



Greg Lewicki And Associates, PLLC

3375 West Powers Circle Littleton, CO 80123

October 23, 2020

Colorado Division of Reclamation, Mining, and Safety
1313 Sherman St, Room 215
Denver, CO 80203

RE: Detroit City Mine; DRMS File No. M-2017-003 - Waste Rock Sample

Colorado Calumet Co, Inc. has conducted a rock sampling and lab testing as it continues mining at the Detroit City Mine. This sample is in accordance with the currently approved permit. The results of the whole rock analysis and acid-base accounting (ABA) are attached.

Please contact me if you have any further questions or concerns.

Sincerely,

Ben Langenfeld, P.E.
Greg Lewicki and Associates



One Government Gulch - PO Box 929

Kellogg, ID 83837-0929

(208) 784-1258

www.svl.net

Colorado Calumet Company
Post Office Box 1169
Golden, CO 80402

Project Name: Detroit City Mine 2019

Work Order: **X0I0619**

Reported: 12-Oct-20 14:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
STOPE 1	X0I0619-01	Rock	21-Sep-20 09:00	BL	28-Sep-2020	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.

Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of SVL Analytical, Inc.

Case Narrative: X0I0619

The state of origin only accredits for drinking water analyses.

Samples were air dried and pulverized for metals analysis



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Client Sample ID: **STOPE 1**

Sampled: 21-Sep-20 09:00

Received: 28-Sep-20

Sampled By: BL

SVL Sample ID: **X010619-01 (Rock)****Sample Report Page 1 of 1**

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals by EPA 6000/7000 Series										
EPA 6010D	Arsenic	69.0	mg/kg	2.50	0.59		X040161	KH	10/05/20 09:54	
EPA 6010D	Barium	60.3	mg/kg	0.40	0.18		X040161	KH	10/05/20 09:54	
EPA 6010D	Cadmium	19.8	mg/kg	0.40	0.14		X040161	KH	10/05/20 09:54	
EPA 6010D	Chromium	11.8	mg/kg	0.60	0.20		X040161	KH	10/05/20 09:54	
EPA 6010D	Lead	472	mg/kg	15.0	3.30	10	X040161	KH	10/05/20 12:11	D2
EPA 6010D	Selenium	< 4.0	mg/kg	4.0	1.1		X040161	KH	10/05/20 09:54	
EPA 6010D	Silver	4.84	mg/kg	1.00	0.20		X040161	KH	10/05/20 09:54	
EPA 7471B	Mercury	0.033	mg/kg	0.033	0.011		X041075	KH	10/09/20 11:50	
Acid/Base Accounting & Sulfur Forms										
Modified Sobek	ABA	-37.2	TCaCO3/kT	0.3			N/A		10/05/20 13:50	
Modified Sobek	AGP	45.6	TCaCO3/kT	0.3			N/A		10/05/20 13:50	
Modified Sobek	ANP	8.4	TCaCO3/kT	0.3			X040270	PRM	10/05/20 12:30	
Modified Sobek	Non-extractable Sulfur	0.0318	%	0.0100	0.0084		X040171	PRM	10/05/20 13:36	
Modified Sobek	Non-Sulfate Sulfur	1.49	%	0.0100	0.0084		X040171	PRM	10/05/20 13:50	
Modified Sobek	Pyritic Sulfur	1.46	%	0.0100			N/A		10/05/20 13:50	
Modified Sobek	Sulfate Sulfur	0.44	%	0.0100			N/A		10/05/20 13:50	
Modified Sobek	Total Sulfur	1.93	%	0.0100	0.0084		X040171	PRM	10/01/20 11:04	
Classical Chemistry Parameters										
ASA 9	Specific conductance@25°C	0.44	mmhos/cm	0.005			X040173	PRM	10/01/20 15:45	
ASTM E1915-11	Total Carbon	< 0.100	%	0.100	0.055		X041083	PRM	10/07/20 12:59	
ASTM E1915-11	Total Inorganic Carbon	< 0.100	%	0.100	0.055		X041084	PRM	10/07/20 13:16	
ASTM E1915-11	Total Organic Carbon	< 0.200	%	0.200	0.110		N/A		10/07/20 13:16	
Percent Solids / Percent Moisture										
Percent Solids	% Solids	99.9	%	0.1			X040158	WW	10/06/20 07:30	

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

Connor Williams
Project Manager



Colorado Calumet Company
Post Office Box 1169
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Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals by EPA 6000/7000 Series								
EPA 6010D	Arsenic	mg/kg	<2.50	0.59	2.50	X040161	05-Oct-20	
EPA 6010D	Barium	mg/kg	<0.40	0.18	0.40	X040161	05-Oct-20	
EPA 6010D	Cadmium	mg/kg	<0.40	0.14	0.40	X040161	05-Oct-20	
EPA 6010D	Chromium	mg/kg	<0.60	0.20	0.60	X040161	05-Oct-20	
EPA 6010D	Lead	mg/kg	<1.50	0.33	1.50	X040161	05-Oct-20	
EPA 6010D	Selenium	mg/kg	<4.0	1.1	4.0	X040161	05-Oct-20	
EPA 6010D	Silver	mg/kg	<1.00	0.20	1.00	X040161	05-Oct-20	
EPA 7471B	Mercury	mg/kg	<0.033	0.011	0.033	X041075	09-Oct-20	
Acid/Base Accounting & Sulfur Forms								
Modified Sobek	ANP	TCaCO ₃ /kT	<0.3		0.3	X040270	05-Oct-20	
Modified Sobek	Non-extractable Sulfur	%	<0.0100	0.0084	0.0100	X040171	05-Oct-20	
Modified Sobek	Non-Sulfate Sulfur	%	<0.0100	0.0084	0.0100	X040171	05-Oct-20	
Modified Sobek	Total Sulfur	%	<0.0100	0.0084	0.0100	X040171	01-Oct-20	
Classical Chemistry Parameters								
ASA 9	Specific conductance@25°C	mmhos/cm	<0.005		0.005	X040173	01-Oct-20	
ASTM E1915-11	Total Carbon	%	<0.100	0.055	0.100	X041083	07-Oct-20	
ASTM E1915-11	Total Inorganic Carbon	%	<0.100	0.055	0.100	X041084	07-Oct-20	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals by EPA 6000/7000 Series									
EPA 6010D	Arsenic	mg/kg	93.0	100	93.0	80 - 120	X040161	05-Oct-20	
EPA 6010D	Barium	mg/kg	100	100	100	80 - 120	X040161	05-Oct-20	
EPA 6010D	Cadmium	mg/kg	92.1	100	92.1	80 - 120	X040161	05-Oct-20	
EPA 6010D	Chromium	mg/kg	99.4	100	99.4	80 - 120	X040161	05-Oct-20	
EPA 6010D	Lead	mg/kg	93.1	100	93.1	80 - 120	X040161	05-Oct-20	
EPA 6010D	Selenium	mg/kg	86.5	100	86.5	80 - 120	X040161	05-Oct-20	
EPA 6010D	Silver	mg/kg	4.78	5.00	95.5	80 - 120	X040161	05-Oct-20	
EPA 7471B	Mercury	mg/kg	0.844	0.833	101	80 - 120	X041075	09-Oct-20	
Acid/Base Accounting & Sulfur Forms									
Modified Sobek	ANP	TCaCO ₃ /kT	1050	1000	105	80 - 120	X040270	05-Oct-20	
Modified Sobek	Total Sulfur	%	0.947	0.970	97.6	80 - 120	X040171	01-Oct-20	
Classical Chemistry Parameters									
ASA 9	Specific conductance@25°C	mmhos/cm	0.41	0.415	100	90 - 110	X040173	01-Oct-20	
ASTM E1915-11	Total Carbon	%	0.992	0.980	101	80 - 120	X041083	07-Oct-20	
ASTM E1915-11	Total Inorganic Carbon	%	0.532	0.500	106	80 - 120	X041084	07-Oct-20	



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Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch and Source ID	Analyzed	Notes
Acid/Base Accounting & Sulfur Forms									
Modified Sobek	ANP	TCaCO3/KT	2.4	2.6	10.0	20	X040270 - X0I0001-01	05-Oct-20	
Modified Sobek	Non-extractable Sulfur	%	0.0340	0.0318	6.7	20	X040171 - X0I0619-01	05-Oct-20	
Modified Sobek	Non-extractable Sulfur	%	<0.0100	<0.0100	UDL	20	X040171 - X0I0615-01	01-Oct-20	
Modified Sobek	Non-Sulfate Sulfur	%	1.41	1.49	5.5	20	X040171 - X0I0619-01	05-Oct-20	
Modified Sobek	Non-Sulfate Sulfur	%	<0.0100	<0.0100	UDL	20	X040171 - X0I0615-01	01-Oct-20	
Modified Sobek	Total Sulfur	%	<0.0100	<0.0100	UDL	20	X040171 - X0I0615-01	01-Oct-20	
Classical Chemistry Parameters									
ASA 9	Specific conductance@25°C	mmhos/cm	0.37	0.36	2.3	20	X040173 - X0I0434-01	01-Oct-20	
ASTM E1915-11	Total Carbon	%	<0.100	<0.100	<RL	20	X041083 - X0I0619-01	07-Oct-20	
ASTM E1915-11	Total Inorganic Carbon	%	<0.100	<0.100	UDL	20	X041084 - X0I0619-01	07-Oct-20	
Percent Solids / Percent Moisture									
Percent Solids	% Solids	%	99.9	100	0.0	20	X040158 - X0I0611-01	06-Oct-20	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Metals by EPA 6000/7000 Series										
EPA 6010D	Arsenic	mg/kg	248	145	100	103	75 - 125	X040161 - X0I0611-01	05-Oct-20	
EPA 6010D	Barium	mg/kg	130	20.8	100	109	75 - 125	X040161 - X0I0611-01	05-Oct-20	
EPA 6010D	Cadmium	mg/kg	100	<0.40	100	100	75 - 125	X040161 - X0I0611-01	05-Oct-20	
EPA 6010D	Chromium	mg/kg	97.8	3.47	100	94.3	75 - 125	X040161 - X0I0611-01	05-Oct-20	
EPA 6010D	Lead	mg/kg	86.6	<1.50	100	85.7	75 - 125	X040161 - X0I0611-01	05-Oct-20	
EPA 6010D	Selenium	mg/kg	94.2	<4.0	100	94.2	75 - 125	X040161 - X0I0611-01	05-Oct-20	
EPA 6010D	Silver	mg/kg	6.94	<1.00	5.00	124	75 - 125	X040161 - X0I0611-01	05-Oct-20	
EPA 7471B	Mercury	mg/kg	0.338	0.033	0.333	91.3	75 - 125	X041075 - X0I0619-01	09-Oct-20	
EPA 7471B	Mercury	mg/kg	0.405	0.103	0.333	90.7	75 - 125	X041075 - X0I0676-07	09-Oct-20	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes
Metals by EPA 6000/7000 Series										
EPA 6010D	Arsenic	mg/kg	232	248	100	6.7	20	87.2	X040161 - X0I0611-01	
EPA 6010D	Barium	mg/kg	125	130	100	3.6	20	105	X040161 - X0I0611-01	
EPA 6010D	Cadmium	mg/kg	96.6	100	100	3.9	20	96.6	X040161 - X0I0611-01	
EPA 6010D	Chromium	mg/kg	95.1	97.8	100	2.7	20	91.7	X040161 - X0I0611-01	
EPA 6010D	Lead	mg/kg	86.1	86.6	100	0.6	20	85.2	X040161 - X0I0611-01	
EPA 6010D	Selenium	mg/kg	89.6	94.2	100	5.0	20	89.6	X040161 - X0I0611-01	
EPA 6010D	Silver	mg/kg	6.89	6.94	5.00	0.7	20	123	X040161 - X0I0611-01	
EPA 7471B	Mercury	mg/kg	0.337	0.338	0.333	0.1	20	91.2	X041075 - X0I0619-01	



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Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable



RE: TR04 Approval M2017003

Bryan Lees <bryan@collectorsedge.com>
To: "Russell - DNR, Elliott" <elliott.russell@state.co.us>
Cc: "benl@lewicki.biz" <benl@lewicki.biz>

Mon, Oct 26, 2020 at 6:04 PM

Hello, Elliott,

It's been an interesting year. I hope all of your family, friends and team members are doing well under the current circumstances.

The Detroit City project is still operating; attached is the currently due rock sampling report.

Regards,

Bryan Lees

Colorado Calumet Co, Inc.

From: Russell - DNR, Elliott <elliott.russell@state.co.us>
Sent: Tuesday, February 25, 2020 2:49 PM
To: Bryan Lees <bryan@collectorsedge.com>; Ben Langenfeld <benl@lewicki.biz>
Subject: TR04 Approval M2017003

Bryan and Ben,

Please see the attached approval letter for TR-04 on the Detroit City Mine (M-2017-003). A hard copy has been mailed to Bryan for his records.

As the TR addressed all of the items identified in the 8/29/19 Inspection Report, Compliance Problems #1 - #3 have been resolved.

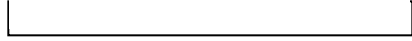
Please let me know if you have any questions.

Thanks,

Elliott Russell

Environmental Protection Specialist

Minerals Regulatory Program



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1313 Sherman Street, Room 215, Denver, CO 80203

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2 attachments



DCM Rock Sample Results 201023.docx

100K



X010619 FINAL 12 Oct 20 1453.pdf

205K