

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 12, 2025

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)

Work Order #2501452

Enclosed are the results of analyses for samples received by Summit Scientific on 01/30/25 16:30. 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 fluid and cursive, with the first name being more prominent.

Natalie Tessier For Paul Shrewsbury

President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)

Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N Wall 5.5Ft	2501452-01	Soil	01/30/25 16:30	01/30/25 16:30
S Wall 5.5Ft	2501452-02	Soil	01/30/25 16:30	01/30/25 16:30
E Wall 5.5Ft	2501452-03	Soil	01/30/25 16:30	01/30/25 16:30
W Wall 5.5Ft	2501452-04	Soil	01/30/25 16:30	01/30/25 16:30
Floor 8Ft	2501452-05	Soil	01/30/25 16:30	01/30/25 16:30
Backfill	2501452-06	Soil	01/30/25 16:30	01/30/25 16:30

Summit Scientific

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2501452

Client: Fremont Environmental		Send Data To:		Company: Chevron	
Address: 8305 6th St.		Project Manager: Henehan		Project Name: Location	
City/State/Zip: Wellington, CO		E-Mail: Chevron Dist. List, paulH, ethanB (@fremontenv.com), erin.crawford@chevron.com		AFE#:	
Phone:		Project Name: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)		PO/Billing Codes: UWRWE-A2809-ENV	
Sampler Name: Ethan Black		Project Number: C023-107		Contact: Jason Davidson	

					Preservative				Matrix				Analysis Requested					Special Instructions		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	Full Table 915-1 (Soil)	Full Table 915-1 (GW)	NBTEX, TMBs	TPH (C6-C36)	PAHs	BAR, H4, H4a, Bortom	Table 915-1 Metals	
1	N Wall 5.5FT	1/30/25		2			X			X			X							
2	S Wall 5.5FT	I		I			I			I			I							
3	E Wall 5.5FT						I			I			I							
4	W Wall 5.5FT						I			I			I							
5	FLOOR 8FT						I			I			I							
6	BACKFILL	I		I			I			I			I							
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				

Relinquished by: <u>Eth Black</u>	Date/Time: <u>1/30/25 1550</u>	Received by: <u>S2 North</u>	Date/Time: <u>1/30/25 1550</u>	TAT Business Days	Field DO	Notes: Dist. Report to parties in the email line(s) only.
Relinquished by: <u>S2</u>	Date/Time: <u>1/30/25 1630</u>	Received by: <u>[Signature]</u>	Date/Time: <u>1/30/25 1630</u>	Same Day <input checked="" type="checkbox"/>	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day <input type="checkbox"/>	Field ORP	
				2 Days <input type="checkbox"/>	Field pH	
				3 Days <input type="checkbox"/>	Field Temp.	
				Standard <input type="checkbox"/>	Field Turb.	
Temperature Upon Receipt: <u>5.9</u>		Corrected Temperature <u>6</u>		IR gun #: <u>1</u>	HNO3 lot #:	

S<sub>2</sub>S2 Work Order# 2501452

## Sample Receipt Checklist

(Excavation)

Client: FremontClient Project ID: Noble-wells Ranch AA 21-06 wellheadReceived Via: H.D./FEU/FedEx/UPS/USPS/Other ☐Airbill #: ☐Matrix (Circle all that apply) Air/Soil/Water/Other ☐Temp (°C) 59Thermometer # 1Bottle ware (Circle all that apply) Glass Jar/Voa/Amber/Poly/Other ☐

	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.	—			m2 OE
If custody seals are present, are they intact? <sup>(1)</sup>	—			
Are samples due within 48 hours?	—			Sameday
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, Total Residual Chlorine (TRC)		—		
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	✓	✓		no times
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	—			
Were all samples received intact? <sup>(1)</sup>	✓			
Was adequate sample volume provided? <sup>(1)</sup>	✓			
Were samples provided in appropriate bottle ware?	✓			
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	✓			
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are any samples/bottles preserved (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.			✓	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Are there requested analysis that cannot be performed by S2? Note analysis in the comments column		✓		
Additional Comments (if any):				
(1) If NO, then contact the client before proceeding with analysis and note in case narrative.				

Control Form #: SRC-001

AS  
Custodian Printed Name

1/30/25  
Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)

Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**N Wall 5.5Ft**  
**2501452-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BIA1453	01/30/25	01/30/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0462	115 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0390	97.4 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BIA1455	01/30/25	01/30/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.8	86.3 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project Manager: Paul Henchan

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**2501452-01 (Soil)**

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**PAH by EPA Method 8270D SIM**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0100	02/04/25	02/08/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0223	67.0 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0249	74.8 %	40-140		"	"	"	"	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIA1460	01/31/25	02/01/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/30/25 16:30**

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 AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**N Wall 5.5Ft**  
**2501452-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	4.17	0.200	mg/kg dry	1	BIA1468	01/31/25	02/01/25	EPA 6020B
Barium	179	0.400	"	"	"	"	"	"
Cadmium	0.471	0.200	"	"	"	"	"	"
Copper	7.11	0.400	"	"	"	"	"	"
Lead	11.1	0.200	"	"	"	"	"	"
Nickel	6.31	0.400	"	"	"	"	"	"
Silver	0.0611	0.0200	"	"	"	"	"	"
Zinc	26.2	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1496	01/31/25	01/31/25	EPA 7196A	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	81.6	0.0500	mg/L dry	1	BIA1457	01/30/25	02/01/25	EPA 6020B	
Magnesium	13.6	0.0500	"	"	"	"	"	"	
Sodium	106	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.86	0.00100	units	1	BIB0116	02/04/25	02/04/25	Calculation	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**N Wall 5.5Ft**  
**2501452-01 (Soil)**

**Summit Scientific**

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

% Solids	81.2	%	1	BIA1465	01/31/25	02/03/25	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.791	0.0100	mmhos/cm	1	BIA1458	01/30/25	02/03/25	EPA 120.1	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.20		pH Units	1	BIA1459	01/30/25	02/03/25	EPA 9045D	

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Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**S Wall 5.5Ft**  
**2501452-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BIA1453	01/30/25	01/30/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0452	113 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0380	94.9 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BIA1455	01/30/25	01/30/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.9	95.2 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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**S Wall 5.5Ft**  
**2501452-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0100	02/04/25	02/08/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0200	60.1 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0187	56.0 %	40-140		"	"	"	"	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIA1460	01/31/25	02/01/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**S Wall 5.5Ft**  
**2501452-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	4.48	0.200	mg/kg dry	1	BIA1468	01/31/25	02/01/25	EPA 6020B
Barium	143	0.400	"	"	"	"	"	"
Cadmium	0.570	0.200	"	"	"	"	"	"
Copper	8.66	0.400	"	"	"	"	"	"
Lead	14.6	0.200	"	"	"	"	"	"
Nickel	7.41	0.400	"	"	"	"	"	"
Silver	0.0947	0.0200	"	"	"	"	"	"
Zinc	33.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1496	01/31/25	01/31/25	EPA 7196A	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	70.3	0.0500	mg/L dry	1	BIA1457	01/30/25	02/01/25	EPA 6020B	
Magnesium	13.8	0.0500	"	"	"	"	"	"	
Sodium	114	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.25	0.00100	units	1	BIB0116	02/04/25	02/04/25	Calculation	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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02/12/25 08:16

**S Wall 5.5Ft**  
**2501452-02 (Soil)**

**Summit Scientific**

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

% Solids	80.9	%	1	BIA1466	01/31/25	01/31/25	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.809	0.0100	mmhos/cm	1	BIA1458	01/30/25	02/03/25	EPA 120.1	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.15		pH Units	1	BIA1459	01/30/25	02/03/25	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**E Wall 5.5Ft**  
**2501452-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BIA1453	01/30/25	01/30/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0446	112 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0409	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0389	97.2 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BIA1455	01/30/25	01/31/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.3	82.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**E Wall 5.5Ft**  
**2501452-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0100	02/04/25	02/08/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0264	79.3 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0284	85.1 %	40-140		"	"	"	"	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIA1460	01/31/25	02/01/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/30/25 16:30**

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

Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**E Wall 5.5Ft**  
**2501452-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	4.94	0.200	mg/kg dry	1	BIA1468	01/31/25	02/01/25	EPA 6020B
Barium	204	0.400	"	"	"	"	"	"
Cadmium	0.718	0.200	"	"	"	"	"	"
Copper	8.96	0.400	"	"	"	"	"	"
Lead	15.5	0.200	"	"	"	"	"	"
Nickel	6.97	0.400	"	"	"	"	"	"
Silver	0.0809	0.0200	"	"	"	"	"	"
Zinc	32.9	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1496	01/31/25	01/31/25	EPA 7196A	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	59.9	0.0500	mg/L dry	1	BIA1457	01/30/25	02/01/25	EPA 6020B	
Magnesium	9.88	0.0500	"	"	"	"	"	"	
Sodium	41.2	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.30	0.00100	units	1	BIB0116	02/04/25	02/04/25	Calculation	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**E Wall 5.5Ft  
2501452-03 (Soil)**

**Summit Scientific**

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

% Solids	75.9	%	1	BIA1466	01/31/25	01/31/25	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.481	0.0100	mmhos/cm	1	BIA1458	01/30/25	02/03/25	EPA 120.1	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.22		pH Units	1	BIA1459	01/30/25	02/03/25	EPA 9045D	

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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**W Wall 5.5Ft**  
**2501452-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BIA1453	01/30/25	01/31/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0451	113 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.6 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	140	50	mg/kg	1	BIA1455	01/30/25	01/31/25	EPA 8015M	
C28-C36 (ORO)	150	50	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.0	80.1 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**W Wall 5.5Ft**  
**2501452-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0100	02/04/25	02/08/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0235	70.4 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0213	63.8 %	40-140		"	"	"	"	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIA1460	01/31/25	02/01/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**W Wall 5.5Ft**  
**2501452-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	4.33	0.200	mg/kg dry	1	BIA1468	01/31/25	02/03/25	EPA 6020B
Barium	190	0.400	"	"	"	"	"	"
Cadmium	0.433	0.200	"	"	"	"	"	"
Copper	8.01	0.400	"	"	"	"	"	"
Lead	11.3	0.200	"	"	"	"	"	"
Nickel	6.45	0.400	"	"	"	"	"	"
Silver	0.0686	0.0200	"	"	"	"	"	"
Zinc	27.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1496	01/31/25	01/31/25	EPA 7196A	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	125	0.0500	mg/L dry	1	BIA1457	01/30/25	02/01/25	EPA 6020B	
Magnesium	36.2	0.0500	"	"	"	"	"	"	
Sodium	157	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.18	0.00100	units	1	BIB0116	02/04/25	02/04/25	Calculation	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**W Wall 5.5Ft**  
**2501452-04 (Soil)**

**Summit Scientific**

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

% Solids	85.7	%	1	BIA1466	01/31/25	01/31/25	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.34	0.0100	mmhos/cm	1	BIA1458	01/30/25	02/03/25	EPA 120.1	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.03		pH Units	1	BIA1459	01/30/25	02/03/25	EPA 9045D	

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Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**Floor 8Ft**  
**2501452-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BIA1453	01/30/25	01/31/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0456	114 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0402	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	97.0 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	72	50	mg/kg	1	BIA1455	01/30/25	01/31/25	EPA 8015M	
C28-C36 (ORO)	84	50	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.0	87.8 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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02/12/25 08:16

**Floor 8Ft**  
**2501452-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0100	02/04/25	02/08/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0260	78.0 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0264	79.1 %	40-140		"	"	"	"	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIA1460	01/31/25	02/01/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**Floor 8Ft**  
**2501452-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	5.13	0.200	mg/kg dry	1	BIA1468	01/31/25	02/01/25	EPA 6020B
Barium	193	0.400	"	"	"	"	"	"
Cadmium	0.666	0.200	"	"	"	"	"	"
Copper	7.87	0.400	"	"	"	"	"	"
Lead	15.2	0.200	"	"	"	"	"	"
Nickel	6.77	0.400	"	"	"	"	"	"
Silver	0.0793	0.0200	"	"	"	"	"	"
Zinc	30.0	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1496	01/31/25	01/31/25	EPA 7196A	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	81.7	0.0500	mg/L dry	1	BIA1457	01/30/25	02/01/25	EPA 6020B	
Magnesium	16.0	0.0500	"	"	"	"	"	"	
Sodium	103	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.73	0.00100	units	1	BIB0116	02/04/25	02/04/25	Calculation	

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

Date Sampled: **01/30/25 16:30**

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 AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**Floor 8Ft**  
**2501452-05 (Soil)**

**Summit Scientific**

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

% Solids	75.4	%	1	BIA1466	01/31/25	01/31/25	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.769	0.0100	mmhos/cm	1	BIA1458	01/30/25	02/03/25	EPA 120.1	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BIA1459	01/30/25	02/03/25	EPA 9045D	

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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**Backfill**  
**2501452-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BIA1453	01/30/25	01/31/25	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0438	110 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0396	99.0 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BIA1455	01/30/25	01/31/25	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.2	97.5 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**Backfill**  
**2501452-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BIB0100	02/04/25	02/08/25	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0254	76.3 %	40-140		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0264	79.3 %	40-140		"	"	"	"	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BIA1460	01/31/25	02/01/25	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/30/25 16:30**

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 AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**Backfill**  
**2501452-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	1.73	0.200	mg/kg dry	1	BIA1468	01/31/25	02/01/25	EPA 6020B
Barium	48.3	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.68	0.400	"	"	"	"	"	"
Lead	6.14	0.200	"	"	"	"	"	"
Nickel	3.37	0.400	"	"	"	"	"	"
Silver	0.0233	0.0200	"	"	"	"	"	"
Zinc	13.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BIA1496	01/31/25	01/31/25	EPA 7196A	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	22.7	0.0500	mg/L dry	1	BIA1457	01/30/25	02/01/25	EPA 6020B	
Magnesium	1.91	0.0500	"	"	"	"	"	"	
Sodium	30.6	0.0500	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.66	0.00100	units	1	BIB0116	02/04/25	02/04/25	Calculation	

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

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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**Backfill**  
**2501452-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.0		%	1	BIA1466	01/31/25	01/31/25	Calculation	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.218	0.0100	mmhos/cm	1	BIA1458	01/30/25	02/03/25	EPA 120.1	

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

Date Sampled: **01/30/25 16:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.76		pH Units	1	BIA1459	01/30/25	02/03/25	EPA 9045D	

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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)

Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

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

#### Batch BIA1453 - EPA 5030 Soil MS

##### Blank (BIA1453-BLK1)

Prepared: 01/30/25 Analyzed: 01/31/25

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0450		"	0.0400		112	50-150			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

##### LCS (BIA1453-BS1)

Prepared: 01/30/25 Analyzed: 01/31/25

Benzene	0.101	0.0020	mg/kg	0.100		101	70-130			
Toluene	0.101	0.0050	"	0.100		101	70-130			
Ethylbenzene	0.0973	0.0050	"	0.100		97.3	70-130			
m,p-Xylene	0.194	0.010	"	0.200		97.0	70-130			
o-Xylene	0.0951	0.0050	"	0.100		95.1	70-130			
1,2,4-Trimethylbenzene	0.0923	0.0050	"	0.100		92.3	70-130			
1,3,5-Trimethylbenzene	0.0922	0.0050	"	0.100		92.2	70-130			
Naphthalene	0.106	0.0038	"	0.100		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0462		"	0.0400		115	50-150			
Surrogate: Toluene-d8	0.0406		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0397		"	0.0400		99.2	50-150			

##### Matrix Spike (BIA1453-MS1)

Source: 2501449-01

Prepared: 01/30/25 Analyzed: 01/31/25

Benzene	0.104	0.0020	mg/kg	0.100	ND	104	70-130			
Toluene	0.103	0.0050	"	0.100	ND	103	70-130			
Ethylbenzene	0.160	0.0050	"	0.100	0.234	NR	70-130			QM-05
m,p-Xylene	0.414	0.010	"	0.200	1.14	NR	70-130			QM-05
o-Xylene	0.104	0.0050	"	0.100	ND	104	70-130			
1,2,4-Trimethylbenzene	0.238	0.0050	"	0.100	0.504	NR	70-130			QM-05
1,3,5-Trimethylbenzene	0.182	0.0050	"	0.100	0.374	NR	70-130			QM-05
Naphthalene	0.122	0.0038	"	0.100	0.0252	96.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0433		"	0.0400		108	50-150			
Surrogate: Toluene-d8	0.0520		"	0.0400		130	50-150			
Surrogate: 4-Bromofluorobenzene	0.0448		"	0.0400		112	50-150			

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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Summit Scientific**

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

**Batch BIA1453 - EPA 5030 Soil MS**

Matrix Spike Dup (BIA1453-MSD1)		Source: 2501449-01			Prepared: 01/30/25 Analyzed: 01/31/25					
Benzene	0.0915	0.0020	mg/kg	0.100	ND	91.5	70-130	12.6	30	
Toluene	0.0946	0.0050	"	0.100	ND	94.6	70-130	8.59	30	
Ethylbenzene	0.489	0.0050	"	0.100	0.234	256	70-130	101	30	QM-05, QR-03
m,p-Xylene	1.87	0.010	"	0.200	1.14	368	70-130	128	30	QM-05, QR-03
o-Xylene	0.0902	0.0050	"	0.100	ND	90.2	70-130	14.1	30	
1,2,4-Trimethylbenzene	1.18	0.0050	"	0.100	0.504	680	70-130	133	30	QM-05, QR-03
1,3,5-Trimethylbenzene	0.852	0.0050	"	0.100	0.374	477	70-130	130	30	QM-05, QR-03
Naphthalene	0.171	0.0038	"	0.100	0.0252	146	70-130	33.8	30	QM-05, QR-03
Surrogate: 1,2-Dichloroethane-d4	0.0433		"	0.0400		108	50-150			
Surrogate: Toluene-d8	0.147		"	0.0400		367	50-150			S-03
Surrogate: 4-Bromofluorobenzene	0.0832		"	0.0400		208	50-150			S-03

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Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

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

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

**Batch BIA1455 - EPA 3550A**

**Blank (BIA1455-BLK1)**

Prepared: 01/30/25 Analyzed: 01/31/25

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	14.2		"	12.5		114	30-150			

**LCS (BIA1455-BS1)**

Prepared: 01/30/25 Analyzed: 01/31/25

C10-C28 (DRO)	444	50	mg/kg	500		88.9	70-130			
Surrogate: o-Terphenyl	13.4		"	12.5		107	30-150			

**Matrix Spike (BIA1455-MS1)**

Source: 2501449-01

Prepared: 01/30/25 Analyzed: 01/31/25

C10-C28 (DRO)	492	50	mg/kg	500	ND	98.4	70-130			
Surrogate: o-Terphenyl	12.0		"	12.5		96.2	30-150			

**Matrix Spike Dup (BIA1455-MSD1)**

Source: 2501449-01

Prepared: 01/30/25 Analyzed: 01/31/25

C10-C28 (DRO)	534	50	mg/kg	500	ND	107	70-130	8.24	20	
Surrogate: o-Terphenyl	12.0		"	12.5		96.0	30-150			

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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

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

### Summit Scientific

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

#### Batch BIB0100 - EPA 5030 Soil MS

##### Blank (BIB0100-BLK1)

Prepared: 02/04/25 Analyzed: 02/08/25

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0262		"	0.0333		78.7	40-140			
Surrogate: Fluoranthene-d10	0.0299		"	0.0333		89.6	40-140			

##### LCS (BIB0100-BS1)

Prepared: 02/04/25 Analyzed: 02/08/25

Acenaphthene	0.0221	0.00500	mg/kg	0.0333		66.4	40-140			
Anthracene	0.0225	0.00500	"	0.0333		67.5	40-140			
Benzo (a) anthracene	0.0248	0.00500	"	0.0333		74.5	40-140			
Benzo (a) pyrene	0.0224	0.00500	"	0.0333		67.3	40-140			
Benzo (b) fluoranthene	0.0216	0.00500	"	0.0333		64.7	40-140			
Benzo (k) fluoranthene	0.0202	0.00500	"	0.0333		60.7	40-140			
Chrysene	0.0226	0.00500	"	0.0333		67.9	40-140			
Dibenz (a,h) anthracene	0.0216	0.00500	"	0.0333		64.7	40-140			
Fluoranthene	0.0232	0.00500	"	0.0333		69.6	40-140			
Fluorene	0.0260	0.00500	"	0.0333		78.1	40-140			
Indeno (1,2,3-cd) pyrene	0.0224	0.00500	"	0.0333		67.3	40-140			
Pyrene	0.0222	0.00500	"	0.0333		66.6	40-140			
1-Methylnaphthalene	0.0199	0.00500	"	0.0333		59.7	40-140			
2-Methylnaphthalene	0.0203	0.00500	"	0.0333		60.8	40-140			
Surrogate: 2-Methylnaphthalene-d10	0.0201		"	0.0333		60.3	40-140			
Surrogate: Fluoranthene-d10	0.0241		"	0.0333		72.4	40-140			

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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

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

#### Summit Scientific

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

#### Batch BIB0100 - EPA 5030 Soil MS

Matrix Spike (BIB0100-MS1)		Source: 2501434-01			Prepared: 02/04/25 Analyzed: 02/08/25						
Acenaphthene	0.0215	0.00500	mg/kg	0.0333	ND	64.4	40-140				
Anthracene	0.0198	0.00500	"	0.0333	ND	59.4	40-140				
Benzo (a) anthracene	0.0212	0.00500	"	0.0333	ND	63.7	40-140				
Benzo (a) pyrene	0.0178	0.00500	"	0.0333	ND	53.5	40-140				
Benzo (b) fluoranthene	0.0182	0.00500	"	0.0333	ND	54.5	40-140				
Benzo (k) fluoranthene	0.0155	0.00500	"	0.0333	ND	46.5	40-140				
Chrysene	0.0195	0.00500	"	0.0333	ND	58.4	40-140				
Dibenz (a,h) anthracene	0.0178	0.00500	"	0.0333	ND	53.4	40-140				
Fluoranthene	0.0241	0.00500	"	0.0333	ND	72.3	40-140				
Fluorene	0.0253	0.00500	"	0.0333	ND	75.9	40-140				
Indeno (1,2,3-cd) pyrene	0.0188	0.00500	"	0.0333	ND	56.3	40-140				
Pyrene	0.0218	0.00500	"	0.0333	ND	65.5	40-140				
1-Methylnaphthalene	0.0207	0.00500	"	0.0333	ND	62.2	40-140				
2-Methylnaphthalene	0.0223	0.00500	"	0.0333	ND	66.8	40-140				
Surrogate: 2-Methylnaphthalene-d10	0.0193		"	0.0333		57.8	40-140				
Surrogate: Fluoranthene-d10	0.0193		"	0.0333		58.0	40-140				

Matrix Spike Dup (BIB0100-MSD1)		Source: 2501434-01			Prepared: 02/04/25 Analyzed: 02/08/25						
Acenaphthene	0.0229	0.00500	mg/kg	0.0333	ND	68.7	40-140	6.53	30		
Anthracene	0.0227	0.00500	"	0.0333	ND	68.1	40-140	13.7	30		
Benzo (a) anthracene	0.0242	0.00500	"	0.0333	ND	72.5	40-140	12.9	30		
Benzo (a) pyrene	0.0217	0.00500	"	0.0333	ND	65.0	40-140	19.5	30		
Benzo (b) fluoranthene	0.0210	0.00500	"	0.0333	ND	63.1	40-140	14.6	30		
Benzo (k) fluoranthene	0.0184	0.00500	"	0.0333	ND	55.3	40-140	17.3	30		
Chrysene	0.0225	0.00500	"	0.0333	ND	67.5	40-140	14.5	30		
Dibenz (a,h) anthracene	0.0200	0.00500	"	0.0333	ND	59.9	40-140	11.5	30		
Fluoranthene	0.0276	0.00500	"	0.0333	ND	82.9	40-140	13.6	30		
Fluorene	0.0251	0.00500	"	0.0333	ND	75.4	40-140	0.628	30		
Indeno (1,2,3-cd) pyrene	0.0209	0.00500	"	0.0333	ND	62.8	40-140	10.8	30		
Pyrene	0.0239	0.00500	"	0.0333	ND	71.7	40-140	9.05	30		
1-Methylnaphthalene	0.0217	0.00500	"	0.0333	ND	65.2	40-140	4.79	30		
2-Methylnaphthalene	0.0226	0.00500	"	0.0333	ND	67.7	40-140	1.38	30		
Surrogate: 2-Methylnaphthalene-d10	0.0210		"	0.0333		63.1	40-140				
Surrogate: Fluoranthene-d10	0.0240		"	0.0333		71.9	40-140				

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

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

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

**Batch BIA1460 - EPA 3050B**

**Blank (BIA1460-BLK1)**

Prepared: 01/31/25 Analyzed: 02/01/25

Boron ND 2.00 mg/L

**LCS (BIA1460-BS1)**

Prepared: 01/31/25 Analyzed: 02/01/25

Boron 5.05 2.00 mg/L 5.00 101 80-120

**Duplicate (BIA1460-DUP1)**

**Source: 2412263-01**

Prepared: 01/31/25 Analyzed: 02/01/25

Boron 0.218 2.00 mg/L 0.276 23.6 20 QR-01

**Matrix Spike (BIA1460-MS1)**

**Source: 2412263-01**

Prepared: 01/31/25 Analyzed: 02/01/25

Boron 5.36 2.00 mg/L 4.99 0.276 102 75-125

**Matrix Spike Dup (BIA1460-MSD1)**

**Source: 2412263-01**

Prepared: 01/31/25 Analyzed: 02/01/25

Boron 5.45 2.00 mg/L 4.99 0.276 104 75-125 1.76 25

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Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BIA1468 - EPA 3050B**

**Blank (BIA1468-BLK1)**

Prepared: 01/31/25 Analyzed: 02/01/25

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

**LCS (BIA1468-BS1)**

Prepared: 01/31/25 Analyzed: 02/03/25

Arsenic	41.9	0.200	mg/kg wet	41.0	102	80-120
Barium	42.2	0.400	"	41.0	103	80-120
Cadmium	2.22	0.200	"	2.05	108	80-120
Copper	48.9	0.400	"	41.0	119	80-120
Lead	21.5	0.200	"	20.5	105	80-120
Nickel	48.8	0.400	"	41.0	119	80-120
Silver	2.20	0.0200	"	2.05	107	80-120
Zinc	48.7	0.400	"	41.0	119	80-120
Selenium	4.17	0.260	"	4.10	102	80-120

**Duplicate (BIA1468-DUP1)**

Source: 2501450-20

Prepared: 01/31/25 Analyzed: 02/03/25

Arsenic	26.9	0.200	mg/kg dry	23.6	13.1	20	
Barium	14.3	0.400	"	11.2	24.8	20	QR-04
Cadmium	0.244	0.200	"	0.210	15.1	20	
Copper	9.86	0.400	"	7.37	28.9	20	QR-04
Lead	17.2	0.200	"	14.7	16.1	20	
Nickel	4.40	0.400	"	2.82	43.9	20	QR-04
Silver	0.0253	0.0200	"	0.0216	15.8	20	
Zinc	32.9	0.400	"	23.6	32.9	20	QR-04
Selenium	ND	0.260	"	ND		20	

Summit Scientific

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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)

Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

### Total Metals by EPA 6020B - Quality Control

#### Summit Scientific

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

#### Batch BIA1468 - EPA 3050B

##### Matrix Spike (BIA1468-MS1)

Source: 2501450-20

Prepared: 01/31/25 Analyzed: 02/01/25

Arsenic	57.8	0.200	mg/kg dry	47.5	23.6	72.0	75-125			QM-05
Barium	56.6	0.400	"	47.5	11.2	95.7	75-125			
Cadmium	2.45	0.200	"	2.37	0.210	94.5	75-125			
Copper	30.2	0.400	"	47.5	7.37	48.1	75-125			QM-05
Lead	34.8	0.200	"	23.7	14.7	84.7	75-125			
Nickel	26.9	0.400	"	47.5	2.82	50.7	75-125			QM-05
Silver	2.24	0.0200	"	2.37	0.0216	93.6	75-125			
Zinc	43.7	0.400	"	47.5	23.6	42.3	75-125			QM-05
Selenium	3.60	0.260	"	4.75	ND	75.8	75-125			

##### Matrix Spike Dup (BIA1468-MSD1)

Source: 2501450-20

Prepared: 01/31/25 Analyzed: 02/01/25

Arsenic	67.3	0.200	mg/kg dry	46.0	23.6	94.9	75-125	15.2	25	
Barium	52.7	0.400	"	46.0	11.2	90.3	75-125	7.13	25	
Cadmium	2.43	0.200	"	2.30	0.210	96.4	75-125	1.04	25	
Copper	32.2	0.400	"	46.0	7.37	54.0	75-125	6.39	25	QM-05
Lead	37.8	0.200	"	23.0	14.7	101	75-125	8.44	25	
Nickel	26.4	0.400	"	46.0	2.82	51.2	75-125	1.84	25	QM-05
Silver	2.16	0.0200	"	2.30	0.0216	93.2	75-125	3.59	25	
Zinc	56.7	0.400	"	46.0	23.6	71.9	75-125	25.9	25	QM-05
Selenium	3.50	0.260	"	4.60	ND	76.1	75-125	2.75	25	

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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

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

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

**Batch BIA1496 - 3060A Mod**

**Blank (BIA1496-BLK1)**

Prepared & Analyzed: 01/31/25

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BIA1496-BS1)**

Prepared & Analyzed: 01/31/25

Chromium, Hexavalent 23.0 0.30 mg/kg wet 25.0 91.8 80-120

**Duplicate (BIA1496-DUP1)**

**Source: 2501450-22**

Prepared & Analyzed: 01/31/25

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BIA1496-MS1)**

**Source: 2501450-22**

Prepared & Analyzed: 01/31/25

Chromium, Hexavalent 24.9 0.30 mg/kg dry 28.6 ND 87.0 75-125

**Matrix Spike Dup (BIA1496-MSD1)**

**Source: 2501450-22**

Prepared & Analyzed: 01/31/25

Chromium, Hexavalent 27.7 0.30 mg/kg dry 28.6 ND 96.8 75-125 10.7 20

Summit Scientific

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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

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

**Summit Scientific**

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

**Batch BIA1457 - General Preparation**

**Blank (BIA1457-BLK1)**

Prepared: 01/30/25 Analyzed: 01/31/25

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

**LCS (BIA1457-BS1)**

Prepared: 01/30/25 Analyzed: 01/31/25

Calcium	4.99	0.0500	mg/L wet	5.00	99.7	70-130
Magnesium	5.09	0.0500	"	5.00	102	70-130
Sodium	5.15	0.0500	"	5.00	103	70-130

Summit Scientific

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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)

Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**

**Summit Scientific**

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

**Batch BIA1465 - General Preparation**

<b>Duplicate (BIA1465-DUP1)</b>		<b>Source: 2501450-01</b>			Prepared: 01/31/25 Analyzed: 02/03/25						
% Solids	84.1		%		83.7			0.398		20	

**Batch BIA1466 - General Preparation**

<b>Duplicate (BIA1466-DUP1)</b>		<b>Source: 2501452-02</b>			Prepared & Analyzed: 01/31/25						
% Solids	81.5		%		80.9			0.685		20	

Summit Scientific

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Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)  
Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control**  
**Summit Scientific**

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

**Batch BIA1458 - General Preparation**

**Blank (BIA1458-BLK1)**

Prepared: 01/30/25 Analyzed: 02/03/25

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BIA1458-BS1)**

Prepared: 01/30/25 Analyzed: 02/03/25

Specific Conductance (EC) 1.35 0.0100 mmhos/cm 1.41 95.8 95-105

**Duplicate (BIA1458-DUP1)**

**Source: 2501438-01**

Prepared: 01/30/25 Analyzed: 02/03/25

Specific Conductance (EC) 2.58 0.0100 mmhos/cm 2.58 0.00 20

Summit Scientific

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Wellington CO, 80549

Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)

Project Number: UWRWE-A2809-ENV CO23-107

Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

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

**Summit Scientific**

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

**Batch BIA1459 - General Preparation**

**LCS (BIA1459-BS1)**

Prepared: 01/30/25 Analyzed: 02/03/25

pH	9.11	pH Units	9.18	99.3	95-105
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**Duplicate (BIA1459-DUP1)**

**Source: 2501438-01**

Prepared: 01/30/25 Analyzed: 02/03/25

pH	7.96	pH Units	7.99	0.362	20
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Summit Scientific

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Wellington CO, 80549

Project: Noble - Wells Ranch AA 21-06 Wellhead (Excavation)

Project Number: UWRWE-A2809-ENV CO23-107  
Project Manager: Paul Henchan

**Reported:**  
02/12/25 08:16

### Notes and Definitions

S-03	The surrogate recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QR-04	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. Sample results were accepted based on LCS and/or LCSD recoveries and/or RPD values.
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