

# Summit Scientific

---

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 19, 2025

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

RE: Noble - Reistad 1 Tank Battery

Work Order #2412394

Enclosed are the results of analyses for samples received by Summit Scientific on 12/18/24 18:07. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Natalie Tessier For Ben Shrewsbury  
Laboratory Manager



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01R@6-7'	2412394-01	Soil	12/18/24 10:00	12/18/24 18:07
BH01R@7-8'	2412394-02	Soil	12/18/24 10:07	12/18/24 18:07
BH01R@8-9'	2412394-03	Soil	12/18/24 10:04	12/18/24 18:07
BH01R@10-11'	2412394-04	Soil	12/18/24 10:06	12/18/24 18:07

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.*



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

Lab ID	Page 1 of 1
2412394	

	<b>Send Data To:</b>	<b>Send Invoice To:</b>
Client: Tasman , Inc.	Project Manager: Daniel Simpson	Company: Noble
Address: 6855 W. 119th Ave.	E-Mail: tas-chevron-5@tasman-geo.com	Project Name/Location: Reistad 1 Tank Battery
City/State/Zip: Broomfield / CO/ 80020	RBUEUF27@chevron.com / Dan.peterson@chevron.com	AFE#:
Phone:	Project Name: Reistad 1 Tank Battery	PO/Billing Codes:
Sampler Name: S. Anderson	Project Number:	Contact:

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	BH01R e 6-7'	12/18/24	10:00	2			X			X			X	X	X	X	X	X		SAR, EC, pH by saturated paste
2	BH01R e 7-8'		10:02																	
3	BH01R e 8-9'		10:04																	
4	BH01R e 10-11'		10:06																	
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <i>[Signature]</i>	Date/Time: 12/18/24 1556	Received by: Tasman Lockbox	Date/Time: 12/18/24 1556	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lockbox	Date/Time: 12/20/24 1807	Received by: <i>[Signature]</i>	Date/Time: 12/20/24 1807	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 7.3	Corrected Temperature: <i>[Symbol]</i>	IR gun #: 1	HNO3 lot #:			

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2412394

Client: Tasman / Noble Client Project ID: Reisted 1 Tank Battery

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? <sup>(1)</sup> 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"/>	<u>NOTE</u>
If custody seals are present, are they intact? <sup>(1)</sup>	<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 <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , 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? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<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)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> 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):

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

AS  
Custodian Printed Name

12/18/24  
Date/Time



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@6-7'**  
**2412394-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **12/18/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHL1309	12/30/24	01/01/25	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: **12/18/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0525	131 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0417	104 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **12/18/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHL1321	12/30/24	01/03/25	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **12/18/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	10.9	87.2 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@6-7'**  
**2412394-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **12/18/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHL1289	12/30/24	01/03/25	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: **12/18/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0254	76.1 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0289	86.8 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **12/18/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>2.96</b>	2.00	mg/L	1	BIB0532	02/11/25	02/18/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **12/18/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@6-7'**  
**2412394-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	4.22	0.200	mg/kg dry	1	BIB0362	02/07/25	02/18/25	EPA 6020B
Barium	32.1	0.400	"	"	"	"	"	"
Cadmium	0.299	0.200	"	"	"	"	"	"
Copper	8.44	0.400	"	"	"	"	"	"
Lead	14.4	0.200	"	"	"	"	"	"
Nickel	4.83	0.400	"	"	"	"	"	"
Silver	0.0376	0.0200	"	"	"	"	"	"
Zinc	31.4	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **12/18/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0648	01/15/25	01/17/25	EPA 7196A	

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

Date Sampled: **12/18/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	60.2	0.0500	mg/L dry	1	BIA0499	01/13/25	01/20/25	EPA 6020B	
Magnesium	17.3	0.0500	"	"	"	"	"	"	
Sodium	214	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **12/18/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.26	0.00100	units	1	BIA0948	01/21/25	01/21/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **12/18/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@6-7'**  
**2412394-01 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	85.0	%	1	BIA0603	01/14/25	01/16/25	Calculation
----------	------	---	---	---------	----------	----------	-------------

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **12/18/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.633	0.0100	mmhos/cm	1	BIA0484	01/13/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BIA0479	01/13/25	01/16/25	EPA 9045D	

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@7-8'**  
**2412394-02 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **12/18/24 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHL1309	12/30/24	01/01/25	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: **12/18/24 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0541	135 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0427	107 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **12/18/24 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHL1321	12/30/24	01/03/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/18/24 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.75	54.0 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@7-8'**  
**2412394-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **12/18/24 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHL1289	12/30/24	01/03/25	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: **12/18/24 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0199	59.7 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0227	68.0 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **12/18/24 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>2.25</b>	2.00	mg/L	1	BIB0532	02/11/25	02/18/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **12/18/24 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@7-8'**  
**2412394-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	7.21	0.200	mg/kg dry	1	BIB0362	02/07/25	02/18/25	EPA 6020B
Barium	39.7	0.400	"	"	"	"	"	"
Cadmium	0.204	0.200	"	"	"	"	"	"
Copper	3.66	0.400	"	"	"	"	"	"
Lead	19.8	0.200	"	"	"	"	"	"
Nickel	4.40	0.400	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	33.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **12/18/24 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0648	01/15/25	01/17/25	EPA 7196A	

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

Date Sampled: **12/18/24 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	174	0.0500	mg/L dry	1	BIA0499	01/13/25	01/20/25	EPA 6020B	
Magnesium	42.7	0.0500	"	"	"	"	"	"	
Sodium	695	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **12/18/24 10:07**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	12.2	0.00100	units	1	BIA0948	01/21/25	01/21/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@7-8'**  
**2412394-02 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **12/18/24 10:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	85.5			%	1	BIA0603	01/14/25	01/16/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **12/18/24 10:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.70	0.0100		mmhos/cm	1	BIA0484	01/13/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 10:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.34			pH Units	1	BIA0479	01/13/25	01/16/25	EPA 9045D	

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@8-9'**  
**2412394-03 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **12/18/24 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHL1309	12/30/24	01/01/25	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: **12/18/24 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0570	142 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0426	106 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **12/18/24 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHL1321	12/30/24	01/03/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/18/24 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.93	55.4 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@8-9'**  
**2412394-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **12/18/24 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHL1289	12/30/24	01/03/25	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: **12/18/24 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0214	64.1 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0242	72.6 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **12/18/24 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>3.00</b>	2.00	mg/L	1	BIB0532	02/11/25	02/18/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **12/18/24 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@8-9'**  
**2412394-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	12.1	0.200	mg/kg dry	1	BIB0362	02/07/25	02/18/25	EPA 6020B	
Barium	31.9	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.95	0.400	"	"	"	"	"	"	
Lead	5.07	0.200	"	"	"	"	"	"	
Nickel	2.36	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	17.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **12/18/24 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0648	01/15/25	01/17/25	EPA 7196A	

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

Date Sampled: **12/18/24 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	126	0.0500	mg/L dry	1	BIA0499	01/13/25	01/20/25	EPA 6020B	
Magnesium	64.6	0.0500	"	"	"	"	"	"	
Sodium	775	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **12/18/24 10:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	14.0	0.00100	units	1	BIA0948	01/21/25	01/21/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@8-9'**  
**2412394-03 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **12/18/24 10:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	84.7			%	1	BIA0603	01/14/25	01/16/25	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **12/18/24 10:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.55	0.0100		mmhos/cm	1	BIA0484	01/13/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 10:04**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.78			pH Units	1	BIA0479	01/13/25	01/16/25	EPA 9045D	

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@10-11'**  
**2412394-04 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **12/18/24 10:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHL1309	12/30/24	01/01/25	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: **12/18/24 10:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0519	130 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0415	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0425	106 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **12/18/24 10:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHL1321	12/30/24	01/03/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **12/18/24 10:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.41	67.3 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@10-11'**  
**2412394-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **12/18/24 10:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHL1289	12/30/24	01/03/25	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: **12/18/24 10:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0276	82.7 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0319	95.8 %	40-140		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **12/18/24 10:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIB0532	02/11/25	02/18/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **12/18/24 10:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@10-11'**  
**2412394-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	3.31	0.200	mg/kg dry	1	BIB0362	02/07/25	02/18/25	EPA 6020B
Barium	11.5	0.400	"	"	"	"	"	"
Cadmium	0.338	0.200	"	"	"	"	"	"
Copper	5.49	0.400	"	"	"	"	"	"
Lead	7.83	0.200	"	"	"	"	"	"
Nickel	7.37	0.400	"	"	"	"	"	"
Silver	0.0492	0.0200	"	"	"	"	"	"
Zinc	35.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 12/18/24 10:06

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA0648	01/15/25	01/17/25	EPA 7196A	

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

Date Sampled: 12/18/24 10:06

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	75.8	0.0500	mg/L dry	1	BIA0499	01/13/25	01/20/25	EPA 6020B	
Magnesium	35.1	0.0500	"	"	"	"	"	"	
Sodium	195	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 12/18/24 10:06

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.64	0.00100	units	1	BIA0948	01/21/25	01/21/25	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: 12/18/24 10:06

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**BH01R@10-11'**  
**2412394-04 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	84.6	%	1	BIA0603	01/14/25	01/16/25	Calculation
----------	------	---	---	---------	----------	----------	-------------

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **12/18/24 10:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.55	0.0100	mmhos/cm	1	BIA0484	01/13/25	01/16/25	EPA 120.1	

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

Date Sampled: **12/18/24 10:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.52		pH Units	1	BIA0479	01/13/25	01/16/25	EPA 9045D	

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

### 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 BHL1309 - EPA 5030 Soil MS

##### Blank (BHL1309-BLK1)

Prepared: 12/30/24 Analyzed: 01/01/25

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	0.0458		"	0.0400		114	50-150			
Surrogate: Toluene-d8	0.0403		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0392		"	0.0400		98.1	50-150			

##### LCS (BHL1309-BS1)

Prepared: 12/30/24 Analyzed: 01/01/25

Benzene	0.0954	0.0020	mg/kg	0.100		95.4	70-130			
Toluene	0.0917	0.0050	"	0.100		91.7	70-130			
Ethylbenzene	0.0923	0.0050	"	0.100		92.3	70-130			
m,p-Xylene	0.176	0.010	"	0.200		88.0	70-130			
o-Xylene	0.0887	0.0050	"	0.100		88.7	70-130			
1,2,4-Trimethylbenzene	0.0886	0.0050	"	0.100		88.6	70-130			
1,3,5-Trimethylbenzene	0.0873	0.0050	"	0.100		87.3	70-130			
Naphthalene	0.0824	0.0038	"	0.100		82.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0475		"	0.0400		119	50-150			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		101	50-150			

##### Matrix Spike (BHL1309-MS1)

Source: 2412384-01

Prepared: 12/30/24 Analyzed: 01/01/25

Benzene	0.0868	0.0020	mg/kg	0.100	ND	86.8	70-130			
Toluene	0.0833	0.0050	"	0.100	ND	83.3	70-130			
Ethylbenzene	0.0835	0.0050	"	0.100	ND	83.5	70-130			
m,p-Xylene	0.159	0.010	"	0.200	ND	79.6	70-130			
o-Xylene	0.0788	0.0050	"	0.100	ND	78.8	70-130			
1,2,4-Trimethylbenzene	0.0746	0.0050	"	0.100	ND	74.6	70-130			
1,3,5-Trimethylbenzene	0.0734	0.0050	"	0.100	ND	73.4	70-130			
Naphthalene	0.0664	0.0038	"	0.100	ND	66.4	70-130			QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0483		"	0.0400		121	50-150			
Surrogate: Toluene-d8	0.0402		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0406		"	0.0400		102	50-150			

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**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 BHL1309 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BHL1309-MSD1)</b>	<b>Source: 2412384-01</b>			Prepared: 12/30/24 Analyzed: 01/01/25						
Benzene	0.0853	0.0020	mg/kg	0.100	ND	85.3	70-130	1.78	30	
Toluene	0.0816	0.0050	"	0.100	ND	81.6	70-130	2.15	30	
Ethylbenzene	0.0801	0.0050	"	0.100	ND	80.1	70-130	4.15	30	
m,p-Xylene	0.151	0.010	"	0.200	ND	75.5	70-130	5.28	30	
o-Xylene	0.0749	0.0050	"	0.100	ND	74.9	70-130	5.11	30	
1,2,4-Trimethylbenzene	0.0687	0.0050	"	0.100	ND	68.7	70-130	8.25	30	QM-05
1,3,5-Trimethylbenzene	0.0690	0.0050	"	0.100	ND	69.0	70-130	6.20	30	QM-05
Naphthalene	0.0598	0.0038	"	0.100	ND	59.8	70-130	10.4	30	QM-05
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0476</i>		<i>"</i>	<i>0.0400</i>		<i>119</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0396</i>		<i>"</i>	<i>0.0400</i>		<i>99.1</i>	<i>50-150</i>			

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BHL1321 - EPA 3550A**

**Blank (BHL1321-BLK1)**

Prepared: 12/30/24 Analyzed: 01/03/25

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	10.8		"	12.5		86.6		30-150		

**LCS (BHL1321-BS1)**

Prepared: 12/30/24 Analyzed: 01/03/25

C10-C28 (DRO)	510	50	mg/kg	500		102		70-130		
Surrogate: <i>o</i> -Terphenyl	11.7		"	12.5		93.4		30-150		

**Matrix Spike (BHL1321-MS1)**

Source: 2412384-01

Prepared: 12/30/24 Analyzed: 01/03/25

C10-C28 (DRO)	437	50	mg/kg	500	42.4	78.8		70-130		
Surrogate: <i>o</i> -Terphenyl	9.50		"	12.5		76.0		30-150		

**Matrix Spike Dup (BHL1321-MSD1)**

Source: 2412384-01

Prepared: 12/30/24 Analyzed: 01/03/25

C10-C28 (DRO)	486	50	mg/kg	500	42.4	88.6		70-130	10.6	20
Surrogate: <i>o</i> -Terphenyl	11.7		"	12.5		93.5		30-150		

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**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 BHL1289 - EPA 5030 Soil MS**

**Blank (BHL1289-BLK1)**

Prepared: 12/30/24 Analyzed: 01/02/25

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	0.0231		"	0.0333		69.3	40-140			
Surrogate: Fluoranthene-d10	0.0258		"	0.0333		77.5	40-140			

**LCS (BHL1289-BS1)**

Prepared: 12/30/24 Analyzed: 01/02/25

Acenaphthene	0.0242	0.00500	mg/kg	0.0333		72.6	40-140			
Anthracene	0.0259	0.00500	"	0.0333		77.6	40-140			
Benzo (a) anthracene	0.0253	0.00500	"	0.0333		75.9	40-140			
Benzo (a) pyrene	0.0238	0.00500	"	0.0333		71.4	40-140			
Benzo (b) fluoranthene	0.0231	0.00500	"	0.0333		69.4	40-140			
Benzo (k) fluoranthene	0.0236	0.00500	"	0.0333		70.8	40-140			
Chrysene	0.0249	0.00500	"	0.0333		74.7	40-140			
Dibenz (a,h) anthracene	0.0219	0.00500	"	0.0333		65.8	40-140			
Fluoranthene	0.0243	0.00500	"	0.0333		72.8	40-140			
Fluorene	0.0247	0.00500	"	0.0333		74.2	40-140			
Indeno (1,2,3-cd) pyrene	0.0236	0.00500	"	0.0333		70.8	40-140			
Pyrene	0.0255	0.00500	"	0.0333		76.4	40-140			
1-Methylnaphthalene	0.0212	0.00500	"	0.0333		63.5	40-140			
2-Methylnaphthalene	0.0212	0.00500	"	0.0333		63.6	40-140			
Surrogate: 2-Methylnaphthalene-d10	0.0211		"	0.0333		63.4	40-140			
Surrogate: Fluoranthene-d10	0.0250		"	0.0333		75.1	40-140			

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**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 BHL1289 - EPA 5030 Soil MS**

<b>Matrix Spike (BHL1289-MS1)</b>	<b>Source: 2412385-01</b>			<b>Prepared: 12/30/24 Analyzed: 01/03/25</b>						
Acenaphthene	0.0215	0.00500	mg/kg	0.0333	ND	64.6	40-140			
Anthracene	0.0225	0.00500	"	0.0333	ND	67.4	40-140			
Benzo (a) anthracene	0.0222	0.00500	"	0.0333	ND	66.5	40-140			
Benzo (a) pyrene	0.0205	0.00500	"	0.0333	ND	61.5	40-140			
Benzo (b) fluoranthene	0.0200	0.00500	"	0.0333	ND	60.1	40-140			
Benzo (k) fluoranthene	0.0199	0.00500	"	0.0333	ND	59.8	40-140			
Chrysene	0.0213	0.00500	"	0.0333	ND	64.0	40-140			
Dibenz (a,h) anthracene	0.0170	0.00500	"	0.0333	ND	50.9	40-140			
Fluoranthene	0.0215	0.00500	"	0.0333	ND	64.6	40-140			
Fluorene	0.0216	0.00500	"	0.0333	ND	64.7	40-140			
Indeno (1,2,3-cd) pyrene	0.0188	0.00500	"	0.0333	ND	56.5	40-140			
Pyrene	0.0230	0.00500	"	0.0333	ND	68.9	40-140			
1-Methylnaphthalene	0.0194	0.00500	"	0.0333	ND	58.1	40-140			
2-Methylnaphthalene	0.0207	0.00500	"	0.0333	ND	62.2	40-140			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0194</i>		<i>"</i>	<i>0.0333</i>		<i>58.1</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0218</i>		<i>"</i>	<i>0.0333</i>		<i>65.5</i>	<i>40-140</i>			

<b>Matrix Spike Dup (BHL1289-MSD1)</b>	<b>Source: 2412385-01</b>			<b>Prepared: 12/30/24 Analyzed: 01/03/25</b>						
Acenaphthene	0.0228	0.00500	mg/kg	0.0333	ND	68.5	40-140	5.85	30	
Anthracene	0.0248	0.00500	"	0.0333	ND	74.2	40-140	9.65	30	
Benzo (a) anthracene	0.0247	0.00500	"	0.0333	ND	74.0	40-140	10.8	30	
Benzo (a) pyrene	0.0223	0.00500	"	0.0333	ND	66.8	40-140	8.29	30	
Benzo (b) fluoranthene	0.0209	0.00500	"	0.0333	ND	62.8	40-140	4.36	30	
Benzo (k) fluoranthene	0.0204	0.00500	"	0.0333	ND	61.3	40-140	2.45	30	
Chrysene	0.0242	0.00500	"	0.0333	ND	72.7	40-140	12.8	30	
Dibenz (a,h) anthracene	0.0214	0.00500	"	0.0333	ND	64.3	40-140	23.3	30	
Fluoranthene	0.0250	0.00500	"	0.0333	ND	75.1	40-140	15.1	30	
Fluorene	0.0233	0.00500	"	0.0333	ND	69.8	40-140	7.61	30	
Indeno (1,2,3-cd) pyrene	0.0231	0.00500	"	0.0333	ND	69.4	40-140	20.6	30	
Pyrene	0.0250	0.00500	"	0.0333	ND	74.9	40-140	8.37	30	
1-Methylnaphthalene	0.0210	0.00500	"	0.0333	ND	63.0	40-140	8.09	30	
2-Methylnaphthalene	0.0209	0.00500	"	0.0333	ND	62.7	40-140	0.792	30	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0199</i>		<i>"</i>	<i>0.0333</i>		<i>59.8</i>	<i>40-140</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0238</i>		<i>"</i>	<i>0.0333</i>		<i>71.4</i>	<i>40-140</i>			

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**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 BIB0532 - EPA 3050B**

**Blank (BIB0532-BLK1)**

Prepared: 02/11/25 Analyzed: 02/18/25

Boron ND 2.00 mg/L

**LCS (BIB0532-BS1)**

Prepared: 02/11/25 Analyzed: 02/18/25

Boron 4.82 2.00 mg/L 5.00 96.4 80-120

**Duplicate (BIB0532-DUP1)**

Source: 2412393-01

Prepared: 02/11/25 Analyzed: 02/18/25

Boron 0.0299 2.00 mg/L 0.126 123 20 QR-01

**Matrix Spike (BIB0532-MS1)**

Source: 2412393-01

Prepared: 02/11/25 Analyzed: 02/18/25

Boron 5.33 2.00 mg/L 5.00 0.126 104 75-125

**Matrix Spike Dup (BIB0532-MSD1)**

Source: 2412393-01

Prepared: 02/11/25 Analyzed: 02/18/25

Boron 5.17 2.00 mg/L 5.00 0.126 101 75-125 2.97 25

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**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 BIB0362 - EPA 3050B**

**Blank (BIB0362-BLK1)**

Prepared: 02/07/25 Analyzed: 02/17/25

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 (BIB0362-BS1)**

Prepared: 02/07/25 Analyzed: 02/17/25

Arsenic	45.4	0.200	mg/kg wet	38.5	118	80-120
Barium	44.5	0.400	"	38.5	116	80-120
Cadmium	2.16	0.200	"	1.92	113	80-120
Copper	43.8	0.400	"	38.5	114	80-120
Lead	21.4	0.200	"	19.2	112	80-120
Nickel	46.0	0.400	"	38.5	120	80-120
Silver	2.19	0.0200	"	1.92	114	80-120
Zinc	46.3	0.400	"	38.5	120	80-120
Selenium	4.61	0.260	"	3.85	120	80-120

**Duplicate (BIB0362-DUP1)**

Source: 2412363-01

Prepared: 02/07/25 Analyzed: 02/17/25

Arsenic	3.48	0.200	mg/kg dry	3.37	3.46	20
Barium	108	0.400	"	109	0.787	20
Cadmium	0.277	0.200	"	0.277	0.231	20
Copper	6.32	0.400	"	6.04	4.53	20
Lead	9.32	0.200	"	9.48	1.65	20
Nickel	7.42	0.400	"	7.10	4.47	20
Silver	0.0508	0.0200	"	0.0556	8.98	20
Zinc	25.8	0.400	"	25.0	3.23	20
Selenium	0.177	0.260	"	0.192	7.97	20

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**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 BIB0362 - EPA 3050B**

<b>Matrix Spike (BIB0362-MS1)</b>	<b>Source: 2412363-01</b>			Prepared: 02/07/25		Analyzed: 02/17/25					
Arsenic	34.8	0.200	mg/kg dry	47.2	3.37	66.6	75-125				QM-05
Barium	166	0.400	"	47.2	109	121	75-125				
Cadmium	2.80	0.200	"	2.36	0.277	107	75-125				
Copper	35.8	0.400	"	47.2	6.04	63.0	75-125				QM-05
Lead	33.7	0.200	"	23.6	9.48	102	75-125				
Nickel	38.8	0.400	"	47.2	7.10	67.1	75-125				QM-05
Silver	2.58	0.0200	"	2.36	0.0556	107	75-125				
Zinc	56.4	0.400	"	47.2	25.0	66.6	75-125				QM-05
Selenium	4.75	0.260	"	4.72	0.192	96.6	75-125				

<b>Matrix Spike Dup (BIB0362-MSD1)</b>	<b>Source: 2412363-01</b>			Prepared: 02/07/25		Analyzed: 02/17/25					
Arsenic	36.4	0.200	mg/kg dry	49.6	3.37	66.6	75-125	4.47	25		QM-05
Barium	181	0.400	"	49.6	109	147	75-125	8.91	25		QM-05
Cadmium	2.88	0.200	"	2.48	0.277	105	75-125	2.76	25		
Copper	37.3	0.400	"	49.6	6.04	63.0	75-125	4.08	25		QM-05
Lead	34.9	0.200	"	24.8	9.48	102	75-125	3.50	25		
Nickel	40.5	0.400	"	49.6	7.10	67.5	75-125	4.43	25		QM-05
Silver	2.65	0.0200	"	2.48	0.0556	105	75-125	2.88	25		
Zinc	60.3	0.400	"	49.6	25.0	71.4	75-125	6.71	25		QM-05
Selenium	5.03	0.260	"	4.96	0.192	97.5	75-125	5.59	25		

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.



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**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 BIA0648 - 3060A Mod**

**Blank (BIA0648-BLK1)**

Prepared: 01/15/25 Analyzed: 01/17/25

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BIA0648-BS1)**

Prepared: 01/15/25 Analyzed: 01/17/25

Chromium, Hexavalent 25.8 0.30 mg/kg wet 25.0 103 80-120

**Duplicate (BIA0648-DUP1)**

**Source: 2412388-01**

Prepared: 01/15/25 Analyzed: 01/17/25

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BIA0648-MS1)**

**Source: 2412388-01**

Prepared: 01/15/25 Analyzed: 01/17/25

Chromium, Hexavalent 31.8 0.30 mg/kg dry 31.5 ND 101 75-125

**Matrix Spike Dup (BIA0648-MSD1)**

**Source: 2412388-01**

Prepared: 01/15/25 Analyzed: 01/17/25

Chromium, Hexavalent 30.1 0.30 mg/kg dry 29.1 ND 103 75-125 5.54 20

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.*





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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**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 BIA0499 - General Preparation**

**Blank (BIA0499-BLK1)**

Prepared: 01/13/25 Analyzed: 01/20/25

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

**LCS (BIA0499-BS1)**

Prepared: 01/13/25 Analyzed: 01/20/25

Calcium	5.36	0.0500	mg/L wet	5.00	107	70-130				
Magnesium	4.88	0.0500	"	5.00	97.6	70-130				
Sodium	4.96	0.0500	"	5.00	99.3	70-130				

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**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 BIA0603 - General Preparation**

**Duplicate (BIA0603-DUP1)**

Source: 2412379-01

Prepared: 01/14/25 Analyzed: 01/16/25

% Solids	92.9		%		93.4			0.553		20	
----------	------	--	---	--	------	--	--	-------	--	----	--

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**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 BIA0484 - General Preparation**

**Blank (BIA0484-BLK1)**

Prepared: 01/13/25 Analyzed: 01/16/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BIA0484-BS1)**

Prepared: 01/13/25 Analyzed: 01/16/25

Specific Conductance (EC) 1.37 0.0100 mmhos/cm 1.41 96.8 95-105

**Duplicate (BIA0484-DUP1)**

**Source: 2412368-43**

Prepared: 01/13/25 Analyzed: 01/16/25

Specific Conductance (EC) 13.8 0.0100 mmhos/cm 13.9 0.538 20

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

**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 BIA0479 - General Preparation**

**LCS (BIA0479-BS1)**

Prepared: 01/13/25 Analyzed: 01/16/25

pH	9.01	pH Units	9.18	98.1	95-105
----	------	----------	------	------	--------

**Duplicate (BIA0479-DUP1)**

Source: 2412368-43

Prepared: 01/13/25 Analyzed: 01/16/25

pH	8.42	pH Units	8.45	0.460	20
----	------	----------	------	-------	----

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.*



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

Project: Noble - Reistad 1 Tank Battery

Project Number: [none]  
Project Manager: Daniel Simpson

**Reported:**  
02/19/25 10:05

### Notes and Definitions

- QR-01      Analyses are not controlled on RPD values from sample concentrations below the reporting limit. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- QM-05      The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
- DET        Analyte DETECTED
- ND        Analyte NOT DETECTED at or above the reporting limit
- NR        Not Reported
- dry        Sample results reported on a dry weight basis
- RPD        Relative Percent Difference