

TABLE 1
SOIL SAMPLE LOCATIONS
NOBLE ENERGY, INC. - BOULTER 14-12G

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude ¹	Longitude	PDOP
AST01@0.5	11/30/23	1.1	No Staining	No Odor	Lab	40.30789422	-104.6387650	1.0
FS01@7'	11/30/23	28.7	No Staining	No Odor	Lab	40.30790437	-104.6388525	0.9
MH01@0.5'	11/30/23	0.3	No Staining	No Odor	Grab	40.30791023	-104.6391431	0.9
SEP01-FL@3'	11/30/23	0.2	No Staining	No Odor	Lab	40.30794172	-104.6391050	0.9
SEP01-DL@3'	11/30/23	1.3	No Staining	No Odor	Lab	40.30793267	-104.6391464	0.9
SS01@2.5	11/30/23	0.8	No Staining	No Odor	Lab	40.30793191	-104.6388393	0.9
SS02@2.5	11/30/23	2.0	No Staining	No Odor	Lab	40.30790164	-104.6388078	0.9
SS03@2.5'	11/30/23	1.1	No Staining	No Odor	Lab	40.30787136	-104.6388551	0.9
SS04@2.5'	11/30/23	0.1	No Staining	No Odor	Lab	40.30791059	-104.6388925	0.8

Notes:

PID = Photoionization detector



ppm = parts per million

PDOP = Position dilution of precision

HC = Hydrocarbon

1.) Latitude and longitude coordinates will be provided in decimal degrees with an accuracy and precision of 5 decimals of a degree using the North American Datum ("NAD") of 1983

Photographic Log

							
Equipment ID: MH01 @ 0.5'		Equipment Type:		Equipment ID: SEP01-DL @ 3'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions: Facing South				Notes/Conditions: Facing East			



Photographic Log

							
Equipment ID: SEP01-FL@3'		Equipment Type:		Equipment ID: SS01@2.5'		Equipment Type:	
Material:	Volume:	Contents:	Material:	Volume:	Contents:		
Notes/Conditions: Facing South			Notes/Conditions: Facing North				

Photographic Log

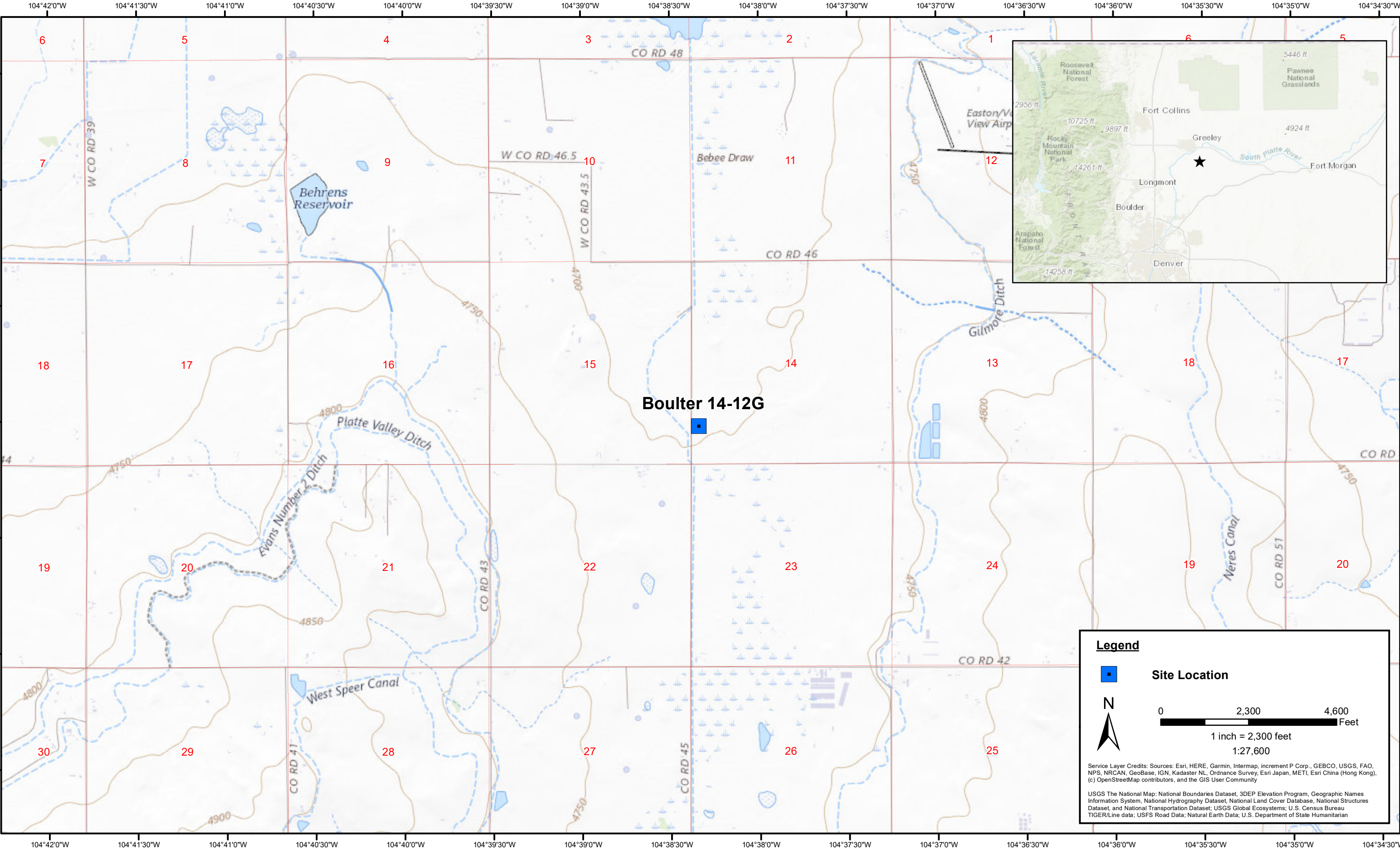
					
Equipment ID: SS02@2.5'		Equipment Type: Partially Buried Vault			
Material:	Volume:	Contents:			
Notes/Conditions: Facing East					
Equipment ID: SS03@2.5'			Equipment Type: Partially Buried Vault		
Material:	Volume:	Contents:			
Notes/Conditions: Facing South					

Photographic Log

											
Equipment ID: SS04@2.5'		Equipment Type: Partially Buried Vault		Equipment ID: FS01@7'		Equipment Type: Partially Buried Vault					
Material:		Volume:		Contents:		Material:		Volume:		Contents:	
Notes/Conditions: Facing West						Notes/Conditions: Facing West					

Photographic Log

					
Equipment ID: AST01@0.5'		Equipment Type: Above Ground Storage Tank	Equipment ID:		Equipment Type:
Material:	Volume:	Contents:	Material:	Volume:	Contents:
Notes/Conditions: Facing South			Notes/Conditions:		



DATE:	January 2024
DESIGNED BY:	J. Whritenour
DRAWN BY:	J. Woffinden

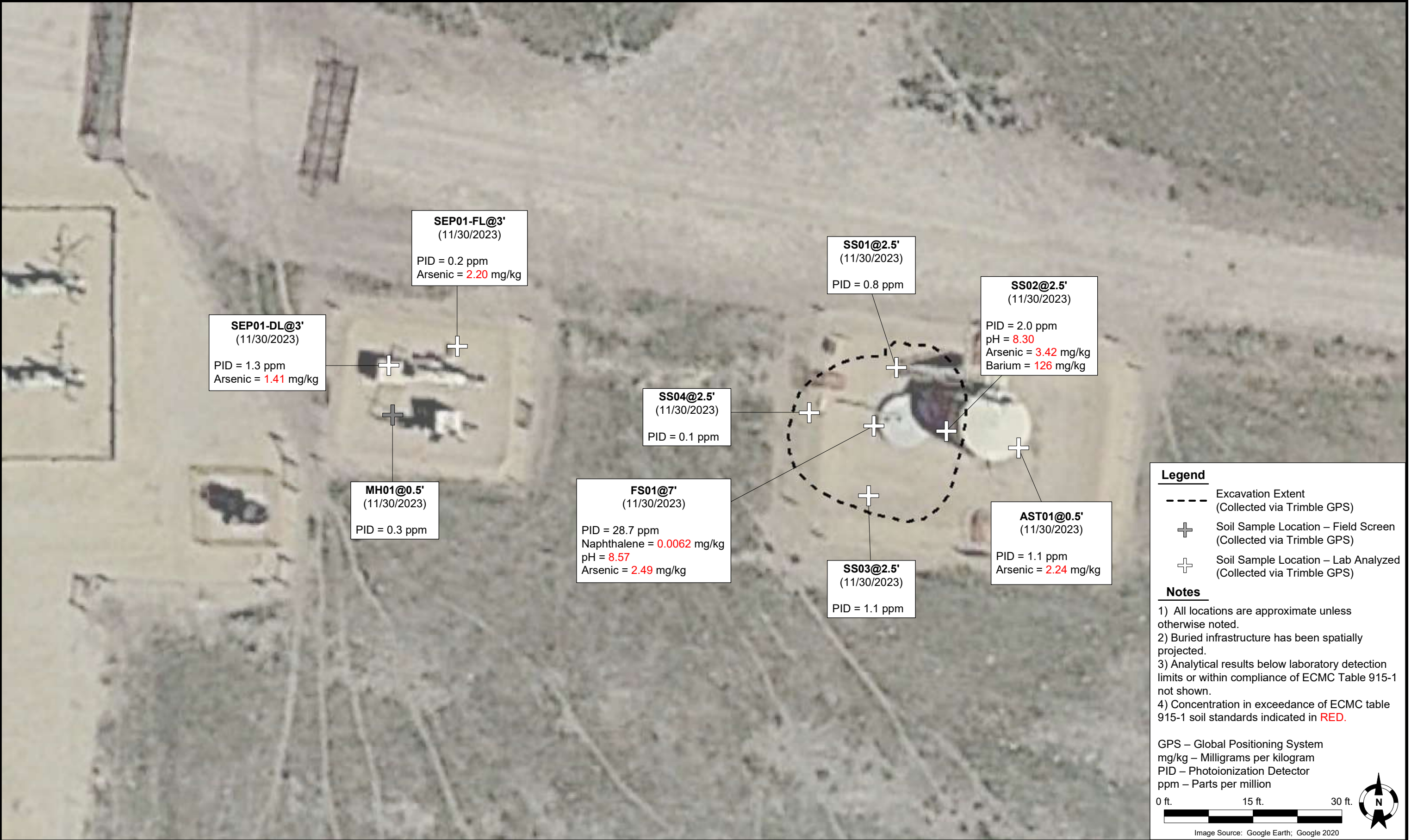


Tasman, Inc.
6855 W. 119th Ave
Broomfield, CO 80020

Noble Energy, Inc - DJ Basin
Boulder 14-12G
SWSW, Section 14, Township 4 North, Range 65 West
Weld County, Colorado

Site Location Map

Figure
1



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 12, 2024

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Boulter 14-12G FAC

Work Order #2311618

Enclosed are the results of analyses for samples received by Summit Scientific on 11/30/23 17:55. 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 - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS02@2.5'	2311618-02	Soil	11/30/23 09:32	11/30/23 17:55
SEP01-FL@3'	2311618-05	Soil	11/30/23 09:20	11/30/23 17:55
SEP01-DL@3'	2311618-06	Soil	11/30/23 09:23	11/30/23 17:55
AST01@0.5'	2311618-07	Soil	11/30/23 09:50	11/30/23 17:55
FS01@7'	2311618-08	Soil	11/30/23 09:48	11/30/23 17:55

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.

Client: Noble/Tasman		Send Data To:		Send Invoice To:	
Address: 6855 W. 119th Ave.		Project Manager: Jake Whritenour		Company: Noble	
City/State/Zip: Broomfield/CO/ 80020		E-Mail: Jwhritenour@tasman-geo.com		Project Name/Location: Boulder 14-126 (FAC)	
Phone:		Project Name: Boulder 14-126 (FAC)		AFE#:	
Sampler Name: Alden Franklin		Project Number:		PO/Billing Codes:	
				Contact: Miguel Barron	

					Preservative				Matrix				Analysis Requested								Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS	HOLD		
1	SS01@2.5'	11/30/23	0930	3						X			X	X	X	X	X	X	X		SAR, EC, pH by saturated paste
2	SS02@2.5'	↓	0932	↓						↓			↓	↓	↓	↓	↓	↓	↓		
3	SS03@2.5'	↓	0934	↓						↓			↓	↓	↓	↓	↓	↓	↓		
4	SS04@2.5'	↓	0936	↓						↓			↓	↓	↓	↓	↓	↓	↓	X	
5	SEP01-FL@3'	↓	0920	↓						↓			↓	↓	↓	↓	↓	↓	↓		
6	SEP01-DL@3'	↓	0923	↓						↓			↓	↓	↓	↓	↓	↓	↓		
7	AST01@0.5'	↓	0950	↓						↓			↓	↓	↓	↓	↓	↓	↓		
8	FS01@7'	↓	0948	↓						↓			↓	↓	↓	↓	↓	↓	↓		
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <i>Alden Franklin</i>	Date/Time: 11/30/23 16:00	Received by: Tasman Lock Box	Date/Time: 11/30/23 16:00	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lock Box	Date/Time: 11/30/23 1755	Received by: <i>[Signature]</i>	Date/Time: 11/30/23 1755	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: 19.7	Corrected Temperature: 6	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2311618Client: Noble TormanClient Project ID: Boulter 14-12G (FAE)Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #:

	-			
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Matrix (Check all that apply)

Air

☐

Soft/Solid

☒

Water

☐

Other

☐

Temp (°C)

19.7

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

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

Custodian Printed Name

Date/Time

AS

11/30/23



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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

SS02@2.5'
2311618-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/30/23 09:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGL0149	12/05/23	12/06/23	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: **11/30/23 09:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0567	142 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0420	105 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0433	108 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/30/23 09:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGL0156	12/05/23	12/05/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **11/30/23 09:32**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.4	91.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

SS02@2.5'
2311618-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/30/23 09:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGL0218	12/06/23	12/08/23	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: **11/30/23 09:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0194	58.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0218	65.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/30/23 09:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BGL0262	12/07/23	12/12/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/30/23 09:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

SS02@2.5'
2311618-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.42	0.200	mg/kg dry	1	BGL0295	12/08/23	12/14/23	EPA 6020B
Barium	126	0.400	"	"	"	"	"	"
Cadmium	0.217	0.200	"	"	"	"	"	"
Copper	6.86	0.400	"	"	"	"	"	"
Lead	8.95	0.200	"	"	"	"	"	"
Nickel	6.24	0.400	"	"	"	"	"	"
Silver	0.0638	0.0200	"	"	"	"	"	"
Zinc	21.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **11/30/23 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0217	12/06/23	12/07/23	EPA 7196A	

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

Date Sampled: **11/30/23 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	27.8	0.0500	mg/L dry	1	BGL0701	12/19/23	12/27/23	EPA 6020B	
Magnesium	10.4	0.0500	"	"	"	"	"	"	
Sodium	5.63	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **11/30/23 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.231	0.00100	units	1	BGL0949	12/27/23	12/27/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/30/23 09:32**

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

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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

01/12/24 14:37

SS02@2.5'
2311618-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	85.2	%	1	BGL0320	12/08/23	12/08/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/30/23 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.199	0.0100	mmhos/cm	1	BGL0736	12/20/23	12/20/23	EPA 120.1	

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

Date Sampled: **11/30/23 09:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.30		pH Units	1	BGL0737	12/20/23	12/20/23	EPA 9045D	

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Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

SEP01-FL@3'
2311618-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/30/23 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGL0149	12/05/23	12/06/23	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: **11/30/23 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0566	141 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0423	106 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0431	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/30/23 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGL0156	12/05/23	12/05/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/30/23 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.52	68.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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6855 W. 119th Ave.
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Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

SEP01-FL@3'
2311618-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/30/23 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGL0218	12/06/23	12/08/23	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: **11/30/23 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0161	48.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0220	66.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/30/23 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BGL0262	12/07/23	12/12/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/30/23 09:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

SEP01-FL@3'
2311618-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.41	0.200	mg/kg dry	1	BGL0295	12/08/23	12/14/23	EPA 6020B
Barium	35.2	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.97	0.400	"	"	"	"	"	"
Lead	3.97	0.200	"	"	"	"	"	"
Nickel	2.59	0.400	"	"	"	"	"	"
Silver	0.0202	0.0200	"	"	"	"	"	"
Zinc	11.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **11/30/23 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0217	12/06/23	12/07/23	EPA 7196A	

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

Date Sampled: **11/30/23 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	222	0.0500	mg/L dry	1	BGL0701	12/19/23	12/27/23	EPA 6020B	
Magnesium	33.6	0.0500	"	"	"	"	"	"	
Sodium	1.88	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **11/30/23 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0311	0.00100	units	1	BGL0949	12/27/23	12/27/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

01/12/24 14:37

SEP01-FL@3'

2311618-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/30/23 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.3		%	1	BGL0320	12/08/23	12/08/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/30/23 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.182	0.0100	mmhos/cm	1	BGL0736	12/20/23	12/20/23	EPA 120.1	

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

Date Sampled: **11/30/23 09:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.21		pH Units	1	BGL0737	12/20/23	12/20/23	EPA 9045D	

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

SEP01-DL@3'
2311618-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/30/23 09:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGL0149	12/05/23	12/06/23	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: **11/30/23 09:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0592	148 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0430	107 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0434	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/30/23 09:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	91	50	mg/kg	1	BGL0156	12/05/23	12/06/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/30/23 09:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.80	70.4 %	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 - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

SEP01-DL@3'
2311618-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/30/23 09:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGL0218	12/06/23	12/08/23	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: **11/30/23 09:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0200	60.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0229	68.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/30/23 09:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BGL0262	12/07/23	12/12/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/30/23 09:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

SEP01-DL@3'
2311618-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.20	0.200	mg/kg dry	1	BGL0295	12/08/23	12/14/23	EPA 6020B
Barium	46.1	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.21	0.400	"	"	"	"	"	"
Lead	5.97	0.200	"	"	"	"	"	"
Nickel	3.29	0.400	"	"	"	"	"	"
Silver	0.0477	0.0200	"	"	"	"	"	"
Zinc	15.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **11/30/23 09:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0217	12/06/23	12/07/23	EPA 7196A	

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

Date Sampled: **11/30/23 09:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	82.8	0.0500	mg/L dry	1	BGL0701	12/19/23	12/27/23	EPA 6020B	
Magnesium	9.91	0.0500	"	"	"	"	"	"	
Sodium	124	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **11/30/23 09:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.43	0.00100	units	1	BGL0949	12/27/23	12/27/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

01/12/24 14:37

SEP01-DL@3'

2311618-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/30/23 09:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.3		%	1	BGL0320	12/08/23	12/08/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/30/23 09:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.00	0.0100	mmhos/cm	1	BGL0736	12/20/23	12/20/23	EPA 120.1	

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

Date Sampled: **11/30/23 09:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.85		pH Units	1	BGL0737	12/20/23	12/20/23	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

01/12/24 14:37

AST01@0.5'
2311618-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/30/23 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGL0149	12/05/23	12/06/23	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: **11/30/23 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0562	141 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0431	108 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0437	109 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/30/23 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGL0156	12/05/23	12/06/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/30/23 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.3	82.3 %	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 - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

AST01@0.5'
2311618-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **11/30/23 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGL0218	12/06/23	12/08/23	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: **11/30/23 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0251	75.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0238	71.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/30/23 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	ND	2.00	mg/L	1	BGL0262	12/07/23	12/12/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/30/23 09:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

AST01@0.5'
2311618-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.24	0.200	mg/kg dry	1	BGL0295	12/08/23	12/14/23	EPA 6020B
Barium	67.3	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.28	0.400	"	"	"	"	"	"
Lead	5.95	0.200	"	"	"	"	"	"
Nickel	3.60	0.400	"	"	"	"	"	"
Silver	0.0238	0.0200	"	"	"	"	"	"
Zinc	15.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **11/30/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0217	12/06/23	12/07/23	EPA 7196A	

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

Date Sampled: **11/30/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	23.5	0.0500	mg/L dry	1	BGL0701	12/19/23	12/27/23	EPA 6020B	
Magnesium	6.02	0.0500	"	"	"	"	"	"	
Sodium	5.49	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **11/30/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.262	0.00100	units	1	BGL0949	12/27/23	12/27/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

01/12/24 14:37

AST01@0.5'
2311618-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/30/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.0		%	1	BGL0320	12/08/23	12/08/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/30/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.178	0.0100	mmhos/cm	1	BGL0736	12/20/23	12/20/23	EPA 120.1	

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

Date Sampled: **11/30/23 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.29		pH Units	1	BGL0737	12/20/23	12/20/23	EPA 9045D	

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

FS01@7'
2311618-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Toluene	0.019	0.0050	mg/kg	1	BGL0149	12/05/23	12/06/23	EPA 8260B	
Ethylbenzene	0.011	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.051	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2.4	0.50	"	"	"	"	"	"	

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0598	150 %	50-150		"	"	"	"	
<i>Surrogate: Toluene-d8</i>	0.0445	111 %	50-150		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0471	118 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGL0156	12/05/23	12/06/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<i>Surrogate: o-Terphenyl</i>	11.4	90.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGL0218	12/06/23	12/08/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

FS01@7'
2311618-08 (Soil)

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PAH by EPA Method 8270D SIM

Benzo (a) pyrene	ND	0.00500	mg/kg	1	BGL0218	12/06/23	12/08/23	EPA 8270D SIM
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	0.0156	0.00500	"	"	"	"	"	"

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0216	64.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0240	71.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **11/30/23 09:48**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BGL0262	12/07/23	12/12/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.49	0.200	mg/kg dry	1	BGL0295	12/08/23	12/15/23	EPA 6020B	
Barium	57.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	4.41	0.400	"	"	"	"	"	"	
Lead	6.14	0.200	"	"	"	"	"	"	
Nickel	4.02	0.400	"	"	"	"	"	"	
Silver	0.0333	0.0200	"	"	"	"	"	"	

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Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

FS01@7'
2311618-08 (Soil)

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Total Metals by EPA 6020B

Zinc	16.6	0.400	mg/kg dry	1	BGL0295	12/08/23	12/15/23	EPA 6020B
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGL0217	12/06/23	12/07/23	EPA 7196A	

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

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	153	0.0500	mg/L dry	1	BGL0701	12/19/23	12/27/23	EPA 6020B	
Magnesium	42.3	0.0500	"	"	"	"	"	"	
Sodium	244	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.50	0.00100	units	1	BGL0949	12/27/23	12/27/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.8		%	1	BGL0320	12/08/23	12/08/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

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Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

01/12/24 14:37

FS01@7'
2311618-08 (Soil)

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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.25	0.0100		mmhos/cm	1	BGL0736	12/20/23	12/20/23	EPA 120.1	

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

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.57			pH Units	1	BGL0737	12/20/23	12/20/23	EPA 9045D	

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Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

FS01@7'
2311618-08 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BHA0032	12/05/23	01/03/24	EPA 8260B	I-04
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-04
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	I-04
Naphthalene	0.0062	0.0038	"	"	"	"	"	"	I-04

Date Sampled: **11/30/23 09:48**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0512	128 %	50-150		"	"	"	"	I-04
Surrogate: Toluene-d8	0.0436	109 %	50-150		"	"	"	"	I-04
Surrogate: 4-Bromofluorobenzene	0.0442	110 %	50-150		"	"	"	"	I-04

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Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

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 BGL0149 - EPA 5030 Soil MS

Blank (BGL0149-BLK1)

Prepared: 12/05/23 Analyzed: 12/06/23

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	0.0581		"	0.0400		145	50-150			
Surrogate: Toluene-d8	0.0423		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0428		"	0.0400		107	50-150			

LCS (BGL0149-BS1)

Prepared: 12/05/23 Analyzed: 12/06/23

Benzene	0.114	0.0020	mg/kg	0.100		114	70-130			
Toluene	0.127	0.0050	"	0.100		127	70-130			
Ethylbenzene	0.115	0.0050	"	0.100		115	70-130			
m,p-Xylene	0.224	0.010	"	0.200		112	70-130			
o-Xylene	0.113	0.0050	"	0.100		113	70-130			
1,2,4-Trimethylbenzene	0.107	0.0050	"	0.100		107	70-130			
1,3,5-Trimethylbenzene	0.116	0.0050	"	0.100		116	70-130			
Naphthalene	0.0855	0.0038	"	0.100		85.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0528		"	0.0400		132	50-150			
Surrogate: Toluene-d8	0.0440		"	0.0400		110	50-150			
Surrogate: 4-Bromofluorobenzene	0.0419		"	0.0400		105	50-150			

Matrix Spike (BGL0149-MS1)

Source: 2311618-02

Prepared: 12/05/23 Analyzed: 12/06/23

Benzene	0.101	0.0020	mg/kg	0.100	ND	101	70-130			
Toluene	0.114	0.0050	"	0.100	ND	114	70-130			
Ethylbenzene	0.0982	0.0050	"	0.100	ND	98.2	70-130			
m,p-Xylene	0.196	0.010	"	0.200	ND	98.2	70-130			
o-Xylene	0.102	0.0050	"	0.100	ND	102	70-130			
1,2,4-Trimethylbenzene	0.0897	0.0050	"	0.100	ND	89.7	70-130			
1,3,5-Trimethylbenzene	0.0985	0.0050	"	0.100	ND	98.5	70-130			
Naphthalene	0.0788	0.0038	"	0.100	ND	78.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0594		"	0.0400		148	50-150			
Surrogate: Toluene-d8	0.0446		"	0.0400		112	50-150			
Surrogate: 4-Bromofluorobenzene	0.0429		"	0.0400		107	50-150			

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Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BGL0149 - EPA 5030 Soil MS

Matrix Spike Dup (BGL0149-MSD1)

Source: 2311618-02

Prepared: 12/05/23 Analyzed: 12/06/23

Benzene	0.0851	0.0020	mg/kg	0.100	ND	85.1	70-130	17.2	30	
Toluene	0.0922	0.0050	"	0.100	ND	92.2	70-130	20.7	30	
Ethylbenzene	0.0871	0.0050	"	0.100	ND	87.1	70-130	12.0	30	
m,p-Xylene	0.177	0.010	"	0.200	ND	88.3	70-130	10.6	30	
o-Xylene	0.0919	0.0050	"	0.100	ND	91.9	70-130	10.9	30	
1,2,4-Trimethylbenzene	0.0807	0.0050	"	0.100	ND	80.7	70-130	10.6	30	
1,3,5-Trimethylbenzene	0.0900	0.0050	"	0.100	ND	90.0	70-130	9.01	30	
Naphthalene	0.0758	0.0038	"	0.100	ND	75.8	70-130	3.96	30	
Surrogate: 1,2-Dichloroethane-d4	0.0583		"	0.0400		146	50-150			
Surrogate: Toluene-d8	0.0436		"	0.0400		109	50-150			
Surrogate: 4-Bromofluorobenzene	0.0417		"	0.0400		104	50-150			

Batch BHA0032 - EPA 5030 Soil MS

Blank (BHA0032-BLK1)

Prepared: 01/02/24 Analyzed: 01/03/24

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	0.0479		"	0.0400		120	50-150			
Surrogate: Toluene-d8	0.0412		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0443		"	0.0400		111	50-150			

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Tasman Geosciences
6855 W. 119th Ave.
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Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

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 BHA0032 - EPA 5030 Soil MS

LCS (BHA0032-BS1)

Prepared: 01/02/24 Analyzed: 01/03/24

Benzene	0.0945	0.0020	mg/kg	0.100		94.5	70-130			
Toluene	0.123	0.0050	"	0.100		123	70-130			
Ethylbenzene	0.113	0.0050	"	0.100		113	70-130			
m,p-Xylene	0.236	0.010	"	0.200		118	70-130			
o-Xylene	0.120	0.0050	"	0.100		120	70-130			
1,2,4-Trimethylbenzene	0.122	0.0050	"	0.100		122	70-130			
1,3,5-Trimethylbenzene	0.122	0.0050	"	0.100		122	70-130			
Naphthalene	0.0860	0.0038	"	0.100		86.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0496		"	0.0400		124	50-150			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0447		"	0.0400		112	50-150			

Matrix Spike (BHA0032-MS1)

Source: 2312536-01

Prepared: 01/02/24 Analyzed: 01/03/24

Benzene	0.0814	0.0020	mg/kg	0.100	ND	81.4	70-130			
Toluene	0.103	0.0050	"	0.100	ND	103	70-130			
Ethylbenzene	0.0951	0.0050	"	0.100	ND	95.1	70-130			
m,p-Xylene	0.197	0.010	"	0.200	ND	98.4	70-130			
o-Xylene	0.100	0.0050	"	0.100	ND	100	70-130			
1,2,4-Trimethylbenzene	0.0955	0.0050	"	0.100	ND	95.5	70-130			
1,3,5-Trimethylbenzene	0.0982	0.0050	"	0.100	ND	98.2	70-130			
Naphthalene	0.0702	0.0038	"	0.100	ND	70.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0544		"	0.0400		136	50-150			
Surrogate: Toluene-d8	0.0420		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0433		"	0.0400		108	50-150			

Matrix Spike Dup (BHA0032-MSD1)

Source: 2312536-01

Prepared: 01/02/24 Analyzed: 01/03/24

Benzene	0.0815	0.0020	mg/kg	0.100	ND	81.5	70-130	0.184	30	
Toluene	0.102	0.0050	"	0.100	ND	102	70-130	0.468	30	
Ethylbenzene	0.0936	0.0050	"	0.100	ND	93.6	70-130	1.59	30	
m,p-Xylene	0.191	0.010	"	0.200	ND	95.3	70-130	3.22	30	
o-Xylene	0.0953	0.0050	"	0.100	ND	95.3	70-130	4.91	30	
1,2,4-Trimethylbenzene	0.0911	0.0050	"	0.100	ND	91.1	70-130	4.63	30	
1,3,5-Trimethylbenzene	0.0943	0.0050	"	0.100	ND	94.3	70-130	4.15	30	
Naphthalene	0.0840	0.0038	"	0.100	ND	84.0	70-130	17.9	30	
Surrogate: 1,2-Dichloroethane-d4	0.0571		"	0.0400		143	50-150			
Surrogate: Toluene-d8	0.0416		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0445		"	0.0400		111	50-150			

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Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

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 BGL0156 - EPA 3550A

Blank (BGL0156-BLK1)

Prepared & Analyzed: 12/05/23

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

Surrogate: o-Terphenyl	17.2	"	12.5	137	30-150
------------------------	------	---	------	-----	--------

LCS (BGL0156-BS1)

Prepared & Analyzed: 12/05/23

C10-C28 (DRO)	504	50	mg/kg	500	101	70-130
Surrogate: o-Terphenyl	15.7	"	12.5	126	30-150	

Matrix Spike (BGL0156-MS1)

Source: 2311618-02

Prepared & Analyzed: 12/05/23

C10-C28 (DRO)	423	50	mg/kg	500	25.2	79.7	70-130
Surrogate: o-Terphenyl	8.94	"	12.5	71.6	30-150		

Matrix Spike Dup (BGL0156-MSD1)

Source: 2311618-02

Prepared & Analyzed: 12/05/23

C10-C28 (DRO)	491	50	mg/kg	500	25.2	93.2	70-130	14.8	20
Surrogate: o-Terphenyl	9.75	"	12.5	78.0	30-150				

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Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

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 BGL0218 - EPA 5030 Soil MS

Blank (BGL0218-BLK1)

Prepared: 12/06/23 Analyzed: 12/08/23

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	0.0383	"	0.0333	115	40-150
Surrogate: Fluoranthene-d10	0.0311	"	0.0333	93.4	40-150

LCS (BGL0218-BS1)

Prepared: 12/06/23 Analyzed: 12/08/23

Acenaphthene	0.0222	0.00500	mg/kg	0.0333	66.7	31-137
Anthracene	0.0243	0.00500	"	0.0333	72.8	30-120
Benzo (a) anthracene	0.0262	0.00500	"	0.0333	78.5	30-120
Benzo (a) pyrene	0.0208	0.00500	"	0.0333	62.4	30-120
Benzo (b) fluoranthene	0.0243	0.00500	"	0.0333	72.9	30-120
Benzo (k) fluoranthene	0.0286	0.00500	"	0.0333	85.7	30-120
Chrysene	0.0263	0.00500	"	0.0333	78.9	30-120
Dibenz (a,h) anthracene	0.0180	0.00500	"	0.0333	54.1	30-120
Fluoranthene	0.0258	0.00500	"	0.0333	77.4	30-120
Fluorene	0.0255	0.00500	"	0.0333	76.5	30-120
Indeno (1,2,3-cd) pyrene	0.0185	0.00500	"	0.0333	55.4	30-120
Pyrene	0.0252	0.00500	"	0.0333	75.7	35-142
1-Methylnaphthalene	0.0322	0.00500	"	0.0333	96.5	35-142
2-Methylnaphthalene	0.0243	0.00500	"	0.0333	72.9	35-142

Surrogate: 2-Methylnaphthalene-d10	0.0174	"	0.0333	52.1	40-150
Surrogate: Fluoranthene-d10	0.0377	"	0.0333	113	40-150

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Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

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 BGL0218 - EPA 5030 Soil MS

Matrix Spike (BGL0218-MS1)

Source: 2311599-01

Prepared: 12/06/23 Analyzed: 12/08/23

Acenaphthene	0.0220	0.00500	mg/kg	0.0333	ND	65.9	31-137		
Anthracene	0.0207	0.00500	"	0.0333	ND	62.1	30-120		
Benzo (a) anthracene	0.0141	0.00500	"	0.0333	ND	42.3	30-120		
Benzo (a) pyrene	0.0191	0.00500	"	0.0333	ND	57.2	30-120		
Benzo (b) fluoranthene	0.0150	0.00500	"	0.0333	ND	44.9	30-120		
Benzo (k) fluoranthene	0.0194	0.00500	"	0.0333	ND	58.3	30-120		
Chrysene	0.0156	0.00500	"	0.0333	ND	46.9	30-120		
Dibenz (a,h) anthracene	0.0146	0.00500	"	0.0333	ND	43.7	30-120		
Fluoranthene	0.0161	0.00500	"	0.0333	ND	48.2	30-120		
Fluorene	0.0174	0.00500	"	0.0333	ND	52.3	30-120		
Indeno (1,2,3-cd) pyrene	0.0203	0.00500	"	0.0333	ND	61.0	30-120		
Pyrene	0.0161	0.00500	"	0.0333	ND	48.4	35-142		
1-Methylnaphthalene	0.0192	0.00500	"	0.0333	ND	57.6	15-130		
2-Methylnaphthalene	0.0134	0.00500	"	0.0333	ND	40.2	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0330		"	0.0333		99.0	40-150		
Surrogate: Fluoranthene-d10	0.0253		"	0.0333		75.8	40-150		

Matrix Spike Dup (BGL0218-MSD1)

Source: 2311599-01

Prepared: 12/06/23 Analyzed: 12/08/23

Acenaphthene	0.0224	0.00500	mg/kg	0.0333	ND	67.3	31-137	2.14	30	
Anthracene	0.0228	0.00500	"	0.0333	ND	68.5	30-120	9.81	30	
Benzo (a) anthracene	0.0163	0.00500	"	0.0333	ND	48.9	30-120	14.7	30	
Benzo (a) pyrene	0.0149	0.00500	"	0.0333	ND	44.8	30-120	24.3	30	
Benzo (b) fluoranthene	0.0213	0.00500	"	0.0333	ND	63.8	30-120	34.7	30	QR-02
Benzo (k) fluoranthene	0.0154	0.00500	"	0.0333	ND	46.1	30-120	23.4	30	
Chrysene	0.0150	0.00500	"	0.0333	ND	45.0	30-120	4.18	30	
Dibenz (a,h) anthracene	0.0215	0.00500	"	0.0333	ND	64.4	30-120	38.4	30	QR-02
Fluoranthene	0.0142	0.00500	"	0.0333	ND	42.6	30-120	12.4	30	
Fluorene	0.0175	0.00500	"	0.0333	ND	52.5	30-120	0.416	30	
Indeno (1,2,3-cd) pyrene	0.0136	0.00500	"	0.0333	ND	40.8	30-120	39.7	30	QR-02
Pyrene	0.0138	0.00500	"	0.0333	ND	41.5	35-142	15.3	30	
1-Methylnaphthalene	0.0246	0.00500	"	0.0333	ND	73.9	15-130	24.8	50	
2-Methylnaphthalene	0.0192	0.00500	"	0.0333	ND	57.6	15-130	35.5	50	
Surrogate: 2-Methylnaphthalene-d10	0.0169		"	0.0333		50.7	40-150			
Surrogate: Fluoranthene-d10	0.0162		"	0.0333		48.6	40-150			

Summit Scientific

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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

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 BGL0262 - EPA 3050B

Blank (BGL0262-BLK1)

Prepared: 12/07/23 Analyzed: 12/12/23

Boron ND 2.00 mg/L

LCS (BGL0262-BS1)

Prepared: 12/07/23 Analyzed: 12/12/23

Boron 5.96 2.00 mg/L 5.00 119 80-120

Duplicate (BGL0262-DUP1)

Source: 2311598-01

Prepared: 12/07/23 Analyzed: 12/12/23

Boron 0.0353 2.00 mg/L 0.0752 72.3 20 QR-01

Matrix Spike (BGL0262-MS1)

Source: 2311598-01

Prepared: 12/07/23 Analyzed: 12/12/23

Boron 6.13 2.00 mg/L 5.00 0.0752 121 75-125

Matrix Spike Dup (BGL0262-MSD1)

Source: 2311598-01

Prepared: 12/07/23 Analyzed: 12/12/23

Boron 6.41 2.00 mg/L 5.00 0.0752 127 75-125 4.47 25 QM-07

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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BGL0295 - EPA 3050B

Blank (BGL0295-BLK1)

Prepared: 12/08/23 Analyzed: 12/14/23

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 (BGL0295-BS1)

Prepared: 12/08/23 Analyzed: 12/14/23

Arsenic	40.9	0.200	mg/kg wet	40.0	102	80-120
Barium	41.1	0.400	"	40.0	103	80-120
Cadmium	1.90	0.200	"	2.00	94.9	80-120
Copper	37.4	0.400	"	40.0	93.5	80-120
Lead	19.3	0.200	"	20.0	96.4	80-120
Nickel	36.1	0.400	"	40.0	90.3	80-120
Silver	1.93	0.0200	"	2.00	96.6	80-120
Zinc	36.8	0.400	"	40.0	92.0	80-120
Selenium	4.10	0.260	"	4.00	102	80-120

Duplicate (BGL0295-DUP1)

Source: 2311618-02

Prepared: 12/08/23 Analyzed: 12/14/23

Arsenic	3.06	0.200	mg/kg dry	3.42	11.0	20
Barium	115	0.400	"	126	8.90	20
Cadmium	0.194	0.200	"	0.217	11.2	20
Copper	6.87	0.400	"	6.86	0.0889	20
Lead	8.40	0.200	"	8.95	6.25	20
Nickel	6.38	0.400	"	6.24	2.13	20
Silver	0.0577	0.0200	"	0.0638	10.0	20
Zinc	21.2	0.400	"	21.0	0.592	20
Selenium	ND	0.260	"	0.186	200	20

QR-01

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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

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 BGL0295 - EPA 3050B

Matrix Spike (BGL0295-MS1)		Source: 2311618-02			Prepared: 12/08/23		Analyzed: 12/14/23			
Arsenic	49.6	0.200	mg/kg dry	46.9	3.42	98.3	75-125			
Barium	163	0.400	"	46.9	126	78.4	75-125			
Cadmium	2.45	0.200	"	2.35	0.217	95.1	75-125			
Copper	30.2	0.400	"	46.9	6.86	49.8	75-125			QM-07
Lead	30.5	0.200	"	23.5	8.95	91.9	75-125			
Nickel	29.3	0.400	"	46.9	6.24	49.1	75-125			QM-07
Silver	2.25	0.0200	"	2.35	0.0638	93.1	75-125			
Zinc	44.2	0.400	"	46.9	21.0	49.4	75-125			QM-07
Selenium	4.53	0.260	"	4.69	0.186	92.5	75-125			

Matrix Spike Dup (BGL0295-MSD1)		Source: 2311618-02			Prepared: 12/08/23		Analyzed: 12/14/23			
Arsenic	49.5	0.200	mg/kg dry	46.9	3.42	98.2	75-125	0.0237	25	
Barium	161	0.400	"	46.9	126	74.0	75-125	1.25	25	QM-07
Cadmium	2.43	0.200	"	2.35	0.217	94.1	75-125	0.944	25	
Copper	30.0	0.400	"	46.9	6.86	49.2	75-125	0.870	25	QM-07
Lead	30.1	0.200	"	23.5	8.95	90.1	75-125	1.43	25	
Nickel	28.9	0.400	"	46.9	6.24	48.4	75-125	1.15	25	QM-07
Silver	2.21	0.0200	"	2.35	0.0638	91.4	75-125	1.79	25	
Zinc	43.7	0.400	"	46.9	21.0	48.3	75-125	1.09	25	QM-07
Selenium	4.45	0.260	"	4.69	0.186	90.9	75-125	1.65	25	

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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BGL0217 - 3060A Mod

Blank (BGL0217-BLK1)

Prepared: 12/06/23 Analyzed: 12/07/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGL0217-BS1)

Prepared: 12/06/23 Analyzed: 12/07/23

Chromium, Hexavalent 27.2 0.30 mg/kg wet 25.0 109 80-120

Duplicate (BGL0217-DUP1)

Source: 2311581-01

Prepared: 12/06/23 Analyzed: 12/07/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGL0217-MS1)

Source: 2311581-01

Prepared: 12/06/23 Analyzed: 12/07/23

Chromium, Hexavalent 31.5 0.30 mg/kg dry 29.6 ND 106 75-125

Matrix Spike Dup (BGL0217-MSD1)

Source: 2311581-01

Prepared: 12/06/23 Analyzed: 12/07/23

Chromium, Hexavalent 30.8 0.30 mg/kg dry 29.6 ND 104 75-125 2.28 20

Summit Scientific

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Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

01/12/24 14:37

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

Summit Scientific

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

Batch BGL0701 - General Preparation

Blank (BGL0701-BLK1)

Prepared: 12/19/23 Analyzed: 12/27/23

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

LCS (BGL0701-BS1)

Prepared: 12/19/23 Analyzed: 12/27/23

Calcium	5.74	0.0500	mg/L wet	5.00	115	70-130
Magnesium	5.54	0.0500	"	5.00	111	70-130
Sodium	5.47	0.0500	"	5.00	109	70-130

Summit Scientific

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Tasman Geosciences
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Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

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 BGL0320 - General Preparation

Duplicate (BGL0320-DUP1)		Source: 2311618-02			Prepared & Analyzed: 12/08/23					
% Solids	84.6		%		85.2		0.684		20	

Summit Scientific

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Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

01/12/24 14:37

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 BGL0736 - General Preparation

Blank (BGL0736-BLK1)

Prepared & Analyzed: 12/20/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGL0736-BS1)

Prepared & Analyzed: 12/20/23

Specific Conductance (EC) 0.151 0.0100 mmhos/cm 0.150 101 95-105

Duplicate (BGL0736-DUP1)

Source: 2311618-02

Prepared & Analyzed: 12/20/23

Specific Conductance (EC) 0.199 0.0100 mmhos/cm 0.199 0.00 20

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

Project: Noble - Boulter 14-12G FAC

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

01/12/24 14:37

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 BGL0737 - General Preparation

LCS (BGL0737-BS1)

Prepared & Analyzed: 12/20/23

pH	9.11	pH Units	9.18	99.2	95-105
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Duplicate (BGL0737-DUP1)

Source: 2311618-02

Prepared & Analyzed: 12/20/23

pH	8.30	pH Units	8.30	0.00	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Boulter 14-12G FAC

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
01/12/24 14:37

Notes and Definitions

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.
I-04	Sample was analyzed out of recommended holding time per clients request.
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