

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 31, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Plus G25-07 (25-2)

Work Order #2308483

Enclosed are the results of analyses for samples received by Summit Scientific on 08/21/23 17:33. 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 - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN

Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-A@2'	2308483-01	Soil	08/21/23 09:29	08/21/23 17:33
FL01-E@4'	2308483-02	Soil	08/21/23 13:05	08/21/23 17:33
FL01-F@3'	2308483-03	Soil	08/21/23 13:24	08/21/23 17:33
FL01-G@4'	2308483-04	Soil	08/21/23 14:01	08/21/23 17:33
FL01-I@3'	2308483-05	Soil	08/21/23 14:13	08/21/23 17:33
FL01-B@4'	2308483-06	Soil	08/21/23 14:29	08/21/23 17:33

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

Lab ID	Page 1 of 1
2308483	

Client: Noble / Tasman		Project Manager: Jake Whritenour		Send Invoice To:	
Address: 6855 W. 119th Ave		E-Mail: Jwhritenour@tasman-geo.com		Company: Chevron	
City/State/Zip: Broomfield, CO 80020		Project Name: PLUS G25-07 (25-2)		Project Name/Location: PLUS G25-07 (25-2)	
Phone: 303-903-5168		Project Number:		AFE#: UWRWE-A3199-ABN	
Sampler Name: Dalton Hagen				PO/Billing Codes:	
				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	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	Metals - 915		HOLD	
1	FL01-AE2'	8/21/23	0929	3			X			X			X	X	X	X	X	X	X		pH, EC, SAR by saturated paste
2	FL01-EQ4'		1305	1																	
3	FL01-FE3'		1324	1																	
4	FL01-GP4'		1401	1																	
5	FL01-IE3'		1413	1																	
6	FL01-BE4'		1429	1																	
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: 	Date/Time: 8/21/23	Received by: Tasman Lockbox	Date/Time: 8/21/23	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lockbox	Date/Time: 8/21/23	Received by: 	Date/Time: 8/21/23	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: 9.8	Corrected Temperature: 0	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2308483

Client: Neil Fisman Client Project ID: Plus G25-07(25-2)

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"/>	or JGE
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.				

Josh
Custodian Printed Name

08/21/23
Date/Time



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

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-A@2'
2308483-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/21/23 09:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH0998	08/24/23	08/25/23	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: **08/21/23 09:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0410	103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0416	104 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0382	95.6 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/21/23 09:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH1002	08/24/23	08/24/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/21/23 09:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	14.7	118 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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2308483-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **08/21/23 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0913	08/23/23	08/23/23	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: **08/21/23 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0146	43.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0137	41.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/21/23 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0921	08/23/23	08/25/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/21/23 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-A@2'
2308483-01 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.41	0.200	mg/kg dry	1	BGH0894	08/22/23	08/28/23	EPA 6020B	
Barium	52.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	5.18	0.400	"	"	"	"	"	"	
Lead	16.0	0.200	"	"	"	"	"	"	
Nickel	2.65	0.400	"	"	"	"	"	"	
Silver	0.0226	0.0200	"	"	"	"	"	"	
Zinc	22.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/21/23 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0930	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/21/23 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	52.7	0.0534	mg/L dry	1	BGH1070	08/25/23	08/29/23	EPA 6020B	
Magnesium	6.88	0.0534	"	"	"	"	"	"	
Sodium	4.12	0.0534	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/21/23 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.142	0.00100	units	1	BGH1203	08/30/23	08/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Reported:
08/31/23 11:48

FL01-A@2'
2308483-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/21/23 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.6		%	1	BGH0926	08/23/23	08/24/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/21/23 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.263	0.0100	mmhos/cm	1	BGH1106	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/21/23 09:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.20		pH Units	1	BGH1103	08/28/23	08/28/23	EPA 9045D	

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Project: Noble - Plus G25-07 (25-2)

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Reported:
08/31/23 11:48

FL01-E@4'
2308483-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/21/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH0998	08/24/23	08/25/23	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: **08/21/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0349	87.3 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0411	103 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/21/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH1002	08/24/23	08/24/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/21/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	14.0	112 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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FL01-E@4'
2308483-02 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **08/21/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0913	08/23/23	08/23/23	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: **08/21/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0135	40.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0136	40.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/21/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0921	08/23/23	08/25/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/21/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
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FL01-E@4'
2308483-02 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.06	0.200	mg/kg dry	1	BGH0894	08/22/23	08/28/23	EPA 6020B	
Barium	31.6	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.01	0.400	"	"	"	"	"	"	
Lead	3.18	0.200	"	"	"	"	"	"	
Nickel	2.17	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	8.37	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/21/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0930	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/21/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	38.9	0.0513	mg/L dry	1	BGH1070	08/25/23	08/29/23	EPA 6020B	
Magnesium	11.1	0.0513	"	"	"	"	"	"	
Sodium	10.4	0.0513	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/21/23 13:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.379	0.00100	units	1	BGH1203	08/30/23	08/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-E@4'
2308483-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/21/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	97.5			%	1	BGH0926	08/23/23	08/24/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/21/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.119	0.0100		mmhos/cm	1	BGH1106	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/21/23 13:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	6.39			pH Units	1	BGH1103	08/28/23	08/28/23	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-F@3'
2308483-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/21/23 13:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH0998	08/24/23	08/25/23	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: **08/21/23 13:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0284	71.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0390	97.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0344	86.0 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/21/23 13:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH1002	08/24/23	08/24/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/21/23 13:24**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	13.2	106 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-F@3'
2308483-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/21/23 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0913	08/23/23	08/23/23	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: **08/21/23 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0137	41.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0142	42.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/21/23 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0921	08/23/23	08/25/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/21/23 13:24**

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 - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-F@3'
2308483-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.52	0.200	mg/kg dry	1	BGH0894	08/22/23	08/28/23	EPA 6020B	
Barium	44.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.85	0.400	"	"	"	"	"	"	
Lead	4.24	0.200	"	"	"	"	"	"	
Nickel	3.25	0.400	"	"	"	"	"	"	
Silver	0.0205	0.0200	"	"	"	"	"	"	
Zinc	11.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/21/23 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0930	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/21/23 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	55.0	0.0533	mg/L dry	1	BGH1070	08/25/23	08/29/23	EPA 6020B	
Magnesium	11.6	0.0533	"	"	"	"	"	"	
Sodium	0.483	0.0533	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/21/23 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0154	0.00100	units	1	BGH1203	08/30/23	08/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-F@3'
2308483-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/21/23 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.9		%	1	BGH0926	08/23/23	08/24/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/21/23 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.102	0.0100	mmhos/cm	1	BGH1106	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/21/23 13:24**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.26		pH Units	1	BGH1103	08/28/23	08/28/23	EPA 9045D	

Summit Scientific

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Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-G@4'
2308483-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGH0998	08/24/23	08/25/23	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: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0345	86.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0367	91.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.2	105 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Reported:
08/31/23 11:48

FL01-G@4'
2308483-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0913	08/23/23	08/23/23	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: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0148	44.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0135	40.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0345	0.0100	mg/L	1	BGH0921	08/23/23	08/25/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Broomfield CO, 80020

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-G@4'
2308483-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.44	0.200	mg/kg dry	1	BGH0894	08/22/23	08/28/23	EPA 6020B	
Barium	48.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.17	0.400	"	"	"	"	"	"	
Lead	4.05	0.200	"	"	"	"	"	"	
Nickel	2.50	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	10.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0930	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	57.2	0.0518	mg/L dry	1	BGH1070	08/25/23	08/29/23	EPA 6020B	
Magnesium	16.0	0.0518	"	"	"	"	"	"	
Sodium	3.85	0.0518	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.116	0.00100	units	1	BGH1203	08/30/23	08/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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FL01-G@4'
2308483-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	96.6		%	1	BGH0926	08/23/23	08/24/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0682	0.0100	mmhos/cm	1	BGH1106	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/21/23 14:01**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.52		pH Units	1	BGH1103	08/28/23	08/28/23	EPA 9045D	

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Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-I@3'
2308483-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/21/23 14:13**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH0998	08/24/23	08/25/23	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: **08/21/23 14:13**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0268	67.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.7 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.5 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/21/23 14:13**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/21/23 14:13**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.3	98.3 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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2308483-05 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **08/21/23 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0913	08/23/23	08/23/23	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: **08/21/23 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0193	58.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0180	54.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/21/23 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0921	08/23/23	08/25/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/21/23 14:13**

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

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6855 W. 119th Ave.
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Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-I@3'
2308483-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.34	0.200	mg/kg dry	1	BGH0894	08/22/23	08/28/23	EPA 6020B	
Barium	42.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.14	0.400	"	"	"	"	"	"	
Lead	4.27	0.200	"	"	"	"	"	"	
Nickel	2.90	0.400	"	"	"	"	"	"	
Silver	0.0200	0.0200	"	"	"	"	"	"	
Zinc	12.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/21/23 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0930	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/21/23 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	46.8	0.0522	mg/L dry	1	BGH1070	08/25/23	08/29/23	EPA 6020B	
Magnesium	8.98	0.0522	"	"	"	"	"	"	
Sodium	0.920	0.0522	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/21/23 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0323	0.00100	units	1	BGH1203	08/30/23	08/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-I@3'
2308483-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/21/23 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.8		%	1	BGH0926	08/23/23	08/24/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/21/23 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0963	0.0100	mmhos/cm	1	BGH1106	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/21/23 14:13**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.91		pH Units	1	BGH1103	08/28/23	08/28/23	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-B@4'
2308483-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/21/23 14:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH0998	08/24/23	08/25/23	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: **08/21/23 14:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0338	84.4 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.2 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/21/23 14:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH1002	08/24/23	08/25/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/21/23 14:29**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	15.5	124 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-B@4'
2308483-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/21/23 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0913	08/23/23	08/23/23	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: **08/21/23 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0195	58.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0167	50.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/21/23 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	0.0100	mg/L	1	BGH0921	08/23/23	08/25/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/21/23 14:29**

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 - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-B@4'
2308483-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.65	0.200	mg/kg dry	1	BGH0894	08/22/23	08/28/23	EPA 6020B	
Barium	41.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.10	0.400	"	"	"	"	"	"	
Lead	3.87	0.200	"	"	"	"	"	"	
Nickel	3.03	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	12.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/21/23 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0930	08/23/23	08/24/23	EPA 7196A	

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

Date Sampled: **08/21/23 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	67.6	0.0547	mg/L dry	1	BGH1070	08/25/23	08/29/23	EPA 6020B	
Magnesium	6.05	0.0547	"	"	"	"	"	"	
Sodium	0.806	0.0547	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/21/23 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0252	0.00100	units	1	BGH1203	08/30/23	08/30/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

FL01-B@4'
2308483-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/21/23 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.4		%	1	BGH0926	08/23/23	08/24/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/21/23 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.147	0.0100	mmhos/cm	1	BGH1106	08/28/23	08/28/23	EPA 120.1	

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

Date Sampled: **08/21/23 14:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.88		pH Units	1	BGH1103	08/28/23	08/28/23	EPA 9045D	

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

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

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 BGH0998 - EPA 5030 Soil MS

Blank (BGH0998-BLK1)

Prepared: 08/24/23 Analyzed: 08/25/23

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>	0.0376		"	0.0400		94.0	50-150			
<i>Surrogate: Toluene-d8</i>	0.0387		"	0.0400		96.8	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0373		"	0.0400		93.3	50-150			

LCS (BGH0998-BS1)

Prepared: 08/24/23 Analyzed: 08/25/23

Benzene	0.0948	0.0020	mg/kg	0.100		94.8	70-130			
Toluene	0.0902	0.0050	"	0.100		90.2	70-130			
Ethylbenzene	0.0914	0.0050	"	0.100		91.4	70-130			
m,p-Xylene	0.204	0.010	"	0.200		102	70-130			
o-Xylene	0.0873	0.0050	"	0.100		87.3	70-130			
1,2,4-Trimethylbenzene	0.0921	0.0050	"	0.100		92.1	70-130			
1,3,5-Trimethylbenzene	0.0958	0.0050	"	0.100		95.8	70-130			
Naphthalene	0.103	0.0038	"	0.100		103	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0490		"	0.0400		122	50-150			
<i>Surrogate: Toluene-d8</i>	0.0394		"	0.0400		98.4	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0379		"	0.0400		94.6	50-150			

Matrix Spike (BGH0998-MS1)

Source: 2308483-01

Prepared: 08/24/23 Analyzed: 08/25/23

Benzene	0.0970	0.0020	mg/kg	0.100	ND	97.0	70-130			
Toluene	0.102	0.0050	"	0.100	ND	102	70-130			
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
m,p-Xylene	0.206	0.010	"	0.200	ND	103	70-130			
o-Xylene	0.0963	0.0050	"	0.100	ND	96.3	70-130			
1,2,4-Trimethylbenzene	0.0983	0.0050	"	0.100	ND	98.3	70-130			
1,3,5-Trimethylbenzene	0.0937	0.0050	"	0.100	ND	93.7	70-130			
Naphthalene	0.0923	0.0038	"	0.100	ND	92.3	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0368		"	0.0400		92.0	50-150			
<i>Surrogate: Toluene-d8</i>	0.0391		"	0.0400		97.7	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0404		"	0.0400		101	50-150			

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

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGH0998 - EPA 5030 Soil MS

Matrix Spike Dup (BGH0998-MSD1)	Source: 2308483-01			Prepared: 08/24/23 Analyzed: 08/25/23						
Benzene	0.0998	0.0020	mg/kg	0.100	ND	99.8	70-130	2.84	30	
Toluene	0.0946	0.0050	"	0.100	ND	94.6	70-130	7.98	30	
Ethylbenzene	0.103	0.0050	"	0.100	ND	103	70-130	3.59	30	
m,p-Xylene	0.213	0.010	"	0.200	ND	106	70-130	3.27	30	
o-Xylene	0.107	0.0050	"	0.100	ND	107	70-130	10.7	30	
1,2,4-Trimethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130	3.54	30	
1,3,5-Trimethylbenzene	0.0980	0.0050	"	0.100	ND	98.0	70-130	4.48	30	
Naphthalene	0.0965	0.0038	"	0.100	ND	96.5	70-130	4.51	30	
Surrogate: 1,2-Dichloroethane-d4	0.0465		"	0.0400		116	50-150			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0370		"	0.0400		92.6	50-150			

Summit Scientific

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

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

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 BGH1002 - EPA 3550A

Blank (BGH1002-BLK1)

Prepared & Analyzed: 08/24/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.4		"	12.5		99.0	30-150				

LCS (BGH1002-BS1)

Prepared & Analyzed: 08/24/23

C10-C28 (DRO)	517	50	mg/kg	500		103	70-130				
Surrogate: <i>o</i> -Terphenyl	12.8		"	12.5		102	30-150				

Matrix Spike (BGH1002-MS1)

Source: 2308483-01

Prepared & Analyzed: 08/24/23

C10-C28 (DRO)	494	50	mg/kg	500	14.8	95.8	70-130				
Surrogate: <i>o</i> -Terphenyl	10.5		"	12.5		84.3	30-150				

Matrix Spike Dup (BGH1002-MSD1)

Source: 2308483-01

Prepared & Analyzed: 08/24/23

C10-C28 (DRO)	560	50	mg/kg	500	14.8	109	70-130	12.6	20		
Surrogate: <i>o</i> -Terphenyl	12.5		"	12.5		100	30-150				

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

Project: Noble - Plus G25-07 (25-2)
Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

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 BGH0913 - EPA 5030 Soil MS

Blank (BGH0913-BLK1)

Prepared & Analyzed: 08/23/23

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0227		"	0.0333		68.0	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0249		"	0.0333		74.8	40-150			

LCS (BGH0913-BS1)

Prepared & Analyzed: 08/23/23

Acenaphthene	0.0337	0.00500	mg/kg	0.0333		101	31-137			
Anthracene	0.0301	0.00500	"	0.0333		90.3	30-120			
Benzo (a) anthracene	0.0297	0.00500	"	0.0333		89.0	30-120			
Benzo (a) pyrene	0.0275	0.00500	"	0.0333		82.5	30-120			
Benzo (b) fluoranthene	0.0300	0.00500	"	0.0333		89.9	30-120			
Benzo (k) fluoranthene	0.0301	0.00500	"	0.0333		90.4	30-120			
Chrysene	0.0313	0.00500	"	0.0333		94.0	30-120			
Dibenz (a,h) anthracene	0.0333	0.00500	"	0.0333		99.8	30-120			
Fluoranthene	0.0298	0.00500	"	0.0333		89.5	30-120			
Fluorene	0.0341	0.00500	"	0.0333		102	30-120			
Indeno (1,2,3-cd) pyrene	0.0264	0.00500	"	0.0333		79.2	30-120			
Pyrene	0.0353	0.00500	"	0.0333		106	35-142			
1-Methylnaphthalene	0.0315	0.00500	"	0.0333		94.4	35-142			
2-Methylnaphthalene	0.0311	0.00500	"	0.0333		93.2	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0310		"	0.0333		93.0	40-150			
<i>Surrogate: Fluoranthene-d10</i>	0.0300		"	0.0333		90.1	40-150			

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Broomfield CO, 80020

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

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 BGH0913 - EPA 5030 Soil MS

Matrix Spike (BGH0913-MS1)

Source: 2308483-01

Prepared & Analyzed: 08/23/23

Acenaphthene	0.0205	0.00500	mg/kg	0.0333	ND	61.5	31-137			
Anthracene	0.0194	0.00500	"	0.0333	ND	58.1	30-120			
Benzo (a) anthracene	0.0195	0.00500	"	0.0333	ND	58.6	30-120			
Benzo (a) pyrene	0.0166	0.00500	"	0.0333	ND	49.9	30-120			
Benzo (b) fluoranthene	0.0175	0.00500	"	0.0333	ND	52.6	30-120			
Benzo (k) fluoranthene	0.0182	0.00500	"	0.0333	ND	54.6	30-120			
Chrysene	0.0203	0.00500	"	0.0333	ND	60.9	30-120			
Dibenz (a,h) anthracene	0.0200	0.00500	"	0.0333	ND	59.9	30-120			
Fluoranthene	0.0195	0.00500	"	0.0333	ND	58.5	30-120			
Fluorene	0.0217	0.00500	"	0.0333	ND	65.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0260	0.00500	"	0.0333	ND	78.1	30-120			
Pyrene	0.0231	0.00500	"	0.0333	ND	69.3	35-142			
1-Methylnaphthalene	0.0209	0.00500	"	0.0333	ND	62.6	15-130			
2-Methylnaphthalene	0.0194	0.00500	"	0.0333	ND	58.1	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0178		"	0.0333		53.5	40-150			
Surrogate: Fluoranthene-d10	0.0171		"	0.0333		51.3	40-150			

Matrix Spike Dup (BGH0913-MSD1)

Source: 2308483-01

Prepared & Analyzed: 08/23/23

Acenaphthene	0.0170	0.00500	mg/kg	0.0333	ND	51.1	31-137	18.5	30
Anthracene	0.0180	0.00500	"	0.0333	ND	54.0	30-120	7.36	30
Benzo (a) anthracene	0.0181	0.00500	"	0.0333	ND	54.4	30-120	7.46	30
Benzo (a) pyrene	0.0160	0.00500	"	0.0333	ND	47.9	30-120	4.16	30
Benzo (b) fluoranthene	0.0165	0.00500	"	0.0333	ND	49.5	30-120	6.06	30
Benzo (k) fluoranthene	0.0167	0.00500	"	0.0333	ND	50.0	30-120	8.68	30
Chrysene	0.0188	0.00500	"	0.0333	ND	56.3	30-120	7.86	30
Dibenz (a,h) anthracene	0.0186	0.00500	"	0.0333	ND	55.9	30-120	6.94	30
Fluoranthene	0.0183	0.00500	"	0.0333	ND	54.9	30-120	6.40	30
Fluorene	0.0179	0.00500	"	0.0333	ND	53.7	30-120	19.0	30
Indeno (1,2,3-cd) pyrene	0.0265	0.00500	"	0.0333	ND	79.4	30-120	1.69	30
Pyrene	0.0204	0.00500	"	0.0333	ND	61.3	35-142	12.2	30
1-Methylnaphthalene	0.0199	0.00500	"	0.0333	ND	59.7	15-130	4.78	50
2-Methylnaphthalene	0.0189	0.00500	"	0.0333	ND	56.6	15-130	2.61	50
Surrogate: 2-Methylnaphthalene-d10	0.0167		"	0.0333		50.1	40-150		
Surrogate: Fluoranthene-d10	0.0162		"	0.0333		48.5	40-150		

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

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

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 BGH0921 - EPA 3050B

Blank (BGH0921-BLK1)

Prepared: 08/23/23 Analyzed: 08/24/23

Boron ND 0.0100 mg/L

LCS (BGH0921-BS1)

Prepared: 08/23/23 Analyzed: 08/24/23

Boron 4.33 0.0100 mg/L 5.00 86.6 80-120

Duplicate (BGH0921-DUP1)

Source: 2308482-01

Prepared: 08/23/23 Analyzed: 08/24/23

Boron ND 0.0100 mg/L ND 20

Matrix Spike (BGH0921-MS1)

Source: 2308482-01

Prepared: 08/23/23 Analyzed: 08/24/23

Boron 4.60 0.0100 mg/L 5.00 ND 91.9 75-125

Matrix Spike Dup (BGH0921-MSD1)

Source: 2308482-01

Prepared: 08/23/23 Analyzed: 08/24/23

Boron 4.65 0.0100 mg/L 5.00 ND 93.0 75-125 1.21 25

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

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGH0894 - EPA 3050B

Blank (BGH0894-BLK1)

Prepared: 08/22/23 Analyzed: 08/28/23

Arsenic	ND	0.200	mg/kg wet						
Barium	ND	0.400	"						
Cadmium	ND	0.200	"						
Copper	ND	0.400	"						
Lead	ND	0.200	"						
Nickel	ND	0.400	"						
Silver	ND	0.0200	"						
Zinc	ND	0.400	"						
Selenium	ND	0.260	"						

LCS (BGH0894-BS1)

Prepared: 08/22/23 Analyzed: 08/28/23

Arsenic	43.1	0.200	mg/kg wet	40.0		108	80-120
Barium	41.3	0.400	"	40.0		103	80-120
Cadmium	1.97	0.200	"	2.00		98.7	80-120
Copper	39.5	0.400	"	40.0		98.6	80-120
Lead	19.9	0.200	"	20.0		99.5	80-120
Nickel	38.7	0.400	"	40.0		96.8	80-120
Silver	1.97	0.0200	"	2.00		98.4	80-120
Zinc	39.7	0.400	"	40.0		99.3	80-120

Duplicate (BGH0894-DUP1)

Source: 2308478-01

Prepared: 08/22/23 Analyzed: 08/28/23

Arsenic	2.68	0.200	mg/kg dry	2.24		18.0	20
Barium	59.6	0.400	"	51.2		15.2	20
Cadmium	0.310	0.200	"	0.278		11.0	20
Copper	6.88	0.400	"	6.10		12.1	20
Lead	11.9	0.200	"	10.5		13.0	20
Nickel	3.55	0.400	"	3.04		15.6	20
Silver	0.0950	0.0200	"	0.0859		10.1	20
Zinc	24.8	0.400	"	22.8		8.15	20
Selenium	ND	0.260	"	ND			200

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

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGH0894 - EPA 3050B

Matrix Spike (BGH0894-MS1)

Source: 2308478-01

Prepared: 08/22/23 Analyzed: 08/28/23

Arsenic	50.6	0.200	mg/kg dry	43.6	2.24	111	75-125				
Barium	110	0.400	"	43.6	51.2	135	75-125				QM-07
Cadmium	2.69	0.200	"	2.18	0.278	111	75-125				
Copper	40.9	0.400	"	43.6	6.10	79.8	75-125				
Lead	37.7	0.200	"	21.8	10.5	125	75-125				
Nickel	35.7	0.400	"	43.6	3.04	74.9	75-125				QM-07
Silver	2.34	0.0200	"	2.18	0.0859	104	75-125				
Zinc	61.7	0.400	"	43.6	22.8	89.2	75-125				

Matrix Spike Dup (BGH0894-MSD1)

Source: 2308478-01

Prepared: 08/22/23 Analyzed: 08/28/23

Arsenic	43.7	0.200	mg/kg dry	43.6	2.24	95.2	75-125	14.6	25		
Barium	98.9	0.400	"	43.6	51.2	110	75-125	10.7	25		
Cadmium	2.34	0.200	"	2.18	0.278	94.4	75-125	14.0	25		
Copper	36.4	0.400	"	43.6	6.10	69.4	75-125	11.7	25		QM-07
Lead	32.3	0.200	"	21.8	10.5	100	75-125	15.3	25		
Nickel	32.3	0.400	"	43.6	3.04	67.2	75-125	9.90	25		QM-07
Silver	2.06	0.0200	"	2.18	0.0859	90.5	75-125	12.9	25		
Zinc	55.3	0.400	"	43.6	22.8	74.5	75-125	10.9	25		QM-07

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Broomfield CO, 80020

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BGH0930 - 3060A Mod

Blank (BGH0930-BLK1)

Prepared: 08/23/23 Analyzed: 08/24/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGH0930-BS1)

Prepared: 08/23/23 Analyzed: 08/24/23

Chromium, Hexavalent 26.6 0.30 mg/kg wet 25.0 106 80-120

Duplicate (BGH0930-DUP1)

Source: 2308475-01

Prepared: 08/23/23 Analyzed: 08/24/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGH0930-MS1)

Source: 2308475-01

Prepared: 08/23/23 Analyzed: 08/24/23

Chromium, Hexavalent 25.6 0.30 mg/kg dry 28.1 ND 91.2 75-125

Matrix Spike Dup (BGH0930-MSD1)

Source: 2308475-01

Prepared: 08/23/23 Analyzed: 08/24/23

Chromium, Hexavalent 25.5 0.30 mg/kg dry 28.1 ND 91.0 75-125 0.220 20

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

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 BGH1070 - General Preparation

Blank (BGH1070-BLK1)

Prepared: 08/25/23 Analyzed: 08/29/23

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

LCS (BGH1070-BS1)

Prepared: 08/25/23 Analyzed: 08/29/23

Calcium	5.49	0.0500	mg/L wet	5.00	110	70-130				
Magnesium	5.42	0.0500	"	5.00	108	70-130				
Sodium	5.34	0.0500	"	5.00	107	70-130				

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

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

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

Summit Scientific

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

Batch BGH0926 - General Preparation


Duplicate (BGH0926-DUP1)

Source: 2308482-01

Prepared: 08/23/23 Analyzed: 08/24/23

% Solids	92.7		%		92.0			0.665	20	
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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

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 BGH1106 - General Preparation

Blank (BGH1106-BLK1)

Prepared & Analyzed: 08/28/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGH1106-BS1)

Prepared & Analyzed: 08/28/23

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 103 95-105

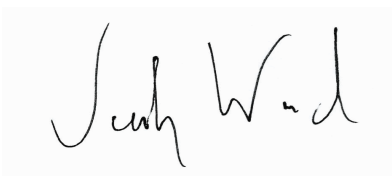
Duplicate (BGH1106-DUP1)

Source: 2308478-01

Prepared & Analyzed: 08/28/23

Specific Conductance (EC) 0.639 0.0100 mmhos/cm 0.639 0.00 20

Summit Scientific



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

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN
Project Manager: Jacob Whritenour

Reported:
08/31/23 11:48

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 BGH1103 - General Preparation

LCS (BGH1103-BS1)

Prepared & Analyzed: 08/28/23

pH 9.16 pH Units 9.18 99.8 95-105

Duplicate (BGH1103-DUP1)

Source: 2308478-01

Prepared & Analyzed: 08/28/23

pH 7.63 pH Units 7.63 0.00 20

Summit Scientific

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

Project: Noble - Plus G25-07 (25-2)

Project Number: UWRWE-A3199-ABN

Project Manager: Jacob Whritenour

Reported:

08/31/23 11:48

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference