

May 29, 2024

Noble Energy Inc. – McDermed 2-1

Groundwater Monitoring Report

API # 05-123-12223

NWNE Sec 1, T4N, R64W

40.34695°, -104.49421°

Weld County, Colorado

Fremont Project No. C020-022

Facility # 322891, Remediation # 15399

Site Overview – Site History

Soil and groundwater impacts were identified at the former McDermed tank battery produced water vault (PWV) location during its abandonment. A site investigation was conducted on May 27, 2020 to delineate the magnitude and extent of impacts at the former PWV location. A total of eight soil borings were advanced utilizing a Geoprobe rig and one hand-augered boring was advanced within the bermed area. The eight borings were completed as flush-mounted, one-inch diameter monitoring wells. These monitoring wells were sampled quarterly until a no further action designation was granted for groundwater monitoring under Document Number (#403233128) on November 17, 2023.

Excavation to remove soil impacts left in place at the former PWV began following the removal of the above-ground storage tank adjacent to the former PWV. Excavation activities at the former PWV were completed on September 07, 2023. A total of approximately 1,960 tons (~ 1,400 cubic yards) of petroleum impacted soil and 730 bbls of groundwater were removed from the location via excavation and hydrovac by 4X Industrial, Inc. Impacted soil was disposed of at North Weld Landfill in Ault, Colorado as non-hazardous waste, and the excavation was backfilled using clean fill dirt. Impacted groundwater was observed in one sample collected from the excavation prompting additional delineation, monitoring well installation, and monitoring of dissolved phased groundwater impacts.

Conceptual Site Model*

*Data presented represents the most recent sampling event

- **Land Use** – Agricultural
- **Soil Type (USCS)** – SC
- **Potential Receptors within ¼ mile** – Occupied Building 250'
- **Inferred Groundwater Gradient (Ft/Ft) and Flow Direction** – 0.042 ft/ft southeast
- **Average Depth to Groundwater** – 5-7 ft
- **Impacted Media and Extent** – Groundwater, soil
- **LNAPL Present** – No
- **Points of Compliance** – Yes, in all cardinal and ordinal directions
- **Number of Consecutive ECMC Compliant Quarters** – two
- **Remediation Type** – MNA
- **Remediation System Activation Date** – NA

Contaminants of Concern (COC)

The laboratory data indicate that the dissolved phase organic and inorganic constituents were below their respective ECMC Table 915-1 standards in all five wells sampled during the April 2024 quarterly monitoring event. The groundwater analytical data are summarized in Tables 1 and 2 and illustrated on Figure 4. A copy of the laboratory's report, quality control data, and chain-of-custody documentation is attached.

Remedial Actions

Due to the absence of dissolved phase impacts at this site monitored natural attenuation of groundwater will continue quarterly until four consecutive ECMC Table 915-1 complaint quarters are achieved. The Q2 2024 sample event marks the second consecutive clean quarter of groundwater monitoring at the site.

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 (603) 477-6907 if you require any additional information.

Fremont appreciates the opportunity to provide this service.

This report was prepared by **FREMONT ENVIRONMENTAL INC.**



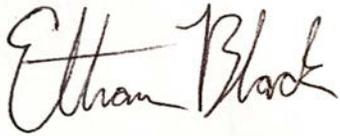
5/29/24

Date _____

Aaron Otilar

Consultant

Reviewed by:

A handwritten signature in black ink that reads "Ethan Black". The signature is written in a cursive style with a large initial 'E'.

5/29/24

Date _____

Ethan D. Black, P.G.

Geologist

Attachments:

Tables

Figures

Laboratory Report

TABLE 1
SUMMARY OF GROUNDWATER ELEVATION DATA AND ORGANIC CHEMISTRY DATA
NOBLE 100322
MC DERMED 2-1, WELD COUNTY, COLORADO
REM # 15399

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 Below TOC (ft)	Groundwater Elevation (ft)	LNAPL Thickness (ft)
ECMC Table 915-1 Limits		5.0	560	700	1400	140	67	67				
MW-1	01/23/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	100.00	7.48	92.52	NP
	04/05/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		8.16	91.84	NP
MW-2	01/23/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	100.51	7.68	92.83	NP
	04/05/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		8.39	92.12	NP
MW-3	01/23/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	99.98	7.42	92.56	NP
	04/05/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		8.17	91.81	NP
MW-4	01/23/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	100.08	7.47	92.61	NP
	04/05/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		8.18	91.90	NP
MW-5	01/23/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	99.58	7.45	92.13	NP
	04/05/24	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		8.13	91.45	NP

MW-3 was used as the up/cross gradient background well.

2. Red highlighted groundwater analytical values indicate a regulatory exceedance

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

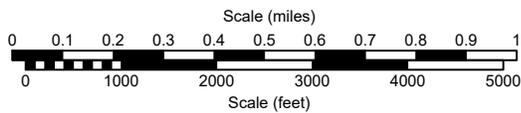
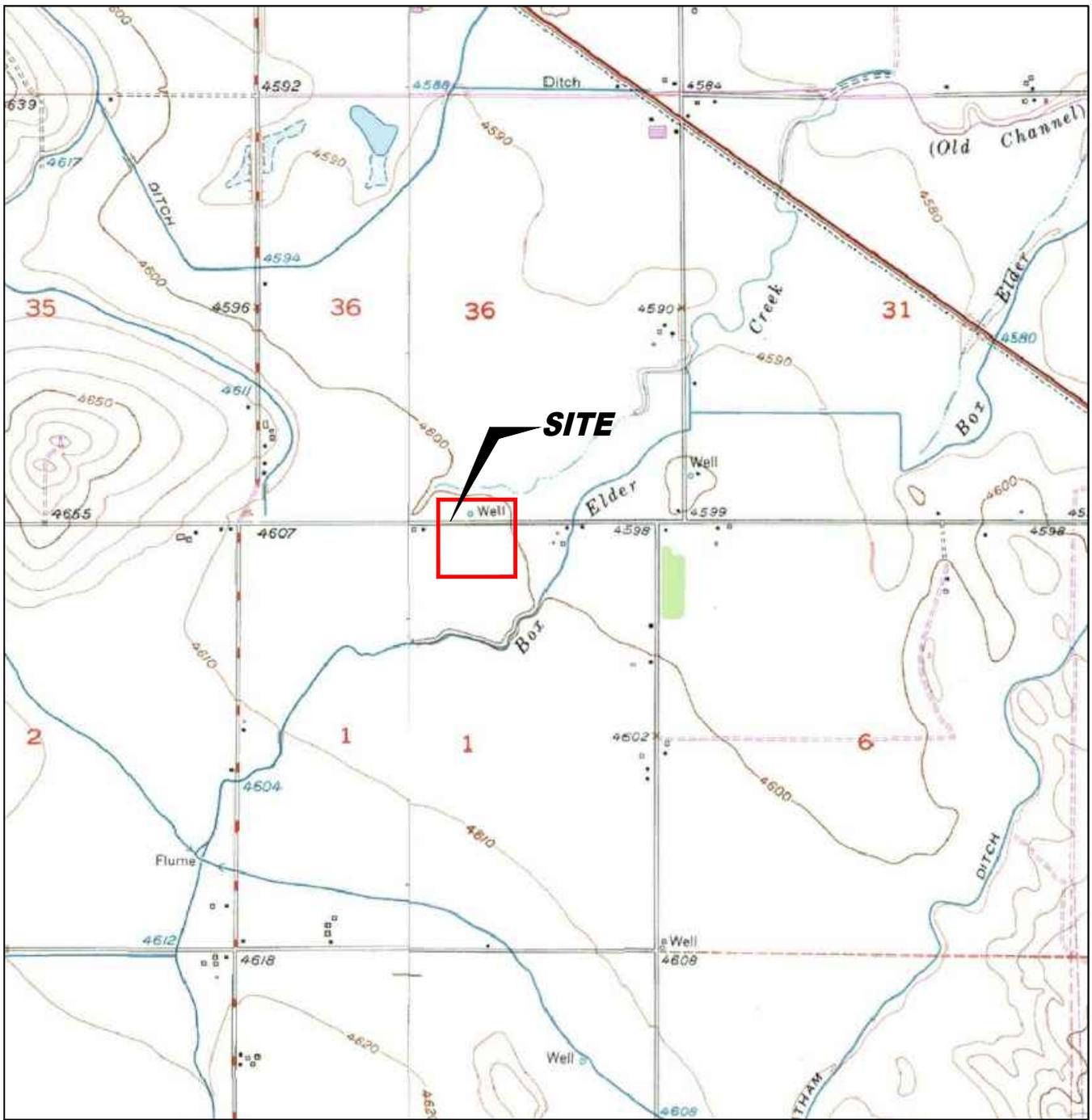
TABLE 2
SUMMARY OF INORGANIC GROUNDWATER CHEMISTRY DATA
NOBLE 100322
MC DERMED 2-1, Weld COUNTY, COLORADO
REM # 15399

Sample ID	Sample Date	Total Dissolved Solids (mg/L)	Chloride Ion (mg/L)	Sulfate Ion (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
MW-1	1/23/24	1340	206	559
	04/05/2024	1370	154	428
MW-2	1/23/24	1510	250	571
	04/05/2024	1540	204	450
MW-3	1/23/24	2070	349	892
	04/05/2024	1750	241	566
MW-4	1/23/24	1880	360	695
	04/05/2024	1470	205	417
MW-5	1/23/24	1580	259	525
	04/05/2024	1440	198	400
Background Concentration (Current)		1925	241	563

1. Bold values exceed the ECMC limit(s)

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

MW-3 was used as the up/cross gradient background well.



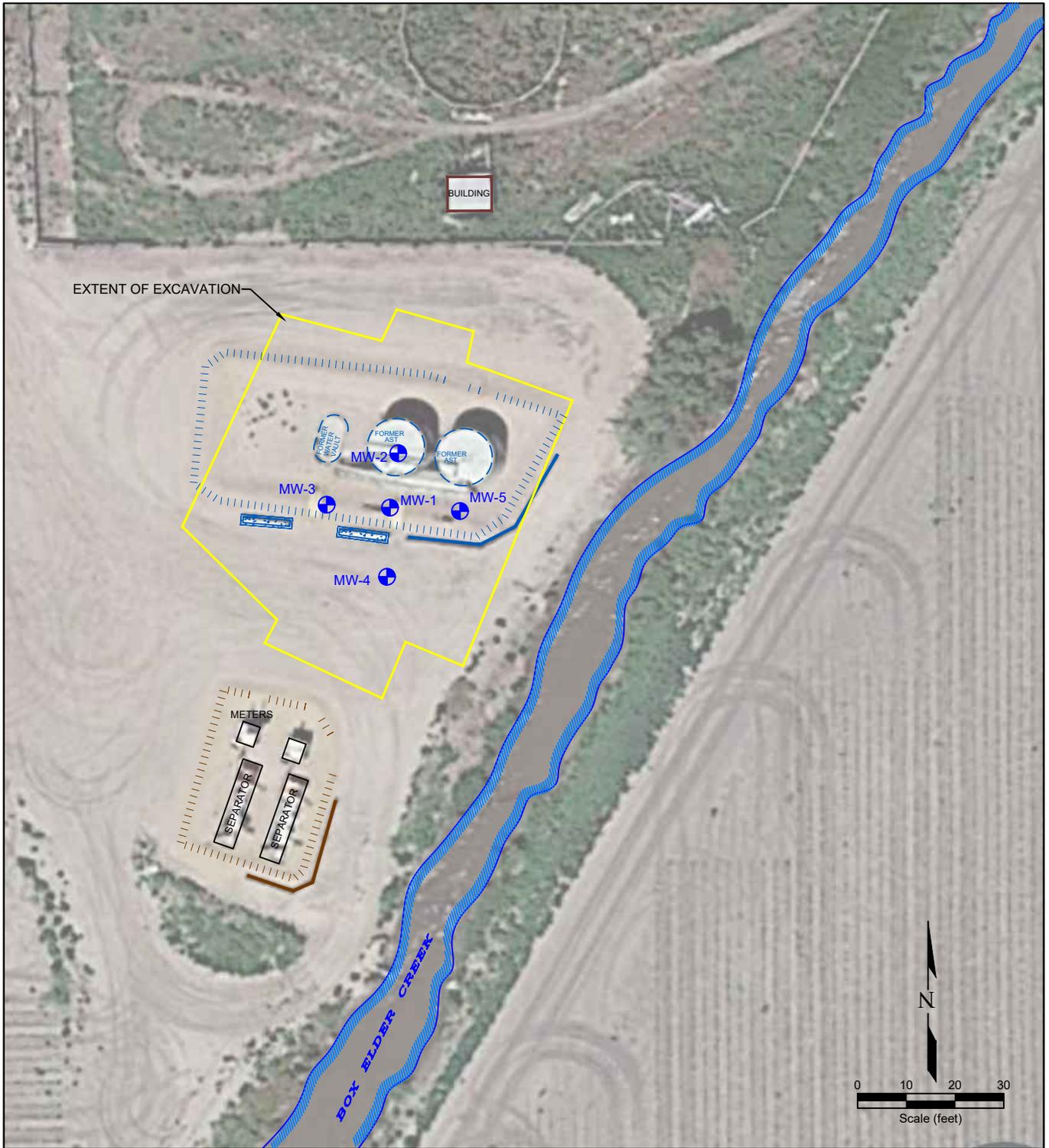
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY, INC. ~ McDERMED 2-1
NWNE Sec. 1, T4N, R64W, 6th PM
Weld County, Colorado
40.34695°, -104.49421°

Project No. CO20-022	Prepared by	Drawn by TA
Date 4/25/24	Reviewed by AO	Filename 20022T





LEGEND

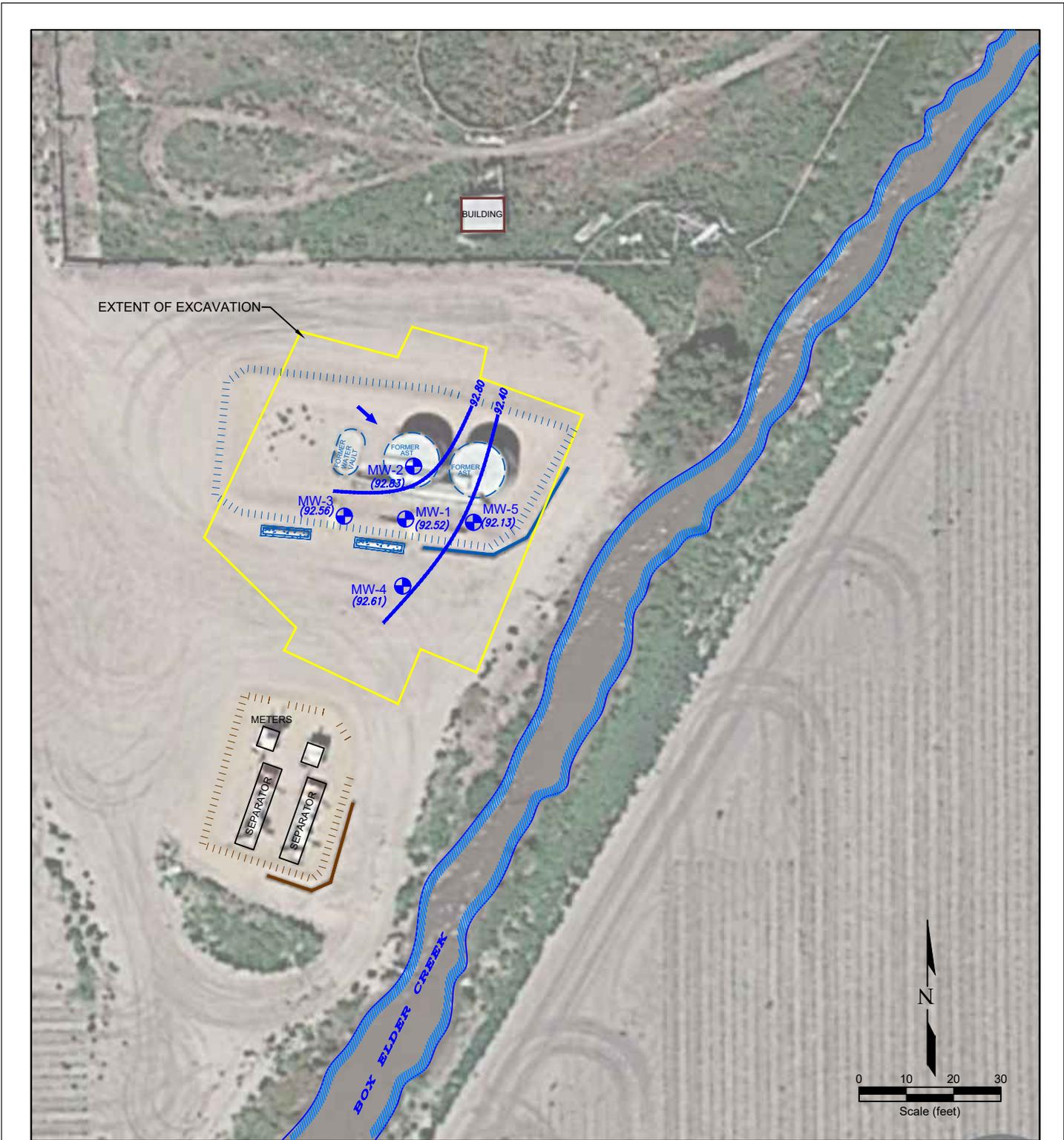
- MONITORING WELL LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- CONTAINMENT BERM
- CONCRETE BARRICADES
- BUILDING
- EXTENT OF EXCAVATION
- CONTAINMENT WALL
- FENCE LINE

**Figure 2
SITE MAP**

NOBLE ENERGY, INC. ~ McDERMED 2-1
 NWNE Sec. 1, T4N, R64W, 6th PM
 Weld County, Colorado
 40.34695°, -104.49421°

Project No. CO20-022	Prepared by AO	Drawn by TA
Date 4/25/24	Reviewed by AO	Filename 20022Q2





LEGEND

MONITORING WELL LOCATION	ABOVE GROUND STORAGE TANK	FORMER FACILITY	CONTAINMENT BERM
CONCRETE BARRICADES	BUILDING	EXTENT OF EXCAVATION	CONTAINMENT WALL
	FENCE LINE		

(92.56) GROUND WATER ELEVATION
(feet above mean sea level)

(92.40) WATER TABLE CONTOUR
(feet above mean sea level)

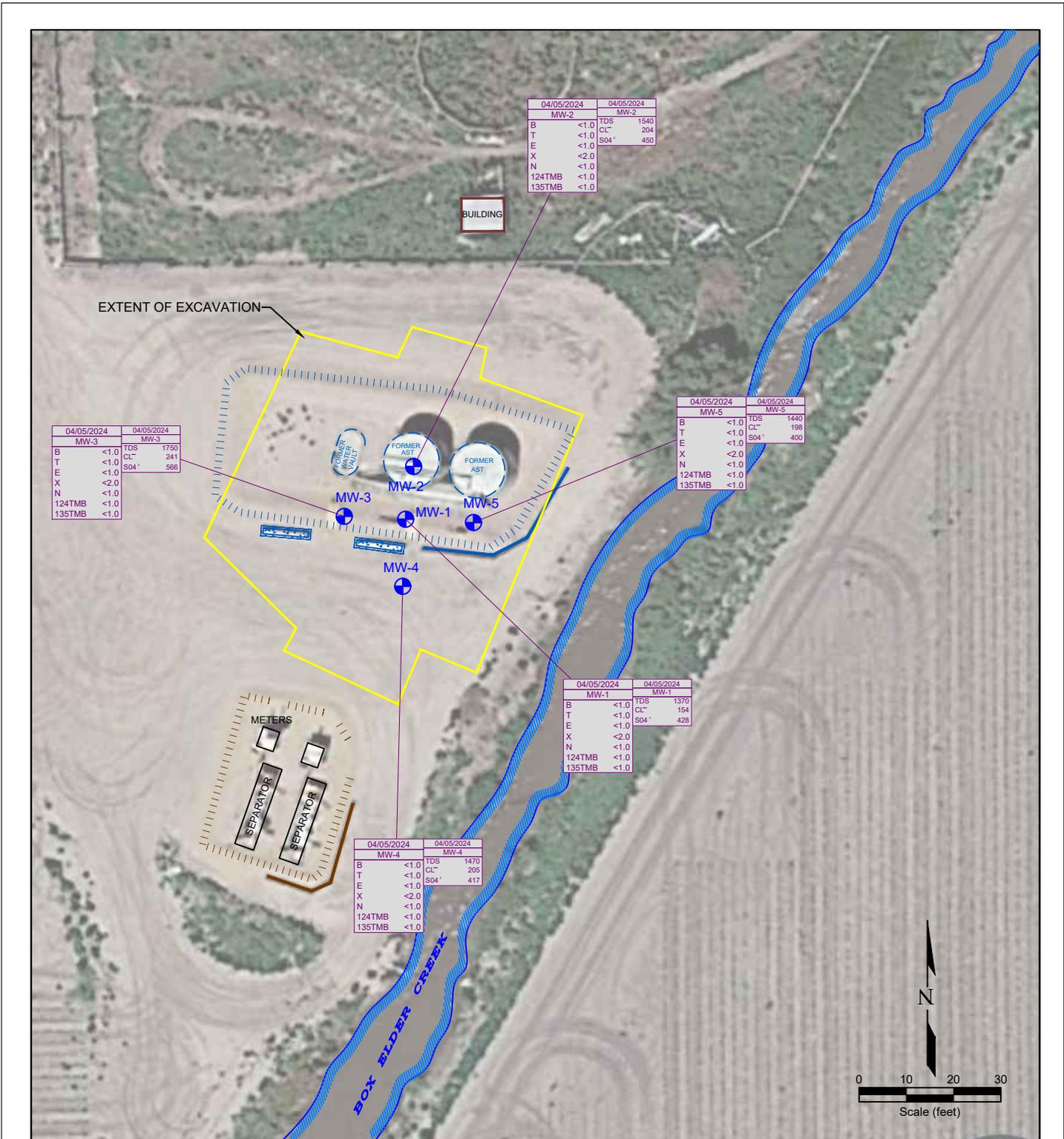
→ INFERRED GROUND WATER

Figure 3
INFERRED GROUNDWATER CONTOUR MAP

NOBLE ENERGY, INC. ~ McDERMED 2-1.
NWNE Sec. 1, T4N, R64W, 6th PM
Weld County, Colorado
40.34695°, -104.49421°

Project No. CO20-022	Prepared by TA	Drawn by TA
Date 5/25/24	Reviewed by AO	Filename 20022Q2





04/05/2024		04/05/2024	
MW-2		MW-2	
B	<1.0	TDS	1540
T	<1.0	CL ⁻	204
E	<1.0	SO4 ⁻	450
X	<2.0		
N	<1.0		
124TMB	<1.0		
135TMB	<1.0		

04/05/2024		04/05/2024	
MW-5		MW-5	
B	<1.0	TDS	1440
T	<1.0	CL ⁻	198
E	<1.0	SO4 ⁻	400
X	<2.0		
N	<1.0		
124TMB	<1.0		
135TMB	<1.0		

04/05/2024		04/05/2024	
MW-3		MW-3	
B	<1.0	TDS	1750
T	<1.0	CL ⁻	241
E	<1.0	SO4 ⁻	566
X	<2.0		
N	<1.0		
124TMB	<1.0		
135TMB	<1.0		

04/05/2024		04/05/2024	
MW-1		MW-1	
B	<1.0	TDS	1370
T	<1.0	CL ⁻	154
E	<1.0	SO4 ⁻	428
X	<2.0		
N	<1.0		
124TMB	<1.0		
135TMB	<1.0		

04/05/2024		04/05/2024	
MW-4		MW-4	
B	<1.0	TDS	1470
T	<1.0	CL ⁻	205
E	<1.0	SO4 ⁻	417
X	<2.0		
N	<1.0		
124TMB	<1.0		
135TMB	<1.0		

- LEGEND**
- MONITORING WELL LOCATION
 - ABOVE GROUND STORAGE TANK
 - CONCRETE BARRICADES
 - FORMER FACILITY
 - BUILDING
 - CONTAINMENT BERM
 - EXTENT OF EXCAVATION
 - CONTAINMENT WALL
 - FENCE LINE

01/23/2024	DATE SAMPLED	01/23/2024	DATE SAMPLED
MW-1	SAMPLE ID	MW-1	SAMPLE ID
B	<1.0	TDS	1340
T	<1.0	CL ⁻	206
E	<1.0	SO4 ⁻	559
X	<2.0		
N	<1.0		
124TMB	<1.0		
135TMB	<1.0		

01/23/2024	DATE SAMPLED	01/23/2024	DATE SAMPLED
MW-1	SAMPLE ID	MW-1	SAMPLE ID
B	<1.0	TDS	1340
T	<1.0	CL ⁻	206
E	<1.0	SO4 ⁻	559
X	<2.0		
N	<1.0		
124TMB	<1.0		
135TMB	<1.0		

**Figure 4
GROUNDWATER CHEMISTRY MAP**

NOBLE ENERGY, INC. ~ McDERMED 2-1
 NWNE Sec. 1, T4N, R64W, 6th PM
 Weld County, Colorado
 40.34695°, -104.49421°

Project No. CO20-022	Prepared by TA	Drawn by TA
Date 5/25/24	Reviewed by AO	Filename 20022Q2



Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 14, 2024

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549
RE: Noble - McDermed 2-1
Work Order #2404120

Enclosed are the results of analyses for samples received by Summit Scientific on 04/08/24 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

Jacob Wood For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - McDermed 2-1

Project Number: UWRWE-A1241-ABN

Project Manager: Paul Henchan

Reported:
05/14/24 17:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	2404120-01	Water	04/05/24 00:00	04/08/24 16:30
MW-2	2404120-02	Water	04/05/24 00:00	04/08/24 16:30
MW-3	2404120-03	Water	04/05/24 00:00	04/08/24 16:30
MW-4	2404120-04	Water	04/05/24 00:00	04/08/24 16:30
MW-5	2404120-05	Water	04/05/24 00:00	04/08/24 16:30

Summit Scientific

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

SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2404120	

Client: Fremont Environmental	Send Data To: Project Manager: Paul Henehan	Send Invoice To: Company: <u>Noble</u>
Address: 8305 6th Street	E-Mail: Fremont Distribution List	Project Name/Location:
City/State/Zip: Wellington, CO, 80549		AFE#:
Phone: 603-477-6907	Project Name: <u>McDermid 2-1</u>	PO/Billing Codes:
Sampler Name: Aaron Otilar	Project Number: <u>C020-022</u>	Contact: <u>Don Peterson</u>

ID	Sample Description	Date Sampled	Time Sampled	Preservative					Matrix			Analysis Requested						Special Instructions			
				# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEXN - 915	TPH (C6-C36)	PAH	TMB's - 915	Metals (915-1)		SAR, EC, pH, Boron	TDS, Cl, SO4	
1	MW - 1	4/5/24		5	2					X				7					X		
2	MW - 2																				
3	MW - 3																				
4	MW - 4																				
5	MW - 5																				
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <u>Aaron Otilar</u>	Date/Time: <u>4/5/24 1652</u>	Received by: <u>Summit North Office</u>	Date/Time: <u>4/5/24 1652</u>	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: <u>52</u>	Date/Time: <u>4/8/24 1030</u>	Received by: <u>[Signature]</u>	Date/Time: <u>4/8/24 1030</u>	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: <u>6.0</u>	Corrected Temperature: <u>6</u>	IR gun #: <u>1</u>	HNO3 lot #: _____			

S₂

Sample Receipt Checklist

S2 Work Order# 2404120

Client: Fremont

Client Project ID: McDermid 2-1

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

Airbill #: _____

Matrix (Check all that apply)

Air

Soil/Solid

Water

Other

Temp (°C)

6.6

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°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"/>	<u>none</u>
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<u>no sample times</u>
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input 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 ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>HCl</u>
If samples are acid preserved for metals, is the pH ≤ 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

4/8/24
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - McDermed 2-1
Project Number: UWRWE-A1241-ABN
Project Manager: Paul Henchan

Reported:
05/14/24 17:09

MW-1
2404120-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BHD0318	04/10/24	04/12/24	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: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	13.4	101 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.5	101 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.0	97.1 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	154	12.0		mg/L	200	BHD0648	04/18/24	04/18/24	EPA 300.0	
Sulfate	428	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1370	10.0		mg/L	1	BHD0274	04/09/24	04/09/24	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 - McDermed 2-1
Project Number: UWRWE-A1241-ABN
Project Manager: Paul Henchan

Reported:
05/14/24 17:09

MW-2
2404120-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BHD0318	04/10/24	04/12/24	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: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	13.7	103 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.1	98.4 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.1	98.0 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	204	12.0		mg/L	200	BHD0648	04/18/24	04/18/24	EPA 300.0	
Sulfate	450	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1540	10.0		mg/L	1	BHD0274	04/09/24	04/09/24	SM2540C	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - McDermed 2-1
Project Number: UWRWE-A1241-ABN
Project Manager: Paul Henchan

Reported:
05/14/24 17:09

MW-3
2404120-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BHD0318	04/10/24	04/12/24	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: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	14.0	105 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.4	100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.3	99.9 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	241	12.0		mg/L	200	BHD0648	04/18/24	04/18/24	EPA 300.0	
Sulfate	566	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1750	10.0		mg/L	1	BHD0274	04/09/24	04/09/24	SM2540C	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - McDermed 2-1
Project Number: UWRWE-A1241-ABN
Project Manager: Paul Henchan

Reported:
05/14/24 17:09

MW-4
2404120-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BHD0318	04/10/24	04/12/24	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: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	13.9	104 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.3	99.9 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.0	97.4 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	205	12.0		mg/L	200	BHD0648	04/18/24	04/18/24	EPA 300.0	
Sulfate	417	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1470	10.0		mg/L	1	BHD0274	04/09/24	04/09/24	SM2540C	

Summit Scientific

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Fremont Environmental
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Project: Noble - McDermed 2-1
Project Number: UWRWE-A1241-ABN
Project Manager: Paul Henchan

Reported:
05/14/24 17:09

MW-5
2404120-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BHD0318	04/10/24	04/12/24	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: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	14.5	109 %		23-173		"	"	"	"	
Surrogate: Toluene-d8	13.5	101 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.1	98.1 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	198	12.0		mg/L	200	BHD0648	04/18/24	04/18/24	EPA 300.0	
Sulfate	400	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **04/05/24 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	1440	10.0		mg/L	1	BHD0274	04/09/24	04/09/24	SM2540C	

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Fremont Environmental
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Project: Noble - McDermed 2-1
Project Number: UWRWE-A1241-ABN
Project Manager: Paul Henchan

Reported:
05/14/24 17:09

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHD0318 - EPA 5030 Water MS

Blank (BHD0318-BLK1)

Prepared: 04/10/24 Analyzed: 04/11/24

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	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	11.5		"	13.3		86.0		23-173			
<i>Surrogate: Toluene-d8</i>	13.5		"	13.3		101		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	12.4		"	13.3		92.9		21-167			

LCS (BHD0318-BS1)

Prepared: 04/10/24 Analyzed: 04/11/24

Benzene	36.9	1.0	ug/l	33.3		111		51-132			
Toluene	36.5	1.0	"	33.3		110		51-138			
Ethylbenzene	39.2	1.0	"	33.3		118		58-146			
m,p-Xylene	77.2	2.0	"	66.7		116		57-144			
o-Xylene	35.6	1.0	"	33.3		107		53-146			
Naphthalene	33.0	1.0	"	33.3		99.1		70-130			
1,2,4-Trimethylbenzene	31.7	1.0	"	33.3		95.0		70-130			
1,3,5-Trimethylbenzene	33.3	1.0	"	33.3		100		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	12.3		"	13.3		92.3		23-173			
<i>Surrogate: Toluene-d8</i>	13.2		"	13.3		99.2		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	12.0		"	13.3		90.2		21-167			

Matrix Spike (BHD0318-MS1)

Source: 2404120-01

Prepared: 04/10/24 Analyzed: 04/11/24

Benzene	36.7	1.0	ug/l	33.3	ND	110		34-141			
Toluene	35.3	1.0	"	33.3	ND	106		27-151			
Ethylbenzene	37.6	1.0	"	33.3	ND	113		29-160			
m,p-Xylene	74.2	2.0	"	66.7	ND	111		20-166			
o-Xylene	34.6	1.0	"	33.3	ND	104		33-159			
Naphthalene	36.1	1.0	"	33.3	ND	108		70-130			
1,2,4-Trimethylbenzene	29.6	1.0	"	33.3	ND	88.9		70-130			
1,3,5-Trimethylbenzene	31.6	1.0	"	33.3	ND	94.7		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	12.5		"	13.3		94.0		23-173			
<i>Surrogate: Toluene-d8</i>	13.3		"	13.3		99.9		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	12.2		"	13.3		91.6		21-167			

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Fremont Environmental
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 Wellington CO, 80549

Project: Noble - McDermed 2-1
 Project Number: UWRWE-A1241-ABN
 Project Manager: Paul Henchan

Reported:
 05/14/24 17:09

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 BHD0318 - EPA 5030 Water MS

Matrix Spike Dup (BHD0318-MSD1)	Source: 2404120-01			Prepared: 04/10/24 Analyzed: 04/11/24						
Benzene	36.7	1.0	ug/l	33.3	ND	110	34-141	0.0545	30	
Toluene	35.8	1.0	"	33.3	ND	107	27-151	1.29	30	
Ethylbenzene	38.5	1.0	"	33.3	ND	115	29-160	2.13	30	
m,p-Xylene	74.6	2.0	"	66.7	ND	112	20-166	0.524	30	
o-Xylene	34.9	1.0	"	33.3	ND	105	33-159	0.777	30	
Naphthalene	28.9	1.0	"	33.3	ND	86.8	70-130	21.9	30	
1,2,4-Trimethylbenzene	29.6	1.0	"	33.3	ND	88.9	70-130	0.0675	30	
1,3,5-Trimethylbenzene	32.0	1.0	"	33.3	ND	95.9	70-130	1.32	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>12.8</i>		<i>"</i>	<i>13.3</i>		<i>96.0</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>13.2</i>		<i>"</i>	<i>13.3</i>		<i>98.6</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>12.2</i>		<i>"</i>	<i>13.3</i>		<i>91.8</i>	<i>21-167</i>			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - McDermed 2-1

Project Number: UWRWE-A1241-ABN
 Project Manager: Paul Henchan

Reported:
 05/14/24 17:09

Anions by EPA Method 300.0 - Quality Control

Summit Scientific

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

Batch BHD0648 - General Preparation

Blank (BHD0648-BLK1)

Prepared & Analyzed: 04/18/24

Chloride	ND	0.0600	mg/L						
Sulfate	ND	0.300	"						

LCS (BHD0648-BS1)

Prepared & Analyzed: 04/18/24

Chloride	2.95	0.0600	mg/L	3.00	98.2	90-110
Sulfate	15.2	0.300	"	15.0	101	90-110

Duplicate (BHD0648-DUP1)

Source: 2404120-01

Prepared & Analyzed: 04/18/24

Chloride	150	12.0	mg/L	154	2.37	20
Sulfate	413	60.0	"	428	3.47	20

Matrix Spike (BHD0648-MS1)

Source: 2404120-01

Prepared & Analyzed: 04/18/24

Chloride	744	12.0	mg/L	600	154	98.3	80-120
Sulfate	3440	60.0	"	3000	428	100	80-120

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - McDermed 2-1
 Project Number: UWRWE-A1241-ABN
 Project Manager: Paul Henchan

Reported:
 05/14/24 17:09

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BHD0274 - General Preparation

Blank (BHD0274-BLK1)

Prepared & Analyzed: 04/09/24

Total Dissolved Solids ND 10.0 mg/L

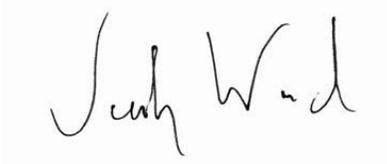
Duplicate (BHD0274-DUP1)

Source: 2404120-01

Prepared & Analyzed: 04/09/24

Total Dissolved Solids 1380 10.0 mg/L 1370 0.145 20

Summit Scientific



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Fremont Environmental
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Project: Noble - McDermed 2-1
Project Number: UWRWE-A1241-ABN
Project Manager: Paul Henchan

Reported:
05/14/24 17:09

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