

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 14, 2025

Mike Medina

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Land 31-13,17,19,24,36D Wellheads

Work Order #2412398

Enclosed are the results of analyses for samples received by Summit Scientific on 12/18/24 18:07. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is fluid and cursive, with the first name being more prominent.

Natalie Tessier For Paul Shrewsbury
President



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

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG03@0.5'	2412398-01	Soil	12/18/24 11:00	12/18/24 18:07
BKG03@2.5'	2412398-02	Soil	12/18/24 11:02	12/18/24 18:07
BKG03@3'	2412398-03	Soil	12/18/24 11:04	12/18/24 18:07
BKG03@4.5'	2412398-04	Soil	12/18/24 11:06	12/18/24 18:07
BKG04@0.5'	2412398-05	Soil	12/18/24 11:08	12/18/24 18:07
BKG04@2.5'	2412398-06	Soil	12/18/24 11:10	12/18/24 18:07
BKG04@3'	2412398-07	Soil	12/18/24 11:12	12/18/24 18:07
BKG04.5'	2412398-08	Soil	12/18/24 11:14	12/18/24 18:07
BKG05@0.5'	2412398-09	Soil	12/18/24 11:16	12/18/24 18:07
BKG05@2.5'	2412398-10	Soil	12/18/24 11:18	12/18/24 18:07
BKG05@3'	2412398-11	Soil	12/18/24 11:20	12/18/24 18:07
BKG05@4.5'	2412398-12	Soil	12/18/24 11:22	12/18/24 18:07
BKG06@0.5'	2412398-13	Soil	12/18/24 11:24	12/18/24 18:07
BKG06@2.5'	2412398-14	Soil	12/18/24 11:26	12/18/24 18:07
BKG06@3'	2412398-15	Soil	12/18/24 11:28	12/18/24 18:07
BKG06@4.5'	2412398-16	Soil	12/18/24 11:30	12/18/24 18:07

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.

Client: PDC/Tasman		Send Data To:		Send Invoice To:	
Address: 6855 W. 119th Ave.		Project Manager: Andy Sagen ^{PH} Mike Medina		Company: PDC Energy	
City/State/Zip: Broomfield/CO/ 80020		E-Mail: tas-chevron-1@tasman-geo.com		Project Name/Location: Land 31-13, 17, 19, 24, 36 D	
Phone: 231-292-2576		RBUEUF27@chevron.com		AFE#: PX-90033	
Sampler Name: Elyse Hossink		Project Name: Land 31-13, 17, 19, 24, 36D Wellheads		PO/Billing Codes:	
		Project Number: 33835		Contact: Karen Olson / Delbert Pace	

					Preservative				Matrix				Analysis Requested								Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS	HOLD			
1	BK603 @ 0.5'	12/18/24	11:00	1			X			X			X				X	X			SAR, EC, pH by saturated paste	
2	BK603 @ 2.5'		11:02																			
3	BK603 @ 3'		11:04																			
4	BK603 @ 4.5'		11:06																			
5	BK604 @ 0.5'		11:08																			
6	BK604 @ 2.5'		11:10																			
7	BK604 @ 3'		11:12																			
8	BK604 @ 4.5'		11:14																			
9	BK605 @ 0.5'		11:16																			
10	BK605 @ 2.5'		11:18																			
11	BK605 @ 3'		11:20																			
12	BK605 @ 4.5'		11:22																			
13																						
14																						
15																						

Relinquished by: Elyse Hossink	Date/Time: 12/18/2024 14:20	Received by: Tasman Lock Box	Date/Time: 12/18/2024 14:20	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lock Box	Date/Time: 12/18/2024 1807	Received by: [Signature]	Date/Time: 12/18/2024 1807	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 3.2	Corrected Temperature: 0	IR gun #: 1	HNO3 lot #:			

Client: PDC/Tasman		Send Data To:		Send Invoice To:	
Address: 6855 W. 119th Ave.		Project Manager: Andy Sagen ^{CH} Mike Medina		Company: PDC Energy	
City/State/Zip: Broomfield/CO/ 80020		E-Mail: tas-chevron-1@tasman-geo.com		Project Name/Location: Land 31-13, 17, 19, 24, 36D	
Phone: 231-292-2576		RBUEUF27@chevron.com		AFE#: PX - 900 33	
Sampler Name: Elyse Hossink		Project Name: Land 31-13,17,19,24,36D Wellheads		PO/Billing Codes:	
		Project Number: 33 8 35		Contact: Karen Olson / Delbert Pace	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS	HOLD	
1	BK606 @ 0.5'	12/18/24	11:24	1			X			X			X				X	X		SAR, EC, pH by saturated paste
2	BK606 @ 2.5'		11:26	1			X			X			X				X	X		
3	BK606 @ 3'		11:28	1			X			X			X				X	X		
4	BK606 @ 4.5'		11:30	1			X			X			X				X	X		
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <u>Rupe Horvick</u>	Date/Time: <u>12/18/2024</u> 14:30	Received by: Tasman Lock Box	Date/Time: <u>12/18/2024</u> 14:20	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <u>Tasman Lock Box</u>	Date/Time: <u>12/18/24</u> 1807	Received by: <u>[Signature]</u>	Date/Time: <u>12/18/24</u> 1807	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: <u>3.2</u>	Corrected Temperature: <u>6</u>	IR gun #: <u>1</u>	HNO3 lot #: <u></u>			

S₂

2/2

Sample Receipt Checklist

S2 Work Order# 2412298Client: PortasmanClient Project ID: Land 31-13, 17, 19, 24, 36D

wellheads

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

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

32

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"/>	on 26E
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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

12/18/24
Date/Time



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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG03@0.5'
2412398-01 (Soil)

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Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.30	0.200		mg/kg dry	1	BIB0377	02/07/25	02/13/25	EPA 6020B	
Barium	115	0.400		"	"	"	"	"	"	
Cadmium	0.284	0.200		"	"	"	"	"	"	
Copper	9.04	0.400		"	"	"	"	"	"	
Lead	8.84	0.200		"	"	"	"	"	"	
Nickel	5.12	0.400		"	"	"	"	"	"	
Silver	0.0374	0.0200		"	"	"	"	"	"	
Zinc	37.8	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	557	0.0500		mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	10.0	0.0500		"	"	"	"	"	"	
Sodium	5.64	0.0500		"	"	"	"	"	"	

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Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG03@0.5'
2412398-01 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0649	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.7		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.902	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.08		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

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Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG03@2.5'
2412398-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.07	0.200	mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	110	0.400	"	"	"	"	"	"	
Cadmium	0.205	0.200	"	"	"	"	"	"	
Copper	6.67	0.400	"	"	"	"	"	"	
Lead	6.84	0.200	"	"	"	"	"	"	
Nickel	4.84	0.400	"	"	"	"	"	"	
Silver	0.0282	0.0200	"	"	"	"	"	"	
Zinc	28.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:02**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	67.0	0.0500	mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	18.5	0.0500	"	"	"	"	"	"	
Sodium	151	0.0500	"	"	"	"	"	"	

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Broomfield CO, 80020

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG03@2.5'
2412398-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.21	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.7		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.61	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.04		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

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Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG03@3'
2412398-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.29	0.200	mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	99.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	5.94	0.400	"	"	"	"	"	"	
Lead	6.23	0.200	"	"	"	"	"	"	
Nickel	4.91	0.400	"	"	"	"	"	"	
Silver	0.0266	0.0200	"	"	"	"	"	"	
Zinc	25.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:04**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	115	0.0500	mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	33.0	0.0500	"	"	"	"	"	"	
Sodium	188	0.0500	"	"	"	"	"	"	

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Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG03@3'
2412398-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.98	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.9		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.15	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.10		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

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Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG03@4.5'
2412398-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:06**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:06**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.76	0.200		mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	79.8	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	4.03	0.400		"	"	"	"	"	"	
Lead	5.04	0.200		"	"	"	"	"	"	
Nickel	3.64	0.400		"	"	"	"	"	"	
Silver	ND	0.0200		"	"	"	"	"	"	
Zinc	17.6	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:06**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:06**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	99.8	0.0500		mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	28.6	0.0500		"	"	"	"	"	"	
Sodium	181	0.0500		"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG03@4.5'
2412398-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.11	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.2		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.817	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.90		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG04@0.5'
2412398-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.07	0.200	mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	99.7	0.400	"	"	"	"	"	"	
Cadmium	0.273	0.200	"	"	"	"	"	"	
Copper	8.58	0.400	"	"	"	"	"	"	
Lead	8.24	0.200	"	"	"	"	"	"	
Nickel	5.01	0.400	"	"	"	"	"	"	
Silver	0.0330	0.0200	"	"	"	"	"	"	
Zinc	37.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	198	0.0500	mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	9.73	0.0500	"	"	"	"	"	"	
Sodium	29.6	0.0500	"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG04@0.5'
2412398-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.557	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.4		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.53	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.00		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG04@2.5'
2412398-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.83	0.200	mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	137	0.400	"	"	"	"	"	"	
Cadmium	0.214	0.200	"	"	"	"	"	"	
Copper	7.77	0.400	"	"	"	"	"	"	
Lead	7.78	0.200	"	"	"	"	"	"	
Nickel	6.24	0.400	"	"	"	"	"	"	
Silver	0.0376	0.0200	"	"	"	"	"	"	
Zinc	32.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	323	0.0500	mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	65.4	0.0500	"	"	"	"	"	"	
Sodium	241	0.0500	"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG04@2.5'
2412398-06 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.20	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.6		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.79	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.32		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG04@3'
2412398-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.73	0.200	mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	60.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.75	0.400	"	"	"	"	"	"	
Lead	4.08	0.200	"	"	"	"	"	"	
Nickel	3.10	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	15.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	94.0	0.0500	mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	23.8	0.0500	"	"	"	"	"	"	
Sodium	163	0.0500	"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG04@3'
2412398-07 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.89	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.4		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.08	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG04.5'
2412398-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.84	0.200	mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	107	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.47	0.400	"	"	"	"	"	"	
Lead	4.81	0.200	"	"	"	"	"	"	
Nickel	3.96	0.400	"	"	"	"	"	"	
Silver	0.0204	0.0200	"	"	"	"	"	"	
Zinc	19.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	106	0.0500	mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	26.5	0.0500	"	"	"	"	"	"	
Sodium	214	0.0500	"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG04.5'
2412398-08 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.82	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.7		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.773	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.95		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG05@0.5'
2412398-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.60	0.200		mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	50.3	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	5.70	0.400		"	"	"	"	"	"	
Lead	5.62	0.200		"	"	"	"	"	"	
Nickel	3.78	0.400		"	"	"	"	"	"	
Silver	ND	0.0200		"	"	"	"	"	"	
Zinc	25.3	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:16**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	577	0.0500		mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	9.47	0.0500		"	"	"	"	"	"	
Sodium	3.83	0.0500		"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG05@0.5'
2412398-09 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0433	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.0		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.25	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.94		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG05@2.5'
2412398-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.76	0.200	mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	191	0.400	"	"	"	"	"	"	
Cadmium	0.301	0.200	"	"	"	"	"	"	
Copper	11.0	0.400	"	"	"	"	"	"	
Lead	9.27	0.200	"	"	"	"	"	"	
Nickel	6.45	0.400	"	"	"	"	"	"	
Silver	0.0376	0.0200	"	"	"	"	"	"	
Zinc	46.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	314	0.0500	mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	89.7	0.0500	"	"	"	"	"	"	
Sodium	379	0.0500	"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG05@2.5'
2412398-10 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.86	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.4		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.957	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.73		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG05@3'
2412398-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.89	0.200	mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	142	0.400	"	"	"	"	"	"	
Cadmium	0.253	0.200	"	"	"	"	"	"	
Copper	9.47	0.400	"	"	"	"	"	"	
Lead	9.10	0.200	"	"	"	"	"	"	
Nickel	6.98	0.400	"	"	"	"	"	"	
Silver	0.0451	0.0200	"	"	"	"	"	"	
Zinc	45.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	32.2	0.0500	mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	9.95	0.0500	"	"	"	"	"	"	
Sodium	94.3	0.0500	"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG05@3'
2412398-11 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.72	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.7		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.43	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG05@4.5'
2412398-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.76	0.200	mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	149	0.400	"	"	"	"	"	"	
Cadmium	0.207	0.200	"	"	"	"	"	"	
Copper	8.39	0.400	"	"	"	"	"	"	
Lead	7.88	0.200	"	"	"	"	"	"	
Nickel	6.55	0.400	"	"	"	"	"	"	
Silver	0.0420	0.0200	"	"	"	"	"	"	
Zinc	34.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:22**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	192	0.0500	mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	65.8	0.0500	"	"	"	"	"	"	
Sodium	394	0.0500	"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG05@4.5'
2412398-12 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.26	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.8		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.892	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:22**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.29		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG06@0.5'
2412398-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.15	0.200	mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	82.8	0.400	"	"	"	"	"	"	
Cadmium	0.231	0.200	"	"	"	"	"	"	
Copper	8.36	0.400	"	"	"	"	"	"	
Lead	7.79	0.200	"	"	"	"	"	"	
Nickel	5.12	0.400	"	"	"	"	"	"	
Silver	0.0321	0.0200	"	"	"	"	"	"	
Zinc	33.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:24**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	617	0.0500	mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	10.7	0.0500	"	"	"	"	"	"	
Sodium	5.62	0.0500	"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG06@0.5'
2412398-13 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0614	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.4		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.96	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.03		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG06@2.5'
2412398-14 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:26**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:26**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.27	0.200		mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	109	0.400		"	"	"	"	"	"	
Cadmium	0.339	0.200		"	"	"	"	"	"	
Copper	9.71	0.400		"	"	"	"	"	"	
Lead	10.1	0.200		"	"	"	"	"	"	
Nickel	6.40	0.400		"	"	"	"	"	"	
Silver	0.0505	0.0200		"	"	"	"	"	"	
Zinc	33.4	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:26**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:26**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	101	0.0500		mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	26.1	0.0500		"	"	"	"	"	"	
Sodium	207	0.0500		"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG06@2.5'
2412398-14 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.75	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.0		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.46	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.05		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG06@3'
2412398-15 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.61	0.200		mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	58.1	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	4.42	0.400		"	"	"	"	"	"	
Lead	5.13	0.200		"	"	"	"	"	"	
Nickel	3.73	0.400		"	"	"	"	"	"	
Silver	ND	0.0200		"	"	"	"	"	"	
Zinc	18.8	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	198	0.0500		mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	49.3	0.0500		"	"	"	"	"	"	
Sodium	238	0.0500		"	"	"	"	"	"	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG06@3'
2412398-15 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **12/18/24 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.92	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.2		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.76	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.86		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

Summit Scientific

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG06@4.5'
2412398-16 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **12/18/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BIB0530	02/11/25	02/13/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **12/18/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	1.67	0.200	mg/kg dry	1	BIB0377	02/07/25	02/14/25	EPA 6020B	
Barium	53.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.20	0.400	"	"	"	"	"	"	
Lead	5.27	0.200	"	"	"	"	"	"	
Nickel	3.31	0.400	"	"	"	"	"	"	
Silver	0.0204	0.0200	"	"	"	"	"	"	
Zinc	17.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **12/18/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0732	01/16/25	01/21/25	EPA 7196A	

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

Date Sampled: **12/18/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	470	0.0500	mg/L dry	1	BIA0580	01/14/25	01/20/25	EPA 6020B	
Magnesium	92.6	0.0500	"	"	"	"	"	"	
Sodium	250	0.0500	"	"	"	"	"	"	

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

Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

BKG06@4.5'
2412398-16 (Soil)

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Calculated Analysis

Date Sampled: **12/18/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.76	0.00100	units	1	BIA0964	01/21/25	01/21/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **12/18/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.6		%	1	BIA0604	01/14/25	01/14/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **12/18/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0854	0.0100	mmhos/cm	1	BIA0574	01/14/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.84		pH Units	1	BIA0568	01/14/25	01/16/25	EPA 9045D	

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Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

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

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

Batch BIB0530 - EPA 3050B

Blank (BIB0530-BLK1)

Prepared: 02/11/25 Analyzed: 02/13/25

Boron ND 2.00 mg/L

LCS (BIB0530-BS1)

Prepared: 02/11/25 Analyzed: 02/13/25

Boron 4.74 2.00 mg/L 5.00 94.8 80-120

Duplicate (BIB0530-DUP1)

Source: 2412378-01

Prepared: 02/11/25 Analyzed: 02/13/25

Boron 0.263 2.00 mg/L 0.277 5.17 20

Matrix Spike (BIB0530-MS1)

Source: 2412378-01

Prepared: 02/11/25 Analyzed: 02/13/25

Boron 4.97 2.00 mg/L 5.02 0.277 93.6 75-125

Matrix Spike Dup (BIB0530-MSD1)

Source: 2412378-01

Prepared: 02/11/25 Analyzed: 02/13/25

Boron 5.10 2.00 mg/L 5.02 0.277 96.0 75-125 2.45 25

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Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BIB0377 - EPA 3050B

Blank (BIB0377-BLK1)

Prepared: 02/07/25 Analyzed: 02/13/25

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 (BIB0377-BS1)

Prepared: 02/07/25 Analyzed: 02/13/25

Arsenic	40.4	0.200	mg/kg wet	41.0	98.7	80-120
Barium	43.2	0.400	"	41.0	105	80-120
Cadmium	2.26	0.200	"	2.05	110	80-120
Copper	40.6	0.400	"	41.0	99.1	80-120
Lead	22.7	0.200	"	20.5	111	80-120
Nickel	48.4	0.400	"	41.0	118	80-120
Silver	2.25	0.0200	"	2.05	110	80-120
Zinc	41.8	0.400	"	41.0	102	80-120
Selenium	4.57	0.260	"	4.10	112	80-120

Duplicate (BIB0377-DUP1)

Source: 2412398-01

Prepared: 02/07/25 Analyzed: 02/13/25

Arsenic	2.20	0.200	mg/kg dry	2.30	4.14	20
Barium	111	0.400	"	115	3.79	20
Cadmium	0.278	0.200	"	0.284	1.97	20
Copper	8.51	0.400	"	9.04	6.04	20
Lead	8.52	0.200	"	8.84	3.68	20
Nickel	5.23	0.400	"	5.12	1.96	20
Silver	0.0345	0.0200	"	0.0374	8.12	20
Zinc	36.7	0.400	"	37.8	2.73	20
Selenium	0.187	0.260	"	0.185	0.803	20

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Project: PDC - Land 31-13,17,19,24,36D Wellheads
Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BIB0377 - EPA 3050B

Matrix Spike (BIB0377-MS1)		Source: 2412398-01			Prepared: 02/07/25		Analyzed: 02/14/25			
Arsenic	44.9	0.200	mg/kg dry	47.5	2.30	89.8	75-125			
Barium	158	0.400	"	47.5	115	91.4	75-125			
Cadmium	2.71	0.200	"	2.37	0.284	102	75-125			
Copper	51.0	0.400	"	47.5	9.04	88.3	75-125			
Lead	32.2	0.200	"	23.7	8.84	98.4	75-125			
Nickel	37.0	0.400	"	47.5	5.12	67.1	75-125			QM-05
Silver	2.41	0.0200	"	2.37	0.0374	99.8	75-125			
Zinc	81.4	0.400	"	47.5	37.8	91.8	75-125			
Selenium	4.92	0.260	"	4.75	0.185	99.7	75-125			

Matrix Spike Dup (BIB0377-MSD1)		Source: 2412398-01			Prepared: 02/07/25		Analyzed: 02/14/25			
Arsenic	45.8	0.200	mg/kg dry	45.2	2.30	96.3	75-125	2.01	25	
Barium	163	0.400	"	45.2	115	107	75-125	3.09	25	
Cadmium	2.73	0.200	"	2.26	0.284	108	75-125	0.660	25	
Copper	52.0	0.400	"	45.2	9.04	94.9	75-125	1.90	25	
Lead	32.4	0.200	"	22.6	8.84	104	75-125	0.725	25	
Nickel	36.4	0.400	"	45.2	5.12	69.2	75-125	1.55	25	QM-05
Silver	2.42	0.0200	"	2.26	0.0374	105	75-125	0.514	25	
Zinc	84.5	0.400	"	45.2	37.8	103	75-125	3.78	25	
Selenium	4.78	0.260	"	4.52	0.185	102	75-125	2.81	25	

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Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BIA0732 - 3060A Mod

Blank (BIA0732-BLK1)

Prepared: 01/16/25 Analyzed: 01/21/25

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BIA0732-BS1)

Prepared: 01/16/25 Analyzed: 01/21/25

Chromium, Hexavalent 23.9 0.30 mg/kg wet 25.3 94.8 80-120

Duplicate (BIA0732-DUP1)

Source: 2412396-01

Prepared: 01/16/25 Analyzed: 01/21/25

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BIA0732-MS1)

Source: 2412396-01

Prepared: 01/16/25 Analyzed: 01/21/25

Chromium, Hexavalent 27.3 0.30 mg/kg dry 25.9 ND 105 75-125

Matrix Spike Dup (BIA0732-MSD1)

Source: 2412396-01

Prepared: 01/16/25 Analyzed: 01/21/25

Chromium, Hexavalent 30.6 0.30 mg/kg dry 28.1 ND 109 75-125 11.3 20

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Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

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

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

Batch BIA0580 - General Preparation

Blank (BIA0580-BLK1)

Prepared: 01/14/25 Analyzed: 01/20/25

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

LCS (BIA0580-BS1)

Prepared: 01/14/25 Analyzed: 01/20/25

Calcium	5.05	0.0500	mg/L wet	5.00	101	70-130
Magnesium	4.86	0.0500	"	5.00	97.1	70-130
Sodium	5.00	0.0500	"	5.00	100	70-130

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Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

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

Summit Scientific

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

Batch BIA0604 - General Preparation

Duplicate (BIA0604-DUP1)

Source: 2412398-01

Prepared & Analyzed: 01/14/25

% Solids	87.1	%	87.7	0.709	20
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Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

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

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

Batch BIA0574 - General Preparation

Blank (BIA0574-BLK1)

Prepared: 01/14/25 Analyzed: 01/16/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BIA0574-BS1)

Prepared: 01/14/25 Analyzed: 01/16/25

Specific Conductance (EC) 0.157 0.0100 mmhos/cm 0.150 105 95-105

Duplicate (BIA0574-DUP1)

Source: 2412391-01

Prepared: 01/14/25 Analyzed: 01/16/25

Specific Conductance (EC) 0.418 0.0100 mmhos/cm 0.419 0.287 20

Summit Scientific

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Broomfield CO, 80020

Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

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

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

Batch BIA0568 - General Preparation

LCS (BIA0568-BS1)

Prepared: 01/14/25 Analyzed: 01/16/25

pH	9.15	pH Units	9.18	99.7	95-105
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Duplicate (BIA0568-DUP1)

Source: 2412391-01

Prepared: 01/14/25 Analyzed: 01/16/25

pH	8.87	pH Units	8.90	0.338	20
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Project: PDC - Land 31-13,17,19,24,36D Wellheads

Project Number: 33835
Project Manager: Mike Medina

Reported:
02/14/25 09:34

Notes and Definitions

QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
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