

April 18, 2024

Noble Energy Inc. – UPRC #27-9F Tank Battery

Groundwater

NESE Sec 27, T4N, R66W

40.278319, -104.754134

Weld County, Colorado

Fremont Project No. C022-025

Location # 327969, Remediation # 18876

Site Overview – Site History

The site consists of the former tank battery for the UPRC 27-9F natural gas well. The UPRC 27-9F well was drilled in 1992 to a depth of approximately 7,378 feet. Soil impacts were identified at the former tank battery location following the facility's abandonment.

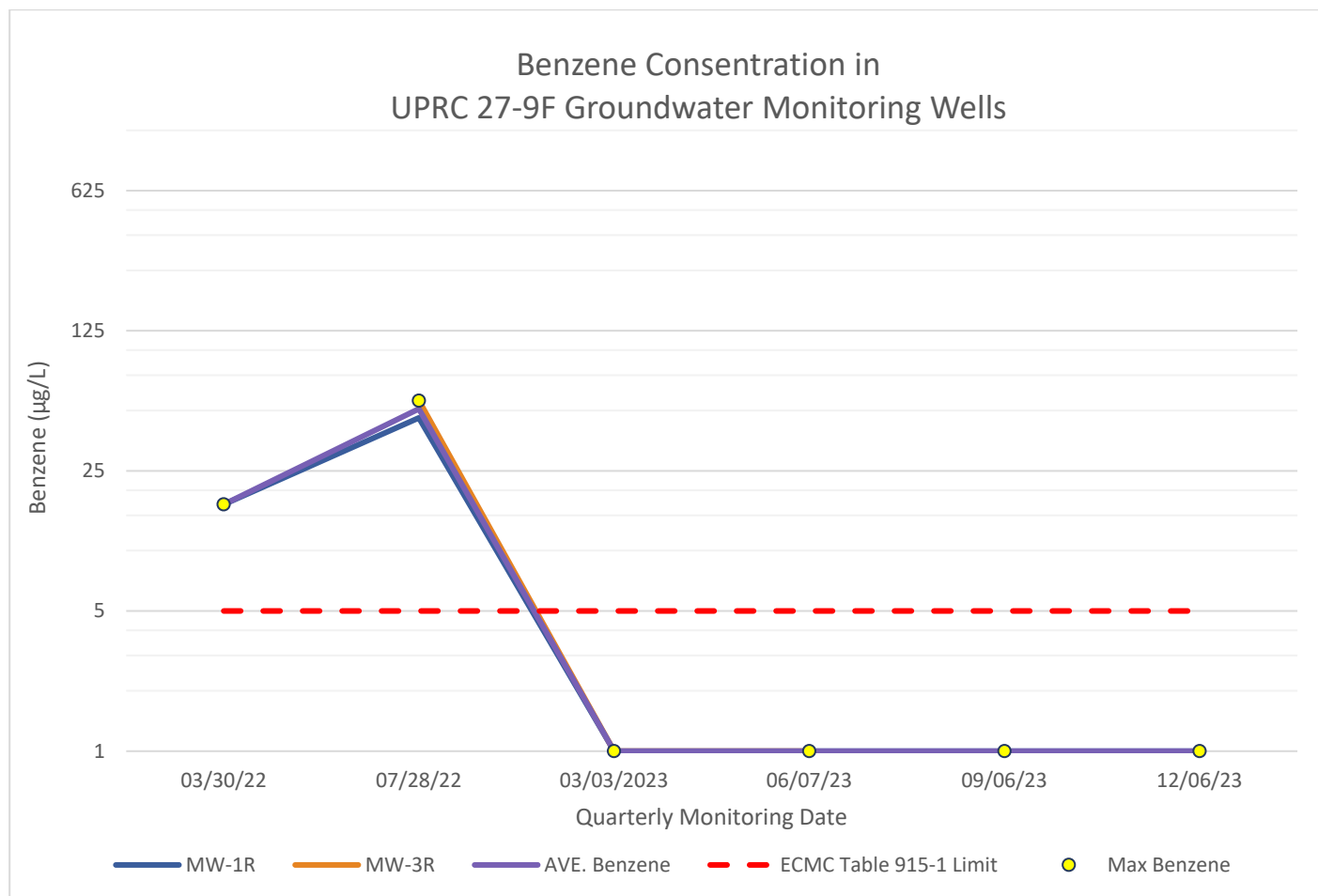
Conceptual Site Model*

* Data presented represents the most recent sampling event

- **Land Use** – Agricultural crop land
- **Soil Type (USCS)** – SP
- **Potential Receptors within ¼ mile** – dwelling ~0.12 mi SE, pond ~0.16 mi SW
- **Inferred Groundwater Gradient (Ft/Ft) and Flow Direction** – 0.145 (Ft/Ft) East
- **Average Depth to Groundwater** – 5.465 (ft)
- **Impacted Media and Extent** – Groundwater
- **LNAPL Present** – No
- **Points of Compliance** – Yes, compliant in all cardinal directions
- **Number of Consecutive ECMC Compliant Quarters** – Four
- **Remediation Type** – Excavation and MNA
- **Remediation System Activation Date** – N/A

Contaminants of Concern (COC)

The laboratory data was reported with concentrations of dissolved phase organic constituents below their respective ECMC Table 915-1 standards in all of the monitoring wells sampled during the December 2023 quarterly monitoring event. The groundwater analytical data is summarized in Table 1 and illustrated in Figure 4. A copy of the laboratory's report, quality control data, and chain-of-custody documentation is attached.



Remedial Actions

Monitored natural attenuation of groundwater will continue quarterly until all monitoring wells achieve the ECMC Table 915-1 concentration standards for four consecutive quarters.

Remarks

The discussion and conclusions contained in this report represent our professional opinions. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

Please contact me at (970) 213-7488 if you require any additional information.

Fremont appreciates the opportunity to provide this service.



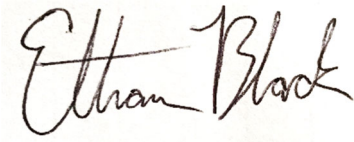
4/18/24

Date_____

Chris Lattes

Consultant

Reviewed by:



4/23/24

Date_____

Ethan D. Black, P.G.

Geologist

Attachments:

Tables

Figures

Laboratory Reports

TABLE 1
SUMMARY OF GROUNDWATER ELEVATION DATA AND ORGANIC CHEMISTRY DATA
NOBLE ENERGY INC.
UPRC 27-9F, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-025

Sample ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4- Trimethyl- Benzene (µg/L)	1,3,5- Trimethyl- Benzene (µg/L)	TOC Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	LNAPL Thickness (ft)
ECMC Table 915-1 Limits		5.0	560	700	1400	140	67	67				
MW-1	03/30/22	17	<1.0	1.44	11	<2.0	<2.0	20.7	99.47	NA	NA	NA
MW-1R	07/28/22	46	<1.0	34	38	11	28	12	100.01	6.91	92.56	NP
	03/03/23	<1.0	<1.0	17	59	5.9	19	13		6.54	93.47	NP
	06/07/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		3.38	96.63	NP
	09/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		4.20	95.81	NP
	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		6.13	93.88	NP
MW-2R	03/03/23	1.8	<1.0	7.4	14	4.2	42	9.5	100.00	6.29	93.71	NP
	06/07/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	97.10	3.16	96.84	NP
	09/06/23	DES	DES	DES	DES	DES	DES	DES		DES	DES	DES
	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		7.94	89.16	NP
MW-3	07/28/22	56	<1.0	150	11000	27	990	700	99.81	7.2	92.61	NP
MW-3R	03/03/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	100.49	6.98	93.51	NP
	06/07/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	98.64	3.79	96.70	NP
	09/06/23	DES	DES	DES	DES	DES	DES	DES		DES	DES	DES
	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		8.04	90.60	NP

Sample ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4- Trimethyl- Benzene (µg/L)	1,3,5- Trimethyl- Benzene (µg/L)	TOC Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	LNAPL Thickness (ft)
ECMC Table 915-1 Limits		5.0	560	700	1400	140	67	67				
MW-5	07/28/22	<1.0	<1.0	<1.0	20	<1.0	2	5.2	99.98	7.6	92.38	NP
MW-5R	03/03/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	100.28	5.56	94.72	NP
	06/07/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		5.24	95.04	NP
	09/06/23	DES	DES	DES	DES	DES	DES	DES		DES	DES	DES
	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	100.28	2.67	97.61	NP
MW-6	07/28/22	2.1	<1.0	<1.0	69	1.5	25	34	100	7.54	92.46	NP
MW-6R	03/03/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	99.62	6.12	93.5	NP
	06/07/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		3.08	96.54	NP
	09/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		3.78	95.84	NP
	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		6.38	93.24	NP
MW-7	07/28/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	100.72	7.91	92.81	NP
	03/03/23	DES	DES	DES	DES	DES	DES	DES	97.13	DES	DES	DES
	12/06/23	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	94.24	5.16	89.08	NP
MW-301015	07/28/22	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	95.71	3.09	92.62	NP
	03/03/23	NS	NS	NS	NS	NS	NS	NS		NS	NS	NS

Bold face values exceed the ECMC concentration limits

Red highlighted 915-1 Limits indicate the referenced groundwater screening level

NP - No measurable LNAPL, NA - Not Analyzed, INA - Inaccessible, IW - Insufficient Water, DES - Destroyed

TABLE 2
SUMMARY OF INORGANIC GROUNDWATER CHEMISTRY DATA
NOBLE ENERGY INC.
UPRC 27-9F, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C022-025

Sample ID	Sample Date	Total Dissolved Solids (mg/L)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)	Barium (mg/L)
ECMC Table 915-1 Limits		<1.25 x local background	250 or <1.25 x local background	250 or <1.25 x local background	
Calculated Local Background		1463	391	377.5	NA
MW-1	7/28/2022	1050	176	193	NA
MW-1R	3/3/2023	1030	235	97.2	NA
	6/7/2023	2700	542	703	0.116
	9/6/2023	2220	440	593	0.0559
	12/6/2023	1550	339	457	NA
MW-2R	3/3/2023	917	138	86.4	NA
	6/7/2023	1120	237	270	0.0891
	9/6/2023	DES	DES	DES	DES
	12/6/2023	1290	381	301	NA
MW-3	7/28/2022	930	162	64.2	NA
MW-3R	3/3/2023	964	167	79.6	NA
	6/7/2023	2010	389	608	0.0586
	9/6/2023	DES	DES	DES	DES
	12/6/2023	1070	318	261	NA

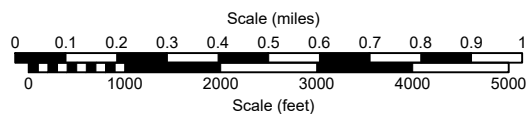
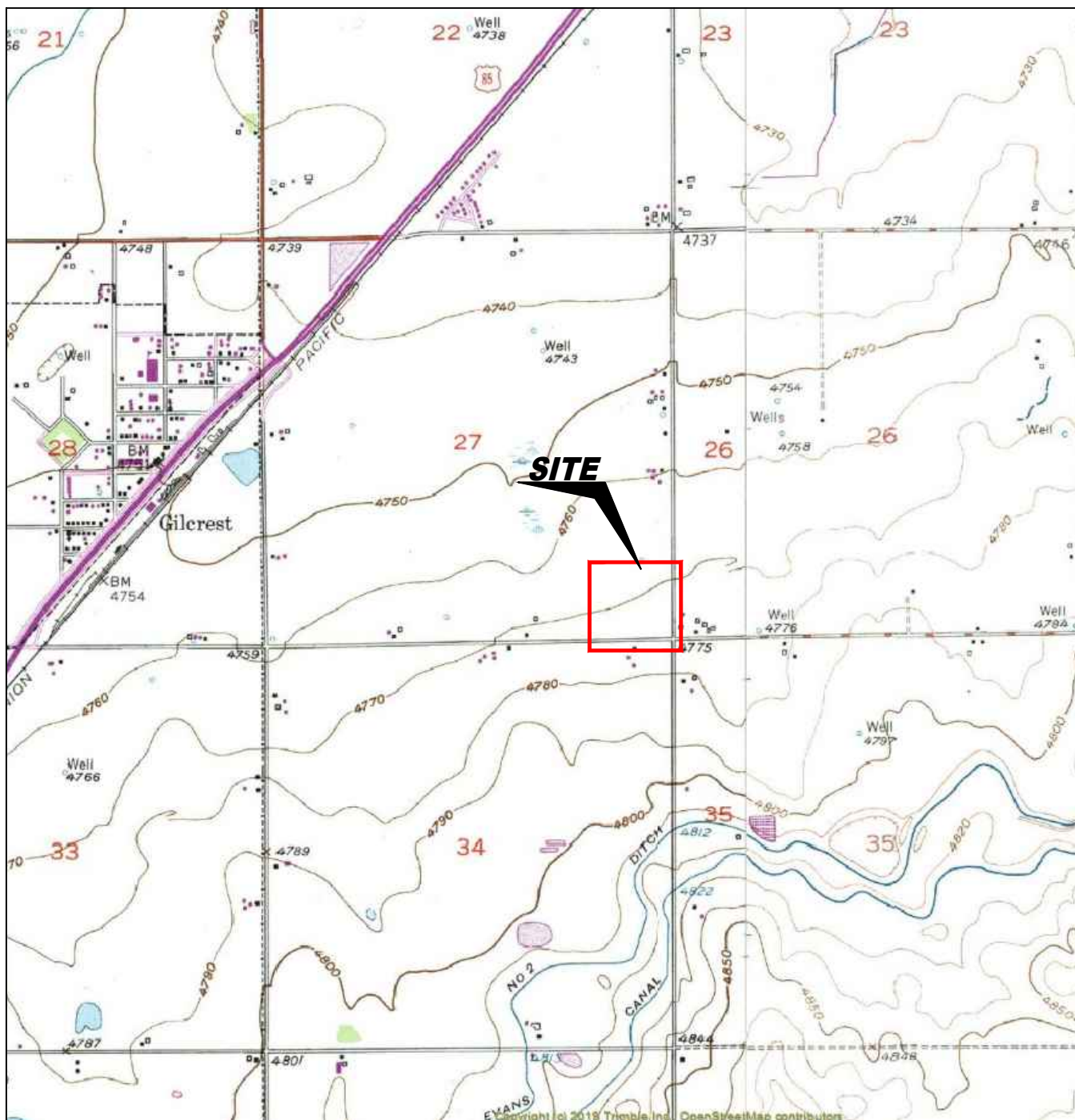
Sample ID	Sample Date	Total Dissolved Solids (mg/L)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)	Barium (mg/L)
ECMC Table 915-1 Limits		<1.25 x local background	250 or <1.25 x local background	250 or <1.25 x local background	
Calculated Local Background		1463	391	377.5	NA
MW-5	7/28/2022	1370	204	59.2	NA
MW-5R	3/3/23	1050	180	101	NA
	6/7/2023	1330	302	413	0.0697
	9/6/2023	DES	DES	DES	DES
	12/6/2023	1170	313	302	NA
MW-6	7/28/2022	1040	215	203	NA
MW-6R	3/3/2023	874	160	70.0	NA
	6/7/2023	1170	281	248	0.135
	9/6/2023	1180	273	198	0.0393
	12/6/2023	988	286	184	NA
MW-7	7/28/2022	945	212	196	NA
	3/3/2023	DES	DES	DES	DES
	12/6/2023	854	226	194	NA
MW-301015	7/28/2022	927	194	219	NS
	3/3/2023	NS	NS	NS	NS

Bold face values exceed the ECMC concentration limits

Yellow highlighted 915-1 Limits indicate the referenced groundwater screening level

NP - No measurable LNAPL, NA - Not Analyzed, INA - Inaccessible, IW - Insufficient Water, DES - Destroyed

MW-5 used as upgradient/crossgradient monitoring well



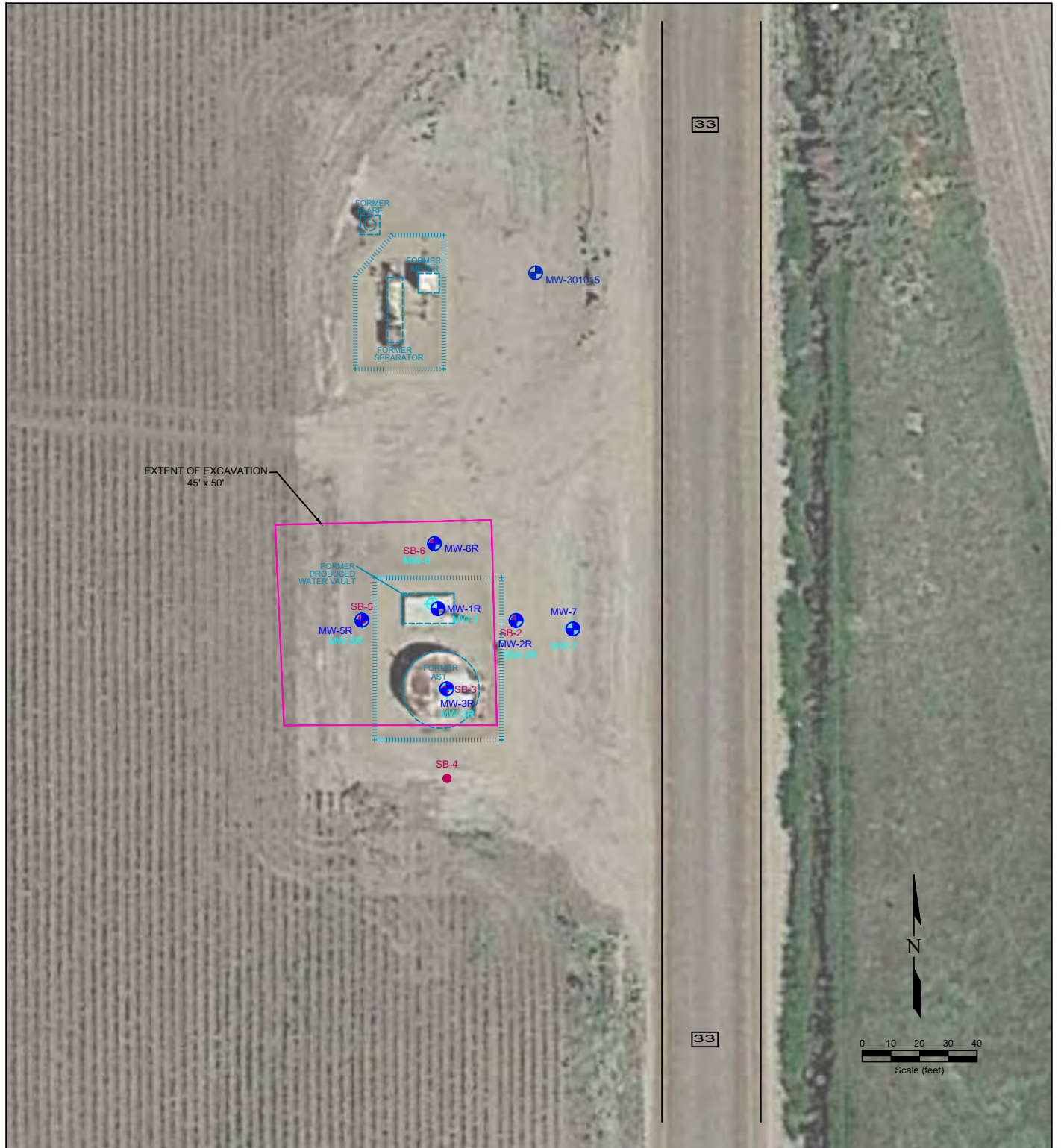
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Noble Energy, Inc. ~ UPRC #27 - 9F
NESE Sec. 27, T4N, R66W, 6th PM
Weld County, Colorado
40.278319°, -104.754134°

Project # C022-025	API # 05-123-15377	Facility # 481568
Date 6/10/24	Remediation # 18876	Filename 22025T





LEGEND

● SOIL BORING LOCATION	○ ABOVE GROUND STORAGE TANK	FORMER	FORMER FACILITY	CONTAINMENT BERM
● MONITORING WELL				EXTENT OF EXCAVATION
● PRE-EXISTING WELLS				
● MONITORING WELL				
● DESTROYED MONITORING WELL				

Figure 2
SITE MAP

Noble Energy, Inc. ~ UPRC #27 - 9F
NESE Sec. 27, T4N, R66W, 6th PM
Weld County, Colorado
40.278319°, -104.754134°

Project No. C022-025	API # 05-123-15377	Facility # 327969
Date 6/10/24	Remediation # 18876	Filename 22025Q





LEGEND

- SOIL BORING LOCATION
- MONITORING WELL
- PRE-EXISTING MONITORING WELL
- DESTROYED MONITORING WELL
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- CONTAINMENT BERM
- EXTENT OF EXCAVATION

(NM) NOT MEASURED
 (DS) DESTROYED MONITORING WELL
 (92.50) GROUND WATER ELEVATION (ft above arbitrary datum)

← GROUND WATER FLOW DIRECTION
 92.50 WATER TABLE CONTOUR

Figure 3

INFERRED GROUNDWATER CONTOUR MAP

December 6, 2023

Noble Energy, Inc. ~ UPRC #27 - 9F

NESE Sec. 27, T4N, R66W, 6th PM

Weld County, Colorado

40.278319°, -104.754134°

Project No.
C022-025

API #
05-123-15377

Facility #
327969

Date
6/10/24

Remediation #
18876

Filename
22025Q



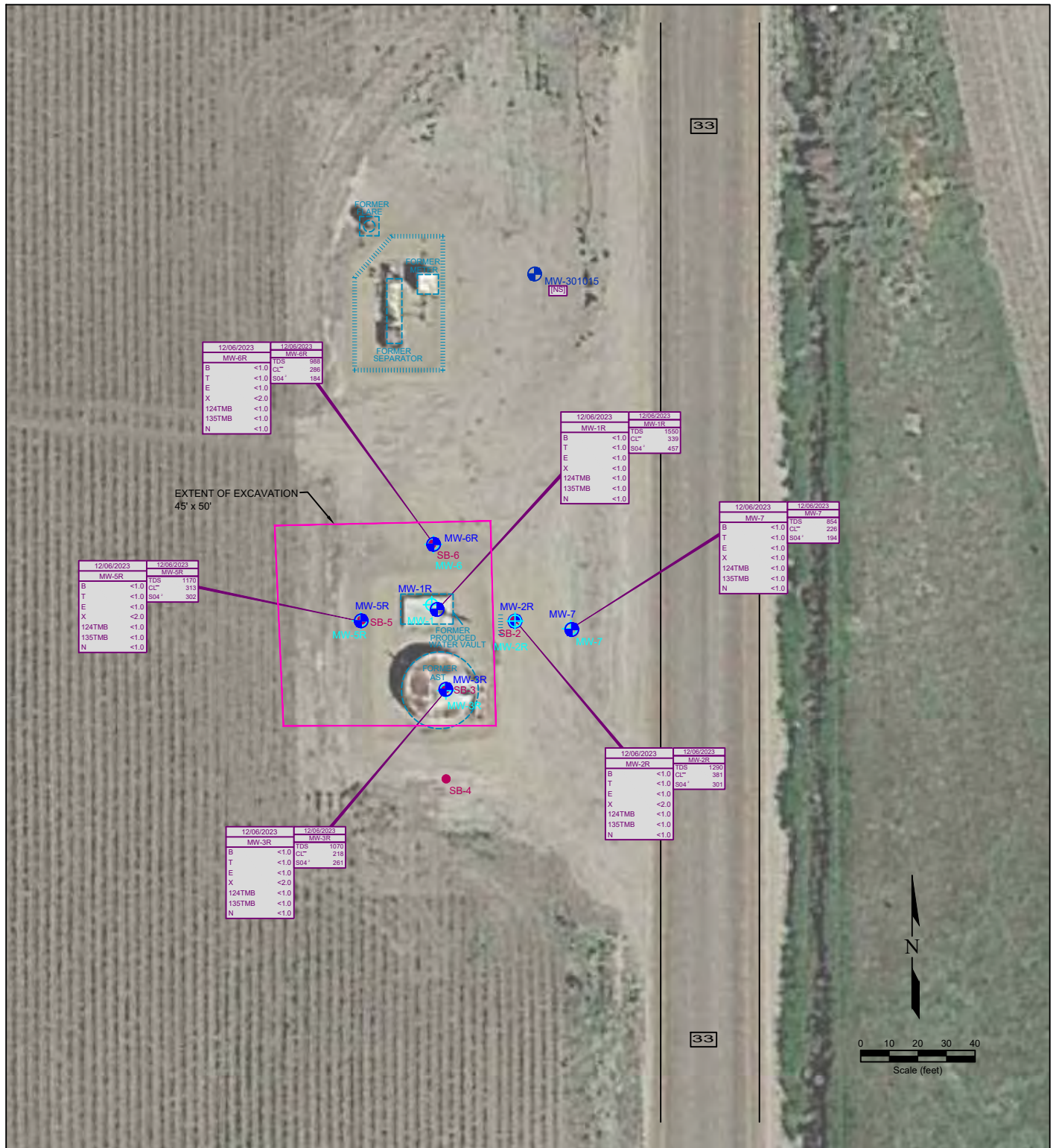


Figure 4

GROUNDWATER CHEMISTRY MAP
December 6, 2023
Noble Energy, Inc. ~ UPRC #27 - 9F
NESE Sec. 27, T4N, R66W, 6th PM
Weld County, Colorado
40.278319°, -104.754134°

Project No.
C022-025

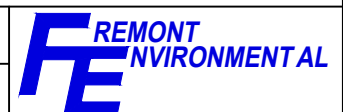
API #
05-123-15377

Facility #
327969

Date
6/10/24

Remediation #
18876

Filename
22025Q



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

December 19, 2023

Paul Henchan

Fremont Environmental

PO Box 1289


Wellington, CO 80549

RE: Noble - UPRC 27-9F

Work Order #2312107

Enclosed are the results of analyses for samples received by Summit Scientific on 12/06/23 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 "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - UPRC 27-9F

Project Number: CO22-025
Project Manager: Paul Henchan

Reported:
12/19/23 10:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1R	2312107-01	Water	12/06/23 13:35	12/06/23 16:30
MW-2R	2312107-02	Water	12/06/23 13:40	12/06/23 16:30
MW-3R	2312107-03	Water	12/06/23 13:45	12/06/23 16:30
MW-5R	2312107-04	Water	12/06/23 13:50	12/06/23 16:30
MW-6R	2312107-05	Water	12/06/23 13:55	12/06/23 16:30
MW-7R	2312107-06	Water	12/06/23 14:00	12/06/23 16:30

Summit Scientific

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



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

Lab ID	Page 1 of 1
2312107	

Client: Fremont Environmental		Send Data To:		Send Invoice To:																
Address:		Project Manager: Paul Henehan		Company: Noble																
City/State/Zip:		E-Mail: Fremont Distribution List		Project Name/Location:																
Phone: 303-261-6246		Project Name: UPRC 27-9F		AFE#:																
Sampler Name: Stanley Gilbert		Project Number: C022-025		PO/Billing Codes:																
				Contact: Dan Peterson																
		Preservative		Matrix																
				Analysis Requested																
				Special Instructions																
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron	Metals (915)	TDS, Chloride, Sulfate	Dissolved Ba	HOLD
1	MW-1R	12/6/23	13:35	4	3		1		X				X					X		
2	MW-2R		13:40																	
3	MW-3R		13:45																	
4	MW-5R		13:50																	
5	MW-6R		13:55																	
6	MW-7R		14:00																	
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
Relinquished by: [Signature]		Date/Time: 12/6/23 15:10		Received by: Summit North		Date/Time: 12/6/23 15:10		TAT Business Days		Field DO		Notes:								
Relinquished by: [Signature]		Date/Time: 12/6/23 16:30		Received by: [Signature]		Date/Time: 12/6/23 16:30		Same Day		Field EC										
								1 Day		Field ORP										
								2 Days		Field pH										
								3 Days		Field Temp.										
Relinquished by:		Date/Time:		Received by:		Date/Time:		Standard		Field Turb.										
Temperature Upon Receipt: 64		Corrected Temperature: 6		IR gun #: 1		HNO3 lot #:														

S₂

Sample Receipt Checklist

S2 Work Order# 2312107Client: FremontClient Project ID: UPRC 27-9FShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☒

Other

☐

Temp (°C)

6.4

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature $< 6^{\circ}\text{C}$? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	OUTLINE
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe^{2+}), Hexavalent Chromium (Cr^{6+} , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	no time stamps
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H_2SO_4 , NaOH, HNO_3 , etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCl
If samples are acid preserved for metals, is the $\text{pH} \leq 2$? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

AS

Custodian Printed Name

12/6/23

Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - UPRC 27-9F
Project Number: CO22-025
Project Manager: Paul Henchan

Reported:
12/19/23 10:28

MW-1R
2312107-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BGL0349	12/09/23	12/10/23	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **12/06/23 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	14.0	105 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	12.3	92.0 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.6	102 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **12/06/23 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	339	12.0		mg/L	200	BGL0448	12/12/23	12/13/23	EPA 300.0	
Sulfate	457	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 13:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1550	10.0		mg/L	1	BGL0444	12/12/23	12/12/23	SM2540C	

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - UPRC 27-9F
Project Number: CO22-025
Project Manager: Paul Henchan

Reported:
12/19/23 10:28

MW-2R
2312107-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0349	12/09/23	12/10/23	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/06/23 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.1	98.5 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.5	94.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.4	108 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **12/06/23 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	381	12.0	mg/L	200	BGL0448	12/12/23	12/13/23	EPA 300.0	
Sulfate	301	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1290	10.0	mg/L	1	BGL0444	12/12/23	12/12/23	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - UPRC 27-9F
Project Number: CO22-025
Project Manager: Paul Henchan

Reported:
12/19/23 10:28

MW-3R
2312107-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0349	12/09/23	12/10/23	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/06/23 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.8	104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.3	92.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.6	102 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **12/06/23 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	318	12.0	mg/L	200	BGL0448	12/12/23	12/13/23	EPA 300.0	
Sulfate	261	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 13:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1070	10.0	mg/L	1	BGL0444	12/12/23	12/12/23	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - UPRC 27-9F
Project Number: CO22-025
Project Manager: Paul Henchan

Reported:
12/19/23 10:28

MW-5R
2312107-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 13:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0349	12/09/23	12/10/23	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/06/23 13:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.5	102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.2	91.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.9	104 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **12/06/23 13:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	313	12.0	mg/L	200	BGL0448	12/12/23	12/13/23	EPA 300.0	
Sulfate	302	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 13:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	1170	10.0	mg/L	1	BGL0444	12/12/23	12/12/23	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - UPRC 27-9F
Project Number: CO22-025
Project Manager: Paul Henchan

Reported:
12/19/23 10:28

MW-6R
2312107-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0349	12/09/23	12/10/23	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/06/23 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.0	105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.6	94.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	14.0	105 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **12/06/23 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	286	12.0	mg/L	200	BGL0448	12/12/23	12/13/23	EPA 300.0	
Sulfate	184	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	988	10.0	mg/L	1	BGL0444	12/12/23	12/12/23	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - UPRC 27-9F
Project Number: CO22-025
Project Manager: Paul Henchan

Reported:
12/19/23 10:28

MW-7R
2312107-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **12/06/23 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BGL0349	12/09/23	12/10/23	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **12/06/23 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.4	108 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	12.5	94.0 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.8	103 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **12/06/23 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	226	12.0	mg/L	200	BGL0448	12/12/23	12/13/23	EPA 300.0	
Sulfate	194	60.0	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **12/06/23 14:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	854	10.0	mg/L	1	BGL0444	12/12/23	12/12/23	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - UPRC 27-9F
Project Number: CO22-025
Project Manager: Paul Henchan

Reported:
12/19/23 10:28

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 BGL0349 - EPA 5030 Water MS

Blank (BGL0349-BLK1)

Prepared: 12/09/23 Analyzed: 12/10/23

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	14.0		"	13.3		105	23-173			
Surrogate: Toluene-d8	12.6		"	13.3		94.5	20-170			
Surrogate: 4-Bromofluorobenzene	13.6		"	13.3		102	21-167			

LCS (BGL0349-BS1)

Prepared: 12/09/23 Analyzed: 12/10/23

Benzene	34.6	1.0	ug/l	33.3		104	51-132			
Toluene	26.5	1.0	"	33.3		79.5	51-138			
Ethylbenzene	28.0	1.0	"	33.3		84.0	58-146			
m,p-Xylene	51.1	2.0	"	66.7		76.7	57-144			
o-Xylene	23.8	1.0	"	33.3		71.5	53-146			
Naphthalene	29.5	1.0	"	33.3		88.5	70-130			
1,2,4-Trimethylbenzene	29.8	1.0	"	33.3		89.3	70-130			
1,3,5-Trimethylbenzene	24.7	1.0	"	33.3		74.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	10.6		"	13.3		79.2	23-173			
Surrogate: Toluene-d8	16.2		"	13.3		122	20-170			
Surrogate: 4-Bromofluorobenzene	16.0		"	13.3		120	21-167			

Matrix Spike (BGL0349-MS1)

Source: 2312107-01

Prepared: 12/09/23 Analyzed: 12/10/23

Benzene	30.9	1.0	ug/l	33.3	ND	92.6	34-141			
Toluene	24.3	1.0	"	33.3	ND	72.9	27-151			
Ethylbenzene	30.1	1.0	"	33.3	ND	90.4	29-160			
m,p-Xylene	57.3	2.0	"	66.7	ND	86.0	20-166			
o-Xylene	25.7	1.0	"	33.3	ND	77.0	33-159			
Naphthalene	28.6	1.0	"	33.3	ND	86.0	70-130			
1,2,4-Trimethylbenzene	26.4	1.0	"	33.3	ND	79.1	70-130			
1,3,5-Trimethylbenzene	26.9	1.0	"	33.3	ND	80.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.2		"	13.3		91.7	23-173			
Surrogate: Toluene-d8	11.4		"	13.3		85.8	20-170			
Surrogate: 4-Bromofluorobenzene	18.2		"	13.3		136	21-167			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - UPRC 27-9F
Project Number: CO22-025
Project Manager: Paul Henchan

Reported:
12/19/23 10:28

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 BGL0349 - EPA 5030 Water MS

Matrix Spike Dup (BGL0349-MSD1)	Source: 2312107-01			Prepared: 12/09/23 Analyzed: 12/10/23						
Benzene	30.6	1.0	ug/l	33.3	ND	91.8	34-141	0.813	30	
Toluene	25.0	1.0	"	33.3	ND	75.2	27-151	3.00	30	
Ethylbenzene	30.0	1.0	"	33.3	ND	89.9	29-160	0.599	30	
m,p-Xylene	56.2	2.0	"	66.7	ND	84.3	20-166	1.97	30	
o-Xylene	25.4	1.0	"	33.3	ND	76.1	33-159	1.18	30	
Naphthalene	24.2	1.0	"	33.3	ND	72.5	70-130	17.0	30	
1,2,4-Trimethylbenzene	26.1	1.0	"	33.3	ND	78.2	70-130	1.03	30	
1,3,5-Trimethylbenzene	27.0	1.0	"	33.3	ND	80.9	70-130	0.335	30	
Surrogate: 1,2-Dichloroethane-d4	10.4		"	13.3		77.8	23-173			
Surrogate: Toluene-d8	13.6		"	13.3		102	20-170			
Surrogate: 4-Bromofluorobenzene	12.2		"	13.3		91.4	21-167			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - UPRC 27-9F

Project Number: CO22-025
Project Manager: Paul Henchan

Reported:
12/19/23 10:28

Anions by EPA Method 300.0 - Quality Control

Summit Scientific

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

Batch BGL0448 - General Preparation

Blank (BGL0448-BLK1)

Prepared: 12/12/23 Analyzed: 12/13/23

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BGL0448-BS1)

Prepared: 12/12/23 Analyzed: 12/13/23

Chloride	3.03	0.0600	mg/L	3.00	101	90-110
Sulfate	15.2	0.300	"	15.0	101	90-110

Duplicate (BGL0448-DUP1)

Source: 2312107-01

Prepared: 12/12/23 Analyzed: 12/14/23

Chloride	352	12.0	mg/L	339	3.82	20
Sulfate	468	60.0	"	457	2.29	20

Matrix Spike (BGL0448-MS1)

Source: 2312107-01

Prepared: 12/12/23 Analyzed: 12/13/23

Chloride	937	12.0	mg/L	600	339	99.7	80-120
Sulfate	3490	60.0	"	3000	457	101	80-120

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - UPRC 27-9F

Project Number: CO22-025
Project Manager: Paul Henchan

Reported:
12/19/23 10:28

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BGL0444 - General Preparation

Blank (BGL0444-BLK1)

Prepared & Analyzed: 12/12/23

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BGL0444-DUP1)

Source: 2312107-01

Prepared & Analyzed: 12/12/23

Total Dissolved Solids 1550 10.0 mg/L 1550 0.258 20

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - UPRC 27-9F

Project Number: CO22-025
Project Manager: Paul Henchan

Reported:
12/19/23 10:28

Notes and Definitions

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