

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 11, 2024

AJ Engelhardt

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - SH Farms C17-3

Work Order #2410468

Enclosed are the results of analyses for samples received by Summit Scientific on 10/24/24 18:45. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Natalie Tessier For Paul Shrewsbury

President



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

Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

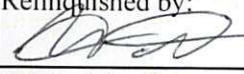
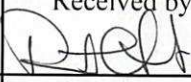

Reported:
11/11/24 07:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01-04@3'	2410468-01	Soil	10/24/24 11:06	10/24/24 18:45
FL01-06@3'	2410468-02	Soil	10/24/24 12:23	10/24/24 18:45
FL01-07@3'	2410468-03	Soil	10/24/24 12:28	10/24/24 18:45

Client: Chevron/Tasman		Project Manager: AJ Engelhardt		Company: Chevron	
Address: 6855 W. 119th Avenue		E-Mail: tas-chevron-3@tasman-geo.com		Project Name/Location: SH Farms C17. A ^W 3	
City/State/Zip: Broomfield, CO 80020				AFE#:	
Phone: 978-857-4408		Project Name: SH Farms C17-3		PO/Billing Codes:	
Sampler Name: Matthew Wentzel		Project Number:		Contact: Miguel Barron	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested					Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	915-VOC	915-PAH	915-TPH	pH, EC, SAR		Boron
1	FL01-04 @ 3'	10-24-24	1106	2			X			X			X	X	X	X	X	
2	FL01-06 @ 3'	I	1223	I			I			I			I	I	I	I	I	
3	FL01-07 @ 3'	I	1228	I			I			I			I	I	I	I	I	
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished by: 	Date/Time: 10-24-24 1515	Received by: Tasman Lockbox	Date/Time: 10-24-24 1515	TAT Business Days	Field DO	Notes:
Relinquished by: Tasman Lockbox	Date/Time: 10/24/24 1545	Received by: 	Date/Time: 10/24/24 1845	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Temperature Upon Receipt: 7.1	Corrected Temperature: 	IR gun #: 1	HNO3 lot #:	Standard	<input checked="" type="checkbox"/> Field Turb.	

S₂

Sample Receipt Checklist

S2 Work Order# 2410468

Client: Chesront Casman Client Project ID: SH Farms C17-3

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"/>	
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

10/24/24
Date/Time



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

Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

FL01-04@3'
2410468-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/24/24 11:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BHJ1126	10/25/24	10/25/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/24/24 11:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0379	94.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0396	98.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/24/24 11:06**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ1127	10/25/24	10/27/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/24/24 11:06**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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2410468-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/24/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ1080	10/25/24	10/26/24	EPA 8270D SIM	
Anthracene	0.00502	0.00500	"	"	"	"	"	"	"
Benzo (a) anthracene	0.00784	0.00500	"	"	"	"	"	"	"
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	"
Benzo (b) fluoranthene	0.00828	0.00500	"	"	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	"
Chrysene	0.00757	0.00500	"	"	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	"
Fluoranthene	0.0210	0.00500	"	"	"	"	"	"	"
Fluorene	ND	0.00500	"	"	"	"	"	"	"
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	"
Pyrene	0.0181	0.00500	"	"	"	"	"	"	"
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	"

Date Sampled: **10/24/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0177	53.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0179	53.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/24/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ1327	10/30/24	10/31/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/24/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
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Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

FL01-04@3'
2410468-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.05	0.200	mg/kg dry	1	BHJ1402	10/31/24	11/02/24	EPA 6020B
Barium	69.4	0.400	"	"	"	"	"	"
Cadmium	0.400	0.200	"	"	"	"	"	"
Copper	21.3	0.400	"	"	"	"	"	"
Lead	18.3	0.200	"	"	"	"	"	"
Nickel	6.24	0.400	"	"	"	"	"	"
Silver	0.0377	0.0200	"	"	"	"	"	"
Zinc	468	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/24/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHK0130	11/04/24	11/05/24	EPA 7196A	

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

Date Sampled: **10/24/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	121	0.0500	mg/L dry	1	BHJ1363	10/30/24	11/08/24	EPA 6020B	
Magnesium	98.4	0.0500	"	"	"	"	"	"	
Sodium	296	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/24/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.84	0.00100	units	1	BHK0428	11/08/24	11/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/24/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: [none]
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FL01-04@3'
2410468-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	93.9	%	1	BHJ1380	10/30/24	10/31/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/24/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.25	0.0100	mmhos/cm	1	BHJ1367	10/30/24	10/31/24	EPA 120.1	

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

Date Sampled: **10/24/24 11:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.56		pH Units	1	BHJ1366	10/30/24	10/31/24	EPA 9045D	

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Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

FL01-06@3'
2410468-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/24/24 12:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ1126	10/25/24	10/26/24	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	0.18	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/24/24 12:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0367	91.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/24/24 12:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ1127	10/25/24	10/27/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/24/24 12:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.5	108 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - SH Farms C17-3

Project Number: [none]
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FL01-06@3'
2410468-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **10/24/24 12:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.0407	0.00500	mg/kg	1	BHJ1080	10/25/24	10/26/24	EPA 8270D SIM	
Anthracene	0.0552	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.0736	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0472	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	0.0734	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	0.0259	0.00500	"	"	"	"	"	"	
Chrysene	0.0701	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	0.00844	0.00500	"	"	"	"	"	"	
Fluoranthene	0.203	0.00500	"	"	"	"	"	"	E
Fluorene	0.0415	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.0333	0.00500	"	"	"	"	"	"	
Pyrene	0.171	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.00815	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0184	0.00500	"	"	"	"	"	"	

Date Sampled: **10/24/24 12:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0219	65.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0218	65.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/24/24 12:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ1327	10/30/24	10/31/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/24/24 12:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.26	0.200	mg/kg dry	1	BHJ1402	10/31/24	11/02/24	EPA 6020B	

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FL01-06@3'
2410468-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Barium	52.6	0.400	mg/kg dry	1	BHJ1402	10/31/24	11/02/24	EPA 6020B	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.92	0.400	"	"	"	"	"	"	
Lead	4.42	0.200	"	"	"	"	"	"	
Nickel	3.93	0.400	"	"	"	"	"	"	
Silver	0.0254	0.0200	"	"	"	"	"	"	
Zinc	14.8	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 10/24/24 12:23

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHK0130	11/04/24	11/05/24	EPA 7196A	

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

Date Sampled: 10/24/24 12:23

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	59.5	0.0500	mg/L dry	1	BHJ1363	10/30/24	11/08/24	EPA 6020B	
Magnesium	21.7	0.0500	"	"	"	"	"	"	
Sodium	135	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 10/24/24 12:23

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.81	0.00100	units	1	BHK0428	11/08/24	11/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 10/24/24 12:23

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
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FL01-06@3'
2410468-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	96.9	%	1	BHJ1380	10/30/24	10/31/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/24/24 12:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.63	0.0100	mmhos/cm	1	BHJ1367	10/30/24	10/31/24	EPA 120.1	

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

Date Sampled: **10/24/24 12:23**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.02		pH Units	1	BHJ1366	10/30/24	10/31/24	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

FL01-07@3'
2410468-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHJ1126	10/25/24	10/28/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0388	96.9 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0380	94.9 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	86	50		mg/kg	1	BHJ1127	10/25/24	10/27/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	14.9	119 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

FL01-07@3'
2410468-03 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.0413	0.00500	mg/kg	1	BHJ1080	10/25/24	10/26/24	EPA 8270D SIM	
Anthracene	0.138	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	0.419	0.00500	"	"	"	"	"	"	E
Benzo (a) pyrene	0.337	0.00500	"	"	"	"	"	"	E
Benzo (b) fluoranthene	0.528	0.00500	"	"	"	"	"	"	E
Benzo (k) fluoranthene	0.170	0.00500	"	"	"	"	"	"	
Chrysene	0.413	0.00500	"	"	"	"	"	"	E
Dibenz (a,h) anthracene	0.0396	0.00500	"	"	"	"	"	"	
Fluoranthene	0.724	0.00500	"	"	"	"	"	"	E
Fluorene	0.0500	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	0.204	0.00500	"	"	"	"	"	"	E
Pyrene	0.768	0.00500	"	"	"	"	"	"	E
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0215	64.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0215	64.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ1327	10/30/24	10/31/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.62	0.200	mg/kg dry	1	BHJ1402	10/31/24	11/02/24	EPA 6020B	

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Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

FL01-07@3'
2410468-03 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Barium	83.5	0.400	mg/kg dry	1	BHJ1402	10/31/24	11/02/24	EPA 6020B	
Cadmium	0.201	0.200	"	"	"	"	"	"	
Copper	7.12	0.400	"	"	"	"	"	"	
Lead	5.63	0.200	"	"	"	"	"	"	
Nickel	4.83	0.400	"	"	"	"	"	"	
Silver	0.0285	0.0200	"	"	"	"	"	"	
Zinc	19.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHK0130	11/04/24	11/05/24	EPA 7196A	

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

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	34.8	0.0500	mg/L dry	1	BHJ1363	10/30/24	11/08/24	EPA 6020B	
Magnesium	9.41	0.0500	"	"	"	"	"	"	
Sodium	36.9	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.43	0.00100	units	1	BHK0428	11/08/24	11/08/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.3		%	1	BHJ1380	10/30/24	10/31/24	Calculation	

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Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

FL01-07@3'
2410468-03 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.804	0.0100	mmhos/cm	1	BHJ1367	10/30/24	10/31/24	EPA 120.1	

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

Date Sampled: **10/24/24 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.92		pH Units	1	BHJ1366	10/30/24	10/31/24	EPA 9045D	

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Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

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 BHJ1126 - EPA 5030 Soil MS

Blank (BHJ1126-BLK1)

Prepared & Analyzed: 10/25/24

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	0.0373		"	0.0400		93.2	50-150				
Surrogate: Toluene-d8	0.0404		"	0.0400		101	50-150				
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	50-150				

LCS (BHJ1126-BS1)

Prepared & Analyzed: 10/25/24

Benzene	0.105	0.0020	mg/kg	0.100		105	70-130				
Toluene	0.100	0.0050	"	0.100		100	70-130				
Ethylbenzene	0.102	0.0050	"	0.100		102	70-130				
m,p-Xylene	0.197	0.010	"	0.200		98.5	70-130				
o-Xylene	0.0982	0.0050	"	0.100		98.2	70-130				
1,2,4-Trimethylbenzene	0.0936	0.0050	"	0.100		93.6	70-130				
1,3,5-Trimethylbenzene	0.0927	0.0050	"	0.100		92.7	70-130				
Naphthalene	0.0993	0.0038	"	0.100		99.3	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0375		"	0.0400		93.8	50-150				
Surrogate: Toluene-d8	0.0396		"	0.0400		99.1	50-150				
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.5	50-150				

Matrix Spike (BHJ1126-MS1)

Source: 2410468-01

Prepared & Analyzed: 10/25/24

Benzene	0.0937	0.0020	mg/kg	0.100	ND	93.7	70-130				
Toluene	0.0818	0.0050	"	0.100	ND	81.8	70-130				
Ethylbenzene	0.0777	0.0050	"	0.100	ND	77.7	70-130				
m,p-Xylene	0.149	0.010	"	0.200	ND	74.3	70-130				
o-Xylene	0.0748	0.0050	"	0.100	ND	74.8	70-130				
1,2,4-Trimethylbenzene	0.0640	0.0050	"	0.100	ND	64.0	70-130				QM-05
1,3,5-Trimethylbenzene	0.0649	0.0050	"	0.100	ND	64.9	70-130				QM-05
Naphthalene	0.0578	0.0038	"	0.100	ND	57.8	70-130				QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0382		"	0.0400		95.6	50-150				
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	50-150				
Surrogate: 4-Bromofluorobenzene	0.0395		"	0.0400		98.8	50-150				

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Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

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 BHJ1126 - EPA 5030 Soil MS

Matrix Spike Dup (BHJ1126-MSD1)	Source: 2410468-01			Prepared & Analyzed: 10/25/24						
Benzene	0.0958	0.0020	mg/kg	0.100	ND	95.8	70-130	2.22	30	
Toluene	0.0863	0.0050	"	0.100	ND	86.3	70-130	5.39	30	
Ethylbenzene	0.0812	0.0050	"	0.100	ND	81.2	70-130	4.42	30	
m,p-Xylene	0.161	0.010	"	0.200	ND	80.3	70-130	7.78	30	
o-Xylene	0.0805	0.0050	"	0.100	ND	80.5	70-130	7.26	30	
1,2,4-Trimethylbenzene	0.0690	0.0050	"	0.100	ND	69.0	70-130	7.62	30	QM-05
1,3,5-Trimethylbenzene	0.0698	0.0050	"	0.100	ND	69.8	70-130	7.27	30	QM-05
Naphthalene	0.0599	0.0038	"	0.100	ND	59.9	70-130	3.57	30	QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0386		"	0.0400		96.6	50-150			
Surrogate: Toluene-d8	0.0400		"	0.0400		99.9	50-150			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		101	50-150			

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Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BHJ1127 - EPA 3550A

Blank (BHJ1127-BLK1)

Prepared: 10/25/24 Analyzed: 10/27/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	14.5		"	12.5		116	30-150			

LCS (BHJ1127-BS1)

Prepared: 10/25/24 Analyzed: 10/27/24

C10-C28 (DRO)	609	50	mg/kg	500		122	70-130			
Surrogate: <i>o</i> -Terphenyl	14.4		"	12.5		115	30-150			

Matrix Spike (BHJ1127-MS1)

Source: 2410468-01

Prepared: 10/25/24 Analyzed: 10/27/24

C10-C28 (DRO)	589	50	mg/kg	500	ND	118	70-130			
Surrogate: <i>o</i> -Terphenyl	14.3		"	12.5		114	30-150			

Matrix Spike Dup (BHJ1127-MSD1)

Source: 2410468-01

Prepared: 10/25/24 Analyzed: 10/27/24

C10-C28 (DRO)	599	50	mg/kg	500	ND	120	70-130	1.71	20	
Surrogate: <i>o</i> -Terphenyl	14.9		"	12.5		119	30-150			

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Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

PAH by EPA Method 8270D SIM - Quality Control

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

Batch BHJ1080 - EPA 5030 Soil MS

Blank (BHJ1080-BLK1)

Prepared & Analyzed: 10/25/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0290</i>		"	<i>0.0333</i>		<i>87.0</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0303</i>		"	<i>0.0333</i>		<i>90.8</i>		<i>40-150</i>		

LCS (BHJ1080-BS1)

Prepared & Analyzed: 10/25/24

Acenaphthene	0.0242	0.00500	mg/kg	0.0333		72.7		31-137		
Anthracene	0.0249	0.00500	"	0.0333		74.7		30-120		
Benzo (a) anthracene	0.0260	0.00500	"	0.0333		77.9		30-120		
Benzo (a) pyrene	0.0237	0.00500	"	0.0333		71.1		30-120		
Benzo (b) fluoranthene	0.0250	0.00500	"	0.0333		75.0		30-120		
Benzo (k) fluoranthene	0.0256	0.00500	"	0.0333		76.9		30-120		
Chrysene	0.0255	0.00500	"	0.0333		76.4		30-120		
Dibenz (a,h) anthracene	0.0227	0.00500	"	0.0333		68.1		30-120		
Fluoranthene	0.0258	0.00500	"	0.0333		77.3		30-120		
Fluorene	0.0255	0.00500	"	0.0333		76.4		30-120		
Indeno (1,2,3-cd) pyrene	0.0253	0.00500	"	0.0333		76.0		30-120		
Pyrene	0.0269	0.00500	"	0.0333		80.6		35-142		
1-Methylnaphthalene	0.0252	0.00500	"	0.0333		75.7		35-142		
2-Methylnaphthalene	0.0256	0.00500	"	0.0333		76.9		35-142		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0258</i>		"	<i>0.0333</i>		<i>77.3</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0257</i>		"	<i>0.0333</i>		<i>77.2</i>		<i>40-150</i>		

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Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

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 BHJ1080 - EPA 5030 Soil MS

Matrix Spike (BHJ1080-MS1)	Source: 2410449-01			Prepared & Analyzed: 10/25/24						
Acenaphthene	0.0193	0.00500	mg/kg	0.0333	ND	57.8	31-137			
Anthracene	0.0223	0.00500	"	0.0333	ND	66.8	30-120			
Benzo (a) anthracene	0.0272	0.00500	"	0.0333	ND	81.5	30-120			
Benzo (a) pyrene	0.0213	0.00500	"	0.0333	ND	63.8	30-120			
Benzo (b) fluoranthene	0.0256	0.00500	"	0.0333	ND	76.7	30-120			
Benzo (k) fluoranthene	0.0197	0.00500	"	0.0333	ND	59.0	30-120			
Chrysene	0.0256	0.00500	"	0.0333	ND	76.7	30-120			
Dibenz (a,h) anthracene	0.0172	0.00500	"	0.0333	ND	51.5	30-120			
Fluoranthene	0.0339	0.00500	"	0.0333	ND	102	30-120			
Fluorene	0.0203	0.00500	"	0.0333	ND	60.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0204	0.00500	"	0.0333	ND	61.3	30-120			
Pyrene	0.0413	0.00500	"	0.0333	ND	124	35-142			
1-Methylnaphthalene	0.0172	0.00500	"	0.0333	ND	51.5	15-130			
2-Methylnaphthalene	0.0175	0.00500	"	0.0333	ND	52.5	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0170</i>		<i>"</i>	<i>0.0333</i>		<i>51.0</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0170</i>		<i>"</i>	<i>0.0333</i>		<i>51.1</i>	<i>40-150</i>			

Matrix Spike Dup (BHJ1080-MSD1)	Source: 2410449-01			Prepared & Analyzed: 10/25/24						
Acenaphthene	0.0204	0.00500	mg/kg	0.0333	ND	61.3	31-137	5.93	30	
Anthracene	0.0235	0.00500	"	0.0333	ND	70.6	30-120	5.42	30	
Benzo (a) anthracene	0.0283	0.00500	"	0.0333	ND	84.9	30-120	4.09	30	
Benzo (a) pyrene	0.0217	0.00500	"	0.0333	ND	65.2	30-120	2.17	30	
Benzo (b) fluoranthene	0.0266	0.00500	"	0.0333	ND	79.8	30-120	3.97	30	
Benzo (k) fluoranthene	0.0201	0.00500	"	0.0333	ND	60.4	30-120	2.33	30	
Chrysene	0.0260	0.00500	"	0.0333	ND	78.0	30-120	1.70	30	
Dibenz (a,h) anthracene	0.0181	0.00500	"	0.0333	ND	54.3	30-120	5.35	30	
Fluoranthene	0.0369	0.00500	"	0.0333	ND	111	30-120	8.36	30	
Fluorene	0.0214	0.00500	"	0.0333	ND	64.3	30-120	5.44	30	
Indeno (1,2,3-cd) pyrene	0.0218	0.00500	"	0.0333	ND	65.3	30-120	6.31	30	
Pyrene	0.0431	0.00500	"	0.0333	ND	129	35-142	4.37	30	
1-Methylnaphthalene	0.0186	0.00500	"	0.0333	ND	55.9	15-130	8.15	50	
2-Methylnaphthalene	0.0189	0.00500	"	0.0333	ND	56.8	15-130	7.85	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0178</i>		<i>"</i>	<i>0.0333</i>		<i>53.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0172</i>		<i>"</i>	<i>0.0333</i>		<i>51.7</i>	<i>40-150</i>			

Summit Scientific

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

Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

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 BHJ1327 - EPA 3050B

Blank (BHJ1327-BLK1)

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

Boron ND 2.00 mg/L

LCS (BHJ1327-BS1)

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

Boron 4.64 2.00 mg/L 5.00 92.8 80-120

Duplicate (BHJ1327-DUP1)

Source: 2410406-01

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

Boron 0.109 2.00 mg/L 0.132 18.9 20

Matrix Spike (BHJ1327-MS1)

Source: 2410406-01

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

Boron 4.83 2.00 mg/L 5.04 0.132 93.2 75-125

Matrix Spike Dup (BHJ1327-MSD1)

Source: 2410406-01

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

Boron 4.93 2.00 mg/L 5.04 0.132 95.2 75-125 2.16 25

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

Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

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 BHJ1402 - EPA 3050B

Blank (BHJ1402-BLK1)

Prepared: 10/31/24 Analyzed: 11/02/24

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 (BHJ1402-BS1)

Prepared: 10/31/24 Analyzed: 11/02/24

Arsenic	39.0	0.200	mg/kg wet	41.0	95.0	80-120
Barium	41.3	0.400	"	41.0	101	80-120
Cadmium	2.06	0.200	"	2.05	100	80-120
Copper	44.3	0.400	"	41.0	108	80-120
Lead	20.4	0.200	"	20.5	99.8	80-120
Nickel	43.5	0.400	"	41.0	106	80-120
Silver	2.06	0.0200	"	2.05	101	80-120
Zinc	43.9	0.400	"	41.0	107	80-120
Selenium	3.93	0.260	"	4.10	95.9	80-120

Duplicate (BHJ1402-DUP1)

Source: 2410406-01

Prepared: 10/31/24 Analyzed: 11/02/24

Arsenic	1.52	0.200	mg/kg dry	1.31	14.8	20
Barium	38.5	0.400	"	38.0	1.26	20
Cadmium	0.130	0.200	"	0.137	5.15	20
Copper	2.61	0.400	"	2.64	1.36	20
Lead	4.26	0.200	"	4.25	0.399	20
Nickel	2.38	0.400	"	2.36	0.943	20
Silver	0.0122	0.0200	"	0.0124	1.65	20
Zinc	11.3	0.400	"	11.2	0.928	20
Selenium	ND	0.260	"	ND		20

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

Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

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 BHJ1402 - EPA 3050B

Matrix Spike (BHJ1402-MS1)

Source: 2410406-01

Prepared: 10/31/24 Analyzed: 11/02/24

Arsenic	39.5	0.200	mg/kg dry	40.7	1.31	93.9	75-125		
Barium	73.8	0.400	"	40.7	38.0	87.8	75-125		
Cadmium	2.19	0.200	"	2.03	0.137	101	75-125		
Copper	34.2	0.400	"	40.7	2.64	77.6	75-125		
Lead	24.3	0.200	"	20.3	4.25	98.7	75-125		
Nickel	33.8	0.400	"	40.7	2.36	77.2	75-125		
Silver	1.98	0.0200	"	2.03	0.0124	96.5	75-125		
Zinc	43.2	0.400	"	40.7	11.2	78.8	75-125		
Selenium	3.61	0.260	"	4.07	ND	88.7	75-125		

Matrix Spike Dup (BHJ1402-MSD1)

Source: 2410406-01

Prepared: 10/31/24 Analyzed: 11/02/24

Arsenic	40.7	0.200	mg/kg dry	42.4	1.31	92.9	75-125	2.90	25
Barium	76.3	0.400	"	42.4	38.0	90.3	75-125	3.39	25
Cadmium	2.26	0.200	"	2.12	0.137	100	75-125	2.95	25
Copper	35.2	0.400	"	42.4	2.64	76.8	75-125	2.73	25
Lead	24.7	0.200	"	21.2	4.25	96.4	75-125	1.39	25
Nickel	34.9	0.400	"	42.4	2.36	76.8	75-125	3.29	25
Silver	2.05	0.0200	"	2.12	0.0124	96.1	75-125	3.57	25
Zinc	44.2	0.400	"	42.4	11.2	78.0	75-125	2.30	25
Selenium	3.83	0.260	"	4.24	ND	90.4	75-125	5.90	25

Summit Scientific

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

Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

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 BHK0130 - 3060A Mod

Blank (BHK0130-BLK1)

Prepared: 11/04/24 Analyzed: 11/05/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHK0130-BS1)

Prepared: 11/04/24 Analyzed: 11/05/24

Chromium, Hexavalent 26.0 0.30 mg/kg wet 25.0 104 80-120

Duplicate (BHK0130-DUP1)

Source: 2410468-01

Prepared: 11/04/24 Analyzed: 11/05/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHK0130-MS1)

Source: 2410468-01

Prepared: 11/04/24 Analyzed: 11/05/24

Chromium, Hexavalent 28.2 0.30 mg/kg dry 26.6 ND 106 75-125

Matrix Spike Dup (BHK0130-MSD1)

Source: 2410468-01

Prepared: 11/04/24 Analyzed: 11/05/24

Chromium, Hexavalent 27.0 0.30 mg/kg dry 26.6 ND 101 75-125 4.44 20

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Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

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 BHJ1363 - General Preparation

Blank (BHJ1363-BLK1)

Prepared: 10/30/24 Analyzed: 11/08/24

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

LCS (BHJ1363-BS1)

Prepared: 10/30/24 Analyzed: 11/08/24

Calcium	5.48	0.0500	mg/L wet	5.00		110	70-130			
Magnesium	4.70	0.0500	"	5.00		94.1	70-130			
Sodium	4.60	0.0500	"	5.00		92.0	70-130			

Summit Scientific

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 6855 W. 119th Ave.
 Broomfield CO, 80020

Project: Noble - SH Farms C17-3

Project Number: [none]
 Project Manager: AJ Engelhardt

Reported:
 11/11/24 07:56

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 BHJ1380 - General Preparation

Duplicate (BHJ1380-DUP1)	Source: 2410468-01		Prepared: 10/30/24 Analyzed: 10/31/24		
% Solids	94.0	%	93.9	0.160	20

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Tasman Geosciences
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Broomfield CO, 80020

Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

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 BHJ1367 - General Preparation

Blank (BHJ1367-BLK1)

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

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHJ1367-BS1)

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

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BHJ1367-DUP1)

Source: 2410428-01

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

Specific Conductance (EC) 0.275 0.0100 mmhos/cm 0.279 1.34 20

Summit Scientific

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

Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

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 BHJ1366 - General Preparation

LCS (BHJ1366-BS1)

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

pH	9.04		pH Units	9.18		98.5	95-105			
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Duplicate (BHJ1366-DUP1)

Source: 2410428-01

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

pH	8.73		pH Units	8.85				1.37	20	
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - SH Farms C17-3

Project Number: [none]
Project Manager: AJ Engelhardt

Reported:
11/11/24 07:56

Notes and Definitions

- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- 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