

Flowline Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional Attachments:		Tank Battery Closure		Wellhead Closure		Pit Closure		Partially Buried Vault Closure
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Site Name & COGCC Facility Number: Shelton RG26-08	Date: 8/14/2023	Remediation Project #: 29038
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Associated Wells:	Age of Site:	Number of Photos Attached: 12
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Starting point: (GPS coordinates and descriptions)
40.285012, -104.623523

End point: (GPS coordinates and descriptions)
40.287144, -104.627011

USCS Soil Type: SW	Estimated Depth to Groundwater: >3.5 ft
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Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)
Some staining observed at wellhead, impact appears to be surficial.

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)
None observed

Flowlines

Flowline type	Oil / Gas / Water			
Depth	3.5 ft			
Age				
Length	1246 ft			
Construction Material	Steel			
Were flowlines pulled?	Yes			
Visual Integrity of lines	Good			
Visual impacts if trenched	None			
PID Readings if trenched	0.0 - 3.7			
Sample taken? Location/Sample ID#	Yes, see below			
Photo Number(s)	2 - 11			

Other observations regarding on location flowlines:
Samples were taken at the wellhead (FL01-A@3') and also along the flowline path (FL01-C@4' - FL01- K@3').
B-point (at separator) was sampled during facility decommissioning.

Summary

Was impacted soil identified? No	
Total number of samples field screened: 10	Total number of samples collected: 10
Highest PID Reading: 3.7	Total number of samples submitted to lab for analysis: 1
If more than 10 cubic yards of impacted soil were observed:	
Vertical extent:	Estimated spill volume:
Lateral extent:	Volume of soil removed:
Is additional investigation required?	
Was groundwater encountered during the investigation? No	
Measured depth to groundwater:	Was remedial groundwater removal conducted?
Date Groundwater was encountered:	Commencement date of removal:
Sheen on groundwater?	Volume of groundwater removed prior to sampling:
Free product observed?	Volume of groundwater removed post sampling:
Total number of samples collected:	Total Volume of groundwater removed:
Total number of samples submitted to lab for analysis:	

Photographic Log



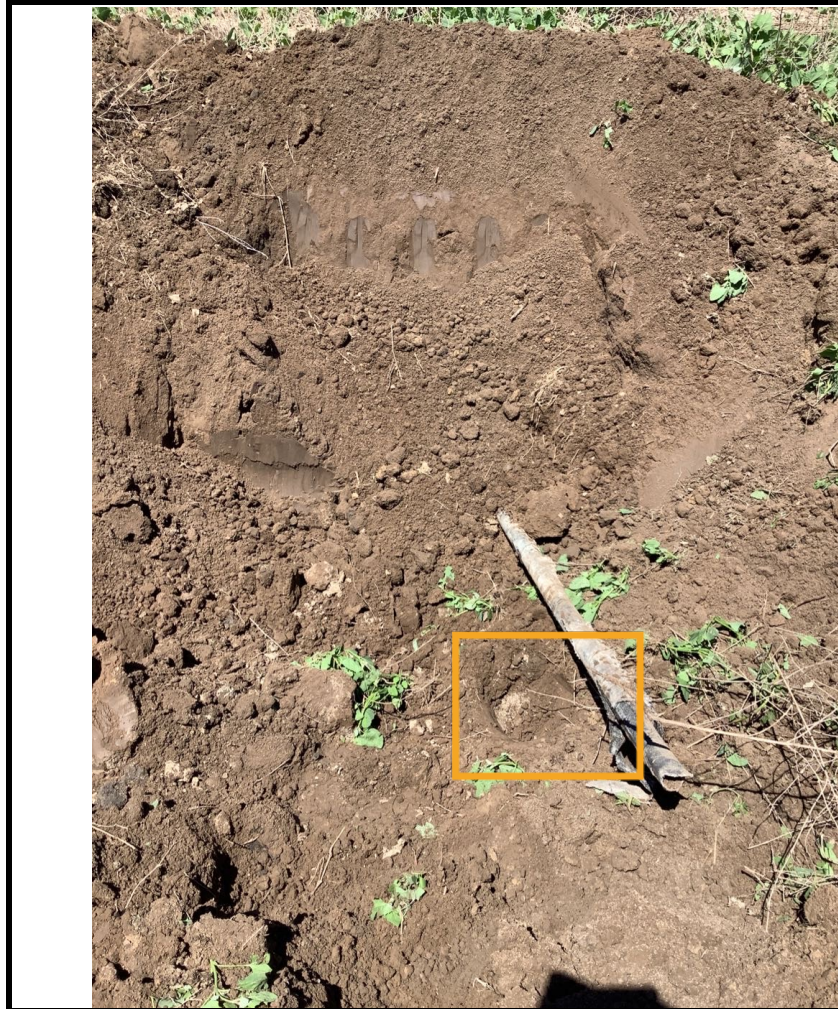
Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:	
Notes/Conditions: Site photo - facility Facing NE			

Equipment ID: FL01-C@4'		Equipment Type: Flowline	
Material: Steel	Volume:	Contents: Oil/Gas/Water	
Notes/Conditions:			

Photographic Log



Equipment ID: FL01-D@4'		Equipment Type:		Equipment ID: FL01-E@3.5'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions: Slight direction change				Notes/Conditions:			

Photographic Log


Equipment ID: FL01-F@4'		Equipment Type:		Equipment ID: FL01-G@4'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log



Equipment ID: FL01-H@1'		Equipment Type:		Equipment ID: FL01-I@2.5'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log


Equipment ID: FL01-J@2.5'		Equipment Type:		Equipment ID: FL01-K@3'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log



Equipment ID: FL01-A@3'

Equipment Type:

Material:

Volume:

Contents:

Notes/Conditions: Some staining present in excavation



Equipment ID:

Equipment Type:

Material:

Volume:

Contents:

Notes/Conditions: Site photo, from A point
Facing W

Arrow shows direction of flowline path

TABLE 1
SOIL SAMPLE LOCATIONS
NOBLE ENERGY, INC. - SHELTON RG 26-08

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude ¹	Longitude	PDOP
FL01-A@3'	08/14/23	3.7	HC staining	No Odor	Lab	40.285013	-104.623541	1.2
FL01-C@4'	08/14/23	0.0	No staining	No Odor	Grab	40.286707	-104.626268	1.6
FL01-D@4'	08/14/23	0.0	No staining	No Odor	Grab	40.286866	-104.626523	1.1
FL01-E@3.5'	08/14/23	0.0	No staining	No Odor	Grab	40.287141	-104.626862	1.2
FL01-F@4'	08/14/23	0.0	No staining	No Odor	Grab	40.286463	-104.625878	0.9
FL01-G@4'	08/14/23	0.0	No staining	No Odor	Grab	40.286105	-104.625349	0.8
FL01-H@1'	08/14/23	0.0	No staining	No Odor	Grab	40.285711	-104.624694	0.9
FL01-I@2.5'	08/14/23	0.0	No staining	No Odor	Grab	40.285479	-104.624325	1.0
FL01-J@2.5'	08/14/23	0.0	No staining	No Odor	Grab	40.285320	-104.624055	1.1
FL01-K@3'	08/14/23	0.0	No staining	No Odor	Grab	40.285144	-104.623736	1.3

Notes:

PID = Photoionization detector

ppm = parts per million

PDOP = Position dilution of precision

HC = Hydrocarbon

1.) Latitude and longitude coordinates will be provided in decimal degrees with an accuracy and precision of 5 decimals of a degree using the North American Datum ("NAD") of 1983

TABLE 2
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - SHELTON RG 26-08

Soil Sample ID	Date	¹ Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4 - TMB (mg/kg)	1,3,5 - TMB (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ²		1.2	490	5.8	58	30	27	2	500			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^{2,3}		0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500			0.55	6	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FL01-A@3'	08/14/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
Residential SSL ²		6 - 8.3	<6	<4mmhos/cm	2
FL01-A@3'	08/14/23	7.88	4.64	1.58	0.666

Soil Sample ID	Date	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ^(1,2)		0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL ^(1,2,3)		0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
FL01-A@3'	08/14/23	1.11	81.9	0.491	<0.30	3.20	38.5	2.07	<0.260	0.0497	18.9

Notes:

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

Definitions:

ECMC = Energy and Carbon Management Commission

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

SAR = Sodium Adsorption Ratio

EC = Electrical Conductivity

mmhos/cm = Millimhos per centimeter

mg/L = Milligrams per liter

< = Analytical result is less than the indicated laboratory reporting limit

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

1,2,4 - TMB = 1,2,4 Trimethylbenzene

1,3,5 - TMB = 1,3,5 Trimethylbenzene

Benzo(a) = Benzo(a)anthracene

Benzo(b) = Benzo(b)fluoranthene

Benzo(k) = Benzo(k)fluoranthene

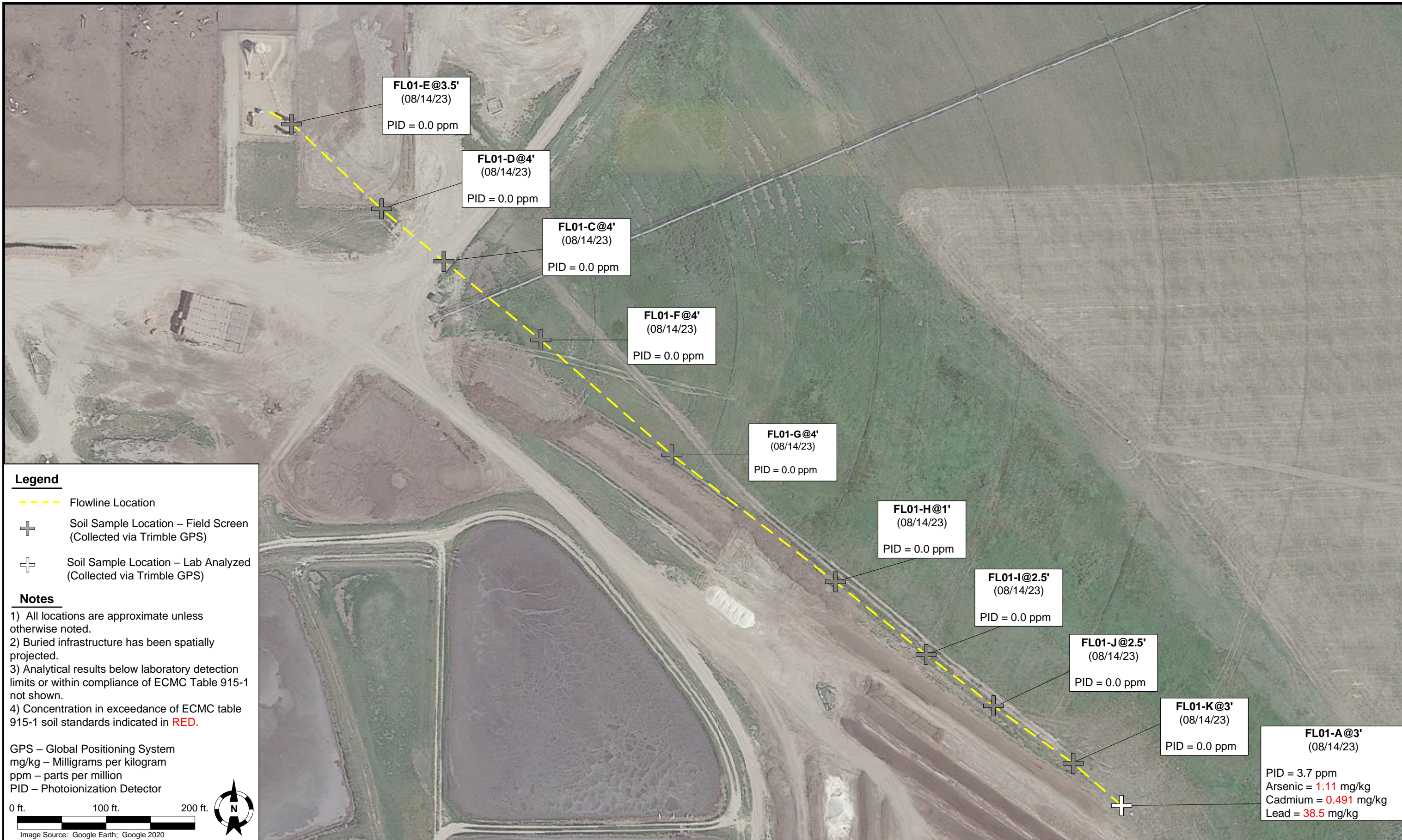
Benzo(a) = Benzo(a)pyrene

A,H = Dibenzo(a,h)anthracene

1,2,3-CD = Indeno(1,2,3-cd)pyrene

1-M = 1-methylnaphthalene

2-M = 2-methylnaphthalene



Legend

- Flowline Location
- + Soil Sample Location – Field Screen (Collected via Trimble GPS)
- + Soil Sample Location – Lab Analyzed (Collected via Trimble GPS)

Notes

- 1) All locations are approximate unless otherwise noted.
- 2) Buried infrastructure has been spatially projected.
- 3) Analytical results below laboratory detection limits or within compliance of ECMC Table 915-1 not shown.
- 4) Concentration in exceedance of ECMC table 915-1 soil standards indicated in **RED**.

GPS – Global Positioning System
 mg/kg – Milligrams per kilogram
 ppm – parts per million
 PID – Photoionization Detector

0 ft. 100 ft. 200 ft.

Image Source: Google Earth; Google 2020

DATE:	09/01/2023
DESIGNED BY:	JW
DRAWN BY:	EH

TASMAN
 GEOSCIENCES

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

Noble Energy, Inc. – DJ Basin
Shelton RG 26-08
 SENE, Section 26, Township 4 North, Range 65 West
 Weld County, Colorado

Flowline Closure & Soil
 Analytical Results Map
 (08/14/2023)

FIGURE
 1

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 23, 2023

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

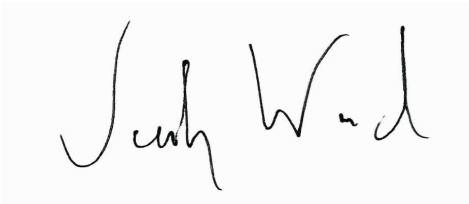
Broomfield, CO 80020

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

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Summit Scientific

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) 14.1 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"/>	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

11



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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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

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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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

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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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

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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Broomfield CO, 80020

Project: Noble - Shelton RG 26-08

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

Reported:
08/23/23 11:57

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

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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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

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 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
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0557</i>		<i>"</i>	<i>0.0400</i>		<i>139</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0429</i>		<i>"</i>	<i>0.0400</i>		<i>107</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0436</i>		<i>"</i>	<i>0.0400</i>		<i>109</i>	<i>50-150</i>			

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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

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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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

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0391		"	0.0333		117	40-150			
Surrogate: Fluoranthene-d10	0.0323		"	0.0333		96.9	40-150			

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			
Surrogate: 2-Methylnaphthalene-d10	0.0392		"	0.0333		118	40-150			
Surrogate: Fluoranthene-d10	0.0302		"	0.0333		90.7	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

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	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0369</i>		"	<i>0.0333</i>		<i>111</i>	<i>40-150</i>	
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0217</i>		"	<i>0.0333</i>		<i>65.0</i>	<i>40-150</i>	

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
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0373</i>		"	<i>0.0333</i>		<i>112</i>	<i>40-150</i>	
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0240</i>		"	<i>0.0333</i>		<i>71.9</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

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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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	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	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			QR-04
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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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	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

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

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

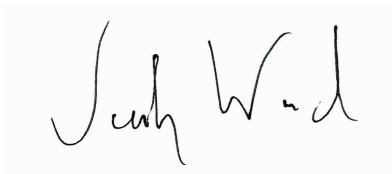
Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

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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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

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

Summit Scientific

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

Batch 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
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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

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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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

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