

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 04, 2025

Mike Medina

Tasman Geosciences

4725 Independence St.

Wheat Ridge, CO 80033

RE: PDC - Segal 8-2-24 Flowline

Work Order #2505075

Enclosed are the results of analyses for samples received by Summit Scientific on 05/14/25 18:18. 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 - Segal 8-2-24 Flowline

Project Number: 10477
Project Manager: Mike Medina

Reported:
06/04/25 09:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01R-W@2'	2505075-01	Soil	05/14/25 14:02	05/14/25 18:18

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

Lab ID	Page 1 of 1
2505075	

Client: PDC / Tasman		Project Manager: Mike Medina		Company: PDC Energy	
Address: 4725 Independence St.		E-Mail: karen.olson@chevron.com; tas-chevron-2@tasman-geo.com;		Project Name/Location: <u>Segal 8-2-24 Flowline</u>	
City/State/Zip: Wheat Ridge / CO / 80033		rbueuf27@chevron.com		AFE#: <u>UWRWE-A5064-AES</u>	
Phone: 303-487-1228		Project Name: <u>Segal 8-2-24 Flowline</u>		PO/Billing Codes:	
Sampler Name: <u>M. Dilger</u>		Project Number: <u>10477</u>		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	BTEXN - 8260B	1,2,4 & 1,3,5-TMB	TDS, Cl, SO4	Full 915-1 Suite		pH, EC, SAR, boron	Table 915-1 Metals
1	FLOIR-W@2'	5/14/25	1402	1			X									X			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: <u>Matt Dilger</u>	Date/Time: <u>5/14/25</u>	Received by: <u>Tasman lockbox</u>	Date/Time: <u>5/14/25 1720</u>	TAT Business Days	Field DO	Notes:
				Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by: <u>Tasman lockbox</u>	Date/Time: <u>5/14/25</u>	Received by: <u>[Signature]</u>	Date/Time: <u>5/14/25</u>	1 Day <input type="checkbox"/>	Field ORP	
				2 Days <input type="checkbox"/>	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days <input type="checkbox"/>	Field Temp.	
				Standard <input type="checkbox"/>	Field Turb.	
Temperature Upon Receipt: <u>0.7</u>	Corrected Temperature: <u>0</u>	IR gun #: <u>1</u>	HNO3 lot #:			



Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Segal 8-2-24 Flowline

Project Number: 10477
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06/04/25 09:29

FL01R-W@2'
2505075-01 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIE0528	05/14/25	05/15/25	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	0.014	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0427	107 %	50-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	0.0403	101 %	50-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0424	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIE0532	05/14/25	05/15/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: o-Terphenyl</i>	8.36	66.9 %	50-140		"	"	"	"	

PAH by EPA Method 8270D SIM

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FL01R-W@2'
2505075-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIE0581	05/19/25	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: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0248	74.4 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0237	71.1 %	40-140		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L dry	1	BIE0534	05/15/25	05/15/25	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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FL01R-W@2'
2505075-01 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.77	0.200	mg/kg dry	1	BIE0540	05/15/25	05/15/25	EPA 6020B
Barium	107	0.400	"	"	"	"	"	"
Cadmium	0.252	0.200	"	"	"	"	"	"
Copper	10.7	0.400	"	"	"	"	"	"
Lead	14.0	0.200	"	"	"	"	"	"
Nickel	7.02	0.400	"	"	"	"	"	"
Silver	0.102	0.0200	"	"	"	"	"	"
Zinc	34.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by HACH M8023

Date Sampled: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIE0535	05/15/25	05/15/25	Hach 8000	

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

Date Sampled: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	111	0.0500	mg/L dry	1	BIE0529	05/14/25	05/15/25	EPA 6020B	
Magnesium	21.6	0.0500	"	"	"	"	"	"	
Sodium	115	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.62	0.00100	units	1	BIE0576	05/18/25	05/18/25	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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2505075-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.4	%	1	BIE0536	05/15/25	05/15/25	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.943	0.0100	mmhos/cm	1	BIE0531	05/14/25	05/15/25	EPA 120.1	

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

Date Sampled: **05/14/25 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.94		pH Units	1	BIE0530	05/14/25	05/15/25	EPA 9045D	

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Project Manager: Mike Medina

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06/04/25 09:29

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BIE0528 - EPA 5030 Soil MS

Blank (BIE0528-BLK1)

Prepared: 05/14/25 Analyzed: 05/15/25

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	0.0356		"	0.0400		89.0	50-150				
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	50-150				
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.4	50-150				

LCS (BIE0528-BS1)

Prepared: 05/14/25 Analyzed: 05/15/25

Benzene	0.0994	0.0020	mg/kg	0.100		99.4	70-130				
Toluene	0.0939	0.0050	"	0.100		93.9	70-130				
Ethylbenzene	0.0923	0.0050	"	0.100		92.3	70-130				
m,p-Xylene	0.177	0.010	"	0.200		88.6	70-130				
o-Xylene	0.0892	0.0050	"	0.100		89.2	70-130				
1,2,4-Trimethylbenzene	0.0843	0.0050	"	0.100		84.3	70-130				
1,3,5-Trimethylbenzene	0.0866	0.0050	"	0.100		86.6	70-130				
Naphthalene	0.0914	0.0038	"	0.100		91.4	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0355		"	0.0400		88.6	50-150				
Surrogate: Toluene-d8	0.0399		"	0.0400		99.7	50-150				
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	50-150				

Matrix Spike (BIE0528-MS1)

Source: 2505070-01

Prepared: 05/14/25 Analyzed: 05/15/25

Benzene	0.0784	0.0020	mg/kg	0.100	ND	78.4	70-130				
Toluene	0.0744	0.0050	"	0.100	ND	74.4	70-130				
Ethylbenzene	0.0714	0.0050	"	0.100	ND	71.4	70-130				
m,p-Xylene	0.136	0.010	"	0.200	ND	68.2	70-130				QM-05
o-Xylene	0.0676	0.0050	"	0.100	ND	67.6	70-130				QM-05
1,2,4-Trimethylbenzene	0.0633	0.0050	"	0.100	ND	63.3	70-130				QM-05
1,3,5-Trimethylbenzene	0.0671	0.0050	"	0.100	ND	67.1	70-130				QM-05
Naphthalene	0.0684	0.0038	"	0.100	ND	68.4	70-130				QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0395		"	0.0400		98.7	50-150				
Surrogate: Toluene-d8	0.0398		"	0.0400		99.5	50-150				
Surrogate: 4-Bromofluorobenzene	0.0405		"	0.0400		101	50-150				

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06/04/25 09:29

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 BIE0528 - EPA 5030 Soil MS

Matrix Spike Dup (BIE0528-MSD1)	Source: 2505070-01			Prepared: 05/14/25 Analyzed: 05/15/25						
Benzene	0.0819	0.0020	mg/kg	0.100	ND	81.9	70-130	4.34	30	
Toluene	0.0773	0.0050	"	0.100	ND	77.3	70-130	3.84	30	
Ethylbenzene	0.0739	0.0050	"	0.100	ND	73.9	70-130	3.47	30	
m,p-Xylene	0.142	0.010	"	0.200	ND	70.9	70-130	3.97	30	
o-Xylene	0.0702	0.0050	"	0.100	ND	70.2	70-130	3.83	30	
1,2,4-Trimethylbenzene	0.0659	0.0050	"	0.100	ND	65.9	70-130	4.09	30	QM-05
1,3,5-Trimethylbenzene	0.0696	0.0050	"	0.100	ND	69.6	70-130	3.60	30	QM-05
Naphthalene	0.0690	0.0038	"	0.100	ND	69.0	70-130	0.917	30	QM-05
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0390</i>		<i>"</i>	<i>0.0400</i>		<i>97.4</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.5</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			

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Project Manager: Mike Medina

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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 BIE0532 - EPA 3550A

Blank (BIE0532-BLK1)

Prepared: 05/14/25 Analyzed: 05/15/25

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	16.3		"	12.5		131	50-140				

LCS (BIE0532-BS1)

Prepared: 05/14/25 Analyzed: 05/15/25

C10-C28 (DRO)	419	50	mg/kg	500		83.7	50-140				
Surrogate: <i>o</i> -Terphenyl	13.4		"	12.5		108	50-140				

Matrix Spike (BIE0532-MS1)

Source: 2505070-01

Prepared: 05/14/25 Analyzed: 05/15/25

C10-C28 (DRO)	352	50	mg/kg	500	21.4	66.1	50-140				
Surrogate: <i>o</i> -Terphenyl	11.6		"	12.5		92.9	50-140				

Matrix Spike Dup (BIE0532-MSD1)

Source: 2505070-01

Prepared: 05/14/25 Analyzed: 05/15/25

C10-C28 (DRO)	421	50	mg/kg	500	21.4	79.9	50-140	17.8	20		
Surrogate: <i>o</i> -Terphenyl	11.9		"	12.5		95.3	50-140				

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PAH by EPA Method 8270D SIM - Quality Control
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Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BIE0581 - EPA 5030 Soil MS

Blank (BIE0581-BLK1)

Prepared: 05/19/25 Analyzed: 06/02/25

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0307		"	0.0333		92.1	40-140			
Surrogate: Fluoranthene-d10	0.0282		"	0.0333		84.6	40-140			

LCS (BIE0581-BS1)

Prepared: 05/19/25 Analyzed: 06/02/25

Acenaphthene	0.0236	0.00500	mg/kg	0.0333		70.7	40-140			
Anthracene	0.0240	0.00500	"	0.0333		72.1	40-140			
Benzo (a) anthracene	0.0247	0.00500	"	0.0333		74.2	40-140			
Benzo (a) pyrene	0.0217	0.00500	"	0.0333		65.0	40-140			
Benzo (b) fluoranthene	0.0225	0.00500	"	0.0333		67.5	40-140			
Benzo (k) fluoranthene	0.0226	0.00500	"	0.0333		67.8	40-140			
Chrysene	0.0246	0.00500	"	0.0333		73.9	40-140			
Dibenz (a,h) anthracene	0.0224	0.00500	"	0.0333		67.2	40-140			
Fluoranthene	0.0249	0.00500	"	0.0333		74.7	40-140			
Fluorene	0.0244	0.00500	"	0.0333		73.1	40-140			
Indeno (1,2,3-cd) pyrene	0.0237	0.00500	"	0.0333		71.0	40-140			
Pyrene	0.0240	0.00500	"	0.0333		72.1	40-140			
1-Methylnaphthalene	0.0268	0.00500	"	0.0333		80.4	40-140			
2-Methylnaphthalene	0.0289	0.00500	"	0.0333		86.8	40-140			
Surrogate: 2-Methylnaphthalene-d10	0.0242		"	0.0333		72.5	40-140			
Surrogate: Fluoranthene-d10	0.0236		"	0.0333		70.7	40-140			

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Project Number: 10477
Project Manager: Mike Medina

Reported:
06/04/25 09:29

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 BIE0581 - EPA 5030 Soil MS

Matrix Spike (BIE0581-MS1)	Source: 2505064-01			Prepared: 05/19/25 Analyzed: 06/02/25						
Acenaphthene	0.0221	0.00500	mg/kg	0.0333	ND	66.3	40-140			
Anthracene	0.0215	0.00500	"	0.0333	ND	64.4	40-140			
Benzo (a) anthracene	0.0217	0.00500	"	0.0333	ND	65.2	40-140			
Benzo (a) pyrene	0.0189	0.00500	"	0.0333	ND	56.6	40-140			
Benzo (b) fluoranthene	0.0191	0.00500	"	0.0333	ND	57.4	40-140			
Benzo (k) fluoranthene	0.0193	0.00500	"	0.0333	ND	57.9	40-140			
Chrysene	0.0220	0.00500	"	0.0333	ND	65.9	40-140			
Dibenz (a,h) anthracene	0.0197	0.00500	"	0.0333	ND	59.2	40-140			
Fluoranthene	0.0221	0.00500	"	0.0333	ND	66.3	40-140			
Fluorene	0.0221	0.00500	"	0.0333	ND	66.3	40-140			
Indeno (1,2,3-cd) pyrene	0.0196	0.00500	"	0.0333	ND	58.9	40-140			
Pyrene	0.0207	0.00500	"	0.0333	ND	62.2	40-140			
1-Methylnaphthalene	0.0253	0.00500	"	0.0333	ND	75.9	40-140			
2-Methylnaphthalene	0.0282	0.00500	"	0.0333	0.00506	69.3	40-140			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0224</i>		<i>"</i>	<i>0.0333</i>		<i>67.2</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0210</i>		<i>"</i>	<i>0.0333</i>		<i>63.0</i>	<i>40-140</i>			

Matrix Spike Dup (BIE0581-MSD1)	Source: 2505064-01			Prepared: 05/19/25 Analyzed: 06/02/25						
Acenaphthene	0.0178	0.00500	mg/kg	0.0333	ND	53.5	40-140	21.4	30	
Anthracene	0.0191	0.00500	"	0.0333	ND	57.3	40-140	11.7	30	
Benzo (a) anthracene	0.0195	0.00500	"	0.0333	ND	58.5	40-140	10.8	30	
Benzo (a) pyrene	0.0170	0.00500	"	0.0333	ND	51.0	40-140	10.6	30	
Benzo (b) fluoranthene	0.0170	0.00500	"	0.0333	ND	50.9	40-140	12.0	30	
Benzo (k) fluoranthene	0.0176	0.00500	"	0.0333	ND	52.7	40-140	9.36	30	
Chrysene	0.0198	0.00500	"	0.0333	ND	59.3	40-140	10.6	30	
Dibenz (a,h) anthracene	0.0178	0.00500	"	0.0333	ND	53.3	40-140	10.4	30	
Fluoranthene	0.0188	0.00500	"	0.0333	ND	56.5	40-140	15.9	30	
Fluorene	0.0187	0.00500	"	0.0333	ND	56.1	40-140	16.5	30	
Indeno (1,2,3-cd) pyrene	0.0176	0.00500	"	0.0333	ND	52.8	40-140	10.9	30	
Pyrene	0.0195	0.00500	"	0.0333	ND	58.4	40-140	6.36	30	
1-Methylnaphthalene	0.0201	0.00500	"	0.0333	ND	60.3	40-140	22.8	30	
2-Methylnaphthalene	0.0228	0.00500	"	0.0333	0.00506	53.4	40-140	20.9	30	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0178</i>		<i>"</i>	<i>0.0333</i>		<i>53.4</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0177</i>		<i>"</i>	<i>0.0333</i>		<i>53.0</i>	<i>40-140</i>			

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Segal 8-2-24 Flowline

Project Number: 10477
Project Manager: Mike Medina

Reported:
06/04/25 09:29

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

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

Batch BIE0534 - EPA 3050B

Blank (BIE0534-BLK1)

Prepared & Analyzed: 05/15/25

Boron ND 2.00 mg/L wet

LCS (BIE0534-BS1)

Prepared & Analyzed: 05/15/25

Boron 4.22 2.00 mg/L wet 4.98 84.9 80-120

Duplicate (BIE0534-DUP1)

Source: 2505068-06

Prepared & Analyzed: 05/15/25

Boron 0.0232 2.00 mg/L dry 0.0264 13.0 20

Matrix Spike (BIE0534-MS1)

Source: 2505068-06

Prepared & Analyzed: 05/15/25

Boron 5.62 2.00 mg/L dry 5.96 0.0264 93.8 75-125

Matrix Spike Dup (BIE0534-MSD1)

Source: 2505068-06

Prepared & Analyzed: 05/15/25

Boron 5.71 2.00 mg/L dry 5.96 0.0264 95.4 75-125 1.75 25

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Segal 8-2-24 Flowline

Project Number: 10477
Project Manager: Mike Medina

Reported:
06/04/25 09:29

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 BIE0540 - EPA 3050B

Blank (BIE0540-BLK1)

Prepared & Analyzed: 05/15/25

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 (BIE0540-BS1)

Prepared & Analyzed: 05/15/25

Arsenic	37.8	0.200	mg/kg wet	38.8	97.6	80-120
Barium	38.4	0.400	"	38.8	99.2	80-120
Cadmium	1.86	0.200	"	1.94	95.8	80-120
Copper	38.2	0.400	"	38.8	98.6	80-120
Lead	19.2	0.200	"	19.4	99.2	80-120
Nickel	37.9	0.400	"	38.8	97.8	80-120
Silver	1.89	0.0200	"	1.94	97.6	80-120
Zinc	37.5	0.400	"	38.8	96.8	80-120
Selenium	3.71	0.260	"	3.88	95.7	80-120

Duplicate (BIE0540-DUP1)

Source: 2505070-01

Prepared & Analyzed: 05/15/25

Arsenic	0.604	0.200	mg/kg dry	0.886	37.8	20	QR-04
Barium	8.61	0.400	"	9.39	8.68	20	
Cadmium	0.107	0.200	"	0.126	16.2	20	
Copper	7.32	0.400	"	8.26	12.1	20	
Lead	9.89	0.200	"	10.3	4.04	20	
Nickel	4.93	0.400	"	6.95	34.0	20	QR-04
Silver	0.0225	0.0200	"	0.0234	3.89	20	
Zinc	12.8	0.400	"	20.4	46.2	20	QR-04
Selenium	ND	0.260	"	ND		20	

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Segal 8-2-24 Flowline

Project Number: 10477
Project Manager: Mike Medina

Reported:
06/04/25 09:29

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 BIE0540 - EPA 3050B

Matrix Spike (BIE0540-MS1)

Source: 2505070-01

Prepared & Analyzed: 05/15/25

Arsenic	16.3	0.200	mg/kg dry	46.3	0.886	33.3	75-125				QM-05
Barium	52.8	0.400	"	46.3	9.39	93.7	75-125				
Cadmium	2.11	0.200	"	2.32	0.126	85.6	75-125				
Copper	40.6	0.400	"	46.3	8.26	69.8	75-125				QM-05
Lead	29.9	0.200	"	23.2	10.3	84.5	75-125				
Nickel	36.7	0.400	"	46.3	6.95	64.1	75-125				QM-05
Silver	1.98	0.0200	"	2.32	0.0234	84.5	75-125				
Zinc	46.4	0.400	"	46.3	20.4	56.1	75-125				QM-05
Selenium	3.72	0.260	"	4.63	ND	80.3	75-125				

Matrix Spike Dup (BIE0540-MSD1)

Source: 2505070-01

Prepared & Analyzed: 05/15/25

Arsenic	15.9	0.200	mg/kg dry	48.6	0.886	30.8	75-125	2.93	25		QM-05
Barium	50.6	0.400	"	48.6	9.39	84.8	75-125	4.32	25		
Cadmium	1.96	0.200	"	2.43	0.126	75.6	75-125	7.07	25		
Copper	43.9	0.400	"	48.6	8.26	73.3	75-125	7.72	25		QM-05
Lead	29.7	0.200	"	24.3	10.3	79.9	75-125	0.560	25		
Nickel	39.1	0.400	"	48.6	6.95	66.2	75-125	6.49	25		QM-05
Silver	1.92	0.0200	"	2.43	0.0234	78.2	75-125	2.89	25		
Zinc	51.3	0.400	"	48.6	20.4	63.4	75-125	9.93	25		QM-05
Selenium	3.92	0.260	"	4.86	ND	80.6	75-125	5.18	25		

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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Segal 8-2-24 Flowline

Project Number: 10477
Project Manager: Mike Medina

Reported:
06/04/25 09:29

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 BIE0535 - 3060A Mod

Blank (BIE0535-BLK1)

Prepared & Analyzed: 05/15/25

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BIE0535-BS1)

Prepared & Analyzed: 05/15/25

Chromium, Hexavalent 25.7 0.30 mg/kg wet 25.8 99.8 80-120

Duplicate (BIE0535-DUP1)

Source: 2505068-06

Prepared & Analyzed: 05/15/25

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BIE0535-MS1)

Source: 2505068-06

Prepared & Analyzed: 05/15/25

Chromium, Hexavalent 25.7 0.30 mg/kg dry 29.3 ND 87.6 75-125

Matrix Spike Dup (BIE0535-MSD1)

Source: 2505068-06

Prepared & Analyzed: 05/15/25

Chromium, Hexavalent 24.4 0.30 mg/kg dry 28.7 ND 84.8 75-125 5.19 20

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - Segal 8-2-24 Flowline

Project Number: 10477
 Project Manager: Mike Medina

Reported:
 06/04/25 09:29

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 BIE0529 - General Preparation

Blank (BIE0529-BLK1)

Prepared: 05/14/25 Analyzed: 05/15/25

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

LCS (BIE0529-BS1)

Prepared: 05/14/25 Analyzed: 05/15/25

Calcium	5.10	0.0500	mg/L wet	5.00		102	70-130			
Magnesium	5.07	0.0500	"	5.00		101	70-130			
Sodium	4.93	0.0500	"	5.00		98.7	70-130			

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - Segal 8-2-24 Flowline

Project Number: 10477
 Project Manager: Mike Medina

Reported:
 06/04/25 09:29

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 BIE0536 - General Preparation

Duplicate (BIE0536-DUP1)

Source: 2505070-01

Prepared & Analyzed: 05/15/25

% Solids	83.4		%		83.7			0.320		20	
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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - Segal 8-2-24 Flowline

Project Number: 10477
 Project Manager: Mike Medina

Reported:
 06/04/25 09:29

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 BIE0531 - General Preparation

Blank (BIE0531-BLK1)

Prepared: 05/14/25 Analyzed: 05/15/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BIE0531-BS1)

Prepared: 05/14/25 Analyzed: 05/15/25

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BIE0531-DUP1)

Source: 2505066-01

Prepared: 05/14/25 Analyzed: 05/15/25

Specific Conductance (EC) 6.09 0.0100 mmhos/cm 6.19 1.61 20

Summit Scientific

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Tasman Geosciences
 4725 Independence St.
 Wheat Ridge CO, 80033

Project: PDC - Segal 8-2-24 Flowline

Project Number: 10477
 Project Manager: Mike Medina

Reported:
 06/04/25 09:29

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 BIE0530 - General Preparation

LCS (BIE0530-BS1)

Prepared: 05/14/25 Analyzed: 05/15/25

pH	9.12	pH Units	9.18	99.3	95-105
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Duplicate (BIE0530-DUP1)

Source: 2505066-01

Prepared: 05/14/25 Analyzed: 05/15/25

pH	8.39	pH Units	8.38	0.119	20
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Tasman Geosciences
4725 Independence St.
Wheat Ridge CO, 80033

Project: PDC - Segal 8-2-24 Flowline

Project Number: 10477
Project Manager: Mike Medina

Reported:
06/04/25 09:29

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values. Only applies to source/DUP and MS/MSD pairs.
- 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