

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 20, 2024

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

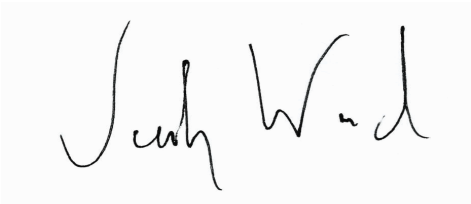
Broomfield, CO 80020

RE: Noble - Baker B02-05

Work Order #2404386

Enclosed are the results of analyses for samples received by Summit Scientific on 04/23/24 17:34. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



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

Project: Noble - Baker B02-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS04@11'	2404386-01	Soil	04/23/24 10:30	04/23/24 17:34
SS05@11'	2404386-02	Soil	04/23/24 10:35	04/23/24 17:34
SS06@11'	2404386-03	Soil	04/23/24 12:30	04/23/24 17:34
SS07@11'	2404386-04	Soil	04/23/24 12:45	04/23/24 17:34
FS02@12'	2404386-05	Soil	04/23/24 13:00	04/23/24 17:34

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

Lab ID	Page 1 of 1
2404386	

Client: Noble/Tasman	Send Data To: Project Manager: Jake Whritenour	Send Invoice To: Company: Noble/Chevron
Address: 6855 W. 119th Avenue	E-Mail: jwhritenour@tasman-geo.com	Project Name/Location:
City/State/Zip: Broomfield, CO 80020		AFE#:
Phone:	Project Name: <u>BAKER BOZ-05</u>	PO/Billing Codes:
Sampler Name: <u>Shannon Wailes</u>	Project Number:	Contact: <u>Keith McClean</u>

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested								Special Instructions	
					HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	915-VOC	915-PAH	915-TPH	pH, EC, SAR	Boron	915-Metals		
1	SS04 @ 11'	4/23/24	1030	2			X			X			X	X	X	X	X		X	organic maximum chromium
2	SS05 @ 11'	I	1035	I									I	I	I	I	I		I	
3	SS06 @ 11'		1230	I									I	I	I	I	I		I	
4	SS07 @ 11'		1245	I									I	I	I	I	I		I	
5	SS02 @ 12'	I	1300	I						I			I	I	I	I	I		I	
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <u>Shannon Wailes</u>	Date/Time: <u>4/23/24 1520</u>	Received by: <u>Tasman Geo</u>	Date/Time: <u>4/23/24 1520</u>	TAT Business Days	Field DO	Notes:
Relinquished by: <u>Tasman Geo</u>	Date/Time: <u>4/23/24 1734</u>	Received by: <u>[Signature]</u>	Date/Time: <u>4/23/24 1734</u>	Same Day <input checked="" type="checkbox"/>	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: <u>8.8</u>	Corrected Temperature: <u>8</u>	IR gun #:		Standard	Field Turb.	
				HNO3 lot #:		

S₂

Sample Receipt Checklist

S2 Work Order# 2404386Client: Noble CompanyClient Project ID: Baker Box-05Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #:

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

Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☐

Other

☐

Temp (°C)

8.8

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ON ICE
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Custodian Printed Name

Date/Time

AS

4/23/24

R10



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

Project: Noble - Baker B02-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

SS04@11'
2404386-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/23/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHD0854	04/23/24	04/23/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.012	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: **04/23/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0560	140 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0460	115 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0424	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/23/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHD0855	04/23/24	04/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/23/24 10:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.9	94.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Baker B02-05

Project Number: [none]
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SS04@11'
2404386-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **04/23/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthylene	ND	0.330	mg/kg	1	BHD0863	04/24/24	04/25/24	EPA 8270D SIM	
Acenaphthene	ND	0.00500	"	"	"	"	"	"	
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: **04/23/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0228	68.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0213	64.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/23/24 10:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHD0882	04/24/24	05/20/24	EPA 6020B	

Total Metals by EPA 6020B

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Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

SS04@11'
2404386-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **04/23/24 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	9.07	0.200	mg/kg dry	1	BHD0955	04/25/24	05/02/24	EPA 6020B	
Barium	22.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/23/24 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	81.6	0.0500	mg/L dry	1	BHE0042	05/01/24	05/03/24	EPA 6020B	
Magnesium	17.2	0.0500	"	"	"	"	"	"	
Sodium	23.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/23/24 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.612	0.00100	units	1	BHE0137	05/04/24	05/04/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/23/24 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	80.9		%	1	BHD0887	04/24/24	04/24/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/23/24 10:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.596	0.0100	mmhos/cm	1	BHE0043	05/01/24	05/02/24	EPA 120.1	

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Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

05/20/24 15:17

SS04@11'
2404386-01 (Soil)

Summit Scientific

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

Date Sampled: **04/23/24 10:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.05			pH Units	1	BHE0044	05/01/24	05/02/24	EPA 9045D	

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Broomfield CO, 80020

Project: Noble - Baker B02-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

SS05@11'
2404386-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/23/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHD0854	04/23/24	04/23/24	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: **04/23/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0577	144 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0463	116 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0430	107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/23/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHD0855	04/23/24	04/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/23/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.8	102 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Tasman Geosciences
6855 W. 119th Ave.
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Project: Noble - Baker B02-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

SS05@11'
2404386-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/23/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthylene	ND	0.330	mg/kg	1	BHD0863	04/24/24	04/25/24	EPA 8270D SIM	
Acenaphthene	ND	0.00500	"	"	"	"	"	"	
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: **04/23/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0206	61.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0186	55.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/23/24 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHD0882	04/24/24	05/20/24	EPA 6020B	

Total Metals by EPA 6020B

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

SS05@11'
2404386-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **04/23/24 10:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.76	0.200	mg/kg dry	1	BHD0955	04/25/24	05/02/24	EPA 6020B	
Barium	28.6	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/23/24 10:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	17.1	0.0500	mg/L dry	1	BHE0042	05/01/24	05/03/24	EPA 6020B	
Magnesium	6.98	0.0500	"	"	"	"	"	"	
Sodium	10.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/23/24 10:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.525	0.00100	units	1	BHE0137	05/04/24	05/04/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/23/24 10:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	81.6		%	1	BHD0887	04/24/24	04/24/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/23/24 10:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.175	0.0100	mmhos/cm	1	BHE0043	05/01/24	05/02/24	EPA 120.1	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Baker B02-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

SS05@11'
2404386-02 (Soil)

Summit Scientific

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

Date Sampled: **04/23/24 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.14			pH Units	1	BHE0044	05/01/24	05/02/24	EPA 9045D	

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

SS06@11'
2404386-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/23/24 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHD0854	04/23/24	04/23/24	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: **04/23/24 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0573	143 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0461	115 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/23/24 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHD0855	04/23/24	04/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/23/24 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.8	94.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Baker B02-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

SS06@11'
2404386-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/23/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthylene	ND	0.330	mg/kg	1	BHD0863	04/24/24	04/25/24	EPA 8270D SIM	
Acenaphthene	ND	0.00500	"	"	"	"	"	"	
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: **04/23/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0206	61.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0196	58.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/23/24 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHD0882	04/24/24	05/20/24	EPA 6020B	

Total Metals by EPA 6020B

Summit Scientific

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

05/20/24 15:17

SS06@11'
2404386-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **04/23/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.52	0.200	mg/kg dry	1	BHD0955	04/25/24	05/02/24	EPA 6020B	
Barium	12.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/23/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	38.3	0.0500	mg/L dry	1	BHE0042	05/01/24	05/03/24	EPA 6020B	
Magnesium	9.31	0.0500	"	"	"	"	"	"	
Sodium	13.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/23/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.515	0.00100	units	1	BHE0137	05/04/24	05/04/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/23/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	79.8		%	1	BHD0887	04/24/24	04/24/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/23/24 12:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.327	0.0100	mmhos/cm	1	BHE0043	05/01/24	05/02/24	EPA 120.1	

Summit Scientific

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

05/20/24 15:17

SS06@11'
2404386-03 (Soil)

Summit Scientific

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

Date Sampled: **04/23/24 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.08			pH Units	1	BHE0044	05/01/24	05/02/24	EPA 9045D	

Summit Scientific

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

SS07@11'
2404386-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/23/24 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHD0854	04/23/24	04/23/24	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: **04/23/24 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0578	145 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0460	115 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0432	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/23/24 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHD0855	04/23/24	04/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/23/24 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.9	87.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Baker B02-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

SS07@11'
2404386-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/23/24 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthylene	ND	0.330	mg/kg	1	BHD0863	04/24/24	04/26/24	EPA 8270D SIM	
Acenaphthene	ND	0.00500	"	"	"	"	"	"	
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: **04/23/24 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0195	58.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0185	55.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/23/24 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHD0882	04/24/24	05/20/24	EPA 6020B	

Total Metals by EPA 6020B

Summit Scientific

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

05/20/24 15:17

SS07@11'
2404386-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **04/23/24 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	4.08	0.200	mg/kg dry	1	BHD0955	04/25/24	05/02/24	EPA 6020B	
Barium	17.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/23/24 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	26.3	0.0500	mg/L dry	1	BHE0042	05/01/24	05/03/24	EPA 6020B	
Magnesium	7.00	0.0500	"	"	"	"	"	"	
Sodium	11.8	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/23/24 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.528	0.00100	units	1	BHE0137	05/04/24	05/04/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/23/24 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	80.2		%	1	BHD0887	04/24/24	04/24/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/23/24 12:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.243	0.0100	mmhos/cm	1	BHE0043	05/01/24	05/02/24	EPA 120.1	

Summit Scientific

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

05/20/24 15:17

SS07@11'
2404386-04 (Soil)

Summit Scientific

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

Date Sampled: **04/23/24 12:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.16			pH Units	1	BHE0044	05/01/24	05/02/24	EPA 9045D	

Summit Scientific

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

05/20/24 15:17

FS02@12'
2404386-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/23/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHD0854	04/23/24	04/23/24	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: **04/23/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0590	147 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0479	120 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/23/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BHD0855	04/23/24	04/23/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/23/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.1	96.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Baker B02-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

FS02@12'
2404386-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/23/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthylene	ND	0.330	mg/kg	1	BHD0863	04/24/24	04/26/24	EPA 8270D SIM	
Acenaphthene	ND	0.00500	"	"	"	"	"	"	
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: **04/23/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0199	59.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0202	60.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/23/24 13:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BHD0882	04/24/24	05/20/24	EPA 6020B	

Total Metals by EPA 6020B

Summit Scientific

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

FS02@12'
2404386-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **04/23/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.52	0.200	mg/kg dry	1	BHD0955	04/25/24	05/02/24	EPA 6020B	
Barium	59.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

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

Date Sampled: **04/23/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	50.5	0.0500	mg/L dry	1	BHE0042	05/01/24	05/03/24	EPA 6020B	
Magnesium	14.8	0.0500	"	"	"	"	"	"	
Sodium	15.6	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/23/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.496	0.00100	units	1	BHE0137	05/04/24	05/04/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/23/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	78.7		%	1	BHD0887	04/24/24	04/24/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/23/24 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.417	0.0100	mmhos/cm	1	BHE0043	05/01/24	05/02/24	EPA 120.1	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

05/20/24 15:17

FS02@12'
2404386-05 (Soil)

Summit Scientific

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

Date Sampled: **04/23/24 13:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.14			pH Units	1	BHE0044	05/01/24	05/02/24	EPA 9045D	

Summit Scientific

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

Project: Noble - Baker B02-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHD0854 - EPA 5030 Soil MS

Blank (BHD0854-BLK1)

Prepared: 04/23/24 Analyzed: 04/24/24

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	0.0389		"	0.0400		97.4	50-150			
Surrogate: Toluene-d8	0.0384		"	0.0400		96.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.3	50-150			

LCS (BHD0854-BS1)

Prepared: 04/23/24 Analyzed: 04/24/24

Benzene	0.0772	0.0020	mg/kg	0.100		77.2	70-130			
Toluene	0.0834	0.0050	"	0.100		83.4	70-130			
Ethylbenzene	0.0945	0.0050	"	0.100		94.5	70-130			
m,p-Xylene	0.180	0.010	"	0.200		90.2	70-130			
o-Xylene	0.0913	0.0050	"	0.100		91.3	70-130			
1,2,4-Trimethylbenzene	0.0897	0.0050	"	0.100		89.7	70-130			
1,3,5-Trimethylbenzene	0.0912	0.0050	"	0.100		91.2	70-130			
Naphthalene	0.0856	0.0038	"	0.100		85.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0346		"	0.0400		86.5	50-150			
Surrogate: Toluene-d8	0.0375		"	0.0400		93.7	50-150			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		95.0	50-150			

Matrix Spike (BHD0854-MS1)

Source: 2404378-03

Prepared: 04/23/24 Analyzed: 04/24/24

Benzene	0.0613	0.0020	mg/kg	0.100	ND	61.3	70-130			QM-07
Toluene	0.0678	0.0050	"	0.100	ND	67.8	70-130			QM-07
Ethylbenzene	0.0751	0.0050	"	0.100	ND	75.1	70-130			
m,p-Xylene	0.154	0.010	"	0.200	ND	77.1	70-130			
o-Xylene	0.0789	0.0050	"	0.100	ND	78.9	70-130			
1,2,4-Trimethylbenzene	0.0761	0.0050	"	0.100	ND	76.1	70-130			
1,3,5-Trimethylbenzene	0.0774	0.0050	"	0.100	ND	77.4	70-130			
Naphthalene	0.0623	0.0038	"	0.100	ND	62.3	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0353		"	0.0400		88.3	50-150			
Surrogate: Toluene-d8	0.0384		"	0.0400		96.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		97.0	50-150			

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

05/20/24 15:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHD0854 - EPA 5030 Soil MS

Matrix Spike Dup (BHD0854-MSD1)

Source: 2404378-03

Prepared: 04/23/24 Analyzed: 04/24/24

Benzene	0.0604	0.0020	mg/kg	0.100	ND	60.4	70-130	1.43	30	QM-07
Toluene	0.0658	0.0050	"	0.100	ND	65.8	70-130	2.92	30	QM-07
Ethylbenzene	0.0715	0.0050	"	0.100	ND	71.5	70-130	4.99	30	
m,p-Xylene	0.154	0.010	"	0.200	ND	76.9	70-130	0.253	30	
o-Xylene	0.0766	0.0050	"	0.100	ND	76.6	70-130	2.85	30	
1,2,4-Trimethylbenzene	0.0740	0.0050	"	0.100	ND	74.0	70-130	2.84	30	
1,3,5-Trimethylbenzene	0.0766	0.0050	"	0.100	ND	76.6	70-130	0.935	30	
Naphthalene	0.0437	0.0038	"	0.100	ND	43.7	70-130	35.1	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0361		"	0.0400		90.2	50-150			
Surrogate: Toluene-d8	0.0374		"	0.0400		93.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0380		"	0.0400		94.9	50-150			

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

Project: Noble - Baker B02-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BHD0855 - EPA 3550A

Blank (BHD0855-BLK1)

Prepared: 04/23/24 Analyzed: 04/24/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	18.0		"	12.5		144	30-150			

LCS (BHD0855-BS1)

Prepared: 04/23/24 Analyzed: 04/24/24

C10-C28 (DRO)	523	50	mg/kg	500		105	70-130			
Surrogate: o-Terphenyl	16.0		"	12.5		128	30-150			

Matrix Spike (BHD0855-MS1)

Source: 2404378-03

Prepared: 04/23/24 Analyzed: 04/24/24

C10-C28 (DRO)	498	50	mg/kg	500	22.5	95.1	70-130			
Surrogate: o-Terphenyl	16.5		"	12.5		132	30-150			

Matrix Spike Dup (BHD0855-MSD1)

Source: 2404378-03

Prepared: 04/23/24 Analyzed: 04/24/24

C10-C28 (DRO)	390	50	mg/kg	500	22.5	73.6	70-130	24.2	20	QR-04
Surrogate: o-Terphenyl	16.1		"	12.5		129	30-150			

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Project: Noble - Baker B02-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHD0863 - EPA 5030 Soil MS

Blank (BHD0863-BLK1)

Prepared: 04/24/24 Analyzed: 04/25/24

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	0.0325		"	0.0333		97.5	40-150			
Surrogate: Fluoranthene-d10	0.0267		"	0.0333		80.1	40-150			

LCS (BHD0863-BS1)

Prepared: 04/24/24 Analyzed: 04/25/24

Acenaphthene	0.0394	0.00500	mg/kg	0.0333	118	31-137
Anthracene	0.0384	0.00500	"	0.0333	115	30-120
Benzo (a) anthracene	0.0387	0.00500	"	0.0333	116	30-120
Benzo (a) pyrene	0.0352	0.00500	"	0.0333	106	30-120
Benzo (b) fluoranthene	0.0369	0.00500	"	0.0333	111	30-120
Benzo (k) fluoranthene	0.0297	0.00500	"	0.0333	89.0	30-120
Chrysene	0.0383	0.00500	"	0.0333	115	30-120
Dibenz (a,h) anthracene	0.0343	0.00500	"	0.0333	103	30-120
Fluoranthene	0.0313	0.00500	"	0.0333	93.8	30-120
Fluorene	0.0386	0.00500	"	0.0333	116	30-120
Indeno (1,2,3-cd) pyrene	0.0366	0.00500	"	0.0333	110	30-120
Pyrene	0.0363	0.00500	"	0.0333	109	35-142
1-Methylnaphthalene	0.0365	0.00500	"	0.0333	110	35-142
2-Methylnaphthalene	0.0367	0.00500	"	0.0333	110	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0373		"	0.0333	112	40-150
Surrogate: Fluoranthene-d10	0.0317		"	0.0333	95.2	40-150

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

Project: Noble - Baker B02-05
Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BHD0863 - EPA 5030 Soil MS

Matrix Spike (BHD0863-MS1)			Source: 2404371-01		Prepared: 04/24/24 Analyzed: 04/25/24					
Acenaphthene	0.0186	0.00500	mg/kg	0.0333	ND	55.8	31-137			
Anthracene	0.0190	0.00500	"	0.0333	ND	57.1	30-120			
Benzo (a) anthracene	0.0190	0.00500	"	0.0333	ND	57.1	30-120			
Benzo (a) pyrene	0.0185	0.00500	"	0.0333	ND	55.5	30-120			
Benzo (b) fluoranthene	0.0195	0.00500	"	0.0333	ND	58.5	30-120			
Benzo (k) fluoranthene	0.0163	0.00500	"	0.0333	ND	49.0	30-120			
Chrysene	0.0205	0.00500	"	0.0333	ND	61.6	30-120			
Dibenz (a,h) anthracene	0.0248	0.00500	"	0.0333	ND	74.5	30-120			
Fluoranthene	0.0166	0.00500	"	0.0333	ND	49.7	30-120			
Fluorene	0.0185	0.00500	"	0.0333	ND	55.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0319	0.00500	"	0.0333	ND	95.8	30-120			
Pyrene	0.0297	0.00500	"	0.0333	ND	89.2	35-142			
1-Methylnaphthalene	0.0176	0.00500	"	0.0333	ND	52.8	15-130			
2-Methylnaphthalene	0.0172	0.00500	"	0.0333	ND	51.6	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0179		"	0.0333		53.8	40-150			
Surrogate: Fluoranthene-d10	0.0172		"	0.0333		51.6	40-150			

Matrix Spike Dup (BHD0863-MSD1)			Source: 2404371-01		Prepared: 04/24/24 Analyzed: 04/25/24					
Acenaphthene	0.0182	0.00500	mg/kg	0.0333	ND	54.7	31-137	2.05	30	
Anthracene	0.0178	0.00500	"	0.0333	ND	53.5	30-120	6.42	30	
Benzo (a) anthracene	0.0194	0.00500	"	0.0333	ND	58.1	30-120	1.74	30	
Benzo (a) pyrene	0.0210	0.00500	"	0.0333	ND	62.9	30-120	12.6	30	
Benzo (b) fluoranthene	0.0194	0.00500	"	0.0333	ND	58.3	30-120	0.430	30	
Benzo (k) fluoranthene	0.0154	0.00500	"	0.0333	ND	46.1	30-120	6.12	30	
Chrysene	0.0210	0.00500	"	0.0333	ND	62.9	30-120	2.03	30	
Dibenz (a,h) anthracene	0.0349	0.00500	"	0.0333	ND	105	30-120	33.7	30	QR-02
Fluoranthene	0.0153	0.00500	"	0.0333	ND	45.9	30-120	7.94	30	
Fluorene	0.0193	0.00500	"	0.0333	ND	57.9	30-120	4.21	30	
Indeno (1,2,3-cd) pyrene	0.0377	0.00500	"	0.0333	ND	113	30-120	16.4	30	
Pyrene	0.0306	0.00500	"	0.0333	ND	91.8	35-142	2.90	30	
1-Methylnaphthalene	0.0180	0.00500	"	0.0333	ND	53.9	15-130	1.98	50	
2-Methylnaphthalene	0.0175	0.00500	"	0.0333	ND	52.6	15-130	1.91	50	
Surrogate: 2-Methylnaphthalene-d10	0.0183		"	0.0333		54.9	40-150			
Surrogate: Fluoranthene-d10	0.0163		"	0.0333		49.0	40-150			

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

Project: Noble - Baker B02-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

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

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

Batch BHD0882 - EPA 3050B

Blank (BHD0882-BLK1)

Prepared: 04/24/24 Analyzed: 05/19/24

Boron ND 2.00 mg/L

LCS (BHD0882-BS1)

Prepared: 04/24/24 Analyzed: 05/19/24

Boron 4.88 2.00 mg/L 5.00 97.5 80-120

Duplicate (BHD0882-DUP1)

Source: 2404378-03

Prepared: 04/24/24 Analyzed: 05/19/24

Boron 0.554 2.00 mg/L 0.575 3.66 20

Matrix Spike (BHD0882-MS1)

Source: 2404378-03

Prepared: 04/24/24 Analyzed: 05/19/24

Boron 4.15 2.00 mg/L 5.04 0.575 70.9 75-125 QM-07

Matrix Spike Dup (BHD0882-MSD1)

Source: 2404378-03

Prepared: 04/24/24 Analyzed: 05/19/24

Boron 4.13 2.00 mg/L 5.04 0.575 70.5 75-125 0.473 25 QM-07

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BHD0955 - EPA 3050B

Blank (BHD0955-BLK1)

Prepared: 04/25/24 Analyzed: 05/02/24

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Selenium	ND	0.260	"

LCS (BHD0955-BS1)

Prepared: 04/25/24 Analyzed: 05/02/24

Arsenic	35.7	0.200	mg/kg wet	40.0	89.3	80-120
Barium	35.0	0.400	"	40.0	87.4	80-120
Selenium	3.58	0.260	"	4.00	89.5	80-120

Duplicate (BHD0955-DUP1)

Source: 2404361-01

Prepared: 04/25/24 Analyzed: 05/02/24

Arsenic	7.11	0.200	mg/kg dry	4.34	48.3	20	QR-01
Barium	141	0.400	"	123	13.2	20	
Selenium	0.254	0.260	"	0.273	6.93	20	

Matrix Spike (BHD0955-MS1)

Source: 2404361-01

Prepared: 04/25/24 Analyzed: 05/02/24

Arsenic	49.9	0.200	mg/kg dry	50.8	4.34	89.5	75-125	
Barium	142	0.400	"	50.8	123	36.0	75-125	QM-07
Selenium	4.70	0.260	"	5.08	0.273	87.1	75-125	

Matrix Spike Dup (BHD0955-MSD1)

Source: 2404361-01

Prepared: 04/25/24 Analyzed: 05/02/24

Arsenic	49.9	0.200	mg/kg dry	50.8	4.34	89.7	75-125	0.119	25	
Barium	141	0.400	"	50.8	123	35.8	75-125	0.0941	25	QM-07
Selenium	4.44	0.260	"	5.08	0.273	82.0	75-125	5.61	25	

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

05/20/24 15:17

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

Summit Scientific

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

Batch BHE0042 - General Preparation

Blank (BHE0042-BLK1)

Prepared: 05/01/24 Analyzed: 05/03/24

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

LCS (BHE0042-BS1)

Prepared: 05/01/24 Analyzed: 05/03/24

Calcium	4.88	0.0500	mg/L wet	5.00	97.6	70-130
Magnesium	4.86	0.0500	"	5.00	97.2	70-130
Sodium	4.96	0.0500	"	5.00	99.2	70-130

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

05/20/24 15:17

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

Summit Scientific

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

Batch BHD0887 - General Preparation

Duplicate (BHD0887-DUP1)		Source: 2404378-02		Prepared & Analyzed: 04/24/24	
% Solids	92.8		%	92.8	0.00132 20

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

05/20/24 15:17

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

Summit Scientific

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

Batch BHE0043 - General Preparation

Blank (BHE0043-BLK1)

Prepared: 05/01/24 Analyzed: 05/02/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHE0043-BS1)

Prepared: 05/01/24 Analyzed: 05/02/24

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BHE0043-DUP1)

Source: 2404306-01

Prepared: 05/01/24 Analyzed: 05/02/24

Specific Conductance (EC) 0.147 0.0100 mmhos/cm 0.149 1.42 20

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

Project: Noble - Baker B02-05

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

05/20/24 15:17

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

Summit Scientific

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

Batch BHE0044 - General Preparation

LCS (BHE0044-BS1)

Prepared: 05/01/24 Analyzed: 05/02/24

pH	9.08	pH Units	9.18	98.9	95-105
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Duplicate (BHE0044-DUP1)

Source: 2404306-01

Prepared: 05/01/24 Analyzed: 05/02/24

pH	7.81	pH Units	7.77	0.513	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Baker B02-05

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/20/24 15:17

Notes and Definitions

QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
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