

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 23, 2025

Bryce Goldade

Tasman Geosciences

4725 Independence St.

Wheat Ridge, CO 80033

RE: PDC - Miller GJ 33-24

Work Order #2503023

Enclosed are the results of analyses for samples received by Summit Scientific on 03/03/25 17:46. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences  
 4725 Independence St.  
 Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
 Project Manager: Bryce Goldade

**Reported:**  
 04/23/25 08:31

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH33@5-6'	2503023-01	Soil	03/03/25 11:09	03/03/25 17:46
BH33@10-11'	2503023-02	Soil	03/03/25 11:14	03/03/25 17:46
BH33@13-14'	2503023-03	Soil	03/03/25 11:19	03/03/25 17:46
BH33@16-17'	2503023-04	Soil	03/03/25 11:24	03/03/25 17:46
BH34@5-6'	2503023-05	Soil	03/03/25 11:42	03/03/25 17:46
BH34@10-11'	2503023-06	Soil	03/03/25 11:44	03/03/25 17:46
BH34@13-14'	2503023-07	Soil	03/03/25 11:46	03/03/25 17:46
BH34@16-17'	2503023-08	Soil	03/03/25 11:48	03/03/25 17:46
BKG17@5-6'	2503023-09	Soil	03/03/25 12:02	03/03/25 17:46
BKG17@10-11'	2503023-10	Soil	03/03/25 12:04	03/03/25 17:46
BKG17@13-14'	2503023-11	Soil	03/03/25 12:06	03/03/25 17:46
BKG17@16-17'	2503023-12	Soil	03/03/25 12:08	03/03/25 17:46
BKG16@5-6'	2503023-13	Soil	03/03/25 13:14	03/03/25 17:46
BKG16@10-11'	2503023-14	Soil	03/03/25 13:16	03/03/25 17:46
BKG16@13-14'	2503023-15	Soil	03/03/25 13:18	03/03/25 17:46
BKG16@16-17'	2503023-16	Soil	03/03/25 13:20	03/03/25 17:46
BKG15@5-6'	2503023-17	Soil	03/03/25 13:38	03/03/25 17:46
BKG15@10-11'	2503023-18	Soil	03/03/25 13:40	03/03/25 17:46
BKG15@13-14'	2503023-19	Soil	03/03/25 13:42	03/03/25 17:46
BKG15@16-17'	2503023-20	Soil	03/03/25 13:44	03/03/25 17:46
BKG14@5-6'	2503023-21	Soil	03/03/25 14:04	03/03/25 17:46
BKG14@10-11'	2503023-22	Soil	03/03/25 14:06	03/03/25 17:46
BKG14@13-14'	2503023-23	Soil	03/03/25 14:08	03/03/25 17:46
BKG14@16-17'	2503023-24	Soil	03/03/25 14:10	03/03/25 17:46

<b>Send Data To:</b>		<b>Send Invoice To:</b>
Client: <del>Noble</del> /Tasman	Project Manager: Bryce Goldade	Company: <del>Noble</del> PDC
Address: 6855 W. 119th Ave.	E-Mail: tas-chevron-4@tasman-geo.com	Project Name/Location: Miller EJ 33-24
City/State/Zip: Broomfield/CO/ 80020	E-Mail: RBUEUF27@chevron.com	AFE#:
Phone: 704-231-1819	Project Name: Miller EJ 33-24	PO/Billing Codes:
Sampler Name: Emily Lambert	Project Number:	Contact: Karen Olson

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Other	Analysis Requested							Special Instructions
					HCl	HNO3	None	Other	Water	Soil			Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS	HOLD	
1	BH33@5-6'	3/3/25	1109	2			X			X		X	X	X	X	X	X		SAR, EC, pH by saturated paste	
2	BH33@10-11'		1114																	
3	BH33@13-14'		1119																	
4	BH33@16-17'		1124																	
5	BH34@5-6'		1142																	
6	BH34@10-11'		1144																	
7	BH34@13-14'		1146																	
8	BH34@16-17'		1148																	
9	BK617@5-6'		1202	1																
10	BK617@10-11'		1204																	
11	BK617@13-14'		1206																	
12	BK617@16-17'		1208																	
13	BK616@5-6'		1314																	
14	BK616@10-11'		1316																	
15	BK616@13-14'		1318																	

Relinquished by:	Date/Time: 3/3/25 1530	Received by: Tasman Lock Box	Date/Time: 3/3/25 1530	TAT Business Days	Field DO	Notes:
Relinquished by: Tasman Lock Box	Date/Time: 3/3/25 1740	Received by:	Date/Time: 3/3/25 1740	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: 0.9	Corrected Temperature: 6	IR gun #: 1	HNO3 lot #:	Standard	X Field Turb.	

<b>Send Data To:</b>		<b>Send Invoice To:</b>
Client: <del>Noble</del> /Tasman	Project Manager: Bryce Goldade	Company: <del>Noble</del> -EL PDC
Address: 6855 W. 119th Ave.	E-Mail: tas-chevron-4@tasman-geo.com	Project Name/Location: Miller GJ 33-24
City/State/Zip: Broomfield/CO/ 80020	E-Mail: RBUEUF27@chevron.com	AFE#:
Phone: 704-231-1819	Project Name: Miller GJ 33-24	PO/Billing Codes:
Sampler Name: Emily Lambert	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
1	BKG10@10-17'	3/3/25	1320	1			X			X						X	X		SAR, EC, pH by saturated paste
2	BKG15@5-10'		1338																
3	BKG15@10-11'		1340																
4	BKG15@13-14'		1342																
5	BKG15@10-17'		1344																
6	BKG14@5-10'		1404																
7	BKG14@10-11'		1400																
8	BKG14@13-14'		1408																
9	BKG14@10-17'		1410																
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: <i>E. Lambert</i>	Date/Time: 3/3/25 1530	Received by: Tasman Lock Box	Date/Time: 3/3/25 1530	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lock Box	Date/Time: 3/3/25 1740	Received by: <i>D. [Signature]</i>	Date/Time: 3/3/25 1740	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 0.9	Corrected Temperature: 0.9	IR gun #: 1	HNO3 lot #:			

# S<sub>2</sub>

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S2 Work Order# 2503023

### Sample Receipt Checklist

Client: Tasman

Client Project ID: Miller GJ 33-24

Received Via: H.D./F.U./FedEx/UPS/USPS/Other

Airbill #:

Matrix (Circle all that apply) Air/Soil/Water/Other

Temp (°C) 09

Thermometer #

Bottle 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? <sup>(1)</sup> <b>NOTE:</b> If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	-			on 2/6
If custody seals are present, are they intact? <sup>(1)</sup>	-			
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 <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD, Total Residual Chlorine (TRC)		-		
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	-			
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	-			
Were all samples received intact? <sup>(1)</sup>	✓			
Was adequate sample volume provided? <sup>(1)</sup>	✓			
Were samples provided in appropriate bottle ware?	✓			
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	✓			
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are any samples/bottles preserved (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.			✓	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> 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			✓	
Additional Comments (if any):				

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

Control Form #: SRC-001

AS

Custodian Printed Name

3/3/25  
Date/Time



Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@5-6'**  
**2503023-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/03/25 11:09**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIC0829	03/14/25	04/12/25	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: **03/03/25 11:09**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0380	94.9 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0401	100 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/03/25 11:09**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIC0831	03/14/25	04/05/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/03/25 11:09**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.58	76.7 %		50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@5-6'**  
**2503023-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/03/25 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC0750	03/13/25	03/25/25	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: **03/03/25 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0269	80.6 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0306	91.7 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0213	03/04/25	03/11/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 11:09**

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

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@5-6'**  
**2503023-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.97	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B
Barium	23.3	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	1.69	0.400	"	"	"	"	"	"
Lead	2.53	0.200	"	"	"	"	"	"
Nickel	1.46	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	5.81	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	266	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	93.0	0.0500	"	"	"	"	"	"	
Sodium	193	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/03/25 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.60	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@5-6'**  
**2503023-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.1		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.06	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 11:09**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.88		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@10-11'**  
**2503023-02 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/03/25 11:14**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIC0829	03/14/25	04/12/25	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: **03/03/25 11:14**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0398	99.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0397	99.3 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/03/25 11:14**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>C10-C28 (DRO)</b>	<b>54</b>	50		mg/kg	1	BIC0831	03/14/25	04/05/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/03/25 11:14**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	6.98	55.9 %		50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@10-11'**  
**2503023-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/03/25 11:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC0750	03/13/25	03/25/25	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: **03/03/25 11:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0243	73.0 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0271	81.3 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 11:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0213	03/04/25	03/11/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 11:14**

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

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@10-11'**  
**2503023-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.10	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B
Barium	146	0.400	"	"	"	"	"	"
Cadmium	0.274	0.200	"	"	"	"	"	"
Copper	3.84	0.400	"	"	"	"	"	"
Lead	7.49	0.200	"	"	"	"	"	"
Nickel	4.22	0.400	"	"	"	"	"	"
Silver	0.0274	0.0200	"	"	"	"	"	"
Zinc	18.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 11:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 11:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	155	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	11.5	0.0500	"	"	"	"	"	"	
Sodium	39.4	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/03/25 11:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.823	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 11:14**

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 - Miller GJ 33-24

Project Number: [none]  
 Project Manager: Bryce Goldade

**Reported:**  
 04/23/25 08:31

**BH33@10-11'**  
**2503023-02 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	76.6	%	1	BIC0154	03/04/25	03/04/25	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 11:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.404</b>	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 11:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>9.00</b>		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@13-14'**  
**2503023-03 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIC0829	03/14/25	04/12/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.019</b>	0.010	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>0.29</b>	0.0050	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.15</b>	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>38</b>	0.50	"	"	"	"	"	"	

Date Sampled: **03/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0366	91.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0410	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0505	126 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>C10-C28 (DRO)</b>	<b>130</b>	50	mg/kg	1	BIC0831	03/14/25	04/05/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.82	62.6 %	50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@13-14'**  
**2503023-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC0750	03/13/25	03/25/25	EPA 8270D SIM	
<b>Anthracene</b>	<b>0.00696</b>	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	"	"	"	"	"	"	"
<b>Fluorene</b>	<b>0.00508</b>	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	ND	0.00500	"	"	"	"	"	"	"
<b>1-Methylnaphthalene</b>	<b>0.00926</b>	0.00500	"	"	"	"	"	"	"
<b>2-Methylnaphthalene</b>	<b>0.0145</b>	0.00500	"	"	"	"	"	"	"

Date Sampled: **03/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0249	74.7 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0271	81.2 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0213	03/04/25	03/11/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 11:19**

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 - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@13-14'**  
**2503023-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.91	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
Barium	42.3	0.400	"	"	"	"	"	"	
Cadmium	0.206	0.200	"	"	"	"	"	"	
Copper	3.57	0.400	"	"	"	"	"	"	
Lead	5.18	0.200	"	"	"	"	"	"	
Nickel	3.78	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	27.3	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	5.33	0.0500	"	"	"	"	"	"	
Sodium	37.0	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/03/25 11:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.70	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@13-14'**  
**2503023-03 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 11:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	73.6			%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 11:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.415	0.0100		mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 11:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.77			pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@16-17'**  
**2503023-04 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/03/25 11:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIC0829	03/14/25	04/14/25	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: **03/03/25 11:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0367	91.7 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0399	99.8 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/03/25 11:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIC0831	03/14/25	04/05/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/03/25 11:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.6	85.0 %		50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@16-17'**  
**2503023-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/03/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC0750	03/13/25	03/25/25	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: **03/03/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0146	43.8 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0187	56.0 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0213	03/04/25	03/11/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 11:24**

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 - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@16-17'**  
**2503023-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.15	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
Barium	7.83	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	0.891	0.400	"	"	"	"	"	"	
Lead	1.17	0.200	"	"	"	"	"	"	
Nickel	0.694	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	3.65	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	23.6	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	4.57	0.0500	"	"	"	"	"	"	
Sodium	32.0	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/03/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.58	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH33@16-17'**  
**2503023-04 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>94.0</b>		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.363</b>	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 11:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>8.74</b>		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@5-6'**  
**2503023-05 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/03/25 11:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIC0829	03/14/25	04/12/25	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: **03/03/25 11:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0394	98.5 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0406	101 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/03/25 11:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIC0831	03/14/25	04/05/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/03/25 11:42**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.98	63.8 %		50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@5-6'**  
**2503023-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/03/25 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC0750	03/13/25	03/25/25	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: **03/03/25 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0294	88.2 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0291	87.3 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC0213	03/04/25	03/11/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 11:42**

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

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@5-6'**  
**2503023-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.85	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
Barium	287	0.400	"	"	"	"	"	"	
Cadmium	0.354	0.200	"	"	"	"	"	"	
Copper	5.44	0.400	"	"	"	"	"	"	
Lead	10.4	0.200	"	"	"	"	"	"	
Nickel	5.31	0.400	"	"	"	"	"	"	
Silver	0.0415	0.0200	"	"	"	"	"	"	
Zinc	19.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	70.9	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	11.4	0.0500	"	"	"	"	"	"	
Sodium	122	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/03/25 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.55	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 11:42**

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

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Tasman Geosciences  
 4725 Independence St.  
 Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
 Project Manager: Bryce Goldade

**Reported:**  
 04/23/25 08:31

**BH34@5-6'**  
**2503023-05 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	79.4	%	1	BIC0154	03/04/25	03/04/25	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.13	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 11:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.58		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@10-11'**  
**2503023-06 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/03/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIC0829	03/14/25	04/12/25	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	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>0.51</b>	<b>0.50</b>	"	"	"	"	"	"	

Date Sampled: **03/03/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0371	92.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/03/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIC0831	03/14/25	04/05/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/03/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.21	73.7 %	50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@10-11'**  
**2503023-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/03/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC0750	03/13/25	03/25/25	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: **03/03/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0273	81.9 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0301	90.3 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 11:44**

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 - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@10-11'**  
**2503023-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.74	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B
Barium	86.1	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	5.04	0.400	"	"	"	"	"	"
Lead	8.08	0.200	"	"	"	"	"	"
Nickel	4.12	0.400	"	"	"	"	"	"
Silver	0.0296	0.0200	"	"	"	"	"	"
Zinc	17.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	21.7	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	6.52	0.0500	"	"	"	"	"	"	
Sodium	30.4	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/03/25 11:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.47	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@10-11'**  
**2503023-06 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 11:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	79.8			%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 11:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.327	0.0100		mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 11:44**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	9.64			pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@13-14'**  
**2503023-07 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/03/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BIC0829	03/14/25	04/12/25	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: **03/03/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0380	95.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0403	101 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/03/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BIC0831	03/14/25	04/05/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/03/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.09	64.7 %	50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@13-14'**  
**2503023-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/03/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC0750	03/13/25	03/25/25	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	"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.00749</b>	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: **03/03/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0290	86.9 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0331	99.3 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 11:46**

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 - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@13-14'**  
**2503023-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.10	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
Barium	40.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.53	0.400	"	"	"	"	"	"	
Lead	3.88	0.200	"	"	"	"	"	"	
Nickel	2.24	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	9.71	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	44.5	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	9.13	0.0500	"	"	"	"	"	"	
Sodium	33.5	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/03/25 11:46**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.20	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@13-14'**  
**2503023-07 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 11:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	93.6			%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 11:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.602	0.0100		mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 11:46**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.15			pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@16-17'**  
**2503023-08 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/03/25 11:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BIC0829	03/14/25	04/12/25	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: **03/03/25 11:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0379	94.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	104 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/03/25 11:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BIC0831	03/14/25	04/05/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **03/03/25 11:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.09	72.7 %		50-140		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@16-17'**  
**2503023-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/03/25 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIC0750	03/13/25	03/25/25	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: **03/03/25 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0326	97.8 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0349	105 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 11:48**

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 - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@16-17'**  
**2503023-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.33	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
Barium	12.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	0.879	0.400	"	"	"	"	"	"	
Lead	1.34	0.200	"	"	"	"	"	"	
Nickel	0.876	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	3.33	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	27.0	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	4.99	0.0500	"	"	"	"	"	"	
Sodium	23.3	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/03/25 11:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.08	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BH34@16-17'**  
**2503023-08 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 11:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	95.0			%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 11:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.356	0.0100		mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 11:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.90			pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG17@5-6'**  
**2503023-09 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 12:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 12:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.92	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
Barium	157	0.400	"	"	"	"	"	"	
Cadmium	0.457	0.200	"	"	"	"	"	"	
Copper	7.33	0.400	"	"	"	"	"	"	
Lead	12.3	0.200	"	"	"	"	"	"	
Nickel	6.33	0.400	"	"	"	"	"	"	
Silver	0.0575	0.0200	"	"	"	"	"	"	
Zinc	24.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 12:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 12:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	51.1	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	10.4	0.0500	"	"	"	"	"	"	
Sodium	150	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG17@5-6'**  
**2503023-09 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.00	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	74.0		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.02	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 12:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.67		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG17@10-11'**  
**2503023-10 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 12:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 12:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	<b>1.70</b>	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
Barium	<b>70.3</b>	0.400	"	"	"	"	"	"	
Cadmium	<b>0.335</b>	0.200	"	"	"	"	"	"	
Copper	<b>4.98</b>	0.400	"	"	"	"	"	"	
Lead	<b>8.32</b>	0.200	"	"	"	"	"	"	
Nickel	<b>5.36</b>	0.400	"	"	"	"	"	"	
Silver	<b>0.0282</b>	0.0200	"	"	"	"	"	"	
Zinc	<b>16.7</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 12:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 12:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	<b>27.8</b>	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	<b>4.67</b>	0.0500	"	"	"	"	"	"	
Sodium	<b>30.4</b>	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG17@10-11'**  
**2503023-10 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.40	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.6		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.282	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 12:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.78		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG17@13-14'**  
**2503023-11 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 12:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 12:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Arsenic</b>	<b>0.950</b>	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
<b>Barium</b>	<b>43.3</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
<b>Copper</b>	<b>1.13</b>	0.400	"	"	"	"	"	"	
<b>Lead</b>	<b>1.41</b>	0.200	"	"	"	"	"	"	
<b>Nickel</b>	<b>0.741</b>	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
<b>Zinc</b>	<b>3.72</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 12:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 12:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Calcium</b>	<b>21.0</b>	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
<b>Magnesium</b>	<b>3.92</b>	0.0500	"	"	"	"	"	"	
<b>Sodium</b>	<b>15.6</b>	0.0500	"	"	"	"	"	"	

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG17@13-14'**  
**2503023-11 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.820</b>	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>91.1</b>		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>2.20</b>	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 12:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>9.21</b>		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG17@16-17'**  
**2503023-12 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 12:08**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 12:08**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Arsenic</b>	<b>1.05</b>	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
<b>Barium</b>	<b>14.7</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
<b>Copper</b>	<b>0.845</b>	0.400	"	"	"	"	"	"	
<b>Lead</b>	<b>1.66</b>	0.200	"	"	"	"	"	"	
<b>Nickel</b>	<b>0.637</b>	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
<b>Zinc</b>	<b>3.34</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 12:08**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 12:08**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Calcium</b>	<b>21.1</b>	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
<b>Magnesium</b>	<b>5.22</b>	0.0500	"	"	"	"	"	"	
<b>Sodium</b>	<b>24.9</b>	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG17@16-17'**  
**2503023-12 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.26	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.8		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.376	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 12:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.84		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG16@5-6'**  
**2503023-13 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 13:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 13:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.68	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
Barium	131	0.400	"	"	"	"	"	"	
Cadmium	0.231	0.200	"	"	"	"	"	"	
Copper	3.27	0.400	"	"	"	"	"	"	
Lead	7.13	0.200	"	"	"	"	"	"	
Nickel	5.27	0.400	"	"	"	"	"	"	
Silver	0.0244	0.0200	"	"	"	"	"	"	
Zinc	16.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 13:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 13:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	164	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	46.7	0.0500	"	"	"	"	"	"	
Sodium	58.1	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG16@5-6'**  
**2503023-13 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 13:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.03	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 13:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.3		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 13:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.52	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 13:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.09		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG16@10-11'**  
**2503023-14 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 13:16**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 13:16**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.04	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
Barium	85.7	0.400	"	"	"	"	"	"	
Cadmium	0.301	0.200	"	"	"	"	"	"	
Copper	7.38	0.400	"	"	"	"	"	"	
Lead	11.8	0.200	"	"	"	"	"	"	
Nickel	7.11	0.400	"	"	"	"	"	"	
Silver	0.0590	0.0200	"	"	"	"	"	"	
Zinc	28.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 13:16**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 13:16**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	63.9	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	9.71	0.0500	"	"	"	"	"	"	
Sodium	38.3	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG16@10-11'**  
**2503023-14 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 13:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.18	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 13:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	72.9		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 13:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.290	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 13:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.59		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG16@13-14'**  
**2503023-15 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 13:18**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 13:18**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Arsenic</b>	<b>2.10</b>	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
<b>Barium</b>	<b>13.0</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
<b>Copper</b>	<b>1.09</b>	0.400	"	"	"	"	"	"	
<b>Lead</b>	<b>2.48</b>	0.200	"	"	"	"	"	"	
<b>Nickel</b>	<b>1.14</b>	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
<b>Zinc</b>	<b>5.04</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 13:18**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 13:18**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Calcium</b>	<b>16.7</b>	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
<b>Magnesium</b>	<b>3.48</b>	0.0500	"	"	"	"	"	"	
<b>Sodium</b>	<b>19.5</b>	0.0500	"	"	"	"	"	"	

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG16@13-14'**  
**2503023-15 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.13	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.5		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.278	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 13:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.87		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG16@16-17'**  
**2503023-16 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Arsenic</b>	<b>2.32</b>	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
<b>Barium</b>	<b>11.0</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
<b>Copper</b>	<b>1.11</b>	0.400	"	"	"	"	"	"	
<b>Lead</b>	<b>1.15</b>	0.200	"	"	"	"	"	"	
<b>Nickel</b>	<b>1.54</b>	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
<b>Zinc</b>	<b>4.53</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Calcium</b>	<b>21.8</b>	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
<b>Magnesium</b>	<b>4.14</b>	0.0500	"	"	"	"	"	"	
<b>Sodium</b>	<b>21.3</b>	0.0500	"	"	"	"	"	"	

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG16@16-17'**  
**2503023-16 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.10	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.4		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.279	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.99		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG15@5-6'**  
**2503023-17 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 13:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 13:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.38	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
Barium	158	0.400	"	"	"	"	"	"	
Cadmium	0.287	0.200	"	"	"	"	"	"	
Copper	3.84	0.400	"	"	"	"	"	"	
Lead	7.74	0.200	"	"	"	"	"	"	
Nickel	4.48	0.400	"	"	"	"	"	"	
Silver	0.0231	0.0200	"	"	"	"	"	"	
Zinc	15.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 13:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 13:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	83.3	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	16.8	0.0500	"	"	"	"	"	"	
Sodium	285	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG15@5-6'**  
**2503023-17 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 13:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	7.45	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 13:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	79.3		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 13:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.00	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 13:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.44		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG15@10-11'**  
**2503023-18 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	1.46	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
Barium	115	0.400	"	"	"	"	"	"	
Cadmium	0.216	0.200	"	"	"	"	"	"	
Copper	6.46	0.400	"	"	"	"	"	"	
Lead	10.6	0.200	"	"	"	"	"	"	
Nickel	4.74	0.400	"	"	"	"	"	"	
Silver	0.0597	0.0200	"	"	"	"	"	"	
Zinc	21.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	23.0	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	3.91	0.0500	"	"	"	"	"	"	
Sodium	38.9	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG15@10-11'**  
**2503023-18 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.97	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	72.6		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.337	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.99		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG15@13-14'**  
**2503023-19 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 13:42**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 13:42**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Arsenic</b>	<b>1.74</b>	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
<b>Barium</b>	<b>16.1</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
<b>Copper</b>	<b>3.87</b>	0.400	"	"	"	"	"	"	
<b>Lead</b>	<b>2.43</b>	0.200	"	"	"	"	"	"	
<b>Nickel</b>	<b>1.33</b>	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
<b>Zinc</b>	<b>6.51</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 13:42**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 13:42**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Calcium</b>	<b>18.8</b>	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
<b>Magnesium</b>	<b>4.24</b>	0.0500	"	"	"	"	"	"	
<b>Sodium</b>	<b>23.0</b>	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG15@13-14'**  
**2503023-19 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.25	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.3		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.306	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.79		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG15@16-17'**  
**2503023-20 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 13:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 13:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Arsenic</b>	<b>1.84</b>	0.200	mg/kg dry	1	BIC1639	03/27/25	04/19/25	EPA 6020B	
<b>Barium</b>	<b>10.0</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
<b>Copper</b>	<b>0.817</b>	0.400	"	"	"	"	"	"	
<b>Lead</b>	<b>1.53</b>	0.200	"	"	"	"	"	"	
<b>Nickel</b>	<b>0.748</b>	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
<b>Zinc</b>	<b>3.71</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 13:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0513	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 13:44**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Calcium</b>	<b>9.22</b>	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
<b>Magnesium</b>	<b>2.53</b>	0.0500	"	"	"	"	"	"	
<b>Sodium</b>	<b>8.04</b>	0.0500	"	"	"	"	"	"	

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG15@16-17'**  
**2503023-20 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 13:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.605</b>	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 13:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>93.9</b>		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 13:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.140</b>	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 13:44**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>9.28</b>		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG14@5-6'**  
**2503023-21 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.51	0.200	mg/kg dry	1	BIC1640	03/27/25	04/20/25	EPA 6020B	
Barium	153	0.400	"	"	"	"	"	"	
Cadmium	0.280	0.200	"	"	"	"	"	"	
Copper	4.21	0.400	"	"	"	"	"	"	
Lead	8.82	0.200	"	"	"	"	"	"	
Nickel	4.36	0.400	"	"	"	"	"	"	
Silver	0.0291	0.0200	"	"	"	"	"	"	
Zinc	18.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0514	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 14:04**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	88.9	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	21.3	0.0500	"	"	"	"	"	"	
Sodium	165	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG14@5-6'**  
**2503023-21 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.08	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	73.7		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.45	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.43		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG14@10-11'**  
**2503023-22 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 14:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 14:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Arsenic</b>	<b>2.82</b>	0.200	mg/kg dry	1	BIC1640	03/27/25	04/20/25	EPA 6020B	
<b>Barium</b>	<b>96.1</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
<b>Copper</b>	<b>2.57</b>	0.400	"	"	"	"	"	"	
<b>Lead</b>	<b>5.12</b>	0.200	"	"	"	"	"	"	
<b>Nickel</b>	<b>3.13</b>	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
<b>Zinc</b>	<b>13.5</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 14:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0514	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 14:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Calcium</b>	<b>52.8</b>	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
<b>Magnesium</b>	<b>8.41</b>	0.0500	"	"	"	"	"	"	
<b>Sodium</b>	<b>57.1</b>	0.0500	"	"	"	"	"	"	

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG14@10-11'**  
**2503023-22 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.93	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	80.3		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.679	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.42		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG14@13-14'**  
**2503023-23 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 14:08**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 14:08**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	<b>3.18</b>	0.200	mg/kg dry	1	BIC1640	03/27/25	04/20/25	EPA 6020B	
Barium	<b>100</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	<b>4.77</b>	0.400	"	"	"	"	"	"	
Lead	<b>7.29</b>	0.200	"	"	"	"	"	"	
Nickel	<b>3.85</b>	0.400	"	"	"	"	"	"	
Silver	<b>0.0246</b>	0.0200	"	"	"	"	"	"	
Zinc	<b>17.4</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 14:08**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0514	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 14:08**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	<b>38.5</b>	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
Magnesium	<b>6.48</b>	0.0500	"	"	"	"	"	"	
Sodium	<b>46.8</b>	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG14@13-14'**  
**2503023-23 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.84	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	79.4		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.480	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.49		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG14@16-17'**  
**2503023-24 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/03/25 14:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Boron	ND	2.00	mg/L	1	BIC1095	03/19/25	03/25/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/03/25 14:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Arsenic</b>	<b>2.62</b>	0.200	mg/kg dry	1	BIC1640	03/27/25	04/20/25	EPA 6020B	
<b>Barium</b>	<b>14.3</b>	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
<b>Copper</b>	<b>2.19</b>	0.400	"	"	"	"	"	"	
<b>Lead</b>	<b>2.10</b>	0.200	"	"	"	"	"	"	
<b>Nickel</b>	<b>1.41</b>	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
<b>Zinc</b>	<b>5.79</b>	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/03/25 14:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIC0514	03/10/25	03/10/25	EPA 7196A	

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

Date Sampled: **03/03/25 14:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>Calcium</b>	<b>19.2</b>	0.0500	mg/L dry	1	BIC1699	03/27/25	04/18/25	EPA 6020B	
<b>Magnesium</b>	<b>2.82</b>	0.0500	"	"	"	"	"	"	
<b>Sodium</b>	<b>22.3</b>	0.0500	"	"	"	"	"	"	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**BKG14@16-17'**  
**2503023-24 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **03/03/25 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.26	0.00100	units	1	BID1048	04/18/25	04/18/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/03/25 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.1		%	1	BIC0154	03/04/25	03/04/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/03/25 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.622	0.0100	mmhos/cm	1	BIC1700	03/27/25	03/31/25	EPA 120.1	

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

Date Sampled: **03/03/25 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.13		pH Units	1	BIC1703	03/27/25	03/31/25	EPA 9045D	

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**Summit Scientific**

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

**Batch BIC0829 - EPA 5030 Soil MS**

**Blank (BIC0829-BLK1)**

Prepared: 03/14/25 Analyzed: 04/12/25

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	0.0381		"	0.0400		95.2	50-150			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		101	50-150			

**LCS (BIC0829-BS1)**

Prepared: 03/14/25 Analyzed: 04/12/25

Benzene	0.100	0.0020	mg/kg	0.100		100	70-130			
Toluene	0.0960	0.0050	"	0.100		96.0	70-130			
Ethylbenzene	0.0955	0.0050	"	0.100		95.5	70-130			
m,p-Xylene	0.187	0.010	"	0.200		93.6	70-130			
o-Xylene	0.0965	0.0050	"	0.100		96.5	70-130			
1,2,4-Trimethylbenzene	0.100	0.0050	"	0.100		100	70-130			
1,3,5-Trimethylbenzene	0.0997	0.0050	"	0.100		99.7	70-130			
Naphthalene	0.0928	0.0038	"	0.100		92.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0396		"	0.0400		98.9	50-150			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		98.9	50-150			

**Matrix Spike (BIC0829-MS1)**

Source: 2503015-01

Prepared: 03/14/25 Analyzed: 04/12/25

Benzene	0.0917	0.0020	mg/kg	0.100	ND	91.7	70-130			
Toluene	0.0854	0.0050	"	0.100	ND	85.4	70-130			
Ethylbenzene	0.0858	0.0050	"	0.100	ND	85.8	70-130			
m,p-Xylene	0.168	0.010	"	0.200	ND	83.9	70-130			
o-Xylene	0.0866	0.0050	"	0.100	ND	86.6	70-130			
1,2,4-Trimethylbenzene	0.0858	0.0050	"	0.100	ND	85.8	70-130			
1,3,5-Trimethylbenzene	0.0848	0.0050	"	0.100	ND	84.8	70-130			
Naphthalene	0.0773	0.0038	"	0.100	ND	77.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0393		"	0.0400		98.3	50-150			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	50-150			

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**Summit Scientific**

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

**Batch BIC0829 - EPA 5030 Soil MS**

Matrix Spike Dup (BIC0829-MSD1)	Source: 2503015-01			Prepared: 03/14/25 Analyzed: 04/14/25						
Benzene	0.0922	0.0020	mg/kg	0.100	ND	92.2	70-130	0.555	30	
Toluene	0.0866	0.0050	"	0.100	ND	86.6	70-130	1.40	30	
Ethylbenzene	0.0851	0.0050	"	0.100	ND	85.1	70-130	0.878	30	
m,p-Xylene	0.165	0.010	"	0.200	ND	82.7	70-130	1.44	30	
o-Xylene	0.0847	0.0050	"	0.100	ND	84.7	70-130	2.24	30	
1,2,4-Trimethylbenzene	0.0824	0.0050	"	0.100	ND	82.4	70-130	4.00	30	
1,3,5-Trimethylbenzene	0.0817	0.0050	"	0.100	ND	81.7	70-130	3.75	30	
Naphthalene	0.0733	0.0038	"	0.100	ND	73.3	70-130	5.34	30	
Surrogate: 1,2-Dichloroethane-d4	0.0388		"	0.0400		96.9	50-150			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.2	50-150			

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BIC0831 - EPA 3550A**

**Blank (BIC0831-BLK1)**

Prepared: 03/14/25 Analyzed: 04/05/25

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	13.1		"	12.5		105	50-140			

**LCS (BIC0831-BS1)**

Prepared: 03/14/25 Analyzed: 04/05/25

C10-C28 (DRO)	478	50	mg/kg	500		95.7	50-140			
Surrogate: <i>o</i> -Terphenyl	11.3		"	12.5		90.7	50-140			

**Matrix Spike (BIC0831-MS1)**

Source: 2503015-01

Prepared: 03/14/25 Analyzed: 04/05/25

C10-C28 (DRO)	483	50	mg/kg	500	17.3	93.2	50-140			
Surrogate: <i>o</i> -Terphenyl	10.9		"	12.5		87.0	50-140			

**Matrix Spike Dup (BIC0831-MSD1)**

Source: 2503015-01

Prepared: 03/14/25 Analyzed: 04/05/25

C10-C28 (DRO)	511	50	mg/kg	500	17.3	98.7	50-140	5.51	20	
Surrogate: <i>o</i> -Terphenyl	11.3		"	12.5		90.0	50-140			

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**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 BIC0750 - EPA 5030 Soil MS**

**Blank (BIC0750-BLK1)**

Prepared: 03/13/25 Analyzed: 03/24/25

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	0.0259		"	0.0333		77.7	40-140			
Surrogate: Fluoranthene-d10	0.0298		"	0.0333		89.5	40-140			

**LCS (BIC0750-BS1)**

Prepared: 03/13/25 Analyzed: 03/24/25

Acenaphthene	0.0173	0.00500	mg/kg	0.0333		51.8	40-140			
Anthracene	0.0175	0.00500	"	0.0333		52.5	40-140			
Benzo (a) anthracene	0.0186	0.00500	"	0.0333		55.9	40-140			
Benzo (a) pyrene	0.0175	0.00500	"	0.0333		52.4	40-140			
Benzo (b) fluoranthene	0.0176	0.00500	"	0.0333		52.7	40-140			
Benzo (k) fluoranthene	0.0177	0.00500	"	0.0333		53.0	40-140			
Chrysene	0.0179	0.00500	"	0.0333		53.6	40-140			
Dibenz (a,h) anthracene	0.0163	0.00500	"	0.0333		49.0	40-140			
Fluoranthene	0.0181	0.00500	"	0.0333		54.4	40-140			
Fluorene	0.0177	0.00500	"	0.0333		53.1	40-140			
Indeno (1,2,3-cd) pyrene	0.0167	0.00500	"	0.0333		50.2	40-140			
Pyrene	0.0176	0.00500	"	0.0333		52.8	40-140			
1-Methylnaphthalene	0.0166	0.00500	"	0.0333		49.9	40-140			
2-Methylnaphthalene	0.0162	0.00500	"	0.0333		48.5	40-140			
Surrogate: 2-Methylnaphthalene-d10	0.0268		"	0.0333		80.5	40-140			
Surrogate: Fluoranthene-d10	0.0292		"	0.0333		87.5	40-140			

Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

Reported:  
04/23/25 08:31

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BIC0750 - EPA 5030 Soil MS

Matrix Spike (BIC0750-MS1)	Source: 2503018-01			Prepared: 03/13/25 Analyzed: 03/24/25							
Acenaphthene	0.0146	0.00500	mg/kg	0.0333	ND	43.9	40-140				
Anthracene	0.0163	0.00500	"	0.0333	ND	48.9	40-140				
Benzo (a) anthracene	0.0222	0.00500	"	0.0333	ND	66.5	40-140				
Benzo (a) pyrene	0.0178	0.00500	"	0.0333	ND	53.5	40-140				
Benzo (b) fluoranthene	0.0211	0.00500	"	0.0333	ND	63.2	40-140				
Benzo (k) fluoranthene	0.0160	0.00500	"	0.0333	ND	48.0	40-140				
Chrysene	0.0220	0.00500	"	0.0333	ND	66.1	40-140				
Dibenz (a,h) anthracene	0.0112	0.00500	"	0.0333	ND	33.6	40-140				QM-05
Fluoranthene	0.0354	0.00500	"	0.0333	ND	106	40-140				
Fluorene	0.0154	0.00500	"	0.0333	ND	46.2	40-140				
Indeno (1,2,3-cd) pyrene	0.0158	0.00500	"	0.0333	ND	47.5	40-140				
Pyrene	0.0315	0.00500	"	0.0333	ND	94.4	40-140				
1-Methylnaphthalene	0.0136	0.00500	"	0.0333	ND	40.7	40-140				
2-Methylnaphthalene	0.0137	0.00500	"	0.0333	ND	41.2	40-140				
Surrogate: 2-Methylnaphthalene-d10	0.0215		"	0.0333		64.4	40-140				
Surrogate: Fluoranthene-d10	0.0206		"	0.0333		61.9	40-140				

Matrix Spike Dup (BIC0750-MSD1)	Source: 2503018-01			Prepared: 03/13/25 Analyzed: 03/24/25							
Acenaphthene	0.0123	0.00500	mg/kg	0.0333	ND	36.8	40-140	17.7	30		QM-05
Anthracene	0.0131	0.00500	"	0.0333	ND	39.4	40-140	21.6	30		QM-05
Benzo (a) anthracene	0.0167	0.00500	"	0.0333	ND	50.1	40-140	28.1	30		
Benzo (a) pyrene	0.0141	0.00500	"	0.0333	ND	42.2	40-140	23.6	30		
Benzo (b) fluoranthene	0.0159	0.00500	"	0.0333	ND	47.6	40-140	28.1	30		
Benzo (k) fluoranthene	0.0127	0.00500	"	0.0333	ND	38.2	40-140	22.7	30		QM-05
Chrysene	0.0159	0.00500	"	0.0333	ND	47.7	40-140	32.4	30		QR-03
Dibenz (a,h) anthracene	0.00983	0.00500	"	0.0333	ND	29.5	40-140	13.2	30		QM-05
Fluoranthene	0.0237	0.00500	"	0.0333	ND	71.2	40-140	39.3	30		QR-03
Fluorene	0.0127	0.00500	"	0.0333	ND	38.1	40-140	19.2	30		QM-05
Indeno (1,2,3-cd) pyrene	0.0124	0.00500	"	0.0333	ND	37.1	40-140	24.5	30		QM-05
Pyrene	0.0209	0.00500	"	0.0333	ND	62.8	40-140	40.1	30		QR-03
1-Methylnaphthalene	0.0125	0.00500	"	0.0333	ND	37.5	40-140	8.12	30		QM-05
2-Methylnaphthalene	0.0129	0.00500	"	0.0333	ND	38.6	40-140	6.53	30		QM-05
Surrogate: 2-Methylnaphthalene-d10	0.0200		"	0.0333		59.9	40-140				
Surrogate: Fluoranthene-d10	0.0195		"	0.0333		58.4	40-140				

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**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 BIC0213 - EPA 3050B**

<b>Blank (BIC0213-BLK1)</b>				Prepared: 03/04/25 Analyzed: 03/11/25						
Boron	ND	2.00	mg/L							
<b>LCS (BIC0213-BS1)</b>				Prepared: 03/04/25 Analyzed: 03/11/25						
Boron	4.92	2.00	mg/L	5.00		98.4	80-120			
<b>Duplicate (BIC0213-DUP1)</b>				<b>Source: 2503021-01</b>		Prepared: 03/04/25 Analyzed: 03/11/25				
Boron	2.82	2.00	mg/L		2.83			0.205	20	
<b>Matrix Spike (BIC0213-MS1)</b>				<b>Source: 2503021-01</b>		Prepared: 03/04/25 Analyzed: 03/11/25				
Boron	7.78	2.00	mg/L	5.00	2.83	99.3	75-125			
<b>Matrix Spike Dup (BIC0213-MSD1)</b>				<b>Source: 2503021-01</b>		Prepared: 03/04/25 Analyzed: 03/11/25				
Boron	7.95	2.00	mg/L	5.00	2.83	103	75-125	2.18	25	

**Batch BIC1095 - EPA 3050B**

<b>Blank (BIC1095-BLK1)</b>				Prepared: 03/19/25 Analyzed: 03/25/25						
Boron	ND	2.00	mg/L							
<b>LCS (BIC1095-BS1)</b>				Prepared: 03/19/25 Analyzed: 03/25/25						
Boron	4.87	2.00	mg/L	5.00		97.5	80-120			
<b>Duplicate (BIC1095-DUP1)</b>				<b>Source: 2503023-06</b>		Prepared: 03/19/25 Analyzed: 03/25/25				
Boron	0.127	2.00	mg/L		0.128			0.890	20	
<b>Matrix Spike (BIC1095-MS1)</b>				<b>Source: 2503023-06</b>		Prepared: 03/19/25 Analyzed: 03/25/25				
Boron	5.14	2.00	mg/L	5.00	0.128	100	75-125			

Summit Scientific

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Tasman Geosciences  
 4725 Independence St.  
 Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
 Project Manager: Bryce Goldade

**Reported:**  
 04/23/25 08:31

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

**Summit Scientific**

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

**Batch BIC1095 - EPA 3050B**

**Matrix Spike Dup (BIC1095-MSD1)**

**Source: 2503023-06**

Prepared: 03/19/25 Analyzed: 03/25/25

Boron	5.17	2.00	mg/L	5.00	0.128	101	75-125	0.506	25	
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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BIC1639 - EPA 3050B**

**Blank (BIC1639-BLK1)**

Prepared: 03/27/25 Analyzed: 04/20/25

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 (BIC1639-BS1)**

Prepared: 03/27/25 Analyzed: 04/19/25

Arsenic	39.8	0.200	mg/kg wet	40.7	97.8	80-120
Barium	41.8	0.400	"	40.7	103	80-120
Cadmium	1.98	0.200	"	2.03	97.5	80-120
Copper	42.2	0.400	"	40.7	104	80-120
Lead	20.1	0.200	"	20.3	99.0	80-120
Nickel	42.1	0.400	"	40.7	104	80-120
Silver	2.03	0.0200	"	2.03	99.8	80-120
Zinc	41.0	0.400	"	40.7	101	80-120
Selenium	4.40	0.260	"	4.07	108	80-120

**Duplicate (BIC1639-DUP1)**

Source: 2503023-01

Prepared: 03/27/25 Analyzed: 04/19/25

Arsenic	2.49	0.200	mg/kg dry	2.97	17.6	20	
Barium	18.4	0.400	"	23.3	23.5	20	QR-04
Cadmium	0.0584	0.200	"	0.0949	47.5	20	QR-01
Copper	1.13	0.400	"	1.69	40.1	20	QR-04
Lead	1.81	0.200	"	2.53	33.1	20	QR-04
Nickel	1.37	0.400	"	1.46	6.05	20	
Silver	0.00336	0.0200	"	0.00556	49.1	20	QR-01
Zinc	5.51	0.400	"	5.81	5.38	20	
Selenium	ND	0.260	"	ND		20	

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**Total Metals by EPA 6020B - Quality Control**  
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Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

**Batch BIC1639 - EPA 3050B**

**Matrix Spike (BIC1639-MS1)**

Source: 2503023-01

Prepared: 03/27/25 Analyzed: 04/19/25

Arsenic	45.2	0.200	mg/kg dry	40.7	2.97	104	75-125			
Barium	69.5	0.400	"	40.7	23.3	113	75-125			
Cadmium	2.05	0.200	"	2.04	0.0949	96.0	75-125			
Copper	37.3	0.400	"	40.7	1.69	87.5	75-125			
Lead	21.4	0.200	"	20.4	2.53	92.6	75-125			
Nickel	37.4	0.400	"	40.7	1.46	88.2	75-125			
Silver	1.95	0.0200	"	2.04	0.00556	95.6	75-125			
Zinc	42.5	0.400	"	40.7	5.81	90.0	75-125			
Selenium	4.00	0.260	"	4.07	ND	98.1	75-125			

**Matrix Spike Dup (BIC1639-MSD1)**

Source: 2503023-01

Prepared: 03/27/25 Analyzed: 04/19/25

Arsenic	43.5	0.200	mg/kg dry	42.4	2.97	95.5	75-125	3.88	25
Barium	65.9	0.400	"	42.4	23.3	100	75-125	5.33	25
Cadmium	2.32	0.200	"	2.12	0.0949	105	75-125	12.4	25
Copper	39.6	0.400	"	42.4	1.69	89.5	75-125	5.98	25
Lead	24.4	0.200	"	21.2	2.53	103	75-125	13.1	25
Nickel	39.7	0.400	"	42.4	1.46	90.2	75-125	5.95	25
Silver	2.26	0.0200	"	2.12	0.00556	107	75-125	14.7	25
Zinc	43.4	0.400	"	42.4	5.81	88.8	75-125	2.23	25
Selenium	4.43	0.260	"	4.24	ND	104	75-125	10.3	25

**Batch BIC1640 - EPA 3050B**

**Blank (BIC1640-BLK1)**

Prepared: 03/27/25 Analyzed: 04/20/25

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	"						

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BIC1640 - EPA 3050B**

**LCS (BIC1640-BS1)**

Prepared: 03/27/25 Analyzed: 04/20/25

Arsenic	36.0	0.200	mg/kg wet	39.7		90.8	80-120			
Barium	38.6	0.400	"	39.7		97.2	80-120			
Cadmium	1.91	0.200	"	1.98		96.3	80-120			
Copper	44.7	0.400	"	39.7		113	80-120			
Lead	19.4	0.200	"	19.8		97.6	80-120			
Nickel	44.2	0.400	"	39.7		111	80-120			
Silver	1.97	0.0200	"	1.98		99.1	80-120			
Zinc	43.0	0.400	"	39.7		108	80-120			
Selenium	4.14	0.260	"	3.97		104	80-120			

**Duplicate (BIC1640-DUP1)**

Source: 2502531-42

Prepared: 03/27/25 Analyzed: 04/20/25

Arsenic	4.06	0.200	mg/kg dry	4.97				20.1	20	QR-04
Barium	69.7	0.400	"	84.0				18.7	20	
Cadmium	0.357	0.200	"	0.429				18.2	20	
Copper	10.6	0.400	"	11.0				3.36	20	
Lead	10.1	0.200	"	12.2				18.8	20	
Nickel	6.14	0.400	"	6.60				7.36	20	
Silver	0.0355	0.0200	"	0.0404				13.0	20	
Zinc	34.0	0.400	"	35.5				4.22	20	
Selenium	0.315	0.260	"	0.338				7.25	20	

**Matrix Spike (BIC1640-MS1)**

Source: 2502531-42

Prepared: 03/27/25 Analyzed: 04/20/25

Arsenic	47.2	0.200	mg/kg dry	48.1	4.97	87.8	75-125			
Barium	122	0.400	"	48.1	84.0	78.1	75-125			
Cadmium	2.77	0.200	"	2.41	0.429	97.1	75-125			
Copper	43.5	0.400	"	48.1	11.0	67.6	75-125			QM-05
Lead	34.3	0.200	"	24.1	12.2	91.7	75-125			
Nickel	39.3	0.400	"	48.1	6.60	68.0	75-125			QM-05
Silver	2.41	0.0200	"	2.41	0.0404	98.4	75-125			
Zinc	67.3	0.400	"	48.1	35.5	66.1	75-125			QM-05
Selenium	4.76	0.260	"	4.81	0.338	91.9	75-125			

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Tasman Geosciences  
 4725 Independence St.  
 Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
 Project Manager: Bryce Goldade

**Reported:**  
 04/23/25 08:31

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BIC1640 - EPA 3050B**

Matrix Spike Dup (BIC1640-MSD1)	Source: 2502531-42			Prepared: 03/27/25 Analyzed: 04/20/25							
Arsenic	45.9	0.200	mg/kg dry	47.0	4.97	87.2	75-125	2.74	25		
Barium	121	0.400	"	47.0	84.0	78.8	75-125	0.463	25		
Cadmium	2.75	0.200	"	2.35	0.429	98.8	75-125	0.563	25		
Copper	42.3	0.400	"	47.0	11.0	66.7	75-125	2.71	25	QM-05	
Lead	34.3	0.200	"	23.5	12.2	94.1	75-125	0.172	25		
Nickel	37.6	0.400	"	47.0	6.60	66.0	75-125	4.53	25	QM-05	
Silver	2.38	0.0200	"	2.35	0.0404	99.8	75-125	0.961	25		
Zinc	67.1	0.400	"	47.0	35.5	67.3	75-125	0.284	25	QM-05	
Selenium	4.63	0.260	"	4.70	0.338	91.3	75-125	2.90	25		

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BIC0513 - 3060A Mod**

<b>Blank (BIC0513-BLK1)</b>		Prepared & Analyzed: 03/10/25									
Chromium, Hexavalent	ND	0.30	mg/kg wet								
<b>LCS (BIC0513-BS1)</b>		Prepared & Analyzed: 03/10/25									
Chromium, Hexavalent	27.1	0.30	mg/kg wet	25.8	105	80-120					
<b>Duplicate (BIC0513-DUP1)</b>		<b>Source: 2503023-01</b>		Prepared & Analyzed: 03/10/25							
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
<b>Matrix Spike (BIC0513-MS1)</b>		<b>Source: 2503023-01</b>		Prepared & Analyzed: 03/10/25							
Chromium, Hexavalent	26.9	0.30	mg/kg dry	25.3	ND	106	75-125				
<b>Matrix Spike Dup (BIC0513-MSD1)</b>		<b>Source: 2503023-01</b>		Prepared & Analyzed: 03/10/25							
Chromium, Hexavalent	27.2	0.30	mg/kg dry	27.1	ND	100	75-125	1.16		20	

**Batch BIC0514 - 3060A Mod**

<b>Blank (BIC0514-BLK1)</b>		Prepared & Analyzed: 03/10/25									
Chromium, Hexavalent	ND	0.30	mg/kg wet								
<b>LCS (BIC0514-BS1)</b>		Prepared & Analyzed: 03/10/25									
Chromium, Hexavalent	26.4	0.30	mg/kg wet	25.0	105	80-120					
<b>Duplicate (BIC0514-DUP1)</b>		<b>Source: 2503023-21</b>		Prepared & Analyzed: 03/10/25							
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND					20	
<b>Matrix Spike (BIC0514-MS1)</b>		<b>Source: 2503023-21</b>		Prepared & Analyzed: 03/10/25							
Chromium, Hexavalent	36.5	0.30	mg/kg dry	35.0	ND	104	75-125				

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 4725 Independence St.  
 Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
 Project Manager: Bryce Goldade

**Reported:**  
 04/23/25 08:31

**Hexavalent Chromium by EPA Method 7196 - Quality Control**

**Summit Scientific**

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

**Batch BIC0514 - 3060A Mod**

**Matrix Spike Dup (BIC0514-MSD1)**

Source: 2503023-21

Prepared & Analyzed: 03/10/25

Chromium, Hexavalent	37.0	0.30	mg/kg dry	35.3	ND	105	75-125	1.42	20	
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 4725 Independence St.  
 Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
 Project Manager: Bryce Goldade

**Reported:**  
 04/23/25 08:31

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

**Summit Scientific**

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

**Batch BIC1699 - General Preparation**

**Blank (BIC1699-BLK1)**

Prepared: 03/27/25 Analyzed: 04/18/25

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

**LCS (BIC1699-BS1)**

Prepared: 03/27/25 Analyzed: 04/18/25

Calcium	4.68	0.0500	mg/L wet	5.00	93.6	70-130				
Magnesium	4.83	0.0500	"	5.00	96.7	70-130				
Sodium	4.92	0.0500	"	5.00	98.3	70-130				

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Tasman Geosciences  
 4725 Independence St.  
 Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
 Project Manager: Bryce Goldade

**Reported:**  
 04/23/25 08:31

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

**Summit Scientific**

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

**Batch BIC0154 - General Preparation**

**Duplicate (BIC0154-DUP1)**

**Source: 2503023-01**

Prepared & Analyzed: 03/04/25

% Solids	94.7		%		95.1			0.492	20	
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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

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

**Summit Scientific**

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

**Batch BIC1700 - General Preparation**

**Blank (BIC1700-BLK1)**

Prepared: 03/27/25 Analyzed: 03/31/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BIC1700-BS1)**

Prepared: 03/27/25 Analyzed: 03/31/25

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 99.9 95-105

**Duplicate (BIC1700-DUP1)**

Source: 2503019-01

Prepared: 03/27/25 Analyzed: 03/31/25

Specific Conductance (EC) 0.621 0.0100 mmhos/cm 0.617 0.614 20

Summit Scientific

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Tasman Geosciences  
 4725 Independence St.  
 Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
 Project Manager: Bryce Goldade

**Reported:**  
 04/23/25 08:31

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

**Summit Scientific**

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

**Batch BIC1703 - General Preparation**

**LCS (BIC1703-BS1)**

Prepared: 03/27/25 Analyzed: 03/31/25

pH	9.10	pH Units	9.18	99.1	95-105
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**Duplicate (BIC1703-DUP1)**

Source: 2503019-01

Prepared: 03/27/25 Analyzed: 03/31/25

pH	8.27	pH Units	8.31	0.483	20
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Summit Scientific

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Tasman Geosciences  
4725 Independence St.  
Wheat Ridge CO, 80033

Project: PDC - Miller GJ 33-24

Project Number: [none]  
Project Manager: Bryce Goldade

**Reported:**  
04/23/25 08:31

### 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.
- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- 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