

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 23, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Shelton RG 26-08

Work Order #2308309

Enclosed are the results of analyses for samples received by Summit Scientific on 08/14/23 17:44. 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 - Shelton RG 26-08

Project Number: UWRWE-A3208-ABN
Project Manager: Jacob Whritenour

Reported:
08/23/23 11:57

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-A@3'	2308309-01	Soil	08/14/23 13:10	08/14/23 17:44

Summit Scientific

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Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

Client: Noble / Tasman Geosciences Project Manager: Jake Whritenour, Invoice:

Address: 6855 W. 119th Ave. E-Mail: Jwhritenour@tasman-geo.com

City/State/Zip: Broomfield / CO/ 80020

Phone: 231-292-2576 Project Name: *Shelton RG 26-08 Miguel Barron*

Sampler Name: Elyse Hossink Project Number: *UWIRWE - A3208 - ABV*

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions					
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH		Boron - HWS	HOLD			
1	<i>FLØ1-A@3'</i>	<i>8/14/23</i>	<i>1316</i>	<i>3</i>			<input checked="" type="checkbox"/>						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	pH, EC, SAR by saturated paste	
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							

Relinquished by: <i>Elyse Hossink</i> Elyse Hossink	Date/Time: 1500 8/14/23	Received by: Tasman's Lock Box	Date/Time: 1500 8/14/23	Turn Around Time (Check) <input type="checkbox"/> Same Day 72 hours <input checked="" type="checkbox"/> 24 hours Standard <input type="checkbox"/> 48 hours Sample Integrity: Temperature Upon Receipt: <u>14.1</u> Samples Intact: <input checked="" type="checkbox"/> Yes No	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 8/14/23 1744	Received by: <i>[Signature]</i>	Date/Time: 8/14/23 1744		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order# 2308309

Client: Nodel Tasman Client Project ID: Shelton RG 26-08

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

-

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

Temp (°C) Thermometer #

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

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

AS
Custodian Printed Name

08/14/23
Date/Time

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

Project: Noble - Shelton RG 26-08

Project Number: UWRWE-A3208-ABN
Project Manager: Jacob Whritenour

Reported:
08/23/23 11:57

FL01-A@3'
2308309-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/14/23 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGH0618	08/15/23	08/17/23	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: **08/14/23 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0441	110 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0392	98.1 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0434	109 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/14/23 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGH0619	08/15/23	08/15/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **08/14/23 13:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.55	68.4 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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2308309-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **08/14/23 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGH0646	08/16/23	08/17/23	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: **08/14/23 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0299	89.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0170	50.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/14/23 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.666	0.0100	mg/L	1	BGH0669	08/16/23	08/18/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/14/23 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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FL01-A@3'
2308309-01 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.11	0.200	mg/kg dry	1	BGH0696	08/17/23	08/19/23	EPA 6020B
Barium	81.9	0.400	"	"	"	"	"	"
Cadmium	0.491	0.200	"	"	"	"	"	"
Copper	3.20	0.400	"	"	"	"	"	"
Lead	38.5	0.200	"	"	"	"	"	"
Nickel	2.07	0.400	"	"	"	"	"	"
Silver	0.0497	0.0200	"	"	"	"	"	"
Zinc	18.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/14/23 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGH0714	08/17/23	08/17/23	EPA 7196A	

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

Date Sampled: **08/14/23 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	19.9	0.0569	mg/L dry	1	BGH0733	08/17/23	08/18/23	EPA 6020B	
Magnesium	28.1	0.0569	"	"	"	"	"	"	
Sodium	137	0.0569	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/14/23 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.64	0.00100	units	1	BGH0832	08/21/23	08/21/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/14/23 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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FL01-A@3'
2308309-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	87.8	%	1	BGH0700	08/17/23	08/18/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/14/23 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.58	0.0100	mmhos/cm	1	BGH0767	08/18/23	08/18/23	EPA 120.1	

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

Date Sampled: **08/14/23 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.88		pH Units	1	BGH0766	08/18/23	08/18/23	EPA 9045D	

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Reported:
08/23/23 11:57

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BGH0618 - EPA 5030 Soil MS

Blank (BGH0618-BLK1)

Prepared & Analyzed: 08/15/23

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>	0.0466		"	0.0400		117	50-150				
<i>Surrogate: Toluene-d8</i>	0.0406		"	0.0400		102	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0427		"	0.0400		107	50-150				

LCS (BGH0618-BS1)

Prepared & Analyzed: 08/15/23

Benzene	0.121	0.0020	mg/kg	0.100		121	70-130				
Toluene	0.113	0.0050	"	0.100		113	70-130				
Ethylbenzene	0.106	0.0050	"	0.100		106	70-130				
m,p-Xylene	0.211	0.010	"	0.200		105	70-130				
o-Xylene	0.101	0.0050	"	0.100		101	70-130				
1,2,4-Trimethylbenzene	0.0996	0.0050	"	0.100		99.6	70-130				
1,3,5-Trimethylbenzene	0.0949	0.0050	"	0.100		94.9	70-130				
Naphthalene	0.0777	0.0038	"	0.100		77.7	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0466		"	0.0400		117	50-150				
<i>Surrogate: Toluene-d8</i>	0.0416		"	0.0400		104	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0404		"	0.0400		101	50-150				

Matrix Spike (BGH0618-MS1)

Source: 2308308-01

Prepared & Analyzed: 08/15/23

Benzene	0.115	0.0020	mg/kg	0.100	ND	115	70-130				
Toluene	0.103	0.0050	"	0.100	ND	103	70-130				
Ethylbenzene	0.0922	0.0050	"	0.100	ND	92.2	70-130				
m,p-Xylene	0.185	0.010	"	0.200	ND	92.4	70-130				
o-Xylene	0.0903	0.0050	"	0.100	ND	90.3	70-130				
1,2,4-Trimethylbenzene	0.0854	0.0050	"	0.100	ND	85.4	70-130				
1,3,5-Trimethylbenzene	0.0819	0.0050	"	0.100	ND	81.9	70-130				
Naphthalene	0.0686	0.0038	"	0.100	ND	68.6	70-130				QM-07
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0531		"	0.0400		133	50-150				
<i>Surrogate: Toluene-d8</i>	0.0419		"	0.0400		105	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0434		"	0.0400		108	50-150				

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08/23/23 11:57

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BGH0618 - EPA 5030 Soil MS

Matrix Spike Dup (BGH0618-MSD1)	Source: 2308308-01			Prepared & Analyzed: 08/15/23						
Benzene	0.111	0.0020	mg/kg	0.100	ND	111	70-130	3.53	30	
Toluene	0.102	0.0050	"	0.100	ND	102	70-130	1.08	30	
Ethylbenzene	0.0938	0.0050	"	0.100	ND	93.8	70-130	1.64	30	
m,p-Xylene	0.187	0.010	"	0.200	ND	93.3	70-130	0.969	30	
o-Xylene	0.0915	0.0050	"	0.100	ND	91.5	70-130	1.32	30	
1,2,4-Trimethylbenzene	0.0841	0.0050	"	0.100	ND	84.1	70-130	1.56	30	
1,3,5-Trimethylbenzene	0.0803	0.0050	"	0.100	ND	80.3	70-130	1.96	30	
Naphthalene	0.0674	0.0038	"	0.100	ND	67.4	70-130	1.77	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0557		"	0.0400		139	50-150			
Surrogate: Toluene-d8	0.0429		"	0.0400		107	50-150			
Surrogate: 4-Bromofluorobenzene	0.0436		"	0.0400		109	50-150			

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Reported:
08/23/23 11:57

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 BGH0619 - EPA 3550A

Blank (BGH0619-BLK1)

Prepared & Analyzed: 08/15/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	7.13		"	12.5		57.0		30-150			

LCS (BGH0619-BS1)

Prepared & Analyzed: 08/15/23

C10-C28 (DRO)	408	50	mg/kg	500		81.6		70-130			
Surrogate: <i>o</i> -Terphenyl	5.61		"	12.5		44.9		30-150			

Matrix Spike (BGH0619-MS1)

Source: 2308308-01

Prepared & Analyzed: 08/15/23

C10-C28 (DRO)	386	50	mg/kg	500	7.14	75.8		70-130			
Surrogate: <i>o</i> -Terphenyl	5.26		"	12.5		42.1		30-150			

Matrix Spike Dup (BGH0619-MSD1)

Source: 2308308-01

Prepared & Analyzed: 08/15/23

C10-C28 (DRO)	399	50	mg/kg	500	7.14	78.3		70-130	3.19	20	
Surrogate: <i>o</i> -Terphenyl	7.95		"	12.5		63.6		30-150			

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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 BGH0646 - EPA 5030 Soil MS

Blank (BGH0646-BLK1)

Prepared: 08/16/23 Analyzed: 08/17/23

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>	<i>0.0391</i>		"	<i>0.0333</i>		<i>117</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0323</i>		"	<i>0.0333</i>		<i>96.9</i>		<i>40-150</i>		

LCS (BGH0646-BS1)

Prepared: 08/16/23 Analyzed: 08/17/23

Acenaphthene	0.0234	0.00500	mg/kg	0.0333		70.2		31-137		
Anthracene	0.0295	0.00500	"	0.0333		88.6		30-120		
Benzo (a) anthracene	0.0296	0.00500	"	0.0333		88.7		30-120		
Benzo (a) pyrene	0.0277	0.00500	"	0.0333		83.1		30-120		
Benzo (b) fluoranthene	0.0289	0.00500	"	0.0333		86.6		30-120		
Benzo (k) fluoranthene	0.0313	0.00500	"	0.0333		93.8		30-120		
Chrysene	0.0317	0.00500	"	0.0333		95.1		30-120		
Dibenz (a,h) anthracene	0.0254	0.00500	"	0.0333		76.1		30-120		
Fluoranthene	0.0301	0.00500	"	0.0333		90.4		30-120		
Fluorene	0.0221	0.00500	"	0.0333		66.2		30-120		
Indeno (1,2,3-cd) pyrene	0.0370	0.00500	"	0.0333		111		30-120		
Pyrene	0.0345	0.00500	"	0.0333		104		35-142		
1-Methylnaphthalene	0.0394	0.00500	"	0.0333		118		35-142		
2-Methylnaphthalene	0.0378	0.00500	"	0.0333		113		35-142		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0392</i>		"	<i>0.0333</i>		<i>118</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0302</i>		"	<i>0.0333</i>		<i>90.7</i>		<i>40-150</i>		

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

Project: Noble - Shelton RG 26-08

Project Number: UWRWE-A3208-ABN
Project Manager: Jacob Whritenour

Reported:
08/23/23 11:57

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 BGH0646 - EPA 5030 Soil MS

Matrix Spike (BGH0646-MS1)

Source: 2308308-01

Prepared: 08/16/23 Analyzed: 08/17/23

Acenaphthene	0.0137	0.00500	mg/kg	0.0333	ND	41.1	31-137			
Anthracene	0.0208	0.00500	"	0.0333	ND	62.5	30-120			
Benzo (a) anthracene	0.0217	0.00500	"	0.0333	ND	65.0	30-120			
Benzo (a) pyrene	0.0185	0.00500	"	0.0333	ND	55.5	30-120			
Benzo (b) fluoranthene	0.0182	0.00500	"	0.0333	ND	54.6	30-120			
Benzo (k) fluoranthene	0.0191	0.00500	"	0.0333	ND	57.3	30-120			
Chrysene	0.0216	0.00500	"	0.0333	ND	64.8	30-120			
Dibenz (a,h) anthracene	0.0176	0.00500	"	0.0333	ND	52.8	30-120			
Fluoranthene	0.0208	0.00500	"	0.0333	ND	62.3	30-120			
Fluorene	0.0141	0.00500	"	0.0333	ND	42.2	30-120			
Indeno (1,2,3-cd) pyrene	0.0252	0.00500	"	0.0333	ND	75.7	30-120			
Pyrene	0.0233	0.00500	"	0.0333	ND	69.8	35-142			
1-Methylnaphthalene	0.0298	0.00500	"	0.0333	ND	89.4	15-130			
2-Methylnaphthalene	0.0308	0.00500	"	0.0333	ND	92.4	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0369		"	0.0333		111	40-150			
Surrogate: Fluoranthene-d10	0.0217		"	0.0333		65.0	40-150			

Matrix Spike Dup (BGH0646-MSD1)

Source: 2308308-01

Prepared: 08/16/23 Analyzed: 08/17/23

Acenaphthene	0.0157	0.00500	mg/kg	0.0333	ND	47.0	31-137	13.4	30
Anthracene	0.0234	0.00500	"	0.0333	ND	70.2	30-120	11.6	30
Benzo (a) anthracene	0.0240	0.00500	"	0.0333	ND	72.0	30-120	10.1	30
Benzo (a) pyrene	0.0206	0.00500	"	0.0333	ND	61.9	30-120	10.9	30
Benzo (b) fluoranthene	0.0207	0.00500	"	0.0333	ND	62.1	30-120	12.8	30
Benzo (k) fluoranthene	0.0216	0.00500	"	0.0333	ND	64.8	30-120	12.3	30
Chrysene	0.0238	0.00500	"	0.0333	ND	71.3	30-120	9.58	30
Dibenz (a,h) anthracene	0.0177	0.00500	"	0.0333	ND	53.1	30-120	0.533	30
Fluoranthene	0.0227	0.00500	"	0.0333	ND	68.1	30-120	8.95	30
Fluorene	0.0166	0.00500	"	0.0333	ND	49.7	30-120	16.5	30
Indeno (1,2,3-cd) pyrene	0.0274	0.00500	"	0.0333	ND	82.3	30-120	8.43	30
Pyrene	0.0255	0.00500	"	0.0333	ND	76.6	35-142	9.21	30
1-Methylnaphthalene	0.0322	0.00500	"	0.0333	ND	96.6	15-130	7.76	50
2-Methylnaphthalene	0.0340	0.00500	"	0.0333	ND	102	15-130	9.83	50
Surrogate: 2-Methylnaphthalene-d10	0.0373		"	0.0333		112	40-150		
Surrogate: Fluoranthene-d10	0.0240		"	0.0333		71.9	40-150		

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

Project: Noble - Shelton RG 26-08

Project Number: UWRWE-A3208-ABN
Project Manager: Jacob Whritenour

Reported:
08/23/23 11:57

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 BGH0669 - EPA 3050B

Blank (BGH0669-BLK1)

Prepared: 08/16/23 Analyzed: 08/18/23

Boron ND 0.0100 mg/L

LCS (BGH0669-BS1)

Prepared: 08/16/23 Analyzed: 08/18/23

Boron 5.31 0.0100 mg/L 5.00 106 80-120

Duplicate (BGH0669-DUP1)

Source: 2308248-21

Prepared: 08/16/23 Analyzed: 08/18/23

Boron 0.105 0.0100 mg/L 0.169 46.6 20 QR-04

Matrix Spike (BGH0669-MS1)

Source: 2308248-21

Prepared: 08/16/23 Analyzed: 08/18/23

Boron 6.61 0.0100 mg/L 5.00 0.169 129 75-125 QM-07

Matrix Spike Dup (BGH0669-MSD1)

Source: 2308248-21

Prepared: 08/16/23 Analyzed: 08/18/23

Boron 6.91 0.0100 mg/L 5.00 0.169 135 75-125 4.40 25 QM-07

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Broomfield CO, 80020

Project: Noble - Shelton RG 26-08

Project Number: UWRWE-A3208-ABN
Project Manager: Jacob Whritenour

Reported:
08/23/23 11:57

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGH0696 - EPA 3050B

Blank (BGH0696-BLK1)

Prepared: 08/17/23 Analyzed: 08/19/23

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 (BGH0696-BS1)

Prepared: 08/17/23 Analyzed: 08/19/23

Arsenic	41.5	0.200	mg/kg wet	40.0	104	80-120
Barium	41.7	0.400	"	40.0	104	80-120
Cadmium	2.19	0.200	"	2.00	110	80-120
Copper	40.5	0.400	"	40.0	101	80-120
Lead	20.2	0.200	"	20.0	101	80-120
Nickel	39.2	0.400	"	40.0	98.1	80-120
Silver	2.02	0.0200	"	2.00	101	80-120
Zinc	40.9	0.400	"	40.0	102	80-120

Duplicate (BGH0696-DUP1)

Source: 2308303-01

Prepared: 08/17/23 Analyzed: 08/19/23

Arsenic	0.482	0.200	mg/kg dry	0.469	2.86	20
Barium	112	0.400	"	87.5	24.5	20
Cadmium	1.32	0.200	"	1.18	11.1	20
Copper	4.08	0.400	"	4.03	1.26	20
Lead	11.6	0.200	"	12.5	7.87	20
Nickel	4.14	0.400	"	4.97	18.3	20
Silver	0.0951	0.0200	"	0.0890	6.62	20
Zinc	25.4	0.400	"	24.5	3.74	20
Selenium	ND	0.260	"	ND		200

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Project: Noble - Shelton RG 26-08

Project Number: UWRWE-A3208-ABN
Project Manager: Jacob Whritenour

Reported:
08/23/23 11:57

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 BGH0696 - EPA 3050B

Matrix Spike (BGH0696-MS1)

Source: 2308303-01

Prepared: 08/17/23 Analyzed: 08/19/23

Arsenic	9.22	0.200	mg/kg dry	46.8	0.469	18.7	75-125				QM-01
Barium	212	0.400	"	46.8	87.5	266	75-125				QM-01
Cadmium	3.48	0.200	"	2.34	1.18	98.1	75-125				
Copper	13.1	0.400	"	46.8	4.03	19.5	75-125				QM-01
Lead	28.6	0.200	"	23.4	12.5	68.9	75-125				QM-01
Nickel	12.5	0.400	"	46.8	4.97	16.1	75-125				QM-01
Silver	2.33	0.0200	"	2.34	0.0890	95.6	75-125				
Zinc	33.4	0.400	"	46.8	24.5	19.0	75-125				QM-01

Matrix Spike Dup (BGH0696-MSD1)

Source: 2308303-01

Prepared: 08/17/23 Analyzed: 08/19/23

Arsenic	9.19	0.200	mg/kg dry	46.8	0.469	18.6	75-125	0.295	25		QM-01
Barium	230	0.400	"	46.8	87.5	305	75-125	8.20	25		QM-01
Cadmium	3.69	0.200	"	2.34	1.18	107	75-125	5.74	25		
Copper	13.4	0.400	"	46.8	4.03	20.0	75-125	1.83	25		QM-01
Lead	30.6	0.200	"	23.4	12.5	77.2	75-125	6.52	25		
Nickel	12.8	0.400	"	46.8	4.97	16.7	75-125	1.97	25		QM-01
Silver	2.45	0.0200	"	2.34	0.0890	101	75-125	5.29	25		
Zinc	35.2	0.400	"	46.8	24.5	22.9	75-125	5.31	25		QM-01

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Project: Noble - Shelton RG 26-08
Project Number: UWRWE-A3208-ABN
Project Manager: Jacob Whritenour

Reported:
08/23/23 11:57

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 BGH0714 - 3060A Mod

Blank (BGH0714-BLK1)

Prepared & Analyzed: 08/17/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGH0714-BS1)

Prepared & Analyzed: 08/17/23

Chromium, Hexavalent 20.7 0.30 mg/kg wet 25.0 82.8 80-120

Duplicate (BGH0714-DUP1)

Source: 2308308-01

Prepared & Analyzed: 08/17/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGH0714-MS1)

Source: 2308308-01

Prepared & Analyzed: 08/17/23

Chromium, Hexavalent 23.7 0.30 mg/kg dry 27.4 ND 86.4 75-125

Matrix Spike Dup (BGH0714-MSD1)

Source: 2308308-01

Prepared & Analyzed: 08/17/23

Chromium, Hexavalent 24.0 0.30 mg/kg dry 27.4 ND 87.4 75-125 1.15 20

Summit Scientific

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

Project: Noble - Shelton RG 26-08

Project Number: UWRWE-A3208-ABN
Project Manager: Jacob Whritenour

Reported:
08/23/23 11:57

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 BGH0733 - General Preparation

Blank (BGH0733-BLK1)

Prepared: 08/17/23 Analyzed: 08/18/23

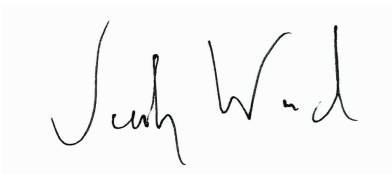
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BGH0733-BS1)

Prepared: 08/17/23 Analyzed: 08/18/23

Calcium	5.58	0.0500	mg/L wet	5.00		112	70-130			
Magnesium	5.78	0.0500	"	5.00		116	70-130			
Sodium	5.70	0.0500	"	5.00		114	70-130			

Summit Scientific



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 Broomfield CO, 80020

Project: Noble - Shelton RG 26-08

Project Number: UWRWE-A3208-ABN
 Project Manager: Jacob Whritenour

Reported:
 08/23/23 11:57

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

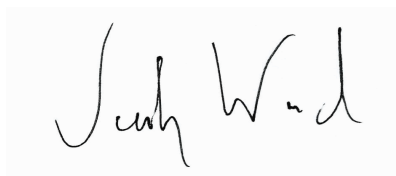
Summit Scientific

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

Batch BGH0700 - General Preparation

Duplicate (BGH0700-DUP1)	Source: 2308303-01	Prepared: 08/17/23	Analyzed: 08/18/23
% Solids	85.4	%	85.4
			0.0147
			20

Summit Scientific



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Broomfield CO, 80020

Project: Noble - Shelton RG 26-08

Project Number: UWRWE-A3208-ABN
Project Manager: Jacob Whritenour

Reported:
08/23/23 11:57

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 BGH0767 - General Preparation

Blank (BGH0767-BLK1)

Prepared & Analyzed: 08/18/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGH0767-BS1)

Prepared & Analyzed: 08/18/23

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 101 95-105

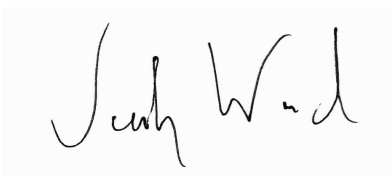
Duplicate (BGH0767-DUP1)

Source: 2308308-01

Prepared & Analyzed: 08/18/23

Specific Conductance (EC) 0.447 0.0100 mmhos/cm 0.458 2.41 20

Summit Scientific



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Broomfield CO, 80020

Project: Noble - Shelton RG 26-08

Project Number: UWRWE-A3208-ABN
Project Manager: Jacob Whritenour

Reported:
08/23/23 11:57

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 BGH0766 - General Preparation

LCS (BGH0766-BS1)

Prepared & Analyzed: 08/18/23

pH	9.11	pH Units	9.18	99.2	95-105
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Duplicate (BGH0766-DUP1)

Source: 2308314-01

Prepared & Analyzed: 08/18/23

pH	7.80	pH Units	7.80	0.00	20
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Summit Scientific



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

Project: Noble - Shelton RG 26-08

Project Number: UWRWE-A3208-ABN
Project Manager: Jacob Whritenour

Reported:
08/23/23 11:57

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- 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.
- QM-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- 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