

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 05, 2025

Andy Sagen

Tasman Geosciences

4725 Independence St.

Wheat Ridge, CO 80033

RE: PDC - Leffler 26Q, 26T-421 TB

Work Order #2505037

Enclosed are the results of analyses for samples received by Summit Scientific on 05/08/25 17:48. 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 written in a cursive, flowing style.

Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01-FL@4'	2505037-01	Soil	05/08/25 10:45	05/08/25 17:48
SEP02-FL@4'	2505037-02	Soil	05/08/25 10:52	05/08/25 17:48
BKG01@0-6"	2505037-03	Soil	05/08/25 12:25	05/08/25 17:48
BKG01@2.5'	2505037-04	Soil	05/08/25 12:26	05/08/25 17:48
BKG01@4'	2505037-05	Soil	05/08/25 12:27	05/08/25 17:48
BKG01@5'	2505037-06	Soil	05/08/25 12:28	05/08/25 17:48

SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2505037	

Client: PDC/Tasman	Send Data To: Project Manager: Andy Sagen	Send Invoice To: Company: PDC Energy
Address: 4725 Independence St.	E-Mail: tas-chevron-1@tasman-geo.com	Project Name/Location: Leffer 260, 26T-421 TB
City/State/Zip: Wheat Ridge/CO/80033	RBUEUF27@chevron.com	AFE#: UWRGC - A4700 - ABN
Phone: 303-487-1228	Project Name: Leffer 260, 26T-421 TB	PO/Billing Codes:
Sampler Name: Josh Adams	Project Number:	Contact: Karen Olson

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	SEPC1-FL @ 4'	5/8/25	1045	3			X			X			X	X	X	X	X	X		SAR, EC, pH by saturated paste	
2	SEPC2-FL @ 4'		1052	1			X			X			X	X	X	X	X	X			
3	BV(GO) @ 0-6"		1225	1			X			X			X	X	X	X	X	X			
4	BV(GO) @ 2.5'		1240	1			X			X			X	X	X	X	X	X			
5	BV(GO) @ 4'		1227	1			X			X			X	X	X	X	X	X			
6	BV(GO) @ 5'		1228	1			X			X			X	X	X	X	X	X			
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <i>Josh Adams</i> Date/Time: 5/8/25 1500	Received by: Tasman Lock Box Date/Time: 5/8/25 1500	TAT Business Days	Field DO	Notes:
		Same Day	Field EC	
Relinquished by: Tasman Lock Box Date/Time: 5/8/25 1748	Received by: <i>[Signature]</i> Date/Time: 5/8/25 1748	1 Day	Field ORP	
		2 Days	Field pH	
		3 Days	Field Temp.	
Relinquished by:	Received by:	Standard	Field Turb. <input checked="" type="checkbox"/>	
Temperature Upon Receipt: 25	Corrected Temperature: 0	IR gun #: 1	HNO3 lot #:	

S₂

SZ Work Order# 2505037

Sample Receipt Checklist

Client: 2DC/Talman Client Project ID: Leffler 2GA, 2GT-421 TBReceived Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____Matrix (Circle all that apply) Air/Soil/Water/Other Temp (°C) 2.5 Thermometer # 1Bottle ware (Circle all that apply) Glass Jar/Voa/Amber/Poly/Other

	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.	-			CW2CE
If custody seals are present, are they intact? ⁽¹⁾	-			
Are samples due within 48 hours?		-		
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, Total Residual Chlorine (TRC)		-		
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	-			
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	-			
Were all samples received intact? ⁽¹⁾	✓			
Was adequate sample volume provided? ⁽¹⁾	✓			
Were samples provided in appropriate bottle ware?	✓			
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	✓			
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are any samples/bottles preserved (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.			✓	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Are there requested analysis that cannot be performed by S2? Note analysis in the comments column		✓		
<u>Additional Comments (if any):</u>				

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

Control Form #: SRC-001

AS
Custodian Printed Name

5/8/25
Date/Time



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

SEP01-FL@4'
2505037-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/08/25 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIE0555	05/16/25	05/24/25	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: **05/08/25 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0419	105 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0377	94.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	96.9 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/08/25 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIE0554	05/16/25	05/29/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/08/25 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.06	72.5 %		50-140		"	"	"	"	

PAH by EPA Method 8270D SIM

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4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

SEP01-FL@4'
2505037-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/08/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIE0429	05/09/25	06/03/25	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: **05/08/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0191	57.4 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0272	81.5 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/08/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BIE0423	05/09/25	05/12/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/08/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

SEP01-FL@4'
2505037-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	6.10	0.200	mg/kg dry	1	BIE0425	05/09/25	05/09/25	EPA 6020B
Barium	152	0.400	"	"	"	"	"	"
Cadmium	0.346	0.200	"	"	"	"	"	"
Copper	10.4	0.400	"	"	"	"	"	"
Lead	9.79	0.200	"	"	"	"	"	"
Nickel	11.9	0.400	"	"	"	"	"	"
Silver	0.0583	0.0200	"	"	"	"	"	"
Zinc	35.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by HACH M8023

Date Sampled: **05/08/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIE0421	05/09/25	05/09/25	Hach 8000	

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

Date Sampled: **05/08/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	78.3	0.0500	mg/L dry	1	BIE0474	05/12/25	05/14/25	EPA 6020B	
Magnesium	17.6	0.0500	"	"	"	"	"	"	
Sodium	12.5	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/08/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.332	0.00100	units	1	BIE0538	05/15/25	05/15/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/08/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 06/05/25 11:11

SEP01-FL@4'
2505037-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.1	%	1	BIE0424	05/09/25	05/09/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/08/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.349	0.0100	mmhos/cm	1	BIE0477	05/12/25	05/13/25	EPA 120.1	

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

Date Sampled: **05/08/25 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.04		pH Units	1	BIE0476	05/12/25	05/13/25	EPA 9045D	

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

SEP02-FL@4'
2505037-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIE0555	05/16/25	05/24/25	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: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0418	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0376	94.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0386	96.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIE0554	05/16/25	05/29/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.64	69.1 %	50-140		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

SEP02-FL@4'
2505037-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIE0429	05/09/25	06/03/25	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: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0206	61.9 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0282	84.7 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BIE0423	05/09/25	05/12/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

SEP02-FL@4'
2505037-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	6.50	0.200	mg/kg dry	1	BIE0425	05/09/25	05/09/25	EPA 6020B	
Barium	136	0.400	"	"	"	"	"	"	
Cadmium	0.335	0.200	"	"	"	"	"	"	
Copper	13.8	0.400	"	"	"	"	"	"	
Lead	9.44	0.200	"	"	"	"	"	"	
Nickel	9.44	0.400	"	"	"	"	"	"	
Silver	0.0463	0.0200	"	"	"	"	"	"	
Zinc	38.1	0.400	"	"	"	"	"	"	
Selenium	0.462	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIE0421	05/09/25	05/09/25	Hach 8000	

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

Date Sampled: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	82.3	0.0500	mg/L dry	1	BIE0474	05/12/25	05/14/25	EPA 6020B	
Magnesium	20.1	0.0500	"	"	"	"	"	"	
Sodium	23.8	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.610	0.00100	units	1	BIE0538	05/15/25	05/15/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 06/05/25 11:11

SEP02-FL@4'
2505037-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	82.8	%	1	BIE0424	05/09/25	05/09/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.424	0.0100	mmhos/cm	1	BIE0477	05/12/25	05/13/25	EPA 120.1	

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

Date Sampled: **05/08/25 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.49		pH Units	1	BIE0476	05/12/25	05/13/25	EPA 9045D	

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

BKG01@0-6''
2505037-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/08/25 12:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BIE0423	05/09/25	05/12/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/08/25 12:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.36	0.200	mg/kg dry	1	BIE0425	05/09/25	05/09/25	EPA 6020B	
Barium	93.2	0.400	"	"	"	"	"	"	
Cadmium	0.309	0.200	"	"	"	"	"	"	
Copper	17.2	0.400	"	"	"	"	"	"	
Lead	8.75	0.200	"	"	"	"	"	"	
Nickel	8.09	0.400	"	"	"	"	"	"	
Silver	0.0460	0.0200	"	"	"	"	"	"	
Zinc	56.8	0.400	"	"	"	"	"	"	
Selenium	0.307	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **05/08/25 12:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIE0421	05/09/25	05/09/25	Hach 8000	

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

Date Sampled: **05/08/25 12:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	308	0.0500	mg/L dry	1	BIE0474	05/12/25	05/14/25	EPA 6020B	
Magnesium	145	0.0500	"	"	"	"	"	"	
Sodium	292	0.0500	"	"	"	"	"	"	

Calculated Analysis

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
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

BKG01@0-6''
2505037-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/08/25 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.44	0.00100	units	1	BIE0538	05/15/25	05/15/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/08/25 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.4		%	1	BIE0424	05/09/25	05/09/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/08/25 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.48	0.0100	mmhos/cm	1	BIE0477	05/12/25	05/13/25	EPA 120.1	

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

Date Sampled: **05/08/25 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.52		pH Units	1	BIE0476	05/12/25	05/13/25	EPA 9045D	

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
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

BKG01@2.5'
2505037-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/08/25 12:26**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BIE0423	05/09/25	05/12/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/08/25 12:26**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.24	0.200	mg/kg dry	1	BIE0425	05/09/25	05/09/25	EPA 6020B	
Barium	110	0.400	"	"	"	"	"	"	
Cadmium	0.253	0.200	"	"	"	"	"	"	
Copper	6.63	0.400	"	"	"	"	"	"	
Lead	7.31	0.200	"	"	"	"	"	"	
Nickel	8.61	0.400	"	"	"	"	"	"	
Silver	0.0399	0.0200	"	"	"	"	"	"	
Zinc	26.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **05/08/25 12:26**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIE0421	05/09/25	05/09/25	Hach 8000	

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

Date Sampled: **05/08/25 12:26**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	363	0.0500	mg/L dry	1	BIE0474	05/12/25	05/14/25	EPA 6020B	
Magnesium	141	0.0500	"	"	"	"	"	"	
Sodium	255	0.0500	"	"	"	"	"	"	

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
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

BKG01@2.5'
2505037-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/08/25 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.88	0.00100	units	1	BIE0538	05/15/25	05/15/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/08/25 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.7		%	1	BIE0424	05/09/25	05/09/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/08/25 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.14	0.0100	mmhos/cm	1	BIE0477	05/12/25	05/13/25	EPA 120.1	

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

Date Sampled: **05/08/25 12:26**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.79		pH Units	1	BIE0476	05/12/25	05/13/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

BKG01@4'
2505037-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/08/25 12:27**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BIE0423	05/09/25	05/12/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/08/25 12:27**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.54	0.200	mg/kg dry	1	BIE0425	05/09/25	05/09/25	EPA 6020B	
Barium	162	0.400	"	"	"	"	"	"	
Cadmium	0.354	0.200	"	"	"	"	"	"	
Copper	9.74	0.400	"	"	"	"	"	"	
Lead	10.2	0.200	"	"	"	"	"	"	
Nickel	10.9	0.400	"	"	"	"	"	"	
Silver	0.0535	0.0200	"	"	"	"	"	"	
Zinc	32.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **05/08/25 12:27**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIE0421	05/09/25	05/09/25	Hach 8000	

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

Date Sampled: **05/08/25 12:27**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	311	0.0500	mg/L dry	1	BIE0474	05/12/25	05/14/25	EPA 6020B	
Magnesium	137	0.0500	"	"	"	"	"	"	
Sodium	112	0.0500	"	"	"	"	"	"	

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
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

BKG01@4'
2505037-05 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/08/25 12:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.33	0.00100	units	1	BIE0538	05/15/25	05/15/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/08/25 12:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.6		%	1	BIE0424	05/09/25	05/09/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/08/25 12:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.09	0.0100	mmhos/cm	1	BIE0477	05/12/25	05/13/25	EPA 120.1	

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

Date Sampled: **05/08/25 12:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.87		pH Units	1	BIE0476	05/12/25	05/13/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

BKG01@5'
2505037-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/08/25 12:28**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L dry	1	BIE0423	05/09/25	05/12/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/08/25 12:28**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.57	0.200	mg/kg dry	1	BIE0425	05/09/25	05/09/25	EPA 6020B	
Barium	84.2	0.400	"	"	"	"	"	"	
Cadmium	0.242	0.200	"	"	"	"	"	"	
Copper	6.19	0.400	"	"	"	"	"	"	
Lead	6.54	0.200	"	"	"	"	"	"	
Nickel	8.09	0.400	"	"	"	"	"	"	
Silver	0.0375	0.0200	"	"	"	"	"	"	
Zinc	24.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by HACH M8023

Date Sampled: **05/08/25 12:28**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIE0421	05/09/25	05/09/25	Hach 8000	

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

Date Sampled: **05/08/25 12:28**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	279	0.0500	mg/L dry	1	BIE0474	05/12/25	05/14/25	EPA 6020B	
Magnesium	96.2	0.0500	"	"	"	"	"	"	
Sodium	233	0.0500	"	"	"	"	"	"	

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
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

BKG01@5'
2505037-06 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/08/25 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.07	0.00100	units	1	BIE0538	05/15/25	05/15/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/08/25 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.8		%	1	BIE0424	05/09/25	05/09/25	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/08/25 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.05	0.0100	mmhos/cm	1	BIE0477	05/12/25	05/13/25	EPA 120.1	

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

Date Sampled: **05/08/25 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.91		pH Units	1	BIE0476	05/12/25	05/13/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

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 BIE0555 - EPA 5030 Soil MS

Blank (BIE0555-BLK1)

Prepared: 05/16/25 Analyzed: 05/24/25

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	"								
Surrogate: 1,2-Dichloroethane-d4	0.0430		"	0.0400		107	50-150				
Surrogate: Toluene-d8	0.0376		"	0.0400		94.0	50-150				
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		97.0	50-150				

LCS (BIE0555-BS1)

Prepared: 05/16/25 Analyzed: 05/24/25

Benzene	0.0862	0.0020	mg/kg	0.100		86.2	70-130				
Toluene	0.0835	0.0050	"	0.100		83.5	70-130				
Ethylbenzene	0.0858	0.0050	"	0.100		85.8	70-130				
m,p-Xylene	0.172	0.010	"	0.200		85.8	70-130				
o-Xylene	0.0909	0.0050	"	0.100		90.9	70-130				
1,2,4-Trimethylbenzene	0.0817	0.0050	"	0.100		81.7	70-130				
1,3,5-Trimethylbenzene	0.0832	0.0050	"	0.100		83.2	70-130				
Naphthalene	0.0904	0.0038	"	0.100		90.4	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0400		102	50-150				
Surrogate: Toluene-d8	0.0379		"	0.0400		94.7	50-150				
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400		95.8	50-150				

Matrix Spike (BIE0555-MS1)

Source: 2505036-01

Prepared: 05/16/25 Analyzed: 05/24/25

Benzene	0.0791	0.0020	mg/kg	0.100	ND	79.1	70-130				
Toluene	0.0711	0.0050	"	0.100	ND	71.1	70-130				
Ethylbenzene	0.0740	0.0050	"	0.100	ND	74.0	70-130				
m,p-Xylene	0.151	0.010	"	0.200	ND	75.3	70-130				
o-Xylene	0.0823	0.0050	"	0.100	ND	82.3	70-130				
1,2,4-Trimethylbenzene	0.0658	0.0050	"	0.100	ND	65.8	70-130				QM-05
1,3,5-Trimethylbenzene	0.0692	0.0050	"	0.100	ND	69.2	70-130				QM-05
Naphthalene	0.0655	0.0038	"	0.100	ND	65.5	70-130				QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0414		"	0.0400		103	50-150				
Surrogate: Toluene-d8	0.0377		"	0.0400		94.3	50-150				
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.6	50-150				

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
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

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 BIE0555 - EPA 5030 Soil MS

Matrix Spike Dup (BIE0555-MSD1)	Source: 2505036-01			Prepared: 05/16/25 Analyzed: 05/24/25						
Benzene	0.0774	0.0020	mg/kg	0.100	ND	77.4	70-130	2.22	30	
Toluene	0.0732	0.0050	"	0.100	ND	73.2	70-130	2.91	30	
Ethylbenzene	0.0787	0.0050	"	0.100	ND	78.7	70-130	6.17	30	
m,p-Xylene	0.160	0.010	"	0.200	ND	79.9	70-130	5.94	30	
o-Xylene	0.0862	0.0050	"	0.100	ND	86.2	70-130	4.63	30	
1,2,4-Trimethylbenzene	0.0705	0.0050	"	0.100	ND	70.5	70-130	6.87	30	
1,3,5-Trimethylbenzene	0.0748	0.0050	"	0.100	ND	74.8	70-130	7.87	30	
Naphthalene	0.0672	0.0038	"	0.100	ND	67.2	70-130	2.62	30	QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0422		"	0.0400		105	50-150			
Surrogate: Toluene-d8	0.0379		"	0.0400		94.7	50-150			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.5	50-150			

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
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BIE0554 - EPA 3550A

Blank (BIE0554-BLK1)

Prepared: 05/16/25 Analyzed: 05/29/25

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	14.4		"	12.5		115	50-140				

LCS (BIE0554-BS1)

Prepared: 05/16/25 Analyzed: 05/29/25

C10-C28 (DRO)	551	50	mg/kg	500		110	50-140				
Surrogate: <i>o</i> -Terphenyl	13.8		"	12.5		110	50-140				

Matrix Spike (BIE0554-MS1)

Source: 2505036-01

Prepared: 05/16/25 Analyzed: 05/29/25

C10-C28 (DRO)	503	50	mg/kg	500	ND	101	50-140				
Surrogate: <i>o</i> -Terphenyl	12.6		"	12.5		100	50-140				

Matrix Spike Dup (BIE0554-MSD1)

Source: 2505036-01

Prepared: 05/16/25 Analyzed: 05/29/25

C10-C28 (DRO)	498	50	mg/kg	500	ND	99.5	50-140	1.09	20		
Surrogate: <i>o</i> -Terphenyl	13.2		"	12.5		106	50-140				

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
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BIE0429 - EPA 5030 Soil MS

Blank (BIE0429-BLK1)

Prepared: 05/09/25 Analyzed: 06/03/25

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>	0.0266		"	0.0333		79.7	40-140			
<i>Surrogate: Fluoranthene-d10</i>	0.0298		"	0.0333		89.3	40-140			

LCS (BIE0429-BS1)

Prepared: 05/09/25 Analyzed: 06/03/25

Acenaphthene	0.0263	0.00500	mg/kg	0.0333		79.0	40-140			
Anthracene	0.0286	0.00500	"	0.0333		85.9	40-140			
Benzo (a) anthracene	0.0311	0.00500	"	0.0333		93.2	40-140			
Benzo (a) pyrene	0.0272	0.00500	"	0.0333		81.5	40-140			
Benzo (b) fluoranthene	0.0295	0.00500	"	0.0333		88.6	40-140			
Benzo (k) fluoranthene	0.0271	0.00500	"	0.0333		81.4	40-140			
Chrysene	0.0274	0.00500	"	0.0333		82.1	40-140			
Dibenz (a,h) anthracene	0.0176	0.00500	"	0.0333		52.9	40-140			
Fluoranthene	0.0282	0.00500	"	0.0333		84.5	40-140			
Fluorene	0.0283	0.00500	"	0.0333		84.8	40-140			
Indeno (1,2,3-cd) pyrene	0.0192	0.00500	"	0.0333		57.7	40-140			
Pyrene	0.0273	0.00500	"	0.0333		81.8	40-140			
1-Methylnaphthalene	0.0215	0.00500	"	0.0333		64.6	40-140			
2-Methylnaphthalene	0.0261	0.00500	"	0.0333		78.3	40-140			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0234		"	0.0333		70.2	40-140			
<i>Surrogate: Fluoranthene-d10</i>	0.0273		"	0.0333		82.0	40-140			

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

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 BIE0429 - EPA 5030 Soil MS

Matrix Spike (BIE0429-MS1)	Source: 2505027-02			Prepared: 05/09/25 Analyzed: 06/03/25						
Acenaphthene	0.0244	0.00500	mg/kg	0.0333	ND	73.2	40-140			
Anthracene	0.0253	0.00500	"	0.0333	ND	75.9	40-140			
Benzo (a) anthracene	0.0264	0.00500	"	0.0333	ND	79.3	40-140			
Benzo (a) pyrene	0.0221	0.00500	"	0.0333	ND	66.3	40-140			
Benzo (b) fluoranthene	0.0259	0.00500	"	0.0333	ND	77.8	40-140			
Benzo (k) fluoranthene	0.0240	0.00500	"	0.0333	ND	72.0	40-140			
Chrysene	0.0233	0.00500	"	0.0333	ND	69.8	40-140			
Dibenz (a,h) anthracene	0.0127	0.00500	"	0.0333	ND	38.0	40-140			QM-05
Fluoranthene	0.0230	0.00500	"	0.0333	ND	69.0	40-140			
Fluorene	0.0254	0.00500	"	0.0333	ND	76.2	40-140			
Indeno (1,2,3-cd) pyrene	0.0133	0.00500	"	0.0333	ND	40.0	40-140			
Pyrene	0.0238	0.00500	"	0.0333	ND	71.4	40-140			
1-Methylnaphthalene	0.0188	0.00500	"	0.0333	ND	56.3	40-140			
2-Methylnaphthalene	0.0224	0.00500	"	0.0333	ND	67.3	40-140			
Surrogate: 2-Methylnaphthalene-d10	0.0204		"	0.0333		61.1	40-140			
Surrogate: Fluoranthene-d10	0.0226		"	0.0333		67.7	40-140			

Matrix Spike Dup (BIE0429-MSD1)	Source: 2505027-02			Prepared: 05/09/25 Analyzed: 06/03/25						
Acenaphthene	0.0227	0.00500	mg/kg	0.0333	ND	68.1	40-140	7.28	30	
Anthracene	0.0219	0.00500	"	0.0333	ND	65.6	40-140	14.5	30	
Benzo (a) anthracene	0.0243	0.00500	"	0.0333	ND	72.8	40-140	8.55	30	
Benzo (a) pyrene	0.0201	0.00500	"	0.0333	ND	60.2	40-140	9.61	30	
Benzo (b) fluoranthene	0.0248	0.00500	"	0.0333	ND	74.4	40-140	4.53	30	
Benzo (k) fluoranthene	0.0229	0.00500	"	0.0333	ND	68.7	40-140	4.67	30	
Chrysene	0.0215	0.00500	"	0.0333	ND	64.6	40-140	7.75	30	
Dibenz (a,h) anthracene	0.0122	0.00500	"	0.0333	ND	36.6	40-140	3.75	30	QM-05
Fluoranthene	0.0204	0.00500	"	0.0333	ND	61.1	40-140	12.1	30	
Fluorene	0.0241	0.00500	"	0.0333	ND	72.2	40-140	5.39	30	
Indeno (1,2,3-cd) pyrene	0.0140	0.00500	"	0.0333	ND	41.9	40-140	4.64	30	
Pyrene	0.0225	0.00500	"	0.0333	ND	67.6	40-140	5.48	30	
1-Methylnaphthalene	0.0178	0.00500	"	0.0333	ND	53.4	40-140	5.35	30	
2-Methylnaphthalene	0.0206	0.00500	"	0.0333	ND	61.7	40-140	8.74	30	
Surrogate: 2-Methylnaphthalene-d10	0.0186		"	0.0333		55.9	40-140			
Surrogate: Fluoranthene-d10	0.0201		"	0.0333		60.4	40-140			

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 06/05/25 11:11

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

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

Batch BIE0423 - EPA 3050B

Blank (BIE0423-BLK1)

Prepared: 05/09/25 Analyzed: 05/12/25

Boron ND 2.00 mg/L wet

LCS (BIE0423-BS1)

Prepared: 05/09/25 Analyzed: 05/14/25

Boron 6.00 2.00 mg/L wet 5.01 120 80-120

Duplicate (BIE0423-DUP1)

Source: 2505034-01

Prepared: 05/09/25 Analyzed: 05/12/25

Boron 0.287 2.00 mg/L dry 0.292 1.76 20

Matrix Spike (BIE0423-MS1)

Source: 2505034-01

Prepared: 05/09/25 Analyzed: 05/14/25

Boron 6.40 2.00 mg/L dry 6.27 0.292 97.5 75-125

Matrix Spike Dup (BIE0423-MSD1)

Source: 2505034-01

Prepared: 05/09/25 Analyzed: 05/14/25

Boron 6.30 2.00 mg/L dry 6.27 0.292 95.7 75-125 1.66 25

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BIE0425 - EPA 3050B

Blank (BIE0425-BLK1)

Prepared & Analyzed: 05/09/25

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 (BIE0425-BS1)

Prepared & Analyzed: 05/09/25

Arsenic	39.8	0.200	mg/kg wet	40.0	99.6	80-120
Barium	40.4	0.400	"	40.0	101	80-120
Cadmium	1.89	0.200	"	2.00	94.7	80-120
Copper	40.1	0.400	"	40.0	100	80-120
Lead	19.3	0.200	"	20.0	96.6	80-120
Nickel	39.6	0.400	"	40.0	99.1	80-120
Silver	2.09	0.0200	"	2.00	104	80-120
Zinc	38.6	0.400	"	40.0	96.4	80-120
Selenium	4.11	0.260	"	4.00	103	80-120

Duplicate (BIE0425-DUP1)

Source: 2505034-01

Prepared & Analyzed: 05/09/25

Arsenic	6.39	0.200	mg/kg dry	6.53	2.14	20
Barium	168	0.400	"	168	0.429	20
Cadmium	0.357	0.200	"	0.354	0.839	20
Copper	9.56	0.400	"	9.67	1.14	20
Lead	9.97	0.200	"	9.94	0.341	20
Nickel	10.7	0.400	"	10.2	5.24	20
Silver	0.0525	0.0200	"	0.0553	5.14	20
Zinc	35.4	0.400	"	34.6	2.23	20
Selenium	0.239	0.260	"	0.234	2.25	20

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

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 BIE0425 - EPA 3050B

Matrix Spike (BIE0425-MS1)	Source: 2505034-01			Prepared & Analyzed: 05/09/25							
Arsenic	51.9	0.200	mg/kg dry	49.1	6.53	92.5	75-125				
Barium	388	0.400	"	49.1	168	449	75-125				QM-05
Cadmium	2.73	0.200	"	2.45	0.354	96.8	75-125				
Copper	46.8	0.400	"	49.1	9.67	75.7	75-125				
Lead	32.1	0.200	"	24.5	9.94	90.5	75-125				
Nickel	45.9	0.400	"	49.1	10.2	73.0	75-125				QM-05
Silver	2.37	0.0200	"	2.45	0.0553	94.5	75-125				
Zinc	70.3	0.400	"	49.1	34.6	72.6	75-125				QM-05
Selenium	4.39	0.260	"	4.91	0.234	84.8	75-125				

Matrix Spike Dup (BIE0425-MSD1)	Source: 2505034-01			Prepared & Analyzed: 05/09/25							
Arsenic	55.0	0.200	mg/kg dry	51.1	6.53	95.0	75-125	5.84	25		
Barium	205	0.400	"	51.1	168	73.5	75-125	61.6	25	QM-05	
Cadmium	2.87	0.200	"	2.55	0.354	98.6	75-125	5.07	25		
Copper	47.3	0.400	"	51.1	9.67	73.7	75-125	1.02	25	QM-05	
Lead	34.8	0.200	"	25.5	9.94	97.4	75-125	7.97	25		
Nickel	47.5	0.400	"	51.1	10.2	73.2	75-125	3.34	25	QM-05	
Silver	2.49	0.0200	"	2.55	0.0553	95.3	75-125	4.73	25		
Zinc	71.8	0.400	"	51.1	34.6	72.8	75-125	2.17	25	QM-05	
Selenium	4.49	0.260	"	5.11	0.234	83.4	75-125	2.24	25		

Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

Hexavalent Chromium by HACH M8023 - Quality Control
Summit Scientific

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

Batch BIE0421 - 3060A Mod

Blank (BIE0421-BLK1)

Prepared & Analyzed: 05/09/25

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BIE0421-BS1)

Prepared & Analyzed: 05/09/25

Chromium, Hexavalent 24.7 0.30 mg/kg wet 25.8 95.8 80-120

Duplicate (BIE0421-DUP1)

Source: 2505034-01

Prepared & Analyzed: 05/09/25

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BIE0421-MS1)

Source: 2505034-01

Prepared & Analyzed: 05/09/25

Chromium, Hexavalent 29.8 0.30 mg/kg dry 31.7 ND 94.0 75-125

Matrix Spike Dup (BIE0421-MSD1)

Source: 2505034-01

Prepared & Analyzed: 05/09/25

Chromium, Hexavalent 30.1 0.30 mg/kg dry 32.7 ND 92.0 75-125 0.927 20

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 06/05/25 11:11

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 BIE0474 - General Preparation

Blank (BIE0474-BLK1)

Prepared: 05/12/25 Analyzed: 05/15/25

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

LCS (BIE0474-BS1)

Prepared: 05/12/25 Analyzed: 05/14/25

Calcium	5.72	0.0500	mg/L wet	5.00	114	70-130				
Magnesium	5.59	0.0500	"	5.00	112	70-130				
Sodium	5.54	0.0500	"	5.00	111	70-130				

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
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 06/05/25 11:11

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 BIE0424 - General Preparation

Duplicate (BIE0424-DUP1)

Source: 2505034-01

Prepared & Analyzed: 05/09/25

% Solids	80.7		%		79.6			1.34		20	
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

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

Summit Scientific

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

Batch BIE0477 - General Preparation

Blank (BIE0477-BLK1)

Prepared: 05/12/25 Analyzed: 05/13/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BIE0477-BS1)

Prepared: 05/12/25 Analyzed: 05/13/25

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BIE0477-DUP1)

Source: 2505035-01

Prepared: 05/12/25 Analyzed: 05/13/25

Specific Conductance (EC) 1.60 0.0100 mmhos/cm 1.61 0.873 20

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
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
 Project Manager: Andy Sagen

Reported:
 06/05/25 11:11

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 BIE0476 - General Preparation

LCS (BIE0476-BS1)

Prepared: 05/12/25 Analyzed: 05/13/25

pH	9.17	pH Units	9.18	99.9	95-105
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Duplicate (BIE0476-DUP1)

Source: 2505035-01

Prepared: 05/12/25 Analyzed: 05/13/25

pH	8.02	pH Units	8.03	0.125	20
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Summit Scientific

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Leffler 26Q, 26T-421 TB

Project Number: [none]
Project Manager: Andy Sagen

Reported:
06/05/25 11:11

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