

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 24, 2024

Jacob Whritenour
Tasman Geosciences
6855 W. 119th Ave.
Broomfield, CO 80020
RE: Noble - Phillips 24-24
Work Order #2406128

Enclosed are the results of analyses for samples received by Summit Scientific on 06/10/24 17:43. 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 - Phillips 24-24

Project Number: UWRWE-A4194-ABN

Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FLR01-W@3'	2406128-01	Soil	06/10/24 15:40	06/10/24 17:43
FL01-01@3'	2406128-02	Soil	06/10/24 15:45	06/10/24 17:43
FL01-02@3'	2406128-03	Soil	06/10/24 15:50	06/10/24 17:43
BKG01@3'	2406128-04	Soil	06/10/24 16:00	06/10/24 17:43

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

Lab ID 2106128 Page 1 of 1

Client: Noble / Tasman		Send Data To: Project Manager: Jake Whritenour		Send Invoice To: Company: Chevron	
Address: 6855 W. 119th Ave		E-Mail: jwhritenour@tasman-geo.com		Project Name/Location:	
City/State/Zip: Broomfield, CO 80020		Project Name: <u>PHILLIPS 2U-2U</u>		AFB#: <u>UNKNE - ALIQUA BN</u>	
Phone:		Project Number:		PO/Billing Codes:	
Sampler Name: <u>SHANNON WALES</u>				Contact: <u>LUDE FIRESTICH</u>	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested							Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	Metals - 915		HOLD
1	FL01-W03'	01/12/24	1510	3			X						X	X	X	X	X	X		pH, EC, SAR by saturated paste
2	FL01-01W3'		1545	1									X	X	X	X	X	X		
3	FL01-02 W3		1550	1									X	X	X	X	X	X		
4	BV7-01W3'		1600	1									X	X	X	X	X	X		
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <u>SHANNON WALES</u>	Date/Time: <u>01/12/24 1800</u>	Received by: <u>Tasman Lock Box</u>	Date/Time: <u>01/12/24 1800</u>	TAT Business Days	Field DO	Notes:
Relinquished by: <u>Tasman Lock Box</u>	Date/Time: <u>01/02/24 1743</u>	Received by: <u>[Signature]</u>	Date/Time: <u>01/02/24 1743</u>	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: <u>9.3</u>	Corrected Temperature: <u>9</u>	IR gun #: <u>1</u>	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2406128

Client: Nedtasman Client Project ID: Phillips 24-24

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"/>	an ICE
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

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

AS
Custodian Printed Name

6/10/24
Date/Time



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

Project: Noble - Phillips 24-24
Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

FLR01-W@3'
2406128-01 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHF0294	06/11/24	06/11/24	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: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0427	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0381	95.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0423	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0297	06/11/24	06/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.92	71.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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2406128-01 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0280	06/11/24	06/12/24	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: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0255	76.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0237	71.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0339	06/12/24	06/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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FLR01-W@3'
2406128-01 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.89	0.180	mg/kg dry	1	BHF0343	06/12/24	06/14/24	EPA 6020B	
Barium	130	0.360	"	"	"	"	"	"	
Cadmium	0.362	0.180	"	"	"	"	"	"	
Copper	8.94	0.360	"	"	"	"	"	"	
Lead	18.7	0.180	"	"	"	"	"	"	
Nickel	7.63	0.360	"	"	"	"	"	"	
Silver	0.0723	0.0180	"	"	"	"	"	"	
Zinc	24.9	0.360	"	"	"	"	"	"	
Selenium	ND	0.234	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0304	06/11/24	06/12/24	EPA 7196A	

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

Date Sampled: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	39.6	0.0500	mg/L dry	1	BHF0387	06/13/24	06/17/24	EPA 6020B	
Magnesium	7.48	0.0500	"	"	"	"	"	"	
Sodium	6.58	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.251	0.00100	units	1	BHF0507	06/18/24	06/18/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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06/24/24 10:17

FLR01-W@3'
2406128-01 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	86.6	%	1	BHF0322	06/12/24	06/14/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.316	0.0100	mmhos/cm	1	BHF0390	06/13/24	06/14/24	EPA 120.1	

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

Date Sampled: **06/10/24 15:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.45		pH Units	1	BHF0389	06/13/24	06/14/24	EPA 9045D	

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Reported:
06/24/24 10:17

FL01-01@3'
2406128-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHF0294	06/11/24	06/12/24	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: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0416	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0420	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0297	06/11/24	06/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.24	73.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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2406128-02 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0280	06/11/24	06/12/24	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: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0246	73.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0220	66.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0339	06/12/24	06/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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FL01-01@3'
2406128-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.82	0.200	mg/kg dry	1	BHF0343	06/12/24	06/14/24	EPA 6020B	
Barium	119	0.400	"	"	"	"	"	"	
Cadmium	0.291	0.200	"	"	"	"	"	"	
Copper	5.57	0.400	"	"	"	"	"	"	
Lead	8.87	0.200	"	"	"	"	"	"	
Nickel	5.88	0.400	"	"	"	"	"	"	
Silver	0.0335	0.0200	"	"	"	"	"	"	
Zinc	23.0	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0304	06/11/24	06/12/24	EPA 7196A	

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

Date Sampled: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	71.7	0.0500	mg/L dry	1	BHF0387	06/13/24	06/17/24	EPA 6020B	
Magnesium	9.26	0.0500	"	"	"	"	"	"	
Sodium	5.88	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.174	0.00100	units	1	BHF0507	06/18/24	06/18/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

FL01-01@3'
2406128-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	91.1	%	1	BHF0322	06/12/24	06/14/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.331	0.0100	mmhos/cm	1	BHF0390	06/13/24	06/14/24	EPA 120.1	

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

Date Sampled: **06/10/24 15:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.60		pH Units	1	BHF0389	06/13/24	06/14/24	EPA 9045D	

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Reported:
06/24/24 10:17

FL01-02@3'
2406128-03 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHF0294	06/11/24	06/12/24	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: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0434	109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0396	99.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0297	06/11/24	06/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.3	82.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - Phillips 24-24
Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

FL01-02@3'
2406128-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0280	06/11/24	06/12/24	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: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0256	76.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0249	74.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0339	06/12/24	06/17/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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6855 W. 119th Ave.
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Project: Noble - Phillips 24-24
Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

FL01-02@3'
2406128-03 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.05	0.200	mg/kg dry	1	BHF0343	06/12/24	06/14/24	EPA 6020B	
Barium	98.1	0.400	"	"	"	"	"	"	
Cadmium	0.239	0.200	"	"	"	"	"	"	
Copper	4.88	0.400	"	"	"	"	"	"	
Lead	7.03	0.200	"	"	"	"	"	"	
Nickel	6.21	0.400	"	"	"	"	"	"	
Silver	0.0388	0.0200	"	"	"	"	"	"	
Zinc	20.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0304	06/11/24	06/12/24	EPA 7196A	

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

Date Sampled: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	29.8	0.0500	mg/L dry	1	BHF0387	06/13/24	06/17/24	EPA 6020B	
Magnesium	6.45	0.0500	"	"	"	"	"	"	
Sodium	6.85	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.297	0.00100	units	1	BHF0507	06/18/24	06/18/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Reported:
06/24/24 10:17

FL01-02@3'
2406128-03 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

% Solids	92.8	%	1	BHF0322	06/12/24	06/14/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.300	0.0100	mmhos/cm	1	BHF0390	06/13/24	06/14/24	EPA 120.1	

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

Date Sampled: **06/10/24 15:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.18		pH Units	1	BHF0389	06/13/24	06/14/24	EPA 9045D	

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Project: Noble - Phillips 24-24
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Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

BKG01@3'
2406128-04 (Soil)

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Total Metals by EPA 6020B

Date Sampled: **06/10/24 16:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.03	0.180	mg/kg dry	1	BHF0343	06/12/24	06/14/24	EPA 6020B	
Barium	144	0.360	"	"	"	"	"	"	
Cadmium	0.444	0.180	"	"	"	"	"	"	
Copper	6.40	0.360	"	"	"	"	"	"	
Lead	9.51	0.180	"	"	"	"	"	"	
Nickel	7.60	0.360	"	"	"	"	"	"	
Silver	0.0654	0.0180	"	"	"	"	"	"	
Zinc	24.1	0.360	"	"	"	"	"	"	
Selenium	ND	0.234	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/10/24 16:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0304	06/11/24	06/12/24	EPA 7196A	

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

Date Sampled: **06/10/24 16:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	37.3	0.0500	mg/L dry	1	BHF0387	06/13/24	06/17/24	EPA 6020B	
Magnesium	19.8	0.0500	"	"	"	"	"	"	
Sodium	30.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/10/24 16:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	1.01	0.00100	units	1	BHF0507	06/18/24	06/18/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

BKG01@3'
2406128-04 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/10/24 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.4		%	1	BHF0322	06/12/24	06/14/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/10/24 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.488	0.0100	mmhos/cm	1	BHF0390	06/13/24	06/14/24	EPA 120.1	

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

Date Sampled: **06/10/24 16:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.55		pH Units	1	BHF0389	06/13/24	06/14/24	EPA 9045D	

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Project: Noble - Phillips 24-24
Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHF0294 - EPA 5030 Soil MS

Blank (BHF0294-BLK1)

Prepared & Analyzed: 06/11/24

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	0.0412		"	0.0400		103		50-150			
Surrogate: Toluene-d8	0.0381		"	0.0400		95.2		50-150			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101		50-150			

LCS (BHF0294-BS1)

Prepared & Analyzed: 06/11/24

Benzene	0.100	0.0020	mg/kg	0.100		100		70-130			
Toluene	0.107	0.0050	"	0.100		107		70-130			
Ethylbenzene	0.106	0.0050	"	0.100		106		70-130			
m,p-Xylene	0.210	0.010	"	0.200		105		70-130			
o-Xylene	0.104	0.0050	"	0.100		104		70-130			
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100		101		70-130			
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100		102		70-130			
Naphthalene	0.0961	0.0038	"	0.100		96.1		70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0412		"	0.0400		103		50-150			
Surrogate: Toluene-d8	0.0409		"	0.0400		102		50-150			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.4		50-150			

Matrix Spike (BHF0294-MS1)

Source: 2406126-01

Prepared & Analyzed: 06/11/24

Benzene	0.100	0.0020	mg/kg	0.100	ND	100		70-130			
Toluene	0.110	0.0050	"	0.100	ND	110		70-130			
Ethylbenzene	0.103	0.0050	"	0.100	ND	103		70-130			
m,p-Xylene	0.203	0.010	"	0.200	ND	102		70-130			
o-Xylene	0.101	0.0050	"	0.100	ND	101		70-130			
1,2,4-Trimethylbenzene	0.0988	0.0050	"	0.100	ND	98.8		70-130			
1,3,5-Trimethylbenzene	0.0988	0.0050	"	0.100	ND	98.8		70-130			
Naphthalene	0.0979	0.0038	"	0.100	ND	97.9		70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0460		"	0.0400		115		50-150			
Surrogate: Toluene-d8	0.0419		"	0.0400		105		50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		98.9		50-150			

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Broomfield CO, 80020

Project: Noble - Phillips 24-24
Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

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 BHF0294 - EPA 5030 Soil MS

Matrix Spike Dup (BHF0294-MSD1)	Source: 2406126-01			Prepared & Analyzed: 06/11/24						
Benzene	0.112	0.0020	mg/kg	0.100	ND	112	70-130	11.1	30	
Toluene	0.120	0.0050	"	0.100	ND	120	70-130	9.02	30	
Ethylbenzene	0.121	0.0050	"	0.100	ND	121	70-130	15.9	30	
m,p-Xylene	0.235	0.010	"	0.200	ND	118	70-130	14.6	30	
o-Xylene	0.115	0.0050	"	0.100	ND	115	70-130	13.0	30	
1,2,4-Trimethylbenzene	0.113	0.0050	"	0.100	ND	113	70-130	13.1	30	
1,3,5-Trimethylbenzene	0.116	0.0050	"	0.100	ND	116	70-130	15.6	30	
Naphthalene	0.104	0.0038	"	0.100	ND	104	70-130	6.29	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0452</i>		<i>"</i>	<i>0.0400</i>		<i>113</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0403</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0410</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			

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Project: Noble - Phillips 24-24
Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

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 BHF0297 - EPA 3550A

Blank (BHF0297-BLK1)

Prepared & Analyzed: 06/11/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	13.2		"	12.5	106	30-150					

LCS (BHF0297-BS1)

Prepared & Analyzed: 06/11/24

C10-C28 (DRO)	454	50	mg/kg	500	90.9	70-130					
Surrogate: <i>o</i> -Terphenyl	12.8		"	12.5	103	30-150					

Matrix Spike (BHF0297-MS1)

Source: 2406126-01

Prepared & Analyzed: 06/11/24

C10-C28 (DRO)	420	50	mg/kg	500	32.1	77.6	70-130				
Surrogate: <i>o</i> -Terphenyl	8.99		"	12.5	71.9	30-150					

Matrix Spike Dup (BHF0297-MSD1)

Source: 2406126-01

Prepared & Analyzed: 06/11/24

C10-C28 (DRO)	418	50	mg/kg	500	32.1	77.1	70-130	0.557	20		
Surrogate: <i>o</i> -Terphenyl	8.48		"	12.5	67.8	30-150					

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Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

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 BHF0280 - EPA 5030 Soil MS

Blank (BHF0280-BLK1)

Prepared & Analyzed: 06/11/24

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	"							
Surrogate: 2-Methylnaphthalene-d10	0.0298		"	0.0333		89.4	40-150			
Surrogate: Fluoranthene-d10	0.0291		"	0.0333		87.3	40-150			

LCS (BHF0280-BS1)

Prepared & Analyzed: 06/11/24

Acenaphthene	0.0295	0.00500	mg/kg	0.0333		88.4	31-137			
Anthracene	0.0302	0.00500	"	0.0333		90.5	30-120			
Benzo (a) anthracene	0.0301	0.00500	"	0.0333		90.4	30-120			
Benzo (a) pyrene	0.0273	0.00500	"	0.0333		82.0	30-120			
Benzo (b) fluoranthene	0.0294	0.00500	"	0.0333		88.2	30-120			
Benzo (k) fluoranthene	0.0295	0.00500	"	0.0333		88.6	30-120			
Chrysene	0.0303	0.00500	"	0.0333		90.8	30-120			
Dibenz (a,h) anthracene	0.0252	0.00500	"	0.0333		75.5	30-120			
Fluoranthene	0.0279	0.00500	"	0.0333		83.6	30-120			
Fluorene	0.0287	0.00500	"	0.0333		86.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0176	0.00500	"	0.0333		52.8	30-120			
Pyrene	0.0403	0.00500	"	0.0333		121	35-142			
1-Methylnaphthalene	0.0294	0.00500	"	0.0333		88.3	35-142			
2-Methylnaphthalene	0.0296	0.00500	"	0.0333		88.7	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0313		"	0.0333		93.9	40-150			
Surrogate: Fluoranthene-d10	0.0298		"	0.0333		89.5	40-150			

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Project: Noble - Phillips 24-24
Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

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 BHF0280 - EPA 5030 Soil MS

Matrix Spike (BHF0280-MS1)	Source: 2406126-01			Prepared & Analyzed: 06/11/24								
Acenaphthene	0.0241	0.00500	mg/kg	0.0333	ND	72.4	31-137					
Anthracene	0.0246	0.00500	"	0.0333	ND	73.9	30-120					
Benzo (a) anthracene	0.0245	0.00500	"	0.0333	ND	73.5	30-120					
Benzo (a) pyrene	0.0211	0.00500	"	0.0333	ND	63.4	30-120					
Benzo (b) fluoranthene	0.0199	0.00500	"	0.0333	ND	59.8	30-120					
Benzo (k) fluoranthene	0.0217	0.00500	"	0.0333	ND	65.1	30-120					
Chrysene	0.0240	0.00500	"	0.0333	ND	72.1	30-120					
Dibenz (a,h) anthracene	0.0181	0.00500	"	0.0333	ND	54.3	30-120					
Fluoranthene	0.0223	0.00500	"	0.0333	ND	67.0	30-120					
Fluorene	0.0258	0.00500	"	0.0333	ND	77.4	30-120					
Indeno (1,2,3-cd) pyrene	0.0243	0.00500	"	0.0333	ND	72.8	30-120					
Pyrene	0.0314	0.00500	"	0.0333	ND	94.2	35-142					
1-Methylnaphthalene	0.0273	0.00500	"	0.0333	ND	81.8	15-130					
2-Methylnaphthalene	0.0316	0.00500	"	0.0333	ND	94.7	15-130					
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0239</i>		<i>"</i>	<i>0.0333</i>		<i>71.8</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0249</i>		<i>"</i>	<i>0.0333</i>		<i>74.7</i>	<i>40-150</i>					

Matrix Spike Dup (BHF0280-MSD1)	Source: 2406126-01			Prepared & Analyzed: 06/11/24								
Acenaphthene	0.0251	0.00500	mg/kg	0.0333	ND	75.2	31-137	3.78	30			
Anthracene	0.0253	0.00500	"	0.0333	ND	75.8	30-120	2.57	30			
Benzo (a) anthracene	0.0257	0.00500	"	0.0333	ND	77.0	30-120	4.67	30			
Benzo (a) pyrene	0.0230	0.00500	"	0.0333	ND	69.0	30-120	8.55	30			
Benzo (b) fluoranthene	0.0249	0.00500	"	0.0333	ND	74.8	30-120	22.3	30			
Benzo (k) fluoranthene	0.0254	0.00500	"	0.0333	ND	76.1	30-120	15.5	30			
Chrysene	0.0249	0.00500	"	0.0333	ND	74.8	30-120	3.66	30			
Dibenz (a,h) anthracene	0.0223	0.00500	"	0.0333	ND	66.8	30-120	20.7	30			
Fluoranthene	0.0232	0.00500	"	0.0333	ND	69.6	30-120	3.70	30			
Fluorene	0.0241	0.00500	"	0.0333	ND	72.2	30-120	6.89	30			
Indeno (1,2,3-cd) pyrene	0.0158	0.00500	"	0.0333	ND	47.3	30-120	42.5	30			QR-02
Pyrene	0.0325	0.00500	"	0.0333	ND	97.5	35-142	3.41	30			
1-Methylnaphthalene	0.0247	0.00500	"	0.0333	ND	74.0	15-130	9.99	50			
2-Methylnaphthalene	0.0251	0.00500	"	0.0333	ND	75.3	15-130	22.9	50			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0261</i>		<i>"</i>	<i>0.0333</i>		<i>78.4</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0249</i>		<i>"</i>	<i>0.0333</i>		<i>74.6</i>	<i>40-150</i>					

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

Project: Noble - Phillips 24-24
Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

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

Batch BHF0339 - EPA 3050B

Blank (BHF0339-BLK1)		Prepared: 06/12/24 Analyzed: 06/17/24								
Boron	ND	2.00	mg/L							
LCS (BHF0339-BS1)		Prepared: 06/12/24 Analyzed: 06/17/24								
Boron	4.09	2.00	mg/L	5.00		81.8	80-120			
Duplicate (BHF0339-DUP1)		Source: 2406126-01		Prepared: 06/12/24 Analyzed: 06/17/24						
Boron	0.148	2.00	mg/L		0.181			19.7	20	
Matrix Spike (BHF0339-MS1)		Source: 2406126-01		Prepared: 06/12/24 Analyzed: 06/17/24						
Boron	4.74	2.00	mg/L	4.99	0.181	91.5	75-125			
Matrix Spike Dup (BHF0339-MSD1)		Source: 2406126-01		Prepared: 06/12/24 Analyzed: 06/17/24						
Boron	5.13	2.00	mg/L	4.99	0.181	99.2	75-125	7.80	25	

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Broomfield CO, 80020

Project: Noble - Phillips 24-24
Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

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 BHF0343 - EPA 3050B

Blank (BHF0343-BLK1)

Prepared: 06/12/24 Analyzed: 06/14/24

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 (BHF0343-BS1)

Prepared: 06/12/24 Analyzed: 06/14/24

Arsenic	42.9	0.200	mg/kg wet	40.0		107	80-120
Barium	42.2	0.400	"	40.0		106	80-120
Cadmium	2.01	0.200	"	2.00		100	80-120
Copper	40.5	0.400	"	40.0		101	80-120
Lead	20.1	0.200	"	20.0		100	80-120
Nickel	40.2	0.400	"	40.0		100	80-120
Silver	1.98	0.0200	"	2.00		99.0	80-120
Zinc	40.0	0.400	"	40.0		100	80-120
Selenium	4.46	0.260	"	4.00		111	80-120

Duplicate (BHF0343-DUP1)

Source: 2406126-01

Prepared: 06/12/24 Analyzed: 06/14/24

Arsenic	3.26	0.200	mg/kg dry	3.66		11.7	20
Barium	112	0.400	"	115		2.02	20
Cadmium	0.213	0.200	"	0.221		3.95	20
Copper	3.32	0.400	"	3.29		0.882	20
Lead	5.42	0.200	"	5.54		2.18	20
Nickel	4.98	0.400	"	4.70		5.82	20
Silver	0.0251	0.0200	"	0.0277		9.90	20
Zinc	15.8	0.400	"	15.6		1.04	20
Selenium	ND	0.260	"	ND			20

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Broomfield CO, 80020

Project: Noble - Phillips 24-24
Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

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 BHF0343 - EPA 3050B

Matrix Spike (BHF0343-MS1)

Source: 2406126-01

Prepared: 06/12/24 Analyzed: 06/14/24

Arsenic	46.7	0.180	mg/kg dry	42.4	3.66	102	75-125				
Barium	159	0.360	"	42.4	115	106	75-125				
Cadmium	2.39	0.180	"	2.12	0.221	102	75-125				
Copper	27.0	0.360	"	42.4	3.29	55.9	75-125				QM-05
Lead	24.1	0.180	"	21.2	5.54	87.5	75-125				
Nickel	29.2	0.360	"	42.4	4.70	57.8	75-125				QM-05
Silver	2.09	0.0180	"	2.12	0.0277	97.2	75-125				
Zinc	40.4	0.360	"	42.4	15.6	58.4	75-125				QM-05
Selenium	3.68	0.234	"	4.24	ND	86.7	75-125				

Matrix Spike Dup (BHF0343-MSD1)

Source: 2406126-01

Prepared: 06/12/24 Analyzed: 06/14/24

Arsenic	47.5	0.200	mg/kg dry	44.7	3.66	98.2	75-125	1.66	25		
Barium	159	0.400	"	44.7	115	99.9	75-125	0.165	25		
Cadmium	2.49	0.200	"	2.23	0.221	102	75-125	4.20	25		
Copper	28.8	0.400	"	44.7	3.29	57.1	75-125	6.44	25		QM-05
Lead	25.6	0.200	"	22.3	5.54	89.9	75-125	6.13	25		
Nickel	31.1	0.400	"	44.7	4.70	59.0	75-125	6.19	25		QM-05
Silver	2.19	0.0200	"	2.23	0.0277	96.8	75-125	4.62	25		
Zinc	43.3	0.400	"	44.7	15.6	61.9	75-125	6.91	25		QM-05
Selenium	3.82	0.260	"	4.47	ND	85.5	75-125	3.73	25		

Post Spike (BHF0343-PS1)

Source: 2406126-01

Prepared: 06/12/24 Analyzed: 06/17/24

Arsenic	119		ug/l	100	8.20	110	75-125				
Barium	370		"	100	257	114	75-125				
Cadmium	5.50		"	5.00	0.496	100	75-125				
Copper	67.8		"	100	7.37	60.4	75-125				QM-01
Lead	53.7		"	50.0	12.4	82.6	75-125				
Nickel	71.4		"	100	10.5	60.9	75-125				QM-01
Silver	5.05		"	5.00	0.0620	99.8	75-125				
Zinc	93.6		"	100	35.0	58.7	75-125				QM-01
Selenium	8.74		"	10.0	0.128	86.1	75-125				

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Project: Noble - Phillips 24-24
Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

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 BHF0304 - 3060A Mod

Blank (BHF0304-BLK1)		Prepared: 06/11/24 Analyzed: 06/12/24								
Chromium, Hexavalent	ND	0.30	mg/kg wet							
LCS (BHF0304-BS1)		Prepared: 06/11/24 Analyzed: 06/12/24								
Chromium, Hexavalent	22.8	0.30	mg/kg wet	25.0		91.0	80-120			
Duplicate (BHF0304-DUP1)		Source: 2406113-01		Prepared: 06/11/24 Analyzed: 06/12/24						
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND				20	
Matrix Spike (BHF0304-MS1)		Source: 2406113-01		Prepared: 06/11/24 Analyzed: 06/12/24						
Chromium, Hexavalent	28.6	0.30	mg/kg dry	28.7	ND	99.8	75-125			
Matrix Spike Dup (BHF0304-MSD1)		Source: 2406113-01		Prepared: 06/11/24 Analyzed: 06/12/24						
Chromium, Hexavalent	27.9	0.30	mg/kg dry	27.9	ND	100	75-125	2.56	20	

Summit Scientific

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Tasman Geosciences
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Broomfield CO, 80020

Project: Noble - Phillips 24-24

Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

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

Summit Scientific

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

Batch BHF0387 - General Preparation

Blank (BHF0387-BLK1)

Prepared: 06/13/24 Analyzed: 06/17/24

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

LCS (BHF0387-BS1)

Prepared: 06/13/24 Analyzed: 06/17/24

Calcium	5.60	0.0500	mg/L wet	5.00	112	70-130
Magnesium	5.30	0.0500	"	5.00	106	70-130
Sodium	5.23	0.0500	"	5.00	105	70-130

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

Project: Noble - Phillips 24-24

Project Number: UWRWE-A4194-ABN
 Project Manager: Jacob Whritenour

Reported:
 06/24/24 10:17

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 BHF0322 - General Preparation

Duplicate (BHF0322-DUP1)	Source: 2406117-01		Prepared: 06/12/24 Analyzed: 06/14/24		
% Solids	95.3	%	95.7	0.481	20

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Phillips 24-24
Project Number: UWRWE-A4194-ABN
Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

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 BHF0390 - General Preparation

Blank (BHF0390-BLK1)

Prepared: 06/13/24 Analyzed: 06/14/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHF0390-BS1)

Prepared: 06/13/24 Analyzed: 06/14/24

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

Duplicate (BHF0390-DUP1)

Source: 2406113-01

Prepared: 06/13/24 Analyzed: 06/14/24

Specific Conductance (EC) 0.170 0.0100 mmhos/cm 0.170 0.177 20

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

Project: Noble - Phillips 24-24

Project Number: UWRWE-A4194-ABN

Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

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 BHF0389 - General Preparation

LCS (BHF0389-BS1)

Prepared: 06/13/24 Analyzed: 06/14/24

pH	9.15	pH Units	9.18	99.7	95-105
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Duplicate (BHF0389-DUP1)

Source: 2406113-01

Prepared: 06/13/24 Analyzed: 06/14/24

pH	8.77	pH Units	8.84	0.795	20
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6855 W. 119th Ave.
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Project: Noble - Phillips 24-24

Project Number: UWRWE-A4194-ABN

Project Manager: Jacob Whritenour

Reported:
06/24/24 10:17

Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- 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