

TABLE 1
FORMER SMITH REEVES 27-1 WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1, 2, 4-TMB (mg/kg)	1, 3, 5-TMB (mg/kg)	Naphthalene (mg/kg)	TPH ⁽⁴⁾ (mg/kg)
Residential SSL^(1,2)			1.2	490	5.8	58	30	27	2	500
Protection of Groundwater SSL^(1,2,3)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500
FL01-05 @ 4'	12/01/2023	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FL01-06 @ 4'	12/01/2023	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50
FLR02 @ 4'	12/01/2023	4 ft. bgs	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50

Notes:

1. Compounds referenced from the ECMC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with groundwater is present.
4. Value calculated by adding TPH-GRO, TPH-DRO, and TPH-ORO concentrations.

ECMC = Colorado Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

TMB = Trimethylbenzene

ft. = feet

bgs = Below ground surface

TABLE 2
FORMER SMITH REEVES 27-1 WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
INORGANIC COMPOUNDS

Sample ID	Date Sampled	Depth	pH (units)	EC (mmhos/cm)	SAR (units)	Boron (mg/L)
Soil Suitability for Reclamation Standard ⁽¹⁾			6-8.3	<4	<6	2
FL01-05 @ 4'	12/01/2023	4 ft. bgs	8.98	0.462	0.729	<2.00
FL01-06 @ 4'	12/01/2023	4 ft. bgs	9.00	0.405	0.849	<2.00
FLR02 @ 4'	12/01/2023	4 ft. bgs	8.53	0.157	0.0505	<2.00

Notes:

1. Compounds referenced from the ECOM 2 CCR 404-1, Table 915-1, effective January 15, 2021.

ECMC = Colorado Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = millimhos per centimeter

mg/L = milligram per liter

ft. = Feet

bgs = Below ground surface

BOLD = Analytical results in exceedance of applicable standard

TABLE 3
FORMER SMITH REEVES 27-1 WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
ORGANIC COMPOUNDS - PAHs

Sample ID	Date Sampled	Depth	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ^(1,2)			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^(1,2,3)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FL01-05 @ 4'	12/01/2023	4 ft. bgs	<0.00500	0.0127	0.0405	0.0206	0.0364	0.0135	0.0347	<0.00500	0.105	<0.00500	0.0125	0.0830	<0.00500	<0.00500
FL01-06 @ 4'	12/01/2023	4 ft. bgs	<0.00500	<0.00500	0.0143	0.00845	0.0136	0.00536	0.0120	<0.00500	0.0350	<0.00500	0.00510	0.0289	<0.00500	<0.00500
FLR02 @ 4'	12/01/2023	4 ft. bgs	<0.00500	<0.00500	0.0461	0.0268	0.0412	0.0156	0.0348	<0.00500	0.101	<0.00500	0.0134	0.0806	<0.00500	<0.00500

Notes:

- Compounds referenced from the ECMC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
- Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
- SSLs are applicable if a pathway for communication with groundwater is present.

ECMC = Colorado Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

PAHs = Polycyclic aromatic hydrocarbons

Benz(a) = Benzanthracene

Benzo(a) = Benzopyrene

Benzo(b) = Benzofluoranthene

Benzo(k) = Benzo(a)fluoranthene

A,H = Dibenzoanthracene

1,2,3-CD = Indenopyrene

M = Methylanthracene

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

TABLE 4
FORMER SMITH REEVES 27-1 WELLHEAD
SOIL ANALYTICAL RESULTS SUMMARY TABLE
METALS

Sample ID	Date Sampled	Depth	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ^(1,2)			0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL ^(1,2,3)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
FL01-05 @ 4'	12/01/2023	4 ft. bgs	1.36	172	0.229	<0.30 ⁽⁴⁾	3.43	9.17	3.92	<0.260	0.0461	12.2
FL01-06 @ 4'	12/01/2023	4 ft. bgs	1.27	139	<0.200	<0.30 ⁽⁴⁾	3.00	6.90	3.82	<0.260	0.0470	11.4
FLR02 @ 4'	12/01/2023	4 ft. bgs	1.35	172	0.233	<0.30 ⁽⁴⁾	3.35	9.87	3.69	<0.260	0.0482	11.7
BKG01 @ 4'	12/01/2023	4 ft. bgs	1.07	235	<0.200	<0.30 ⁽⁴⁾	2.90	8.11	3.53	<0.260	0.0456	11.0
BKG01 @ 6'	12/01/2023	6 ft. bgs	1.03	166	<0.200	<0.30 ⁽⁴⁾	2.78	7.57	3.36	<0.260	0.0488	10.1
Mean Background Concentration ⁽⁵⁾			1.05	201	<0.200	<0.30 ⁽⁴⁾	2.84	7.84	3.45	0.260	0.0472	10.6
Mean Background Concentration ⁽⁵⁾ X 1.25			1.31	251	<0.200	<0.30 ⁽⁴⁾	3.55	9.80	4.31	0.325	0.0590	13.2

Notes:

1. Compounds referenced from the ECMC 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with groundwater is present.
4. Compound falls within COGCC Table 915-1 Footnote 9.
5. Non-detect background results accounted for in the mean background concentration by using the reporting limit.

ECMC = Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

BOLD = Analytical result is in exceedance of applicable standard.

BOLD = Analytical result is in exceedance of applicable standard, but within 1.25x background concentration.

**TABLE 5
FORMER SMITH REEVES 27-1 WELLHEAD
FIELD DATA SUMMARY TABLE**

Sample ID	Date Sampled	Depth	GPS Data ⁽¹⁾		PDOP Value	VOC Concentration ⁽²⁾ (ppm)
			Latitude	Longitude		
FL01-05 @ 4'	12/01/2023	4 ft. bgs	40.366416	-104.871499	0.9	0.0
FL01-06 @ 4'	12/01/2023	4 ft. bgs	40.366002	-104.870828	NC	0.0
FLR02 @ 4'	12/01/2023	4 ft. bgs	40.366004	-104.870713	NC	0.4
BKG01 @ 4'	12/01/2023	4 ft. bgs	40.368936	-104.871686	0.8	0.1
BKG01 @ 6'	12/01/2023	6 ft. bgs	40.368936	-104.871686	0.8	0.0

Notes:

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum 1983 (NAD83) UTM Zone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

ft. = Feet

bgs = Below ground surface

NC = Data not collected

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 29, 2023

Mark Longhurst

Tasman Geosciences

6855 W. 119th Ave.

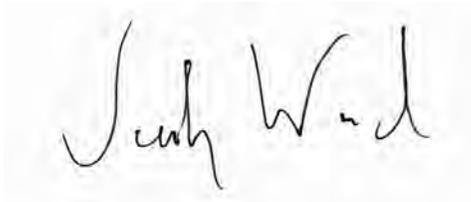
Broomfield, CO 80020

RE: PDC - Smith Reeves 27-1 Wellhead

Work Order #2312019

Enclosed are the results of analyses for samples received by Summit Scientific on 12/01/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial 'J' and 'W'.

Jacob Wood For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH01@6'	2312019-01	Soil	12/01/23 08:45	12/01/23 16:30
FLR01@4'	2312019-02	Soil	12/01/23 08:44	12/01/23 16:30
FL01-03@4'	2312019-03	Soil	12/01/23 10:04	12/01/23 16:30
FL01-05@4'	2312019-04	Soil	12/01/23 10:48	12/01/23 16:30
FL01-06@4'	2312019-05	Soil	12/01/23 11:00	12/01/23 16:30
FLR02@4'	2312019-06	Soil	12/01/23 11:40	12/01/23 16:30
BKG01@4'	2312019-07	Soil	12/01/23 10:18	12/01/23 16:30
BKG01@6'	2312019-08	Soil	12/01/23 10:20	12/01/23 16:30

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



4653 Table Mountain Drive
Golden, CO 80403
303-277-9310

Lab ID	Page 1 of 1
2312019	

Client: PDC / Tasman	Project Manager: Mark Longhurst	Send Invoice To: PDC Energy
Address: 6855 W 119th Ave	E-Mail: mark.longhurst@PDCE.com	Project Name/Location:
City/State/Zip: Broomfield / CO / 80020		AFE#:
Phone: 303-487-1228	Project Name: Smith Reeves 27-1 Wellhead	PO/Billing Codes:
Sampler Name: Elizabeth Brauer	Project Number:	Contact: Mark Longhurst

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Analysis Requested								Special Instructions
					HCl	HNO3	None	Other	Water	Soil		Other	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAHs	On hold	
1	WH01 @ 6'	12/1/23	845	2			X			X		X	X	X	X	X	X			
2	FL01 @ 4'		844												X	X				
3	FL01-03 @ 4'		1004																	
4	FL01-05 @ 4'		1048																	
5	FL01-06 @ 4'		1100																	
6	FL02 @ 4'		1140																	
7	BKG01 @ 4'		1018																	
8	BKG01 @ 6'		1020	1																
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <i>Elmh</i>	Date/Time: 12/1/23 1522	Received by: <i>Summit North</i>	Date/Time: 12/1/23 1522	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <i>SL</i>	Date/Time: 12/23 1630	Received by: <i>DAEJ</i>	Date/Time: 12/23 1630	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 10.1	Corrected Temperature: <i>0</i>	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2312019

Client: Poctrasman

Client Project ID: Smith Reaves 27-1 wellhead

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #: _____

Matrix (Check all that apply)

Air

Soil/Solid

Water

Other

Temp (°C)

10.1

Thermometer #

1

	Yes	No	N/A	Comments (If any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>bags labeled TB not with</u>
For volatiles in water - is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column - HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

AS

Custodian Printed Name

12/1/23

Date/Time

445



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

WH01@6'
2312019-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/23 08:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGL0181	12/05/23	12/08/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **12/01/23 08:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0331	82.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0436	109 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0444	111 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/23 08:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGL0182	12/05/23	12/09/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/01/23 08:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.67	77.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

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WH01@6'
2312019-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/23 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGL0276	12/07/23	12/09/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/01/23 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0183	54.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0234	70.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/01/23 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGL0421	12/12/23	12/19/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/01/23 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

WH01@6'
2312019-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.28	0.200	mg/kg dry	1	BGL0330	12/08/23	12/15/23	EPA 6020B
Barium	156	0.400	"	"	"	"	"	"
Cadmium	0.359	0.200	"	"	"	"	"	"
Copper	5.17	0.400	"	"	"	"	"	"
Lead	124	0.200	"	"	"	"	"	"
Nickel	3.64	0.400	"	"	"	"	"	"
Silver	0.0484	0.0200	"	"	"	"	"	"
Zinc	51.1	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: 12/01/23 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0316	12/08/23	12/12/23	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: 12/01/23 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	2680	0.0500	mg/L dry	1	BGL0702	12/19/23	12/27/23	EPA 6020B	
Magnesium	137	0.0500	"	"	"	"	"	"	
Sodium	22.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 12/01/23 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.113	0.00100	units	1	BGL1019	12/28/23	12/28/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 12/01/23 08:45

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

WH01@6'
2312019-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	85.9	%	1	BGL0319	12/08/23	12/12/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/01/23 08:45**

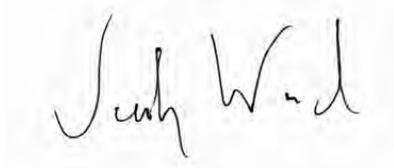
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.790	0.0100	mmhos/cm	1	BGL0795	12/21/23	12/21/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **12/01/23 08:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.43		pH Units	1	BGL0796	12/21/23	12/21/23	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FLR01@4'
2312019-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/23 08:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGL0181	12/05/23	12/08/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **12/01/23 08:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0566	142 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0417	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0431	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/23 08:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGL0182	12/05/23	12/09/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/01/23 08:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.94	79.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FLR01@4'
2312019-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/23 08:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGL0276	12/07/23	12/09/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.00918	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0103	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0153	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.00750	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0129	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.00711	0.00500	"	"	"	"	"	"	
Pyrene	0.0151	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/01/23 08:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0172	51.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0257	77.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/01/23 08:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGL0421	12/12/23	12/19/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/01/23 08:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FLR01@4'
2312019-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.40	0.200	mg/kg dry	1	BGL0330	12/08/23	12/15/23	EPA 6020B
Barium	161	0.400	"	"	"	"	"	"
Cadmium	0.405	0.200	"	"	"	"	"	"
Copper	4.05	0.400	"	"	"	"	"	"
Lead	21.5	0.200	"	"	"	"	"	"
Nickel	3.91	0.400	"	"	"	"	"	"
Silver	0.0509	0.0200	"	"	"	"	"	"
Zinc	17.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: 12/01/23 08:44

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0316	12/08/23	12/12/23	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: 12/01/23 08:44

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	851	0.0500	mg/L dry	1	BGL0702	12/19/23	12/27/23	EPA 6020B	
Magnesium	64.1	0.0500	"	"	"	"	"	"	
Sodium	32.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 12/01/23 08:44

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.293	0.00100	units	1	BGL1019	12/28/23	12/28/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 12/01/23 08:44

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FLR01@4'
2312019-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.7	%	1	BGL0319	12/08/23	12/12/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/01/23 08:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.237	0.0100	mmhos/cm	1	BGL0795	12/21/23	12/21/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **12/01/23 08:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.66		pH Units	1	BGL0796	12/21/23	12/21/23	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FL01-03@4'
2312019-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/23 10:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGL0181	12/05/23	12/08/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **12/01/23 10:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0570	143 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0420	105 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0425	106 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/23 10:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGL0182	12/05/23	12/09/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/01/23 10:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.63	53.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FL01-03@4'
2312019-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/23 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGL0276	12/07/23	12/09/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/01/23 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0151	45.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0231	69.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/01/23 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGL0421	12/12/23	12/19/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/01/23 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FL01-03@4'
2312019-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.32	0.200	mg/kg dry	1	BGL0330	12/08/23	12/15/23	EPA 6020B	
Barium	170	0.400	"	"	"	"	"	"	
Cadmium	0.201	0.200	"	"	"	"	"	"	
Copper	3.06	0.400	"	"	"	"	"	"	
Lead	8.33	0.200	"	"	"	"	"	"	
Nickel	3.78	0.400	"	"	"	"	"	"	
Silver	0.0459	0.0200	"	"	"	"	"	"	
Zinc	11.1	0.400	"	"	"	"	"	"	
Selenium	0.439	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 12/01/23 10:04

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0316	12/08/23	12/12/23	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: 12/01/23 10:04

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	304	0.0500	mg/L dry	1	BGL0702	12/19/23	12/27/23	EPA 6020B	
Magnesium	518	0.0500	"	"	"	"	"	"	
Sodium	383	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 12/01/23 10:04

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.10	0.00100	units	1	BGL1019	12/28/23	12/28/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 12/01/23 10:04

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FL01-03@4'
2312019-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	85.4	%	1	BGL0319	12/08/23	12/12/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/01/23 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	5.19	0.0100	mmhos/cm	1	BGL0795	12/21/23	12/21/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **12/01/23 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BGL0796	12/21/23	12/21/23	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FL01-05@4'
2312019-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/23 10:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGL0181	12/05/23	12/08/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **12/01/23 10:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0589	147 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0437	109 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/23 10:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGL0182	12/05/23	12/09/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/01/23 10:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.28	66.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FL01-05@4'
2312019-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/23 10:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGL0276	12/07/23	12/09/23	EPA 8270D SIM	
Anthracene	0.0127	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0405	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0206	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0364	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.0135	0.00500	"	"	"	"	"	"	
Chrysene	0.0347	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.105	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0125	0.00500	"	"	"	"	"	"	
Pyrene	0.0830	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/01/23 10:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0135	40.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0196	58.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/01/23 10:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGL0421	12/12/23	12/19/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/01/23 10:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FL01-05@4'
2312019-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.36	0.200	mg/kg dry	1	BGL0330	12/08/23	12/15/23	EPA 6020B	
Barium	172	0.400	"	"	"	"	"	"	
Cadmium	0.229	0.200	"	"	"	"	"	"	
Copper	3.43	0.400	"	"	"	"	"	"	
Lead	9.17	0.200	"	"	"	"	"	"	
Nickel	3.92	0.400	"	"	"	"	"	"	
Silver	0.0461	0.0200	"	"	"	"	"	"	
Zinc	12.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 12/01/23 10:48

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0316	12/08/23	12/12/23	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: 12/01/23 10:48

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	995	0.0500	mg/L dry	1	BGL0702	12/19/23	12/27/23	EPA 6020B	
Magnesium	150	0.0500	"	"	"	"	"	"	
Sodium	93.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 12/01/23 10:48

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.729	0.00100	units	1	BGL1019	12/28/23	12/28/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 12/01/23 10:48

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FL01-05@4'
2312019-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.6	%	1	BGL0319	12/08/23	12/12/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/01/23 10:48**

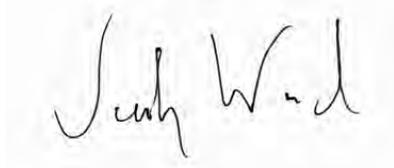
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.462	0.0100	mmhos/cm	1	BGL0795	12/21/23	12/21/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **12/01/23 10:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.98		pH Units	1	BGL0796	12/21/23	12/21/23	EPA 9045D	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FL01-06@4'
2312019-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGL0181	12/05/23	12/08/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **12/01/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0493	123 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0423	106 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0435	109 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGL0182	12/05/23	12/09/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/01/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.79	78.3 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FL01-06@4'
2312019-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGL0276	12/07/23	12/09/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0143	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.00845	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0136	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.00536	0.00500	"	"	"	"	"	"	
Chrysene	0.0120	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0350	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.00510	0.00500	"	"	"	"	"	"	
Pyrene	0.0289	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **12/01/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0143	42.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0211	63.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/01/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGL0421	12/12/23	12/19/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/01/23 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FL01-06@4'
2312019-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.27	0.200	mg/kg dry	1	BGL0330	12/08/23	12/15/23	EPA 6020B
Barium	139	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.00	0.400	"	"	"	"	"	"
Lead	6.90	0.200	"	"	"	"	"	"
Nickel	3.82	0.400	"	"	"	"	"	"
Silver	0.0470	0.0200	"	"	"	"	"	"
Zinc	11.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: 12/01/23 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0316	12/08/23	12/12/23	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: 12/01/23 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	24.6	0.0500	mg/L dry	1	BGL0702	12/19/23	12/27/23	EPA 6020B	
Magnesium	11.1	0.0500	"	"	"	"	"	"	
Sodium	20.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 12/01/23 11:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.849	0.00100	units	1	BGL1019	12/28/23	12/28/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FL01-06@4'
2312019-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/01/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	82.6			%	1	BGL0319	12/08/23	12/12/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/01/23 11:00**

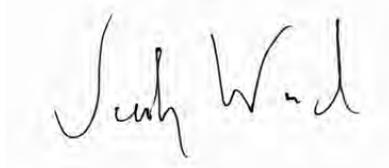
Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.405	0.0100		mmhos/cm	1	BGL0795	12/21/23	12/21/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **12/01/23 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	9.00			pH Units	1	BGL0796	12/21/23	12/21/23	EPA 9045D	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FLR02@4'
2312019-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/01/23 11:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGL0181	12/05/23	12/08/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **12/01/23 11:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0595	149 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0440	110 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0433	108 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **12/01/23 11:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGL0182	12/05/23	12/09/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/01/23 11:40**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.06	64.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FLR02@4'
2312019-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **12/01/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGL0276	12/07/23	12/09/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	0.0461	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	0.0268	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.0412	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	0.0156	0.00500	"	"	"	"	"	"	"
Chrysene	0.0348	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.101	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	0.0134	0.00500	"	"	"	"	"	"	"
Pyrene	0.0806	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **12/01/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0147	44.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0233	69.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/01/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGL0421	12/12/23	12/19/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/01/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FLR02@4'
2312019-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.35	0.200	mg/kg dry	1	BGL0330	12/08/23	12/15/23	EPA 6020B
Barium	172	0.400	"	"	"	"	"	"
Cadmium	0.233	0.200	"	"	"	"	"	"
Copper	3.35	0.400	"	"	"	"	"	"
Lead	9.87	0.200	"	"	"	"	"	"
Nickel	3.69	0.400	"	"	"	"	"	"
Silver	0.0482	0.0200	"	"	"	"	"	"
Zinc	11.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: 12/01/23 11:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0316	12/08/23	12/12/23	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: 12/01/23 11:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	90.6	0.0500	mg/L dry	1	BGL0702	12/19/23	12/27/23	EPA 6020B	
Magnesium	12.9	0.0500	"	"	"	"	"	"	
Sodium	1.94	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 12/01/23 11:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0505	0.00100	units	1	BGL1019	12/28/23	12/28/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 12/01/23 11:40

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

FLR02@4'
2312019-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.8	%	1	BGL0319	12/08/23	12/12/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/01/23 11:40**

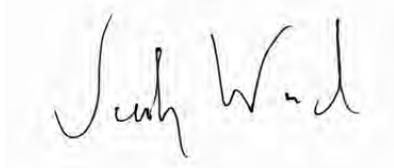
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.157	0.0100	mmhos/cm	1	BGL0795	12/21/23	12/21/23	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **12/01/23 11:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.53		pH Units	1	BGL0796	12/21/23	12/21/23	EPA 9045D	

Summit Scientific



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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

BKG01@4'
2312019-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **12/01/23 10:18**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.07	0.200	mg/kg dry	1	BGL0330	12/08/23	12/15/23	EPA 6020B	
Barium	235	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.90	0.400	"	"	"	"	"	"	
Lead	8.11	0.200	"	"	"	"	"	"	
Nickel	3.53	0.400	"	"	"	"	"	"	
Silver	0.0456	0.0200	"	"	"	"	"	"	
Zinc	11.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/01/23 10:18**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0316	12/08/23	12/12/23	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/01/23 10:18**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	89.5		%	1	BGL0319	12/08/23	12/12/23	Calculation	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

BKG01@6'
2312019-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **12/01/23 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.03	0.200	mg/kg dry	1	BGL0330	12/08/23	12/15/23	EPA 6020B	
Barium	166	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.78	0.400	"	"	"	"	"	"	
Lead	7.57	0.200	"	"	"	"	"	"	
Nickel	3.36	0.400	"	"	"	"	"	"	
Silver	0.0488	0.0200	"	"	"	"	"	"	
Zinc	10.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/01/23 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0316	12/08/23	12/12/23	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/01/23 10:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	89.4		%	1	BGL0319	12/08/23	12/12/23	Calculation	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGL0181 - EPA 5030 Soil MS

Blank (BGL0181-BLK1)

Prepared: 12/05/23 Analyzed: 12/07/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0551</i>		<i>"</i>	<i>0.0400</i>		<i>138</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0416</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0423</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>50-150</i>			

LCS (BGL0181-BS1)

Prepared: 12/05/23 Analyzed: 12/07/23

Benzene	0.117	0.0020	mg/kg	0.100		117	70-130			
Toluene	0.101	0.0050	"	0.100		101	70-130			
Ethylbenzene	0.120	0.0050	"	0.100		120	70-130			
m,p-Xylene	0.238	0.010	"	0.200		119	70-130			
o-Xylene	0.114	0.0050	"	0.100		114	70-130			
1,2,4-Trimethylbenzene	0.117	0.0050	"	0.100		117	70-130			
1,3,5-Trimethylbenzene	0.120	0.0050	"	0.100		120	70-130			
Naphthalene	0.0975	0.0038	"	0.100		97.5	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0583</i>		<i>"</i>	<i>0.0400</i>		<i>146</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0444</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0424</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>50-150</i>			

Matrix Spike (BGL0181-MS1)

Source: 2311495-01

Prepared: 12/05/23 Analyzed: 12/07/23

Benzene	0.112	0.0020	mg/kg	0.100	ND	112	70-130			
Toluene	0.125	0.0050	"	0.100	ND	125	70-130			
Ethylbenzene	0.116	0.0050	"	0.100	ND	116	70-130			
m,p-Xylene	0.226	0.010	"	0.200	ND	113	70-130			
o-Xylene	0.112	0.0050	"	0.100	ND	112	70-130			
1,2,4-Trimethylbenzene	0.111	0.0050	"	0.100	ND	111	70-130			
1,3,5-Trimethylbenzene	0.116	0.0050	"	0.100	ND	116	70-130			
Naphthalene	0.0964	0.0038	"	0.100	ND	96.4	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0579</i>		<i>"</i>	<i>0.0400</i>		<i>145</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0443</i>		<i>"</i>	<i>0.0400</i>		<i>111</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0423</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>50-150</i>			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGL0181 - EPA 5030 Soil MS

Matrix Spike Dup (BGL0181-MSD1)	Source: 2311495-01			Prepared: 12/05/23 Analyzed: 12/07/23						
Benzene	0.117	0.0020	mg/kg	0.100	ND	117	70-130	4.60	30	
Toluene	0.129	0.0050	"	0.100	ND	129	70-130	3.05	30	
Ethylbenzene	0.120	0.0050	"	0.100	ND	120	70-130	3.13	30	
m,p-Xylene	0.235	0.010	"	0.200	ND	118	70-130	3.86	30	
o-Xylene	0.115	0.0050	"	0.100	ND	115	70-130	2.63	30	
1,2,4-Trimethylbenzene	0.115	0.0050	"	0.100	ND	115	70-130	3.65	30	
1,3,5-Trimethylbenzene	0.120	0.0050	"	0.100	ND	120	70-130	3.32	30	
Naphthalene	0.103	0.0038	"	0.100	ND	103	70-130	6.53	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0589</i>		<i>"</i>	<i>0.0400</i>		<i>147</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0438</i>		<i>"</i>	<i>0.0400</i>		<i>110</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0419</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>50-150</i>			

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Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limit	RPD	Limit	RPD	

Batch BGL0182 - EPA 3550A

Blank (BGL0182-BLK1)

Prepared: 12/05/23 Analyzed: 12/09/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	11.9		"	12.5		94.9	30-150			

LCS (BGL0182-BS1)

Prepared: 12/05/23 Analyzed: 12/09/23

C10-C28 (DRO)	550	50	mg/kg	500		110	70-130			
Surrogate: <i>o</i> -Terphenyl	12.5		"	12.5		99.8	30-150			

Matrix Spike (BGL0182-MS1)

Source: 2311495-01

Prepared: 12/05/23 Analyzed: 12/09/23

C10-C28 (DRO)	383	50	mg/kg	500	19.2	72.8	70-130			
Surrogate: <i>o</i> -Terphenyl	8.81		"	12.5		70.5	30-150			

Matrix Spike Dup (BGL0182-MSD1)

Source: 2311495-01

Prepared: 12/05/23 Analyzed: 12/09/23

C10-C28 (DRO)	470	50	mg/kg	500	19.2	90.2	70-130	20.4	20	QR-02
Surrogate: <i>o</i> -Terphenyl	9.36		"	12.5		74.8	30-150			

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Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGL0276 - EPA 5030 Soil MS

Blank (BGL0276-BLK1)

Prepared: 12/07/23 Analyzed: 12/09/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0230</i>		"	<i>0.0333</i>		<i>69.0</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0346</i>		"	<i>0.0333</i>		<i>104</i>		<i>40-150</i>		

LCS (BGL0276-BS1)

Prepared: 12/07/23 Analyzed: 12/09/23

Acenaphthene	0.0348	0.00500	mg/kg	0.0333	104	31-137
Anthracene	0.0331	0.00500	"	0.0333	99.2	30-120
Benzo (a) anthracene	0.0326	0.00500	"	0.0333	97.8	30-120
Benzo (a) pyrene	0.0297	0.00500	"	0.0333	89.0	30-120
Benzo (b) fluoranthene	0.0318	0.00500	"	0.0333	95.4	30-120
Benzo (k) fluoranthene	0.0344	0.00500	"	0.0333	103	30-120
Chrysene	0.0356	0.00500	"	0.0333	107	30-120
Dibenz (a,h) anthracene	0.0282	0.00500	"	0.0333	84.5	30-120
Fluoranthene	0.0328	0.00500	"	0.0333	98.5	30-120
Fluorene	0.0355	0.00500	"	0.0333	106	30-120
Indeno (1,2,3-cd) pyrene	0.0288	0.00500	"	0.0333	86.5	30-120
Pyrene	0.0365	0.00500	"	0.0333	110	35-142
1-Methylnaphthalene	0.0303	0.00500	"	0.0333	90.8	35-142
2-Methylnaphthalene	0.0340	0.00500	"	0.0333	102	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0289</i>		"	<i>0.0333</i>	<i>86.8</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0332</i>		"	<i>0.0333</i>	<i>99.6</i>	<i>40-150</i>

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGL0276 - EPA 5030 Soil MS

Matrix Spike (BGL0276-MS1)

Source: 2312019-01

Prepared: 12/07/23 Analyzed: 12/09/23

Acenaphthene	0.0254	0.00500	mg/kg	0.0333	ND	76.1	31-137			
Anthracene	0.0263	0.00500	"	0.0333	ND	78.8	30-120			
Benzo (a) anthracene	0.0267	0.00500	"	0.0333	ND	80.0	30-120			
Benzo (a) pyrene	0.0241	0.00500	"	0.0333	ND	72.3	30-120			
Benzo (b) fluoranthene	0.0255	0.00500	"	0.0333	ND	76.5	30-120			
Benzo (k) fluoranthene	0.0255	0.00500	"	0.0333	ND	76.6	30-120			
Chrysene	0.0254	0.00500	"	0.0333	ND	76.1	30-120			
Dibenz (a,h) anthracene	0.0187	0.00500	"	0.0333	ND	56.0	30-120			
Fluoranthene	0.0258	0.00500	"	0.0333	ND	77.5	30-120			
Fluorene	0.0277	0.00500	"	0.0333	ND	83.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0203	0.00500	"	0.0333	ND	61.0	30-120			
Pyrene	0.0272	0.00500	"	0.0333	ND	81.6	35-142			
1-Methylnaphthalene	0.0273	0.00500	"	0.0333	ND	82.0	15-130			
2-Methylnaphthalene	0.0318	0.00500	"	0.0333	ND	95.3	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0255		"	0.0333		76.5	40-150			
Surrogate: Fluoranthene-d10	0.0265		"	0.0333		79.6	40-150			

Matrix Spike Dup (BGL0276-MSD1)

Source: 2312019-01

Prepared: 12/07/23 Analyzed: 12/09/23

Acenaphthene	0.0232	0.00500	mg/kg	0.0333	ND	69.6	31-137	8.92	30
Anthracene	0.0237	0.00500	"	0.0333	ND	71.0	30-120	10.4	30
Benzo (a) anthracene	0.0246	0.00500	"	0.0333	ND	73.9	30-120	7.91	30
Benzo (a) pyrene	0.0221	0.00500	"	0.0333	ND	66.2	30-120	8.94	30
Benzo (b) fluoranthene	0.0252	0.00500	"	0.0333	ND	75.7	30-120	1.05	30
Benzo (k) fluoranthene	0.0243	0.00500	"	0.0333	ND	72.9	30-120	5.06	30
Chrysene	0.0229	0.00500	"	0.0333	ND	68.8	30-120	10.1	30
Dibenz (a,h) anthracene	0.0180	0.00500	"	0.0333	ND	54.0	30-120	3.70	30
Fluoranthene	0.0234	0.00500	"	0.0333	ND	70.2	30-120	9.85	30
Fluorene	0.0272	0.00500	"	0.0333	ND	81.7	30-120	1.61	30
Indeno (1,2,3-cd) pyrene	0.0183	0.00500	"	0.0333	ND	54.8	30-120	10.7	30
Pyrene	0.0245	0.00500	"	0.0333	ND	73.4	35-142	10.6	30
1-Methylnaphthalene	0.0281	0.00500	"	0.0333	ND	84.4	15-130	2.90	50
2-Methylnaphthalene	0.0318	0.00500	"	0.0333	ND	95.4	15-130	0.0115	50
Surrogate: 2-Methylnaphthalene-d10	0.0217		"	0.0333		65.2	40-150		
Surrogate: Fluoranthene-d10	0.0238		"	0.0333		71.4	40-150		

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BGL0421 - EPA 3050B

Blank (BGL0421-BLK1)

Prepared: 12/12/23 Analyzed: 12/19/23

Boron ND 2.00 mg/L

LCS (BGL0421-BS1)

Prepared: 12/12/23 Analyzed: 12/19/23

Boron 5.91 2.00 mg/L 5.00 118 80-120

Duplicate (BGL0421-DUP1)

Source: 2311623-01

Prepared: 12/12/23 Analyzed: 12/19/23

Boron 0.255 2.00 mg/L 0.259 1.47 20

Matrix Spike (BGL0421-MS1)

Source: 2311623-01

Prepared: 12/12/23 Analyzed: 12/19/23

Boron 6.14 2.00 mg/L 5.00 0.259 118 75-125

Matrix Spike Dup (BGL0421-MSD1)

Source: 2311623-01

Prepared: 12/12/23 Analyzed: 12/19/23

Boron 6.33 2.00 mg/L 5.00 0.259 122 75-125 3.12 25

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BGL0330 - EPA 3050B

Blank (BGL0330-BLK1)

Prepared: 12/08/23 Analyzed: 12/15/23

Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

LCS (BGL0330-BS1)

Prepared: 12/08/23 Analyzed: 12/15/23

Arsenic	40.7	0.200	mg/kg wet	40.0	102	80-120
Barium	36.1	0.400	"	40.0	90.2	80-120
Cadmium	1.85	0.200	"	2.00	92.3	80-120
Copper	42.4	0.400	"	40.0	106	80-120
Lead	18.2	0.200	"	20.0	91.2	80-120
Nickel	41.8	0.400	"	40.0	105	80-120
Silver	1.89	0.0200	"	2.00	94.7	80-120
Zinc	40.5	0.400	"	40.0	101	80-120
Selenium	4.64	0.260	"	4.00	116	80-120

Duplicate (BGL0330-DUP1)

Source: 2312016-01

Prepared: 12/08/23 Analyzed: 12/15/23

Arsenic	0.697	0.200	mg/kg dry	0.745	6.68	20
Barium	37.1	0.400	"	33.3	10.8	20
Cadmium	0.0701	0.200	"	0.0608	14.2	20
Copper	1.37	0.400	"	1.40	2.44	20
Lead	7.06	0.200	"	6.79	3.97	20
Nickel	1.30	0.400	"	1.28	1.74	20
Silver	0.0123	0.0200	"	0.0123	0.00	20
Zinc	6.06	0.400	"	6.65	9.33	20
Selenium	ND	0.260	"	ND		20

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BGL0330 - EPA 3050B

Matrix Spike (BGL0330-MS1)

Source: 2312016-01

Prepared: 12/08/23 Analyzed: 12/15/23

Arsenic	20.1	0.200	mg/kg dry	42.2	0.745	45.9	75-125				QM-05
Barium	75.6	0.400	"	42.2	33.3	100	75-125				
Cadmium	2.15	0.200	"	2.11	0.0608	99.1	75-125				
Copper	21.5	0.400	"	42.2	1.40	47.5	75-125				QM-05
Lead	27.2	0.200	"	21.1	6.79	96.4	75-125				
Nickel	21.3	0.400	"	42.2	1.28	47.3	75-125				QM-05
Silver	2.14	0.0200	"	2.11	0.0123	101	75-125				
Zinc	27.0	0.400	"	42.2	6.65	48.1	75-125				QM-05
Selenium	4.59	0.260	"	4.22	ND	109	75-125				

Matrix Spike Dup (BGL0330-MSD1)

Source: 2312016-01

Prepared: 12/08/23 Analyzed: 12/15/23

Arsenic	20.0	0.200	mg/kg dry	42.2	0.745	45.5	75-125	0.805	25		QM-05
Barium	72.6	0.400	"	42.2	33.3	92.9	75-125	4.04	25		
Cadmium	2.03	0.200	"	2.11	0.0608	93.1	75-125	6.12	25		
Copper	21.2	0.400	"	42.2	1.40	46.9	75-125	1.27	25		QM-05
Lead	26.1	0.200	"	21.1	6.79	91.5	75-125	3.86	25		
Nickel	21.1	0.400	"	42.2	1.28	46.8	75-125	0.924	25		QM-05
Silver	2.04	0.0200	"	2.11	0.0123	95.8	75-125	5.17	25		
Zinc	26.8	0.400	"	42.2	6.65	47.7	75-125	0.539	25		QM-05
Selenium	4.47	0.260	"	4.22	ND	106	75-125	2.65	25		

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BGL0316 - 3060A Mod

Blank (BGL0316-BLK1)

Prepared: 12/08/23 Analyzed: 12/12/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGL0316-BS1)

Prepared: 12/08/23 Analyzed: 12/12/23

Chromium, Hexavalent 26.8 0.30 mg/kg wet 25.0 107 80-120

Duplicate (BGL0316-DUP1)

Source: 2312019-01

Prepared: 12/08/23 Analyzed: 12/12/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGL0316-MS1)

Source: 2312019-01

Prepared: 12/08/23 Analyzed: 12/12/23

Chromium, Hexavalent 29.6 0.30 mg/kg dry 29.1 ND 102 75-125

Matrix Spike Dup (BGL0316-MSD1)

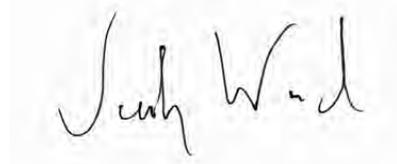
Source: 2312019-01

Prepared: 12/08/23 Analyzed: 12/12/23

Chromium, Hexavalent 29.3 0.30 mg/kg dry 29.1 ND 101 75-125 1.19 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

Batch BGL0702 - General Preparation

Blank (BGL0702-BLK1)

Prepared: 12/19/23 Analyzed: 12/27/23

Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BGL0702-BS1)

Prepared: 12/19/23 Analyzed: 12/27/23

Calcium	6.10	0.0500	mg/L wet	5.00		122	70-130			
Magnesium	5.66	0.0500	"	5.00		113	70-130			
Sodium	5.51	0.0500	"	5.00		110	70-130			

Summit Scientific

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Tasman Geosciences
 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
 Project Manager: Mark Longhurst

Reported:
 12/29/23 10:31

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGL0319 - General Preparation

Duplicate (BGL0319-DUP1)	Source: 2311585-01	Prepared: 12/08/23	Analyzed: 12/12/23		
% Solids	76.0	%	75.8	0.210	20

Summit Scientific

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Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source Result	%REC		RPD		Notes
		Limit	Units			Limits	RPD	Limit		

Batch BGL0795 - General Preparation

Blank (BGL0795-BLK1)

Prepared & Analyzed: 12/21/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGL0795-BS1)

Prepared & Analyzed: 12/21/23

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 100 95-105

Duplicate (BGL0795-DUP1)

Source: 2312016-01

Prepared & Analyzed: 12/21/23

Specific Conductance (EC) 0.771 0.0100 mmhos/cm 0.772 0.194 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGL0796 - General Preparation

LCS (BGL0796-BS1)

Prepared & Analyzed: 12/21/23

pH 9.11 pH Units 9.18 99.2 95-105

Duplicate (BGL0796-DUP1)

Source: 2312016-01

Prepared & Analyzed: 12/21/23

pH 9.34 pH Units 9.34 0.00 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Smith Reeves 27-1 Wellhead

Project Number: [none]

Project Manager: Mark Longhurst

Reported:
12/29/23 10:31

Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference