

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 23, 2023

Paul Henchan  
Fremont Environmental  
PO Box 1289  
Wellington, CO 80549

RE: Noble - Beeler 22-12, 13

Work Order #2301292

Enclosed are the results of analyses for samples received by Summit Scientific on 01/17/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Scott Sheely For Paul Shrewsbury  
President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B03@7.0'	2301292-01	Soil	01/17/23 00:00	01/17/23 16:30
B04@7.0'	2301292-02	Soil	01/17/23 00:00	01/17/23 16:30
NW03@6.0'	2301292-03	Soil	01/17/23 00:00	01/17/23 16:30
NW04@6.0'	2301292-04	Soil	01/17/23 00:00	01/17/23 16:30
NE02@6.0'	2301292-05	Soil	01/17/23 00:00	01/17/23 16:30
SW02@6.0'	2301292-06	Soil	01/17/23 00:00	01/17/23 16:30
SE03@6.0'	2301292-07	Soil	01/17/23 00:00	01/17/23 16:30
SE04@6.0'	2301292-08	Soil	01/17/23 00:00	01/17/23 16:30

Summit Scientific

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

# SUMMIT SCIENTIFIC

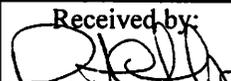
4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310

2301292

Lab ID	Page 1 of 1
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Client: Fremont Env	Project Manager: Paul Henchan	Company: Noble
Address:	E-Mail: Paulh@fremontenv.com	Project Name/Location:
City/State/Zip:	jeffg@fremontenv.com Ethanb@fremontenv.com	AFE#:
Phone:	Project Name: Beeler 22-12,13	PO/Billing Codes:
Sampler Name: J6	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	BTEX+N	TMBs (915)	DRO,ORO,6RO	PAHs (915)	EC,PH,SAR Seron		Metals (915)
1	B03@7.0'	01/17/23		2			X			X			X	X	X	X	X	X	
2	B04@7.0'						X			X									
3	NW03@6.0'						X			X									
4	NW04@6.0'						X			X									
5	NE02@6.0'						X			X									
6	SW03@6.0'						X			X									
7	SE03@6.0'						X			X									
8	SE04@6.0'						X			X									
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: 	Date/Time: 01/17/23	Received by: SZ	Date/Time: 11723	TAT Business Days	Field DO	Notes: Bill to Noble
Relinquished by: SZ	Date/Time: 11723 1630	Received by: 	Date/Time: 11723 11030	Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Temperature Upon Receipt: 7.0	Corrected Temperature: 	IR gun #: 1	HNO3 lot #:	Standard	Field Turb.	

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2301292

Client: Fremont Client Project ID: Becker 22-12,13

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

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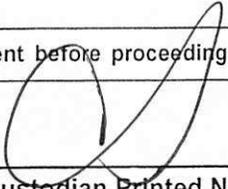
Matrix (Check all that apply) Air  Soil/Solid  Water  Other

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"/>	ON ICE
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Same day
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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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.

  
Custodian Printed Name

1-17-23  
Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**B03@7.0'**  
**2301292-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGA0418	01/17/23	01/17/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0528	132 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0375	93.7 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	14.8	118 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**B03@7.0'**  
**2301292-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0142	42.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0175	52.5 %	40-150		"	"	"	"	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.218</b>	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**B03@7.0'**  
**2301292-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.70	0.240	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B	
Barium	9.90	0.481	"	"	"	"	"	"	
Cadmium	0.0951	0.240	"	"	"	"	"	"	
Copper	4.28	0.481	"	"	"	"	"	"	
Lead	6.42	0.240	"	"	"	"	"	"	
Nickel	4.69	0.481	"	"	"	"	"	"	
Selenium	ND	0.312	"	"	"	"	"	"	
Silver	0.0125	0.0240	"	"	"	"	"	"	
Zinc	22.2	0.481	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	61.3	0.0601	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	109	0.0601	"	"	"	"	"	"	
Sodium	151	0.0601	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.67	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

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

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**B03@7.0'**  
**2301292-01 (Soil)**

**Summit Scientific**

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

% Solids	83.2	%	1	BGA0441	01/18/23	01/18/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.73	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.88		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**B04@7.0'**  
**2301292-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGA0418	01/17/23	01/17/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0530	133 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0377	94.2 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	15.2	122 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**B04@7.0'**  
**2301292-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0135	40.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0221	66.3 %	40-150		"	"	"	"	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.308</b>	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**B04@7.0'**  
**2301292-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	10.1	0.245	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B	
Barium	19.6	0.491	"	"	"	"	"	"	
Cadmium	0.153	0.245	"	"	"	"	"	"	
Copper	6.88	0.491	"	"	"	"	"	"	
Lead	10.2	0.245	"	"	"	"	"	"	
Nickel	6.83	0.491	"	"	"	"	"	"	
Selenium	ND	0.319	"	"	"	"	"	"	
Silver	0.0339	0.0245	"	"	"	"	"	"	
Zinc	31.4	0.491	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	357	0.0613	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	216	0.0613	"	"	"	"	"	"	
Sodium	92.5	0.0613	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.954	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

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

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**B04@7.0'**  
**2301292-02 (Soil)**

**Summit Scientific**

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

% Solids	81.5	%	1	BGA0441	01/18/23	01/18/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.28	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.49		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**NW03@6.0'**  
**2301292-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGA0418	01/17/23	01/17/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0547	137 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0381	95.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0420	105 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	15.5	124 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**NW03@6.0'**  
**2301292-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0140	41.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0170	51.0 %	40-150		"	"	"	"	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0645</b>	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**NW03@6.0'**  
**2301292-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.34	0.227	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B	
Barium	107	0.454	"	"	"	"	"	"	
Cadmium	0.139	0.227	"	"	"	"	"	"	
Copper	4.03	0.454	"	"	"	"	"	"	
Lead	8.73	0.227	"	"	"	"	"	"	
Nickel	5.83	0.454	"	"	"	"	"	"	
Selenium	ND	0.295	"	"	"	"	"	"	
Silver	0.0322	0.0227	"	"	"	"	"	"	
Zinc	22.9	0.454	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	149	0.0567	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	86.2	0.0567	"	"	"	"	"	"	
Sodium	51.2	0.0567	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.826	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**NW03@6.0'**  
**2301292-03 (Soil)**

**Summit Scientific**

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

% Solids	88.2	%	1	BGA0441	01/18/23	01/18/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.64	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.74		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**NW04@6.0'**  
**2301292-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGA0418	01/17/23	01/17/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0555	139 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0380	94.9 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	13.6	109 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**NW04@6.0'**  
**2301292-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0144	43.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0194	58.3 %	40-150		"	"	"	"	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.188</b>	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**NW04@6.0'**  
**2301292-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	3.92	0.239	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B	
Barium	14.3	0.478	"	"	"	"	"	"	
Cadmium	0.0956	0.239	"	"	"	"	"	"	
Copper	4.10	0.478	"	"	"	"	"	"	
Lead	6.28	0.239	"	"	"	"	"	"	
Nickel	5.38	0.478	"	"	"	"	"	"	
Selenium	ND	0.311	"	"	"	"	"	"	
Silver	0.0167	0.0239	"	"	"	"	"	"	
Zinc	27.1	0.478	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	478	0.0598	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	234	0.0598	"	"	"	"	"	"	
Sodium	47.0	0.0598	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.441	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

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

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**NW04@6.0'**  
**2301292-04 (Soil)**

**Summit Scientific**

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

% Solids	83.7	%	1	BGA0441	01/18/23	01/18/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.66	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.55		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**NE02@6.0'**  
**2301292-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGA0418	01/17/23	01/17/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0547	137 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0380	95.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

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

**PAH by EPA Method 8270D SIM**

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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**NE02@6.0'**  
**2301292-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0159	47.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0239	71.7 %	40-150		"	"	"	"	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.183</b>	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**NE02@6.0'**  
**2301292-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	5.77	0.241	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B	
Barium	37.2	0.482	"	"	"	"	"	"	
Cadmium	0.115	0.241	"	"	"	"	"	"	
Copper	5.75	0.482	"	"	"	"	"	"	
Lead	8.76	0.241	"	"	"	"	"	"	
Nickel	5.05	0.482	"	"	"	"	"	"	
Selenium	ND	0.313	"	"	"	"	"	"	
Silver	0.0304	0.0241	"	"	"	"	"	"	
Zinc	36.3	0.482	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	501	0.0603	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	295	0.0603	"	"	"	"	"	"	
Sodium	25.5	0.0603	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.223	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**NE02@6.0'**  
**2301292-05 (Soil)**

**Summit Scientific**

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

<b>% Solids</b>	<b>83.0</b>	%	1	BGA0441	01/18/23	01/18/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Specific Conductance (EC)</b>	<b>3.86</b>	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>pH</b>	<b>7.55</b>		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**SW02@6.0'**  
**2301292-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGA0418	01/17/23	01/17/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0540	135 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0376	94.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0405	101 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	15.6	124 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**SW02@6.0'**  
**2301292-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0168	50.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0265	79.5 %	40-150		"	"	"	"	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.525</b>	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**SW02@6.0'**  
**2301292-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	11.9	0.250	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B
Barium	34.3	0.499	"	"	"	"	"	"
Cadmium	0.123	0.250	"	"	"	"	"	"
Copper	6.75	0.499	"	"	"	"	"	"
Lead	9.53	0.250	"	"	"	"	"	"
Nickel	6.60	0.499	"	"	"	"	"	"
Selenium	ND	0.325	"	"	"	"	"	"
Silver	0.0295	0.0250	"	"	"	"	"	"
Zinc	27.6	0.499	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	191	0.0624	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	234	0.0624	"	"	"	"	"	"	
Sodium	227	0.0624	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.60	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**SW02@6.0'**  
**2301292-06 (Soil)**

**Summit Scientific**

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

<b>% Solids</b>	<b>80.1</b>	%	1	BGA0441	01/18/23	01/18/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Specific Conductance (EC)</b>	<b>3.39</b>	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>pH</b>	<b>7.64</b>		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**SE03@6.0'**  
**2301292-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGA0418	01/17/23	01/17/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0532	133 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0376	94.1 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGA0419	01/17/23	01/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	15.4	123 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**SE03@6.0'**  
**2301292-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0140	42.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0169	50.7 %	40-150		"	"	"	"	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.201</b>	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**SE03@6.0'**  
**2301292-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	14.7	0.244	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B	
Barium	44.6	0.488	"	"	"	"	"	"	
Cadmium	0.166	0.244	"	"	"	"	"	"	
Copper	11.1	0.488	"	"	"	"	"	"	
Lead	15.3	0.244	"	"	"	"	"	"	
Nickel	8.00	0.488	"	"	"	"	"	"	
Selenium	ND	0.317	"	"	"	"	"	"	
Silver	0.0332	0.0244	"	"	"	"	"	"	
Zinc	36.8	0.488	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	416	0.0610	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	276	0.0610	"	"	"	"	"	"	
Sodium	31.3	0.0610	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.293	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**SE03@6.0'**  
**2301292-07 (Soil)**

**Summit Scientific**

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

% Solids	82.0	%	1	BGA0441	01/18/23	01/18/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.43	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.52		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**SE04@6.0'**  
**2301292-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGA0418	01/17/23	01/17/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0553	138 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0380	95.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0411	103 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGA0419	01/17/23	01/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

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**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**SE04@6.0'**  
**2301292-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0422	01/18/23	01/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0158	47.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0202	60.5 %	40-150		"	"	"	"	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.464</b>	0.0100	mg/L	1	BGA0428	01/18/23	01/20/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**SE04@6.0'**  
**2301292-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	9.08	0.248	mg/kg dry	1	BGA0430	01/18/23	01/20/23	EPA 6020B	
Barium	59.5	0.497	"	"	"	"	"	"	
Cadmium	0.162	0.248	"	"	"	"	"	"	
Copper	7.87	0.497	"	"	"	"	"	"	
Lead	11.6	0.248	"	"	"	"	"	"	
Nickel	6.67	0.497	"	"	"	"	"	"	
Selenium	0.220	0.323	"	"	"	"	"	"	
Silver	0.0407	0.0248	"	"	"	"	"	"	
Zinc	32.8	0.497	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGA0467	01/19/23	01/19/23	EPA 7196A	

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

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	38.7	0.0621	mg/L dry	1	BGA0420	01/17/23	01/19/23	EPA 6020B	
Magnesium	66.9	0.0621	"	"	"	"	"	"	
Sodium	12.9	0.0621	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.291	0.00100	units	1	BGA0502	01/20/23	01/20/23	Calculation	

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

Date Sampled: 01/17/23 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**SE04@6.0'**  
**2301292-08 (Soil)**

**Summit Scientific**

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

% Solids	80.6	%	1	BGA0441	01/18/23	01/18/23	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.769	0.0100	mmhos/cm	1	BGA0446	01/18/23	01/18/23	EPA 120.1	

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

Date Sampled: **01/17/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.96		pH Units	1	BGA0445	01/18/23	01/18/23	EPA 9045D	

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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

### 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 BGA0418 - EPA 5030 Soil MS

##### Blank (BGA0418-BLK1)

Prepared: 01/17/23 Analyzed: 01/18/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0510		"	0.0400		128	50-150			
Surrogate: Toluene-d8	0.0376		"	0.0400		94.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

##### LCS (BGA0418-BS1)

Prepared: 01/17/23 Analyzed: 01/18/23

Benzene	0.106	0.0020	mg/kg	0.100		106	70-130			
Toluene	0.114	0.0050	"	0.100		114	70-130			
Ethylbenzene	0.104	0.0050	"	0.100		104	70-130			
m,p-Xylene	0.211	0.010	"	0.200		105	70-130			
o-Xylene	0.104	0.0050	"	0.100		104	70-130			
1,2,4-Trimethylbenzene	0.0988	0.0050	"	0.100		98.8	70-130			
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100		102	70-130			
Naphthalene	0.111	0.0038	"	0.100		111	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0497		"	0.0400		124	50-150			
Surrogate: Toluene-d8	0.0377		"	0.0400		94.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

##### Matrix Spike (BGA0418-MS1)

Source: 2301292-01

Prepared: 01/17/23 Analyzed: 01/18/23

Benzene	0.114	0.0020	mg/kg	0.100	ND	114	70-130			
Toluene	0.103	0.0050	"	0.100	ND	103	70-130			
Ethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130			
m,p-Xylene	0.209	0.010	"	0.200	ND	105	70-130			
o-Xylene	0.103	0.0050	"	0.100	ND	103	70-130			
1,2,4-Trimethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130			
1,3,5-Trimethylbenzene	0.0996	0.0050	"	0.100	ND	99.6	70-130			
Naphthalene	0.106	0.0038	"	0.100	ND	106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0521		"	0.0400		130	50-150			
Surrogate: Toluene-d8	0.0382		"	0.0400		95.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0414		"	0.0400		104	50-150			

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 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**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 BGA0418 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BGA0418-MSD1)</b>	<b>Source: 2301292-01</b>			<b>Prepared: 01/17/23 Analyzed: 01/18/23</b>						
Benzene	0.115	0.0020	mg/kg	0.100	ND	115	70-130	0.210	30	
Toluene	0.104	0.0050	"	0.100	ND	104	70-130	0.843	30	
Ethylbenzene	0.101	0.0050	"	0.100	ND	101	70-130	3.87	30	
m,p-Xylene	0.211	0.010	"	0.200	ND	105	70-130	0.614	30	
o-Xylene	0.105	0.0050	"	0.100	ND	105	70-130	2.28	30	
1,2,4-Trimethylbenzene	0.106	0.0050	"	0.100	ND	106	70-130	4.17	30	
1,3,5-Trimethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130	2.65	30	
Naphthalene	0.0994	0.0038	"	0.100	ND	99.4	70-130	6.06	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0519</i>		<i>"</i>	<i>0.0400</i>		<i>130</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>		<i>94.9</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0416</i>		<i>"</i>	<i>0.0400</i>		<i>104</i>	<i>50-150</i>			

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Fremont Environmental  
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 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

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

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

**Batch BGA0419 - EPA 3550A**

**Blank (BGA0419-BLK1)**

Prepared: 01/17/23 Analyzed: 01/18/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	13.0		"	12.5	104	30-150					

**LCS (BGA0419-BS1)**

Prepared: 01/17/23 Analyzed: 01/18/23

C10-C28 (DRO)	506	50	mg/kg	500	101	70-130					
Surrogate: <i>o</i> -Terphenyl	12.7		"	12.5	102	30-150					

**Matrix Spike (BGA0419-MS1)**

Source: 2301292-01

Prepared: 01/17/23 Analyzed: 01/18/23

C10-C28 (DRO)	480	50	mg/kg	500	10.8	93.7	70-130				
Surrogate: <i>o</i> -Terphenyl	12.7		"	12.5	101	30-150					

**Matrix Spike Dup (BGA0419-MSD1)**

Source: 2301292-01

Prepared: 01/17/23 Analyzed: 01/18/23

C10-C28 (DRO)	454	50	mg/kg	500	10.8	88.6	70-130	5.49	20		
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.5	98.5	30-150					

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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**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 BGA0422 - EPA 5030 Soil MS**

**Blank (BGA0422-BLK1)**

Prepared & Analyzed: 01/18/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0224</i>		"	<i>0.0333</i>		<i>67.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0388</i>		"	<i>0.0333</i>		<i>116</i>	<i>40-150</i>			

**LCS (BGA0422-BS1)**

Prepared & Analyzed: 01/18/23

Acenaphthene	0.0364	0.00500	mg/kg	0.0333	109	31-137
Anthracene	0.0350	0.00500	"	0.0333	105	30-120
Benzo (a) anthracene	0.0299	0.00500	"	0.0333	89.7	30-120
Benzo (a) pyrene	0.0306	0.00500	"	0.0333	91.7	30-120
Benzo (b) fluoranthene	0.0323	0.00500	"	0.0333	96.8	30-120
Benzo (k) fluoranthene	0.0368	0.00500	"	0.0333	110	30-120
Chrysene	0.0364	0.00500	"	0.0333	109	30-120
Dibenz (a,h) anthracene	0.0283	0.00500	"	0.0333	84.9	30-120
Fluoranthene	0.0357	0.00500	"	0.0333	107	30-120
Fluorene	0.0360	0.00500	"	0.0333	108	30-120
Indeno (1,2,3-cd) pyrene	0.0309	0.00500	"	0.0333	92.8	30-120
Pyrene	0.0345	0.00500	"	0.0333	104	35-142
1-Methylnaphthalene	0.0285	0.00500	"	0.0333	85.5	35-142
2-Methylnaphthalene	0.0229	0.00500	"	0.0333	68.6	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0306</i>		"	<i>0.0333</i>	<i>91.7</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0364</i>		"	<i>0.0333</i>	<i>109</i>	<i>40-150</i>

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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

**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 BGA0422 - EPA 5030 Soil MS**

<b>Matrix Spike (BGA0422-MS1)</b>	<b>Source: 2301193-07</b>			<b>Prepared &amp; Analyzed: 01/18/23</b>								
Acenaphthene	0.0223	0.00500	mg/kg	0.0333	ND	66.9	31-137					
Anthracene	0.0226	0.00500	"	0.0333	ND	67.8	30-120					
Benzo (a) anthracene	0.0226	0.00500	"	0.0333	ND	67.8	30-120					
Benzo (a) pyrene	0.0199	0.00500	"	0.0333	ND	59.6	30-120					
Benzo (b) fluoranthene	0.0196	0.00500	"	0.0333	ND	58.8	30-120					
Benzo (k) fluoranthene	0.0207	0.00500	"	0.0333	ND	62.1	30-120					
Chrysene	0.0221	0.00500	"	0.0333	ND	66.3	30-120					
Dibenz (a,h) anthracene	0.0200	0.00500	"	0.0333	ND	59.9	30-120					
Fluoranthene	0.0230	0.00500	"	0.0333	ND	69.0	30-120					
Fluorene	0.0227	0.00500	"	0.0333	ND	68.2	30-120					
Indeno (1,2,3-cd) pyrene	0.0208	0.00500	"	0.0333	ND	62.3	30-120					
Pyrene	0.0232	0.00500	"	0.0333	ND	69.7	35-142					
1-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.5	15-130					
2-Methylnaphthalene	0.0191	0.00500	"	0.0333	ND	57.3	15-130					
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0233</i>		<i>"</i>	<i>0.0333</i>		<i>69.9</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0248</i>		<i>"</i>	<i>0.0333</i>		<i>74.4</i>	<i>40-150</i>					

<b>Matrix Spike Dup (BGA0422-MSD1)</b>	<b>Source: 2301193-07</b>			<b>Prepared &amp; Analyzed: 01/18/23</b>								
Acenaphthene	0.0177	0.00500	mg/kg	0.0333	ND	53.2	31-137	22.8	30			
Anthracene	0.0174	0.00500	"	0.0333	ND	52.3	30-120	25.8	30			
Benzo (a) anthracene	0.0172	0.00500	"	0.0333	ND	51.5	30-120	27.3	30			
Benzo (a) pyrene	0.0189	0.00500	"	0.0333	ND	56.7	30-120	5.01	30			
Benzo (b) fluoranthene	0.0149	0.00500	"	0.0333	ND	44.8	30-120	27.0	30			
Benzo (k) fluoranthene	0.0157	0.00500	"	0.0333	ND	47.0	30-120	27.5	30			
Chrysene	0.0170	0.00500	"	0.0333	ND	51.0	30-120	26.0	30			
Dibenz (a,h) anthracene	0.0146	0.00500	"	0.0333	ND	43.8	30-120	31.1	30			QR-02
Fluoranthene	0.0180	0.00500	"	0.0333	ND	54.0	30-120	24.4	30			
Fluorene	0.0178	0.00500	"	0.0333	ND	53.5	30-120	24.2	30			
Indeno (1,2,3-cd) pyrene	0.0156	0.00500	"	0.0333	ND	46.7	30-120	28.7	30			
Pyrene	0.0174	0.00500	"	0.0333	ND	52.1	35-142	28.9	30			
1-Methylnaphthalene	0.0182	0.00500	"	0.0333	ND	54.6	15-130	16.7	50			
2-Methylnaphthalene	0.0179	0.00500	"	0.0333	ND	53.8	15-130	6.38	50			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0185</i>		<i>"</i>	<i>0.0333</i>		<i>55.5</i>	<i>40-150</i>					
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0186</i>		<i>"</i>	<i>0.0333</i>		<i>55.7</i>	<i>40-150</i>					

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 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**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 BGA0428 - EPA 3050B**

**Blank (BGA0428-BLK1)**

Prepared: 01/18/23 Analyzed: 01/20/23

Boron ND 0.0100 mg/L

**LCS (BGA0428-BS1)**

Prepared: 01/18/23 Analyzed: 01/20/23

Boron 5.83 0.0100 mg/L 5.00 117 80-120

**Duplicate (BGA0428-DUP1)**

Source: 2301246-01

Prepared: 01/18/23 Analyzed: 01/20/23

Boron 0.154 0.0100 mg/L 0.164 6.57 20

**Matrix Spike (BGA0428-MS1)**

Source: 2301246-01

Prepared: 01/18/23 Analyzed: 01/20/23

Boron 6.31 0.0100 mg/L 5.00 0.164 123 75-125

**Matrix Spike Dup (BGA0428-MSD1)**

Source: 2301246-01

Prepared: 01/18/23 Analyzed: 01/20/23

Boron 6.20 0.0100 mg/L 5.00 0.164 121 75-125 1.83 25

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**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 BGA0430 - EPA 3050B**

**Blank (BGA0430-BLK1)**

Prepared: 01/18/23 Analyzed: 01/20/23

Arsenic	ND	0.200	mg/kg wet						
Barium	ND	0.400	"						
Cadmium	ND	0.200	"						
Copper	ND	0.400	"						
Lead	ND	0.200	"						
Nickel	ND	0.400	"						
Selenium	ND	0.260	"						
Silver	ND	0.0200	"						
Zinc	ND	0.400	"						

**LCS (BGA0430-BS1)**

Prepared: 01/18/23 Analyzed: 01/20/23

Arsenic	32.2	0.200	mg/kg wet	40.0	80.4	80-120
Barium	33.5	0.400	"	40.0	83.7	80-120
Cadmium	2.00	0.200	"	2.00	99.9	80-120
Copper	33.3	0.400	"	40.0	83.1	80-120
Lead	19.7	0.200	"	20.0	98.3	80-120
Nickel	32.8	0.400	"	40.0	82.0	80-120
Selenium	4.50	0.260	"	4.00	112	80-120
Silver	1.62	0.0200	"	2.00	81.0	80-120
Zinc	32.4	0.400	"	40.0	81.0	80-120

**Duplicate (BGA0430-DUP1)**

Source: 2301292-01

Prepared: 01/18/23 Analyzed: 01/20/23

Arsenic	3.79	0.240	mg/kg dry	3.70	2.49	20
Barium	9.65	0.481	"	9.90	2.55	20
Cadmium	0.0923	0.240	"	0.0951	3.08	20
Copper	4.32	0.481	"	4.28	0.938	20
Lead	5.96	0.240	"	6.42	7.30	20
Nickel	8.73	0.481	"	4.69	60.3	20
Selenium	ND	0.312	"	ND		20
Silver	0.0125	0.0240	"	0.0125	0.00	20
Zinc	22.4	0.481	"	22.2	1.03	20

QR-03

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 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**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 BGA0430 - EPA 3050B**

**Matrix Spike (BGA0430-MS1)**

Source: 2301292-01

Prepared: 01/18/23 Analyzed: 01/20/23

Arsenic	46.6	0.240	mg/kg dry	48.1	3.70	89.2	75-125			
Barium	58.7	0.481	"	48.1	9.90	102	75-125			
Cadmium	1.98	0.240	"	2.40	0.0951	78.4	75-125			
Copper	31.4	0.481	"	48.1	4.28	56.3	75-125			QM-05
Lead	26.2	0.240	"	24.0	6.42	82.1	75-125			
Nickel	31.7	0.481	"	48.1	4.69	56.2	75-125			QM-05
Selenium	5.88	0.312	"	4.81	ND	122	75-125			
Silver	1.89	0.0240	"	2.40	0.0125	78.3	75-125			
Zinc	50.9	0.481	"	48.1	22.2	59.7	75-125			QM-05

**Matrix Spike Dup (BGA0430-MSD1)**

Source: 2301292-01

Prepared: 01/18/23 Analyzed: 01/20/23

Arsenic	47.5	0.240	mg/kg dry	48.1	3.70	91.2	75-125	2.06	25	
Barium	63.5	0.481	"	48.1	9.90	112	75-125	7.89	25	
Cadmium	2.19	0.240	"	2.40	0.0951	87.2	75-125	10.1	25	
Copper	32.1	0.481	"	48.1	4.28	57.8	75-125	2.27	25	QM-05
Lead	28.5	0.240	"	24.0	6.42	91.8	75-125	8.48	25	
Nickel	32.4	0.481	"	48.1	4.69	57.7	75-125	2.20	25	QM-05
Selenium	5.74	0.312	"	4.81	ND	119	75-125	2.46	25	
Silver	2.09	0.0240	"	2.40	0.0125	86.4	75-125	9.82	25	
Zinc	51.7	0.481	"	48.1	22.2	61.3	75-125	1.51	25	QM-05

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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BGA0467 - 3060A Mod**

**Blank (BGA0467-BLK1)**

Prepared & Analyzed: 01/19/23

Chromium, Hexavalent      ND      0.30 mg/kg wet

**LCS (BGA0467-BS1)**

Prepared & Analyzed: 01/19/23

Chromium, Hexavalent      20.2      0.30 mg/kg wet      25.0      80.6      80-120

**Duplicate (BGA0467-DUP1)**

**Source: 2301292-01**

Prepared & Analyzed: 01/19/23

Chromium, Hexavalent      ND      0.30 mg/kg dry      ND      20

**Matrix Spike (BGA0467-MS1)**

**Source: 2301292-01**

Prepared & Analyzed: 01/19/23

Chromium, Hexavalent      24.9      0.30 mg/kg dry      30.0      ND      82.8      75-125

**Matrix Spike Dup (BGA0467-MSD1)**

**Source: 2301292-01**

Prepared & Analyzed: 01/19/23

Chromium, Hexavalent      25.5      0.30 mg/kg dry      30.0      ND      85.0      75-125      2.62      20

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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**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 BGA0420 - General Preparation**

**Blank (BGA0420-BLK1)**

Prepared: 01/17/23 Analyzed: 01/19/23

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

**LCS (BGA0420-BS1)**

Prepared: 01/17/23 Analyzed: 01/19/23

Calcium	5.21	0.0500	mg/L wet	5.00	104	70-130				
Magnesium	4.78	0.0500	"	5.00	95.5	70-130				
Sodium	5.05	0.0500	"	5.00	101	70-130				

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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**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 BGA0441 - General Preparation**

**Duplicate (BGA0441-DUP1)**

**Source: 2301292-01**

Prepared & Analyzed: 01/18/23

% Solids	82.7		%		83.2			0.677	20	
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Fremont Environmental  
 PO Box 1289  
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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**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 BGA0446 - General Preparation**

**Blank (BGA0446-BLK1)**

Prepared & Analyzed: 01/18/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BGA0446-BS1)**

Prepared & Analyzed: 01/18/23

Specific Conductance (EC) 0.146 0.0100 mmhos/cm 0.150 97.3 95-105

**Duplicate (BGA0446-DUP1)**

Source: 2301292-01

Prepared & Analyzed: 01/18/23

Specific Conductance (EC) 1.72 0.0100 mmhos/cm 1.73 0.406 20

Summit Scientific

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 PO Box 1289  
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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 01/23/23 10:19

**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 BGA0445 - General Preparation**

**LCS (BGA0445-BS1)**

Prepared & Analyzed: 01/18/23

pH	9.08	pH Units	9.18	98.9	95-105
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**Duplicate (BGA0445-DUP1)**

Source: 2301292-01

Prepared & Analyzed: 01/18/23

pH	7.99	pH Units	7.88	1.39	20
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Fremont Environmental  
PO Box 1289  
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Project: Noble - Beeler 22-12, 13

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
01/23/23 10:19

### Notes and Definitions

- QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- 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