

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 16, 2024

Karen Olson

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

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

Work Order #2409137

Enclosed are the results of analyses for samples received by Summit Scientific on 09/10/24 17:49. 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 Tank Battery

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BKG01@0-6"	2409137-01	Soil	09/10/24 08:52	09/10/24 17:49
BKG01@2.5'	2409137-02	Soil	09/10/24 08:54	09/10/24 17:49
BKG01@4'	2409137-03	Soil	09/10/24 08:56	09/10/24 17:49

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

Lab ID	Page 1 of 1
2409137	

Client: PDC / Tasman		Send Data To: Project Manager: Karen Olson		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: karen.olson@chevron.com		Project Name/Location: Land 31-13, 17, 19, 24, 360 Tank Battery	
City/State/Zip: Broomfield / CO / 80020				AFE#: PX - 900337	
Phone: 303-487-1228		Project Name: Land 31-13, 17, 19, 24, 360 Tank Battery		PO/Billing Codes:	
Sampler Name: Elizabeth Brauer		Project Number:		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	BTEXN - 8260B	TPH - (C6 - C36)	1,2,4 & 1,3,5-TMB	Boron - HWS	pH, EC, SAR	PAHs	Metals - 915	
1	BKG0100-6"	9/10/24	852	2												X	X		X	
2	BKG0102.5'	↓	854	↓												↓	↓		↓	
3	BKG0104'	↓	856	↓												↓	↓		↓	
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by:	Date/Time: 9/10/24 1405	Received by: Tasman Lockbox	Date/Time: 9/10/24 1405	TAT Business Days	Field DO	Notes:
Relinquished by: Tasman Lockbox	Date/Time: 9/10/24 1749	Received by:	Date/Time: 9/10/24 1749	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Temperature Upon Receipt: 8.8	Corrected Temperature: 8	IR gun #:		Standard	X Field Turb.	
				HNO3 lot #:		

S₂

Sample Receipt Checklist

S2 Work Order# 2409137Client: Prof Tuman

Client Project ID:

Land 31-13, 17, 19, 24, 36D Tank Battery

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

Airbill #:

	-			
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Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

8.8

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"/>	CM>CE
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 type="checkbox"/>	<input checked="" 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

9/10/24
Date/Time



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

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

BKG01@0-6"
2409137-01 (Soil)

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Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/10/24 08:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHI0339	09/11/24	09/12/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/10/24 08:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	4.03	0.200		mg/kg dry	1	BHI0334	09/11/24	09/11/24	EPA 6020B	
Barium	171	0.400		"	"	"	"	"	"	
Cadmium	0.421	0.200		"	"	"	"	"	"	
Copper	8.47	0.400		"	"	"	"	"	"	
Lead	13.7	0.200		"	"	"	"	"	"	
Nickel	6.83	0.400		"	"	"	"	"	"	
Silver	0.0705	0.0200		"	"	"	"	"	"	
Zinc	29.3	0.400		"	"	"	"	"	"	
Selenium	0.309	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/10/24 08:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHI0338	09/11/24	09/11/24	EPA 7196A	

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

Date Sampled: **09/10/24 08:52**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	123	0.0500		mg/L dry	1	BHI0414	09/12/24	09/14/24	EPA 6020B	
Magnesium	52.7	0.0500		"	"	"	"	"	"	
Sodium	402	0.0500		"	"	"	"	"	"	

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

BKG01@0-6"
2409137-01 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/10/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	7.64	0.00100	units	1	BHI0504	09/16/24	09/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/10/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.6		%	1	BHI0341	09/11/24	09/11/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/10/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.36	0.0100	mmhos/cm	1	BHI0415	09/12/24	09/13/24	EPA 120.1	

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

Date Sampled: **09/10/24 08:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.58		pH Units	1	BHI0416	09/12/24	09/13/24	EPA 9045D	

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Broomfield CO, 80020

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

BKG01@2.5'
2409137-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/10/24 08:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHI0339	09/11/24	09/12/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/10/24 08:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.98	0.200	mg/kg dry	1	BHI0334	09/11/24	09/11/24	EPA 6020B	
Barium	108	0.400	"	"	"	"	"	"	
Cadmium	0.209	0.200	"	"	"	"	"	"	
Copper	5.77	0.400	"	"	"	"	"	"	
Lead	7.91	0.200	"	"	"	"	"	"	
Nickel	5.35	0.400	"	"	"	"	"	"	
Silver	0.0397	0.0200	"	"	"	"	"	"	
Zinc	20.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/10/24 08:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI0338	09/11/24	09/11/24	EPA 7196A	

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

Date Sampled: **09/10/24 08:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	325	0.0500	mg/L dry	1	BHI0414	09/12/24	09/14/24	EPA 6020B	
Magnesium	91.7	0.0500	"	"	"	"	"	"	
Sodium	214	0.0500	"	"	"	"	"	"	

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

BKG01@2.5'
2409137-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/10/24 08:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.70	0.00100	units	1	BHI0504	09/16/24	09/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/10/24 08:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.3		%	1	BHI0341	09/11/24	09/11/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/10/24 08:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.72	0.0100	mmhos/cm	1	BHI0415	09/12/24	09/13/24	EPA 120.1	

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

Date Sampled: **09/10/24 08:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.99		pH Units	1	BHI0416	09/12/24	09/13/24	EPA 9045D	

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

BKG01@4'
2409137-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/10/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHI0339	09/11/24	09/12/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/10/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Arsenic	2.16	0.180	mg/kg dry	1	BHI0334	09/11/24	09/11/24	EPA 6020B	
Barium	43.1	0.360	"	"	"	"	"	"	
Cadmium	ND	0.180	"	"	"	"	"	"	
Copper	3.01	0.360	"	"	"	"	"	"	
Lead	4.66	0.180	"	"	"	"	"	"	
Nickel	3.25	0.360	"	"	"	"	"	"	
Silver	0.0206	0.0180	"	"	"	"	"	"	
Zinc	11.4	0.360	"	"	"	"	"	"	
Selenium	ND	0.234	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/10/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHI0338	09/11/24	09/11/24	EPA 7196A	

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

Date Sampled: **09/10/24 08:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Calcium	60.0	0.0500	mg/L dry	1	BHI0414	09/12/24	09/14/24	EPA 6020B	
Magnesium	32.4	0.0500	"	"	"	"	"	"	
Sodium	260	0.0500	"	"	"	"	"	"	

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

BKG01@4'
2409137-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **09/10/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.72	0.00100	units	1	BHI0504	09/16/24	09/16/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/10/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.0		%	1	BHI0341	09/11/24	09/11/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/10/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.59	0.0100	mmhos/cm	1	BHI0415	09/12/24	09/13/24	EPA 120.1	

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

Date Sampled: **09/10/24 08:56**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.45		pH Units	1	BHI0416	09/12/24	09/13/24	EPA 9045D	

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

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

Summit Scientific

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

Batch BHI0339 - EPA 3050B

Blank (BHI0339-BLK1)

Prepared: 09/11/24 Analyzed: 09/12/24

Boron	ND	2.00	mg/L
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LCS (BHI0339-BS1)

Prepared: 09/11/24 Analyzed: 09/12/24

Boron	4.97	2.00	mg/L	5.00	99.4	80-120
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Duplicate (BHI0339-DUP1)

Source: 2409130-01

Prepared: 09/11/24 Analyzed: 09/12/24

Boron	0.814	2.00	mg/L	0.808	0.695	20
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Matrix Spike (BHI0339-MS1)

Source: 2409130-01

Prepared: 09/11/24 Analyzed: 09/12/24

Boron	6.12	2.00	mg/L	5.01	0.808	106	75-125
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Matrix Spike Dup (BHI0339-MSD1)

Source: 2409130-01

Prepared: 09/11/24 Analyzed: 09/12/24

Boron	6.04	2.00	mg/L	5.01	0.808	105	75-125	1.33	25
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Project: PDC - Land 31-13,17,19,24,36D Tank Battery

Project Number: [none]
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Reported:
09/16/24 12:59

Total Metals by EPA 6020B - Quality Control

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

Batch BHI0334 - EPA 3050B

Blank (BHI0334-BLK1)

Prepared & Analyzed: 09/11/24

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 (BHI0334-BS1)

Prepared & Analyzed: 09/11/24

Arsenic	34.5	0.200	mg/kg wet	36.5	94.5	80-120
Barium	35.5	0.400	"	36.5	97.2	80-120
Cadmium	1.78	0.200	"	1.82	97.7	80-120
Copper	36.7	0.400	"	36.5	101	80-120
Lead	17.7	0.200	"	18.2	96.8	80-120
Nickel	36.6	0.400	"	36.5	100	80-120
Silver	1.79	0.0200	"	1.82	97.9	80-120
Zinc	35.1	0.400	"	36.5	96.1	80-120
Selenium	4.21	0.260	"	3.65	115	80-120

Duplicate (BHI0334-DUP1)

Source: 2409119-01

Prepared & Analyzed: 09/11/24

Arsenic	1.94	0.200	mg/kg dry	1.92	1.02	20
Barium	85.8	0.400	"	93.3	8.39	20
Cadmium	0.133	0.200	"	0.123	7.64	20
Copper	3.87	0.400	"	4.94	24.2	20
Lead	4.62	0.200	"	4.73	2.49	20
Nickel	3.28	0.400	"	3.27	0.311	20
Silver	0.0283	0.0200	"	0.0235	18.3	20
Zinc	11.6	0.400	"	12.6	7.66	20
Selenium	ND	0.260	"	ND		20

QR-01

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

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 BHI0334 - EPA 3050B

Matrix Spike (BHI0334-MS1)

Source: 2409119-01

Prepared & Analyzed: 09/11/24

Arsenic	39.4	0.200	mg/kg dry	40.4	1.92	92.9	75-125			
Barium	193	0.400	"	40.4	93.3	246	75-125			QM-05
Cadmium	2.05	0.200	"	2.02	0.123	95.5	75-125			
Copper	35.2	0.400	"	40.4	4.94	74.8	75-125			QM-05
Lead	24.0	0.200	"	20.2	4.73	95.5	75-125			
Nickel	32.1	0.400	"	40.4	3.27	71.2	75-125			QM-05
Silver	1.89	0.0200	"	2.02	0.0235	92.4	75-125			
Zinc	41.6	0.400	"	40.4	12.6	72.0	75-125			QM-05
Selenium	4.45	0.260	"	4.04	ND	110	75-125			

Matrix Spike Dup (BHI0334-MSD1)

Source: 2409119-01

Prepared & Analyzed: 09/11/24

Arsenic	40.4	0.200	mg/kg dry	41.3	1.92	93.0	75-125	2.40	25	
Barium	119	0.400	"	41.3	93.3	63.1	75-125	47.0	25	QM-05
Cadmium	2.12	0.200	"	2.07	0.123	96.7	75-125	3.31	25	
Copper	32.9	0.400	"	41.3	4.94	67.6	75-125	6.72	25	QM-05
Lead	23.8	0.200	"	20.7	4.73	92.4	75-125	0.718	25	
Nickel	32.2	0.400	"	41.3	3.27	69.9	75-125	0.318	25	QM-05
Silver	1.96	0.0200	"	2.07	0.0235	93.7	75-125	3.68	25	
Zinc	41.6	0.400	"	41.3	12.6	70.3	75-125	0.0731	25	QM-05
Selenium	4.52	0.260	"	4.13	ND	109	75-125	1.53	25	

Summit Scientific

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

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

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 BHI0338 - 3060A Mod

Blank (BHI0338-BLK1)

Prepared & Analyzed: 09/11/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHI0338-BS1)

Prepared & Analyzed: 09/11/24

Chromium, Hexavalent 25.2 0.30 mg/kg wet 25.0 101 80-120

Duplicate (BHI0338-DUP1)

Source: 2409135-01

Prepared & Analyzed: 09/11/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHI0338-MS1)

Source: 2409135-01

Prepared & Analyzed: 09/11/24

Chromium, Hexavalent 29.6 0.30 mg/kg dry 28.6 ND 103 75-125

Matrix Spike Dup (BHI0338-MSD1)

Source: 2409135-01

Prepared & Analyzed: 09/11/24

Chromium, Hexavalent 28.9 0.30 mg/kg dry 28.6 ND 101 75-125 2.35 20

Summit Scientific

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

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

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

Summit Scientific

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

Batch BHI0414 - General Preparation

Blank (BHI0414-BLK1)

Prepared: 09/12/24 Analyzed: 09/14/24

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

LCS (BHI0414-BS1)

Prepared: 09/12/24 Analyzed: 09/14/24

Calcium	5.56	0.0500	mg/L wet	5.00	111	70-130
Magnesium	5.19	0.0500	"	5.00	104	70-130
Sodium	5.45	0.0500	"	5.00	109	70-130

Summit Scientific

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

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

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 BHI0341 - General Preparation

Duplicate (BHI0341-DUP1)

Source: 2409135-01

Prepared & Analyzed: 09/11/24

% Solids	85.7	%	87.4	1.96	20
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Summit Scientific

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

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

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 BHI0415 - General Preparation

Blank (BHI0415-BLK1)

Prepared: 09/12/24 Analyzed: 09/13/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHI0415-BS1)

Prepared: 09/12/24 Analyzed: 09/13/24

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 101 95-105

Duplicate (BHI0415-DUP1)

Source: 2409105-01

Prepared: 09/12/24 Analyzed: 09/13/24

Specific Conductance (EC) 0.357 0.0100 mmhos/cm 0.356 0.0841 20

Summit Scientific

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

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

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 BHI0416 - General Preparation

LCS (BHI0416-BS1)

Prepared: 09/12/24 Analyzed: 09/13/24

pH	9.14	pH Units	9.18	99.6	95-105
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Duplicate (BHI0416-DUP1)

Source: 2409105-01

Prepared: 09/12/24 Analyzed: 09/13/24

pH	7.25	pH Units	7.38	1.78	20
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Summit Scientific

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

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

Project Number: [none]
Project Manager: Karen Olson

Reported:
09/16/24 12:59

Notes and Definitions

QR-01	Analyses are not controlled on RPD values from sample concentrations below the reporting limit. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
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