

Third Party Removal Date									
Sample taken? Location/Container									
PID Readings									
Photo Number(s)									

Other Facility Equipment

Equipment type	Meter House	Flare		
Equipment Condition	Good	Good		
Age				
Soil impacts	None observed	None observed		
PID Readings	0.3, 0.0	0.7, 1.2		
Sample taken? Location/Container	Yes, see below	Yes, see below		
Photo Number(s)	4, 5	2, 3		

Other observations regarding other facility or third party equipment:

Samples were taken from both meter houses on site (MH01@0.5', MH02@0.5') as well as from the base of both flares (FLARE01@0.5' , FLARE02@0.5').

Summary

<i>Was impacted soil identified?</i>	
No	Yes - less than 10 cubic yards Yes - more than 10 cubic yards
<i>Total number of samples field screened:</i> 11	<i>Total number of samples collected:</i> 11
<i>Highest PID Reading:</i> 2.4	<i>Total number of samples submitted to lab for analysis:</i> 4
<i>If more than 10 cubic yards of impacted soil were observed:</i>	
<i>Vertical extent:</i>	<i>Estimated spill volume:</i>
<i>Lateral extent:</i>	<i>Volume of soil removed:</i>
<i>Is additional investigation required?</i>	
<i>Was groundwater encountered during the investigation?</i>	
No	Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils
<i>Measured depth to groundwater:</i>	<i>Was remedial groundwater removal conducted?</i> Yes No
<i>Date Groundwater was encountered:</i>	<i>Commencement date of removal:</i>
<i>Sheen on groundwater?</i> Yes No	<i>Volume of groundwater removed prior to sampling:</i>
<i>Free product observed?</i> Yes No	<i>Volume of groundwater removed post sampling:</i>
<i>Total number of samples collected:</i>	<i>Total Volume of groundwater removed:</i>
<i>Total number of samples submitted to lab for analysis:</i>	

Photographic Log

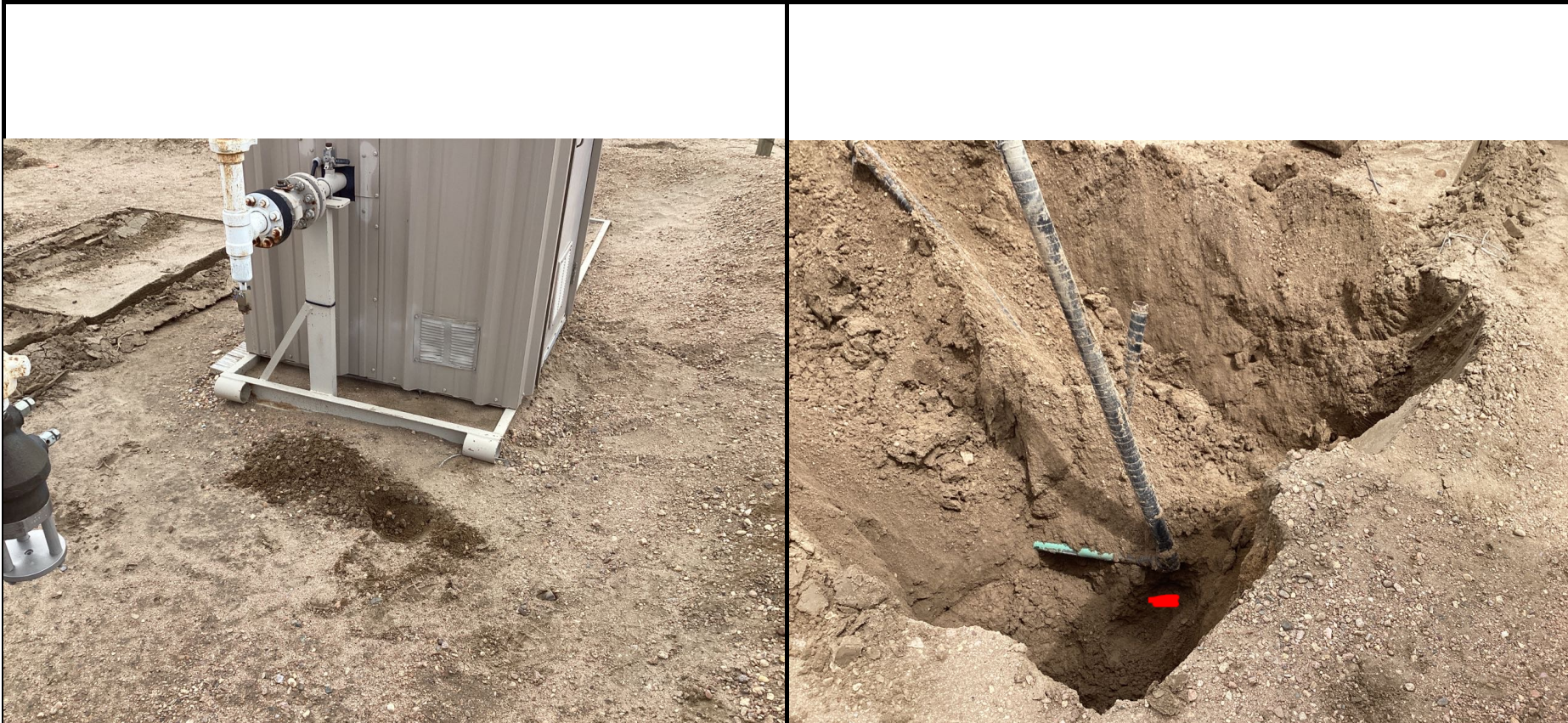


Equipment ID: AST01@0.5'		Equipment Type: Above Ground Storage Tank		Equipment ID: FLARE01@0.5'		Equipment Type: Emission Control Device	
Material: Steel	Volume:	Contents: Oil/Gas/Water		Material: Steel	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log



Equipment ID: FLARE02@0.5'		Equipment Type: Emission Control Device		Equipment ID: MH02@0.5'		Equipment Type: Meter House	
Material: Steel	Volume:	Contents:		Material: Steel	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log


Equipment ID: MH01@0.5'		Equipment Type: Meter House		Equipment ID: SEP01-DL@3'		Equipment Type: Dump Line	
Material: Steel	Volume:	Contents:		Material: Steel	Volume:	Contents: Oil/Gas/Water	
Notes/Conditions:				Notes/Conditions:			

Photographic Log



Equipment ID: SS01@2.5'		Equipment Type:		Equipment ID: SS02@2.5'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log



Equipment ID: SS03@2.5'		Equipment Type:		Equipment ID: SS04@2.5'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log

							
Equipment ID: FS01@6'		Equipment Type:		Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

TABLE 1
SOIL SAMPLE LOCATIONS
NOBLE ENERGY, INC. - UHRICH 19-29,1,14-29

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude ¹	Longitude	PDOP
AST01@0.5'	04/28/23	1.7	No Staining	No Odor	Lab	40.44997329	-104.5811816	1.0
FLARE01@0.5'	04/28/23	0.7	No Staining	No Odor	Grab	40.44991970	-104.5807169	1.0
FLARE02@0.5'	04/28/23	1.2	No Staining	No Odor	Grab	40.44995923	-104.5807159	1.0
MH01@0.5'	04/28/23	0.3	No Staining	No Odor	Grab	40.44991078	-104.5808394	1.0
MH02@0.5'	04/28/23	0.0	No Staining	No Odor	Grab	40.44990804	-104.5808558	1.0
SEP01-DL@3'	04/28/23	2.4	No Staining	No Odor	Lab	40.44993088	-104.5808740	0.8
FS01@6'	05/01/23	0.1	No Staining	No Odor	Lab	40.44997689	-104.5811273	NC
SS01@2.5'	05/01/23	0.0	No Staining	No Odor	Grab	40.45000576	-104.5811253	NC
SS02@2.5'	05/01/23	0.1	No Staining	No Odor	Grab	40.44997648	-104.5810972	NC
SS03@2.5'	05/01/23	0.5	No Staining	No Odor	Lab	40.44994857	-104.5811245	NC
SS04@2.5'	05/01/23	0.4	No Staining	No Odor	Grab	40.44997553	-104.5811564	NC

Notes:

PID = photoionization detector

ppm = parts per million

PDOP = Position dilution of precision

HC = Hydrocarbon

NC = Not Collected

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

**TABLE 2
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - UHRICH 19-29,1,14-29**

Soil Sample ID	Date	¹ Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4 - TMB (mg/kg)	1,3,5 - TMB (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL²		1.2	490	5.8	58	30	27	2	500			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL^{2,3}		0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500			0.55	6	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
AST01@0.5'	04/28/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP01-DL@3'	04/28/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FS01@6'	05/01/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS03@2.5'	05/01/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
Residential SSL²		6 - 8.3	<6	<4mmhos/cm	2
AST01@0.5'	04/28/23	7.74	0.342	0.657	0.304
SEP01-DL@3'	04/28/23	7.89	0.149	0.348	0.499
FS01@6'	05/01/23	8.27	0.170	0.203	0.199
SS03@2.5'	05/01/23	8.09	0.0113	0.137	0.164

Notes:

1. Compounds referenced from 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with groundwater is present.

Definitions:

COGCC = Colorado Oil and Gas Conservation Commission
 TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
 TPH-DRO = Total petroleum hydrocarbons - diesel range organics
 TPH-ORO = Total petroleum hydrocarbons - oil range organics
 mg/kg = Milligrams per kilogram
 SAR = Sodium Adsorption Ratio
 EC = Electrical Conductivity
 mmhos/cm = Millimhos per centimeter
 mg/L = Milligrams per liter
 < = Analytical result is less than the indicated laboratory reporting limit

1,2,4 - TMB = 1,2,4 Trimethylbenzene
 1,3,5 - TMB = 1,3,5 Trimethylbenzene
 Benz(a) = Benzanthracene
 Benzo(b) = Benzofluoranthene
 Benzo(k) = Benzofluoranthene
 Benzo(a) = Benzopyrene
 A,H = Dibenzoanthracene
 1,2,3-CD = Indenopyrene
 1-M = 1-methylnaphthalene
 2-M = 2-methylnaphthalene

Highlighted results are equal to or exceed the COGCC Table 915-1 standard



DATE:	07/28/2023
DESIGNED BY:	JW
DRAWN BY:	HM



TASMAN
GEOSCIENCES

Tasman Geosciences, Inc.
 6855 W 119th Avenue
 Broomfield, CO 80020

Noble Energy, Inc. – DJ Basin
Uhrich 19-29,1,14-29
 SWSW, Section 29, Township 6 North, Range 64 West
 Weld County, Colorado

Tank Battery Closure & Soil
 Analytical Results Map
 (04/28/2023 & 05/01/2023)

FIGURE
1

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 09, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Ulrich 19-29,2,14-29

Work Order #2304653

Enclosed are the results of analyses for samples received by Summit Scientific on 04/28/23 17:43. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury

President



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

Project: Noble - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@0.5'	2304653-01	Soil	04/28/23 12:27	04/28/23 17:43
SEP01-DL@3'	2304653-02	Soil	04/28/23 13:33	04/28/23 17:43

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.

SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2304653	

	Send Data To:	Send Invoice To:
Client: Noble/Tasman	Project Manager: Jake Whritenour	Company: Chevron
Address: 6855 W. 119th Ave.	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location: Uhrich 19-29, 2, 14-29
City/State/Zip: Broomfield/CO/ 80020		AFE#:
Phone: 602-881-5716	Project Name: Uhrich 19-29, 2, 14-29	PO/Billing Codes:
Sampler Name: Dennis Gray	Project Number:	Contact: Wade Firestein

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS		HOLD
1	ASTO1 @ 0.5'	4-28-23	1227	2			X			X				X	X	X	X	X		SAR, EC, pH by saturated paste
2	SE901-DL @ 3'	4-28-23	1333	2			X			X				X	X	X	X	X		
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <i>Dennis Gray</i>	Date/Time: 4-28-23 1530	Received by: Tasman Lock Box	Date/Time: 4-28-23 1530	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <i>Tasman Lock Box</i>	Date/Time: 4-28-23 1743	Received by: <i>[Signature]</i>	Date/Time: 4-28-23 1743	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 10.1	Corrected Temperature: <i>⊖</i>	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2304653

Client: Noble Fasmann Client Project ID: Uhrich 19-29, 1, 14-29

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

Matrix (Check all that apply) Air Soil Solid Water Other

Temp (°C) Thermometer #

	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" value="-"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
If custody seals are present, are they intact? ⁽¹⁾	<input type="checkbox" value="-"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input type="checkbox" value="-"/>	<input type="checkbox"/>	
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 type="checkbox" value="-"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input type="checkbox" value="-"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input type="checkbox" value="-"/>	<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.

As

Custodian Printed Name

4/28/23

Date/Time



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

Project: Noble - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

AST01@0.5'
2304653-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/28/23 12:27**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGE0076	05/02/23	05/04/23	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: **04/28/23 12:27**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0430	108 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0411	103 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/28/23 12:27**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0077	05/02/23	05/03/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **04/28/23 12:27**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.5	91.9 %		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 - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

AST01@0.5'
2304653-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/28/23 12:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGE0003	05/01/23	05/03/23	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: **04/28/23 12:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0184	55.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0278	83.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/28/23 12:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.304	0.0100	mg/L	1	BGE0091	05/03/23	05/08/23	EPA 6020B	

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

Date Sampled: **04/28/23 12:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

AST01@0.5'
2304653-01 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	50.4	0.0539	mg/L dry	1	BGE0166	05/04/23	05/08/23	EPA 6020B	
Magnesium	12.0	0.0539	"	"	"	"	"	"	
Sodium	10.4	0.0539	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/28/23 12:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.342	0.00100	units	1	BGE0239	05/08/23	05/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/23 12:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.7		%	1	BGE0104	05/03/23	05/03/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/28/23 12:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.657	0.0100	mmhos/cm	1	BGE0202	05/05/23	05/05/23	EPA 120.1	

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

Date Sampled: **04/28/23 12:27**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.74		pH Units	1	BGE0203	05/05/23	05/05/23	EPA 9045D	

Summit Scientific

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

Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

SEP01-DL@3'
2304653-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/28/23 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGE0076	05/02/23	05/04/23	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: **04/28/23 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0412	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0415	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/28/23 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGE0077	05/02/23	05/03/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/28/23 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.8	86.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

SEP01-DL@3'
2304653-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/28/23 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGE0003	05/01/23	05/03/23	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: **04/28/23 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0199	59.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0277	83.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/28/23 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.499	0.0100	mg/L	1	BGE0091	05/03/23	05/08/23	EPA 6020B	

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

Date Sampled: **04/28/23 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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6855 W. 119th Ave.
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Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

SEP01-DL@3'
2304653-02 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	103	0.0570	mg/L dry	1	BGE0166	05/04/23	05/08/23	EPA 6020B	
Magnesium	9.17	0.0570	"	"	"	"	"	"	
Sodium	5.90	0.0570	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **04/28/23 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.149	0.00100	units	1	BGE0239	05/08/23	05/08/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/28/23 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.7		%	1	BGE0104	05/03/23	05/03/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **04/28/23 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.348	0.0100	mmhos/cm	1	BGE0202	05/05/23	05/05/23	EPA 120.1	

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

Date Sampled: **04/28/23 13:33**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.89		pH Units	1	BGE0203	05/05/23	05/05/23	EPA 9045D	

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Project: Noble - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGE0076 - EPA 5030 Soil MS

Blank (BGE0076-BLK1)

Prepared: 05/02/23 Analyzed: 05/03/23

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	0.0408		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0396		"	0.0400		99.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	50-150			

LCS (BGE0076-BS1)

Prepared: 05/02/23 Analyzed: 05/03/23

Benzene	0.0823	0.0020	mg/kg	0.100		82.3	70-130			
Toluene	0.0939	0.0050	"	0.100		93.9	70-130			
Ethylbenzene	0.110	0.0050	"	0.100		110	70-130			
m,p-Xylene	0.222	0.010	"	0.200		111	70-130			
o-Xylene	0.103	0.0050	"	0.100		103	70-130			
1,2,4-Trimethylbenzene	0.115	0.0050	"	0.100		115	70-130			
1,3,5-Trimethylbenzene	0.116	0.0050	"	0.100		116	70-130			
Naphthalene	0.0851	0.0038	"	0.100		85.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0330		"	0.0400		82.4	50-150			
Surrogate: Toluene-d8	0.0388		"	0.0400		97.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.4	50-150			

Matrix Spike (BGE0076-MS1)

Source: 2304617-01

Prepared: 05/02/23 Analyzed: 05/03/23

Benzene	0.0796	0.0020	mg/kg	0.100	ND	79.6	70-130			
Toluene	0.0915	0.0050	"	0.100	ND	91.5	70-130			
Ethylbenzene	0.108	0.0050	"	0.100	ND	108	70-130			
m,p-Xylene	0.215	0.010	"	0.200	ND	108	70-130			
o-Xylene	0.103	0.0050	"	0.100	ND	103	70-130			
1,2,4-Trimethylbenzene	0.113	0.0050	"	0.100	ND	113	70-130			
1,3,5-Trimethylbenzene	0.115	0.0050	"	0.100	ND	115	70-130			
Naphthalene	0.0917	0.0038	"	0.100	ND	91.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0349		"	0.0400		87.3	50-150			
Surrogate: Toluene-d8	0.0388		"	0.0400		96.9	50-150			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.6	50-150			

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Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch BGE0076 - EPA 5030 Soil MS

Matrix Spike Dup (BGE0076-MSD1)	Source: 2304617-01			Prepared: 05/02/23 Analyzed: 05/03/23						
Benzene	0.0785	0.0020	mg/kg	0.100	ND	78.5	70-130	1.44	30	
Toluene	0.0907	0.0050	"	0.100	ND	90.7	70-130	0.955	30	
Ethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130	2.45	30	
m,p-Xylene	0.211	0.010	"	0.200	ND	106	70-130	1.98	30	
o-Xylene	0.101	0.0050	"	0.100	ND	101	70-130	1.53	30	
1,2,4-Trimethylbenzene	0.111	0.0050	"	0.100	ND	111	70-130	1.82	30	
1,3,5-Trimethylbenzene	0.112	0.0050	"	0.100	ND	112	70-130	2.62	30	
Naphthalene	0.0936	0.0038	"	0.100	ND	93.6	70-130	2.01	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0354</i>		<i>"</i>	<i>0.0400</i>		<i>88.5</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>98.1</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0401</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>50-150</i>			

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Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

Extractable Petroleum Hydrocarbons by 8015 - Quality Control

Summit Scientific

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

Batch BGE0077 - EPA 3550A

Blank (BGE0077-BLK1)

Prepared & Analyzed: 05/02/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	10.4		"	12.5		83.2	30-150			

LCS (BGE0077-BS1)

Prepared: 05/02/23 Analyzed: 05/03/23

C10-C28 (DRO)	643	50	mg/kg	500		129	70-130			
Surrogate: <i>o</i> -Terphenyl	10.7		"	12.5		85.2	30-150			

Matrix Spike (BGE0077-MS1)

Source: 2304617-01

Prepared: 05/02/23 Analyzed: 05/03/23

C10-C28 (DRO)	629	50	mg/kg	500	14.1	123	70-130			
Surrogate: <i>o</i> -Terphenyl	11.5		"	12.5		92.1	30-150			

Matrix Spike Dup (BGE0077-MSD1)

Source: 2304617-01

Prepared: 05/02/23 Analyzed: 05/03/23

C10-C28 (DRO)	523	50	mg/kg	500	14.1	102	70-130	18.4	20	
Surrogate: <i>o</i> -Terphenyl	10.4		"	12.5		83.5	30-150			

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Project: Noble - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGE0003 - EPA 5030 Soil MS

Blank (BGE0003-BLK1)

Prepared: 05/01/23 Analyzed: 05/02/23

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	0.0242		"	0.0333		72.6	40-150			
Surrogate: Fluoranthene-d10	0.0292		"	0.0333		87.7	40-150			

LCS (BGE0003-BS1)

Prepared: 05/01/23 Analyzed: 05/02/23

Acenaphthene	0.0272	0.00500	mg/kg	0.0333		81.6	31-137			
Anthracene	0.0262	0.00500	"	0.0333		78.7	30-120			
Benzo (a) anthracene	0.0261	0.00500	"	0.0333		78.3	30-120			
Benzo (a) pyrene	0.0225	0.00500	"	0.0333		67.6	30-120			
Benzo (b) fluoranthene	0.0165	0.00500	"	0.0333		49.6	30-120			
Benzo (k) fluoranthene	0.0245	0.00500	"	0.0333		73.6	30-120			
Chrysene	0.0322	0.00500	"	0.0333		96.6	30-120			
Dibenz (a,h) anthracene	0.0204	0.00500	"	0.0333		61.3	30-120			
Fluoranthene	0.0262	0.00500	"	0.0333		78.6	30-120			
Fluorene	0.0267	0.00500	"	0.0333		80.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0217	0.00500	"	0.0333		65.0	30-120			
Pyrene	0.0297	0.00500	"	0.0333		89.0	35-142			
1-Methylnaphthalene	0.0225	0.00500	"	0.0333		67.6	35-142			
2-Methylnaphthalene	0.0289	0.00500	"	0.0333		86.7	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0241		"	0.0333		72.4	40-150			
Surrogate: Fluoranthene-d10	0.0271		"	0.0333		81.3	40-150			

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

Project: Noble - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGE0003 - EPA 5030 Soil MS

Matrix Spike (BGE0003-MS1)	Source: 2304643-01			Prepared: 05/01/23 Analyzed: 05/02/23						
Acenaphthene	0.0246	0.00500	mg/kg	0.0333	ND	73.8	31-137			
Anthracene	0.0255	0.00500	"	0.0333	ND	76.5	30-120			
Benzo (a) anthracene	0.0303	0.00500	"	0.0333	0.000767	88.7	30-120			
Benzo (a) pyrene	0.0220	0.00500	"	0.0333	ND	66.0	30-120			
Benzo (b) fluoranthene	0.0165	0.00500	"	0.0333	ND	49.4	30-120			
Benzo (k) fluoranthene	0.0214	0.00500	"	0.0333	ND	64.0	30-120			
Chrysene	0.0283	0.00500	"	0.0333	ND	84.9	30-120			
Dibenz (a,h) anthracene	0.0200	0.00500	"	0.0333	ND	59.9	30-120			
Fluoranthene	0.0263	0.00500	"	0.0333	ND	78.8	30-120			
Fluorene	0.0246	0.00500	"	0.0333	ND	73.7	30-120			
Indeno (1,2,3-cd) pyrene	0.0188	0.00500	"	0.0333	ND	56.4	30-120			
Pyrene	0.0257	0.00500	"	0.0333	ND	77.0	35-142			
1-Methylnaphthalene	0.0201	0.00500	"	0.0333	ND	60.2	15-130			
2-Methylnaphthalene	0.0256	0.00500	"	0.0333	ND	76.9	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0212</i>		<i>"</i>	<i>0.0333</i>		<i>63.5</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0297</i>		<i>"</i>	<i>0.0333</i>		<i>89.1</i>	<i>40-150</i>			

Matrix Spike Dup (BGE0003-MSD1)	Source: 2304643-01			Prepared: 05/01/23 Analyzed: 05/02/23						
Acenaphthene	0.0236	0.00500	mg/kg	0.0333	ND	70.7	31-137	4.27	30	
Anthracene	0.0237	0.00500	"	0.0333	ND	71.1	30-120	7.28	30	
Benzo (a) anthracene	0.0308	0.00500	"	0.0333	0.000767	90.2	30-120	1.63	30	
Benzo (a) pyrene	0.0225	0.00500	"	0.0333	ND	67.4	30-120	2.05	30	
Benzo (b) fluoranthene	0.0178	0.00500	"	0.0333	ND	53.4	30-120	7.93	30	
Benzo (k) fluoranthene	0.0208	0.00500	"	0.0333	ND	62.4	30-120	2.54	30	
Chrysene	0.0269	0.00500	"	0.0333	ND	80.7	30-120	5.03	30	
Dibenz (a,h) anthracene	0.0203	0.00500	"	0.0333	ND	61.0	30-120	1.94	30	
Fluoranthene	0.0243	0.00500	"	0.0333	ND	72.8	30-120	7.95	30	
Fluorene	0.0243	0.00500	"	0.0333	ND	72.9	30-120	1.18	30	
Indeno (1,2,3-cd) pyrene	0.0191	0.00500	"	0.0333	ND	57.4	30-120	1.74	30	
Pyrene	0.0259	0.00500	"	0.0333	ND	77.6	35-142	0.750	30	
1-Methylnaphthalene	0.0214	0.00500	"	0.0333	ND	64.2	15-130	6.28	50	
2-Methylnaphthalene	0.0259	0.00500	"	0.0333	ND	77.7	15-130	1.01	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0231</i>		<i>"</i>	<i>0.0333</i>		<i>69.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0271</i>		<i>"</i>	<i>0.0333</i>		<i>81.2</i>	<i>40-150</i>			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

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

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

Batch BGE0091 - EPA 3050B

Blank (BGE0091-BLK1)

Prepared: 05/03/23 Analyzed: 05/08/23

Boron ND 0.0100 mg/L

LCS (BGE0091-BS1)

Prepared: 05/03/23 Analyzed: 05/08/23

Boron 5.43 0.0100 mg/L 5.00 109 80-120

Duplicate (BGE0091-DUP1)

Source: 2304616-01

Prepared: 05/03/23 Analyzed: 05/08/23

Boron 0.278 0.0100 mg/L 0.284 2.40 20

Matrix Spike (BGE0091-MS1)

Source: 2304616-01

Prepared: 05/03/23 Analyzed: 05/08/23

Boron 5.40 0.0100 mg/L 5.00 0.284 102 75-125

Matrix Spike Dup (BGE0091-MSD1)

Source: 2304616-01

Prepared: 05/03/23 Analyzed: 05/08/23

Boron 5.71 0.0100 mg/L 5.00 0.284 109 75-125 5.58 25

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 - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

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

Summit Scientific

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

Batch BGE0166 - General Preparation

Blank (BGE0166-BLK1)

Prepared: 05/04/23 Analyzed: 05/08/23

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

LCS (BGE0166-BS1)

Prepared: 05/04/23 Analyzed: 05/08/23

Calcium	5.83	0.0500	mg/L wet	5.00	117	70-130
Magnesium	5.64	0.0500	"	5.00	113	70-130
Sodium	5.78	0.0500	"	5.00	116	70-130

Summit Scientific

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

Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 05/09/23 11:25

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

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

Batch BGE0104 - General Preparation

Duplicate (BGE0104-DUP1)		Source: 2304643-01			Prepared & Analyzed: 05/03/23						
% Solids	93.1		%		93.2			0.0853		20	

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

Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

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

Summit Scientific

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

Batch BGE0202 - General Preparation

Blank (BGE0202-BLK1)

Prepared & Analyzed: 05/05/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGE0202-BS1)

Prepared & Analyzed: 05/05/23

Specific Conductance (EC) 0.157 0.0100 mmhos/cm 0.150 105 95-105

Duplicate (BGE0202-DUP1)

Source: 2304374-02

Prepared & Analyzed: 05/05/23

Specific Conductance (EC) 1.08 0.0100 mmhos/cm 1.08 0.0929 20

Summit Scientific

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

Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

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

Summit Scientific

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

Batch BGE0203 - General Preparation

LCS (BGE0203-BS1)

Prepared & Analyzed: 05/05/23

pH 9.08 pH Units 9.18 98.9 95-105

Duplicate (BGE0203-DUP1)

Source: 2304374-02

Prepared & Analyzed: 05/05/23

pH 7.53 pH Units 7.49 0.533 20

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

Project: Noble - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/09/23 11:25

Notes and Definitions

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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 25, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Ulrich 19-29,2,14-29

Work Order #2305018

Enclosed are the results of analyses for samples received by Summit Scientific on 05/01/23 18:10. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury

President



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

Project: Noble - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS03@2.5'	2305018-03	Soil	05/01/23 10:45	05/01/23 18:10
FS01@6'	2305018-05	Soil	05/01/23 10:52	05/01/23 18:10

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.

Send Data To:		Send Invoice To:
Client: Noble / Tasman	Project Manager: Jake Whritenour	Company: Chevron
Address: 6855 W. 119th Ave	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location: Uhrich 19-29, 1, 14-29
City/State/Zip: Broomfield, CO 80020		AFE#:
Phone: 303-261-6246	Project Name: Uhrich 19-29, 1, 14-29	PO/Billing Codes:
Sampler Name: Stanley Gilbert	Project Number:	Contact: Wade Firestien

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Other	Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil			VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	Metals - 915	HOLD		
1	SS01 @ 2.5'	5/1/23	10:36	2			X			X		X	X	X	X	X	X	X	X	X	pH, EC, SAR by saturated paste
2	SS02 @ 2.5'	↓	10:40	↓			↓					↓	↓	↓	↓	↓	↓	↓	↓	↓	
3	SS03 @ 2.5'	↓	10:45	↓			↓					↓	↓	↓	↓	↓	↓	↓	↓	↓	
4	SS04 @ 2.5'	↓	10:50	↓			↓					↓	↓	↓	↓	↓	↓	↓	↓	↓	
5	FS01 @ 6'	↓	10:52	↓			↓					↓	↓	↓	↓	↓	↓	↓	↓	↓	
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <i>[Signature]</i>	Date/Time: 5/1/23 16:00	Received by: <i>[Signature]</i>	Date/Time: 5/1/23 16:00	TAT Business Days	Field DO	Notes:
Relinquished by: <i>Tasman Wickes</i>	Date/Time: 5/2/23 18:10	Received by: <i>[Signature]</i>	Date/Time: 5/2/23 18:10	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Temperature Upon Receipt: 10.1	Corrected Temperature: 9	IR gun #:		Standard	X Field Turb.	
			HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2305018

Client: N. Weitzman Client Project ID: Uhrich 19-29, H-29

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C)

Thermometer #

	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"/>	once
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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.				

AS

Custodian Printed Name

5/1/23

Date/Time



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

Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

SS03@2.5'
2305018-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/01/23 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGE0100	05/03/23	05/04/23	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: **05/01/23 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0439	110 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0436	109 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0392	98.0 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/01/23 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0102	05/03/23	05/04/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/01/23 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.56	60.4 %		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 - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

SS03@2.5'
2305018-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/01/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGE0044	05/02/23	05/16/23	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: **05/01/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0145	43.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0178	53.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/01/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.164	0.0100	mg/L	1	BGE0244	05/08/23	05/09/23	EPA 6020B	

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

Date Sampled: **05/01/23 10:45**

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 - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

SS03@2.5'
2305018-03 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	262	0.0588	mg/L dry	1	BGE0271	05/08/23	05/11/23	EPA 6020B	
Magnesium	7.68	0.0588	"	"	"	"	"	"	
Sodium	0.678	0.0588	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/01/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0113	0.00100	units	1	BGE0367	05/11/23	05/11/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.0		%	1	BGE0157	05/04/23	05/04/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/01/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.137	0.0100	mmhos/cm	1	BGE0299	05/09/23	05/09/23	EPA 120.1	

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

Date Sampled: **05/01/23 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.09		pH Units	1	BGE0298	05/09/23	05/09/23	EPA 9045D	

Summit Scientific

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

Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

FS01@6'
2305018-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/01/23 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGE0100	05/03/23	05/04/23	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: **05/01/23 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0461	115 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0446	112 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0382	95.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/01/23 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGE0102	05/03/23	05/04/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/01/23 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	5.42	43.4 %	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 - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

FS01@6'
2305018-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/01/23 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGE0044	05/02/23	05/16/23	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: **05/01/23 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0140	41.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0179	53.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/01/23 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.199	0.0100	mg/L	1	BGE0244	05/08/23	05/08/23	EPA 6020B	

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

Date Sampled: **05/01/23 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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 - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

FS01@6'
2305018-05 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	531	0.0570	mg/L dry	1	BGE0271	05/08/23	05/11/23	EPA 6020B	
Magnesium	16.7	0.0570	"	"	"	"	"	"	
Sodium	14.6	0.0570	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/01/23 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.170	0.00100	units	1	BGE0367	05/11/23	05/11/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/01/23 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.7		%	1	BGE0157	05/04/23	05/04/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/01/23 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.203	0.0100	mmhos/cm	1	BGE0299	05/09/23	05/09/23	EPA 120.1	

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

Date Sampled: **05/01/23 10:52**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.27		pH Units	1	BGE0298	05/09/23	05/09/23	EPA 9045D	

Summit Scientific

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

Project: Noble - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGE0100 - EPA 5030 Soil MS

Blank (BGE0100-BLK1)

Prepared & Analyzed: 05/03/23

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	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0516</i>		<i>"</i>	<i>0.0400</i>		<i>129</i>	<i>50-150</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0426</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>50-150</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>50-150</i>				

LCS (BGE0100-BS1)

Prepared & Analyzed: 05/03/23

Benzene	0.105	0.0020	mg/kg	0.125		83.9	70-130				
Toluene	0.106	0.0050	"	0.125		84.7	70-130				
Ethylbenzene	0.153	0.0050	"	0.125		123	70-130				
m,p-Xylene	0.309	0.010	"	0.250		124	70-130				
o-Xylene	0.145	0.0050	"	0.125		116	70-130				
1,2,4-Trimethylbenzene	0.139	0.0050	"	0.125		111	70-130				
1,3,5-Trimethylbenzene	0.156	0.0050	"	0.125		125	70-130				
Naphthalene	0.162	0.0038	"	0.125		129	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0530</i>		<i>"</i>	<i>0.0400</i>		<i>133</i>	<i>50-150</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0424</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>50-150</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0391</i>		<i>"</i>	<i>0.0400</i>		<i>97.8</i>	<i>50-150</i>				

Matrix Spike (BGE0100-MS1)

Source: 2304649-01

Prepared & Analyzed: 05/03/23

Benzene	0.105	0.0020	mg/kg	0.125	ND	83.7	70-130				
Toluene	0.105	0.0050	"	0.125	ND	84.4	70-130				
Ethylbenzene	0.156	0.0050	"	0.125	ND	125	70-130				
m,p-Xylene	0.312	0.010	"	0.250	ND	125	70-130				
o-Xylene	0.150	0.0050	"	0.125	ND	120	70-130				
1,2,4-Trimethylbenzene	0.142	0.0050	"	0.125	ND	113	70-130				
1,3,5-Trimethylbenzene	0.157	0.0050	"	0.125	ND	126	70-130				
Naphthalene	0.155	0.0038	"	0.125	ND	124	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0526</i>		<i>"</i>	<i>0.0400</i>		<i>132</i>	<i>50-150</i>				
<i>Surrogate: Toluene-d8</i>	<i>0.0425</i>		<i>"</i>	<i>0.0400</i>		<i>106</i>	<i>50-150</i>				
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0398</i>		<i>"</i>	<i>0.0400</i>		<i>99.6</i>	<i>50-150</i>				

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

Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGE0100 - EPA 5030 Soil MS

Matrix Spike Dup (BGE0100-MSD1)	Source: 2304649-01			Prepared & Analyzed: 05/03/23						
Benzene	0.104	0.0020	mg/kg	0.125	ND	83.1	70-130	0.691	30	
Toluene	0.105	0.0050	"	0.125	ND	84.0	70-130	0.399	30	
Ethylbenzene	0.156	0.0050	"	0.125	ND	125	70-130	0.0384	30	
m,p-Xylene	0.313	0.010	"	0.250	ND	125	70-130	0.125	30	
o-Xylene	0.147	0.0050	"	0.125	ND	118	70-130	2.08	30	
1,2,4-Trimethylbenzene	0.138	0.0050	"	0.125	ND	111	70-130	2.55	30	
1,3,5-Trimethylbenzene	0.159	0.0050	"	0.125	ND	127	70-130	1.12	30	
Naphthalene	0.161	0.0038	"	0.125	ND	129	70-130	3.56	30	
Surrogate: 1,2-Dichloroethane-d4	0.0541		"	0.0400		135	50-150			
Surrogate: Toluene-d8	0.0438		"	0.0400		110	50-150			
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.6	50-150			

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Broomfield CO, 80020

Project: Noble - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGE0102 - EPA 3550A

Blank (BGE0102-BLK1)

Prepared & Analyzed: 05/03/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.5		"	12.5		99.7	30-150				

LCS (BGE0102-BS1)

Prepared & Analyzed: 05/03/23

C10-C28 (DRO)	511	50	mg/kg	500		102	70-130				
Surrogate: <i>o</i> -Terphenyl	12.6		"	12.5		101	30-150				

Matrix Spike (BGE0102-MS1)

Source: 2304649-01

Prepared & Analyzed: 05/03/23

C10-C28 (DRO)	468	50	mg/kg	500	8.66	91.8	70-130				
Surrogate: <i>o</i> -Terphenyl	10.9		"	12.5		87.0	30-150				

Matrix Spike Dup (BGE0102-MSD1)

Source: 2304649-01

Prepared & Analyzed: 05/03/23

C10-C28 (DRO)	530	50	mg/kg	500	8.66	104	70-130	12.4	20		
Surrogate: <i>o</i> -Terphenyl	11.2		"	12.5		89.6	30-150				

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Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGE0044 - EPA 5030 Soil MS

Blank (BGE0044-BLK1)

Prepared & Analyzed: 05/02/23

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0317		"	0.0333		95.2	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0317		"	0.0333		95.2	40-150			

LCS (BGE0044-BS1)

Prepared & Analyzed: 05/02/23

Acenaphthene	0.0333	0.00500	mg/kg	0.0333	100	31-137
Anthracene	0.0325	0.00500	"	0.0333	97.6	30-120
Benzo (a) anthracene	0.0306	0.00500	"	0.0333	91.7	30-120
Benzo (a) pyrene	0.0321	0.00500	"	0.0333	96.3	30-120
Benzo (b) fluoranthene	0.0338	0.00500	"	0.0333	102	30-120
Benzo (k) fluoranthene	0.0357	0.00500	"	0.0333	107	30-120
Chrysene	0.0310	0.00500	"	0.0333	92.9	30-120
Dibenz (a,h) anthracene	0.0296	0.00500	"	0.0333	88.9	30-120
Fluoranthene	0.0331	0.00500	"	0.0333	99.3	30-120
Fluorene	0.0351	0.00500	"	0.0333	105	30-120
Indeno (1,2,3-cd) pyrene	0.0253	0.00500	"	0.0333	75.8	30-120
Pyrene	0.0336	0.00500	"	0.0333	101	35-142
1-Methylnaphthalene	0.0301	0.00500	"	0.0333	90.3	35-142
2-Methylnaphthalene	0.0303	0.00500	"	0.0333	91.0	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0304		"	0.0333	91.1	40-150
<i>Surrogate: Fluoranthene-d10</i>	0.0353		"	0.0333	106	40-150

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Tasman Geosciences
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Broomfield CO, 80020

Project: Noble - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGE0044 - EPA 5030 Soil MS

Matrix Spike (BGE0044-MS1)	Source: 2304652-01			Prepared & Analyzed: 05/02/23						
Acenaphthene	0.0252	0.00500	mg/kg	0.0333	ND	75.7	31-137			
Anthracene	0.0244	0.00500	"	0.0333	ND	73.2	30-120			
Benzo (a) anthracene	0.0253	0.00500	"	0.0333	ND	75.8	30-120			
Benzo (a) pyrene	0.0257	0.00500	"	0.0333	ND	77.2	30-120			
Benzo (b) fluoranthene	0.0273	0.00500	"	0.0333	ND	81.8	30-120			
Benzo (k) fluoranthene	0.0286	0.00500	"	0.0333	ND	85.7	30-120			
Chrysene	0.0251	0.00500	"	0.0333	ND	75.2	30-120			
Dibenz (a,h) anthracene	0.0249	0.00500	"	0.0333	ND	74.6	30-120			
Fluoranthene	0.0254	0.00500	"	0.0333	ND	76.2	30-120			
Fluorene	0.0255	0.00500	"	0.0333	ND	76.4	30-120			
Indeno (1,2,3-cd) pyrene	0.0215	0.00500	"	0.0333	ND	64.4	30-120			
Pyrene	0.0271	0.00500	"	0.0333	ND	81.3	35-142			
1-Methylnaphthalene	0.0252	0.00500	"	0.0333	ND	75.7	15-130			
2-Methylnaphthalene	0.0259	0.00500	"	0.0333	ND	77.8	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0252</i>		<i>"</i>	<i>0.0333</i>		<i>75.5</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0268</i>		<i>"</i>	<i>0.0333</i>		<i>80.3</i>	<i>40-150</i>			

Matrix Spike Dup (BGE0044-MSD1)	Source: 2304652-01			Prepared & Analyzed: 05/02/23						
Acenaphthene	0.0226	0.00500	mg/kg	0.0333	ND	67.9	31-137	10.9	30	
Anthracene	0.0225	0.00500	"	0.0333	ND	67.4	30-120	8.23	30	
Benzo (a) anthracene	0.0229	0.00500	"	0.0333	ND	68.6	30-120	9.97	30	
Benzo (a) pyrene	0.0231	0.00500	"	0.0333	ND	69.3	30-120	10.8	30	
Benzo (b) fluoranthene	0.0250	0.00500	"	0.0333	ND	75.0	30-120	8.65	30	
Benzo (k) fluoranthene	0.0267	0.00500	"	0.0333	ND	80.0	30-120	6.93	30	
Chrysene	0.0229	0.00500	"	0.0333	ND	68.8	30-120	8.90	30	
Dibenz (a,h) anthracene	0.0218	0.00500	"	0.0333	ND	65.4	30-120	13.1	30	
Fluoranthene	0.0239	0.00500	"	0.0333	ND	71.8	30-120	5.93	30	
Fluorene	0.0224	0.00500	"	0.0333	ND	67.1	30-120	13.0	30	
Indeno (1,2,3-cd) pyrene	0.0191	0.00500	"	0.0333	ND	57.4	30-120	11.4	30	
Pyrene	0.0251	0.00500	"	0.0333	ND	75.3	35-142	7.72	30	
1-Methylnaphthalene	0.0224	0.00500	"	0.0333	ND	67.2	15-130	11.8	50	
2-Methylnaphthalene	0.0235	0.00500	"	0.0333	ND	70.6	15-130	9.74	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0228</i>		<i>"</i>	<i>0.0333</i>		<i>68.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0256</i>		<i>"</i>	<i>0.0333</i>		<i>76.7</i>	<i>40-150</i>			

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

Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

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

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

Batch BGE0244 - EPA 3050B

Blank (BGE0244-BLK1)

Prepared & Analyzed: 05/08/23

Boron ND 0.0100 mg/L

LCS (BGE0244-BS1)

Prepared & Analyzed: 05/08/23

Boron 4.99 0.0100 mg/L 5.00 99.7 80-120

Duplicate (BGE0244-DUP1)

Source: 2305017-01

Prepared & Analyzed: 05/08/23

Boron 0.165 0.0100 mg/L 0.182 9.82 20

Matrix Spike (BGE0244-MS1)

Source: 2305017-01

Prepared & Analyzed: 05/08/23

Boron 5.01 0.0100 mg/L 5.00 0.182 96.6 75-125

Matrix Spike Dup (BGE0244-MSD1)

Source: 2305017-01

Prepared & Analyzed: 05/08/23

Boron 5.17 0.0100 mg/L 5.00 0.182 99.8 75-125 3.22 25

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

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

Summit Scientific

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

Batch BGE0271 - General Preparation

Blank (BGE0271-BLK1)

Prepared: 05/08/23 Analyzed: 05/10/23

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

LCS (BGE0271-BS1)

Prepared: 05/08/23 Analyzed: 05/10/23

Calcium	6.40	0.0500	mg/L wet	5.00		128	70-130			
Magnesium	5.97	0.0500	"	5.00		119	70-130			
Sodium	6.24	0.0500	"	5.00		125	70-130			

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Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
 Project Manager: Jacob Whritenour

Reported:
 05/25/23 14:09

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

Summit Scientific

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

Batch BGE0157 - General Preparation

Duplicate (BGE0157-DUP1)	Source: 2305006-03			Prepared & Analyzed: 05/04/23					
% Solids	91.1	%		91.8			0.681	20	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

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

Summit Scientific

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

Batch BGE0299 - General Preparation

Blank (BGE0299-BLK1)

Prepared & Analyzed: 05/09/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGE0299-BS1)

Prepared & Analyzed: 05/09/23

Specific Conductance (EC) 0.150 0.0100 mmhos/cm 0.150 100 95-105

Duplicate (BGE0299-DUP1)

Source: 2305017-01

Prepared & Analyzed: 05/09/23

Specific Conductance (EC) 0.286 0.0100 mmhos/cm 0.294 2.72 20

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Ulhrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

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

Summit Scientific

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

Batch BGE0298 - General Preparation

LCS (BGE0298-BS1)

Prepared & Analyzed: 05/09/23

pH 9.02 pH Units 9.18 98.3 95-105

Duplicate (BGE0298-DUP1)

Source: 2305017-01

Prepared & Analyzed: 05/09/23

pH 6.80 pH Units 6.63 2.53 20

Summit Scientific

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

Project: Noble - Ulrich 19-29,2,14-29

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
05/25/23 14:09

Notes and Definitions

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