

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 07, 2025

AJ Engelhardt

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - UPRC-64N66W 35SESW

Work Order #2410519

Enclosed are the results of analyses for samples received by Summit Scientific on 10/28/24 17:56. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Natalie Tessier For Paul Shrewsbury
President



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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@0-6"	2410519-01	Soil	10/28/24 09:03	10/28/24 17:56
AST02@0-6"	2410519-02	Soil	10/28/24 09:06	10/28/24 17:56
SEP01-DL@3'	2410519-03	Soil	10/28/24 11:30	10/28/24 17:56
SEP01-FL@3'	2410519-04	Soil	10/28/24 11:31	10/28/24 17:56
PWV01-B@4'	2410519-05	Soil	10/28/24 11:10	10/28/24 17:56
PWV01-N@3'	2410519-06	Soil	10/28/24 11:02	10/28/24 17:56

Case Narrative

This project has been renamed per client request on 2/7/25.

This is a revision of the report originally sent on 11/11/24 at 08:10 MT.



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

Lab ID	Page 1 of 1
2410519	

Client: Chevron/Tasman	Project Manager: AJ Engelhardt	Company: Chevron
Address: 6855 W. 119th Avenue	E-Mail: tas-chevron-3@tasman-geo.com	Project Name/Location: UPRC 64N66W 35SESW
City/State/Zip: Broomfield, CO 80020		AFE#:
Phone: 978-857-4408	Project Name: UPRC 64N66W 35SESW	PO/Billing Codes:
Sampler Name: Matthew Wartzel	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	915-VOC	915-PAH	915-TPH	pH, EC, SAR	Boron		915-Metals
1	AST01 @ 0-6"	10-28-24	0903	2			X			X			X	X	X	X	X	X	
2	AST02 @ 0-6"		0906																
3	SEPO1-DL @ 3'		1130																
4	SEPO1-FL @ 3'		1131																
5	PWVO1-B @ 4'		1110																
6	PWVO1-N @ 3'		1102																
7	PWVO1-E @ 3'		1104																X
8	PWVO1-S @ 3'		1106																X
9	PWVO1-W @ 3'		1108																X
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: <i>AD</i>	Date/Time: 10-28-24 1545	Received by: Tasman Lockbox	Date/Time: 10-28-24 1545	TAT Business Days	Field DO	Notes:
Relinquished by: Tasman Lockbox	Date/Time: 10-28-24 1750	Received by: <i>[Signature]</i>	Date/Time: 10-28-24 1750	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 6-1	Corrected Temperature: 0	IR gun #:	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2410519

Client: Chertron/Asman Client Project ID: UPRR 64N (new) 35 SESW

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

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

Temp (°C) cel Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>OMD NE</u>
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

10/28/24
Date/Time



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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

AST01@0-6"
2410519-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 09:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHJ1347	10/30/24	11/01/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **10/28/24 09:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0470	118 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0416	104 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0423	106 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/28/24 09:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHJ1350	10/30/24	11/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **10/28/24 09:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.35	74.8 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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2410519-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **10/28/24 09:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ1332	10/30/24	10/30/24	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: **10/28/24 09:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0174	52.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0163	48.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/28/24 09:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHK0153	11/04/24	11/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/28/24 09:03**

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

AST01@0-6"
2410519-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.13	0.200	mg/kg dry	1	BHK0327	11/07/24	11/08/24	EPA 6020B
Barium	33.4	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.78	0.400	"	"	"	"	"	"
Lead	3.21	0.200	"	"	"	"	"	"
Nickel	2.73	0.400	"	"	"	"	"	"
Silver	0.0200	0.0200	"	"	"	"	"	"
Zinc	21.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/28/24 09:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHK0373	11/07/24	11/08/24	EPA 7196A	

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

Date Sampled: **10/28/24 09:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	29.9	0.0500	mg/L dry	1	BHK0076	11/02/24	11/05/24	EPA 6020B	
Magnesium	10.6	0.0500	"	"	"	"	"	"	
Sodium	9.63	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/28/24 09:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.385	0.00100	units	1	BHK0272	11/06/24	11/06/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project Number: [none]
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Reported:
02/07/25 10:42

AST01@0-6"
2410519-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/28/24 09:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	94.7			%	1	BHK0024	11/01/24	11/01/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/28/24 09:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.141	0.0100		mmhos/cm	1	BHK0077	11/02/24	11/05/24	EPA 120.1	

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

Date Sampled: **10/28/24 09:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.51			pH Units	1	BHK0078	11/02/24	11/05/24	EPA 9045D	

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Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
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Reported:
02/07/25 10:42

AST02@0-6"
2410519-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 09:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ1347	10/30/24	11/01/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/28/24 09:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0402	100 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0398	99.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/28/24 09:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ1350	10/30/24	11/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/28/24 09:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.62	60.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

AST02@0-6"
2410519-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/28/24 09:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ1332	10/30/24	10/31/24	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: **10/28/24 09:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0157	47.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0134	40.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/28/24 09:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHK0153	11/04/24	11/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/28/24 09:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

AST02@0-6"
2410519-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.25	0.200	mg/kg dry	1	BHK0327	11/07/24	11/08/24	EPA 6020B	
Barium	35.0	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.46	0.400	"	"	"	"	"	"	
Lead	4.02	0.200	"	"	"	"	"	"	
Nickel	2.59	0.400	"	"	"	"	"	"	
Silver	0.0214	0.0200	"	"	"	"	"	"	
Zinc	11.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/28/24 09:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHK0373	11/07/24	11/08/24	EPA 7196A	

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

Date Sampled: **10/28/24 09:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	59.0	0.0500	mg/L dry	1	BHK0076	11/02/24	11/05/24	EPA 6020B	
Magnesium	26.7	0.0500	"	"	"	"	"	"	
Sodium	0.904	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/28/24 09:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0245	0.00100	units	1	BHK0272	11/06/24	11/06/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

AST02@0-6"
2410519-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/28/24 09:06**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	91.5			%	1	BHK0024	11/01/24	11/01/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/28/24 09:06**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.0641	0.0100		mmhos/cm	1	BHK0077	11/02/24	11/05/24	EPA 120.1	

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

Date Sampled: **10/28/24 09:06**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	6.17			pH Units	1	BHK0078	11/02/24	11/05/24	EPA 9045D	

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Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

SEP01-DL@3'
2410519-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHJ1347	10/30/24	11/01/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0404	101 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0399	99.7 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0395	98.8 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHJ1350	10/30/24	11/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.61	68.9 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

SEP01-DL@3'
2410519-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ1332	10/30/24	10/31/24	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: **10/28/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0197	59.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0204	61.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHK0153	11/04/24	11/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/28/24 11:30**

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 - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

SEP01-DL@3'
2410519-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.39	0.200	mg/kg dry	1	BHK0327	11/07/24	11/08/24	EPA 6020B	
Barium	44.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.32	0.400	"	"	"	"	"	"	
Lead	5.94	0.200	"	"	"	"	"	"	
Nickel	3.07	0.400	"	"	"	"	"	"	
Silver	0.0224	0.0200	"	"	"	"	"	"	
Zinc	14.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHK0373	11/07/24	11/08/24	EPA 7196A	

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

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	58.6	0.0500	mg/L dry	1	BHK0076	11/02/24	11/05/24	EPA 6020B	
Magnesium	27.6	0.0500	"	"	"	"	"	"	
Sodium	3.11	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0839	0.00100	units	1	BHK0272	11/06/24	11/06/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

SEP01-DL@3'
2410519-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	92.7			%	1	BHK0024	11/01/24	11/01/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.0222	0.0100		mmhos/cm	1	BHK0077	11/02/24	11/05/24	EPA 120.1	

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

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	6.11			pH Units	1	BHK0078	11/02/24	11/05/24	EPA 9045D	

Summit Scientific

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

SEP01-FL@3'
2410519-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHJ1347	10/30/24	11/01/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0447	112 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0417	104 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	104 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHJ1350	10/30/24	11/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.17	65.4 %		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 - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

SEP01-FL@3'
2410519-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ1332	10/30/24	10/31/24	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: **10/28/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0193	57.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0206	61.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHK0153	11/04/24	11/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/28/24 11:31**

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 - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

SEP01-FL@3'
2410519-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.46	0.200	mg/kg dry	1	BHK0327	11/07/24	11/08/24	EPA 6020B	
Barium	45.4	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.15	0.400	"	"	"	"	"	"	
Lead	5.08	0.200	"	"	"	"	"	"	
Nickel	3.08	0.400	"	"	"	"	"	"	
Silver	0.0233	0.0200	"	"	"	"	"	"	
Zinc	14.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHK0373	11/07/24	11/08/24	EPA 7196A	

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

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	50.3	0.0500	mg/L dry	1	BHK0076	11/02/24	11/05/24	EPA 6020B	
Magnesium	30.1	0.0500	"	"	"	"	"	"	
Sodium	1.26	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0347	0.00100	units	1	BHK0272	11/06/24	11/06/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

SEP01-FL@3'
2410519-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.5		%	1	BHK0024	11/01/24	11/01/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0898	0.0100	mmhos/cm	1	BHK0077	11/02/24	11/05/24	EPA 120.1	

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

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.21		pH Units	1	BHK0078	11/02/24	11/05/24	EPA 9045D	

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

PWV01-B@4'
2410519-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ1347	10/30/24	11/01/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/28/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0431	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0390	97.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/28/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ1350	10/30/24	11/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/28/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.13	65.1 %	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 - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

PWV01-B@4'
2410519-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/28/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ1332	10/30/24	10/31/24	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: **10/28/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0167	50.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0185	55.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/28/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHK0153	11/04/24	11/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/28/24 11:10**

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 - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

PWV01-B@4'
2410519-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.935	0.200	mg/kg dry	1	BHK0327	11/07/24	11/08/24	EPA 6020B	
Barium	29.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.94	0.400	"	"	"	"	"	"	
Lead	2.85	0.200	"	"	"	"	"	"	
Nickel	2.09	0.400	"	"	"	"	"	"	
Silver	0.0203	0.0200	"	"	"	"	"	"	
Zinc	9.22	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/28/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHK0373	11/07/24	11/08/24	EPA 7196A	

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

Date Sampled: **10/28/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	32.0	0.0500	mg/L dry	1	BHK0076	11/02/24	11/05/24	EPA 6020B	
Magnesium	15.6	0.0500	"	"	"	"	"	"	
Sodium	34.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/28/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.24	0.00100	units	1	BHK0272	11/06/24	11/06/24	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 - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

PWV01-B@4'
2410519-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/28/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.6		%	1	BHK0024	11/01/24	11/01/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/28/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.308	0.0100	mmhos/cm	1	BHK0077	11/02/24	11/05/24	EPA 120.1	

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

Date Sampled: **10/28/24 11:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.31		pH Units	1	BHK0078	11/02/24	11/05/24	EPA 9045D	

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

PWV01-N@3'
2410519-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 11:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHJ1347	10/30/24	11/01/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **10/28/24 11:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0428	107 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0426	106 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0396	99.1 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/28/24 11:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHJ1350	10/30/24	11/01/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **10/28/24 11:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	7.31	58.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

PWV01-N@3'
2410519-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/28/24 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ1332	10/30/24	10/31/24	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: **10/28/24 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0173	51.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0190	57.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/28/24 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHK0153	11/04/24	11/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/28/24 11:02**

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 - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

PWV01-N@3'
2410519-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.09	0.200	mg/kg dry	1	BHK0327	11/07/24	11/08/24	EPA 6020B	
Barium	47.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.62	0.400	"	"	"	"	"	"	
Lead	5.10	0.200	"	"	"	"	"	"	
Nickel	2.73	0.400	"	"	"	"	"	"	
Silver	0.0214	0.0200	"	"	"	"	"	"	
Zinc	11.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/28/24 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHK0373	11/07/24	11/08/24	EPA 7196A	

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

Date Sampled: **10/28/24 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	39.9	0.0500	mg/L dry	1	BHK0076	11/02/24	11/05/24	EPA 6020B	
Magnesium	15.1	0.0500	"	"	"	"	"	"	
Sodium	278	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/28/24 11:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.51	0.00100	units	1	BHK0272	11/06/24	11/06/24	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 - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

PWV01-N@3'
2410519-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/28/24 11:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	90.6			%	1	BHK0024	11/01/24	11/01/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/28/24 11:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.227	0.0100		mmhos/cm	1	BHK0077	11/02/24	11/05/24	EPA 120.1	

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

Date Sampled: **10/28/24 11:02**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.90			pH Units	1	BHK0078	11/02/24	11/05/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
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Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

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 BHJ1347 - EPA 5030 Soil MS

Blank (BHJ1347-BLK1)

Prepared: 10/30/24 Analyzed: 11/01/24

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
1,2,4-Trimethylbenzene	ND	0.0050	"								
1,3,5-Trimethylbenzene	ND	0.0050	"								
Naphthalene	ND	0.0038	"								
Gasoline Range Hydrocarbons	ND	0.50	"								
Surrogate: 1,2-Dichloroethane-d4	0.0402		"	0.0400		100	50-150				
Surrogate: Toluene-d8	0.0434		"	0.0400		109	50-150				
Surrogate: 4-Bromofluorobenzene	0.0385		"	0.0400		96.2	50-150				

LCS (BHJ1347-BS1)

Prepared: 10/30/24 Analyzed: 11/01/24

Benzene	0.102	0.0020	mg/kg	0.100		102	70-130				
Toluene	0.0974	0.0050	"	0.100		97.4	70-130				
Ethylbenzene	0.0896	0.0050	"	0.100		89.6	70-130				
m,p-Xylene	0.186	0.010	"	0.200		92.9	70-130				
o-Xylene	0.0934	0.0050	"	0.100		93.4	70-130				
1,2,4-Trimethylbenzene	0.0864	0.0050	"	0.100		86.4	70-130				
1,3,5-Trimethylbenzene	0.0870	0.0050	"	0.100		87.0	70-130				
Naphthalene	0.0892	0.0038	"	0.100		89.2	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0409		"	0.0400		102	50-150				
Surrogate: Toluene-d8	0.0421		"	0.0400		105	50-150				
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.4	50-150				

Matrix Spike (BHJ1347-MS1)

Source: 2410514-01

Prepared: 10/30/24 Analyzed: 11/01/24

Benzene	0.0784	0.0020	mg/kg	0.100	ND	78.4	70-130				
Toluene	0.0746	0.0050	"	0.100	ND	74.6	70-130				
Ethylbenzene	0.0631	0.0050	"	0.100	ND	63.1	70-130				QM-05
m,p-Xylene	0.146	0.010	"	0.200	ND	73.0	70-130				
o-Xylene	0.0783	0.0050	"	0.100	ND	78.3	70-130				
1,2,4-Trimethylbenzene	0.0592	0.0050	"	0.100	ND	59.2	70-130				QM-05
1,3,5-Trimethylbenzene	0.0642	0.0050	"	0.100	ND	64.2	70-130				QM-05
Naphthalene	0.0540	0.0038	"	0.100	ND	54.0	70-130				QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0441		"	0.0400		110	50-150				
Surrogate: Toluene-d8	0.0407		"	0.0400		102	50-150				
Surrogate: 4-Bromofluorobenzene	0.0422		"	0.0400		105	50-150				

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

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 BHJ1347 - EPA 5030 Soil MS

Matrix Spike Dup (BHJ1347-MSD1)	Source: 2410514-01			Prepared: 10/30/24 Analyzed: 11/01/24						
Benzene	0.0742	0.0020	mg/kg	0.100	ND	74.2	70-130	5.51	30	
Toluene	0.0698	0.0050	"	0.100	ND	69.8	70-130	6.69	30	QM-05
Ethylbenzene	0.0582	0.0050	"	0.100	ND	58.2	70-130	7.96	30	QM-05
m,p-Xylene	0.132	0.010	"	0.200	ND	65.8	70-130	10.4	30	QM-05
o-Xylene	0.0733	0.0050	"	0.100	ND	73.3	70-130	6.69	30	
1,2,4-Trimethylbenzene	0.0528	0.0050	"	0.100	ND	52.8	70-130	11.4	30	QM-05
1,3,5-Trimethylbenzene	0.0600	0.0050	"	0.100	ND	60.0	70-130	6.67	30	QM-05
Naphthalene	0.0569	0.0038	"	0.100	ND	56.9	70-130	5.36	30	QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0424		"	0.0400		106	50-150			
Surrogate: Toluene-d8	0.0420		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.6	50-150			

Summit Scientific

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

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 BHJ1350 - EPA 3550A

Blank (BHJ1350-BLK1)

Prepared: 10/30/24 Analyzed: 10/31/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	11.5		"	12.5		92.0	30-150				

LCS (BHJ1350-BS1)

Prepared: 10/30/24 Analyzed: 10/31/24

C10-C28 (DRO)	421	50	mg/kg	500		84.2	70-130				
Surrogate: <i>o</i> -Terphenyl	11.5		"	12.5		92.0	30-150				

Matrix Spike (BHJ1350-MS1)

Source: 2410514-01

Prepared: 10/30/24 Analyzed: 11/01/24

C10-C28 (DRO)	434	50	mg/kg	500	ND	86.9	70-130				
Surrogate: <i>o</i> -Terphenyl	6.51		"	12.5		52.1	30-150				

Matrix Spike Dup (BHJ1350-MSD1)

Source: 2410514-01

Prepared: 10/30/24 Analyzed: 11/01/24

C10-C28 (DRO)	433	50	mg/kg	500	ND	86.6	70-130	0.333	20		
Surrogate: <i>o</i> -Terphenyl	7.32		"	12.5		58.5	30-150				

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

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 BHJ1332 - EPA 5030 Soil MS

Blank (BHJ1332-BLK1)

Prepared & Analyzed: 10/30/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0218</i>		"	<i>0.0333</i>		<i>65.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0234</i>		"	<i>0.0333</i>		<i>70.1</i>	<i>40-150</i>			

LCS (BHJ1332-BS1)

Prepared & Analyzed: 10/30/24

Acenaphthene	0.0195	0.00500	mg/kg	0.0333		58.6	31-137			
Anthracene	0.0194	0.00500	"	0.0333		58.3	30-120			
Benzo (a) anthracene	0.0199	0.00500	"	0.0333		59.6	30-120			
Benzo (a) pyrene	0.0181	0.00500	"	0.0333		54.4	30-120			
Benzo (b) fluoranthene	0.0191	0.00500	"	0.0333		57.2	30-120			
Benzo (k) fluoranthene	0.0192	0.00500	"	0.0333		57.7	30-120			
Chrysene	0.0194	0.00500	"	0.0333		58.3	30-120			
Dibenz (a,h) anthracene	0.0161	0.00500	"	0.0333		48.3	30-120			
Fluoranthene	0.0206	0.00500	"	0.0333		61.7	30-120			
Fluorene	0.0202	0.00500	"	0.0333		60.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0167	0.00500	"	0.0333		50.2	30-120			
Pyrene	0.0200	0.00500	"	0.0333		60.1	35-142			
1-Methylnaphthalene	0.0194	0.00500	"	0.0333		58.3	35-142			
2-Methylnaphthalene	0.0192	0.00500	"	0.0333		57.7	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0195</i>		"	<i>0.0333</i>		<i>58.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0208</i>		"	<i>0.0333</i>		<i>62.5</i>	<i>40-150</i>			

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

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 BHJ1332 - EPA 5030 Soil MS

Matrix Spike (BHJ1332-MS1)	Source: 2410514-01			Prepared & Analyzed: 10/30/24							
Acenaphthene	0.0155	0.00500	mg/kg	0.0333	ND	46.5	31-137				
Anthracene	0.0160	0.00500	"	0.0333	ND	47.9	30-120				
Benzo (a) anthracene	0.0190	0.00500	"	0.0333	ND	57.0	30-120				
Benzo (a) pyrene	0.0176	0.00500	"	0.0333	ND	52.8	30-120				
Benzo (b) fluoranthene	0.0167	0.00500	"	0.0333	ND	50.1	30-120				
Benzo (k) fluoranthene	0.0153	0.00500	"	0.0333	ND	46.0	30-120				
Chrysene	0.0187	0.00500	"	0.0333	ND	56.0	30-120				
Dibenz (a,h) anthracene	0.0166	0.00500	"	0.0333	ND	49.9	30-120				
Fluoranthene	0.0186	0.00500	"	0.0333	ND	55.7	30-120				
Fluorene	0.0165	0.00500	"	0.0333	ND	49.4	30-120				
Indeno (1,2,3-cd) pyrene	0.0177	0.00500	"	0.0333	ND	53.0	30-120				
Pyrene	0.0197	0.00500	"	0.0333	ND	59.0	35-142				
1-Methylnaphthalene	0.0185	0.00500	"	0.0333	ND	55.4	15-130				
2-Methylnaphthalene	0.0184	0.00500	"	0.0333	ND	55.3	15-130				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0181</i>		<i>"</i>	<i>0.0333</i>		<i>54.3</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0165</i>		<i>"</i>	<i>0.0333</i>		<i>49.6</i>	<i>40-150</i>				

Matrix Spike Dup (BHJ1332-MSD1)	Source: 2410514-01			Prepared & Analyzed: 10/30/24							
Acenaphthene	0.0166	0.00500	mg/kg	0.0333	ND	49.9	31-137	7.03	30		
Anthracene	0.0168	0.00500	"	0.0333	ND	50.5	30-120	5.15	30		
Benzo (a) anthracene	0.0182	0.00500	"	0.0333	ND	54.5	30-120	4.43	30		
Benzo (a) pyrene	0.0166	0.00500	"	0.0333	ND	49.7	30-120	5.95	30		
Benzo (b) fluoranthene	0.0160	0.00500	"	0.0333	ND	48.1	30-120	4.14	30		
Benzo (k) fluoranthene	0.0145	0.00500	"	0.0333	ND	43.6	30-120	5.38	30		
Chrysene	0.0169	0.00500	"	0.0333	ND	50.8	30-120	9.83	30		
Dibenz (a,h) anthracene	0.0163	0.00500	"	0.0333	ND	48.9	30-120	1.99	30		
Fluoranthene	0.0186	0.00500	"	0.0333	ND	55.9	30-120	0.453	30		
Fluorene	0.0172	0.00500	"	0.0333	ND	51.5	30-120	4.13	30		
Indeno (1,2,3-cd) pyrene	0.0172	0.00500	"	0.0333	ND	51.6	30-120	2.72	30		
Pyrene	0.0183	0.00500	"	0.0333	ND	54.9	35-142	7.28	30		
1-Methylnaphthalene	0.0169	0.00500	"	0.0333	ND	50.7	15-130	8.93	50		
2-Methylnaphthalene	0.0164	0.00500	"	0.0333	ND	49.3	15-130	11.5	50		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0163</i>		<i>"</i>	<i>0.0333</i>		<i>49.0</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0169</i>		<i>"</i>	<i>0.0333</i>		<i>50.6</i>	<i>40-150</i>				

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

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 BHK0153 - EPA 3050B

Blank (BHK0153-BLK1)

Prepared: 11/04/24 Analyzed: 11/06/24

Boron ND 2.00 mg/L

LCS (BHK0153-BS1)

Prepared: 11/04/24 Analyzed: 11/06/24

Boron 4.82 2.00 mg/L 5.00 96.3 80-120

Duplicate (BHK0153-DUP1)

Source: 2410516-75

Prepared: 11/04/24 Analyzed: 11/06/24

Boron 0.268 2.00 mg/L 0.318 17.3 20

Matrix Spike (BHK0153-MS1)

Source: 2410516-75

Prepared: 11/04/24 Analyzed: 11/06/24

Boron 4.94 2.00 mg/L 4.98 0.318 92.9 75-125

Matrix Spike Dup (BHK0153-MSD1)

Source: 2410516-75

Prepared: 11/04/24 Analyzed: 11/06/24

Boron 4.87 2.00 mg/L 4.98 0.318 91.4 75-125 1.55 25

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

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 BHK0327 - EPA 3050B

Blank (BHK0327-BLK1)

Prepared: 11/07/24 Analyzed: 11/08/24

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 (BHK0327-BS1)

Prepared: 11/07/24 Analyzed: 11/08/24

Arsenic	37.0	0.200	mg/kg wet	38.5	96.3	80-120
Barium	40.2	0.400	"	38.5	104	80-120
Cadmium	1.94	0.200	"	1.92	101	80-120
Copper	40.3	0.400	"	38.5	105	80-120
Lead	18.7	0.200	"	19.2	97.5	80-120
Nickel	39.6	0.400	"	38.5	103	80-120
Silver	1.98	0.0200	"	1.92	103	80-120
Zinc	41.1	0.400	"	38.5	107	80-120
Selenium	4.01	0.260	"	3.85	104	80-120

Duplicate (BHK0327-DUP1)

Source: 2410519-01

Prepared: 11/07/24 Analyzed: 11/08/24

Arsenic	1.12	0.200	mg/kg dry	1.13	1.16	20	
Barium	24.4	0.400	"	33.4	31.1	20	QR-04
Cadmium	0.0844	0.200	"	0.0983	15.3	20	
Copper	2.21	0.400	"	2.78	23.0	20	QR-01
Lead	2.77	0.200	"	3.21	14.6	20	
Nickel	2.12	0.400	"	2.73	25.1	20	QR-01
Silver	0.0133	0.0200	"	0.0200	40.3	20	QR-01
Zinc	14.4	0.400	"	21.8	40.9	20	QR-04
Selenium	ND	0.260	"	ND		20	

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

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 BHK0327 - EPA 3050B

Matrix Spike (BHK0327-MS1)

Source: 2410519-01

Prepared: 11/07/24 Analyzed: 11/08/24

Arsenic	42.5	0.200	mg/kg dry	41.9	1.13	98.7	75-125		
Barium	74.9	0.400	"	41.9	33.4	99.2	75-125		
Cadmium	2.27	0.200	"	2.09	0.0983	104	75-125		
Copper	36.7	0.400	"	41.9	2.78	81.0	75-125		
Lead	24.4	0.200	"	20.9	3.21	101	75-125		
Nickel	36.4	0.400	"	41.9	2.73	80.3	75-125		
Silver	2.15	0.0200	"	2.09	0.0200	102	75-125		
Zinc	53.9	0.400	"	41.9	21.8	76.6	75-125		
Selenium	3.95	0.260	"	4.19	ND	94.3	75-125		

Matrix Spike Dup (BHK0327-MSD1)

Source: 2410519-01

Prepared: 11/07/24 Analyzed: 11/08/24

Arsenic	43.8	0.200	mg/kg dry	43.6	1.13	97.7	75-125	2.99	25
Barium	80.3	0.400	"	43.6	33.4	107	75-125	6.88	25
Cadmium	2.33	0.200	"	2.18	0.0983	102	75-125	2.41	25
Copper	37.4	0.400	"	43.6	2.78	79.3	75-125	1.76	25
Lead	25.5	0.200	"	21.8	3.21	102	75-125	4.04	25
Nickel	37.4	0.400	"	43.6	2.73	79.6	75-125	2.93	25
Silver	2.18	0.0200	"	2.18	0.0200	98.9	75-125	1.01	25
Zinc	56.1	0.400	"	43.6	21.8	78.6	75-125	4.00	25
Selenium	3.99	0.260	"	4.36	ND	91.5	75-125	1.01	25

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BHK0373 - 3060A Mod

Blank (BHK0373-BLK1)

Prepared: 11/07/24 Analyzed: 11/08/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHK0373-BS1)

Prepared: 11/07/24 Analyzed: 11/08/24

Chromium, Hexavalent 25.6 0.30 mg/kg wet 25.0 103 80-120

Duplicate (BHK0373-DUP1)

Source: 2410515-01

Prepared: 11/07/24 Analyzed: 11/08/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHK0373-MS1)

Source: 2410515-01

Prepared: 11/07/24 Analyzed: 11/08/24

Chromium, Hexavalent 28.8 0.30 mg/kg dry 33.5 ND 86.0 75-125

Matrix Spike Dup (BHK0373-MSD1)

Source: 2410515-01

Prepared: 11/07/24 Analyzed: 11/08/24

Chromium, Hexavalent 26.6 0.30 mg/kg dry 33.5 ND 79.4 75-125 7.98 20

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Broomfield CO, 80020

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

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 BHK0076 - General Preparation

Blank (BHK0076-BLK1)

Prepared: 11/02/24 Analyzed: 11/05/24

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

LCS (BHK0076-BS1)

Prepared: 11/02/24 Analyzed: 11/05/24

Calcium	5.56	0.0500	mg/L wet	5.00		111	70-130			
Magnesium	4.83	0.0500	"	5.00		96.7	70-130			
Sodium	4.70	0.0500	"	5.00		94.1	70-130			

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
 Project Manager: AJ Engelhardt

Reported:
 02/07/25 10:42

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 BHK0024 - General Preparation

Duplicate (BHK0024-DUP1)

Source: 2410514-01

Prepared & Analyzed: 11/01/24

% Solids	88.7		%		90.0			1.43	20	
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

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 BHK0077 - General Preparation

Blank (BHK0077-BLK1)

Prepared: 11/02/24 Analyzed: 11/05/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHK0077-BS1)

Prepared: 11/02/24 Analyzed: 11/05/24

Specific Conductance (EC) 1.12 0.0100 mmhos/cm 1.41 79.5 95-105

Duplicate (BHK0077-DUP1)

Source: 2410515-01

Prepared: 11/02/24 Analyzed: 11/05/24

Specific Conductance (EC) 1.90 0.0100 mmhos/cm 1.90 0.000264 20

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

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

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 BHK0078 - General Preparation

LCS (BHK0078-BS1)

Prepared: 11/02/24 Analyzed: 11/05/24

pH	9.17	pH Units	9.18	99.9	95-105
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Duplicate (BHK0078-DUP1)

Source: 2410515-01

Prepared: 11/02/24 Analyzed: 11/05/24

pH	8.18	pH Units	8.17	0.114	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPRC-64N66W 35SESW

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
02/07/25 10:42

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations below the reporting limit. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- 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