

August 17, 2022

Report to:

Meagan Graham
FMI- Climax Mine Company
Hwy 91 - Fremont Pass
Climax, CO 80429

Bill to:

Accounts Payable
FMI- Climax Mine Company
P.O. Box 13407
Phoenix, AZ 85002

cc: Elaine Dubois

Project ID: ZH0000076W

ACZ Project ID: L75071

Meagan Graham:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 10, 2022. This project has been assigned to ACZ's project number, L75071. 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 L75071. 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 February 13, 2023. 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.



Sue Webber has reviewed and
approved this report.



FMI- Climax Mine Company

Project ID: ZH0000076W

Sample ID: OUTFALL 001A

ACZ Sample ID: **L75071-01**

Date Sampled: 08/05/22 12:50

Date Received: 08/10/22

Sample Matrix: Surface Water

Field Data

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity (Field)	Field Measurement	1	1203			umhos/cm			08/05/22 12:50	sw
pH (Field)	Field Measurement	1	7.6			units			08/05/22 12:50	sw
Temperature (Field)	Field Measurement	1	12.1			C			08/05/22 12:50	sw

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidify and filter (Potentially Dissolved)	Colorado 5 CCR 1002- 31.5.31 (2009)								08/12/22 10:35	ssr/gjl
Total Hot Plate Digestion	M200.2 ICP-MS								08/11/22 14:39	kja
Total Recoverable Digestion	M200.2 ICP-MS								08/11/22 14:40	kja

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Boron, total	M200.8 ICP-MS	1	0.0028	B	*	mg/L	0.001	0.005	08/12/22 16:15	mfm
Cadmium, potentially dissolved	M200.8 ICP-MS	1	0.000251			mg/L	0.00005	0.00025	08/12/22 12:42	mfm
Chromium, potentially dissolved	M200.8 ICP-MS	1	<0.0005	U		mg/L	0.0005	0.002	08/12/22 12:42	mfm
Iron, total recoverable	M200.8 ICP-MS	1	0.167		*	mg/L	0.007	0.02	08/11/22 17:40	mfm
Manganese, potentially dissolved	M200.8 ICP-MS	1	0.136			mg/L	0.0004	0.002	08/12/22 12:42	mfm
Molybdenum, total recoverable	M200.8 ICP-MS	1	0.0242			mg/L	0.0002	0.0005	08/11/22 17:40	mfm
Nickel, potentially dissolved	M200.8 ICP-MS	1	0.00125			mg/L	0.0004	0.001	08/12/22 12:42	mfm
Selenium, potentially dissolved	M200.8 ICP-MS	1	0.00012	B		mg/L	0.0001	0.00025	08/12/22 12:42	mfm
Zinc, potentially dissolved	M200.8 ICP-MS	1	0.0456			mg/L	0.006	0.015	08/12/22 12:42	mfm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfide as S	SM4500S2-D	1	<0.02	U	*	mg/L	0.02	0.1	08/12/22 13:00	jck



Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

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

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

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ACZ Project ID: **L75071**

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

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548446													
WG548446ICV	ICV	08/12/22 15:47	MS220701-3					101	90	110			
WG548446ICB	ICB	08/12/22 15:49				U	mg/L		-0.003	0.003			
WG548264LRB	LRB	08/12/22 16:05				U	mg/L		-0.0022	0.0022			
WG548264LFB	LFB	08/12/22 16:07	MS220722-2	.01001		.0092	mg/L	92	85	115			
L74988-05LFM	LFM	08/12/22 16:11	MS220722-2	.01001	.242	.2537	mg/L	117	70	130			
L74988-05LFMD	LFMD	08/12/22 16:13	MS220722-2	.01001	.242	.2528	mg/L	108	70	130	0	20	

Cadmium, potentially dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548413													
WG548413ICV	ICV	08/12/22 12:16	MS220701-3	.05		.05362	mg/L	107	90	110			
WG548413ICB	ICB	08/12/22 12:18				U	mg/L		-0.00011	0.00011			
WG548413LFB	LFB	08/12/22 12:19	MS220722-2	.05005		.04755	mg/L	95	85	115			
WG547918PBW	PBW	08/12/22 12:21				U	mg/L		-0.00015	0.00015			
WG547966PBW	PBW	08/12/22 12:25				U	mg/L		-0.00015	0.00015			
WG548392PBW	PBW	08/12/22 12:29				U	mg/L		-0.00015	0.00015			
L75040-06AS	AS	08/12/22 12:33	MS220722-2	.05005	U	.048616	mg/L	97	70	130			
L75040-06ASD	ASD	08/12/22 12:35	MS220722-2	.05005	U	.048248	mg/L	96	70	130	1	20	

Chromium, potentially dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548413													
WG548413ICV	ICV	08/12/22 12:16	MS220701-3	.05		.05292	mg/L	106	90	110			
WG548413ICB	ICB	08/12/22 12:18				U	mg/L		-0.0011	0.0011			
WG548413LFB	LFB	08/12/22 12:19	MS220722-2	.0501		.04705	mg/L	94	85	115			
WG547918PBW	PBW	08/12/22 12:21				U	mg/L		-0.0015	0.0015			
WG547966PBW	PBW	08/12/22 12:25				U	mg/L		-0.0015	0.0015			
WG548392PBW	PBW	08/12/22 12:29				U	mg/L		-0.0015	0.0015			
L75040-06AS	AS	08/12/22 12:33	MS220722-2	.0501	U	.04556	mg/L	91	70	130			
L75040-06ASD	ASD	08/12/22 12:35	MS220722-2	.0501	U	.0452	mg/L	90	70	130	1	20	

Iron, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548347													
WG548347ICV	ICV	08/11/22 16:42	MS220701-3	.10016		.108	mg/L	108	90	110			
WG548347ICB	ICB	08/11/22 16:44				U	mg/L		-0.021	0.021			
WG548265LRB	LRB	08/11/22 16:46				U	mg/L		-0.0154	0.0154			
WG548265LFB	LFB	08/11/22 16:48	MS220722-2	.04975		.0445	mg/L	89	85	115			
L75065-05LFM	LFM	08/11/22 17:36	MS220722-2	.04975	.185	.23	mg/L	90	70	130			
L75065-05LFMD	LFMD	08/11/22 17:38	MS220722-2	.04975	.185	.2307	mg/L	92	70	130	0	20	

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ACZ Project ID: **L75071**

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, potentially dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548413													
WG548413ICV	ICV	08/12/22 12:16	MS220701-3	.05		.055	mg/L	110	90	110			
WG548413ICB	ICB	08/12/22 12:18				U	mg/L		-0.00088	0.00088			
WG548413LFB	LFB	08/12/22 12:19	MS220722-2	.0498		.0485	mg/L	97	85	115			
WG547918PBW	PBW	08/12/22 12:21				U	mg/L		-0.0012	0.0012			
WG547966PBW	PBW	08/12/22 12:25				U	mg/L		-0.0012	0.0012			
WG548392PBW	PBW	08/12/22 12:29				U	mg/L		-0.0012	0.0012			
L75040-06AS	AS	08/12/22 12:33	MS220722-2	.0498	.011	.05821	mg/L	95	70	130			
L75040-06ASD	ASD	08/12/22 12:35	MS220722-2	.0498	.011	.0578	mg/L	94	70	130	1	20	

Molybdenum, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548347													
WG548347ICV	ICV	08/11/22 16:42	MS220701-3	.02		.0199	mg/L	100	90	110			
WG548347ICB	ICB	08/11/22 16:44				U	mg/L		-0.0006	0.0006			
WG548265LRB	LRB	08/11/22 16:46				U	mg/L		-0.00044	0.00044			
WG548265LFB	LFB	08/11/22 16:48	MS220722-2	.05005		.04361	mg/L	87	85	115			
L75065-05LFM	LFM	08/11/22 17:36	MS220722-2	.05005	.00096	.04707	mg/L	92	70	130			
L75065-05LFMD	LFMD	08/11/22 17:38	MS220722-2	.05005	.00096	.0464	mg/L	91	70	130	1	20	

Nickel, potentially dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548413													
WG548413ICV	ICV	08/12/22 12:16	MS220701-3	.05		.05285	mg/L	106	90	110			
WG548413ICB	ICB	08/12/22 12:18				U	mg/L		-0.00088	0.00088			
WG548413LFB	LFB	08/12/22 12:19	MS220722-2	.05005		.04655	mg/L	93	85	115			
WG547918PBW	PBW	08/12/22 12:21				U	mg/L		-0.0012	0.0012			
WG547966PBW	PBW	08/12/22 12:25				U	mg/L		-0.0012	0.0012			
WG548392PBW	PBW	08/12/22 12:29				U	mg/L		-0.0012	0.0012			
L75040-06AS	AS	08/12/22 12:33	MS220722-2	.05005	.00054	.04449	mg/L	88	70	130			
L75040-06ASD	ASD	08/12/22 12:35	MS220722-2	.05005	.00054	.04404	mg/L	87	70	130	1	20	

Selenium, potentially dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548413													
WG548413ICV	ICV	08/12/22 12:16	MS220701-3	.05		.05489	mg/L	110	90	110			
WG548413ICB	ICB	08/12/22 12:18				U	mg/L		-0.00022	0.00022			
WG548413LFB	LFB	08/12/22 12:19	MS220722-2	.05		.0495	mg/L	99	85	115			
WG547918PBW	PBW	08/12/22 12:21				U	mg/L		-0.0003	0.0003			
WG547966PBW	PBW	08/12/22 12:25				U	mg/L		-0.0003	0.0003			
WG548392PBW	PBW	08/12/22 12:29				U	mg/L		-0.0003	0.0003			
L75040-06AS	AS	08/12/22 12:33	MS220722-2	.05	.00013	.05357	mg/L	107	70	130			
L75040-06ASD	ASD	08/12/22 12:35	MS220722-2	.05	.00013	.0538	mg/L	107	70	130	0	20	

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ACZ Project ID: **L75071**

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.

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548426													
WG548426ICV	ICV	08/12/22 12:42	WC220811-3	.352		.356	mg/L	101	90	110			
WG548426ICB	ICB	08/12/22 12:46				U	mg/L		-0.05	0.05			
WG548426LFB	LFB	08/12/22 12:51	WC220811-6	.2257733		.255	mg/L	113	80	120			
L75112-01AS	AS	08/12/22 13:52	WC220811-6	.2257733	U	.144	mg/L	64	75	125			M2
L75112-01ASD	ASD	08/12/22 13:57	WC220811-6	.2257733	U	.165	mg/L	73	75	125	14	20	M2

Zinc, potentially dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG548413													
WG548413ICV	ICV	08/12/22 12:16	MS220701-3	.05		.0521	mg/L	104	90	110			
WG548413ICB	ICB	08/12/22 12:18				U	mg/L		-0.0132	0.0132			
WG548413LFB	LFB	08/12/22 12:19	MS220722-2	.050075		.0481	mg/L	96	85	115			
WG547918PBW	PBW	08/12/22 12:21				U	mg/L		-0.018	0.018			
WG547966PBW	PBW	08/12/22 12:25				U	mg/L		-0.018	0.018			
WG548392PBW	PBW	08/12/22 12:29				.0176	mg/L		-0.018	0.018			
L75040-06AS	AS	08/12/22 12:33	MS220722-2	.050075	.0216	.0653	mg/L	87	70	130			
L75040-06ASD	ASD	08/12/22 12:35	MS220722-2	.050075	.0216	.0649	mg/L	86	70	130	1	20	

FMI- Climax Mine Company

ACZ Project ID: **L75071**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L75071-01	WG548426	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI- Climax Mine Company

ACZ Project ID: **L75071**

Metals Analysis

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

Boron, total	M200.8 ICP-MS
Iron, total recoverable	M200.8 ICP-MS

FMI- Climax Mine Company
ZH0000076W

ACZ Project ID: L75071
Date Received: 08/10/2022 10:57
Received By:
Date Printed: 8/11/2022

Receipt Verification

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

Samples/Containers

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

Some parameters were received past hold time.

NA indicates Not Applicable

Chain of Custody Related Remarks

The 'Relinquished By' field on the COC was not completed. The project manager is contacting the client.

Client Contact Remarks

Please rush results

Shipping Containers

Cooler Id	Temp (°C)	Temp Criteria (°C)	Rad (µR/Hr)	Custody Seal Intact?
3885	0.3	<=6.0	15	N/A

Was ice present in the shipment container(s)?

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

FMI- Climax Mine Company
ZH0000076W

ACZ Project ID: L75071

Date Received: 08/10/2022 10:57

Received By:

Date Printed: 8/11/2022

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).

