

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	0.0	0.2 - 0.5		
Sample taken? Location/Container	Yes, see below	Yes, see below		
Photo Number(s)	14	15-16		

Other observations regarding other facility or third party equipment:

Samples were taken at the base of three flares on site (Flare01 - Flare03@0.5'), as well as at the Meter House (MH01@0.5').

Summary



Was impacted soil identified?	
No	Yes - less than 10 cubic yards Yes - more than 10 cubic yards
Total number of samples field screened: 20	Total number of samples collected: 20
Highest PID Reading: 1.8	Total number of samples submitted to lab for analysis: 11
If more than 10 cubic yards of impacted soil were observed:	
Vertical extent:	Estimated spill volume:
Lateral extent:	Volume of soil removed:
Is additional investigation required?	
Was groundwater encountered during the investigation?	
No	Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils
Measured depth to groundwater:	Was remedial groundwater removal conducted? Yes No
Date Groundwater was encountered:	Commencement date of removal:
Sheen on groundwater? Yes No	Volume of groundwater removed prior to sampling:
Free product observed? Yes No	Volume of groundwater removed post sampling:
Total number of samples collected:	Total Volume of groundwater removed:
Total number of samples submitted to lab for analysis:	

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

					
Material:	Volume:	Contents:	Material:	Volume:	Contents:
Notes/Conditions:			Notes/Conditions:		

Photographic Log




Equipment ID: SS05@2.5'		Equipment Type:		Equipment ID: SS06@2.5'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log



Equipment ID: FS01@6'		Equipment Type:		Equipment ID: FS02@6'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log

					
Material:	Volume:	Contents:	Material:	Volume:	Contents:
Notes/Conditions:			Notes/Conditions:		

Photographic Log




Equipment ID: AST03@0.5'		Equipment Type:		Equipment ID: AST04@0.5'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log



Equipment ID: AST05@0.5'		Equipment Type:		Equipment ID: MH01@0.5'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log

					
Material:	Volume:	Contents:	Material:	Volume:	Contents:
Notes/Conditions:			Notes/Conditions:		

Photographic Log



Equipment ID: Flare03@0.5'		Equipment Type:		Equipment ID: SEP01-DL@4'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log



Equipment ID: SEP02-DL@4'		Equipment Type:		Equipment ID: SEP03-DL@4'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

TABLE 1
SOIL SAMPLE LOCATIONS
NOBLE ENERGY, INC. - STATE C36-99HZ

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude ¹	Longitude	PDOP
AST01@0.5'	07/19/23	0.7	No Staining	No Odor	Lab	40.2646939	-104.5057732	0.9
AST02@0.5'	07/19/23	1.0	No Staining	No Odor	Lab	40.2647549	-104.5058147	0.9
AST03@0.5'	07/19/23	1.0	No Staining	No Odor	Lab	40.2647656	-104.5057805	0.9
AST04@0.5'	07/19/23	0.5	No Staining	No Odor	Lab	40.2647951	-104.5057855	0.9
AST05@0.5'	07/19/23	0.6	No Staining	No Odor	Lab	40.2648281	-104.5058158	1.0
Flare01@0.5'	07/19/23	0.2	No Staining	No Odor	Grab	40.2651300	-104.5060473	0.9
Flare02@0.5'	07/19/23	0.5	No Staining	No Odor	Grab	40.2651087	-104.5060840	0.8
Flare03@0.5'	07/19/23	0.4	No Staining	No Odor	Grab	40.2650744	-104.5061327	0.8
FS01@6'	07/19/23	0.6	No Staining	No Odor	Lab	40.2646698	-104.5058231	1.0
FS02@6'	07/19/23	1.8	No Staining	No Odor	Lab	40.2647726	-104.5058080	1.0
MH01@0.5'	07/19/23	0.0	No Staining	No Odor	Grab	40.2649919	-104.5058747	0.8
SEP01-DL@4'	07/19/23	1.8	No Staining	No Odor	Lab	40.2650195	-104.5059866	1.2
SEP02-DL@4'	07/19/23	0.7	No Staining	No Odor	Lab	40.2650177	-104.5059914	1.0
SEP03-DL@4'	07/19/23	0.6	No Staining	No Odor	Lab	40.2650177	-104.5060078	1.0
SS01@2.5'	07/19/23	1.4	No Staining	No Odor	Lab	40.2646595	-104.5058435	0.9
SS02@2.5'	07/19/23	0.7	No Staining	No Odor	Grab	40.2647259	-104.5058847	0.9
SS03@2.5'	07/19/23	0.7	No Staining	No Odor	Grab	40.2647872	-104.5058710	1.0
SS04@2.5'	07/19/23	0.8	No Staining	No Odor	Grab	40.2648355	-104.5058487	1.2
SS05@2.5'	07/19/23	0.7	No Staining	No Odor	Grab	40.2647822	-104.5058154	1.2
SS06@2.5'	07/19/23	0.6	No Staining	No Odor	Grab	40.2647279	-104.5058360	0.9

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

TABLE 2
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - STATE C36-99HZ

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 SSL ²		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'	07/19/23	<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
AST02@0.5'	07/19/23	<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
AST03@0.5'	07/19/23	<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
AST04@0.5'	07/19/23	<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
AST05@0.5'	07/19/23	<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'	07/19/23	<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
FS02@6'	07/19/23	<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@4'	07/19/23	<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
SEP02-DL@4'	07/19/23	<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
SEP03-DL@4'	07/19/23	<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
SS01@2.5'	07/19/23	<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 SSL ²		6 - 8.3	<6	<4mmhos/cm	2
AST01@0.5'	07/19/23	7.92	0.301	0.222	<0.0100
AST02@0.5'	07/19/23	8.05	0.223	0.175	<0.0100
AST03@0.5'	07/19/23	7.88	0.248	0.210	<0.0100
AST04@0.5'	07/19/23	8.03	0.0657	0.169	<0.0100
AST05@0.5'	07/19/23	7.52	0.167	0.678	<0.0100
FS01@6'	07/19/23	8.61	0.435	0.190	<0.0100
FS02@6'	07/19/23	9.52	5.75	0.539	0.316
SEP01-DL@4'	07/19/23	8.05	0.245	0.195	<0.0100
SEP02-DL@4'	07/19/23	7.88	0.297	0.213	<0.0100
SEP03-DL@4'	07/19/23	7.86	0.633	0.288	<0.0100
SS01@2.5'	07/19/23	8.09	0.0543	0.153	<0.0100

Notes:

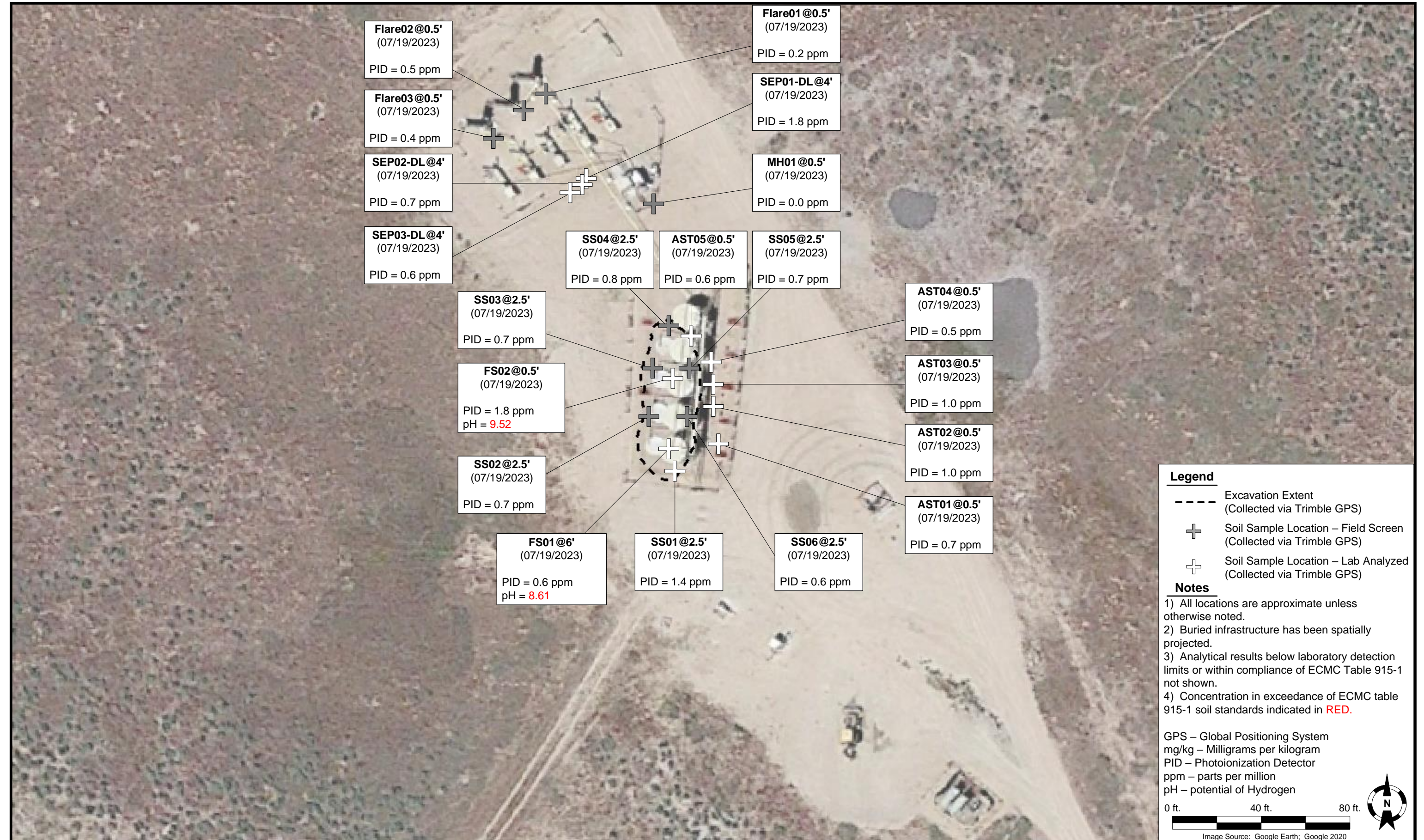
1. Compounds referenced from 2 CCR 404-1, Table 915-1, effective January 15, 2021.
2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
3. SSLs are applicable if a pathway for communication with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

Definitions:

ECMC = Energy and Carbon Management 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) = Benzo(a)anthracene
 Benzo(b) = Benzo(b)fluoranthene
 Benzo(k) = Benzo(k)fluoranthene
 Benzo(a) = Benzo(a)pyrene
 A,H = Dibenzo(a,h)anthracene
 1,2,3-CD = Indeno(1,2,3-cd)pyrene
 1-M = 1-methylnaphthalene
 2-M = 2-methylnaphthalene

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



DATE: 10/25/2023

DESIGNED BY: JW

DRAWN BY: MG



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

Noble Energy, Inc. – DJ Basin
State C36-99HZ
 SWSW, Section 36, Township 4 North, Range 64 West
 Weld County, Colorado

Tank Battery Closure & Soil
 Analytical Results Map
 (07/19/2023)

FIGURE
 1

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 01, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

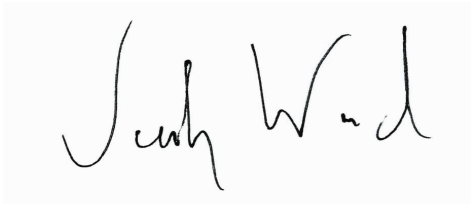
Broomfield, CO 80020

RE: Noble - State C36-99Hz

Work Order #2307363

Enclosed are the results of analyses for samples received by Summit Scientific on 07/19/23 17:56. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a long, sweeping underline.

Jacob Wood For Paul Shrewsbury

President



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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@2.5'	2307363-01	Soil	07/19/23 10:20	07/19/23 17:56
FS01@6'	2307363-07	Soil	07/19/23 10:50	07/19/23 17:56
FS02@6'	2307363-08	Soil	07/19/23 10:55	07/19/23 17:56
AST01@0.5'	2307363-09	Soil	07/19/23 11:15	07/19/23 17:56
AST02@0.5'	2307363-10	Soil	07/19/23 11:20	07/19/23 17:56
AST03@0.5'	2307363-11	Soil	07/19/23 11:25	07/19/23 17:56
AST04@0.5'	2307363-12	Soil	07/19/23 11:30	07/19/23 17:56
AST05@0.5'	2307363-13	Soil	07/19/23 11:35	07/19/23 17:56
SEP01-DL@4'	2307363-14	Soil	07/19/23 12:00	07/19/23 17:56
SEP02-DL@4'	2307363-15	Soil	07/19/23 12:05	07/19/23 17:56
SEP03-DL@4'	2307363-16	Soil	07/19/23 12:10	07/19/23 17:56

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.



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

Lab ID	Page 1 of 2
2307363.1	

Client: Noble/Tasman		Project Manager: Jake Whritenour		Company: Noble/chevron	
Address: 6855 W. 119th Ave.		E-Mail: Jwhritenour@tasman-geo.com		Project Name/Location:	
City/State/Zip: Broomfield/CO/ 80020				AFE#:	
Phone: 602-881-5716		Project Name: State C36-99H7		PO/Billing Codes:	
Sampler Name: Martin Medeiros		Project Number: UWRWE-A2593-ABN		Contact: Miguel Barron	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH		Boron - HWS
1	SS01 @ 2.5'	7/19/23	10:10	2															- Jars site name labelled 'State' SAR, EC, pH by saturated paste
2	SS02 @ 2.5'		10:25																
3	SS03 @ 2.5'		10:30																
4	SS04 @ 2.5'		10:35																
5	SS05 @ 2.5'		10:40																
6	SS06 @ 2.6'		10:45																
7	FS01 @ 6'		10:50																
8	FS02 @ 6'		10:55																
9	AST01 @ 0.5'		11:15																
10	AST02 @ 0.5'		11:20																
11	AST03 @ 0.5'		11:25																
12	AST04 @ 0.5'		11:30																
13	AST05 @ 0.5'		11:35																
14	SEP01 - DL @ 4'		12:00																
15	SEP02 - DL @ 4'		12:05																

Relinquished by: Martin Medeiros <i>Martin Medeiros</i>	Date/Time: 7/19/23 16:00	Received by: Tasman Lock Box <i>[Signature]</i>	Date/Time: 7/19/23 16:00	TAT Business Days	Field DO	Notes:
Relinquished by: Tasman Lock Box <i>Tasman Lock Box</i>	Date/Time: 7/19/23 17:50	Received by: <i>[Signature]</i>	Date/Time: 7/19/23 17:50	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 17.1	Corrected Temperature: <i>[Symbol]</i>	IR gun #: 1	HNO3 lot #:			

SUMMIT SCIENTIFIC

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

Lab ID
2307363.2
Page 2 of 2

		Send Data To:		Send Invoice To:	
Client: Noble/Tasman		Project Manager: Jake Whritenour		Company: Noble/chevron	
Address: 6855 W. 119th Ave.		E-Mail: Jwhritenour@tasman-geo.com		Project Name/Location:	
City/State/Zip: Broomfield/CO/ 80020				AFE#:	
Phone: 602-881-5716		Project Name: State C36-99HZ		PO/Billing Codes:	
Sampler Name: Martin Medeiros		Project Number:		Contact: Miguel Barron	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS	
1	SEP03-DL@41	7/19/23	12:10	2			/			/			/	/	/	/	/		SAR, EC, pH by saturated paste
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: Martin Medeiros <i>Martin Medeiros</i>	Date/Time: 7/19/23 16:00	Received by: Tasman Lock Box	Date/Time: 7/19/23 16:00	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lock Box	Date/Time: 7/19/23 17:00	Received by: <i>[Signature]</i>	Date/Time: 7/19/23 17:00	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: 17.1	Corrected Temperature: <i>e</i>	IR gun #: _____	HNO3 lot #: _____			

S₂

2/2

Sample Receipt Checklist

S2 Work Order# 2307363

Client: Noble Gasmen

Client Project ID: State C30-99H2

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"/>	on ICE
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"/>	
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

7/19/23

Date/Time

20



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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

SS01@2.5'
2307363-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/19/23 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGG0613	07/20/23	07/21/23	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: **07/19/23 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0382	95.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0360	90.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0429	107 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/19/23 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGG0616	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **07/19/23 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.6	92.5 %		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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

SS01@2.5'
2307363-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/19/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0677	07/21/23	07/23/23	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: **07/19/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0138	41.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0158	47.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/19/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGG0746	07/24/23	07/28/23	EPA 6020B	

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

Date Sampled: **07/19/23 10:20**

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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

SS01@2.5'
2307363-01 (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	10.4	0.0563	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	4.35	0.0563	"	"	"	"	"	"	
Sodium	0.827	0.0563	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/19/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0543	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/19/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.7		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/19/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.153	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/19/23 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.09		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

Summit Scientific

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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

FS01@6'
2307363-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/19/23 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGG0613	07/20/23	07/21/23	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: **07/19/23 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0365	91.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0366	91.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/19/23 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGG0616	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **07/19/23 10:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	11.8	94.4 %		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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

FS01@6'
2307363-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/19/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0677	07/21/23	07/23/23	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: **07/19/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0186	55.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0148	44.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/19/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGG0746	07/24/23	07/28/23	EPA 6020B	

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

Date Sampled: **07/19/23 10:50**

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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

FS01@6'
2307363-07 (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	18.5	0.0527	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	7.62	0.0527	"	"	"	"	"	"	
Sodium	8.81	0.0527	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/19/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.435	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/19/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.8		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/19/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.190	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/19/23 10:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.61		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

FS02@6'
2307363-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/19/23 10:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGG0613	07/20/23	07/21/23	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: **07/19/23 10:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0388	97.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0356	89.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	103 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/19/23 10:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGG0616	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **07/19/23 10:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.80	78.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

FS02@6'
2307363-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/19/23 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0677	07/21/23	07/23/23	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: **07/19/23 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0156	46.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0165	49.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/19/23 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.316	0.0100	mg/L	1	BGG0746	07/24/23	07/28/23	EPA 6020B	

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

Date Sampled: **07/19/23 10:55**

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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

FS02@6'
2307363-08 (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	36.5	0.0535	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	7.09	0.0535	"	"	"	"	"	"	
Sodium	145	0.0535	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/19/23 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	5.75	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/19/23 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.4		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/19/23 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.539	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/19/23 10:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.52		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

Summit Scientific

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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST01@0.5'
2307363-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/19/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGG0613	07/20/23	07/21/23	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: **07/19/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0371	92.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0370	92.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/19/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0616	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/19/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.80	62.4 %	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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST01@0.5'
2307363-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/19/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0677	07/21/23	07/23/23	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: **07/19/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0164	49.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0141	42.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/19/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGG0746	07/24/23	07/28/23	EPA 6020B	

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

Date Sampled: **07/19/23 11:15**

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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST01@0.5'
2307363-09 (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	16.2	0.0528	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	6.43	0.0528	"	"	"	"	"	"	
Sodium	5.65	0.0528	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/19/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.301	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/19/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.7		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/19/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.222	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/19/23 11:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.92		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

Summit Scientific

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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST02@0.5'
2307363-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/19/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGG0613	07/20/23	07/21/23	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: **07/19/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0361	90.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0351	87.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0420	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/19/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0616	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/19/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.97	63.8 %	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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST02@0.5'
2307363-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/19/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0677	07/21/23	07/24/23	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: **07/19/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0151	45.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0138	41.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/19/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGG0746	07/24/23	07/28/23	EPA 6020B	

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

Date Sampled: **07/19/23 11:20**

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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST02@0.5'
2307363-10 (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	9.52	0.0527	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	4.69	0.0527	"	"	"	"	"	"	
Sodium	3.36	0.0527	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/19/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.223	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/19/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.9		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/19/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.175	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/19/23 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.05		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST03@0.5'
2307363-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/19/23 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGG0613	07/20/23	07/21/23	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: **07/19/23 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0342	85.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0352	88.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0415	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/19/23 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0616	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/19/23 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.96	63.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST03@0.5'
2307363-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/19/23 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0677	07/21/23	07/24/23	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: **07/19/23 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0168	50.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0154	46.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/19/23 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGG0746	07/24/23	07/28/23	EPA 6020B	

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

Date Sampled: **07/19/23 11:25**

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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST03@0.5'
2307363-11 (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	9.53	0.0538	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	3.56	0.0538	"	"	"	"	"	"	
Sodium	3.54	0.0538	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/19/23 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.248	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/19/23 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.9		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/19/23 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.210	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/19/23 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.88		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

Summit Scientific

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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST04@0.5'
2307363-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/19/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGG0613	07/20/23	07/21/23	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: **07/19/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0394	98.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0359	89.7 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0425	106 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/19/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGG0616	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **07/19/23 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.87	70.9 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
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Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST04@0.5'
2307363-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/19/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0677	07/21/23	07/24/23	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: **07/19/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0134	40.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0134	40.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/19/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGG0746	07/24/23	07/28/23	EPA 6020B	

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

Date Sampled: **07/19/23 11:30**

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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST04@0.5'
2307363-12 (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	23.7	0.0535	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	6.22	0.0535	"	"	"	"	"	"	
Sodium	1.39	0.0535	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/19/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0657	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/19/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.5		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/19/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.169	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/19/23 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.03		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

Summit Scientific

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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST05@0.5'
2307363-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/19/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGG0613	07/20/23	07/21/23	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: **07/19/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0349	87.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0359	89.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/19/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0616	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/19/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.8	86.0 %	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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST05@0.5'
2307363-13 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/19/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0677	07/21/23	07/24/23	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: **07/19/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0147	44.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0174	52.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/19/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGG0746	07/24/23	07/28/23	EPA 6020B	

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

Date Sampled: **07/19/23 11:35**

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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

AST05@0.5'
2307363-13 (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	53.7	0.0521	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	9.73	0.0521	"	"	"	"	"	"	
Sodium	5.06	0.0521	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/19/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.167	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/19/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.9		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/19/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.678	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/19/23 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.52		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

SEP01-DL@4'
2307363-14 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/19/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGG0613	07/20/23	07/21/23	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: **07/19/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0344	85.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0363	90.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0415	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/19/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0616	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/19/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.4	83.2 %	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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

SEP01-DL@4'
2307363-14 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/19/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0677	07/21/23	07/24/23	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: **07/19/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0153	45.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0153	45.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/19/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGG0746	07/24/23	07/28/23	EPA 6020B	

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

Date Sampled: **07/19/23 12:00**

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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

SEP01-DL@4'
2307363-14 (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	23.0	0.0556	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	9.76	0.0556	"	"	"	"	"	"	
Sodium	5.57	0.0556	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/19/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.245	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/19/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.9		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/19/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.195	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/19/23 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.05		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

Summit Scientific

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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

SEP02-DL@4'
2307363-15 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/19/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGG0613	07/20/23	07/21/23	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: **07/19/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0386	96.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0357	89.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0422	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/19/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0616	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/19/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.85	62.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

SEP02-DL@4'
2307363-15 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/19/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0677	07/21/23	07/24/23	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: **07/19/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0157	47.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0180	54.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/19/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGG0746	07/24/23	07/28/23	EPA 6020B	

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

Date Sampled: **07/19/23 12:05**

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 - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

SEP02-DL@4'
2307363-15 (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	23.0	0.0529	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	9.67	0.0529	"	"	"	"	"	"	
Sodium	6.73	0.0529	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/19/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.297	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/19/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.6		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/19/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.213	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/19/23 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.88		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

SEP03-DL@4'
2307363-16 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/19/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGG0613	07/20/23	07/21/23	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: **07/19/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0365	91.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0357	89.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/19/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0616	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/19/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.19	65.5 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - State C36-99Hz
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Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

SEP03-DL@4'
2307363-16 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **07/19/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0677	07/21/23	07/24/23	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: **07/19/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0181	54.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0150	45.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/19/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGG0746	07/24/23	07/28/23	EPA 6020B	

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

Date Sampled: **07/19/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

SEP03-DL@4'
2307363-16 (Soil)

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	31.3	0.0529	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	7.17	0.0529	"	"	"	"	"	"	
Sodium	15.1	0.0529	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/19/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.633	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/19/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.6		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/19/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.288	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/19/23 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.86		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

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Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BGG0613 - EPA 5030 Soil MS

Blank (BGG0613-BLK1)

Prepared & Analyzed: 07/20/23

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>	0.0289		"	0.0400		72.3	50-150			
<i>Surrogate: Toluene-d8</i>	0.0356		"	0.0400		89.0	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0442		"	0.0400		110	50-150			

LCS (BGG0613-BS1)

Prepared & Analyzed: 07/20/23

Benzene	0.199	0.0020	mg/kg	0.200		99.7	70-130			
Toluene	0.206	0.0050	"	0.200		103	70-130			
Ethylbenzene	0.153	0.0050	"	0.200		76.7	70-130			
m,p-Xylene	0.362	0.010	"	0.400		90.4	70-130			
o-Xylene	0.254	0.0050	"	0.200		127	70-130			
1,2,4-Trimethylbenzene	0.157	0.0050	"	0.200		78.5	70-130			
1,3,5-Trimethylbenzene	0.164	0.0050	"	0.200		82.1	70-130			
Naphthalene	0.172	0.0038	"	0.200		86.0	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0233		"	0.0400		58.3	50-150			
<i>Surrogate: Toluene-d8</i>	0.0353		"	0.0400		88.2	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0431		"	0.0400		108	50-150			

Matrix Spike (BGG0613-MS1)

Source: 2307362-03

Prepared: 07/20/23 Analyzed: 07/21/23

Benzene	0.203	0.0020	mg/kg	0.200	ND	101	70-130			
Toluene	0.209	0.0050	"	0.200	ND	104	70-130			
Ethylbenzene	0.250	0.0050	"	0.200	ND	125	70-130			
m,p-Xylene	0.499	0.010	"	0.400	ND	125	70-130			
o-Xylene	0.243	0.0050	"	0.200	ND	121	70-130			
1,2,4-Trimethylbenzene	0.175	0.0050	"	0.200	ND	87.3	70-130			
1,3,5-Trimethylbenzene	0.172	0.0050	"	0.200	ND	86.1	70-130			
Naphthalene	0.232	0.0038	"	0.200	ND	116	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0307		"	0.0400		76.7	50-150			
<i>Surrogate: Toluene-d8</i>	0.0347		"	0.0400		86.8	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0431		"	0.0400		108	50-150			

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Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

Volatile Organic Compounds by EPA Method 8260B - Quality Control
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Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BGG0613 - EPA 5030 Soil MS

Matrix Spike Dup (BGG0613-MSD1)	Source: 2307362-03			Prepared: 07/20/23 Analyzed: 07/21/23						
Benzene	0.207	0.0020	mg/kg	0.200	ND	104	70-130	2.24	30	
Toluene	0.213	0.0050	"	0.200	ND	106	70-130	1.95	30	
Ethylbenzene	0.260	0.0050	"	0.200	ND	130	70-130	3.84	30	
m,p-Xylene	0.513	0.010	"	0.400	ND	128	70-130	2.74	30	
o-Xylene	0.246	0.0050	"	0.200	ND	123	70-130	1.30	30	
1,2,4-Trimethylbenzene	0.152	0.0050	"	0.200	ND	75.8	70-130	14.1	30	
1,3,5-Trimethylbenzene	0.150	0.0050	"	0.200	ND	75.1	70-130	13.6	30	
Naphthalene	0.244	0.0038	"	0.200	ND	122	70-130	5.16	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0295</i>		<i>"</i>	<i>0.0400</i>		<i>73.6</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0351</i>		<i>"</i>	<i>0.0400</i>		<i>87.7</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0430</i>		<i>"</i>	<i>0.0400</i>		<i>108</i>	<i>50-150</i>			

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Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGG0616 - EPA 3550A

Blank (BGG0616-BLK1)

Prepared: 07/20/23 Analyzed: 07/21/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	11.8		"	12.5		94.3	30-150			

LCS (BGG0616-BS1)

Prepared: 07/20/23 Analyzed: 07/21/23

C10-C28 (DRO)	367	50	mg/kg	500		73.4	70-130			
Surrogate: <i>o</i> -Terphenyl	8.25		"	12.5		66.0	30-150			

Matrix Spike (BGG0616-MS1)

Source: 2307362-03

Prepared: 07/20/23 Analyzed: 07/21/23

C10-C28 (DRO)	364	50	mg/kg	500	13.8	70.1	70-130			
Surrogate: <i>o</i> -Terphenyl	7.98		"	12.5		63.8	30-150			

Matrix Spike Dup (BGG0616-MSD1)

Source: 2307362-03

Prepared: 07/20/23 Analyzed: 07/21/23

C10-C28 (DRO)	414	50	mg/kg	500	13.8	80.0	70-130	12.7	20	
Surrogate: <i>o</i> -Terphenyl	11.7		"	12.5		93.2	30-150			

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Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

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

Batch BGG0677 - EPA 5030 Soil MS

Blank (BGG0677-BLK1)

Prepared: 07/21/23 Analyzed: 07/23/23

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	0.0215		"	0.0333	64.4	40-150				
Surrogate: Fluoranthene-d10	0.0161		"	0.0333	48.2	40-150				

LCS (BGG0677-BS1)

Prepared: 07/21/23 Analyzed: 07/23/23

Acenaphthene	0.0206	0.00500	mg/kg	0.0333	61.7	31-137				
Anthracene	0.0213	0.00500	"	0.0333	64.0	30-120				
Benzo (a) anthracene	0.0233	0.00500	"	0.0333	69.8	30-120				
Benzo (a) pyrene	0.0213	0.00500	"	0.0333	63.9	30-120				
Benzo (b) fluoranthene	0.0233	0.00500	"	0.0333	70.0	30-120				
Benzo (k) fluoranthene	0.0233	0.00500	"	0.0333	70.0	30-120				
Chrysene	0.0234	0.00500	"	0.0333	70.3	30-120				
Dibenz (a,h) anthracene	0.0208	0.00500	"	0.0333	62.3	30-120				
Fluoranthene	0.0211	0.00500	"	0.0333	63.3	30-120				
Fluorene	0.0206	0.00500	"	0.0333	61.8	30-120				
Indeno (1,2,3-cd) pyrene	0.0226	0.00500	"	0.0333	67.7	30-120				
Pyrene	0.0240	0.00500	"	0.0333	72.1	35-142				
1-Methylnaphthalene	0.0290	0.00500	"	0.0333	86.9	35-142				
2-Methylnaphthalene	0.0240	0.00500	"	0.0333	72.0	35-142				
Surrogate: 2-Methylnaphthalene-d10	0.0251		"	0.0333	75.3	40-150				
Surrogate: Fluoranthene-d10	0.0204		"	0.0333	61.1	40-150				

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Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

PAH by EPA Method 8270D SIM - Quality Control

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

Batch BGG0677 - EPA 5030 Soil MS

Matrix Spike (BGG0677-MS1)

Source: 2307363-01

Prepared: 07/21/23 Analyzed: 07/23/23

Acenaphthene	0.0142	0.00500	mg/kg	0.0333	ND	42.6	31-137		
Anthracene	0.0146	0.00500	"	0.0333	ND	43.8	30-120		
Benzo (a) anthracene	0.0159	0.00500	"	0.0333	ND	47.7	30-120		
Benzo (a) pyrene	0.0136	0.00500	"	0.0333	ND	40.8	30-120		
Benzo (b) fluoranthene	0.0159	0.00500	"	0.0333	ND	47.8	30-120		
Benzo (k) fluoranthene	0.0159	0.00500	"	0.0333	ND	47.6	30-120		
Chrysene	0.0161	0.00500	"	0.0333	ND	48.3	30-120		
Dibenz (a,h) anthracene	0.0141	0.00500	"	0.0333	ND	42.2	30-120		
Fluoranthene	0.0141	0.00500	"	0.0333	ND	42.2	30-120		
Fluorene	0.0143	0.00500	"	0.0333	ND	42.9	30-120		
Indeno (1,2,3-cd) pyrene	0.0153	0.00500	"	0.0333	ND	45.9	30-120		
Pyrene	0.0169	0.00500	"	0.0333	ND	50.7	35-142		
1-Methylnaphthalene	0.0208	0.00500	"	0.0333	ND	62.6	15-130		
2-Methylnaphthalene	0.0157	0.00500	"	0.0333	ND	47.0	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0194		"	0.0333		58.3	40-150		
Surrogate: Fluoranthene-d10	0.0147		"	0.0333		44.0	40-150		

Matrix Spike Dup (BGG0677-MSD1)

Source: 2307363-01

Prepared: 07/21/23 Analyzed: 07/23/23

Acenaphthene	0.0148	0.00500	mg/kg	0.0333	ND	44.5	31-137	4.26	30
Anthracene	0.0152	0.00500	"	0.0333	ND	45.6	30-120	3.93	30
Benzo (a) anthracene	0.0173	0.00500	"	0.0333	ND	51.8	30-120	8.15	30
Benzo (a) pyrene	0.0147	0.00500	"	0.0333	ND	44.1	30-120	7.73	30
Benzo (b) fluoranthene	0.0170	0.00500	"	0.0333	ND	51.0	30-120	6.42	30
Benzo (k) fluoranthene	0.0172	0.00500	"	0.0333	ND	51.5	30-120	7.80	30
Chrysene	0.0174	0.00500	"	0.0333	ND	52.1	30-120	7.58	30
Dibenz (a,h) anthracene	0.0150	0.00500	"	0.0333	ND	45.0	30-120	6.59	30
Fluoranthene	0.0144	0.00500	"	0.0333	ND	43.1	30-120	1.99	30
Fluorene	0.0150	0.00500	"	0.0333	ND	45.1	30-120	4.96	30
Indeno (1,2,3-cd) pyrene	0.0157	0.00500	"	0.0333	ND	47.1	30-120	2.54	30
Pyrene	0.0184	0.00500	"	0.0333	ND	55.1	35-142	8.36	30
1-Methylnaphthalene	0.0216	0.00500	"	0.0333	ND	64.7	15-130	3.36	50
2-Methylnaphthalene	0.0159	0.00500	"	0.0333	ND	47.6	15-130	1.36	50
Surrogate: 2-Methylnaphthalene-d10	0.0209		"	0.0333		62.8	40-150		
Surrogate: Fluoranthene-d10	0.0137		"	0.0333		41.0	40-150		

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Project: Noble - State C36-99Hz
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Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

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 BGG0746 - EPA 3050B

Blank (BGG0746-BLK1)

Prepared: 07/24/23 Analyzed: 07/28/23

Boron ND 0.0100 mg/L

LCS (BGG0746-BS1)

Prepared: 07/24/23 Analyzed: 07/28/23

Boron 5.01 0.0100 mg/L 5.00 100 80-120

Duplicate (BGG0746-DUP1)

Source: 2307360-02

Prepared: 07/24/23 Analyzed: 07/28/23

Boron ND 0.0100 mg/L ND 20

Matrix Spike (BGG0746-MS1)

Source: 2307360-02

Prepared: 07/24/23 Analyzed: 07/28/23

Boron 6.02 0.0100 mg/L 5.00 ND 120 75-125

Matrix Spike Dup (BGG0746-MSD1)

Source: 2307360-02

Prepared: 07/24/23 Analyzed: 07/28/23

Boron 5.20 0.0100 mg/L 5.00 ND 104 75-125 14.7 25

Summit Scientific

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

Project: Noble - State C36-99Hz

Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

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 BGG0623 - General Preparation

Blank (BGG0623-BLK1)

Prepared: 07/20/23 Analyzed: 07/22/23

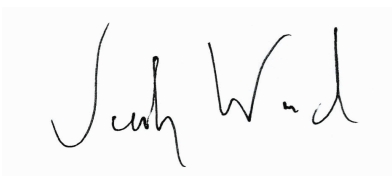
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BGG0623-BS1)

Prepared: 07/20/23 Analyzed: 07/22/23

Calcium	4.76	0.0500	mg/L wet	5.00	95.1	70-130				
Magnesium	6.05	0.0500	"	5.00	121	70-130				
Sodium	6.30	0.0500	"	5.00	126	70-130				

Summit Scientific



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

Project: Noble - State C36-99Hz

Project Number: UWRWE-A2593-ABN

Project Manager: Jacob Whritenour

Reported:
 08/01/23 09:25

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 BGG0629 - General Preparation


Duplicate (BGG0629-DUP1)

Source: 2307352-01

Prepared: 07/20/23 Analyzed: 07/21/23

% Solids	98.5		%		98.1			0.466		20	
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Summit Scientific



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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

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 BGG0663 - General Preparation

Blank (BGG0663-BLK1)

Prepared & Analyzed: 07/21/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGG0663-BS1)

Prepared & Analyzed: 07/21/23

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

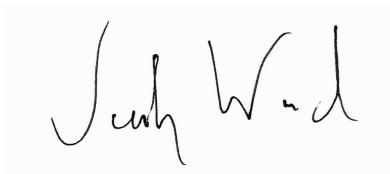
Duplicate (BGG0663-DUP1)

Source: 2307344-01

Prepared & Analyzed: 07/21/23

Specific Conductance (EC) 1.48 0.0100 mmhos/cm 1.48 0.00 20

Summit Scientific



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

Project: Noble - State C36-99Hz

Project Number: UWRWE-A2593-ABN
 Project Manager: Jacob Whritenour

Reported:
 08/01/23 09:25

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 BGG0662 - General Preparation

LCS (BGG0662-BS1)

Prepared & Analyzed: 07/21/23

pH	8.83	pH Units	9.18	96.2	95-105
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Duplicate (BGG0662-DUP1)

Source: 2307344-01

Prepared & Analyzed: 07/21/23

pH	8.19	pH Units	7.87	3.99	20
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Summit Scientific

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

Project: Noble - State C36-99Hz
Project Number: UWRWE-A2593-ABN
Project Manager: Jacob Whritenour

Reported:
08/01/23 09:25

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