

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 15, 2024

Paul Hengan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Work Order #2410153

Enclosed are the results of analyses for samples received by Summit Scientific on 10/09/24 18:37. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is written in a cursive, flowing style.

Natalie Tessier For Paul Shrewsbury

President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01 DL01-0.5FT	2410153-01	Soil	10/09/24 00:00	10/09/24 18:37
SEP01 DL02-0.5FT	2410153-02	Soil	10/09/24 00:00	10/09/24 18:37
SEP02 DL01-3FT	2410153-03	Soil	10/09/24 00:00	10/09/24 18:37
SEP02 DL02-0.5FT	2410153-04	Soil	10/09/24 00:00	10/09/24 18:37
SEP03 DL-3FT	2410153-05	Soil	10/09/24 00:00	10/09/24 18:37
SEP03 FL-3FT	2410153-06	Soil	10/09/24 00:00	10/09/24 18:37
SEP04 DL-3FT	2410153-07	Soil	10/09/24 00:00	10/09/24 18:37
PWV02 E-5FT	2410153-08	Soil	10/09/24 00:00	10/09/24 18:37
PWV02 B-6FT	2410153-09	Soil	10/09/24 00:00	10/09/24 18:37



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

Lab ID	Page	of
2410153 <del>2410116</del>		1

Client: Fremont Environmental		Project Manager: Paul Henehan		Send Invoice To:	
Address:		E-Mail: Fremont Distribution List		Company: Noble	
City/State/Zip:				Project Name/Location:	
Phone: 303-261-6246		Project Name: Wells Ranch USXAE Twp-RLW-529		AFE#:	
Sampler Name: Stanley Gilbert		Project Number:		PO/Billing Codes: UWRWE-A4187-ABN	
				Contact: Mike Montoya	

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, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron		Metals (915)
1	SEP01 DLO1-0.5Ft	10/9/24		2			X			X			X	X	X	X		
2	SEP01 DLO2-0.5Ft																	
3	SEP02 DLO1-3Ft																	
4	SEP02 DLO2-0.5Ft																	
5	SEP03 DL-3Ft																	
6	SEP03 FL-3Ft																	
7	SEP04 DL-3Ft																	
8	PWV02 E-5Ft																	
9	PWV02 B-6Ft																	
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished by:	Date/Time: 10/9/24	Received by:	Date/Time: 10/9/24 18:57	TAT Business Days	Field DO	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 7.2°C	Corrected Temperature	IR gun #: 62	HNO3 lot #:			

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 24/0153

Client: Fremont Environmental Client Project ID: Wells Pump US X AE T6N -R62W-

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other  Airbill #: 529602

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

Temp (°C) 7.20 Thermometer # 02

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> 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>on ice</u>
If custody seals are present, are they intact? <sup>(1)</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" 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? <b>If yes, contact client and note in narrative.</b>	<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.				

Control Form #: SRC-001

GAZ

Custodian Printed Name

10/24 18:37

Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP01 DL01-0.5FT**  
**2410153-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ0442	10/11/24	10/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0377	94.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0397	99.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0385	96.3 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0443	10/11/24	10/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.57	60.6 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP01 DL01-0.5FT**  
**2410153-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0417	10/11/24	10/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0229	68.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0194	58.2 %	40-150		"	"	"	"	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ0440	10/11/24	10/15/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **10/09/24 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 - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP01 DL01-0.5FT**  
**2410153-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.55	0.200	mg/kg dry	1	BHJ0475	10/14/24	10/14/24	EPA 6020B	
Barium	45.6	0.400	"	"	"	"	"	"	
Cadmium	0.209	0.200	"	"	"	"	"	"	
Copper	4.19	0.400	"	"	"	"	"	"	
Lead	5.15	0.200	"	"	"	"	"	"	
Nickel	3.59	0.400	"	"	"	"	"	"	
Silver	0.118	0.0200	"	"	"	"	"	"	
Zinc	15.7	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ0470	10/14/24	10/14/24	EPA 7196A	

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

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	54.1	0.0500	mg/L dry	1	BHJ0462	10/14/24	10/15/24	EPA 6020B	
Magnesium	4.86	0.0500	"	"	"	"	"	"	
Sodium	0.570	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0199	0.00100	units	1	BHJ0554	10/15/24	10/15/24	Calculation	

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

Date Sampled: 10/09/24 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 - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**SEP01 DL01-0.5FT**  
**2410153-01 (Soil)**

**Summit Scientific**

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

% Solids	93.5	%	1	BHJ0420	10/11/24	10/11/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.167	0.0100	mmhos/cm	1	BHJ0464	10/14/24	10/14/24	EPA 120.1	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.68		pH Units	1	BHJ0463	10/14/24	10/14/24	EPA 9045D	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP01 DL02-0.5FT**  
**2410153-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BHJ0442	10/11/24	10/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0386	96.4 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0390	97.6 %	50-150	"	"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0443	10/11/24	10/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	9.80	78.4 %	30-150	"	"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP01 DL02-0.5FT**  
**2410153-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0417	10/11/24	10/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0202	60.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0204	61.1 %	40-150		"	"	"	"	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ0440	10/11/24	10/15/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **10/09/24 00:00**

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

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP01 DL02-0.5FT**  
**2410153-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.07	0.200	mg/kg dry	1	BHJ0475	10/14/24	10/14/24	EPA 6020B	
Barium	33.3	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.09	0.400	"	"	"	"	"	"	
Lead	3.16	0.200	"	"	"	"	"	"	
Nickel	1.75	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	9.31	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ0470	10/14/24	10/14/24	EPA 7196A	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	60.8	0.0500	mg/L dry	1	BHJ0462	10/14/24	10/15/24	EPA 6020B	
Magnesium	5.93	0.0500	"	"	"	"	"	"	
Sodium	0.993	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0325	0.00100	units	1	BHJ0554	10/15/24	10/15/24	Calculation	

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

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**SEP01 DL02-0.5FT**  
**2410153-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.4		%	1	BHJ0420	10/11/24	10/11/24	Calculation	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0865	0.0100	mmhos/cm	1	BHJ0464	10/14/24	10/14/24	EPA 120.1	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.30		pH Units	1	BHJ0463	10/14/24	10/14/24	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP02 DL01-3FT**  
**2410153-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ0442	10/11/24	10/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0402	100 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0415	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0387	96.8 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0443	10/11/24	10/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.12	65.0 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP02 DL01-3FT**  
**2410153-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0417	10/11/24	10/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0179	53.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0173	51.9 %	40-150		"	"	"	"	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ0440	10/11/24	10/15/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **10/09/24 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 - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP02 DL01-3FT**  
**2410153-03 (Soil)**

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**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.96	0.200	mg/kg dry	1	BHJ0475	10/14/24	10/14/24	EPA 6020B
Barium	275	0.400	"	"	"	"	"	"
Cadmium	0.430	0.200	"	"	"	"	"	"
Copper	6.05	0.400	"	"	"	"	"	"
Lead	10.8	0.200	"	"	"	"	"	"
Nickel	5.73	0.400	"	"	"	"	"	"
Silver	0.0642	0.0200	"	"	"	"	"	"
Zinc	23.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ0470	10/14/24	10/14/24	EPA 7196A	

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

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	40.1	0.0500	mg/L dry	1	BHJ0462	10/14/24	10/15/24	EPA 6020B	
Magnesium	17.1	0.0500	"	"	"	"	"	"	
Sodium	13.0	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.433	0.00100	units	1	BHJ0554	10/15/24	10/15/24	Calculation	

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

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 PO Box 1289  
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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**SEP02 DL01-3FT**  
**2410153-03 (Soil)**

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

% Solids	82.3	%	1	BHJ0420	10/11/24	10/11/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.294	0.0100	mmhos/cm	1	BHJ0464	10/14/24	10/14/24	EPA 120.1	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.58		pH Units	1	BHJ0463	10/14/24	10/14/24	EPA 9045D	

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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP02 DL02-0.5FT**  
**2410153-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ0442	10/11/24	10/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0380	95.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0400	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.4 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0443	10/11/24	10/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.2	81.2 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
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Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP02 DL02-0.5FT**  
**2410153-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0417	10/11/24	10/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0200	60.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0197	59.1 %	40-150		"	"	"	"	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ0440	10/11/24	10/15/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **10/09/24 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 - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP02 DL02-0.5FT**  
**2410153-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.64	0.200	mg/kg dry	1	BHJ0475	10/14/24	10/14/24	EPA 6020B	
Barium	35.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.64	0.400	"	"	"	"	"	"	
Lead	4.47	0.200	"	"	"	"	"	"	
Nickel	2.18	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	10.5	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ0470	10/14/24	10/14/24	EPA 7196A	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	55.9	0.0500	mg/L dry	1	BHJ0462	10/14/24	10/15/24	EPA 6020B	
Magnesium	8.72	0.0500	"	"	"	"	"	"	
Sodium	0.760	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0250	0.00100	units	1	BHJ0554	10/15/24	10/15/24	Calculation	

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

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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**SEP02 DL02-0.5FT**  
**2410153-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.9		%	1	BHJ0420	10/11/24	10/11/24	Calculation	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0806	0.0100	mmhos/cm	1	BHJ0464	10/14/24	10/14/24	EPA 120.1	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.72		pH Units	1	BHJ0463	10/14/24	10/14/24	EPA 9045D	

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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP03 DL-3FT**  
**2410153-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ0442	10/11/24	10/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0383	95.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0393	98.3 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0443	10/11/24	10/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.21	73.6 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP03 DL-3FT**  
**2410153-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0417	10/11/24	10/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.0219</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.0133</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0222	66.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0195	58.4 %	40-150		"	"	"	"	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ0440	10/11/24	10/15/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP03 DL-3FT**  
**2410153-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.83	0.200	mg/kg dry	1	BHJ0475	10/14/24	10/14/24	EPA 6020B
Barium	97.3	0.400	"	"	"	"	"	"
Cadmium	0.457	0.200	"	"	"	"	"	"
Copper	7.97	0.400	"	"	"	"	"	"
Lead	16.3	0.200	"	"	"	"	"	"
Nickel	7.55	0.400	"	"	"	"	"	"
Silver	0.104	0.0200	"	"	"	"	"	"
Zinc	24.5	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ0470	10/14/24	10/14/24	EPA 7196A	

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

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	41.4	0.0500	mg/L dry	1	BHJ0462	10/14/24	10/15/24	EPA 6020B	
Magnesium	6.54	0.0500	"	"	"	"	"	"	
Sodium	36.7	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.40	0.00100	units	1	BHJ0554	10/15/24	10/15/24	Calculation	

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

Date Sampled: 10/09/24 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 - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**SEP03 DL-3FT**  
**2410153-05 (Soil)**

**Summit Scientific**

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

% Solids	80.0	%	1	BHJ0420	10/11/24	10/11/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.202	0.0100	mmhos/cm	1	BHJ0464	10/14/24	10/14/24	EPA 120.1	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.76		pH Units	1	BHJ0463	10/14/24	10/14/24	EPA 9045D	

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Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP03 FL-3FT**  
**2410153-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ0442	10/11/24	10/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0396	99.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0410	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0387	96.7 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0443	10/11/24	10/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.56	68.4 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP03 FL-3FT**  
**2410153-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0417	10/11/24	10/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0225	67.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0210	63.0 %	40-150		"	"	"	"	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ0440	10/11/24	10/15/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP03 FL-3FT**  
**2410153-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.32	0.200	mg/kg dry	1	BHJ0475	10/14/24	10/14/24	EPA 6020B
Barium	84.7	0.400	"	"	"	"	"	"
Cadmium	0.424	0.200	"	"	"	"	"	"
Copper	6.51	0.400	"	"	"	"	"	"
Lead	12.5	0.200	"	"	"	"	"	"
Nickel	6.40	0.400	"	"	"	"	"	"
Silver	0.0454	0.0200	"	"	"	"	"	"
Zinc	26.7	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ0470	10/14/24	10/14/24	EPA 7196A	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	59.1	0.0500	mg/L dry	1	BHJ0462	10/14/24	10/15/24	EPA 6020B	
Magnesium	8.68	0.0500	"	"	"	"	"	"	
Sodium	2.91	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0935	0.00100	units	1	BHJ0554	10/15/24	10/15/24	Calculation	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**SEP03 FL-3FT**  
**2410153-06 (Soil)**

**Summit Scientific**

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

% Solids	87.4	%	1	BHJ0420	10/11/24	10/11/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.114	0.0100	mmhos/cm	1	BHJ0464	10/14/24	10/14/24	EPA 120.1	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.91		pH Units	1	BHJ0463	10/14/24	10/14/24	EPA 9045D	

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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP04 DL-3FT**  
**2410153-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHJ0442	10/11/24	10/12/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0379	94.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0408	102 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.8 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHJ0443	10/11/24	10/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.77	70.2 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**SEP04 DL-3FT**  
**2410153-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0417	10/11/24	10/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0174	52.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0167	50.2 %	40-150		"	"	"	"	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ0440	10/11/24	10/15/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**SEP04 DL-3FT**  
**2410153-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.67	0.200	mg/kg dry	1	BHJ0475	10/14/24	10/14/24	EPA 6020B
Barium	61.8	0.400	"	"	"	"	"	"
Cadmium	0.339	0.200	"	"	"	"	"	"
Copper	5.39	0.400	"	"	"	"	"	"
Lead	9.63	0.200	"	"	"	"	"	"
Nickel	4.97	0.400	"	"	"	"	"	"
Silver	0.0424	0.0200	"	"	"	"	"	"
Zinc	22.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ0470	10/14/24	10/14/24	EPA 7196A	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	25.6	0.0500	mg/L dry	1	BHJ0462	10/14/24	10/15/24	EPA 6020B	
Magnesium	4.29	0.0500	"	"	"	"	"	"	
Sodium	17.5	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.843	0.00100	units	1	BHJ0554	10/15/24	10/15/24	Calculation	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**SEP04 DL-3FT**  
**2410153-07 (Soil)**

**Summit Scientific**

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

% Solids	83.5	%	1	BHJ0420	10/11/24	10/11/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.256	0.0100	mmhos/cm	1	BHJ0464	10/14/24	10/14/24	EPA 120.1	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.60		pH Units	1	BHJ0463	10/14/24	10/14/24	EPA 9045D	

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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**PWV02 E-5FT**  
**2410153-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ0442	10/11/24	10/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0392	97.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0397	99.3 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0443	10/11/24	10/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.25	74.0 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**PWV02 E-5FT**  
**2410153-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0417	10/11/24	10/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0157	47.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0150	45.1 %	40-150		"	"	"	"	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ0440	10/11/24	10/15/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **10/09/24 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 - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**PWV02 E-5FT**  
**2410153-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.46	0.200	mg/kg dry	1	BHJ0475	10/14/24	10/14/24	EPA 6020B
Barium	265	0.400	"	"	"	"	"	"
Cadmium	0.470	0.200	"	"	"	"	"	"
Copper	6.71	0.400	"	"	"	"	"	"
Lead	13.0	0.200	"	"	"	"	"	"
Nickel	6.51	0.400	"	"	"	"	"	"
Silver	0.0587	0.0200	"	"	"	"	"	"
Zinc	38.3	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ0470	10/14/24	10/14/24	EPA 7196A	

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

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	14.2	0.0500	mg/L dry	1	BHJ0462	10/14/24	10/15/24	EPA 6020B	
Magnesium	4.77	0.0500	"	"	"	"	"	"	
Sodium	10.2	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.598	0.00100	units	1	BHJ0554	10/15/24	10/15/24	Calculation	

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

Date Sampled: 10/09/24 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 - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**PWV02 E-5FT**  
**2410153-08 (Soil)**

**Summit Scientific**

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

% Solids	81.8	%	1	BHJ0420	10/11/24	10/11/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.116	0.0100	mmhos/cm	1	BHJ0464	10/14/24	10/14/24	EPA 120.1	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.88		pH Units	1	BHJ0463	10/14/24	10/14/24	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**PWV02 B-6FT**  
**2410153-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHJ0442	10/11/24	10/12/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>0.0089</b>	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.0044</b>	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0386	96.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0408	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHJ0443	10/11/24	10/12/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.47	59.8 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
PO Box 1289  
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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**PWV02 B-6FT**  
**2410153-09 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHJ0417	10/11/24	10/12/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.0242</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.0258</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0183	54.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0165	49.5 %	40-150		"	"	"	"	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHJ0440	10/11/24	10/15/24	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **10/09/24 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 - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**PWV02 B-6FT**  
**2410153-09 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	5.87	0.200	mg/kg dry	1	BHJ0475	10/14/24	10/14/24	EPA 6020B
Barium	39.5	0.400	"	"	"	"	"	"
Cadmium	0.594	0.200	"	"	"	"	"	"
Copper	8.33	0.400	"	"	"	"	"	"
Lead	19.0	0.200	"	"	"	"	"	"
Nickel	6.12	0.400	"	"	"	"	"	"
Silver	0.106	0.0200	"	"	"	"	"	"
Zinc	32.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHJ0470	10/14/24	10/14/24	EPA 7196A	

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

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	16.9	0.0500	mg/L dry	1	BHJ0462	10/14/24	10/15/24	EPA 6020B	
Magnesium	5.41	0.0500	"	"	"	"	"	"	
Sodium	14.6	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.791	0.00100	units	1	BHJ0554	10/15/24	10/15/24	Calculation	

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

Date Sampled: 10/09/24 00:00

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
 PO Box 1289  
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Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**PWV02 B-6FT**  
**2410153-09 (Soil)**

**Summit Scientific**

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

% Solids	79.2	%	1	BHJ0420	10/11/24	10/11/24	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.123	0.0100	mmhos/cm	1	BHJ0464	10/14/24	10/14/24	EPA 120.1	

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

Date Sampled: **10/09/24 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.27		pH Units	1	BHJ0463	10/14/24	10/14/24	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

### 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 BHJ0442 - EPA 5030 Soil MS

##### Blank (BHJ0442-BLK1)

Prepared: 10/11/24 Analyzed: 10/12/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0353		"	0.0400		88.4	50-150			
Surrogate: Toluene-d8	0.0406		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		96.9	50-150			

##### LCS (BHJ0442-BS1)

Prepared: 10/11/24 Analyzed: 10/12/24

Benzene	0.0980	0.0020	mg/kg	0.100		98.0	70-130			
Toluene	0.0944	0.0050	"	0.100		94.4	70-130			
Ethylbenzene	0.0920	0.0050	"	0.100		92.0	70-130			
m,p-Xylene	0.181	0.010	"	0.200		90.6	70-130			
o-Xylene	0.0928	0.0050	"	0.100		92.8	70-130			
1,2,4-Trimethylbenzene	0.0854	0.0050	"	0.100		85.4	70-130			
1,3,5-Trimethylbenzene	0.0872	0.0050	"	0.100		87.2	70-130			
Naphthalene	0.0829	0.0038	"	0.100		82.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0364		"	0.0400		90.9	50-150			
Surrogate: Toluene-d8	0.0409		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.4	50-150			

##### Matrix Spike (BHJ0442-MS1)

Source: 2410150-01

Prepared: 10/11/24 Analyzed: 10/12/24

Benzene	0.0830	0.0020	mg/kg	0.100	ND	83.0	70-130			
Toluene	0.0779	0.0050	"	0.100	ND	77.9	70-130			
Ethylbenzene	0.0742	0.0050	"	0.100	ND	74.2	70-130			
m,p-Xylene	0.144	0.010	"	0.200	ND	71.9	70-130			
o-Xylene	0.0746	0.0050	"	0.100	ND	74.6	70-130			
1,2,4-Trimethylbenzene	0.0617	0.0050	"	0.100	ND	61.7	70-130			QM-05
1,3,5-Trimethylbenzene	0.0639	0.0050	"	0.100	ND	63.9	70-130			QM-05
Naphthalene	0.0592	0.0038	"	0.100	ND	59.2	70-130			QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0385		"	0.0400		96.3	50-150			
Surrogate: Toluene-d8	0.0410		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.6	50-150			

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Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**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 BHJ0442 - EPA 5030 Soil MS**

Matrix Spike Dup (BHJ0442-MSD1)	Source: 2410150-01			Prepared: 10/11/24 Analyzed: 10/12/24						
Benzene	0.0847	0.0020	mg/kg	0.100	ND	84.7	70-130	2.00	30	
Toluene	0.0800	0.0050	"	0.100	ND	80.0	70-130	2.62	30	
Ethylbenzene	0.0742	0.0050	"	0.100	ND	74.2	70-130	0.0404	30	
m,p-Xylene	0.145	0.010	"	0.200	ND	72.5	70-130	0.810	30	
o-Xylene	0.0749	0.0050	"	0.100	ND	74.9	70-130	0.401	30	
1,2,4-Trimethylbenzene	0.0619	0.0050	"	0.100	ND	61.9	70-130	0.340	30	QM-05
1,3,5-Trimethylbenzene	0.0638	0.0050	"	0.100	ND	63.8	70-130	0.141	30	QM-05
Naphthalene	0.0577	0.0038	"	0.100	ND	57.7	70-130	2.51	30	QM-05
Surrogate: 1,2-Dichloroethane-d4	0.0396		"	0.0400		99.1	50-150			
Surrogate: Toluene-d8	0.0410		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		99.1	50-150			

Summit Scientific

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

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

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

**Batch BHJ0443 - EPA 3550A**

**Blank (BHJ0443-BLK1)**

Prepared & Analyzed: 10/11/24

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: <i>o</i> -Terphenyl	12.6		"	12.5		101		30-150		

**LCS (BHJ0443-BS1)**

Prepared & Analyzed: 10/11/24

C10-C28 (DRO)	460	50	mg/kg	500		92.0		70-130		
Surrogate: <i>o</i> -Terphenyl	11.7		"	12.5		93.6		30-150		

**Matrix Spike (BHJ0443-MS1)**

Source: 2410150-01

Prepared & Analyzed: 10/11/24

C10-C28 (DRO)	601	50	mg/kg	500	ND	120		70-130		
Surrogate: <i>o</i> -Terphenyl	16.1		"	12.5		129		30-150		

**Matrix Spike Dup (BHJ0443-MSD1)**

Source: 2410150-01

Prepared & Analyzed: 10/11/24

C10-C28 (DRO)	600	50	mg/kg	500	ND	120		70-130	0.112	20
Surrogate: <i>o</i> -Terphenyl	16.2		"	12.5		130		30-150		

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**PAH by EPA Method 8270D SIM - Quality Control**

**Summit Scientific**

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

**Batch BHJ0417 - EPA 5030 Soil MS**

**Blank (BHJ0417-BLK1)**

Prepared: 10/11/24 Analyzed: 10/12/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0238		"	0.0333	71.3	40-150				
Surrogate: Fluoranthene-d10	0.0246		"	0.0333	73.7	40-150				

**LCS (BHJ0417-BS1)**

Prepared: 10/11/24 Analyzed: 10/12/24

Acenaphthene	0.0225	0.00500	mg/kg	0.0333	67.5	31-137				
Anthracene	0.0232	0.00500	"	0.0333	69.7	30-120				
Benzo (a) anthracene	0.0230	0.00500	"	0.0333	69.0	30-120				
Benzo (a) pyrene	0.0205	0.00500	"	0.0333	61.4	30-120				
Benzo (b) fluoranthene	0.0198	0.00500	"	0.0333	59.5	30-120				
Benzo (k) fluoranthene	0.0196	0.00500	"	0.0333	58.7	30-120				
Chrysene	0.0227	0.00500	"	0.0333	68.2	30-120				
Dibenz (a,h) anthracene	0.0210	0.00500	"	0.0333	63.1	30-120				
Fluoranthene	0.0201	0.00500	"	0.0333	60.3	30-120				
Fluorene	0.0218	0.00500	"	0.0333	65.5	30-120				
Indeno (1,2,3-cd) pyrene	0.0226	0.00500	"	0.0333	67.9	30-120				
Pyrene	0.0261	0.00500	"	0.0333	78.2	35-142				
1-Methylnaphthalene	0.0212	0.00500	"	0.0333	63.5	35-142				
2-Methylnaphthalene	0.0218	0.00500	"	0.0333	65.5	35-142				
Surrogate: 2-Methylnaphthalene-d10	0.0216		"	0.0333	64.8	40-150				
Surrogate: Fluoranthene-d10	0.0207		"	0.0333	62.2	40-150				

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**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 BHJ0417 - EPA 5030 Soil MS**

<b>Matrix Spike (BHJ0417-MS1)</b>	<b>Source: 2410151-01</b>			<b>Prepared: 10/11/24 Analyzed: 10/12/24</b>						
Acenaphthene	0.0209	0.00500	mg/kg	0.0333	ND	62.8	31-137			
Anthracene	0.0206	0.00500	"	0.0333	ND	61.9	30-120			
Benzo (a) anthracene	0.0210	0.00500	"	0.0333	ND	62.9	30-120			
Benzo (a) pyrene	0.0178	0.00500	"	0.0333	ND	53.5	30-120			
Benzo (b) fluoranthene	0.0176	0.00500	"	0.0333	ND	52.8	30-120			
Benzo (k) fluoranthene	0.0182	0.00500	"	0.0333	ND	54.6	30-120			
Chrysene	0.0210	0.00500	"	0.0333	ND	62.9	30-120			
Dibenz (a,h) anthracene	0.0191	0.00500	"	0.0333	ND	57.3	30-120			
Fluoranthene	0.0180	0.00500	"	0.0333	ND	53.9	30-120			
Fluorene	0.0199	0.00500	"	0.0333	ND	59.8	30-120			
Indeno (1,2,3-cd) pyrene	0.0209	0.00500	"	0.0333	ND	62.8	30-120			
Pyrene	0.0226	0.00500	"	0.0333	ND	67.9	35-142			
1-Methylnaphthalene	0.0216	0.00500	"	0.0333	ND	64.7	15-130			
2-Methylnaphthalene	0.0217	0.00500	"	0.0333	ND	65.2	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0223</i>		<i>"</i>	<i>0.0333</i>		<i>66.9</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0182</i>		<i>"</i>	<i>0.0333</i>		<i>54.6</i>	<i>40-150</i>			

<b>Matrix Spike Dup (BHJ0417-MSD1)</b>	<b>Source: 2410151-01</b>			<b>Prepared: 10/11/24 Analyzed: 10/12/24</b>						
Acenaphthene	0.0217	0.00500	mg/kg	0.0333	ND	65.1	31-137	3.65	30	
Anthracene	0.0215	0.00500	"	0.0333	ND	64.5	30-120	4.10	30	
Benzo (a) anthracene	0.0220	0.00500	"	0.0333	ND	65.9	30-120	4.62	30	
Benzo (a) pyrene	0.0188	0.00500	"	0.0333	ND	56.5	30-120	5.49	30	
Benzo (b) fluoranthene	0.0179	0.00500	"	0.0333	ND	53.7	30-120	1.81	30	
Benzo (k) fluoranthene	0.0183	0.00500	"	0.0333	ND	54.8	30-120	0.305	30	
Chrysene	0.0212	0.00500	"	0.0333	ND	63.6	30-120	1.18	30	
Dibenz (a,h) anthracene	0.0185	0.00500	"	0.0333	ND	55.5	30-120	3.08	30	
Fluoranthene	0.0195	0.00500	"	0.0333	ND	58.6	30-120	8.44	30	
Fluorene	0.0215	0.00500	"	0.0333	ND	64.6	30-120	7.63	30	
Indeno (1,2,3-cd) pyrene	0.0199	0.00500	"	0.0333	ND	59.6	30-120	5.22	30	
Pyrene	0.0215	0.00500	"	0.0333	ND	64.4	35-142	5.20	30	
1-Methylnaphthalene	0.0218	0.00500	"	0.0333	ND	65.6	15-130	1.29	50	
2-Methylnaphthalene	0.0224	0.00500	"	0.0333	ND	67.1	15-130	2.80	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0218</i>		<i>"</i>	<i>0.0333</i>		<i>65.5</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0199</i>		<i>"</i>	<i>0.0333</i>		<i>59.7</i>	<i>40-150</i>			

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

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

**Summit Scientific**

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

**Batch BHJ0440 - EPA 3050B**

**Blank (BHJ0440-BLK1)**

Prepared: 10/11/24 Analyzed: 10/15/24

Boron ND 2.00 mg/L

**LCS (BHJ0440-BS1)**

Prepared: 10/11/24 Analyzed: 10/15/24

Boron 5.33 2.00 mg/L 5.00 107 80-120

**Duplicate (BHJ0440-DUP1)**

Source: 2410153-01

Prepared: 10/11/24 Analyzed: 10/15/24

Boron 0.140 2.00 mg/L 0.188 29.4 20 QR-01

**Matrix Spike (BHJ0440-MS1)**

Source: 2410153-01

Prepared: 10/11/24 Analyzed: 10/15/24

Boron 4.94 2.00 mg/L 5.04 0.188 94.4 75-125

**Matrix Spike Dup (BHJ0440-MSD1)**

Source: 2410153-01

Prepared: 10/11/24 Analyzed: 10/15/24

Boron 5.08 2.00 mg/L 5.04 0.188 97.1 75-125 2.79 25

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

**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 BHJ0475 - EPA 3050B**

**Blank (BHJ0475-BLK1)**

Prepared & Analyzed: 10/14/24

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

**LCS (BHJ0475-BS1)**

Prepared & Analyzed: 10/14/24

Arsenic	38.7	0.200	mg/kg wet	38.8	99.8	80-120
Barium	41.0	0.400	"	38.8	106	80-120
Cadmium	1.88	0.200	"	1.94	96.9	80-120
Copper	38.5	0.400	"	38.8	99.4	80-120
Lead	18.8	0.200	"	19.4	96.9	80-120
Nickel	38.7	0.400	"	38.8	99.8	80-120
Silver	1.91	0.0200	"	1.94	98.5	80-120
Zinc	38.2	0.400	"	38.8	98.6	80-120
Selenium	4.00	0.260	"	3.88	103	80-120

**Duplicate (BHJ0475-DUP1)**

Source: 2410153-01

Prepared & Analyzed: 10/14/24

Arsenic	1.53	0.200	mg/kg dry	1.55	1.50	20	
Barium	39.1	0.400	"	45.6	15.2	20	
Cadmium	0.197	0.200	"	0.209	6.03	20	
Copper	3.49	0.400	"	4.19	18.3	20	
Lead	4.37	0.200	"	5.15	16.5	20	
Nickel	2.78	0.400	"	3.59	25.4	20	QR-01
Silver	0.0156	0.0200	"	0.118	153	20	QR-01
Zinc	12.4	0.400	"	15.7	23.1	20	QR-02
Selenium	ND	0.260	"	ND		20	

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**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 BHJ0475 - EPA 3050B**

**Matrix Spike (BHJ0475-MS1)**

Source: 2410153-01

Prepared & Analyzed: 10/14/24

Arsenic	32.5	0.200	mg/kg dry	43.8	1.55	70.6	75-125				QM-05
Barium	84.9	0.400	"	43.8	45.6	89.8	75-125				
Cadmium	2.30	0.200	"	2.19	0.209	95.3	75-125				
Copper	34.2	0.400	"	43.8	4.19	68.6	75-125				QM-05
Lead	24.7	0.200	"	21.9	5.15	89.2	75-125				
Nickel	34.4	0.400	"	43.8	3.59	70.4	75-125				QM-05
Silver	2.08	0.0200	"	2.19	0.118	89.7	75-125				
Zinc	45.8	0.400	"	43.8	15.7	68.7	75-125				QM-05
Selenium	4.04	0.260	"	4.38	ND	92.2	75-125				

**Matrix Spike Dup (BHJ0475-MSD1)**

Source: 2410153-01

Prepared & Analyzed: 10/14/24

Arsenic	28.7	0.200	mg/kg dry	42.8	1.55	63.6	75-125	12.2	25		QM-05
Barium	91.1	0.400	"	42.8	45.6	107	75-125	7.07	25		
Cadmium	2.28	0.200	"	2.14	0.209	97.0	75-125	0.614	25		
Copper	31.1	0.400	"	42.8	4.19	62.9	75-125	9.65	25		QM-05
Lead	25.4	0.200	"	21.4	5.15	94.6	75-125	2.69	25		
Nickel	31.1	0.400	"	42.8	3.59	64.4	75-125	10.0	25		QM-05
Silver	2.08	0.0200	"	2.14	0.118	91.6	75-125	0.389	25		
Zinc	42.2	0.400	"	42.8	15.7	62.1	75-125	8.01	25		QM-05
Selenium	3.83	0.260	"	4.28	ND	89.5	75-125	5.43	25		

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

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

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

**Batch BHJ0470 - 3060A Mod**

**Blank (BHJ0470-BLK1)**

Prepared & Analyzed: 10/14/24

Chromium, Hexavalent      ND      0.30    mg/kg wet

**LCS (BHJ0470-BS1)**

Prepared & Analyzed: 10/14/24

Chromium, Hexavalent      26.4      0.30    mg/kg wet      25.0      106      80-120

**Duplicate (BHJ0470-DUP1)**

**Source: 2410153-01**

Prepared & Analyzed: 10/14/24

Chromium, Hexavalent      ND      0.30    mg/kg dry      ND      20

**Matrix Spike (BHJ0470-MS1)**

**Source: 2410153-01**

Prepared & Analyzed: 10/14/24

Chromium, Hexavalent      26.6      0.30    mg/kg dry      26.7      ND      99.6      75-125

**Matrix Spike Dup (BHJ0470-MSD1)**

**Source: 2410153-01**

Prepared & Analyzed: 10/14/24

Chromium, Hexavalent      28.2      0.30    mg/kg dry      26.7      ND      106      75-125      5.85      20

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**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 BHJ0462 - General Preparation**

**Blank (BHJ0462-BLK1)**

Prepared & Analyzed: 10/14/24

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

**LCS (BHJ0462-BS1)**

Prepared & Analyzed: 10/14/24

Calcium	5.57	0.0500	mg/L wet	5.00	111	70-130				
Magnesium	5.25	0.0500	"	5.00	105	70-130				
Sodium	5.17	0.0500	"	5.00	103	70-130				

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**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 BHJ0420 - General Preparation**

**Duplicate (BHJ0420-DUP1)**

**Source: 2410153-01**

Prepared & Analyzed: 10/11/24

% Solids	93.2		%		93.5			0.344	20	
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Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**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 BHJ0464 - General Preparation**

**Blank (BHJ0464-BLK1)**

Prepared & Analyzed: 10/14/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BHJ0464-BS1)**

Prepared & Analyzed: 10/14/24

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.150 105 95-105

**Duplicate (BHJ0464-DUP1)**

Source: 2410141-01

Prepared & Analyzed: 10/14/24

Specific Conductance (EC) 0.0542 0.0100 mmhos/cm 0.0554 2.35 20

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
 Project Manager: Paul Henchan

**Reported:**  
 10/15/24 09:20

**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 BHJ0463 - General Preparation**

**LCS (BHJ0463-BS1)**

Prepared & Analyzed: 10/14/24

pH	9.21	pH Units	9.18	100	95-105
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**Duplicate (BHJ0463-DUP1)**

Source: 2410141-01

Prepared & Analyzed: 10/14/24

pH	6.06	pH Units	6.06	0.00	20
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Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch USX AE T6N-R62W-S29 L01

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
10/15/24 09:20

### Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- 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