

December 31, 2024

## Noble Energy, Inc. – Frenzel B 15-25

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### Groundwater Monitoring Report

NWSW Sec. 15, T5N, R64W

40.395921, -104.540858

Weld County, Colorado

Fremont Project No. C022-196

Facility # 285641, Remediation #24600

### Site Overview – Site History

The site consists of the former Frenzel B 15-25 Flowline. A historical release was identified at the flowline during decommissioning activities on October 21, 2022. A comprehensive site investigation was undertaken to define the magnitude and extent of soil impacts. Soil impacts will be removed via excavation at and adjacent to the former flowline location. The proposed dimensions of the excavation extent are estimated to be 25'x25'x3' deep. Groundwater was encountered during the site investigation.

### Conceptual Site Model\*

\*Data presented represents the most recent sampling event

- **Land Use** – Agricultural (Crop)
- **Soil Type (USCS)** – SW
- **Potential Receptors within ¼ mile** – Flowline is located in a Freshwater Emergent Wetland
- **Inferred Groundwater Gradient (Ft/Ft) and Flow Direction** – 0.036 (ft/ft) northeast
- **Average Depth to Groundwater** – 2.08 feet
- **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** – four for Table 915-1 organic compounds
- **Remediation Type** – MNA
- **Remediation System Operation Date(s)** – NA

### Contaminants of Concern (COC)

The laboratory data indicates that the dissolved phase organic constituents were below their respective ECMC Table 915-1 standards in all six wells sampled during the November 2024 quarterly monitoring event. A copy of the laboratory's report, quality control data, and chain-of-custody documentation are included separately.

### Remedial Actions

Monitored natural attenuation (MNA) will be implemented at the site to address dissolved phase groundwater impacts. A no further action designation will be requested from the ECMC following observation of four consecutive quarters of groundwater compliant with the applicable ECMC Table 915-1 standards, under static conditions, at the site. The Q4 2024 sampling event marks the fourth consecutive quarter of ECMC-compliant groundwater at the site for Table 915-1 organic compounds.

## 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.

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



12/31/2024

Date\_\_\_\_\_

Chris Lattes

Consultant

Reviewed by:



12/31/2024

Date\_\_\_\_\_

Ethan D. Black, P.G.

Geologist

Attachments:

Tables

Figures

TABLE 1  
SUMMARY OF GROUNDWATER ELEVATION DATA AND ORGANIC CHEMISTRY DATA  
NOBLE 100322  
FRENZEL B 15-25, WELD COUNTY, COLORADO  
REM # 24600

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)	Depth to Groundwater Below Ground Surface (ft)	Groundwater Elevation (ft)	LNAPL Thickness (ft)
ECMC Table 915-1 Limits		5.0	560	700	1400	140	67	67					
MW1	1/4/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	6.76	2.15	NA	4.61	NP
	5/21/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		2.39	NA	4.37	NP
	8/22/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		3.09	NA	3.67	NP
	11/12/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		1.97	NA	4.79	NP
MW2	1/4/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	6.56	2.31	NA	4.25	NP
	5/21/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		2.55	NA	4.01	NP
	8/22/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		3.26	NA	3.30	NP
	11/12/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		2.16	NA	4.40	NP
MW3	1/4/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	6.87	2.06	NA	4.81	NP
	5/21/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		2.32	NA	4.55	NP
	8/22/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		3.00	NA	3.87	NP
	11/12/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		1.93	NA	4.94	NP
MW4	1/4/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	6.45	2.01	NA	4.44	NP
	5/21/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		2.26	NA	4.19	NP
	8/22/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		2.95	NA	3.50	NP
	11/12/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		1.86	NA	4.59	NP
MW5	1/4/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	6.33	2.47	NA	3.86	NP
	5/21/2024	<1.0	<1.0	<1.0	<2.0	<1.1	<1.0	<1.0		2.70	NA	3.63	NP
	8/22/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		3.42	NA	2.91	NP
	11/12/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		2.31	NA	4.02	NP
MW6	1/4/2024	<1.0	<1.0	<1.0	<2.0	<1.2	<1.0	<1.0	6.59	2.42	NA	4.17	NP
	5/21/2024	<1.0	<1.0	<1.0	<2.0	<1.3	<1.0	<1.0		2.65	NA	3.94	NP
	8/22/2024	<1.0	<1.0	<1.0	<2.0	<1.3	<1.0	<1.0		3.37	NA	3.22	NP
	11/12/2024	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0		2.27	NA	4.32	NP

1. Bold values exceed the ECMC limit(s)

2. Red highlighted groundwater analytical values indicate a regulatory exceedance

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

TABLE 2  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE 100322  
FRENZEL B 15-25, WELD COUNTY, COLORADO  
REM # 24600

Sample ID	Sample Date	Acenaphthene (µg/L)	Benzo (a) Anthracene (µg/L)	Benzo (a) Pyrene (µg/L)	Dibenzo (a,h) Anthracene (µg/L)	Fluorene (µg/L)	Pyrene (µg/L)	1-Methyl - Naphthaleneene (µg/L)	2-Methyl- Naphthalene (µg/L)
MW1	1/4/2024	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2024	NA	NA	NA	NA	NA	NA	NA	NA
	8/22/2024	NA	NA	NA	NA	NA	NA	NA	NA
	11/13/2024	<0.500	<0.100	<0.200	<0.200	<0.200	<1.00	<0.500	<0.500
MW2	1/4/2024	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2024	NA	NA	NA	NA	NA	NA	NA	NA
	8/22/2024	NA	NA	NA	NA	NA	NA	NA	NA
	11/13/2024	<0.500	<0.100	<0.200	<0.200	<0.200	<1.00	<0.500	<0.500
MW3	1/4/2024	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2024	NA	NA	NA	NA	NA	NA	NA	NA
	8/22/2024	NA	NA	NA	NA	NA	NA	NA	NA
	11/13/2024	<0.500	<0.100	<0.200	<0.200	<0.200	<1.00	<0.500	<0.500
MW4	1/4/2024	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2024	NA	NA	NA	NA	NA	NA	NA	NA
	8/22/2024	NA	NA	NA	NA	NA	NA	NA	NA
	11/13/2024	<0.500	<0.100	<0.200	<0.200	<0.200	<1.00	<0.500	<0.500
MW5	1/4/2024	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2024	NA	NA	NA	NA	NA	NA	NA	NA
	8/22/2024	NA	NA	NA	NA	NA	NA	NA	NA
	11/13/2024	<0.500	<0.100	<0.200	<0.200	<0.200	<1.00	<0.500	<0.500
MW6	1/4/2024	NA	NA	NA	NA	NA	NA	NA	NA
	5/21/2024	NA	NA	NA	NA	NA	NA	NA	NA
	8/22/2024	NA	NA	NA	NA	NA	NA	NA	NA
	11/13/2024	<0.500	<0.100	<0.200	<0.200	<0.200	<1.00	<0.500	<0.500

1. Bold values exceed the ECMC limit(s)

2. Red highlighted groundwater analytical values indicate a regulatory exceedance

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

TABLE 3  
SUMMARY OF INORGANIC GROUNDWATER CHEMISTRY DATA  
NOBLE 100322  
FRENZEL B 15-25, WELD COUNTY, COLORADO  
REM # 24600

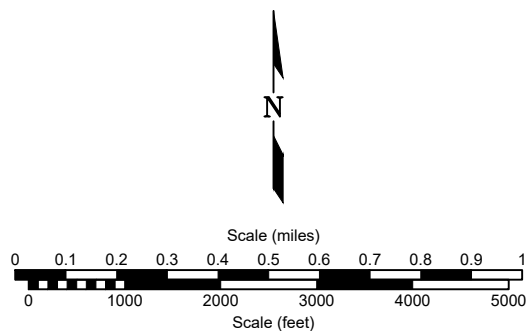
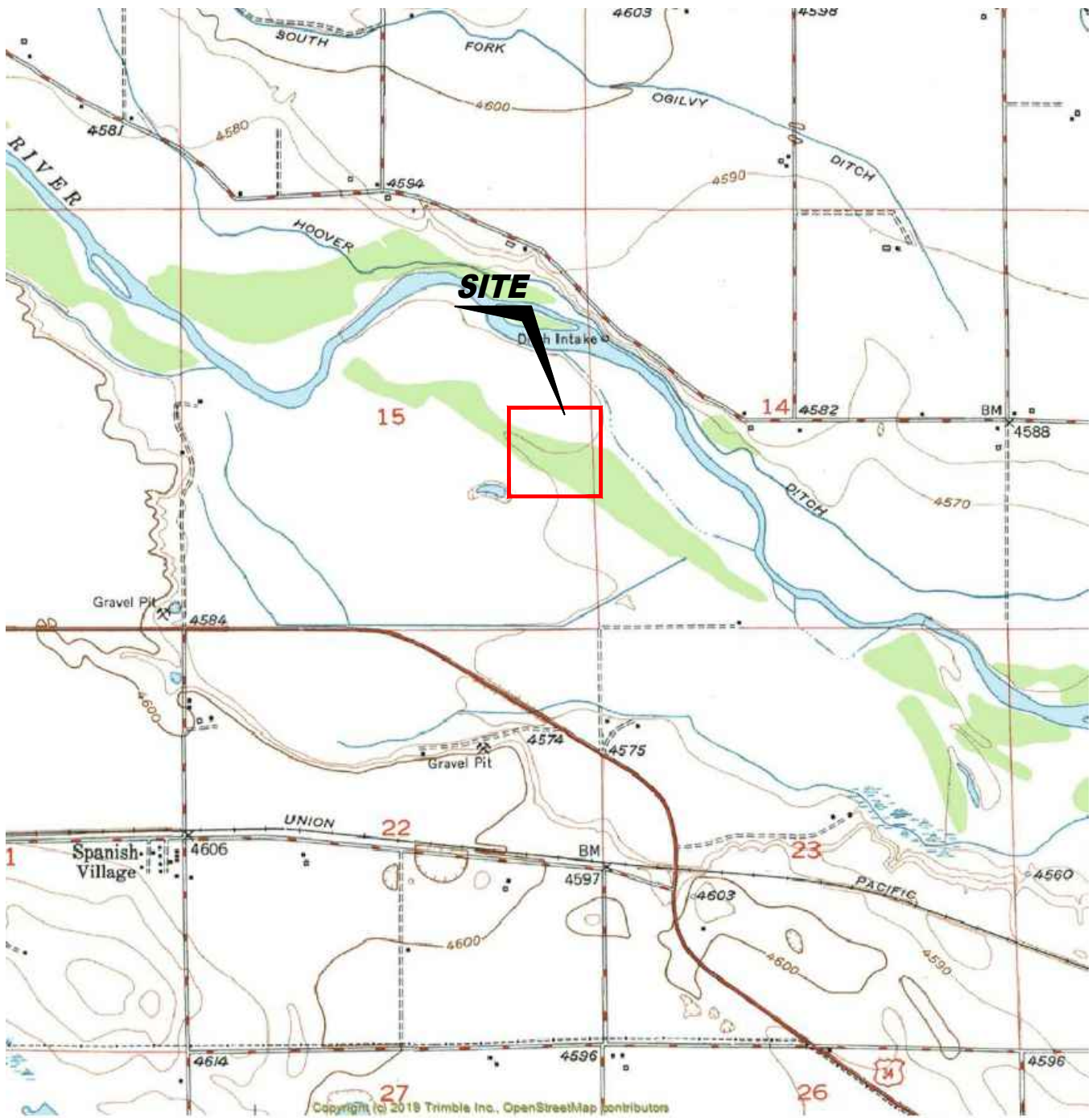
Sample ID	Sample Date	Total Dissolved Solids (mg/L)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)
ECMC Table 915-1 Limits		<1.25 x local background	250 or <1.25 x local background	250 or <1.25 x local background
MW1	1/4/2024	931	162	419
	5/21/2024	994	199	719
	8/22/2024	816	114	308
	11/12/2024	807	96.9	236
MW2	1/4/2024	923	154	374
	5/21/2024	878	175	695
	8/22/2024	820	120	317
	11/12/2024	895	115	308
MW3	1/4/2024	899	152	371
	5/21/2024	829	199	646
	8/22/2024	795	111	301
	11/12/2024	783	106	276
MW4	1/4/2024	861	142	338
	5/21/2024	794	144	603
	8/22/2024	792	118	314
	11/12/2024	800	107	279
MW5	1/4/2024	1160	210	509
	5/21/2024	874	160	618
	8/22/2024	800	120	315
	11/12/2024	851	121	322
MW6	1/4/2024	1080	179	493
	5/21/2024	872	141	662
	8/22/2024	873	125	337
	11/12/2024	<b>1030</b>	144	<b>381</b>
Background Concentration (Current)		<b>978.75</b>	-	<b>345</b>

1. Bold values exceed the ECMC limit(s)

2. Blue highlighted groundwater analytical values indicate a regulatory exceedance

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

MW-3 was chosen as the upgradient/cross gradient background well.



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1  
SITE LOCATION MAP

**NOBLE ENERGY, INC. ~ FRENZEL B15-25**  
NWSW Sec. 15, T5N, R64W, 6th PM  
Weld County, Colorado  
40.395921 °, -104.540770°

Project # <b>C022-196</b>	API # <b>05-123-24009</b>	Facility # <b>285641</b>
Date <b>12/13/24</b>	Remediation # <b>24600</b>	Filename <b>22196T</b>







#### LEGEND

- SOIL BORING LOCATION
- MONITORING WELL LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- CONTAINMENT WALL
- CONTAINMENT BERM
- FENCE LINE

**Figure 2  
SITE MAP**

**NOBLE ENERGY, INC. ~ FRENZEL B 15-25**  
 NWSW Sec.15, T5N, R64W, 6th PM  
 Weld County, Colorado  
 40.395921 ° , -104.540770°

Project No. <b>C022-196</b>	Facility # <b>05-123-24009</b>	Drawn By <b>285641</b>	
Date <b>12/13/24</b>	Reviewed By <b>24600</b>	Filename <b>22196Q</b>	




#### LEGEND

- SOIL BORING LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- CONTAINMENT WALL
- CONTAINMENT BERM
- FENCE LINE
- (4.01) GROUND WATER ELEVATION (ft above arbitrary datum)
- WATER TABLE CONTOUR
- GROUND WATER FLOW DIRECTION

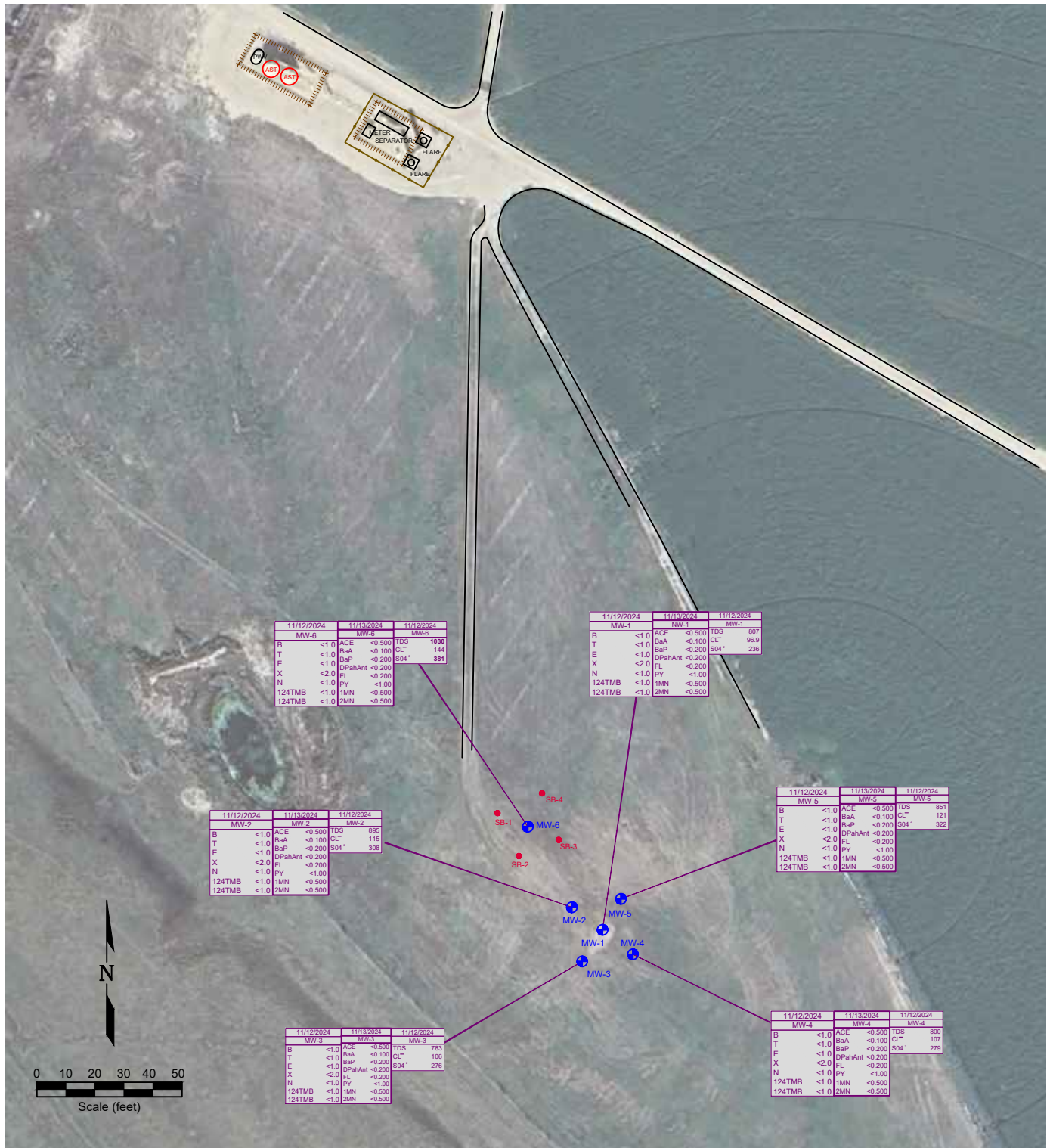
Figure 3

### INFERRED GROUNDWATER CONTOUR MAP November 12, 2024

**NOBLE ENERGY, INC. ~ FRENZEL B 15-25**  
NWSW Sec.15, T5N, R64W, 6th PM  
Weld County, Colorado  
40.395921 ° , -104.540770°

Project No. <b>C022-196</b>	Facility # <b>05-123-24009</b>	Drawn By <b>285641</b>	
Date <b>12/13/24</b>	Reviewed By <b>24600</b>	Filename <b>22196Q</b>	





# LEGEND

- SOIL BORING LOCATION
- MONITORING WELL LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- CONTAINMENT WALL
- CONTAINMENT BERM
- FENCE LINE

11/12/2024	DATE SAMPLED
MW-1	SAMPLE ID
B	<1.0
T	<1.0
E	<1.0
X	<2.0
N	<1.0
124TMB	<1.0
124TMB	<1.0

11/12/2024	DATE SAMPLED
MW-1	SAMPLE ID
TDS	881
CL	162
SO4	410

11/12/2024	DATE SAMPLED
MW-1	SAMPLE ID
ACE	<0.500
BaA	<0.100
BaP	<0.200
DPahAnt	<0.200
FL	<0.200
PY	<1.00
1MN	<0.500
2MN	<0.500

11/12/2024	DATE SAMPLED
MW-1	SAMPLE ID
ACE	<0.500
BaA	<0.100
BaP	<0.200
DPahAnt	<0.200
FL	<0.200
PY	<1.00
1MN	<0.500
2MN	<0.500

Figure 4

**GROUNDWATER CHEMISTRY MAP**  
**November 12, 2024, November 13, 2024**  
**NOBLE ENERGY, INC. ~ FRENZEL B 15-25**  
 NWSW Sec.15, T5N, R64W, 6th PM  
 Weld County, Colorado  
 40.395921 ° , -104.540770°

Project No. <b>C022-196</b>	Facility # <b>05-123-24009</b>	Drawn By <b>285641</b>	<b>REMONTE</b> <b>ENVIRONMENTAL</b>
Date <b>12/13/24</b>	Reviewed By <b>24600</b>	Filename <b>22196Q</b>	