	1410		1356	umhos/cm	96	90	110			

Copper, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563740													
WG563740ICV	ICV	04/10/23 15:50	MS230328-2	.05		.05016	mg/L	100	90	110			
WG563740ICB	ICB	04/10/23 15:52				U	mg/L		-0.00176	0.00176			
WG563740LFB	LFB	04/10/23 15:53	MS230329-2	.05005		.04966	mg/L	99	85	115			
L79447-01AS	AS	04/10/23 16:19	MS230329-2	.05005	U	.04677	mg/L	93	70	130			
L79447-01ASD	ASD	04/10/23 16:21	MS230329-2	.05005	U	.04719	mg/L	94	70	130	1	20	

AZMINING

ACZ Project ID: ***L79447***

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.

Copper, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563751													
WG563751ICV	ICV	04/11/23 8:42	MS230328-2	.05		.04708	mg/L	94	90	110			
WG563751ICB	ICB	04/11/23 8:43				U	mg/L		-0.0024	0.0024			
WG563551LRB	LRB	04/11/23 8:45				U	mg/L		-0.00176	0.00176			
WG563551LFB	LFB	04/11/23 8:47	MS230329-2	.05005		.04841	mg/L	97	85	115			
L79447-01LFM	LFM	04/11/23 9:07	MS230329-2	.05005	.00211	.04608	mg/L	88	70	130			
L79447-01LFMD	LFMD	04/11/23 9:08	MS230329-2	.05005	.00211	.04652	mg/L	89	70	130	1	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563037													
WG563037ICV	ICV	03/29/23 16:44	WI230316-3	.3003		.2711	mg/L	90	90	110			
WG563037ICB	ICB	03/29/23 16:45				U	mg/L		-0.003	0.003			
WG562970LRB	LRB	03/29/23 16:46				U	mg/L		-0.003	0.003			
WG562970LFB	LFB	03/29/23 16:47	WI230317-7	.2		.2077	mg/L	104	90	110			
L79406-06LFM	LFM	03/29/23 17:00	WI230317-7	.2	U	.1532	mg/L	77	90	110			M2
L79406-07DUP	DUP	03/29/23 17:02			U	U	mg/L				0	20	RA

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG564108													
WG564108ICV	ICV	04/13/23 18:57	WC230411-1	2.002		1.92	mg/L	96	90	110			
WG564108ICB	ICB	04/13/23 19:05				U	mg/L		-0.3	0.3			
WG564108LFB1	LFB	04/13/23 19:13	WC221227-7	5.02		4.89	mg/L	97	90	110			
WG564108LFB2	LFB	04/13/23 21:41	WC221227-7	5.02		5.16	mg/L	103	90	110			
L79433-02AS	AS	04/13/23 22:50	WC221227-7	5.02	.8	5.91	mg/L	102	90	110			
L79433-02ASD	ASD	04/13/23 23:05	WC221227-7	5.02	.8	5.91	mg/L	102	90	110	0	20	

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563808													
WG563808ICV	ICV	04/11/23 0:55	II230331-1	2		1.964	mg/L	98	95	105			
WG563808ICB	ICB	04/11/23 1:01				U	mg/L		-0.18	0.18			
WG563808LFB	LFB	04/11/23 1:14	II230407-2	1.004		1.029	mg/L	102	85	115			
L79447-01AS	AS	04/11/23 1:30	II230407-2	1.004	U	1.036	mg/L	103	85	115			
L79447-01ASD	ASD	04/11/23 1:33	II230407-2	1.004	U	1.062	mg/L	106	85	115	2	20	

Iron, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563929													
WG563929ICV	ICV	04/12/23 11:23	II230328-1	2		1.971	mg/L	99	95	105			
WG563929ICB	ICB	04/12/23 11:29				U	mg/L		-0.18	0.18			
WG563560LRB	LRB	04/12/23 11:41				U	mg/L		-0.132	0.132			
WG563560LFB	LFB	04/12/23 11:44	II230317-6	1.004		1.067	mg/L	106	85	115			
L79448-01LFM	LFM	04/12/23 12:08	II230317-6	1.004	1.66	2.81	mg/L	115	70	130			
L79448-01LFMD	LFMD	04/12/23 12:17	II230317-6	1.004	1.66	2.812	mg/L	115	70	130	0	20	

AZMINING

ACZ Project ID: ***L79447***

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.

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563740													
WG563740ICV	ICV	04/10/23 15:50	MS230328-2	.05		.05118	mg/L	102	90	110			
WG563740ICB	ICB	04/10/23 15:52				U	mg/L		-0.00022	0.00022			
WG563740LFB	LFB	04/10/23 15:53	MS230329-2	.05005		.04997	mg/L	100	85	115			
L79447-01AS	AS	04/10/23 16:19	MS230329-2	.05005	U	.05053	mg/L	101	70	130			
L79447-01ASD	ASD	04/10/23 16:21	MS230329-2	.05005	U	.05161	mg/L	103	70	130	2	20	

Lead, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563751													
WG563751ICV	ICV	04/11/23 8:42	MS230328-2	.05		.04858	mg/L	97	90	110			
WG563751ICB	ICB	04/11/23 8:43				U	mg/L		-0.0003	0.0003			
WG563551LRB	LRB	04/11/23 8:45				U	mg/L		-0.00022	0.00022			
WG563551LFB	LFB	04/11/23 8:47	MS230329-2	.05005		.04854	mg/L	97	85	115			
L79447-01LFM	LFM	04/11/23 9:07	MS230329-2	.05005	.014	.06619	mg/L	104	70	130			
L79447-01LFMD	LFMD	04/11/23 9:08	MS230329-2	.05005	.014	.06597	mg/L	104	70	130	0	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563808													
WG563808ICV	ICV	04/11/23 0:55	II230331-1	100		98.47	mg/L	98	95	105			
WG563808ICB	ICB	04/11/23 1:01				U	mg/L		-0.6	0.6			
WG563808LFB	LFB	04/11/23 1:14	II230407-2	49.9979		50.47	mg/L	101	85	115			
L79447-01AS	AS	04/11/23 1:30	II230407-2	49.9979	.7	52.95	mg/L	105	85	115			
L79447-01ASD	ASD	04/11/23 1:33	II230407-2	49.9979	.7	53.7	mg/L	106	85	115	1	20	

Magnesium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563929													
WG563929ICV	ICV	04/12/23 11:23	II230328-1	100		96.89	mg/L	97	95	105			
WG563929ICB	ICB	04/12/23 11:29				U	mg/L		-0.6	0.6			
WG563560LRB	LRB	04/12/23 11:41				U	mg/L		-0.44	0.44			
WG563560LFB	LFB	04/12/23 11:44	II230317-6	49.9979		48.83	mg/L	98	85	115			
L79448-01LFM	LFM	04/12/23 12:08	II230317-6	49.9979	197	246.6	mg/L	99	70	130			
L79448-01LFMD	LFMD	04/12/23 12:17	II230317-6	49.9979	197	248.2	mg/L	102	70	130	1	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563808													
WG563808ICV	ICV	04/11/23 0:55	II230331-1	2		1.938	mg/L	97	95	105			
WG563808ICB	ICB	04/11/23 1:01				U	mg/L		-0.03	0.03			
WG563808LFB	LFB	04/11/23 1:14	II230407-2	.4995		.493	mg/L	99	85	115			
L79447-01AS	AS	04/11/23 1:30	II230407-2	.4995	U	.494	mg/L	99	85	115			
L79447-01ASD	ASD	04/11/23 1:33	II230407-2	.4995	U	.505	mg/L	101	85	115	2	20	

AZMINING

ACZ Project ID: ***L79447***

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.

Manganese, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563929													
WG563929ICV	ICV	04/12/23 11:23	II230328-1	2		1.963	mg/L	98	95	105			
WG563929ICB	ICB	04/12/23 11:29				U	mg/L		-0.03	0.03			
WG563560LRB	LRB	04/12/23 11:41				U	mg/L		-0.022	0.022			
WG563560LFB	LFB	04/12/23 11:44	II230317-6	.4995		.51	mg/L	102	85	115			
L79448-01LFM	LFM	04/12/23 12:08	II230317-6	.4995	18.5	18.924	mg/L	85	70	130			
L79448-01LFMD	LFMD	04/12/23 12:17	II230317-6	.4995	18.5	19.002	mg/L	101	70	130	0	20	

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563341													
WG563341ICV	ICV	04/05/23 8:23	HG230327-3	.005005		.00518	mg/L	103	95	105			
WG563341ICB	ICB	04/05/23 8:24				U	mg/L		-0.0002	0.0002			
WG563381													
L79447-01LFM	LFM	04/05/23 12:11	HG230404-3	.002002	U	.00206	mg/L	103	85	115			
L79447-01LFMD	LFMD	04/05/23 12:12	HG230404-3	.002002	U	.00216	mg/L	108	85	115	5	20	
WG563381LRB	LRB	04/05/23 12:31				U	mg/L		-0.00044	0.00044			

Mercury, total M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563341													
WG563341ICV	ICV	04/05/23 8:23	HG230327-3	.005005		.00518	mg/L	103	95	105			
WG563341ICB	ICB	04/05/23 8:24				U	mg/L		-0.0002	0.0002			
WG563343													
WG563343LRB	LRB	04/05/23 9:48				U	mg/L		-0.00044	0.00044			
WG563343LFB	LFB	04/05/23 9:49	HG230404-3	.002002		.00196	mg/L	98	85	115			
L79447-01LFM	LFM	04/05/23 9:51	HG230404-3	.002002	U	.00196	mg/L	98	85	115			
L79447-01LFMD	LFMD	04/05/23 9:52	HG230404-3	.002002	U	.00198	mg/L	99	85	115	1	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563808													
WG563808ICV	ICV	04/11/23 0:55	II230331-1	2.002		1.99	mg/L	99	95	105			
WG563808ICB	ICB	04/11/23 1:01				U	mg/L		-0.024	0.024			
WG563808LFB	LFB	04/11/23 1:14	II230407-2	.5		.511	mg/L	102	85	115			
L79447-01AS	AS	04/11/23 1:30	II230407-2	.5	U	.5151	mg/L	103	85	115			
L79447-01ASD	ASD	04/11/23 1:33	II230407-2	.5	U	.527	mg/L	105	85	115	2	20	

Nickel, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563929													
WG563929ICV	ICV	04/12/23 11:23	II230328-1	2.002		1.9528	mg/L	98	95	105			
WG563929ICB	ICB	04/12/23 11:29				U	mg/L		-0.024	0.024			
WG563560LRB	LRB	04/12/23 11:41				U	mg/L		-0.0176	0.0176			
WG563560LFB	LFB	04/12/23 11:44	II230317-6	.5		.4983	mg/L	100	85	115			
L79448-01LFM	LFM	04/12/23 12:08	II230317-6	.5	.0346	.5416	mg/L	101	70	130			
L79448-01LFMD	LFMD	04/12/23 12:17	II230317-6	.5	.0346	.553	mg/L	104	70	130	2	20	

AZMINING

ACZ Project ID: ***L79447***

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
WG563714													
WG563714ICV	ICV	04/07/23 23:21	WI230301-5	2.416		2.396	mg/L	99	90	110			
WG563714ICB	ICB	04/07/23 23:22				U	mg/L		-0.02	0.02			
WG563718													
WG563718LFB	LFB	04/08/23 2:37	WI230228-3	2		2.001	mg/L	100	90	110			
L79370-01AS	AS	04/08/23 2:40	WI230228-3	2	2	3.976	mg/L	99	90	110			
L79370-02DUP	DUP	04/08/23 2:42			.033	.031	mg/L				6	20	RA

Nitrogen, ammonia M350.1 Auto Salicylate w/gas diffusion

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563080													
WG563080ICV	ICV	03/30/23 10:58	WI230202-1	12.036		12.176	mg/L	101	90	110			
WG563080ICB	ICB	03/30/23 11:00				U	mg/L		-0.05	0.05			
WG563106													
WG563106LFB1	LFB	03/30/23 13:55	WI220420-3	10		9.729	mg/L	97	90	110			
WG563106LFB2	LFB	03/30/23 14:38	WI220420-3	10		9.889	mg/L	99	90	110			
L79429-01AS	AS	03/30/23 14:41	WI220420-3	10	U	9.879	mg/L	99	90	110			
L79429-02DUP	DUP	03/30/23 14:44			U	U	mg/L				0	20	RA

pH (lab) SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563043													
WG563043LCSW1	LCSW	03/29/23 19:32	PCN623461	5.99		6	units	100	5.9	6.1			
WG563043LCSW4	LCSW	03/29/23 22:49	PCN623461	5.99		6	units	100	5.9	6.1			
WG563043LCSW7	LCSW	03/30/23 2:01	PCN623461	5.99		6	units	100	5.9	6.1			
WG563043LCSW10	LCSW	03/30/23 5:28	PCN623461	5.99		6	units	100	5.9	6.1			
WG563043LCSW13	LCSW	03/30/23 8:41	PCN623461	5.99		6	units	100	5.9	6.1			
L79524-04DUP	DUP	03/30/23 10:27			3.6	3.4	units				6	20	
WG563043LCSW16	LCSW	03/30/23 10:32	PCN623461	5.99		6	units	100	5.9	6.1			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563808													
WG563808ICV	ICV	04/11/23 0:55	II230331-1	20		19.53	mg/L	98	95	105			
WG563808ICB	ICB	04/11/23 1:01				U	mg/L		-0.6	0.6			
WG563808LFB	LFB	04/11/23 1:14	II230407-2	99.95693		99.57	mg/L	100	85	115			
L79447-01AS	AS	04/11/23 1:30	II230407-2	99.95693	.87	103.2	mg/L	102	85	115			
L79447-01ASD	ASD	04/11/23 1:33	II230407-2	99.95693	.87	104.6	mg/L	104	85	115	1	20	

AZMINING

ACZ Project ID: ***L79447***

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.

Potassium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563929													
WG563929ICV	ICV	04/12/23 11:23	II230328-1	20		19.62	mg/L	98	95	105			
WG563929ICB	ICB	04/12/23 11:29				.28	mg/L		-0.6	0.6			
WG563560LRB	LRB	04/12/23 11:41				U	mg/L		-0.44	0.44			
WG563560LFB	LFB	04/12/23 11:44	II230317-6	99.95693		97.07	mg/L	97	85	115			
L79448-01LFM	LFM	04/12/23 12:08	II230317-6	99.95693	6.78	109.02	mg/L	102	70	130			
L79448-01LFMD	LFMD	04/12/23 12:17	II230317-6	99.95693	6.78	109.46	mg/L	103	70	130	0	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG562953													
WG562953PBW	PBW	03/28/23 20:30				U	mg/L		-20	20			
WG562953LCSW	LCSW	03/28/23 20:32	PCN624424	1000		992	mg/L	99	80	120			
L79448-03DUP	DUP	03/28/23 21:30			502	498	mg/L				1	10	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563740													
WG563740ICV	ICV	04/10/23 15:50	MS230328-2	.05		.05428	mg/L	109	90	110			
WG563740ICB	ICB	04/10/23 15:52				U	mg/L		-0.00022	0.00022			
WG563740LFB	LFB	04/10/23 15:53	MS230329-2	.05005		.05331	mg/L	107	85	115			
L79447-01AS	AS	04/10/23 16:19	MS230329-2	.05005	.00049	.05744	mg/L	114	70	130			
L79447-01ASD	ASD	04/10/23 16:21	MS230329-2	.05005	.00049	.05532	mg/L	110	70	130	4	20	

Selenium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563751													
WG563751ICV	ICV	04/11/23 8:42	MS230328-2	.05		.04903	mg/L	98	90	110			
WG563751ICB	ICB	04/11/23 8:43				U	mg/L		-0.0003	0.0003			
WG563551LRB	LRB	04/11/23 8:45				U	mg/L		-0.00022	0.00022			
WG563551LFB	LFB	04/11/23 8:47	MS230329-2	.05005		.0504	mg/L	101	85	115			
L79447-01LFM	LFM	04/11/23 9:07	MS230329-2	.05005	.00039	.05103	mg/L	101	70	130			
L79447-01LFMD	LFMD	04/11/23 9:08	MS230329-2	.05005	.00039	.05091	mg/L	101	70	130	0	20	

Silica, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563808													
WG563808ICV	ICV	04/11/23 0:55	II230331-1	42.8		40.78	mg/L	95	95	105			
WG563808ICB	ICB	04/11/23 1:01				U	mg/L		-0.6	0.6			
WG563808LFB	LFB	04/11/23 1:14	II230407-2	21.42782		20.7	mg/L	97	85	115			
L79447-01AS	AS	04/11/23 1:30	II230407-2	21.42782	19.7	40.52	mg/L	97	85	115			
L79447-01ASD	ASD	04/11/23 1:33	II230407-2	21.42782	19.7	41.08	mg/L	100	85	115	1	20	

AZMINING

ACZ Project ID: ***L79447***

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.

Silica, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563929													
WG563929ICV	ICV	04/12/23 11:23	II230328-1	42.8		41.08	mg/L	96	95	105			
WG563929ICB	ICB	04/12/23 11:29				U	mg/L		-0.6	0.6			
WG563560LRB	LRB	04/12/23 11:41				U	mg/L		-0.44	0.44			
WG563560LFB	LFB	04/12/23 11:44	II230317-6	21.42782		20.93	mg/L	98	85	115			
L79448-01LFM	LFM	04/12/23 12:08	II230317-6	21.42782	26.7	32.32	mg/L	26	70	130			M2
L79448-01LFMD	LFMD	04/12/23 12:17	II230317-6	21.42782	26.7	36.42	mg/L	45	70	130	12	20	M2

Silver, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG564359													
WG564359ICV	ICV	04/19/23 14:57	MS230410-7	.02		.0214	mg/L	107	90	110			
WG564359ICB	ICB	04/19/23 14:59				U	mg/L		-0.00022	0.00022			
WG564359LFB	LFB	04/19/23 15:01	MS230414-2	.01001		.01036	mg/L	103	85	115			
L79447-01AS	AS	04/19/23 15:26	MS230414-2	.02002	U	.02362	mg/L	118	70	130			
L79447-01ASD	ASD	04/19/23 15:28	MS230414-2	.02002	U	.02318	mg/L	116	70	130	2	20	

Silver, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563751													
WG563751ICV	ICV	04/11/23 8:42	MS230328-2	.02		.01973	mg/L	99	90	110			
WG563751ICB	ICB	04/11/23 8:43				U	mg/L		-0.0003	0.0003			
WG563551LRB	LRB	04/11/23 8:45				U	mg/L		-0.00022	0.00022			
WG563551LFB	LFB	04/11/23 8:47	MS230329-2	.01001		.00883	mg/L	88	85	115			
L79447-01LFM	LFM	04/11/23 9:07	MS230329-2	.01001	.00277	.01104	mg/L	83	70	130			
L79447-01LFMD	LFMD	04/11/23 9:08	MS230329-2	.01001	.00277	.01099	mg/L	82	70	130	0	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563808													
WG563808ICV	ICV	04/11/23 0:55	II230331-1	100		101.38	mg/L	101	95	105			
WG563808ICB	ICB	04/11/23 1:01				U	mg/L		-0.6	0.6			
WG563808LFB	LFB	04/11/23 1:14	II230407-2	100.0157		102.4	mg/L	102	85	115			
L79447-01AS	AS	04/11/23 1:30	II230407-2	100.0157	82.8	183.6	mg/L	101	85	115			
L79447-01ASD	ASD	04/11/23 1:33	II230407-2	100.0157	82.8	185.3	mg/L	102	85	115	1	20	

Sodium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563929													
WG563929ICV	ICV	04/12/23 11:23	II230328-1	100		99.85	mg/L	100	95	105			
WG563929ICB	ICB	04/12/23 11:29				U	mg/L		-0.6	0.6			
WG563560LRB	LRB	04/12/23 11:41				U	mg/L		-0.44	0.44			
WG563560LFB	LFB	04/12/23 11:44	II230317-6	100.0157		98.45	mg/L	98	85	115			
L79448-01LFM	LFM	04/12/23 12:08	II230317-6	100.0157	34.3	138.98	mg/L	105	70	130			
L79448-01LFMD	LFMD	04/12/23 12:17	II230317-6	100.0157	34.3	139.3	mg/L	105	70	130	0	20	

AZMINING

ACZ Project ID: ***L79447***

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
WG563886													
WG563886ICB	ICB	04/11/23 11:43				U	mg/L		-3	3			
WG563886ICV	ICV	04/11/23 11:43	WI230328-3	19.54		19.8	mg/L	101	90	110			
WG563886LFB	LFB	04/11/23 15:17	WI230119-9	10		10.8	mg/L	108	90	110			
L79447-01DUP	DUP	04/11/23 15:19			175	176.8	mg/L				1	20	
L79448-01AS	AS	04/11/23 15:37	SO4TURB50X	10	1730	1760.1	mg/L	301	90	110			M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563740													
WG563740ICV	ICV	04/10/23 15:50	MS230328-2	.05		.05434	mg/L	109	90	110			
WG563740ICB	ICB	04/10/23 15:52				U	mg/L		-0.00022	0.00022			
WG563740LFB	LFB	04/10/23 15:53	MS230329-2	.05		.0511	mg/L	102	85	115			
L79447-01AS	AS	04/10/23 16:19	MS230329-2	.05	.00019	.05234	mg/L	104	70	130			
L79447-01ASD	ASD	04/10/23 16:21	MS230329-2	.05	.00019	.05269	mg/L	105	70	130	1	20	

Thallium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563751													
WG563751ICV	ICV	04/11/23 8:42	MS230328-2	.05		.05224	mg/L	104	90	110			
WG563751ICB	ICB	04/11/23 8:43				U	mg/L		-0.0003	0.0003			
WG563551LRB	LRB	04/11/23 8:45				U	mg/L		-0.00022	0.00022			
WG563551LFB	LFB	04/11/23 8:47	MS230329-2	.05		.05012	mg/L	100	85	115			
L79447-01LFM	LFM	04/11/23 9:07	MS230329-2	.05	.00024	.05378	mg/L	107	70	130			
L79447-01LFMD	LFMD	04/11/23 9:08	MS230329-2	.05	.00024	.05299	mg/L	106	70	130	1	20	

Uranium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563740													
WG563740ICV	ICV	04/10/23 15:50	MS230328-2	.05		.05301	mg/L	106	90	110			
WG563740ICB	ICB	04/10/23 15:52				U	mg/L		-0.00022	0.00022			
WG563740LFB	LFB	04/10/23 15:53	MS230329-2	.05		.0512	mg/L	102	85	115			
L79447-01AS	AS	04/10/23 16:19	MS230329-2	.05	.0055	.06045	mg/L	110	70	130			
L79447-01ASD	ASD	04/10/23 16:21	MS230329-2	.05	.0055	.06143	mg/L	112	70	130	2	20	

Uranium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563751													
WG563751ICV	ICV	04/11/23 8:42	MS230328-2	.05		.05056	mg/L	101	90	110			
WG563751ICB	ICB	04/11/23 8:43				U	mg/L		-0.0003	0.0003			
WG563551LRB	LRB	04/11/23 8:45				U	mg/L		-0.00022	0.00022			
WG563551LFB	LFB	04/11/23 8:47	MS230329-2	.05		.05074	mg/L	101	85	115			
L79447-01LFM	LFM	04/11/23 9:07	MS230329-2	.05	.00624	.0648	mg/L	117	70	130			
L79447-01LFMD	LFMD	04/11/23 9:08	MS230329-2	.05	.00624	.06473	mg/L	117	70	130	0	20	

AZMINING

ACZ Project ID: ***L79447***

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.

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563808													
WG563808ICV	ICV	04/11/23 0:55	II230331-1	2		1.948	mg/L	97	95	105			
WG563808ICB	ICB	04/11/23 1:01				U	mg/L		-0.06	0.06			
WG563808LFB	LFB	04/11/23 1:14	II230407-2	.50045		.525	mg/L	105	85	115			
L79447-01AS	AS	04/11/23 1:30	II230407-2	.50045	U	.538	mg/L	108	85	115			
L79447-01ASD	ASD	04/11/23 1:33	II230407-2	.50045	U	.547	mg/L	109	85	115	2	20	

Zinc, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG563929													
WG563929ICV	ICV	04/12/23 11:23	II230328-1	2		1.939	mg/L	97	95	105			
WG563929ICB	ICB	04/12/23 11:29				U	mg/L		-0.06	0.06			
WG563560LRB	LRB	04/12/23 11:41				U	mg/L		-0.044	0.044			
WG563560LFB	LFB	04/12/23 11:44	II230317-6	.50045		.512	mg/L	102	85	115			
L79448-01LFM	LFM	04/12/23 12:08	II230317-6	.50045	3.32	3.772	mg/L	90	70	130			
L79448-01LFMD	LFMD	04/12/23 12:17	II230317-6	.50045	3.32	3.804	mg/L	97	70	130	1	20	

Inorganic Extended Qualifier Report

South32 ACZ Project ID: ***L79447***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L79447-01	WG563740	Beryllium, dissolved	M200.8 ICP-MS	IA	Internal standard recovery exceeded the acceptance limits. Concentration of associated target analyte(s) in the sample is < MDL.
	WG562883	Chloride	SM4500Cl-E	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).
	WG563037	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	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).
	WG563718	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).
	WG563106	Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	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).
	WG563929	Silica, total	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZS	Digestion procedures have the potential to trigger silica polymerization and precipitation, leading to low biased results. Silica chemistry is complex and polymerization kinetics are unpredictable. Dissolved and/or acid soluble silica analyses may provide more accurate measurements.
	WG564359	Silver, dissolved	M200.8 ICP-MS	D5	Sample required dilution. Sample matrix causing internal standards to recover outside method limits.
	WG563886	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.
	WG563043	Total Alkalinity	SM2320B - Titration	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).

Certification Qualifiers

South32 ACZ Project ID: ***L79447***

No certification qualifiers associated with this analysis

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

South32
4542523524

ACZ Project ID: L79447
Date Received: 03/24/2023 10:44
Received By:
Date Printed: 3/27/2023

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? [1]	X		
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	

Some parameters were received past hold time.

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?
4390	2.1	<=6.0	15	Yes

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.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

South32
4542523524

ACZ Project ID: L79447
Date Received: 03/24/2023 10:44
Received By:
Date Printed: 3/27/2023

[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).

ACZ LABORATORIES | Accredited Environmental Testing | 2773 Downhill Drive, Steamboat Springs, CO 80487, (970) 879-6590 | L79447

CHAIN of CUSTODY

Report to:

Name: Kara Haas
Company: AMI/South32
E-mail: Kara.Haas@south32.net
Address: 749 Harshaw Road
Patagonia, AZ 85624
Telephone: 505.947.1738

Copy of Report to:

Name: Nick Connell
Company: NewFields
E-mail: nconnell@newfields.com
Telephone: 847.528.9776

Invoice to:

Name: Kara Haas
Company: AMI/South32
E-mail: kara.haas@south32.net
Address: 749 Harshaw Road
Patagonia, AZ 85624
Telephone: 505.947.1738

Copy of Invoice to:

Name: South32
Company: AMI/South32
E-mail: sscinvoices@south32.net
Address: NA
Telephone: NA

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 ✔ NO

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes No ✔

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Marc Taylor **Sampler's Site Information** **State** AZ **Zip code** 85624 **Time Zone** MST

***Sampler's Signature:** [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 #: GW BASELINE
PO#: 4542523524
Reporting state for compliance testing: AZ
Check box if samples include NRC licensed material?

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	GW BASELINE	dD_d18O							
MW-9-20230321	3/21/2023 12:40	GW	7	✔	✔							

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

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	3-22-23 0700	[signature]	3/24/23 10:44

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

ISOTECH
a Stratum Reservoir brand
www.isotechlabs.com

Lab #:	864845	Job #:	54043	IS-62691	Co. Job#:
Sample Name:	L79447-01				Co. Lab#:
Company:	ACZ Laboratories				
API/Well:					
Container:	Bottle				
Field/Site Name:	GW-BASELINE				
Location:	AZ				
Formation/Depth:					
Sampling Point:					
Date Sampled:	3/21/2023 12:40	Date Received:	3/30/2023	Date Reported:	4/14/2023

δD of water	----------	-51.2 ‰ relative to VSMOW
$\delta^{18}O$ of water	----------	-7.31 ‰ relative to VSMOW
Tritium content of water	----------	na
$\delta^{13}C$ of DIC	----------	na
^{14}C content of DIC	----------	na
$\delta^{15}N$ of nitrate	----------	na
$\delta^{18}O$ of nitrate	----------	na
$\delta^{34}S$ of sulfate	----------	na
$\delta^{18}O$ of sulfate	----------	na
Vacuum Distilled? *	----------	No

Remarks:

nd = not detected. na = not analyzed.
*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

July 12, 2023

Report to:
Kara Haas
South32
749 Harshaw Rd
Patagonia, AZ 85624

cc: Nick Connell

Bill to:
Accounts Payable
South32 Hermosa Inc.
2210 E Fort Lowell Road
Tucson, AZ 85719

Project ID: 4542523524
ACZ Project ID: L81073

Kara Haas:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 13, 2023. This project has been assigned to ACZ's project number, L81073. 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 L81073. 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 July 01, 2025. 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.

Mark McNeal

Mark McNeal has reviewed and approved this report.

South32
Project ID: 4542523524
Sample ID: MW-9-20230608

ACZ Sample ID: ***L81073-01***
Date Sampled: *06/08/23 11:50*
Date Received: *06/13/23*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								06/20/23 9:23	mrd
Total Hot Plate Digestion	M200.2 ICP-MS								06/26/23 14:48	scp
Total Hot Plate Digestion	M200.2 ICP								06/27/23 16:48	aeh

South32
Project ID: 4542523524
Sample ID: MW-9-20230608

ACZ Sample ID: ***L81073-01***
Date Sampled: *06/08/23 11:50*
Date Received: *06/13/23*
Sample Matrix: *Groundwater*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.8 ICP-MS	1	<0.005	U		mg/L	0.005	0.015	07/05/23 12:15	gjl/scp
Aluminum, total	M200.8 ICP-MS	1	0.190		*	mg/L	0.005	0.015	06/29/23 11:33	kja
Antimony, dissolved	M200.8 ICP-MS	1	0.00469			mg/L	0.0004	0.002	07/05/23 12:15	gjl/scp
Antimony, total	M200.8 ICP-MS	1	0.00477			mg/L	0.0004	0.002	06/29/23 11:33	kja
Arsenic, dissolved	M200.8 ICP-MS	1	0.00723			mg/L	0.0002	0.001	07/05/23 12:15	gjl/scp
Arsenic, total	M200.8 ICP-MS	1	0.00775			mg/L	0.0002	0.001	06/29/23 11:33	kja
Barium, dissolved	M200.7 ICP	1	0.0272	B		mg/L	0.009	0.035	06/28/23 17:13	wtc
Barium, total	M200.7 ICP	1	0.0239	B		mg/L	0.009	0.035	06/29/23 11:54	aeh
Beryllium, dissolved	M200.8 ICP-MS	1	<0.00008	U		mg/L	0.00008	0.00025	07/05/23 12:15	gjl/scp
Beryllium, total	M200.8 ICP-MS	1	<0.00008	U		mg/L	0.00008	0.00025	06/29/23 11:33	kja
Boron, dissolved	M200.7 ICP	1	0.142			mg/L	0.03	0.1	06/28/23 17:13	wtc
Boron, total	M200.7 ICP	1	0.123			mg/L	0.03	0.1	06/29/23 11:54	aeh
Cadmium, dissolved	M200.8 ICP-MS	1	<0.00005	U		mg/L	0.00005	0.00025	07/05/23 12:15	gjl/scp
Cadmium, total	M200.8 ICP-MS	1	0.000101	B		mg/L	0.00005	0.00025	06/29/23 11:33	kja
Calcium, dissolved	M200.7 ICP	1	33.5			mg/L	0.1	0.5	06/28/23 17:13	wtc
Calcium, total	M200.7 ICP	1	34.0			mg/L	0.1	0.5	06/29/23 11:54	aeh
Chromium, dissolved	M200.8 ICP-MS	1	0.00241			mg/L	0.0005	0.002	07/05/23 12:15	gjl/scp
Chromium, total	M200.8 ICP-MS	1	0.00297			mg/L	0.0005	0.002	06/29/23 11:33	kja
Cobalt, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	06/28/23 17:13	wtc
Cobalt, total	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	06/29/23 11:54	aeh
Copper, dissolved	M200.8 ICP-MS	1	<0.0008	U		mg/L	0.0008	0.002	07/05/23 12:15	gjl/scp
Copper, total	M200.8 ICP-MS	1	<0.0008	U		mg/L	0.0008	0.002	06/29/23 11:33	kja
Iron, dissolved	M200.7 ICP	1	<0.06	U		mg/L	0.06	0.15	06/28/23 17:13	wtc
Iron, total	M200.7 ICP	1	0.241			mg/L	0.06	0.15	06/29/23 11:54	aeh
Lead, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.0005	07/05/23 12:15	gjl/scp
Lead, total	M200.8 ICP-MS	1	0.0101			mg/L	0.0001	0.0005	06/29/23 11:33	kja
Magnesium, dissolved	M200.7 ICP	1	0.68	B		mg/L	0.2	1	06/28/23 17:13	wtc
Magnesium, total	M200.7 ICP	1	0.78	B		mg/L	0.2	1	06/29/23 11:54	aeh
Manganese, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	06/28/23 17:13	wtc
Manganese, total	M200.7 ICP	1	0.086			mg/L	0.01	0.05	06/29/23 11:54	aeh
Mercury, dissolved	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	06/19/23 15:43	mlh
Mercury, total	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	06/19/23 16:13	mlh
Nickel, dissolved	M200.7 ICP	1	<0.008	U		mg/L	0.008	0.04	06/28/23 17:13	wtc
Nickel, total	M200.7 ICP	1	<0.008	U		mg/L	0.008	0.04	06/29/23 11:54	aeh
Potassium, dissolved	M200.7 ICP	1	0.88	B		mg/L	0.2	1	06/28/23 17:13	wtc
Potassium, total	M200.7 ICP	1	1.06			mg/L	0.2	1	06/29/23 11:54	aeh
Selenium, dissolved	M200.8 ICP-MS	1	0.00048			mg/L	0.0001	0.00025	07/05/23 12:15	gjl/scp
Selenium, total	M200.8 ICP-MS	1	0.00049			mg/L	0.0001	0.00025	06/29/23 11:33	kja
Silica, dissolved	M200.7 ICP	1	20.1			mg/L	0.2	1	06/28/23 17:13	wtc
Silica, total	M200.7 ICP	1	20.2		*	mg/L	0.2	1	06/29/23 11:54	aeh
Silver, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.0005	07/06/23 14:24	gjl/scp
Silver, total	M200.8 ICP-MS	1	0.00145			mg/L	0.0001	0.0005	06/29/23 11:33	kja
Sodium, dissolved	M200.7 ICP	1	78.0			mg/L	0.2	1	06/28/23 17:13	wtc

South32
Project ID: 4542523524
Sample ID: MW-9-20230608

ACZ Sample ID: ***L81073-01***
Date Sampled: *06/08/23 11:50*
Date Received: *06/13/23*
Sample Matrix: *Groundwater*

Sodium, total	M200.7 ICP	1	79.2			mg/L	0.2	1	06/29/23 11:54	aeh
Thallium, dissolved	M200.8 ICP-MS	1	0.00016	B		mg/L	0.0001	0.0005	07/05/23 12:15	gjl/scp
Thallium, total	M200.8 ICP-MS	1	0.00022	B		mg/L	0.0001	0.0005	06/29/23 11:33	kja
Uranium, dissolved	M200.8 ICP-MS	1	0.00541			mg/L	0.0001	0.0005	07/05/23 12:15	gjl/scp
Uranium, total	M200.8 ICP-MS	1	0.00560			mg/L	0.0001	0.0005	06/29/23 11:33	kja
Zinc, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	06/28/23 17:13	wtc
Zinc, total	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	06/29/23 11:54	aeh

Subcontract

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Miscellaneous subcontract	Subcontracted Work									

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	72.8		*	mg/L	2	20	06/21/23 0:00	emk
Carbonate as CaCO3		1	<2	U	*	mg/L	2	20	06/21/23 0:00	emk
Hydroxide as CaCO3		1	<2	U	*	mg/L	2	20	06/21/23 0:00	emk
Total Alkalinity		1	72.8		*	mg/L	2	20	06/21/23 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			07/11/23 0:00	calc
Sum of Anions			5.2			meq/L			07/11/23 0:00	calc
Sum of Cations			5.2			meq/L			07/11/23 0:00	calc
Chloride	SM4500Cl-E	1	3.56		*	mg/L	1	2	06/28/23 9:55	mrd
Conductivity @25C	SM2510B	1	548		*	umhos/cm	1	10	06/21/23 13:19	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5	<0.003	U	*	mg/L	0.003	0.01	06/21/23 9:13	mrd
Fluoride	SM4500F-C	1	0.20	B	*	mg/L	0.15	0.35	07/01/23 13:51	emk
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		86			mg/L	0.2	5	07/11/23 0:00	calc
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1	0.227		*	mg/L	0.02	0.1	06/29/23 3:26	pjb
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1	<0.1	U	*	mg/L	0.1	0.2	06/27/23 13:03	bls
pH (lab)	SM4500H+ B									
pH		1	8.00	H	*	units	0.1	0.1	06/21/23 0:00	emk
pH measured at		1	21.6		*	C	0.1	0.1	06/21/23 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	364		*	mg/L	20	40	06/15/23 11:37	cm
Sulfate	D516-02/-07/-11 - TURBIDIMETRIC	5	172		*	mg/L	5	25	07/06/23 14:24	gkk
TDS (calculated)	Calculation		359			mg/L			07/11/23 0:00	calc
TDS (ratio - measured/calculated)	Calculation		1.01						07/11/23 0:00	calc

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

REP001.03.15.02

AZMINING

ACZ Project ID: ***L81073***

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
WG568670													
WG568670PBW	PBW	06/21/23 10:50				9	mg/L		-20	20			
WG568670LCSW3	LCSW	06/21/23 11:11	WC230612-1	820.0001		864.9	mg/L	105	90	110			
L81113-03DUP	DUP	06/21/23 14:29			60.9	61.4	mg/L				1	20	
WG568670LCSW6	LCSW	06/21/23 14:51	WC230612-1	820.0001		877.4	mg/L	107	90	110			

Aluminum, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569652													
WG569652ICV	ICV	07/05/23 11:50	MS230620-3	.1		.1057	mg/L	106	90	110			
WG569652ICB	ICB	07/05/23 11:52				U	mg/L		-0.011	0.011			
WG569652LFB	LFB	07/05/23 11:55	MS230626-2	.050065		.0511	mg/L	102	85	115			
L81044-01AS	AS	07/05/23 11:59	MS230626-2	.050065	U	.0559	mg/L	112	70	130			
L81044-01ASD	ASD	07/05/23 12:02	MS230626-2	.050065	U	.0551	mg/L	110	70	130	1	20	

Aluminum, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569339													
WG569339ICV	ICV	06/29/23 11:20	MS230620-3	.1		.1048	mg/L	105	90	110			
WG569339ICB	ICB	06/29/23 11:22				U	mg/L		-0.015	0.015			
WG569092LRB	LRB	06/29/23 11:24				U	mg/L		-0.011	0.011			
WG569092LFB	LFB	06/29/23 11:26	MS230605-2	.050065		.0529	mg/L	106	85	115			
L81073-01LFM	LFM	06/29/23 11:35	MS230605-2	.050065	.19	.2519	mg/L	124	70	130			
L81073-01LFMD	LFMD	06/29/23 11:37	MS230605-2	.050065	.19	.2577	mg/L	135	70	130	2	20	M3

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569652													
WG569652ICV	ICV	07/05/23 11:50	MS230620-3	.0201		.0201	mg/L	100	90	110			
WG569652ICB	ICB	07/05/23 11:52				.0004	mg/L		-0.00088	0.00088			
WG569652LFB	LFB	07/05/23 11:55	MS230626-2	.01		.0096	mg/L	96	85	115			
L81044-01AS	AS	07/05/23 11:59	MS230626-2	.01	U	.0092	mg/L	92	70	130			
L81044-01ASD	ASD	07/05/23 12:02	MS230626-2	.01	U	.00941	mg/L	94	70	130	2	20	

Antimony, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569339													
WG569339ICV	ICV	06/29/23 11:20	MS230620-3	.0201		.0197	mg/L	98	90	110			
WG569339ICB	ICB	06/29/23 11:22				U	mg/L		-0.0012	0.0012			
WG569092LRB	LRB	06/29/23 11:24				U	mg/L		-0.00088	0.00088			
WG569092LFB	LFB	06/29/23 11:26	MS230605-2	.01		.01038	mg/L	104	85	115			
L81073-01LFM	LFM	06/29/23 11:35	MS230605-2	.01	.00477	.01512	mg/L	104	70	130			
L81073-01LFMD	LFMD	06/29/23 11:37	MS230605-2	.01	.00477	.01569	mg/L	109	70	130	4	20	

AZMINING

ACZ Project ID: ***L81073***

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.

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569652													
WG569652ICV	ICV	07/05/23 11:50	MS230620-3	.05		.0504	mg/L	101	90	110			
WG569652ICB	ICB	07/05/23 11:52				U	mg/L		-0.00044	0.00044			
WG569652LFB	LFB	07/05/23 11:55	MS230626-2	.0501		.05155	mg/L	103	85	115			
L81044-01AS	AS	07/05/23 11:59	MS230626-2	.0501	.00033	.05279	mg/L	105	70	130			
L81044-01ASD	ASD	07/05/23 12:02	MS230626-2	.0501	.00033	.05292	mg/L	105	70	130	0	20	

Arsenic, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569339													
WG569339ICV	ICV	06/29/23 11:20	MS230620-3	.05		.05101	mg/L	102	90	110			
WG569339ICB	ICB	06/29/23 11:22				U	mg/L		-0.0006	0.0006			
WG569092LRB	LRB	06/29/23 11:24				U	mg/L		-0.00044	0.00044			
WG569092LFB	LFB	06/29/23 11:26	MS230605-2	.0501		.05143	mg/L	103	85	115			
L81073-01LFM	LFM	06/29/23 11:35	MS230605-2	.0501	.00775	.06114	mg/L	107	70	130			
L81073-01LFMD	LFMD	06/29/23 11:37	MS230605-2	.0501	.00775	.06041	mg/L	105	70	130	1	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569316													
WG569316ICV	ICV	06/28/23 16:41	II230624-1	2		1.9545	mg/L	98	95	105			
WG569316ICB	ICB	06/28/23 16:47				U	mg/L		-0.027	0.027			
WG569316LFB	LFB	06/28/23 17:00	II230622-6	.501		.4902	mg/L	98	85	115			
L81073-01AS	AS	06/28/23 17:16	II230622-6	.501	.0272	.5246	mg/L	99	85	115			
L81073-01ASD	ASD	06/28/23 17:19	II230622-6	.501	.0272	.5325	mg/L	101	85	115	1	20	

Barium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569352													
WG569352ICV	ICV	06/29/23 11:14	II230601-1	2		1.962	mg/L	98	95	105			
WG569352ICB	ICB	06/29/23 11:20				U	mg/L		-0.027	0.027			
WG569204LRB	LRB	06/29/23 11:32				U	mg/L		-0.0198	0.0198			
WG569204LFB	LFB	06/29/23 11:36	II230622-6	.501		.5084	mg/L	101	85	115			
L81072-01LFM	LFM	06/29/23 11:48	II230622-6	.501	.0101	.524	mg/L	103	70	130			
L81072-01LFMD	LFMD	06/29/23 11:51	II230622-6	.501	.0101	.5246	mg/L	103	70	130	0	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569652													
WG569652ICV	ICV	07/05/23 11:50	MS230620-3	.05		.053605	mg/L	107	90	110			
WG569652ICB	ICB	07/05/23 11:52				U	mg/L		-0.000176	0.000176			
WG569652LFB	LFB	07/05/23 11:55	MS230626-2	.05005		.051898	mg/L	104	85	115			
L81044-01AS	AS	07/05/23 11:59	MS230626-2	.05005	U	.05069	mg/L	101	70	130			
L81044-01ASD	ASD	07/05/23 12:02	MS230626-2	.05005	U	.051229	mg/L	102	70	130	1	20	

AZMINING

ACZ Project ID: ***L81073***

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.

Beryllium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569339													
WG569339ICV	ICV	06/29/23 11:20	MS230620-3	.05		.051442	mg/L	103	90	110			
WG569339ICB	ICB	06/29/23 11:22				U	mg/L		-0.00024	0.00024			
WG569092LRB	LRB	06/29/23 11:24				U	mg/L		-0.000176	0.000176			
WG569092LFB	LFB	06/29/23 11:26	MS230605-2	.05005		.0502	mg/L	100	85	115			
L81073-01LFM	LFM	06/29/23 11:35	MS230605-2	.05005	U	.052664	mg/L	105	70	130			
L81073-01LFMD	LFMD	06/29/23 11:37	MS230605-2	.05005	U	.051853	mg/L	104	70	130	2	20	

Boron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569316													
WG569316ICV	ICV	06/28/23 16:41	II230624-1	2		2.054	mg/L	103	95	105			
WG569316ICB	ICB	06/28/23 16:47				U	mg/L		-0.09	0.09			
WG569316LFB	LFB	06/28/23 17:00	II230622-6	.5005		.505	mg/L	101	85	115			
L81073-01AS	AS	06/28/23 17:16	II230622-6	.5005	.142	.671	mg/L	106	85	115			
L81073-01ASD	ASD	06/28/23 17:19	II230622-6	.5005	.142	.677	mg/L	107	85	115	1	20	

Boron, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569352													
WG569352ICV	ICV	06/29/23 11:14	II230601-1	2		2.04	mg/L	102	95	105			
WG569352ICB	ICB	06/29/23 11:20				U	mg/L		-0.09	0.09			
WG569204LRB	LRB	06/29/23 11:32				U	mg/L		-0.066	0.066			
WG569204LFB	LFB	06/29/23 11:36	II230622-6	.5005		.508	mg/L	101	85	115			
L81072-01LFM	LFM	06/29/23 11:48	II230622-6	.5005	.054	.577	mg/L	104	70	130			
L81072-01LFMD	LFMD	06/29/23 11:51	II230622-6	.5005	.054	.581	mg/L	105	70	130	1	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569652													
WG569652ICV	ICV	07/05/23 11:50	MS230620-3	.05		.052887	mg/L	106	90	110			
WG569652ICB	ICB	07/05/23 11:52				U	mg/L		-0.00011	0.00011			
WG569652LFB	LFB	07/05/23 11:55	MS230626-2	.05005		.050486	mg/L	101	85	115			
L81044-01AS	AS	07/05/23 11:59	MS230626-2	.05005	.000093	.052622	mg/L	105	70	130			
L81044-01ASD	ASD	07/05/23 12:02	MS230626-2	.05005	.000093	.052752	mg/L	105	70	130	0	20	

Cadmium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569339													
WG569339ICV	ICV	06/29/23 11:20	MS230620-3	.05		.0516	mg/L	103	90	110			
WG569339ICB	ICB	06/29/23 11:22				.000055	mg/L		-0.00015	0.00015			
WG569092LRB	LRB	06/29/23 11:24				U	mg/L		-0.00011	0.00011			
WG569092LFB	LFB	06/29/23 11:26	MS230605-2	.05005		.050679	mg/L	101	85	115			
L81073-01LFM	LFM	06/29/23 11:35	MS230605-2	.05005	.000101	.05143	mg/L	103	70	130			
L81073-01LFMD	LFMD	06/29/23 11:37	MS230605-2	.05005	.000101	.050464	mg/L	101	70	130	2	20	

AZMINING

ACZ Project ID: ***L81073***

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.

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569316													
WG569316ICV	ICV	06/28/23 16:41	II230624-1	100		99.06	mg/L	99	95	105			
WG569316ICB	ICB	06/28/23 16:47				U	mg/L		-0.3	0.3			
WG569316LFB	LFB	06/28/23 17:00	II230622-6	67.98753		66.54	mg/L	98	85	115			
L81073-01AS	AS	06/28/23 17:16	II230622-6	67.98753	33.5	98.72	mg/L	96	85	115			
L81073-01ASD	ASD	06/28/23 17:19	II230622-6	67.98753	33.5	100.3	mg/L	98	85	115	2	20	

Calcium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569352													
WG569352ICV	ICV	06/29/23 11:14	II230601-1	100		97.75	mg/L	98	95	105			
WG569352ICB	ICB	06/29/23 11:20				U	mg/L		-0.3	0.3			
WG569204LRB	LRB	06/29/23 11:32				U	mg/L		-0.22	0.22			
WG569204LFB	LFB	06/29/23 11:36	II230622-6	67.98753		68.89	mg/L	101	85	115			
L81072-01LFM	LFM	06/29/23 11:48	II230622-6	67.98753	93.7	163.4	mg/L	103	70	130			
L81072-01LFMD	LFMD	06/29/23 11:51	II230622-6	67.98753	93.7	162.4	mg/L	101	70	130	1	20	

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569251													
WG569251ICV	ICV	06/28/23 9:49	WI230501-8	55		53.53	mg/L	97	90	110			
WG569251ICB	ICB	06/28/23 9:50				U	mg/L						
WG569251LFB	LFB	06/28/23 9:50	WI230202-6	30		28	mg/L	93	90	110			
L81070-01AS	AS	06/28/23 9:53	WI230202-6	30	3.77	35.85	mg/L	107	90	110			
L81071-01DUP	DUP	06/28/23 9:54			8.72	8.45	mg/L				3	20	RA

Chromium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569652													
WG569652ICV	ICV	07/05/23 11:50	MS230620-3	.05		.05132	mg/L	103	90	110			
WG569652ICB	ICB	07/05/23 11:52				U	mg/L		-0.0011	0.0011			
WG569652LFB	LFB	07/05/23 11:55	MS230626-2	.0501		.05019	mg/L	100	85	115			
L81044-01AS	AS	07/05/23 11:59	MS230626-2	.0501	U	.04935	mg/L	99	70	130			
L81044-01ASD	ASD	07/05/23 12:02	MS230626-2	.0501	U	.04908	mg/L	98	70	130	1	20	

Chromium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569339													
WG569339ICV	ICV	06/29/23 11:20	MS230620-3	.05		.05075	mg/L	102	90	110			
WG569339ICB	ICB	06/29/23 11:22				U	mg/L		-0.0015	0.0015			
WG569092LRB	LRB	06/29/23 11:24				U	mg/L		-0.0011	0.0011			
WG569092LFB	LFB	06/29/23 11:26	MS230605-2	.0501		.05043	mg/L	101	85	115			
L81073-01LFM	LFM	06/29/23 11:35	MS230605-2	.0501	.00297	.05317	mg/L	100	70	130			
L81073-01LFMD	LFMD	06/29/23 11:37	MS230605-2	.0501	.00297	.05236	mg/L	99	70	130	2	20	

AZMINING

ACZ Project ID: ***L81073***

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.

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569316													
WG569316ICV	ICV	06/28/23 16:41	II230624-1	2.01		1.988	mg/L	99	95	105			
WG569316ICB	ICB	06/28/23 16:47				U	mg/L		-0.06	0.06			
WG569316LFB	LFB	06/28/23 17:00	II230622-6	.5005		.493	mg/L	99	85	115			
L81073-01AS	AS	06/28/23 17:16	II230622-6	.5005	U	.507	mg/L	101	85	115			
L81073-01ASD	ASD	06/28/23 17:19	II230622-6	.5005	U	.514	mg/L	103	85	115	1	20	

Cobalt, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569352													
WG569352ICV	ICV	06/29/23 11:14	II230601-1	2.01		1.944	mg/L	97	95	105			
WG569352ICB	ICB	06/29/23 11:20				U	mg/L		-0.06	0.06			
WG569204LRB	LRB	06/29/23 11:32				U	mg/L		-0.044	0.044			
WG569204LFB	LFB	06/29/23 11:36	II230622-6	.5005		.508	mg/L	101	85	115			
L81072-01LFM	LFM	06/29/23 11:48	II230622-6	.5005	U	.526	mg/L	105	70	130			
L81072-01LFMD	LFMD	06/29/23 11:51	II230622-6	.5005	U	.526	mg/L	105	70	130	0	20	

Conductivity @25C SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG568670													
WG568670LCSW2	LCSW	06/21/23 10:56	PCN624443	1410		1411	umhos/cm	100	90	110			
L81113-03DUP	DUP	06/21/23 14:29			724	724	umhos/cm				0	20	
WG568670LCSW5	LCSW	06/21/23 14:36	PCN624443	1410		1403	umhos/cm	100	90	110			

Copper, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569652													
WG569652ICV	ICV	07/05/23 11:50	MS230620-3	.05		.05308	mg/L	106	90	110			
WG569652ICB	ICB	07/05/23 11:52				U	mg/L		-0.00176	0.00176			
WG569652LFB	LFB	07/05/23 11:55	MS230626-2	.05005		.05137	mg/L	103	85	115			
L81044-01AS	AS	07/05/23 11:59	MS230626-2	.05005	.0197	.0672	mg/L	95	70	130			
L81044-01ASD	ASD	07/05/23 12:02	MS230626-2	.05005	.0197	.06764	mg/L	96	70	130	1	20	

Copper, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569339													
WG569339ICV	ICV	06/29/23 11:20	MS230620-3	.05		.0519	mg/L	104	90	110			
WG569339ICB	ICB	06/29/23 11:22				U	mg/L		-0.0024	0.0024			
WG569092LRB	LRB	06/29/23 11:24				U	mg/L		-0.00176	0.00176			
WG569092LFB	LFB	06/29/23 11:26	MS230605-2	.05005		.05126	mg/L	102	85	115			
L81073-01LFM	LFM	06/29/23 11:35	MS230605-2	.05005	U	.05272	mg/L	105	70	130			
L81073-01LFMD	LFMD	06/29/23 11:37	MS230605-2	.05005	U	.05175	mg/L	103	70	130	2	20	

AZMINING

ACZ Project ID: ***L81073***

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.

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG568659													
WG568659ICV	ICV	06/21/23 9:04	WI230615-4	.3003		.2755	mg/L	92	90	110			
WG568659ICB	ICB	06/21/23 9:05				U	mg/L		-0.003	0.003			
WG568546LRB	LRB	06/21/23 9:06				U	mg/L		-0.003	0.003			
WG568546LFB	LFB	06/21/23 9:06	WI230619-2	.2		.2099	mg/L	105	90	110			
L81070-01DUP	DUP	06/21/23 9:10			U	U	mg/L				0	20	RA
L81071-01LFM	LFM	06/21/23 9:12	WI230619-2	.2	U	.2	mg/L	100	90	110			

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569519													
WG569519ICV	ICV	07/01/23 10:47	WC230627-9	2.002		2.06	mg/L	103	90	110			
WG569519ICB	ICB	07/01/23 10:51				U	mg/L		-0.3	0.3			
WG569519LFB1	LFB	07/01/23 10:58	WC221227-7	5.02		5.21	mg/L	104	90	110			
WG569519LFB2	LFB	07/01/23 13:13	WC221227-7	5.02		5.39	mg/L	107	90	110			
L81014-04AS	AS	07/01/23 13:20	WC221227-7	5.02	.27	5.59	mg/L	106	90	110			
L81014-04ASD	ASD	07/01/23 13:23	WC221227-7	5.02	.27	5.64	mg/L	107	90	110	1	20	

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569316													
WG569316ICV	ICV	06/28/23 16:41	II230624-1	2		1.941	mg/L	97	95	105			
WG569316ICB	ICB	06/28/23 16:47				U	mg/L		-0.18	0.18			
WG569316LFB	LFB	06/28/23 17:00	II230622-6	1.004		.994	mg/L	99	85	115			
L81073-01AS	AS	06/28/23 17:16	II230622-6	1.004	U	1.023	mg/L	102	85	115			
L81073-01ASD	ASD	06/28/23 17:19	II230622-6	1.004	U	1.042	mg/L	104	85	115	2	20	

Iron, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569352													
WG569352ICV	ICV	06/29/23 11:14	II230601-1	2		1.952	mg/L	98	95	105			
WG569352ICB	ICB	06/29/23 11:20				U	mg/L		-0.18	0.18			
WG569204LRB	LRB	06/29/23 11:32				U	mg/L		-0.132	0.132			
WG569204LFB	LFB	06/29/23 11:36	II230622-6	1.004		1.029	mg/L	102	85	115			
L81072-01LFM	LFM	06/29/23 11:48	II230622-6	1.004	.186	1.2	mg/L	101	70	130			
L81072-01LFMD	LFMD	06/29/23 11:51	II230622-6	1.004	.186	1.208	mg/L	102	70	130	1	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569652													
WG569652ICV	ICV	07/05/23 11:50	MS230620-3	.05		.05164	mg/L	103	90	110			
WG569652ICB	ICB	07/05/23 11:52				U	mg/L		-0.00022	0.00022			
WG569652LFB	LFB	07/05/23 11:55	MS230626-2	.05005		.05009	mg/L	100	85	115			
L81044-01AS	AS	07/05/23 11:59	MS230626-2	.05005	U	.05077	mg/L	101	70	130			
L81044-01ASD	ASD	07/05/23 12:02	MS230626-2	.05005	U	.05091	mg/L	102	70	130	0	20	

AZMINING

ACZ Project ID: ***L81073***

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.

Lead, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569339													
WG569339ICV	ICV	06/29/23 11:20	MS230620-3	.05		.05255	mg/L	105	90	110			
WG569339ICB	ICB	06/29/23 11:22				U	mg/L		-0.0003	0.0003			
WG569092LRB	LRB	06/29/23 11:24				U	mg/L		-0.00022	0.00022			
WG569092LFB	LFB	06/29/23 11:26	MS230605-2	.05005		.05127	mg/L	102	85	115			
L81073-01LFM	LFM	06/29/23 11:35	MS230605-2	.05005	.0101	.06295	mg/L	106	70	130			
L81073-01LFMD	LFMD	06/29/23 11:37	MS230605-2	.05005	.0101	.06261	mg/L	105	70	130	1	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569316													
WG569316ICV	ICV	06/28/23 16:41	II230624-1	100		98.12	mg/L	98	95	105			
WG569316ICB	ICB	06/28/23 16:47				U	mg/L		-0.6	0.6			
WG569316LFB	LFB	06/28/23 17:00	II230622-6	49.99752		48.27	mg/L	97	85	115			
L81073-01AS	AS	06/28/23 17:16	II230622-6	49.99752	.68	48.78	mg/L	96	85	115			
L81073-01ASD	ASD	06/28/23 17:19	II230622-6	49.99752	.68	49.71	mg/L	98	85	115	2	20	

Magnesium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569352													
WG569352ICV	ICV	06/29/23 11:14	II230601-1	100		97.65	mg/L	98	95	105			
WG569352ICB	ICB	06/29/23 11:20				U	mg/L		-0.6	0.6			
WG569204LRB	LRB	06/29/23 11:32				U	mg/L		-0.44	0.44			
WG569204LFB	LFB	06/29/23 11:36	II230622-6	49.99752		50.42	mg/L	101	85	115			
L81072-01LFM	LFM	06/29/23 11:48	II230622-6	49.99752	17.2	67.61	mg/L	101	70	130			
L81072-01LFMD	LFMD	06/29/23 11:51	II230622-6	49.99752	17.2	67.51	mg/L	101	70	130	0	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569316													
WG569316ICV	ICV	06/28/23 16:41	II230624-1	2		1.938	mg/L	97	95	105			
WG569316ICB	ICB	06/28/23 16:47				U	mg/L		-0.03	0.03			
WG569316LFB	LFB	06/28/23 17:00	II230622-6	.4995		.492	mg/L	98	85	115			
L81073-01AS	AS	06/28/23 17:16	II230622-6	.4995	U	.511	mg/L	102	85	115			
L81073-01ASD	ASD	06/28/23 17:19	II230622-6	.4995	U	.519	mg/L	104	85	115	2	20	

Manganese, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569352													
WG569352ICV	ICV	06/29/23 11:14	II230601-1	2		1.94	mg/L	97	95	105			
WG569352ICB	ICB	06/29/23 11:20				U	mg/L		-0.03	0.03			
WG569204LRB	LRB	06/29/23 11:32				U	mg/L		-0.022	0.022			
WG569204LFB	LFB	06/29/23 11:36	II230622-6	.4995		.513	mg/L	103	85	115			
L81072-01LFM	LFM	06/29/23 11:48	II230622-6	.4995	1.04	1.558	mg/L	104	70	130			
L81072-01LFMD	LFMD	06/29/23 11:51	II230622-6	.4995	1.04	1.548	mg/L	102	70	130	1	20	

AZMINING

ACZ Project ID: ***L81073***

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.

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG568435													
WG568435ICV	ICV	06/19/23 11:44	HG230612-14	.005		.00517	mg/L	103	95	105			
WG568435ICB	ICB	06/19/23 11:45				U	mg/L		-0.0002	0.0002			
WG568470													
WG568470LRB	LRB	06/19/23 15:29				U	mg/L		-0.00044	0.00044			
WG568470LFB	LFB	06/19/23 15:30	HG230612-17	.002002		.00198	mg/L	99	85	115			
L81011-05LFM	LFM	06/19/23 15:33	HG230612-17	.002002	U	.00197	mg/L	98	85	115			
L81011-05LFMD	LFMD	06/19/23 15:34	HG230612-17	.002002	U	.00196	mg/L	98	85	115	1	20	

Mercury, total M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG568435													
WG568435ICV	ICV	06/19/23 11:44	HG230612-14	.005		.00517	mg/L	103	95	105			
WG568435ICB	ICB	06/19/23 11:45				U	mg/L		-0.0002	0.0002			
WG568471													
WG568471LRB	LRB	06/19/23 16:03				U	mg/L		-0.00044	0.00044			
WG568471LFB	LFB	06/19/23 16:04	HG230612-17	.002002		.00192	mg/L	96	85	115			
L81014-03LFM	LFM	06/19/23 16:06	HG230612-17	.002002	U	.00197	mg/L	98	85	115			
L81014-03LFMD	LFMD	06/19/23 16:07	HG230612-17	.002002	U	.00206	mg/L	103	85	115	4	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569316													
WG569316ICV	ICV	06/28/23 16:41	II230624-1	2.002		1.9862	mg/L	99	95	105			
WG569316ICB	ICB	06/28/23 16:47				U	mg/L		-0.024	0.024			
WG569316LFB	LFB	06/28/23 17:00	II230622-6	.5		.4922	mg/L	98	85	115			
L81073-01AS	AS	06/28/23 17:16	II230622-6	.5	U	.5094	mg/L	102	85	115			
L81073-01ASD	ASD	06/28/23 17:19	II230622-6	.5	U	.5167	mg/L	103	85	115	1	20	

Nickel, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569352													
WG569352ICV	ICV	06/29/23 11:14	II230601-1	2.002		1.945	mg/L	97	95	105			
WG569352ICB	ICB	06/29/23 11:20				U	mg/L		-0.024	0.024			
WG569204LRB	LRB	06/29/23 11:32				U	mg/L		-0.0176	0.0176			
WG569204LFB	LFB	06/29/23 11:36	II230622-6	.5		.5163	mg/L	103	85	115			
L81072-01LFM	LFM	06/29/23 11:48	II230622-6	.5	.044	.5533	mg/L	102	70	130			
L81072-01LFMD	LFMD	06/29/23 11:51	II230622-6	.5	.044	.5573	mg/L	103	70	130	1	20	

AZMINING

ACZ Project ID: ***L81073***

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
WG569359													
WG569359ICV	ICV	06/29/23 0:08	WI230601-7	2.416		2.311	mg/L	96	90	110			
WG569359ICB	ICB	06/29/23 0:10				U	mg/L		-0.02	0.02			
WG569363													
WG569363LFB	LFB	06/29/23 3:18	WI230228-3	2		2.04	mg/L	102	90	110			
L81070-01AS	AS	06/29/23 3:21	WI230228-3	2	.076	2.178	mg/L	105	90	110			
L81071-01DUP	DUP	06/29/23 3:23			.199	.195	mg/L				2	20	RA

Nitrogen, ammonia M350.1 Auto Salicylate w/gas diffusion

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569147													
WG569147ICV	ICV	06/27/23 10:01	WI230405-8	12.036		11.149	mg/L	93	90	110			
WG569147ICB	ICB	06/27/23 10:02				U	mg/L		-0.1	0.1			
WG569172													
WG569172LFB1	LFB	06/27/23 12:46	WI220420-3	10		10.356	mg/L	104	90	110			
L81071-01AS	AS	06/27/23 12:56	WI220420-3	10	U	9.832	mg/L	98	90	110			
L81072-01DUP	DUP	06/27/23 12:59			U	U	mg/L				0	20	RA
WG569172LFB2	LFB	06/27/23 13:28	WI220420-3	10		10.499	mg/L	105	90	110			

pH (lab) SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG568670													
WG568670LCSW1	LCSW	06/21/23 10:54	PCN623461	5.99		6.1	units	102	5.9	6.1			
L81113-03DUP	DUP	06/21/23 14:29			9	9	units				0	20	
WG568670LCSW4	LCSW	06/21/23 14:34	PCN623461	5.99		6.1	units	102	5.9	6.1			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569316													
WG569316ICV	ICV	06/28/23 16:41	II230624-1	20		19.77	mg/L	99	95	105			
WG569316ICB	ICB	06/28/23 16:47				U	mg/L		-0.6	0.6			
WG569316LFB	LFB	06/28/23 17:00	II230622-6	99.95693		96.03	mg/L	96	85	115			
L81073-01AS	AS	06/28/23 17:16	II230622-6	99.95693	.88	97.67	mg/L	97	85	115			
L81073-01ASD	ASD	06/28/23 17:19	II230622-6	99.95693	.88	99.09	mg/L	98	85	115	1	20	

Potassium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569352													
WG569352ICV	ICV	06/29/23 11:14	II230601-1	20		19.31	mg/L	97	95	105			
WG569352ICB	ICB	06/29/23 11:20				U	mg/L		-0.6	0.6			
WG569204LRB	LRB	06/29/23 11:32				U	mg/L		-0.44	0.44			
WG569204LFB	LFB	06/29/23 11:36	II230622-6	99.95693		98.74	mg/L	99	85	115			
L81072-01LFM	LFM	06/29/23 11:48	II230622-6	99.95693	9.65	109.3	mg/L	100	70	130			
L81072-01LFMD	LFMD	06/29/23 11:51	II230622-6	99.95693	9.65	108.7	mg/L	99	70	130	1	20	

AZMINING

ACZ Project ID: ***L81073***

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.

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG568234													
WG568234PBW	PBW	06/15/23 10:40				U	mg/L		-20	20			
WG568234LCSW	LCSW	06/15/23 10:42	PCN623500	1000		990	mg/L	99	80	120			
L81073-01DUP	DUP	06/15/23 11:40			364	366	mg/L				1	10	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569652													
WG569652ICV	ICV	07/05/23 11:50	MS230620-3	.05		.05235	mg/L	105	90	110			
WG569652ICB	ICB	07/05/23 11:52				.00012	mg/L		-0.00022	0.00022			
WG569652LFB	LFB	07/05/23 11:55	MS230626-2	.05005		.05165	mg/L	103	85	115			
L81044-01AS	AS	07/05/23 11:59	MS230626-2	.05005	.00266	.05737	mg/L	109	70	130			
L81044-01ASD	ASD	07/05/23 12:02	MS230626-2	.05005	.00266	.0577	mg/L	110	70	130	1	20	

Selenium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569339													
WG569339ICV	ICV	06/29/23 11:20	MS230620-3	.05		.05159	mg/L	103	90	110			
WG569339ICB	ICB	06/29/23 11:22				U	mg/L		-0.0003	0.0003			
WG569092LRB	LRB	06/29/23 11:24				U	mg/L		-0.00022	0.00022			
WG569092LFB	LFB	06/29/23 11:26	MS230605-2	.05005		.05044	mg/L	101	85	115			
L81073-01LFM	LFM	06/29/23 11:35	MS230605-2	.05005	.00049	.05242	mg/L	104	70	130			
L81073-01LFMD	LFMD	06/29/23 11:37	MS230605-2	.05005	.00049	.05113	mg/L	101	70	130	2	20	

Silica, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569316													
WG569316ICV	ICV	06/28/23 16:41	II230624-1	42.8		41.18	mg/L	96	95	105			
WG569316ICB	ICB	06/28/23 16:47				U	mg/L		-0.6	0.6			
WG569316LFB	LFB	06/28/23 17:00	II230622-6	21.42782		21.23	mg/L	99	85	115			
L81073-01AS	AS	06/28/23 17:16	II230622-6	21.42782	20.1	41.6	mg/L	100	85	115			
L81073-01ASD	ASD	06/28/23 17:19	II230622-6	21.42782	20.1	42.36	mg/L	104	85	115	2	20	

Silica, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569352													
WG569352ICV	ICV	06/29/23 11:14	II230601-1	42.8		40.68	mg/L	95	95	105			
WG569352ICB	ICB	06/29/23 11:20				U	mg/L		-0.6	0.6			
WG569204LRB	LRB	06/29/23 11:32				U	mg/L		-0.44	0.44			
WG569204LFB	LFB	06/29/23 11:36	II230622-6	21.42782		22.02	mg/L	103	85	115			
L81072-01LFM	LFM	06/29/23 11:48	II230622-6	21.42782	14.1	26.23	mg/L	57	70	130			M2
L81072-01LFMD	LFMD	06/29/23 11:51	II230622-6	21.42782	14.1	26.39	mg/L	57	70	130	1	20	M2

AZMINING

ACZ Project ID: ***L81073***

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.

Silver, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569808													
WG569808ICV	ICV	07/06/23 13:59	MS230620-3	.02		.02103	mg/L	105	90	110			
WG569808ICB	ICB	07/06/23 14:01				U	mg/L		-0.00022	0.00022			
WG569808LFB	LFB	07/06/23 14:03	MS230626-2	.01001		.01015	mg/L	101	85	115			
L81044-01AS	AS	07/06/23 14:08	MS230626-2	.01001	U	.00914	mg/L	91	70	130			
L81044-01ASD	ASD	07/06/23 14:10	MS230626-2	.01001	U	.00944	mg/L	94	70	130	3	20	

Silver, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569339													
WG569339ICV	ICV	06/29/23 11:20	MS230620-3	.02		.02161	mg/L	108	90	110			
WG569339ICB	ICB	06/29/23 11:22				U	mg/L		-0.0003	0.0003			
WG569092LRB	LRB	06/29/23 11:24				U	mg/L		-0.00022	0.00022			
WG569092LFB	LFB	06/29/23 11:26	MS230605-2	.01001		.01034	mg/L	103	85	115			
L81073-01LFM	LFM	06/29/23 11:35	MS230605-2	.01001	.00145	.01134	mg/L	99	70	130			
L81073-01LFMD	LFMD	06/29/23 11:37	MS230605-2	.01001	.00145	.01176	mg/L	103	70	130	4	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569316													
WG569316ICV	ICV	06/28/23 16:41	II230624-1	100		98.47	mg/L	98	95	105			
WG569316ICB	ICB	06/28/23 16:47				U	mg/L		-0.6	0.6			
WG569316LFB	LFB	06/28/23 17:00	II230622-6	100.0094		95.48	mg/L	95	85	115			
L81073-01AS	AS	06/28/23 17:16	II230622-6	100.0094	78	168.4	mg/L	90	85	115			
L81073-01ASD	ASD	06/28/23 17:19	II230622-6	100.0094	78	172	mg/L	94	85	115	2	20	

Sodium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569352													
WG569352ICV	ICV	06/29/23 11:14	II230601-1	100		97.53	mg/L	98	95	105			
WG569352ICB	ICB	06/29/23 11:20				U	mg/L		-0.6	0.6			
WG569204LRB	LRB	06/29/23 11:32				U	mg/L		-0.44	0.44			
WG569204LFB	LFB	06/29/23 11:36	II230622-6	100.0094		98.75	mg/L	99	85	115			
L81072-01LFM	LFM	06/29/23 11:48	II230622-6	100.0094	53	152.6	mg/L	100	70	130			
L81072-01LFMD	LFMD	06/29/23 11:51	II230622-6	100.0094	53	151.7	mg/L	99	70	130	1	20	

Sulfate D516-02/-07/-11 - TURBIDIMETRIC

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569743													
WG569743ICB	ICB	07/06/23 10:58				U	mg/L		-3	3			
WG569743ICV	ICV	07/06/23 10:58	WI230703-3	20		20.5	mg/L	103	90	110			
WG569743LFB	LFB	07/06/23 13:31	WI230119-9	10		9.8	mg/L	98	90	110			
L81181-02AS	AS	07/06/23 14:46	SO4TURB50X	10	1050	1042.8	mg/L	-72	90	110			M3
L81181-01DUP	DUP	07/06/23 15:08			2320	2374.7	mg/L				2	20	

AZMINING

ACZ Project ID: ***L81073***

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.

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569652													
WG569652ICV	ICV	07/05/23 11:50	MS230620-3	.05		.05381	mg/L	108	90	110			
WG569652ICB	ICB	07/05/23 11:52				U	mg/L		-0.00022	0.00022			
WG569652LFB	LFB	07/05/23 11:55	MS230626-2	.0501		.05073	mg/L	101	85	115			
L81044-01AS	AS	07/05/23 11:59	MS230626-2	.0501	U	.05176	mg/L	103	70	130			
L81044-01ASD	ASD	07/05/23 12:02	MS230626-2	.0501	U	.05212	mg/L	104	70	130	1	20	

Thallium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569339													
WG569339ICV	ICV	06/29/23 11:20	MS230620-3	.05		.05372	mg/L	107	90	110			
WG569339ICB	ICB	06/29/23 11:22				U	mg/L		-0.0003	0.0003			
WG569092LRB	LRB	06/29/23 11:24				U	mg/L		-0.00022	0.00022			
WG569092LFB	LFB	06/29/23 11:26	MS230605-2	.0501		.05051	mg/L	101	85	115			
L81073-01LFM	LFM	06/29/23 11:35	MS230605-2	.0501	.00022	.05228	mg/L	104	70	130			
L81073-01LFMD	LFMD	06/29/23 11:37	MS230605-2	.0501	.00022	.05174	mg/L	103	70	130	1	20	

Uranium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569652													
WG569652ICV	ICV	07/05/23 11:50	MS230620-3	.05		.05295	mg/L	106	90	110			
WG569652ICB	ICB	07/05/23 11:52				U	mg/L		-0.00022	0.00022			
WG569652LFB	LFB	07/05/23 11:55	MS230626-2	.05		.05012	mg/L	100	85	115			
L81044-01AS	AS	07/05/23 11:59	MS230626-2	.05	.00112	.05522	mg/L	108	70	130			
L81044-01ASD	ASD	07/05/23 12:02	MS230626-2	.05	.00112	.05566	mg/L	109	70	130	1	20	

Uranium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569339													
WG569339ICV	ICV	06/29/23 11:20	MS230620-3	.05		.05228	mg/L	105	90	110			
WG569339ICB	ICB	06/29/23 11:22				U	mg/L		-0.0003	0.0003			
WG569092LRB	LRB	06/29/23 11:24				U	mg/L		-0.00022	0.00022			
WG569092LFB	LFB	06/29/23 11:26	MS230605-2	.05		.05057	mg/L	101	85	115			
L81073-01LFM	LFM	06/29/23 11:35	MS230605-2	.05	.0056	.05874	mg/L	106	70	130			
L81073-01LFMD	LFMD	06/29/23 11:37	MS230605-2	.05	.0056	.05805	mg/L	105	70	130	1	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569316													
WG569316ICV	ICV	06/28/23 16:41	II230624-1	2		1.936	mg/L	97	95	105			
WG569316ICB	ICB	06/28/23 16:47				U	mg/L		-0.06	0.06			
WG569316LFB	LFB	06/28/23 17:00	II230622-6	.50045		.497	mg/L	99	85	115			
L81073-01AS	AS	06/28/23 17:16	II230622-6	.50045	U	.502	mg/L	100	85	115			
L81073-01ASD	ASD	06/28/23 17:19	II230622-6	.50045	U	.512	mg/L	102	85	115	2	20	

AZMINING

ACZ Project ID: ***L81073***

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.

Zinc, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG569352													
WG569352ICV	ICV	06/29/23 11:14	II230601-1	2		1.996	mg/L	100	95	105			
WG569352ICB	ICB	06/29/23 11:20				U	mg/L		-0.06	0.06			
WG569204LRB	LRB	06/29/23 11:32				U	mg/L		-0.044	0.044			
WG569204LFB	LFB	06/29/23 11:36	II230622-6	.50045		.533	mg/L	107	85	115			
L81072-01LFM	LFM	06/29/23 11:48	II230622-6	.50045	.787	1.33	mg/L	109	70	130			
L81072-01LFMD	LFMD	06/29/23 11:51	II230622-6	.50045	.787	1.321	mg/L	107	70	130	1	20	

South32 ACZ Project ID: ***L81073***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L81073-01	WG569339	Aluminum, total	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.
	WG568670	Bicarbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
		Carbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG569251	Chloride	SM4500Cl-E	Q6	Sample was received above recommended temperature.
			SM4500Cl-E	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).
	WG568670	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
	WG568659	Cyanide, total	M335.4 - Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			M335.4 - Colorimetric w/ distillation	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).
	WG569519	Fluoride	SM4500F-C	Q6	Sample was received above recommended temperature.
	WG568670	Hydroxide as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG569363	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	Q6	Sample was received above recommended temperature.
			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).
	WG569172	Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	Q6	Sample was received above recommended temperature.
			M350.1 Auto Salicylate w/gas diffusion	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).
	WG568670	pH	SM4500H+ B	Q6	Sample was received above recommended temperature.
		pH measured at	SM4500H+ B	Q6	Sample was received above recommended temperature.
	WG568234	Residue, Filterable (TDS) @180C	SM2540C	Q6	Sample was received above recommended temperature.
	WG569352	Silica, total	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZS	Digestion procedures have the potential to trigger silica polymerization and precipitation, leading to low biased results. Silica chemistry is complex and polymerization kinetics are unpredictable. Dissolved and/or acid soluble silica analyses may provide more accurate measurements.
	WG569743	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.
			D516-02/-07/-11 - TURBIDIMETRIC	Q6	Sample was received above recommended temperature.
	WG568670	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.

Certification Qualifiers

South32 ACZ Project ID: ***L81073***

No certification qualifiers associated with this analysis

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

South32
4542523524

ACZ Project ID: L81073
Date Received: 06/13/2023 10:43
Received By:
Date Printed: 6/14/2023

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? [1]	X		
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?
3985	14.3	<=6.0	15	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s) but was thawed by receipt at ACZ.

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

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

South32
4542523524

ACZ Project ID: L81073
Date Received: 06/13/2023 10:43
Received By:
Date Printed: 6/14/2023

[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).

ACZ LABORATORIES | Accredited Environmental Testing | 2773 Downhill Drive, Steamboat Springs, CO 80487, (970) 879-6590 | L81073

CHAIN of CUSTODY

Report to:

Name: Kara Haas
Company: AMI/South32
E-mail: Kara.Haas@south32.net
Address: 749 Harshaw Road, Patagonia, AZ 85624
Telephone: 505.947.1738

Copy of Report to:

Name: Nick Connell
Company: NewFields
E-mail: nconnell@newfields.com
Telephone: 847.528.9776

Invoice to:

Name: Kara Haas
Company: AMI/South32
E-mail: kara.haas@south32.net
Address: 749 Harshaw Road, Patagonia, AZ 85624
Telephone: 505.947.1738

Copy of Invoice to:

Name: South32
Company: AMI/South32
E-mail: sscinvoices@south32.net
Address: NA
Telephone: NA

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 ✓ NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ✓
If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Marc Taylor **Sampler's Site Information** State AZ Zip code 85624 Time Zone MST
*Sampler's Signature: [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 — ANALYSES REQUESTED (attach list or use quote number)

Quote #: GW BASELINE
PO#: 4542523524
Reporting state for compliance testing: AZ
Check box if samples include NRC licensed material? ☐

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	GW BASELINE	dD_d18O						
MW-9-20230608	6/8/2023 11:50	GW	7	✓	✓						

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

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	6-9-23 0600	[signature]	6/13/23 1043

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

L81073 Chain of Custod

Lab #:	875571	Job #:	55000	IS-62691	Co. Job#:
Sample Name:	L81073-01				Co. Lab#:
Company:	ACZ Laboratories				
API/Well:					
Container:	Bottle				
Field/Site Name:	GW-BASELINE				
Location:	AZ				
Formation/Depth:					
Sampling Point:					
Date Sampled:	6/08/2023 11:50	Date Received:	6/16/2023	Date Reported:	6/30/2023

δD of water	----------	-51.8 ‰ relative to VSMOW
δ^{18}O of water	----------	-7.33 ‰ relative to VSMOW
Tritium content of water	----------	na
δ^{13}C of DIC	----------	na
^{14}C content of DIC	----------	na
δ^{15}N of nitrate	----------	na
δ^{18}O of nitrate	----------	na
δ^{34}S of sulfate	----------	na
δ^{18}O of sulfate	----------	na
Vacuum Distilled? *	----------	No

Remarks:

nd = not detected. na = not analyzed.
*Indicates if vacuum distillation was utilized for hydrogen and oxygen isotopic analysis of water

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

October 10, 2023

Report to:
Kara Haas
South32
749 Harshaw Rd
Patagonia, AZ 85624

cc: Nick Connell

Bill to:
Accounts Payable
South32 Hermosa Inc.
2210 E Fort Lowell Road
Tucson, AZ 85719

Project ID: 4542523524.C14
ACZ Project ID: L82810

Kara Haas:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 30, 2023. This project has been assigned to ACZ's project number, L82810. 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 L82810. 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 September 29, 2025. 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.

Mark McNeal

Mark McNeal has reviewed and approved this report.

South32
Project ID: 4542523524.C14
Sample ID: MW-9-20230825

ACZ Sample ID: ***L82810-03***
Date Sampled: *08/25/23 13:40*
Date Received: *08/30/23*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								08/31/23 16:40	gkk
Total Hot Plate Digestion	M200.2 ICP-MS				*				09/13/23 14:04	kja
Total Hot Plate Digestion	M200.2 ICP				*				09/08/23 10:52	aeh

South32
Project ID: 4542523524.C14
Sample ID: MW-9-20230825

ACZ Sample ID: ***L82810-03***
Date Sampled: *08/25/23 13:40*
Date Received: *08/30/23*
Sample Matrix: *Groundwater*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.8 ICP-MS	1	<0.005	U		mg/L	0.005	0.015	09/14/23 16:31	kja
Aluminum, total	M200.8 ICP-MS	2	0.156			mg/L	0.01	0.03	09/14/23 15:07	kja
Antimony, dissolved	M200.8 ICP-MS	1	0.00483			mg/L	0.0004	0.002	09/14/23 16:31	kja
Antimony, total	M200.8 ICP-MS	2	0.00510			mg/L	0.0008	0.004	09/14/23 15:07	kja
Arsenic, dissolved	M200.8 ICP-MS	1	0.00725			mg/L	0.0002	0.001	09/14/23 16:31	kja
Arsenic, total	M200.8 ICP-MS	2	0.00759			mg/L	0.0004	0.002	09/14/23 15:07	kja
Barium, dissolved	M200.7 ICP	1	0.0233	B		mg/L	0.009	0.035	09/16/23 0:41	aeh
Barium, total	M200.7 ICP	2	0.0186	B		mg/L	0.018	0.07	09/14/23 13:48	wtc
Beryllium, dissolved	M200.8 ICP-MS	1	<0.00008	U		mg/L	0.00008	0.00025	09/15/23 14:20	kja
Beryllium, total	M200.8 ICP-MS	2	<0.00016	U		mg/L	0.00016	0.0005	09/14/23 15:07	kja
Boron, dissolved	M200.7 ICP	5	0.163	B	*	mg/L	0.15	0.5	09/20/23 16:14	aeh
Boron, total	M200.7 ICP	2	0.114	B		mg/L	0.06	0.2	09/14/23 13:48	wtc
Cadmium, dissolved	M200.8 ICP-MS	1	<0.00005	U		mg/L	0.00005	0.00025	09/14/23 16:31	kja
Cadmium, total	M200.8 ICP-MS	2	<0.0001	U		mg/L	0.0001	0.0005	09/14/23 15:07	kja
Calcium, dissolved	M200.7 ICP	1	33.8			mg/L	0.1	0.5	09/16/23 0:41	aeh
Calcium, total	M200.7 ICP	2	33.5			mg/L	0.2	1	09/14/23 13:48	wtc
Chromium, dissolved	M200.8 ICP-MS	1	0.00314			mg/L	0.0005	0.002	09/14/23 16:31	kja
Chromium, total	M200.8 ICP-MS	2	0.00358	B		mg/L	0.001	0.004	09/14/23 15:07	kja
Cobalt, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	09/16/23 0:41	aeh
Cobalt, total	M200.7 ICP	2	<0.04	U		mg/L	0.04	0.1	09/14/23 13:48	wtc
Copper, dissolved	M200.8 ICP-MS	1	<0.0008	U		mg/L	0.0008	0.002	09/14/23 16:31	kja
Copper, total	M200.8 ICP-MS	2	0.00229	B		mg/L	0.0016	0.004	09/14/23 15:07	kja
Iron, dissolved	M200.7 ICP	1	<0.06	U		mg/L	0.06	0.15	09/16/23 0:41	aeh
Iron, total	M200.7 ICP	2	0.216	B		mg/L	0.12	0.3	09/14/23 13:48	wtc
Lead, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.0005	09/14/23 16:31	kja
Lead, total	M200.8 ICP-MS	2	0.00535			mg/L	0.0002	0.001	09/14/23 15:07	kja
Magnesium, dissolved	M200.7 ICP	1	0.68	B		mg/L	0.2	1	09/16/23 0:41	aeh
Magnesium, total	M200.7 ICP	2	0.85	B		mg/L	0.4	2	09/14/23 13:48	wtc
Manganese, dissolved	M200.7 ICP	5	<0.05	U	*	mg/L	0.05	0.25	09/20/23 16:14	aeh
Manganese, total	M200.7 ICP	2	0.066	B		mg/L	0.02	0.1	09/14/23 13:48	wtc
Mercury, dissolved	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	09/11/23 13:10	mlh
Mercury, total	M245.1 CVAA	1	<0.0002	U	*	mg/L	0.0002	0.001	09/07/23 11:49	mlh
Nickel, dissolved	M200.7 ICP	1	<0.008	U		mg/L	0.008	0.04	09/16/23 0:41	aeh
Nickel, total	M200.7 ICP	2	<0.016	U		mg/L	0.016	0.08	09/14/23 13:48	wtc
Potassium, dissolved	M200.7 ICP	1	0.88	B		mg/L	0.5	1	09/16/23 0:41	aeh
Potassium, total	M200.7 ICP	2	1.10	B		mg/L	1	2	09/14/23 13:48	wtc
Selenium, dissolved	M200.8 ICP-MS	1	0.00052			mg/L	0.0001	0.00025	09/15/23 14:20	kja
Selenium, total	M200.8 ICP-MS	2	0.00046	B		mg/L	0.0002	0.0005	09/14/23 15:07	kja
Silica, dissolved	M200.7 ICP	5	20			mg/L	1	5	09/20/23 16:14	aeh
Silica, total	M200.7 ICP	2	20.3		*	mg/L	0.4	2	09/14/23 13:48	wtc
Silver, dissolved	M200.8 ICP-MS	2	<0.0002	U	*	mg/L	0.0002	0.001	09/21/23 17:31	kja
Silver, total	M200.8 ICP-MS	2	0.00115			mg/L	0.0002	0.001	09/14/23 15:07	kja
Sodium, dissolved	M200.7 ICP	1	77.8			mg/L	0.2	1	09/16/23 0:41	aeh

South32
Project ID: 4542523524.C14
Sample ID: MW-9-20230825

ACZ Sample ID: ***L82810-03***
Date Sampled: *08/25/23 13:40*
Date Received: *08/30/23*
Sample Matrix: *Groundwater*

Sodium, total	M200.7 ICP	2	76.7			mg/L	0.4	2	09/14/23 13:48	wtc
Thallium, dissolved	M200.8 ICP-MS	1	0.00016	B		mg/L	0.0001	0.0005	09/14/23 16:31	kja
Thallium, total	M200.8 ICP-MS	2	<0.0002	U		mg/L	0.0002	0.001	09/14/23 15:07	kja
Uranium, dissolved	M200.8 ICP-MS	1	0.00526			mg/L	0.0001	0.0005	09/14/23 16:31	kja
Uranium, total	M200.8 ICP-MS	2	0.00525			mg/L	0.0002	0.001	09/14/23 15:07	kja
Zinc, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	09/16/23 0:41	aeh
Zinc, total	M200.7 ICP	2	0.090	B		mg/L	0.04	0.1	09/14/23 13:48	wtc

Subcontract

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Miscellaneous subcontract	Subcontracted Work									

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	72.5			mg/L	2	20	09/07/23 0:00	emk
Carbonate as CaCO3		1	<2	U		mg/L	2	20	09/07/23 0:00	emk
Hydroxide as CaCO3		1	<2	U		mg/L	2	20	09/07/23 0:00	emk
Total Alkalinity		1	72.5			mg/L	2	20	09/07/23 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-1.0			%			10/10/23 0:00	calc
Sum of Anions			5.3			meq/L			10/10/23 0:00	calc
Sum of Cations			5.2			meq/L			10/10/23 0:00	calc
Chloride	SM4500Cl-E	1	3.70		*	mg/L	1	2	09/21/23 12:06	mrd
Conductivity @25C	SM2510B	1	548			umhos/cm	1	10	09/07/23 16:17	jck
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5	<0.003	U	*	mg/L	0.003	0.01	09/07/23 12:59	mrd
Fluoride	SM4500F-C	1	0.19	B	*	mg/L	0.15	0.35	09/14/23 22:05	jck
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		87			mg/L	0.2	5	10/10/23 0:00	calc
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1	0.245			mg/L	0.02	0.1	09/15/23 1:22	pjb
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1	<0.1	U		mg/L	0.1	0.2	09/15/23 13:20	scs
pH (lab)	SM4500H+ B									
pH		1	7.4	H		units	0.1	0.1	09/07/23 0:00	emk
pH measured at		1	23.4			C	0.1	0.1	09/07/23 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	364		*	mg/L	20	40	08/31/23 16:25	emk
Sulfate	D516-02/-07/-11 - TURBIDIMETRIC	5	179		*	mg/L	5	25	09/19/23 12:41	aps
TDS (calculated)	Calculation		366			mg/L			10/10/23 0:00	calc
TDS (ratio - measured/calculated)	Calculation		0.99						10/10/23 0:00	calc

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

REP001.03.15.02

AZMINING

ACZ Project ID: ***L82810***

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
WG573772													
WG573772PBW1	PBW	09/07/23 13:58				3.5	mg/L		-20	20			
WG573772LCSW2	LCSW	09/07/23 14:04	WC230826-1	820.0001		815.1	mg/L	99	90	110			
WG573772LCSW4	LCSW	09/07/23 15:40	WC230826-1	820.0001		811.6	mg/L	99	90	110			
WG573772PBW2	PBW	09/07/23 15:45				U	mg/L		-20	20			
L82810-03DUP	DUP	09/07/23 17:03			72.5	71.9	mg/L				1	20	
WG573772LCSW6	LCSW	09/07/23 17:35	WC230826-1	820.0001		815.4	mg/L	99	90	110			
WG573772PBW3	PBW	09/07/23 17:40				3	mg/L		-20	20			
WG573772LCSW8	LCSW	09/07/23 19:16	WC230826-1	820.0001		821.5	mg/L	100	90	110			
WG573772PBW4	PBW	09/07/23 19:21				U	mg/L		-20	20			
WG573772LCSW10	LCSW	09/07/23 21:04	WC230826-1	820.0001		814	mg/L	99	90	110			

Aluminum, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574307													
WG574307ICV	ICV	09/14/23 16:01	MS230908-1	.1		.1038	mg/L	104	90	110			
WG574307ICB	ICB	09/14/23 16:02				U	mg/L		-0.011	0.011			
WG574307LFB	LFB	09/14/23 16:04	MS230912-3	.050065		.0558	mg/L	111	85	115			
L82804-01AS	AS	09/14/23 16:17	MS230912-3	.050065	U	.0572	mg/L	114	70	130			
L82804-01ASD	ASD	09/14/23 16:22	MS230912-3	.050065	U	.0562	mg/L	112	70	130	2	20	
L82810-03AS	AS	09/14/23 16:33	MS230912-3	.050065	U	.0565	mg/L	113	70	130			
L82810-03ASD	ASD	09/14/23 16:35	MS230912-3	.050065	U	.0587	mg/L	117	70	130	4	20	

Aluminum, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574315													
WG574315ICV	ICV	09/14/23 14:38	MS230908-1	.1		.1046	mg/L	105	90	110			
WG574315ICB	ICB	09/14/23 14:40				U	mg/L		-0.015	0.015			
WG574140LRB	LRB	09/14/23 14:42				U	mg/L		-0.011	0.011			
WG574140LFB	LFB	09/14/23 14:44	MS230912-3	.050065		.0529	mg/L	106	85	115			
L82810-03LFM	LFM	09/14/23 15:09	MS2XW	.10011	.156	.2535	mg/L	97	70	130			
L82810-03LFMD	LFMD	09/14/23 15:11	MS2XW	.10011	.156	.261	mg/L	105	70	130	3	20	
WG575069													
WG575069ICV	ICV	09/26/23 15:31	MS230908-1	.1		.0994	mg/L	99	90	110			
WG575069ICB	ICB	09/26/23 15:34				U	mg/L		-0.015	0.015			
WG574955LRB	LRB	09/26/23 15:36				U	mg/L		-0.011	0.011			
WG574955LFB	LFB	09/26/23 15:38	MS230912-3	.050065		.0557	mg/L	111	85	115			
L83006-01LFM	LFM	09/26/23 16:06	MS230912-3	.050065	.603	.6265	mg/L	47	70	130			M3
L83006-01LFMD	LFMD	09/26/23 16:08	MS230912-3	.050065	.603	.624	mg/L	42	70	130	0	20	M3

AZMINING

ACZ Project ID: ***L82810***

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.

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574307													
WG574307ICV	ICV	09/14/23 16:01	MS230908-1	.02002		.01985	mg/L	99	90	110			
WG574307ICB	ICB	09/14/23 16:02				U	mg/L		-0.00088	0.00088			
WG574307LFB	LFB	09/14/23 16:04	MS230912-3	.01		.01094	mg/L	109	85	115			
L82804-01AS	AS	09/14/23 16:17	MS230912-3	.01	U	.01077	mg/L	108	70	130			
L82804-01ASD	ASD	09/14/23 16:22	MS230912-3	.01	U	.01089	mg/L	109	70	130	1	20	
L82810-03AS	AS	09/14/23 16:33	MS230912-3	.01	.00483	.01513	mg/L	103	70	130			
L82810-03ASD	ASD	09/14/23 16:35	MS230912-3	.01	.00483	.01567	mg/L	108	70	130	4	20	

Antimony, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574315													
WG574315ICV	ICV	09/14/23 14:38	MS230908-1	.02002		.01986	mg/L	99	90	110			
WG574315ICB	ICB	09/14/23 14:40				U	mg/L		-0.0012	0.0012			
WG574140LRB	LRB	09/14/23 14:42				U	mg/L		-0.00088	0.00088			
WG574140LFB	LFB	09/14/23 14:44	MS230912-3	.01		.01009	mg/L	101	85	115			
L82804-01LFM	LFM	09/14/23 14:51	MS2XW	.02002	U	.02017	mg/L	101	70	130			
L82804-01LFMD	LFMD	09/14/23 14:53	MS2XW	.02002	U	.02014	mg/L	101	70	130	0	20	
L82810-03LFM	LFM	09/14/23 15:09	MS2XW	.02002	.0051	.02497	mg/L	99	70	130			
L82810-03LFMD	LFMD	09/14/23 15:11	MS2XW	.02002	.0051	.02537	mg/L	101	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
WG574307													
WG574307ICV	ICV	09/14/23 16:01	MS230908-1	.05		.05161	mg/L	103	90	110			
WG574307ICB	ICB	09/14/23 16:02				U	mg/L		-0.00044	0.00044			
WG574307LFB	LFB	09/14/23 16:04	MS230912-3	.0501		.05288	mg/L	106	85	115			
L82804-01AS	AS	09/14/23 16:17	MS230912-3	.0501	.0123	.06741	mg/L	110	70	130			
L82804-01ASD	ASD	09/14/23 16:22	MS230912-3	.0501	.0123	.06635	mg/L	108	70	130	2	20	
L82810-03AS	AS	09/14/23 16:33	MS230912-3	.0501	.00725	.05984	mg/L	105	70	130			
L82810-03ASD	ASD	09/14/23 16:35	MS230912-3	.0501	.00725	.06102	mg/L	107	70	130	2	20	

Arsenic, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574315													
WG574315ICV	ICV	09/14/23 14:38	MS230908-1	.05		.05226	mg/L	105	90	110			
WG574315ICB	ICB	09/14/23 14:40				U	mg/L		-0.0006	0.0006			
WG574140LRB	LRB	09/14/23 14:42				U	mg/L		-0.00044	0.00044			
WG574140LFB	LFB	09/14/23 14:44	MS230912-3	.0501		.05121	mg/L	102	85	115			
L82804-01LFM	LFM	09/14/23 14:51	MS2XW	.1002	.0143	.11742	mg/L	103	70	130			
L82804-01LFMD	LFMD	09/14/23 14:53	MS2XW	.1002	.0143	.11804	mg/L	104	70	130	1	20	
L82810-03LFM	LFM	09/14/23 15:09	MS2XW	.1002	.00759	.11099	mg/L	103	70	130			
L82810-03LFMD	LFMD	09/14/23 15:11	MS2XW	.1002	.00759	.11084	mg/L	103	70	130	0	20	

AZMINING

ACZ Project ID: ***L82810***

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.

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574416													
WG574416ICV	ICV	09/16/23 0:12	II230905-2	2		1.9258	mg/L	96	95	105			
WG574416ICB	ICB	09/16/23 0:18				U	mg/L		-0.027	0.027			
WG574416LFB	LFB	09/16/23 0:31	II230907-5	.501		.5055	mg/L	101	85	115			
L82810-03AS	AS	09/16/23 0:44	II230907-5	.501	.0233	.5062	mg/L	96	85	115			
L82810-03ASD	ASD	09/16/23 0:47	II230907-5	.501	.0233	.519	mg/L	99	85	115	2	20	

Barium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574157													
WG574157ICV	ICV	09/14/23 13:18	II230905-1	2		1.9165	mg/L	96	95	105			
WG574157ICB	ICB	09/14/23 13:27				U	mg/L		-0.027	0.027			
WG573827LRB	LRB	09/14/23 13:36				U	mg/L		-0.0198	0.0198			
WG573827LFB	LFB	09/14/23 13:39	II230907-5	.501		.4751	mg/L	95	85	115			
L82810-03LFM	LFM	09/14/23 13:51	II2XWATER	1.003	.0186	.98	mg/L	96	70	130			
L82810-03LFMD	LFMD	09/14/23 13:54	II2XWATER	1.003	.0186	.9902	mg/L	97	70	130	1	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574392													
WG574392ICV	ICV	09/15/23 13:55	MS230908-1	.05		.051363	mg/L	103	90	110			
WG574392ICB	ICB	09/15/23 13:57				U	mg/L		-0.000176	0.000176			
WG574392LFB	LFB	09/15/23 13:59	MS230912-3	.05005		.053018	mg/L	106	85	115			
L82804-01AS	AS	09/15/23 14:06	MS230912-3	.05005	U	.050623	mg/L	101	70	130			
L82804-01ASD	ASD	09/15/23 14:08	MS230912-3	.05005	U	.04989	mg/L	100	70	130	1	20	
L82810-03AS	AS	09/15/23 14:22	MS230912-3	.05005	U	.048809	mg/L	98	70	130			
L82810-03ASD	ASD	09/15/23 14:24	MS230912-3	.05005	U	.04948	mg/L	99	70	130	1	20	

Beryllium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574315													
WG574315ICV	ICV	09/14/23 14:38	MS230908-1	.05		.0513	mg/L	103	90	110			
WG574315ICB	ICB	09/14/23 14:40				.000223	mg/L		-0.00024	0.00024			
WG574140LRB	LRB	09/14/23 14:42				.000086	mg/L		-0.000176	0.000176			
WG574140LFB	LFB	09/14/23 14:44	MS230912-3	.05005		.050036	mg/L	100	85	115			
L82804-01LFM	LFM	09/14/23 14:51	MS2XW	.1001	U	.098928	mg/L	99	70	130			
L82804-01LFMD	LFMD	09/14/23 14:53	MS2XW	.1001	U	.098768	mg/L	99	70	130	0	20	
L82810-03LFM	LFM	09/14/23 15:09	MS2XW	.1001	U	.102082	mg/L	102	70	130			
L82810-03LFMD	LFMD	09/14/23 15:11	MS2XW	.1001	U	.101276	mg/L	101	70	130	1	20	

Boron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574587													
WG574587ICV	ICV	09/20/23 15:42	II230905-2	2		2.053	mg/L	103	95	105			
WG574587ICB	ICB	09/20/23 15:48				U	mg/L		-0.09	0.09			
WG574587LFB	LFB	09/20/23 16:01	II230907-5	.5005		.522	mg/L	104	85	115			
L82810-03AS	AS	09/20/23 16:17	II2XSOIL	1.25125	.163	1.482	mg/L	105	85	115			
L82810-03ASD	ASD	09/20/23 16:20	II2XSOIL	1.25125	.163	1.485	mg/L	106	85	115	0	20	

AZMINING

ACZ Project ID: ***L82810***

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.

Boron, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574157													
WG574157ICV	ICV	09/14/23 13:18	II230905-1	2		2.04	mg/L	102	95	105			
WG574157ICB	ICB	09/14/23 13:27				U	mg/L		-0.09	0.09			
WG573827LRB	LRB	09/14/23 13:36				U	mg/L		-0.066	0.066			
WG573827LFB	LFB	09/14/23 13:39	II230907-5	.5005		.484	mg/L	97	85	115			
L82810-03LFM	LFM	09/14/23 13:51	II2XWATER	1.001	.114	1.109	mg/L	99	70	130			
L82810-03LFMD	LFMD	09/14/23 13:54	II2XWATER	1.001	.114	1.122	mg/L	101	70	130	1	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574307													
WG574307ICV	ICV	09/14/23 16:01	MS230908-1	.05		.052383	mg/L	105	90	110			
WG574307ICB	ICB	09/14/23 16:02				.000051	mg/L		-0.00011	0.00011			
WG574307LFB	LFB	09/14/23 16:04	MS230912-3	.05005		.053374	mg/L	107	85	115			
L82804-01AS	AS	09/14/23 16:17	MS230912-3	.05005	U	.053417	mg/L	107	70	130			
L82804-01ASD	ASD	09/14/23 16:22	MS230912-3	.05005	U	.05261	mg/L	105	70	130	2	20	
L82810-03AS	AS	09/14/23 16:33	MS230912-3	.05005	U	.052097	mg/L	104	70	130			
L82810-03ASD	ASD	09/14/23 16:35	MS230912-3	.05005	U	.05375	mg/L	107	70	130	3	20	

Cadmium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574315													
WG574315ICV	ICV	09/14/23 14:38	MS230908-1	.05		.052703	mg/L	105	90	110			
WG574315ICB	ICB	09/14/23 14:40				U	mg/L		-0.00015	0.00015			
WG574140LRB	LRB	09/14/23 14:42				U	mg/L		-0.00011	0.00011			
WG574140LFB	LFB	09/14/23 14:44	MS230912-3	.05005		.050419	mg/L	101	85	115			
L82804-01LFM	LFM	09/14/23 14:51	MS2XW	.1001	U	.099617	mg/L	100	70	130			
L82804-01LFMD	LFMD	09/14/23 14:53	MS2XW	.1001	U	.099475	mg/L	99	70	130	0	20	
L82810-03LFM	LFM	09/14/23 15:09	MS2XW	.1001	U	.102328	mg/L	102	70	130			
L82810-03LFMD	LFMD	09/14/23 15:11	MS2XW	.1001	U	.101258	mg/L	101	70	130	1	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574416													
WG574416ICV	ICV	09/16/23 0:12	II230905-2	100		98.06	mg/L	98	95	105			
WG574416ICB	ICB	09/16/23 0:18				U	mg/L		-0.3	0.3			
WG574416LFB	LFB	09/16/23 0:31	II230907-5	67.98753		69.35	mg/L	102	85	115			
L82810-03AS	AS	09/16/23 0:44	II230907-5	67.98753	33.8	100.5	mg/L	98	85	115			
L82810-03ASD	ASD	09/16/23 0:47	II230907-5	67.98753	33.8	103.6	mg/L	103	85	115	3	20	

Calcium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574157													
WG574157ICV	ICV	09/14/23 13:18	II230905-1	100		98.1	mg/L	98	95	105			
WG574157ICB	ICB	09/14/23 13:27				U	mg/L		-0.3	0.3			
WG573827LRB	LRB	09/14/23 13:36				U	mg/L		-0.22	0.22			
WG573827LFB	LFB	09/14/23 13:39	II230907-5	67.98753		66.5	mg/L	98	85	115			
L82810-03LFM	LFM	09/14/23 13:51	II2XWATER	136.0667	33.5	166.9	mg/L	98	70	130			
L82810-03LFMD	LFMD	09/14/23 13:54	II2XWATER	136.0667	33.5	168.96	mg/L	100	70	130	1	20	

AZMINING

ACZ Project ID: ***L82810***

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.

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574800													
WG574800ICV	ICV	09/21/23 11:51	WI230501-8	55		54.34	mg/L	99	90	110			
WG574800ICB	ICB	09/21/23 11:52				U	mg/L						
WG574800LFB	LFB	09/21/23 11:52	WI230629-2	30.03		30.32	mg/L	101	90	110			
L82091-04AS	AS	09/21/23 12:01	WI230629-2	30.03	3.24	33.12	mg/L	100	90	110			
L82810-03DUP	DUP	09/21/23 12:06			3.7	3.79	mg/L				2	20	RA

Chromium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574307													
WG574307ICV	ICV	09/14/23 16:01	MS230908-1	.05		.05168	mg/L	103	90	110			
WG574307ICB	ICB	09/14/23 16:02				U	mg/L		-0.0011	0.0011			
WG574307LFB	LFB	09/14/23 16:04	MS230912-3	.0501		.05217	mg/L	104	85	115			
L82804-01AS	AS	09/14/23 16:17	MS230912-3	.0501	U	.05179	mg/L	103	70	130			
L82804-01ASD	ASD	09/14/23 16:22	MS230912-3	.0501	U	.05062	mg/L	101	70	130	2	20	
L82810-03AS	AS	09/14/23 16:33	MS230912-3	.0501	.00314	.05269	mg/L	99	70	130			
L82810-03ASD	ASD	09/14/23 16:35	MS230912-3	.0501	.00314	.05366	mg/L	101	70	130	2	20	

Chromium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574315													
WG574315ICV	ICV	09/14/23 14:38	MS230908-1	.05		.05255	mg/L	105	90	110			
WG574315ICB	ICB	09/14/23 14:40				U	mg/L		-0.0015	0.0015			
WG574140LRB	LRB	09/14/23 14:42				U	mg/L		-0.0011	0.0011			
WG574140LFB	LFB	09/14/23 14:44	MS230912-3	.0501		.05014	mg/L	100	85	115			
L82804-01LFM	LFM	09/14/23 14:51	MS2XW	.1001	U	.09901	mg/L	99	70	130			
L82804-01LFMD	LFMD	09/14/23 14:53	MS2XW	.1001	U	.09919	mg/L	99	70	130	0	20	
L82810-03LFM	LFM	09/14/23 15:09	MS2XW	.1001	.00358	.10362	mg/L	100	70	130			
L82810-03LFMD	LFMD	09/14/23 15:11	MS2XW	.1001	.00358	.10306	mg/L	99	70	130	1	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574416													
WG574416ICV	ICV	09/16/23 0:12	II230905-2	2.01		1.945	mg/L	97	95	105			
WG574416ICB	ICB	09/16/23 0:18				U	mg/L		-0.06	0.06			
WG574416LFB	LFB	09/16/23 0:31	II230907-5	.5005		.494	mg/L	99	85	115			
L82810-03AS	AS	09/16/23 0:44	II230907-5	.5005	U	.481	mg/L	96	85	115			
L82810-03ASD	ASD	09/16/23 0:47	II230907-5	.5005	U	.501	mg/L	100	85	115	4	20	

Cobalt, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574157													
WG574157ICV	ICV	09/14/23 13:18	II230905-1	2.01		2	mg/L	100	95	105			
WG574157ICB	ICB	09/14/23 13:27				U	mg/L		-0.06	0.06			
WG573827LRB	LRB	09/14/23 13:36				U	mg/L		-0.044	0.044			
WG573827LFB	LFB	09/14/23 13:39	II230907-5	.5005		.481	mg/L	96	85	115			
L82810-03LFM	LFM	09/14/23 13:51	II2XWATER	1.005	U	.967	mg/L	96	70	130			
L82810-03LFMD	LFMD	09/14/23 13:54	II2XWATER	1.005	U	.977	mg/L	97	70	130	1	20	

AZMINING

ACZ Project ID: ***L82810***

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.

Conductivity @25C SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG573777													
WG573777PBW	PBW	09/07/23 13:29				U	umhos/cm		-10	10			
WG573777LCSW1	LCSW	09/07/23 13:32	PCN624694	1409		1424	umhos/cm	101	90	110			
WG573777LCSW2	LCSW	09/07/23 14:09	PCN624694	1409		1407	umhos/cm	100	90	110			
WG573777LCSW3	LCSW	09/07/23 14:46	PCN624694	1409		1398	umhos/cm	99	90	110			
WG573777LCSW4	LCSW	09/07/23 15:23	PCN624694	1409		1394	umhos/cm	99	90	110			
WG573777LCSW5	LCSW	09/07/23 16:00	PCN624694	1409		1395	umhos/cm	99	90	110			
L82810-03DUP	DUP	09/07/23 16:18			548	544	umhos/cm				1	20	
WG573777LCSW6	LCSW	09/07/23 16:38	PCN624694	1409		1382	umhos/cm	98	90	110			

Copper, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574307													
WG574307ICV	ICV	09/14/23 16:01	MS230908-1	.05		.05383	mg/L	108	90	110			
WG574307ICB	ICB	09/14/23 16:02				U	mg/L		-0.00176	0.00176			
WG574307LFB	LFB	09/14/23 16:04	MS230912-3	.05005		.05312	mg/L	106	85	115			
L82804-01AS	AS	09/14/23 16:17	MS230912-3	.05005	.00831	.0599	mg/L	103	70	130			
L82804-01ASD	ASD	09/14/23 16:22	MS230912-3	.05005	.00831	.05861	mg/L	100	70	130	2	20	
L82810-03AS	AS	09/14/23 16:33	MS230912-3	.05005	U	.05002	mg/L	100	70	130			
L82810-03ASD	ASD	09/14/23 16:35	MS230912-3	.05005	U	.05168	mg/L	103	70	130	3	20	

Copper, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574315													
WG574315ICV	ICV	09/14/23 14:38	MS230908-1	.05		.05457	mg/L	109	90	110			
WG574315ICB	ICB	09/14/23 14:40				U	mg/L		-0.0024	0.0024			
WG574140LRB	LRB	09/14/23 14:42				U	mg/L		-0.00176	0.00176			
WG574140LFB	LFB	09/14/23 14:44	MS230912-3	.05005		.0518	mg/L	103	85	115			
L82804-01LFM	LFM	09/14/23 14:51	MS2XW	.1002	.00839	.10799	mg/L	99	70	130			
L82804-01LFMD	LFMD	09/14/23 14:53	MS2XW	.1002	.00839	.10811	mg/L	100	70	130	0	20	
L82810-03LFM	LFM	09/14/23 15:09	MS2XW	.1002	.00229	.10584	mg/L	103	70	130			
L82810-03LFMD	LFMD	09/14/23 15:11	MS2XW	.1002	.00229	.10392	mg/L	101	70	130	2	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG573748													
WG573748ICV	ICV	09/07/23 10:58	WI230901-3	.3003		.2878	mg/L	96	90	110			
WG573748ICB	ICB	09/07/23 10:59				U	mg/L		-0.003	0.003			
WG573784													
WG573408LRB	LRB	09/07/23 12:36				U	mg/L		-0.003	0.003			
WG573408LFB	LFB	09/07/23 12:37	WI230828-2	.2		.1879	mg/L	94	90	110			
L82804-01DUP	DUP	09/07/23 12:52			U	U	mg/L				0	20	RA
L82810-03LFM	LFM	09/07/23 12:59	WI230828-2	.2	U	.0922	mg/L	46	90	110			M2

AZMINING

ACZ Project ID: ***L82810***

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.

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574261													
WG574261ICV	ICV	09/14/23 10:45	WC230908-2	2.002		1.89	mg/L	94	90	110			
WG574261ICB	ICB	09/14/23 10:53				U	mg/L		-0.3	0.3			
WG574335													
WG574335ICV	ICV	09/14/23 17:35	WC230908-2	2.002		1.9	mg/L	95	90	110			
WG574335ICB	ICB	09/14/23 17:43				U	mg/L		-0.3	0.3			
WG574335LFB1	LFB	09/14/23 17:53	WC230825-1	5.005		4.7	mg/L	94	90	110			
WG574335LFB2	LFB	09/14/23 20:31	WC230825-1	5.005		4.65	mg/L	93	90	110			
L82810-03AS	AS	09/14/23 22:10	WC230825-1	5.005	.19	4.63	mg/L	89	90	110			M2
L82810-03ASD	ASD	09/14/23 22:15	WC230825-1	5.005	.19	4.63	mg/L	89	90	110	0	20	M2
WG574591													
WG574591ICV	ICV	09/19/23 13:54	WC230915-1	2.002		1.99	mg/L	99	90	110			
WG574591ICB	ICB	09/19/23 14:00				U	mg/L		-0.3	0.3			
WG574591LFB1	LFB	09/19/23 14:08	WC230825-1	5.005		4.95	mg/L	99	90	110			
WG574591LFB2	LFB	09/19/23 16:18	WC230825-1	5.005		5	mg/L	100	90	110			
L82804-01AS	AS	09/19/23 16:52	WC230825-1	5.005	.25	5.17	mg/L	98	90	110			
L82804-01ASD	ASD	09/19/23 16:55	WC230825-1	5.005	.25	5.14	mg/L	98	90	110	1	20	

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574416													
WG574416ICV	ICV	09/16/23 0:12	II230905-2	2		1.939	mg/L	97	95	105			
WG574416ICB	ICB	09/16/23 0:18				U	mg/L		-0.18	0.18			
WG574416LFB	LFB	09/16/23 0:31	II230907-5	1.004		1.052	mg/L	105	85	115			
L82810-03AS	AS	09/16/23 0:44	II230907-5	1.004	U	1.025	mg/L	102	85	115			
L82810-03ASD	ASD	09/16/23 0:47	II230907-5	1.004	U	1.039	mg/L	103	85	115	1	20	

Iron, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574157													
WG574157ICV	ICV	09/14/23 13:18	II230905-1	2		1.94	mg/L	97	95	105			
WG574157ICB	ICB	09/14/23 13:27				U	mg/L		-0.18	0.18			
WG573827LRB	LRB	09/14/23 13:36				U	mg/L		-0.132	0.132			
WG573827LFB	LFB	09/14/23 13:39	II230907-5	1.004		1.006	mg/L	100	85	115			
L82810-03LFM	LFM	09/14/23 13:51	II2XWATER	2.0022	.216	2.11	mg/L	95	70	130			
L82810-03LFMD	LFMD	09/14/23 13:54	II2XWATER	2.0022	.216	2.102	mg/L	94	70	130	0	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574307													
WG574307ICV	ICV	09/14/23 16:01	MS230908-1	.05		.05232	mg/L	105	90	110			
WG574307ICB	ICB	09/14/23 16:02				U	mg/L		-0.00022	0.00022			
WG574307LFB	LFB	09/14/23 16:04	MS230912-3	.05005		.05341	mg/L	107	85	115			
L82804-01AS	AS	09/14/23 16:17	MS230912-3	.05005	U	.05406	mg/L	108	70	130			
L82804-01ASD	ASD	09/14/23 16:22	MS230912-3	.05005	U	.05318	mg/L	106	70	130	2	20	
L82810-03AS	AS	09/14/23 16:33	MS230912-3	.05005	U	.0528	mg/L	105	70	130			
L82810-03ASD	ASD	09/14/23 16:35	MS230912-3	.05005	U	.05422	mg/L	108	70	130	3	20	

AZMINING

ACZ Project ID: ***L82810***

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.

Lead, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574315													
WG574315ICV	ICV	09/14/23 14:38	MS230908-1	.05		.05258	mg/L	105	90	110			
WG574315ICB	ICB	09/14/23 14:40				U	mg/L		-0.0003	0.0003			
WG574140LRB	LRB	09/14/23 14:42				U	mg/L		-0.00022	0.00022			
WG574140LFB	LFB	09/14/23 14:44	MS230912-3	.05005		.05026	mg/L	100	85	115			
L82804-01LFM	LFM	09/14/23 14:51	MS2XW	.1001	.00058	.10039	mg/L	100	70	130			
L82804-01LFMD	LFMD	09/14/23 14:53	MS2XW	.1001	.00058	.10098	mg/L	100	70	130	1	20	
L82810-03LFM	LFM	09/14/23 15:09	MS2XW	.1001	.00535	.10688	mg/L	101	70	130			
L82810-03LFMD	LFMD	09/14/23 15:11	MS2XW	.1001	.00535	.10603	mg/L	101	70	130	1	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574416													
WG574416ICV	ICV	09/16/23 0:12	II230905-2	100		97.53	mg/L	98	95	105			
WG574416ICB	ICB	09/16/23 0:18				U	mg/L		-0.6	0.6			
WG574416LFB	LFB	09/16/23 0:31	II230907-5	49.80792		49.99	mg/L	100	85	115			
L82810-03AS	AS	09/16/23 0:44	II230907-5	49.80792	.68	49.62	mg/L	98	85	115			
L82810-03ASD	ASD	09/16/23 0:47	II230907-5	49.80792	.68	51.27	mg/L	102	85	115	3	20	

Magnesium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574157													
WG574157ICV	ICV	09/14/23 13:18	II230905-1	100		98.07	mg/L	98	95	105			
WG574157ICB	ICB	09/14/23 13:27				U	mg/L		-0.6	0.6			
WG573827LRB	LRB	09/14/23 13:36				U	mg/L		-0.44	0.44			
WG573827LFB	LFB	09/14/23 13:39	II230907-5	49.80792		48.55	mg/L	97	85	115			
L82810-03LFM	LFM	09/14/23 13:51	II2XWATER	100.1149	.85	97.26	mg/L	96	70	130			
L82810-03LFMD	LFMD	09/14/23 13:54	II2XWATER	100.1149	.85	98.16	mg/L	97	70	130	1	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574587													
WG574587ICV	ICV	09/20/23 15:42	II230905-2	2		1.942	mg/L	97	95	105			
WG574587ICB	ICB	09/20/23 15:48				U	mg/L		-0.03	0.03			
WG574587LFB	LFB	09/20/23 16:01	II230907-5	.4995		.515	mg/L	103	85	115			
L82810-03AS	AS	09/20/23 16:17	II2XSOIL	1.25125	U	1.312	mg/L	105	85	115			
L82810-03ASD	ASD	09/20/23 16:20	II2XSOIL	1.25125	U	1.304	mg/L	104	85	115	1	20	

Manganese, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574157													
WG574157ICV	ICV	09/14/23 13:18	II230905-1	2		1.964	mg/L	98	95	105			
WG574157ICB	ICB	09/14/23 13:27				U	mg/L		-0.03	0.03			
WG573827LRB	LRB	09/14/23 13:36				U	mg/L		-0.022	0.022			
WG573827LFB	LFB	09/14/23 13:39	II230907-5	.4995		.508	mg/L	102	85	115			
L82810-03LFM	LFM	09/14/23 13:51	II2XWATER	1	.066	1.081	mg/L	102	70	130			
L82810-03LFMD	LFMD	09/14/23 13:54	II2XWATER	1	.066	1.088	mg/L	102	70	130	1	20	

AZMINING

ACZ Project ID: ***L82810***

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.

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG573937													
WG573937ICV	ICV	09/11/23 13:04	HG230911-14	.005		.00493	mg/L	99	95	105			
WG573937ICB	ICB	09/11/23 13:05				U	mg/L		-0.0002	0.0002			
WG573937LRB	LRB	09/11/23 13:07				U	mg/L		-0.00044	0.00044			
WG573937LFB	LFB	09/11/23 13:08	HG230911-17	.002002		.00196	mg/L	98	85	115			
L82810-03LFM	LFM	09/11/23 13:11	HG230911-17	.002002	U	.00214	mg/L	107	85	115			
L82810-03LFMD	LFMD	09/11/23 13:12	HG230911-17	.002002	U	.00212	mg/L	106	85	115	1	20	

Mercury, total M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG573726													
WG573726ICV	ICV	09/07/23 11:40	HG230828-3	.005		.00512	mg/L	102	95	105			
WG573726ICB	ICB	09/07/23 11:41				U	mg/L		-0.0002	0.0002			
WG573726LRB	LRB	09/07/23 11:43				U	mg/L		-0.00044	0.00044			
WG573726LFB	LFB	09/07/23 11:44	HG230828-6	.002002		.00206	mg/L	103	85	115			
L82810-03LFM	LFM	09/07/23 11:50	HG230828-6	.002002	U	.00224	mg/L	112	85	115			
L82810-03LFMD	LFMD	09/07/23 11:51	HG230828-6	.002002	U	.00236	mg/L	118	85	115	5	20	MA

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574416													
WG574416ICV	ICV	09/16/23 0:12	II230905-2	2.002		1.962	mg/L	98	95	105			
WG574416ICB	ICB	09/16/23 0:18				U	mg/L		-0.024	0.024			
WG574416LFB	LFB	09/16/23 0:31	II230907-5	.5		.5123	mg/L	102	85	115			
L82810-03AS	AS	09/16/23 0:44	II230907-5	.5	U	.4945	mg/L	99	85	115			
L82810-03ASD	ASD	09/16/23 0:47	II230907-5	.5	U	.5147	mg/L	103	85	115	4	20	

Nickel, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574157													
WG574157ICV	ICV	09/14/23 13:18	II230905-1	2.002		1.9478	mg/L	97	95	105			
WG574157ICB	ICB	09/14/23 13:27				U	mg/L		-0.024	0.024			
WG573827LRB	LRB	09/14/23 13:36				U	mg/L		-0.0176	0.0176			
WG573827LFB	LFB	09/14/23 13:39	II230907-5	.5		.4791	mg/L	96	85	115			
L82810-03LFM	LFM	09/14/23 13:51	II2XWATER	.999	U	.967	mg/L	97	70	130			
L82810-03LFMD	LFMD	09/14/23 13:54	II2XWATER	.999	U	.978	mg/L	98	70	130	1	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
WG574342													
WG574342ICV	ICV	09/14/23 23:23	WI230701-1	2.416		2.31	mg/L	96	90	110			
WG574342ICB	ICB	09/14/23 23:24				U	mg/L		-0.02	0.02			
WG574344													
WG574344LFB	LFB	09/15/23 1:13	WI230829-3	2		2.049	mg/L	102	90	110			
L82810-03DUP	DUP	09/15/23 1:23			.245	.245	mg/L				0	20	
L82810-03AS	AS	09/15/23 1:25	WI230829-3	2	.245	2.324	mg/L	104	90	110			

AZMINING

ACZ Project ID: ***L82810***

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.

Nitrogen, ammonia M350.1 Auto Salicylate w/gas diffusion

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574386													
WG574386ICV	ICV	09/15/23 13:08	WI230911-8	12.036		12.391	mg/L	103	90	110			
WG574386ICB	ICB	09/15/23 13:10				U	mg/L		-0.1	0.1			
WG574386LFB	LFB	09/15/23 13:11	WI230817-12	10.03		10.809	mg/L	108	90	110			
L82810-03AS	AS	09/15/23 13:21	WI230817-12	10.03	U	10.934	mg/L	109	90	110			
L82893-02DUP	DUP	09/15/23 13:24			2	2.049	mg/L				2	20	
WG574481													
WG574481ICV	ICV	09/18/23 10:14	WI230911-8	12.036		11.657	mg/L	97	90	110			
WG574481ICB	ICB	09/18/23 10:16				U	mg/L		-0.1	0.1			
WG574481LFB	LFB	09/18/23 10:17	WI230817-12	10.03		9.895	mg/L	99	90	110			
L82848-01AS	AS	09/18/23 10:23	WI230817-12	10.03	U	10.327	mg/L	103	90	110			
L82848-02DUP	DUP	09/18/23 10:26			U	U	mg/L				0	20	RA

pH (lab) SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG573772													
WG573772LCSW1	LCSW	09/07/23 14:02	PCN624449	6		6	units	100	5.9	6.1			
WG573772LCSW3	LCSW	09/07/23 15:38	PCN624449	6		5.98	units	100	5.9	6.1			
L82810-03DUP	DUP	09/07/23 17:03			7.4	7.8	units				5	20	
WG573772LCSW5	LCSW	09/07/23 17:32	PCN624449	6		5.99	units	100	5.9	6.1			
WG573772LCSW7	LCSW	09/07/23 19:13	PCN624449	6		6.02	units	100	5.9	6.1			
WG573772LCSW9	LCSW	09/07/23 21:02	PCN624449	6		5.99	units	100	5.9	6.1			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574416													
WG574416ICV	ICV	09/16/23 0:12	II230905-2	20		19.48	mg/L	97	95	105			
WG574416ICB	ICB	09/16/23 0:18				U	mg/L		-1.5	1.5			
WG574416LFB	LFB	09/16/23 0:31	II230907-5	99.95693		100.5	mg/L	101	85	115			
L82810-03AS	AS	09/16/23 0:44	II230907-5	99.95693	.88	98.8	mg/L	98	85	115			
L82810-03ASD	ASD	09/16/23 0:47	II230907-5	99.95693	.88	101.9	mg/L	101	85	115	3	20	

Potassium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574157													
WG574157ICV	ICV	09/14/23 13:18	II230905-1	20		19.51	mg/L	98	95	105			
WG574157ICB	ICB	09/14/23 13:27				U	mg/L		-1.5	1.5			
WG573827LRB	LRB	09/14/23 13:36				U	mg/L		-1.1	1.1			
WG573827LFB	LFB	09/14/23 13:39	II230907-5	99.95693		95.58	mg/L	96	85	115			
L82810-03LFM	LFM	09/14/23 13:51	II2XWATER	200.0188	1.1	193.42	mg/L	96	70	130			
L82810-03LFMD	LFMD	09/14/23 13:54	II2XWATER	200.0188	1.1	195.34	mg/L	97	70	130	1	20	

AZMINING

ACZ Project ID: ***L82810***

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.

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG573437													
WG573437PBW	PBW	08/31/23 15:00				U	mg/L		-20	20			
WG573437LCSW	LCSW	08/31/23 15:01	PCN625103	1000		988	mg/L	99	80	120			
L82810-01DUP	DUP	08/31/23 15:44			992	986	mg/L				1	10	
WG573438													
WG573438PBW	PBW	08/31/23 15:45				U	mg/L		-20	20			
WG573438LCSW	LCSW	08/31/23 15:46	PCN625103	1000		996	mg/L	100	80	120			
L82810-03DUP	DUP	08/31/23 16:27			364	362	mg/L				1	10	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574392													
WG574392ICV	ICV	09/15/23 13:55	MS230908-1	.05		.05131	mg/L	103	90	110			
WG574392ICB	ICB	09/15/23 13:57				U	mg/L		-0.00022	0.00022			
WG574392LFB	LFB	09/15/23 13:59	MS230912-3	.05005		.05123	mg/L	102	85	115			
L82804-01AS	AS	09/15/23 14:06	MS230912-3	.05005	.00012	.05343	mg/L	107	70	130			
L82804-01ASD	ASD	09/15/23 14:08	MS230912-3	.05005	.00012	.05226	mg/L	104	70	130	2	20	
L82810-03AS	AS	09/15/23 14:22	MS230912-3	.05005	.00052	.05368	mg/L	106	70	130			
L82810-03ASD	ASD	09/15/23 14:24	MS230912-3	.05005	.00052	.05346	mg/L	106	70	130	0	20	

Selenium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574315													
WG574315ICV	ICV	09/14/23 14:38	MS230908-1	.05		.05276	mg/L	106	90	110			
WG574315ICB	ICB	09/14/23 14:40				.0001	mg/L		-0.0003	0.0003			
WG574140LRB	LRB	09/14/23 14:42				U	mg/L		-0.00022	0.00022			
WG574140LFB	LFB	09/14/23 14:44	MS230912-3	.05005		.05019	mg/L	100	85	115			
L82804-01LFM	LFM	09/14/23 14:51	MS2XW	.1003	U	.09853	mg/L	98	70	130			
L82804-01LFMD	LFMD	09/14/23 14:53	MS2XW	.1003	U	.09871	mg/L	98	70	130	0	20	
L82810-03LFM	LFM	09/14/23 15:09	MS2XW	.1003	.00046	.10066	mg/L	100	70	130			
L82810-03LFMD	LFMD	09/14/23 15:11	MS2XW	.1003	.00046	.10104	mg/L	100	70	130	0	20	

Silica, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574587													
WG574587ICV	ICV	09/20/23 15:42	II230905-2	42.8		41.87	mg/L	98	95	105			
WG574587ICB	ICB	09/20/23 15:48				U	mg/L		-0.6	0.6			
WG574587LFB	LFB	09/20/23 16:01	II230907-5	21.42782		22.01	mg/L	103	85	115			
L82810-03AS	AS	09/20/23 16:17	II2XSOIL	53.5375	20	76.5	mg/L	106	85	115			
L82810-03ASD	ASD	09/20/23 16:20	II2XSOIL	53.5375	20	76.3	mg/L	105	85	115	0	20	

AZMINING

ACZ Project ID: ***L82810***

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.

Silica, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574157													
WG574157ICV	ICV	09/14/23 13:18	II230905-1	42.8		42.15	mg/L	98	95	105			
WG574157ICB	ICB	09/14/23 13:27				U	mg/L		-0.6	0.6			
WG573827LRB	LRB	09/14/23 13:36				U	mg/L		-0.44	0.44			
WG573827LFB	LFB	09/14/23 13:39	II230907-5	21.42782		21.5	mg/L	100	85	115			
L82810-03LFM	LFM	09/14/23 13:51	II2XWATER	42.83	20.3	63.74	mg/L	101	70	130			
L82810-03LFMD	LFMD	09/14/23 13:54	II2XWATER	42.83	20.3	64.38	mg/L	103	70	130	1	20	

Silver, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574832													
WG574832ICV	ICV	09/21/23 17:17	MS230908-1	.02		.02081	mg/L	104	90	110			
WG574832ICB	ICB	09/21/23 17:18				U	mg/L		-0.00022	0.00022			
WG574832LFB	LFB	09/21/23 17:20	MS230912-3	.01001		.01047	mg/L	105	85	115			
L82810-03AS	AS	09/21/23 17:33	MS230912-3	.02002	U	.02614	mg/L	131	70	130			M1
L82810-03ASD	ASD	09/21/23 17:39	MS230912-3	.02002	U	.02234	mg/L	112	70	130	16	20	

Silver, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574315													
WG574315ICV	ICV	09/14/23 14:38	MS230908-1	.02		.02115	mg/L	106	90	110			
WG574315ICB	ICB	09/14/23 14:40				U	mg/L		-0.0003	0.0003			
WG574140LRB	LRB	09/14/23 14:42				U	mg/L		-0.00022	0.00022			
WG574140LFB	LFB	09/14/23 14:44	MS230912-3	.01001		.00987	mg/L	99	85	115			
L82804-01LFM	LFM	09/14/23 14:51	MS2XW	.02	U	.01905	mg/L	95	70	130			
L82804-01LFMD	LFMD	09/14/23 14:53	MS2XW	.02	U	.019	mg/L	95	70	130	0	20	
L82810-03LFM	LFM	09/14/23 15:09	MS2XW	.02	.00115	.02006	mg/L	95	70	130			
L82810-03LFMD	LFMD	09/14/23 15:11	MS2XW	.02	.00115	.02037	mg/L	96	70	130	2	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574416													
WG574416ICV	ICV	09/16/23 0:12	II230905-2	100		97.4	mg/L	97	95	105			
WG574416ICB	ICB	09/16/23 0:18				U	mg/L		-0.6	0.6			
WG574416LFB	LFB	09/16/23 0:31	II230907-5	100.0094		99.3	mg/L	99	85	115			
L82810-03AS	AS	09/16/23 0:44	II230907-5	100.0094	77.8	171.5	mg/L	94	85	115			
L82810-03ASD	ASD	09/16/23 0:47	II230907-5	100.0094	77.8	176.2	mg/L	98	85	115	3	20	

Sodium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574157													
WG574157ICV	ICV	09/14/23 13:18	II230905-1	100		97.89	mg/L	98	95	105			
WG574157ICB	ICB	09/14/23 13:27				U	mg/L		-0.6	0.6			
WG573827LRB	LRB	09/14/23 13:36				U	mg/L		-0.44	0.44			
WG573827LFB	LFB	09/14/23 13:39	II230907-5	100.0094		95.01	mg/L	95	85	115			
L82810-03LFM	LFM	09/14/23 13:51	II2XWATER	200.0124	76.7	269.6	mg/L	96	70	130			
L82810-03LFMD	LFMD	09/14/23 13:54	II2XWATER	200.0124	76.7	272.8	mg/L	98	70	130	1	20	

AZMINING

ACZ Project ID: ***L82810***

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
WG574556													
WG574556ICB	ICB	09/19/23 9:46				U	mg/L		-3	3			
WG574556ICV	ICV	09/19/23 9:46	WI230911-4	20		20.6	mg/L	103	90	110			
WG574556LFB	LFB	09/19/23 12:04	WI230119-9	10		10	mg/L	100	90	110			
L82804-01DUP	DUP	09/19/23 12:39			33.6	33.8	mg/L				1	20	
L82810-03AS	AS	09/19/23 12:41	SO4TURB5X	10	179	179.2	mg/L	2	90	110			M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574307													
WG574307ICV	ICV	09/14/23 16:01	MS230908-1	.05		.0537	mg/L	107	90	110			
WG574307ICB	ICB	09/14/23 16:02				U	mg/L		-0.00022	0.00022			
WG574307LFB	LFB	09/14/23 16:04	MS230912-3	.0501		.0533	mg/L	106	85	115			
L82804-01AS	AS	09/14/23 16:17	MS230912-3	.0501	U	.05465	mg/L	109	70	130			
L82804-01ASD	ASD	09/14/23 16:22	MS230912-3	.0501	U	.05339	mg/L	107	70	130	2	20	
L82810-03AS	AS	09/14/23 16:33	MS230912-3	.0501	.00016	.05312	mg/L	106	70	130			
L82810-03ASD	ASD	09/14/23 16:35	MS230912-3	.0501	.00016	.05416	mg/L	108	70	130	2	20	

Thallium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574315													
WG574315ICV	ICV	09/14/23 14:38	MS230908-1	.05		.05418	mg/L	108	90	110			
WG574315ICB	ICB	09/14/23 14:40				U	mg/L		-0.0003	0.0003			
WG574140LRB	LRB	09/14/23 14:42				U	mg/L		-0.00022	0.00022			
WG574140LFB	LFB	09/14/23 14:44	MS230912-3	.0501		.04948	mg/L	99	85	115			
L82804-01LFM	LFM	09/14/23 14:51	MS2XW	.1002	U	.09955	mg/L	99	70	130			
L82804-01LFMD	LFMD	09/14/23 14:53	MS2XW	.1002	U	.10015	mg/L	100	70	130	1	20	
L82810-03LFM	LFM	09/14/23 15:09	MS2XW	.1002	U	.10061	mg/L	100	70	130			
L82810-03LFMD	LFMD	09/14/23 15:11	MS2XW	.1002	U	.09929	mg/L	99	70	130	1	20	

Uranium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574307													
WG574307ICV	ICV	09/14/23 16:01	MS230908-1	.05		.05195	mg/L	104	90	110			
WG574307ICB	ICB	09/14/23 16:02				U	mg/L		-0.00022	0.00022			
WG574307LFB	LFB	09/14/23 16:04	MS230912-3	.05		.05292	mg/L	106	85	115			
L82804-01AS	AS	09/14/23 16:17	MS230912-3	.05	.00631	.06123	mg/L	110	70	130			
L82804-01ASD	ASD	09/14/23 16:22	MS230912-3	.05	.00631	.06079	mg/L	109	70	130	1	20	
L82810-03AS	AS	09/14/23 16:33	MS230912-3	.05	.00526	.05903	mg/L	108	70	130			
L82810-03ASD	ASD	09/14/23 16:35	MS230912-3	.05	.00526	.06006	mg/L	110	70	130	2	20	

AZMINING

ACZ Project ID: ***L82810***

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.

Uranium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574315													
WG574315ICV	ICV	09/14/23 14:38	MS230908-1	.05		.05235	mg/L	105	90	110			
WG574315ICB	ICB	09/14/23 14:40				U	mg/L		-0.0003	0.0003			
WG574140LRB	LRB	09/14/23 14:42				U	mg/L		-0.00022	0.00022			
WG574140LFB	LFB	09/14/23 14:44	MS230912-3	.05		.04973	mg/L	99	85	115			
L82804-01LFM	LFM	09/14/23 14:51	MS2XW	.1	.00615	.10748	mg/L	101	70	130			
L82804-01LFMD	LFMD	09/14/23 14:53	MS2XW	.1	.00615	.10784	mg/L	102	70	130	0	20	
L82810-03LFM	LFM	09/14/23 15:09	MS2XW	.1	.00525	.10859	mg/L	103	70	130			
L82810-03LFMD	LFMD	09/14/23 15:11	MS2XW	.1	.00525	.10772	mg/L	102	70	130	1	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574416													
WG574416ICV	ICV	09/16/23 0:12	II230905-2	2		1.92	mg/L	96	95	105			
WG574416ICB	ICB	09/16/23 0:18				U	mg/L		-0.06	0.06			
WG574416LFB	LFB	09/16/23 0:31	II230907-5	.50045		.513	mg/L	103	85	115			
L82810-03AS	AS	09/16/23 0:44	II230907-5	.50045	U	.509	mg/L	102	85	115			
L82810-03ASD	ASD	09/16/23 0:47	II230907-5	.50045	U	.534	mg/L	107	85	115	5	20	

Zinc, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574157													
WG574157ICV	ICV	09/14/23 13:18	II230905-1	2		1.904	mg/L	95	95	105			
WG574157ICB	ICB	09/14/23 13:27				U	mg/L		-0.06	0.06			
WG573827LRB	LRB	09/14/23 13:36				.038	mg/L		-0.044	0.044			
WG573827LFB	LFB	09/14/23 13:39	II230907-5	.50045		.501	mg/L	100	85	115			
L82810-03LFM	LFM	09/14/23 13:51	II2XWATER	.9884	.09	1.015	mg/L	94	70	130			
L82810-03LFMD	LFMD	09/14/23 13:54	II2XWATER	.9884	.09	1.001	mg/L	92	70	130	1	20	

South32 ACZ Project ID: ***L82810***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L82810-03	WG574587	Boron, dissolved	M200.7 ICP	DJ	Sample dilution required due to insufficient sample.
	WG574800	Chloride	SM4500Cl-E	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).
	WG573784	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	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).
	WG574335	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG574587	Manganese, dissolved	M200.7 ICP	DJ	Sample dilution required due to insufficient sample.
	WG573726	Mercury, total	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG573438	Residue, Filterable (TDS) @180C	SM2540C	Z5	Oven temperature observed out of range. Sample and Quality Control attained a consistent weight and all Quality controls were within limits. Reanalyze at client request
	WG574157	Silica, total	M200.7 ICP	ZS	Digestion procedures have the potential to trigger silica polymerization and precipitation, leading to low biased results. Silica chemistry is complex and polymerization kinetics are unpredictable. Dissolved and/or acid soluble silica analyses may provide more accurate measurements.
	WG574832	Silver, dissolved	M200.8 ICP-MS	DJ	Sample dilution required due to insufficient sample.
			M200.8 ICP-MS	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG574556	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.
	WG573827	Total Hot Plate Digestion	M200.2 ICP	DJ	Sample dilution required due to insufficient sample.
	WG574140		M200.2 ICP-MS	DJ	Sample dilution required due to insufficient sample.

No certification qualifiers associated with this analysis

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

South32
4542523524.C14

ACZ Project ID: L82810
Date Received: 08/30/2023 11:14
Received By:
Date Printed: 8/31/2023

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		

A change was made in the analyses requested section prior to ACZ custody.

A change was made in the analyses requested section prior to ACZ custody.

A change was made in the analyses requested section prior to ACZ custody.

A change was made in the analyses requested section prior to ACZ custody.

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? [1]	X		
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	

Some parameters were received past hold time.

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Sample Receipt

South32
4542523524.C14

ACZ Project ID: L82810
Date Received: 08/30/2023 11:14
Received By:
Date Printed: 8/31/2023

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
4262	4.2	<=6.0	15	Yes

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.

[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).

ACZ LABORATORIES | Accredited Environmental Testing | 2773 Downhill Drive, Steamboat Springs, CO 80487, (970) 879-6590 | L82810

CHAIN of CUSTODY

Report to:

Name: Kara Haas	Address: 749 Harshaw Road
Company: AMI/South32	Patagonia, AZ 85624
E-mail: Kara.Haas@south32.net	Telephone: 505.947.1738

Copy of Report to:

Name: Nick Connell	E-mail: nconnell@newfields.com
Company: NewFields	Telephone: 847.528.9776

Invoice to:

Name: Kara Haas	Address: 749 Harshaw Road
Company: AMI/South32	Patagonia, AZ 85624
E-mail: kara.haas@south32.net	Telephone: 505.947.1738

Copy of Invoice to:

Name: South32	Address: NA
Company: AMI/South32	
E-mail: sscinvoices@south32.net	Telephone: NA

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 ✔ NO

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes No ✔

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Marc Taylor Sampler's Site Information State AZ Zip code 85624 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 #: GW BASELINE

PO#: 4542523524.C14

Reporting state for compliance testing: AZ

Check box if samples include NRC licensed material?

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	GW BASELINE	dD_d18O	C14	NS/NSII				
MW22-15-20230825	8/25/2023 09:30	GW	8	✔	✔	✔					
MW22-13-20230825	8/25/2023 11:03	GW	8	✔	✔	✔					
MW-9-20230825	8/25/2023 13:40	GW	8	✔	✔	✔	✓				
			7	✔	✔						

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

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
	8-26-23 0630		8/30/23 11:14

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

L82810 Chain of Custod

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Analytical Report

December 06, 2023

Report to:
Kara Haas
South32
749 Harshaw Rd
Patagonia, AZ 85624

cc: Nick Connell

Bill to:
Accounts Payable
South32 Hermosa Inc.
2210 E Fort Lowell Road
Tucson, AZ 85719

Project ID: 4542523524
ACZ Project ID: L84280

Kara Haas:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 02, 2023. This project has been assigned to ACZ's project number, L84280. 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 L84280. 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 November 25, 2025. 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.

Mark McNeal
Mark McNeal has reviewed and approved this report.

South32
Project ID: 4542523524
Sample ID: MW-9-20231030

ACZ Sample ID: ***L84280-01***
Date Sampled: *10/30/23 09:50*
Date Received: *11/02/23*
Sample Matrix: *Groundwater*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								11/13/23 10:55	ems
Total Hot Plate Digestion	M200.2 ICP-MS								11/27/23 9:10	mfm/scp
Total Hot Plate Digestion	M200.2 ICP								11/17/23 10:21	smw

South32
Project ID: 4542523524
Sample ID: MW-9-20231030

ACZ Sample ID: ***L84280-01***
Date Sampled: *10/30/23 09:50*
Date Received: *11/02/23*
Sample Matrix: *Groundwater*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.8 ICP-MS	1	<0.005	U		mg/L	0.005	0.015	11/29/23 16:35	gjl/scp
Aluminum, total	M200.8 ICP-MS	1	0.0721			mg/L	0.005	0.015	11/30/23 9:03	gjl/scp
Antimony, dissolved	M200.8 ICP-MS	1	0.00477			mg/L	0.0004	0.002	11/28/23 15:17	gjl/scp
Antimony, total	M200.8 ICP-MS	1	0.00504			mg/L	0.0004	0.002	11/30/23 9:03	gjl/scp
Arsenic, dissolved	M200.8 ICP-MS	1	0.00691			mg/L	0.0002	0.001	11/28/23 15:17	gjl/scp
Arsenic, total	M200.8 ICP-MS	1	0.00657			mg/L	0.0002	0.001	11/30/23 9:03	gjl/scp
Barium, dissolved	M200.7 ICP	1	0.0226	B		mg/L	0.009	0.035	11/16/23 19:28	wtc
Barium, total	M200.7 ICP	1	0.0214	B		mg/L	0.009	0.035	11/19/23 10:35	brc
Beryllium, dissolved	M200.8 ICP-MS	1	<0.00008	U		mg/L	0.00008	0.00025	11/28/23 15:17	gjl/scp
Beryllium, total	M200.8 ICP-MS	1	<0.00008	U		mg/L	0.00008	0.00025	11/30/23 9:03	gjl/scp
Boron, dissolved	M200.7 ICP	1	0.139			mg/L	0.03	0.1	11/16/23 19:28	wtc
Boron, total	M200.7 ICP	1	0.131			mg/L	0.03	0.1	11/19/23 10:35	brc
Cadmium, dissolved	M200.8 ICP-MS	1	<0.00005	U		mg/L	0.00005	0.00025	11/28/23 15:17	gjl/scp
Cadmium, total	M200.8 ICP-MS	1	0.000052	B		mg/L	0.00005	0.00025	11/30/23 9:03	gjl/scp
Calcium, dissolved	M200.7 ICP	1	34.2			mg/L	0.1	0.5	11/16/23 19:28	wtc
Calcium, total	M200.7 ICP	1	34.9			mg/L	0.1	0.5	11/19/23 10:35	brc
Chromium, dissolved	M200.8 ICP-MS	1	0.00295			mg/L	0.0005	0.002	11/28/23 15:17	gjl/scp
Chromium, total	M200.8 ICP-MS	1	0.00297			mg/L	0.0005	0.002	11/30/23 9:03	gjl/scp
Cobalt, dissolved	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	11/16/23 19:28	wtc
Cobalt, total	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	11/19/23 10:35	brc
Copper, dissolved	M200.8 ICP-MS	1	<0.0008	U		mg/L	0.0008	0.002	11/28/23 15:17	gjl/scp
Copper, total	M200.8 ICP-MS	1	0.00089	B		mg/L	0.0008	0.002	11/30/23 9:03	gjl/scp
Iron, dissolved	M200.7 ICP	1	<0.06	U		mg/L	0.06	0.15	11/16/23 19:28	wtc
Iron, total	M200.7 ICP	1	0.091	B		mg/L	0.06	0.15	11/19/23 10:35	brc
Lead, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.0005	11/28/23 15:17	gjl/scp
Lead, total	M200.8 ICP-MS	1	0.00282			mg/L	0.0001	0.0005	11/30/23 9:03	gjl/scp
Magnesium, dissolved	M200.7 ICP	1	0.69	B		mg/L	0.2	1	11/16/23 19:28	wtc
Magnesium, total	M200.7 ICP	1	0.63	B		mg/L	0.2	1	11/19/23 10:35	brc
Manganese, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	11/16/23 19:28	wtc
Manganese, total	M200.7 ICP	1	0.053			mg/L	0.01	0.05	11/19/23 10:35	brc
Mercury, dissolved	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	11/16/23 12:45	aeh
Mercury, total	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	11/16/23 12:07	aeh
Nickel, dissolved	M200.7 ICP	1	<0.008	U		mg/L	0.008	0.04	11/16/23 19:28	wtc
Nickel, total	M200.7 ICP	1	<0.008	U		mg/L	0.008	0.04	11/19/23 10:35	brc
Potassium, dissolved	M200.7 ICP	1	0.84	B		mg/L	0.5	1	11/16/23 19:28	wtc
Potassium, total	M200.7 ICP	1	0.94	B		mg/L	0.5	1	11/19/23 10:35	brc
Selenium, dissolved	M200.8 ICP-MS	1	0.00060			mg/L	0.0001	0.00025	11/28/23 15:17	gjl/scp
Selenium, total	M200.8 ICP-MS	1	0.00050			mg/L	0.0001	0.00025	11/30/23 9:03	gjl/scp
Silica, dissolved	M200.7 ICP	1	20.1			mg/L	0.2	1	11/16/23 19:28	wtc
Silica, total	M200.7 ICP	1	21.0		*	mg/L	0.2	1	11/19/23 10:35	brc
Silver, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.0005	11/28/23 15:17	gjl/scp
Silver, total	M200.8 ICP-MS	1	0.00067			mg/L	0.0001	0.0005	11/30/23 9:03	gjl/scp
Sodium, dissolved	M200.7 ICP	1	80.5			mg/L	0.2	1	11/16/23 19:28	wtc

South32
Project ID: 4542523524
Sample ID: MW-9-20231030

ACZ Sample ID: ***L84280-01***
Date Sampled: *10/30/23 09:50*
Date Received: *11/02/23*
Sample Matrix: *Groundwater*

Sodium, total	M200.7 ICP	1	80.6			mg/L	0.2	1	11/19/23 10:35	brc
Thallium, dissolved	M200.8 ICP-MS	1	0.00011	B		mg/L	0.0001	0.0005	11/28/23 15:17	gjl/scp
Thallium, total	M200.8 ICP-MS	1	0.00015	B		mg/L	0.0001	0.0005	11/30/23 9:03	gjl/scp
Uranium, dissolved	M200.8 ICP-MS	1	0.00470			mg/L	0.0001	0.0005	11/28/23 15:17	gjl/scp
Uranium, total	M200.8 ICP-MS	1	0.00474			mg/L	0.0001	0.0005	11/30/23 9:03	gjl/scp
Zinc, dissolved	M200.7 ICP	1	0.062			mg/L	0.02	0.05	11/16/23 19:28	wtc
Zinc, total	M200.7 ICP	1	<0.02	U		mg/L	0.02	0.05	11/19/23 10:35	brc

Subcontract

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Miscellaneous subcontract	Subcontracted Work									

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	73.5			mg/L	2	20	11/11/23 0:00	emk
Carbonate as CaCO3		1	<2	U		mg/L	2	20	11/11/23 0:00	emk
Hydroxide as CaCO3		1	<2	U		mg/L	2	20	11/11/23 0:00	emk
Total Alkalinity		1	73.5			mg/L	2	20	11/11/23 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			12/06/23 0:00	calc
Sum of Anions			5.3			meq/L			12/06/23 0:00	calc
Sum of Cations			5.3			meq/L			12/06/23 0:00	calc
Chloride	SM4500Cl-E	1	4.76			mg/L	1	2	11/20/23 16:38	aps
Conductivity @25C	SM2510B	1	555			umhos/cm	1	10	11/11/23 7:42	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5	<0.003	U	*	mg/L	0.003	0.01	11/13/23 14:55	mrd
Fluoride	SM4500F-C	1	0.20	BH	*	mg/L	0.15	0.35	11/28/23 15:44	emk
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		88			mg/L	0.2	5	12/06/23 0:00	calc
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1	0.296		*	mg/L	0.02	0.1	11/18/23 23:21	pjb
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1	<0.1	U	*	mg/L	0.1	0.2	11/12/23 18:22	scs
pH (lab)	SM4500H+ B									
pH		1	8.0	H		units	0.1	0.1	11/11/23 0:00	emk
pH measured at		1	24.0			C	0.1	0.1	11/11/23 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	372			mg/L	20	40	11/06/23 10:38	smr
Sulfate	D516-02/-07/-11 - TURBIDIMETRIC	10	173		*	mg/L	10	50	11/17/23 12:18	aps
TDS (calculated)	Calculation		365			mg/L			12/06/23 0:00	calc
TDS (ratio - measured/calculated)	Calculation		1.02						12/06/23 0:00	calc

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

REP001.03.15.02

AZMINING

ACZ Project ID: ***L84280***

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
WG578499													
WG578499PBW1	PBW	11/10/23 19:52				3.3	mg/L		-20	20			
WG578499LCSW3	LCSW	11/10/23 20:11	WC231106-1	820.0001		796.3	mg/L	97	90	110			
WG578499LCSW6	LCSW	11/10/23 22:38	WC231106-1	820.0001		824.5	mg/L	101	90	110			
WG578499PBW2	PBW	11/10/23 22:46				7.5	mg/L		-20	20			
WG578499LCSW9	LCSW	11/11/23 0:59	WC231106-1	820.0001		827.6	mg/L	101	90	110			
WG578499PBW3	PBW	11/11/23 1:08				U	mg/L		-20	20			
WG578499LCSW12	LCSW	11/11/23 3:40	WC231106-1	820.0001		835.7	mg/L	102	90	110			
WG578499PBW4	PBW	11/11/23 3:48				3.8	mg/L		-20	20			
WG578499LCSW15	LCSW	11/11/23 6:52	WC231106-1	820.0001		849.3	mg/L	104	90	110			
WG578499PBW5	PBW	11/11/23 7:00				7.6	mg/L		-20	20			
L84281-01DUP	DUP	11/11/23 8:18			190	207.2	mg/L				9	20	
WG578499LCSW18	LCSW	11/11/23 8:47	WC231106-1	820.0001		850.2	mg/L	104	90	110			

Aluminum, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579485													
WG579485ICV	ICV	11/29/23 16:29	MS231106-9	.1		.1042	mg/L	104	90	110			
WG579485ICB	ICB	11/29/23 16:31				U	mg/L		-0.011	0.011			
WG579485LFB	LFB	11/29/23 16:33	MS231108-4	.050065		.0466	mg/L	93	85	115			
L84280-02AS	AS	11/29/23 16:39	MS231108-4	.050065	U	.0475	mg/L	95	70	130			
L84280-02ASD	ASD	11/29/23 16:41	MS231108-4	.050065	U	.0472	mg/L	94	70	130	1	20	

Aluminum, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579555													
WG579555ICV	ICV	11/30/23 8:55	MS231106-9	.1		.1001	mg/L	100	90	110			
WG579555ICB	ICB	11/30/23 8:57				U	mg/L		-0.015	0.015			
WG579321LRB	LRB	11/30/23 8:59				U	mg/L		-0.011	0.011			
WG579321LFB	LFB	11/30/23 9:01	MS231108-4	.050065		.0442	mg/L	88	85	115			
L84281-01LFM	LFM	11/30/23 9:10	MS2XW	.10011	U	.0957	mg/L	96	70	130			
L84281-01LFMD	LFMD	11/30/23 9:12	MS2XW	.10011	U	.0991	mg/L	99	70	130	3	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579449													
WG579449ICV	ICV	11/28/23 15:11	MS231106-9	.02002		.02011	mg/L	100	90	110			
WG579449ICB	ICB	11/28/23 15:13				U	mg/L		-0.00088	0.00088			
WG579449LFB	LFB	11/28/23 15:15	MS231101-2	.01		.0091	mg/L	91	85	115			
L84281-01AS	AS	11/28/23 15:24	MS231101-2	.01	U	.00914	mg/L	91	70	130			
L84281-01ASD	ASD	11/28/23 15:26	MS231101-2	.01	U	.0091	mg/L	91	70	130	0	20	

AZMINING

ACZ Project ID: ***L84280***

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.

Antimony, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579555													
WG579555ICV	ICV	11/30/23 8:55	MS231106-9	.02002		.01829	mg/L	91	90	110			
WG579555ICB	ICB	11/30/23 8:57				U	mg/L		-0.0012	0.0012			
WG579321LRB	LRB	11/30/23 8:59				U	mg/L		-0.00088	0.00088			
WG579321LFB	LFB	11/30/23 9:01	MS231108-4	.01		.00924	mg/L	92	85	115			
L84281-01LFM	LFM	11/30/23 9:10	MS2XW	.02002	U	.01764	mg/L	88	70	130			
L84281-01LFMD	LFMD	11/30/23 9:12	MS2XW	.02002	U	.01937	mg/L	97	70	130	9	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579449													
WG579449ICV	ICV	11/28/23 15:11	MS231106-9	.05		.05244	mg/L	105	90	110			
WG579449ICB	ICB	11/28/23 15:13				U	mg/L		-0.00044	0.00044			
WG579449LFB	LFB	11/28/23 15:15	MS231101-2	.0501		.04671	mg/L	93	85	115			
L84281-01AS	AS	11/28/23 15:24	MS231101-2	.0501	.00138	.04937	mg/L	96	70	130			
L84281-01ASD	ASD	11/28/23 15:26	MS231101-2	.0501	.00138	.04776	mg/L	93	70	130	3	20	

Arsenic, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579555													
WG579555ICV	ICV	11/30/23 8:55	MS231106-9	.05		.05197	mg/L	104	90	110			
WG579555ICB	ICB	11/30/23 8:57				U	mg/L		-0.0006	0.0006			
WG579321LRB	LRB	11/30/23 8:59				U	mg/L		-0.00044	0.00044			
WG579321LFB	LFB	11/30/23 9:01	MS231108-4	.0501		.04615	mg/L	92	85	115			
L84281-01LFM	LFM	11/30/23 9:10	MS2XW	.1002	.00156	.09144	mg/L	90	70	130			
L84281-01LFMD	LFMD	11/30/23 9:12	MS2XW	.1002	.00156	.09508	mg/L	93	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
WG578868													
WG578868ICV	ICV	11/16/23 19:07	II231107-1	2		1.9742	mg/L	99	95	105			
WG578868ICB	ICB	11/16/23 19:13				U	mg/L		-0.027	0.027			
WG578868LFB	LFB	11/16/23 19:25	II231027-2	.501		.51	mg/L	102	85	115			
L84280-01AS	AS	11/16/23 19:31	II231027-2	.501	.0226	.5497	mg/L	105	85	115			
L84280-01ASD	ASD	11/16/23 19:34	II231027-2	.501	.0226	.5358	mg/L	102	85	115	3	20	

Barium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579015													
WG579015ICV	ICV	11/19/23 10:10	II231107-2	2		1.9642	mg/L	98	95	105			
WG579015ICB	ICB	11/19/23 10:16				U	mg/L		-0.027	0.027			
WG578923LRB	LRB	11/19/23 10:29				U	mg/L		-0.0198	0.0198			
WG578923LFB	LFB	11/19/23 10:32	II231027-2	.501		.497	mg/L	99	85	115			
L84283-05LFM	LFM	11/19/23 10:58	II231027-2	.501	.16	.659	mg/L	100	70	130			
L84283-05LFMD	LFMD	11/19/23 11:07	II231027-2	.501	.16	.6517	mg/L	98	70	130	1	20	

AZMINING

ACZ Project ID: ***L84280***

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.

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579449													
WG579449ICV	ICV	11/28/23 15:11	MS231106-9	.05		.052477	mg/L	105	90	110			
WG579449ICB	ICB	11/28/23 15:13				U	mg/L		-0.000176	0.000176			
WG579449LFB	LFB	11/28/23 15:15	MS231101-2	.05005		.04733	mg/L	95	85	115			
L84281-01AS	AS	11/28/23 15:24	MS231101-2	.05005	U	.043592	mg/L	87	70	130			
L84281-01ASD	ASD	11/28/23 15:26	MS231101-2	.05005	U	.043171	mg/L	86	70	130	1	20	

Beryllium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579555													
WG579555ICV	ICV	11/30/23 8:55	MS231106-9	.05		.049855	mg/L	100	90	110			
WG579555ICB	ICB	11/30/23 8:57				U	mg/L		-0.00024	0.00024			
WG579321LRB	LRB	11/30/23 8:59				U	mg/L		-0.000176	0.000176			
WG579321LFB	LFB	11/30/23 9:01	MS231108-4	.05005		.04664	mg/L	93	85	115			
L84281-01LFM	LFM	11/30/23 9:10	MS2XW	.1001	U	.090607	mg/L	91	70	130			
L84281-01LFMD	LFMD	11/30/23 9:12	MS2XW	.1001	U	.095124	mg/L	95	70	130	5	20	

Boron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578868													
WG578868ICV	ICV	11/16/23 19:07	II231107-1	2		2.039	mg/L	102	95	105			
WG578868ICB	ICB	11/16/23 19:13				U	mg/L		-0.09	0.09			
WG578868LFB	LFB	11/16/23 19:25	II231027-2	.5005		.515	mg/L	103	85	115			
L84280-01AS	AS	11/16/23 19:31	II231027-2	.5005	.139	.667	mg/L	105	85	115			
L84280-01ASD	ASD	11/16/23 19:34	II231027-2	.5005	.139	.645	mg/L	101	85	115	3	20	

Boron, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579015													
WG579015ICV	ICV	11/19/23 10:10	II231107-2	2		2.01	mg/L	101	95	105			
WG579015ICB	ICB	11/19/23 10:16				U	mg/L		-0.09	0.09			
WG578923LRB	LRB	11/19/23 10:29				U	mg/L		-0.066	0.066			
WG578923LFB	LFB	11/19/23 10:32	II231027-2	.5005		.493	mg/L	99	85	115			
L84283-05LFM	LFM	11/19/23 10:58	II231027-2	.5005	U	.511	mg/L	102	70	130			
L84283-05LFMD	LFMD	11/19/23 11:07	II231027-2	.5005	U	.503	mg/L	100	70	130	2	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579449													
WG579449ICV	ICV	11/28/23 15:11	MS231106-9	.05		.05217	mg/L	104	90	110			
WG579449ICB	ICB	11/28/23 15:13				U	mg/L		-0.00011	0.00011			
WG579449LFB	LFB	11/28/23 15:15	MS231101-2	.05005		.046414	mg/L	93	85	115			
L84281-01AS	AS	11/28/23 15:24	MS231101-2	.05005	U	.046144	mg/L	92	70	130			
L84281-01ASD	ASD	11/28/23 15:26	MS231101-2	.05005	U	.045144	mg/L	90	70	130	2	20	

AZMINING

ACZ Project ID: ***L84280***

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, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579555													
WG579555ICV	ICV	11/30/23 8:55	MS231106-9	.05		.046822	mg/L	94	90	110			
WG579555ICB	ICB	11/30/23 8:57				U	mg/L		-0.00015	0.00015			
WG579321LRB	LRB	11/30/23 8:59				U	mg/L		-0.00011	0.00011			
WG579321LFB	LFB	11/30/23 9:01	MS231108-4	.05005		.043914	mg/L	88	85	115			
L84281-01LFM	LFM	11/30/23 9:10	MS2XW	.1001	U	.084169	mg/L	84	70	130			
L84281-01LFMD	LFMD	11/30/23 9:12	MS2XW	.1001	U	.090314	mg/L	90	70	130	7	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578868													
WG578868ICV	ICV	11/16/23 19:07	II231107-1	100		98.87	mg/L	99	95	105			
WG578868ICB	ICB	11/16/23 19:13				U	mg/L		-0.3	0.3			
WG578868LFB	LFB	11/16/23 19:25	II231027-2	67.98753		69.66	mg/L	102	85	115			
L84280-01AS	AS	11/16/23 19:31	II231027-2	67.98753	34.2	106.1	mg/L	106	85	115			
L84280-01ASD	ASD	11/16/23 19:34	II231027-2	67.98753	34.2	103.3	mg/L	102	85	115	3	20	

Calcium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579015													
WG579015ICV	ICV	11/19/23 10:10	II231107-2	100		101.25	mg/L	101	95	105			
WG579015ICB	ICB	11/19/23 10:16				U	mg/L		-0.3	0.3			
WG578923LRB	LRB	11/19/23 10:29				U	mg/L		-0.22	0.22			
WG578923LFB	LFB	11/19/23 10:32	II231027-2	67.98753		71.98	mg/L	106	85	115			
L84283-05LFM	LFM	11/19/23 10:58	II231027-2	67.98753	76.5	151.2	mg/L	110	70	130			
L84283-05LFMD	LFMD	11/19/23 11:07	II231027-2	67.98753	76.5	149.9	mg/L	108	70	130	1	20	

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579060													
WG579060ICB	ICB	11/20/23 9:16				U	mg/L						
WG579060ICV	ICV	11/20/23 9:16	WI230501-8	55		56.56	mg/L	103	90	110			
WG579060LFB	LFB	11/20/23 16:18	WI230629-2	30.03		32.51	mg/L	108	90	110			
L84281-01AS	AS	11/20/23 16:18	WI230629-2	30.03	7.12	38.92	mg/L	106	90	110			
L84281-02DUP	DUP	11/20/23 16:40			14.6	14.65	mg/L				0	20	

Chromium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579449													
WG579449ICV	ICV	11/28/23 15:11	MS231106-9	.05		.05348	mg/L	107	90	110			
WG579449ICB	ICB	11/28/23 15:13				U	mg/L		-0.0011	0.0011			
WG579449LFB	LFB	11/28/23 15:15	MS231101-2	.0501		.04738	mg/L	95	85	115			
L84281-01AS	AS	11/28/23 15:24	MS231101-2	.0501	.00071	.04646	mg/L	91	70	130			
L84281-01ASD	ASD	11/28/23 15:26	MS231101-2	.0501	.00071	.04457	mg/L	88	70	130	4	20	

AZMINING

ACZ Project ID: ***L84280***

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.

Chromium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579555													
WG579555ICV	ICV	11/30/23 8:55	MS231106-9	.05		.04963	mg/L	99	90	110			
WG579555ICB	ICB	11/30/23 8:57				U	mg/L		-0.0015	0.0015			
WG579321LRB	LRB	11/30/23 8:59				U	mg/L		-0.0011	0.0011			
WG579321LFB	LFB	11/30/23 9:01	MS231108-4	.0501		.04355	mg/L	87	85	115			
L84281-01LFM	LFM	11/30/23 9:10	MS2XW	.1001	U	.08353	mg/L	83	70	130			
L84281-01LFMD	LFMD	11/30/23 9:12	MS2XW	.1001	U	.08698	mg/L	87	70	130	4	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578868													
WG578868ICV	ICV	11/16/23 19:07	II231107-1	2.01		2.011	mg/L	100	95	105			
WG578868ICB	ICB	11/16/23 19:13				U	mg/L		-0.06	0.06			
WG578868LFB	LFB	11/16/23 19:25	II231027-2	.5005		.493	mg/L	99	85	115			
L84280-01AS	AS	11/16/23 19:31	II231027-2	.5005	U	.517	mg/L	103	85	115			
L84280-01ASD	ASD	11/16/23 19:34	II231027-2	.5005	U	.499	mg/L	100	85	115	4	20	

Cobalt, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579015													
WG579015ICV	ICV	11/19/23 10:10	II231107-2	2.01		2.006	mg/L	100	95	105			
WG579015ICB	ICB	11/19/23 10:16				U	mg/L		-0.06	0.06			
WG578923LRB	LRB	11/19/23 10:29				U	mg/L		-0.044	0.044			
WG578923LFB	LFB	11/19/23 10:32	II231027-2	.5005		.507	mg/L	101	85	115			
L84283-05LFM	LFM	11/19/23 10:58	II231027-2	.5005	U	.513	mg/L	102	70	130			
L84283-05LFMD	LFMD	11/19/23 11:07	II231027-2	.5005	U	.503	mg/L	100	70	130	2	20	

Conductivity @25C SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578499													
WG578499LCSW2	LCSW	11/10/23 19:58	PCN625155	1409		1382	umhos/cm	98	90	110			
WG578499LCSW5	LCSW	11/10/23 22:26	PCN625155	1409		1383	umhos/cm	98	90	110			
WG578499LCSW8	LCSW	11/11/23 0:47	PCN625155	1409		1380	umhos/cm	98	90	110			
WG578499LCSW11	LCSW	11/11/23 3:27	PCN625155	1409		1359	umhos/cm	96	90	110			
WG578499LCSW14	LCSW	11/11/23 6:38	PCN625155	1409		1348	umhos/cm	96	90	110			
L84281-01DUP	DUP	11/11/23 8:18			677	677	umhos/cm				0	20	
WG578499LCSW17	LCSW	11/11/23 8:33	PCN625155	1409		1340	umhos/cm	95	90	110			

Copper, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579449													
WG579449ICV	ICV	11/28/23 15:11	MS231106-9	.05		.05072	mg/L	101	90	110			
WG579449ICB	ICB	11/28/23 15:13				U	mg/L		-0.00176	0.00176			
WG579449LFB	LFB	11/28/23 15:15	MS231101-2	.05005		.04463	mg/L	89	85	115			
L84281-01AS	AS	11/28/23 15:24	MS231101-2	.05005	.0123	.05319	mg/L	82	70	130			
L84281-01ASD	ASD	11/28/23 15:26	MS231101-2	.05005	.0123	.05102	mg/L	77	70	130	4	20	

AZMINING

ACZ Project ID: ***L84280***

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.

Copper, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579555													
WG579555ICV	ICV	11/30/23 8:55	MS231106-9	.05		.04929	mg/L	99	90	110			
WG579555ICB	ICB	11/30/23 8:57				U	mg/L		-0.0024	0.0024			
WG579321LRB	LRB	11/30/23 8:59				U	mg/L		-0.00176	0.00176			
WG579321LFB	LFB	11/30/23 9:01	MS231108-4	.05005		.04318	mg/L	86	85	115			
L84281-01LFM	LFM	11/30/23 9:10	MS2XW	.1002	.0043	.08209	mg/L	78	70	130			
L84281-01LFMD	LFMD	11/30/23 9:12	MS2XW	.1002	.0043	.08593	mg/L	81	70	130	5	20	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578615													
WG578615ICV	ICV	11/13/23 14:41	WI231113-9	.3003		.2714	mg/L	90	90	110			
WG578615ICB	ICB	11/13/23 14:42				U	mg/L		-0.003	0.003			
WG578550LRB	LRB	11/13/23 14:43				U	mg/L		-0.003	0.003			
WG578550LFB	LFB	11/13/23 14:44	WI231109-2	.2		.2006	mg/L	100	90	110			
L84258-10DUP	DUP	11/13/23 14:54			U	U	mg/L				0	20	RA
L84280-01LFM	LFM	11/13/23 14:56	WI231109-2	.2	U	.2034	mg/L	102	90	110			
L84281-01DUP	DUP	11/13/23 14:59			U	U	mg/L				0	20	RA
L84423-01LFM	LFM	11/13/23 15:24	WI231109-2	.2	U	.1992	mg/L	100	90	110			

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579419													
WG579419ICV	ICV	11/28/23 13:34	WC231116-2	2.002		2.09	mg/L	104	90	110			
WG579419ICB	ICB	11/28/23 13:42				U	mg/L		-0.3	0.3			
WG579419LFB1	LFB	11/28/23 13:57	WC230825-1	5.005		5.44	mg/L	109	90	110			
L84281-01AS	AS	11/28/23 16:22	WC230825-1	5.005	.24	5.02	mg/L	96	90	110			
L84281-01ASD	ASD	11/28/23 16:26	WC230825-1	5.005	.24	4.95	mg/L	94	90	110	1	20	
WG579419LFB2	LFB	11/28/23 16:39	WC230825-1	5.005		4.95	mg/L	99	90	110			

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578868													
WG578868ICV	ICV	11/16/23 19:07	II231107-1	2		1.938	mg/L	97	95	105			
WG578868ICB	ICB	11/16/23 19:13				U	mg/L		-0.18	0.18			
WG578868LFB	LFB	11/16/23 19:25	II231027-2	.9981		1.036	mg/L	104	85	115			
L84280-01AS	AS	11/16/23 19:31	II231027-2	.9981	U	1.063	mg/L	107	85	115			
L84280-01ASD	ASD	11/16/23 19:34	II231027-2	.9981	U	1.052	mg/L	105	85	115	1	20	

Iron, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579015													
WG579015ICV	ICV	11/19/23 10:10	II231107-2	2		2.027	mg/L	101	95	105			
WG579015ICB	ICB	11/19/23 10:16				U	mg/L		-0.18	0.18			
WG578923LRB	LRB	11/19/23 10:29				U	mg/L		-0.132	0.132			
WG578923LFB	LFB	11/19/23 10:32	II231027-2	.9981		1.054	mg/L	106	85	115			
L84283-05LFM	LFM	11/19/23 10:58	II231027-2	.9981	4.1	5.183	mg/L	111	70	130			
L84283-05LFMD	LFMD	11/19/23 11:07	II231027-2	.9981	4.1	5.137	mg/L	106	70	130	1	20	

AZMINING

ACZ Project ID: ***L84280***

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.

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579449													
WG579449ICV	ICV	11/28/23 15:11	MS231106-9	.05		.05215	mg/L	104	90	110			
WG579449ICB	ICB	11/28/23 15:13				U	mg/L		-0.00022	0.00022			
WG579449LFB	LFB	11/28/23 15:15	MS231101-2	.05005		.04573	mg/L	91	85	115			
L84281-01AS	AS	11/28/23 15:24	MS231101-2	.05005	U	.04551	mg/L	91	70	130			
L84281-01ASD	ASD	11/28/23 15:26	MS231101-2	.05005	U	.04497	mg/L	90	70	130	1	20	

Lead, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579555													
WG579555ICV	ICV	11/30/23 8:55	MS231106-9	.05		.05035	mg/L	101	90	110			
WG579555ICB	ICB	11/30/23 8:57				U	mg/L		-0.0003	0.0003			
WG579321LRB	LRB	11/30/23 8:59				U	mg/L		-0.00022	0.00022			
WG579321LFB	LFB	11/30/23 9:01	MS231108-4	.05005		.04507	mg/L	90	85	115			
L84281-01LFM	LFM	11/30/23 9:10	MS2XW	.1001	U	.08872	mg/L	89	70	130			
L84281-01LFMD	LFMD	11/30/23 9:12	MS2XW	.1001	U	.09496	mg/L	95	70	130	7	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578868													
WG578868ICV	ICV	11/16/23 19:07	II231107-1	100		98.21	mg/L	98	95	105			
WG578868ICB	ICB	11/16/23 19:13				U	mg/L		-0.6	0.6			
WG578868LFB	LFB	11/16/23 19:25	II231027-2	49.80792		50.46	mg/L	101	85	115			
L84280-01AS	AS	11/16/23 19:31	II231027-2	49.80792	.69	53.57	mg/L	106	85	115			
L84280-01ASD	ASD	11/16/23 19:34	II231027-2	49.80792	.69	51.91	mg/L	103	85	115	3	20	

Magnesium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579015													
WG579015ICV	ICV	11/19/23 10:10	II231107-2	100		101.1	mg/L	101	95	105			
WG579015ICB	ICB	11/19/23 10:16				U	mg/L		-0.6	0.6			
WG578923LRB	LRB	11/19/23 10:29				U	mg/L		-0.44	0.44			
WG578923LFB	LFB	11/19/23 10:32	II231027-2	49.80792		51.78	mg/L	104	85	115			
L84283-05LFM	LFM	11/19/23 10:58	II231027-2	49.80792	17.6	69.9	mg/L	105	70	130			
L84283-05LFMD	LFMD	11/19/23 11:07	II231027-2	49.80792	17.6	69.38	mg/L	104	70	130	1	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578868													
WG578868ICV	ICV	11/16/23 19:07	II231107-1	2		1.94	mg/L	97	95	105			
WG578868ICB	ICB	11/16/23 19:13				U	mg/L		-0.03	0.03			
WG578868LFB	LFB	11/16/23 19:25	II231027-2	.501		.508	mg/L	101	85	115			
L84280-01AS	AS	11/16/23 19:31	II231027-2	.501	U	.529	mg/L	106	85	115			
L84280-01ASD	ASD	11/16/23 19:34	II231027-2	.501	U	.516	mg/L	103	85	115	2	20	

AZMINING

ACZ Project ID: ***L84280***

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.

Manganese, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579015													
WG579015ICV	ICV	11/19/23 10:10	II231107-2	2		1.956	mg/L	98	95	105			
WG579015ICB	ICB	11/19/23 10:16				U	mg/L		-0.03	0.03			
WG578923LRB	LRB	11/19/23 10:29				U	mg/L		-0.022	0.022			
WG578923LFB	LFB	11/19/23 10:32	II231027-2	.501		.512	mg/L	102	85	115			
L84283-05LFM	LFM	11/19/23 10:58	II231027-2	.501	.816	1.343	mg/L	105	70	130			
L84283-05LFMD	LFMD	11/19/23 11:07	II231027-2	.501	.816	1.327	mg/L	102	70	130	1	20	

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578762													
WG578762ICV	ICV	11/16/23 11:25	HG231106-3	.005		.00507	mg/L	101	95	105			
WG578762ICB	ICB	11/16/23 11:26				U	mg/L		-0.0002	0.0002			
WG578765													
WG578765LRB	LRB	11/16/23 12:44				U	mg/L		-0.00044	0.00044			
WG578765LFB	LFB	11/16/23 12:45	HG231106-6	.002002		.00193	mg/L	96	85	115			
L84281-01LFM	LFM	11/16/23 12:49	HG231106-6	.002002	U	.00215	mg/L	107	85	115			
L84281-01LFMD	LFMD	11/16/23 12:50	HG231106-6	.002002	U	.00213	mg/L	106	85	115	1	20	

Mercury, total M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578762													
WG578762ICV	ICV	11/16/23 11:25	HG231106-3	.005		.00507	mg/L	101	95	105			
WG578762ICB	ICB	11/16/23 11:26				U	mg/L		-0.0002	0.0002			
WG578763													
WG578763LRB	LRB	11/16/23 12:05				U	mg/L		-0.00044	0.00044			
WG578763LFB	LFB	11/16/23 12:06	HG231106-6	.002002		.0021	mg/L	105	85	115			
L84281-01LFM	LFM	11/16/23 12:11	HG231106-6	.002002	U	.0022	mg/L	110	85	115			
L84281-01LFMD	LFMD	11/16/23 12:12	HG231106-6	.002002	U	.00225	mg/L	112	85	115	2	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578868													
WG578868ICV	ICV	11/16/23 19:07	II231107-1	2.002		1.9852	mg/L	99	95	105			
WG578868ICB	ICB	11/16/23 19:13				U	mg/L		-0.024	0.024			
WG578868LFB	LFB	11/16/23 19:25	II231027-2	.5		.5013	mg/L	100	85	115			
L84280-01AS	AS	11/16/23 19:31	II231027-2	.5	U	.5205	mg/L	104	85	115			
L84280-01ASD	ASD	11/16/23 19:34	II231027-2	.5	U	.5037	mg/L	101	85	115	3	20	

AZMINING

ACZ Project ID: ***L84280***

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.

Nickel, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579015													
WG579015ICV	ICV	11/19/23 10:10	II231107-2	2.002		1.972	mg/L	99	95	105			
WG579015ICB	ICB	11/19/23 10:16				U	mg/L		-0.024	0.024			
WG578923LRB	LRB	11/19/23 10:29				U	mg/L		-0.0176	0.0176			
WG578923LFB	LFB	11/19/23 10:32	II231027-2	.5		.514	mg/L	103	85	115			
L84283-05LFM	LFM	11/19/23 10:58	II231027-2	.5	U	.5135	mg/L	103	70	130			
L84283-05LFMD	LFMD	11/19/23 11:07	II231027-2	.5	U	.5059	mg/L	101	70	130	1	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
WG579010													
WG579010LFB	LFB	11/18/23 23:20	WI230829-3	2		2.101	mg/L	105	90	110			
L84281-01DUP	DUP	11/18/23 23:26			1.16	1.164	mg/L				0	20	
L84281-01AS	AS	11/18/23 23:27	WI230829-3	2	1.16	3.404	mg/L	112	90	110			M1

Nitrogen, ammonia M350.1 Auto Salicylate w/gas diffusion

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578538													
WG578538ICV	ICV	11/12/23 16:48	WI231102-3	12		11.844	mg/L	99	90	110			
WG578538ICB	ICB	11/12/23 16:50				U	mg/L		-0.1	0.1			
WG578539													
WG578539LFB	LFB	11/12/23 17:55	WI231102-6	10		10.199	mg/L	102	90	110			
L84281-01AS	AS	11/12/23 18:31	WI231102-6	10	U	9.435	mg/L	94	90	110			
L84281-02DUP	DUP	11/12/23 18:33			U	U	mg/L				0	20	RA

pH (lab) SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578499													
WG578499LCSW1	LCSW	11/10/23 19:56	PCN624449	6		6.05	units	101	5.9	6.1			
WG578499LCSW4	LCSW	11/10/23 22:24	PCN624449	6		6.01	units	100	5.9	6.1			
WG578499LCSW7	LCSW	11/11/23 0:45	PCN624449	6		6.02	units	100	5.9	6.1			
WG578499LCSW10	LCSW	11/11/23 3:25	PCN624449	6		6.07	units	101	5.9	6.1			
WG578499LCSW13	LCSW	11/11/23 6:37	PCN624449	6		6.06	units	101	5.9	6.1			
L84281-01DUP	DUP	11/11/23 8:18			8.2	8.3	units				1	20	
WG578499LCSW16	LCSW	11/11/23 8:31	PCN624449	6		6.06	units	101	5.9	6.1			

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578868													
WG578868ICV	ICV	11/16/23 19:07	II231107-1	20		19.59	mg/L	98	95	105			
WG578868ICB	ICB	11/16/23 19:13				U	mg/L		-1.5	1.5			
WG578868LFB	LFB	11/16/23 19:25	II231027-2	99.95693		100.8	mg/L	101	85	115			
L84280-01AS	AS	11/16/23 19:31	II231027-2	99.95693	.84	107.6	mg/L	107	85	115			
L84280-01ASD	ASD	11/16/23 19:34	II231027-2	99.95693	.84	103.9	mg/L	103	85	115	3	20	

AZMINING

ACZ Project ID: ***L84280***

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.

Potassium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579015													
WG579015ICV	ICV	11/19/23 10:10	II231107-2	20		20.02	mg/L	100	95	105			
WG579015ICB	ICB	11/19/23 10:16				U	mg/L		-1.5	1.5			
WG578923LRB	LRB	11/19/23 10:29				U	mg/L		-1.1	1.1			
WG578923LFB	LFB	11/19/23 10:32	II231027-2	99.95693		104.1	mg/L	104	85	115			
L84283-05LFM	LFM	11/19/23 10:58	II231027-2	99.95693	2.37	108.3	mg/L	106	70	130			
L84283-05LFMD	LFMD	11/19/23 11:07	II231027-2	99.95693	2.37	106.9	mg/L	105	70	130	1	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578045													
WG578045PBW	PBW	11/06/23 9:44				U	mg/L		-20	20			
WG578045LCSW	LCSW	11/06/23 9:46	PCN625109	1000		970	mg/L	97	80	120			
L84280-02DUP	DUP	11/06/23 10:44			376	378	mg/L				1	10	
WG578048													
WG578048PBW	PBW	11/06/23 11:45				U	mg/L		-20	20			
WG578048LCSW	LCSW	11/06/23 11:47	PCN625109	1000		940	mg/L	94	80	120			
L84336-01DUP	DUP	11/06/23 12:13			152	166	mg/L				9	10	RA

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579449													
WG579449ICV	ICV	11/28/23 15:11	MS231106-9	.05		.05414	mg/L	108	90	110			
WG579449ICB	ICB	11/28/23 15:13				U	mg/L		-0.00022	0.00022			
WG579449LFB	LFB	11/28/23 15:15	MS231101-2	.05005		.04789	mg/L	96	85	115			
L84281-01AS	AS	11/28/23 15:24	MS231101-2	.05005	.00062	.05258	mg/L	104	70	130			
L84281-01ASD	ASD	11/28/23 15:26	MS231101-2	.05005	.00062	.05079	mg/L	100	70	130	3	20	

Selenium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579555													
WG579555ICV	ICV	11/30/23 8:55	MS231106-9	.05		.05016	mg/L	100	90	110			
WG579555ICB	ICB	11/30/23 8:57				U	mg/L		-0.0003	0.0003			
WG579321LRB	LRB	11/30/23 8:59				U	mg/L		-0.00022	0.00022			
WG579321LFB	LFB	11/30/23 9:01	MS231108-4	.05005		.04675	mg/L	93	85	115			
L84281-01LFM	LFM	11/30/23 9:10	MS2XW	.1003	.00055	.09198	mg/L	91	70	130			
L84281-01LFMD	LFMD	11/30/23 9:12	MS2XW	.1003	.00055	.0952	mg/L	94	70	130	3	20	

Silica, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578868													
WG578868ICV	ICV	11/16/23 19:07	II231107-1	42.8		41.78	mg/L	98	95	105			
WG578868ICB	ICB	11/16/23 19:13				U	mg/L		-0.6	0.6			
WG578868LFB	LFB	11/16/23 19:25	II231027-2	21.42782		21.34	mg/L	100	85	115			
L84280-01AS	AS	11/16/23 19:31	II231027-2	21.42782	20.1	41.35	mg/L	99	85	115			
L84280-01ASD	ASD	11/16/23 19:34	II231027-2	21.42782	20.1	40.66	mg/L	96	85	115	2	20	

AZMINING

ACZ Project ID: ***L84280***

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.

Silica, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579015													
WG579015ICV	ICV	11/19/23 10:10	II231107-2	42.8		44.41	mg/L	104	95	105			
WG579015ICB	ICB	11/19/23 10:16				U	mg/L		-0.6	0.6			
WG578923LRB	LRB	11/19/23 10:29				U	mg/L		-0.44	0.44			
WG578923LFB	LFB	11/19/23 10:32	II231027-2	21.42782		22.8	mg/L	106	85	115			
L84283-05LFM	LFM	11/19/23 10:58	II231027-2	21.42782	28.6	48.99	mg/L	95	70	130			
L84283-05LFMD	LFMD	11/19/23 11:07	II231027-2	21.42782	28.6	46.97	mg/L	86	70	130	4	20	

Silver, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579449													
WG579449ICV	ICV	11/28/23 15:11	MS231106-9	.02		.02066	mg/L	103	90	110			
WG579449ICB	ICB	11/28/23 15:13				U	mg/L		-0.00022	0.00022			
WG579449LFB	LFB	11/28/23 15:15	MS231101-2	.01		.00868	mg/L	87	85	115			
L84281-01AS	AS	11/28/23 15:24	MS231101-2	.01	U	.00815	mg/L	82	70	130			
L84281-01ASD	ASD	11/28/23 15:26	MS231101-2	.01	U	.00786	mg/L	79	70	130	4	20	

Silver, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579555													
WG579555ICV	ICV	11/30/23 8:55	MS231106-9	.02		.01869	mg/L	93	90	110			
WG579555ICB	ICB	11/30/23 8:57				U	mg/L		-0.0003	0.0003			
WG579321LRB	LRB	11/30/23 8:59				U	mg/L		-0.00022	0.00022			
WG579321LFB	LFB	11/30/23 9:01	MS231108-4	.01		.00855	mg/L	86	85	115			
L84281-01LFM	LFM	11/30/23 9:10	MS2XW	.02	U	.01551	mg/L	78	70	130			
L84281-01LFMD	LFMD	11/30/23 9:12	MS2XW	.02	U	.01692	mg/L	85	70	130	9	20	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578868													
WG578868ICV	ICV	11/16/23 19:07	II231107-1	100		99.87	mg/L	100	95	105			
WG578868ICB	ICB	11/16/23 19:13				U	mg/L		-0.6	0.6			
WG578868LFB	LFB	11/16/23 19:25	II231027-2	100.0094		101.8	mg/L	102	85	115			
L84280-01AS	AS	11/16/23 19:31	II231027-2	100.0094	80.5	183.5	mg/L	103	85	115			
L84280-01ASD	ASD	11/16/23 19:34	II231027-2	100.0094	80.5	179.3	mg/L	99	85	115	2	20	

Sodium, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579015													
WG579015ICV	ICV	11/19/23 10:10	II231107-2	100		101.13	mg/L	101	95	105			
WG579015ICB	ICB	11/19/23 10:16				U	mg/L		-0.6	0.6			
WG578923LRB	LRB	11/19/23 10:29				U	mg/L		-0.44	0.44			
WG578923LFB	LFB	11/19/23 10:32	II231027-2	100.0094		102.9	mg/L	103	85	115			
L84283-05LFM	LFM	11/19/23 10:58	II231027-2	100.0094	17.9	121.7	mg/L	104	70	130			
L84283-05LFMD	LFMD	11/19/23 11:07	II231027-2	100.0094	17.9	120.5	mg/L	103	70	130	1	20	

AZMINING

ACZ Project ID: ***L84280***

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
WG578943													
WG578943ICB	ICB	11/17/23 9:19				U	mg/L		-3	3			
WG578943ICV	ICV	11/17/23 9:19	WI231113-7	20		19.6	mg/L	98	90	110			
WG578943LFB	LFB	11/17/23 11:40	WI230119-9	10		9.8	mg/L	98	90	110			
L84281-01AS	AS	11/17/23 12:19	SO4TURB10X	10	167	176.9	mg/L	99	90	110			
L84281-01ASD	ASD	11/17/23 12:19	SO4TURB10X	10	167	174.9	mg/L	79	90	110	1	20	M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579449													
WG579449ICV	ICV	11/28/23 15:11	MS231106-9	.05		.05496	mg/L	110	90	110			
WG579449ICB	ICB	11/28/23 15:13				U	mg/L		-0.00022	0.00022			
WG579449LFB	LFB	11/28/23 15:15	MS231101-2	.0501		.04685	mg/L	94	85	115			
L84281-01AS	AS	11/28/23 15:24	MS231101-2	.0501	U	.04487	mg/L	90	70	130			
L84281-01ASD	ASD	11/28/23 15:26	MS231101-2	.0501	U	.04403	mg/L	88	70	130	2	20	

Thallium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579555													
WG579555ICV	ICV	11/30/23 8:55	MS231106-9	.05		.05317	mg/L	106	90	110			
WG579555ICB	ICB	11/30/23 8:57				U	mg/L		-0.0003	0.0003			
WG579321LRB	LRB	11/30/23 8:59				U	mg/L		-0.00022	0.00022			
WG579321LFB	LFB	11/30/23 9:01	MS231108-4	.0501		.04651	mg/L	93	85	115			
L84281-01LFM	LFM	11/30/23 9:10	MS2XW	.1002	U	.09276	mg/L	93	70	130			
L84281-01LFMD	LFMD	11/30/23 9:12	MS2XW	.1002	U	.10008	mg/L	100	70	130	8	20	

Uranium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579449													
WG579449ICV	ICV	11/28/23 15:11	MS231106-9	.05		.05312	mg/L	106	90	110			
WG579449ICB	ICB	11/28/23 15:13				U	mg/L		-0.00022	0.00022			
WG579449LFB	LFB	11/28/23 15:15	MS231101-2	.05		.04619	mg/L	92	85	115			
L84281-01AS	AS	11/28/23 15:24	MS231101-2	.05	.00618	.05504	mg/L	98	70	130			
L84281-01ASD	ASD	11/28/23 15:26	MS231101-2	.05	.00618	.05438	mg/L	96	70	130	1	20	

Uranium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579555													
WG579555ICV	ICV	11/30/23 8:55	MS231106-9	.05		.05176	mg/L	104	90	110			
WG579555ICB	ICB	11/30/23 8:57				U	mg/L		-0.0003	0.0003			
WG579321LRB	LRB	11/30/23 8:59				U	mg/L		-0.00022	0.00022			
WG579321LFB	LFB	11/30/23 9:01	MS231108-4	.05		.04665	mg/L	93	85	115			
L84281-01LFM	LFM	11/30/23 9:10	MS2XW	.1	.00571	.10127	mg/L	96	70	130			
L84281-01LFMD	LFMD	11/30/23 9:12	MS2XW	.1	.00571	.10992	mg/L	104	70	130	8	20	

AZMINING

ACZ Project ID: ***L84280***

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.

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG578868													
WG578868ICV	ICV	11/16/23 19:07	II231107-1	2		1.91	mg/L	96	95	105			
WG578868ICB	ICB	11/16/23 19:13				U	mg/L		-0.06	0.06			
WG578868LFB	LFB	11/16/23 19:25	II231027-2	.50045		.525	mg/L	105	85	115			
L84280-01AS	AS	11/16/23 19:31	II231027-2	.50045	.062	.603	mg/L	108	85	115			
L84280-01ASD	ASD	11/16/23 19:34	II231027-2	.50045	.062	.598	mg/L	107	85	115	1	20	

Zinc, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG579015													
WG579015ICV	ICV	11/19/23 10:10	II231107-2	2		1.959	mg/L	98	95	105			
WG579015ICB	ICB	11/19/23 10:16				U	mg/L		-0.06	0.06			
WG578923LRB	LRB	11/19/23 10:29				U	mg/L		-0.044	0.044			
WG578923LFB	LFB	11/19/23 10:32	II231027-2	.50045		.539	mg/L	108	85	115			
L84283-05LFM	LFM	11/19/23 10:58	II231027-2	.50045	U	.542	mg/L	108	70	130			
L84283-05LFMD	LFMD	11/19/23 11:07	II231027-2	.50045	U	.536	mg/L	107	70	130	1	20	

South32 ACZ Project ID: ***L84280***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L84280-01	WG578615	Cyanide, total	M335.4 - Colorimetric w/ distillation	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).
	WG579419	Fluoride	SM4500F-C	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
	WG579010	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG578539	Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	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).
	WG579015	Silica, total	M200.7 ICP	ZS	Digestion procedures have the potential to trigger silica polymerization and precipitation, leading to low biased results. Silica chemistry is complex and polymerization kinetics are unpredictable. Dissolved and/or acid soluble silica analyses may provide more accurate measurements.
	WG578943	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.
L84280-02	WG578615	Cyanide, total	M335.4 - Colorimetric w/ distillation	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).
	WG579419	Fluoride	SM4500F-C	HC	Initial analysis within holding time. Reanalysis was past holding time, which was required due to a QC failure during the initial analysis.
	WG579010	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG578539	Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	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).
	WG579015	Silica, total	M200.7 ICP	ZS	Digestion procedures have the potential to trigger silica polymerization and precipitation, leading to low biased results. Silica chemistry is complex and polymerization kinetics are unpredictable. Dissolved and/or acid soluble silica analyses may provide more accurate measurements.
	WG578943	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.

Certification Qualifiers

South32 ACZ Project ID: ***L84280***

No certification qualifiers associated with this analysis

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

South32
4542523524

ACZ Project ID: L84280
Date Received: 11/02/2023 10:44
Received By:
Date Printed: 11/3/2023

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? [1]	X		
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?
4207	2.7	<=6.0	15	Yes

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.

ACZ Laboratories, Inc.
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

Sample Receipt

South32
4542523524

ACZ Project ID:	L84280
Date Received:	11/02/2023 10:44
Received By:	
Date Printed:	11/3/2023

[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).

ACZ LABORATORIES | Accredited Environmental Testing | 2773 Downhill Drive, Steamboat Springs, CO 80487, (970) 879-6590 | L84280

CHAIN of CUSTODY

Report to:

Name: Kara Haas	Address: 749 Harshaw Road
Company: AMI/South32	Patagonia, AZ 85624
E-mail: Kara.Haas@south32.net	Telephone: 505.947.1738

Copy of Report to:

Name: Nick Connell	E-mail: nconnell@newfields.com
Company: NewFields	Telephone: 847.528.9776

Invoice to:

Name: Kara Haas	Address: 749 Harshaw Road
Company: AMI/South32	Patagonia, AZ 85624
E-mail: kara.haas@south32.net	Telephone: 505.947.1738

Copy of Invoice to:

Name: South32	Address: NA
Company: AMI/South32	
E-mail: sscinvoices@south32.net	Telephone: NA

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 ✓ NO

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes No ✓

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Marc Taylor Sampler's Site Information State AZ Zip code 85624 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 — ANALYSES REQUESTED (with preservative if used)

Quote #: GW BASELINE

PO#: 4542523524

Reporting state for compliance testing: AZ

Check box if samples include NRC licensed material?

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	GW BASELINE	dD_d18O						
MW-9-20231030	10/30/2023 09:50	GW	7	✓	✓						
TW-597785-20231030	10/30/2023 10:35	GW	7	✓	✓						
TW-603213-20231030	10/30/2023 12:20	GW	7	✓	✓						

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

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
	11-1-23 0700		11/1/23 1044

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

L84280 Chain of Custod