

# NOBLE ENERGY, INC

## Third Quarter 2025 Groundwater Monitoring Summary

December 2, 2025

REI 25-10

SWSW Sec 10, T3N, R65W

Remediation # 34864

This groundwater monitoring summary has been prepared by Fremont Environmental, Inc. (Fremont) for the REI 25-10 location.

### Site History and Background

Groundwater impacts were identified at the former Noble Energy, Inc. (Noble) REI 25-10 tank battery produced water vault (PWV) location during site decommissioning activities conducted on July 3, 2024. Five monitoring wells were installed on May 21, 2025, to delineate the magnitude and extent of dissolved-phase groundwater impacts at the former PWV location. A total of five soil borings were advanced utilizing a Geoprobe rig. The five borings were completed as flush-mounted, one-inch diameter monitoring wells. These monitoring wells are sampled quarterly.

Soil impacts were encountered in the vadose zone at 11 feet (ft) below ground surface (bgs) in the MW-5 soil boring. The MW-5 11 Ft soil sample exceeded the Energy and Carbon Management Commission (ECMC) Table 915-1 Protection of Groundwater Soil Screening Levels (PGSSLs) for 1,2,4-trimethylbenzene (1,2,4-TMB), 1-methylnaphthalene, and 2-methylnaphthalene, with concentrations of 0.723 milligrams per kilogram (mg/kg), 0.0519 mg/kg, and 0.103 mg/kg, respectively.

### Groundwater Monitoring Activities

Groundwater sampling was completed at the location on August 11, 2025. Five monitoring wells (MW-1 to MW-5) were sampled and submitted to Pace Analytical Laboratory (Pace) for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, 1,2,4-TMB, and 1,3,5-TMB by United States Environmental Protection Agency (EPA) Method 8260D, chloride ion and sulfate ion by EPA Method 9056A, and Total Dissolved Solids (TDS) by EPA Method SM2540 C-2011.

The laboratory analytical results indicate that dissolved-phase organic constituents are compliant with their respective ECMC Table 915-1 standards in all wells sampled. Concentrations of organic compounds exceeding the ECMC Table 915-1 standards were not observed in any of the five monitoring wells sampled during the Q3 2025 quarterly groundwater monitoring event. Further, the laboratory analytical results indicate that Table 915-1 inorganic constituents were compliant with their respective standards and/or calculated background concentrations in all five wells sampled. A background monitoring well has not been established to characterize native groundwater concentrations of Table 915-1 inorganic constituents.

Groundwater elevations measured during the third quarter groundwater monitoring event conducted on August 11, 2025, are summarized in Table 1. Groundwater elevation contours interpreted from the third quarter monitoring event are depicted on Figure 3. Based on the interpreted elevations, groundwater flow is inferred to be directed generally towards the southwest. The calculated gradient was approximately 0.0074 feet per foot (ft/ft) during the event.

The groundwater analytical data are summarized in Tables 1 and 2. The site location is illustrated on Figure 1, monitoring well locations are illustrated on Figure 2, groundwater elevations are illustrated on Figure 3, and groundwater chemistry is illustrated on Figure 4. A copy of the laboratory report, quality control data, and chain-of-custody (COC) documentation is included separately.

## **Current Remediation Strategy and Path Forward**

A monitoring well will be installed upgradient of the release area, north of MW-2, to characterize native groundwater conditions. Three additional soil borings will be advanced to the north, south, and west of MW-5 to delineate the magnitude and extent of soil impacts exceeding Table 915-1 soil standards. Following delineation, additional remedial actions will be evaluated to target the observed soil impacts at 11 ft bgs during monitoring well MW-5 installation.

A No Further Action (NFA) designation will be requested from the ECMC when remediation criteria have been achieved, and following the observation of four consecutive quarters of groundwater compliant with the applicable ECMC Table 915-1 standards under static conditions at the site. The Q3 2025 sampling event marks the second quarter of ECMC-compliant groundwater at the site for organic compounds.

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# ANALYTICAL TABLES

TABLE 1  
SUMMARY OF GROUNDWATER ELEVATION DATA AND ORGANIC CHEMISTRY DATA  
NOBLE 100322  
REI 25-10, WELD COUNTY, COLORADO  
REM # 34864

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 <sup>(1)</sup>		5.0	560	700	1400	140	67	67				
GWS	07/03/24	<b>44</b>	130	7.9	130	<1.0	10	8.0	N/A	N/A	5.00	NP
MW-1	05/21/25	<1.00	<1.00	<1.00	<3.00	<5.00	<1.00	<1.00	99.64	12.92	86.72	NP
	08/11/25	<1.00	<1.00	<1.00	<3.00	<5.00	<2.00	<1.00		13.83	85.81	NP
MW-2	05/21/25	<1.00	<1.00	<1.00	<3.00	<5.00	<1.00	<1.00	100.06	NM	NM	NM
	08/11/25	<1.00	<1.00	<1.00	<3.00	<5.00	<2.00	<1.00		14.24	85.82	NP
MW-3	05/21/25	<1.00	<1.00	<1.00	<3.00	<5.00	<1.00	<1.00	99.67	12.92	86.75	NP
	08/11/25	<1.00	<1.00	<1.00	<3.00	<5.00	<2.00	<1.00		13.86	85.81	NP
MW-4	05/21/25	<1.00	<1.00	<1.00	<3.00	<5.00	<1.00	<1.00	100.00	13.27	86.73	NP
	08/11/25	<1.00	<1.00	<1.00	<3.00	<5.00	<2.00	<1.00		14.28	85.72	NP
MW-5	05/21/25	<1.00	<1.00	<1.00	<3.00	<5.00	12.7	<1.00	100.05	13.40	86.65	NP
	08/11/25	<1.00	<1.00	<1.00	<3.00	<5.00	<2.00	<1.00		14.30	85.75	NP

**Notes:**

- Groundwater standards referenced from 2 CCR 404-1, Table 915-1, January 15, 2021.
- Depth to water measurements were measured from ground surface for excavation samples. Monitoring well measurements were collected from top of casing .

ECMC = Colorado Energy and Carbon Management Commission

LNAPL = Light Non-Aqueous Phase Liquid

µg/L = Micrograms per liter

(<) = Analytical result is less than the indicated laboratory reporting limit.

ft. = Feet

bgs = below ground surface

NM = Not measured

ND = Not detected

NA = Constituent not analyzed

Red highlighted groundwater analytical values indicate an exceedance of ECMC Groundwater Standard

**Bold** faced values exceed the ECMC Table 915-1 limit(s)

**TABLE 2**  
**SUMMARY OF INORGANIC GROUNDWATER CHEMISTRY DATA**  
**NOBLE 100322**  
**REI 25-10, WELD COUNTY, COLORADO**  
**REM # 34864**

Sample ID	Sample Date	Total Dissolved Solids (mg/L)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)	Depth to Groundwater <sup>(2)</sup> (ft. Below TOC)	Groundwater Elevation (ft. Below TOC)
ECMC Table 915-1 Limits <sup>(1)</sup>		<1.25 x local background	250 or <1.25 x local background	250 or <1.25 x local background		
MW-1	5/21/25	1690	133	216	12.92	86.72
	8/11/25	950	79.7	200	13.83	85.81
MW-2	5/21/25	1260	123	203	NM	NM
	8/11/25	950	141	196	14.24	85.82
MW-3	5/22/25	1260	132	178	12.92	86.75
	8/11/25	1530	138	171	13.86	85.81
MW-4	5/23/25	1020	146	216	13.27	86.73
	8/11/25	994	141	199	14.28	85.72
MW-5	5/21/25	2170	65.5	1150	13.40	86.65
	8/11/25	1130	31.7	253	14.30	85.75
<b>Maximum BKG Concentration x1.25</b>		NA	NA	NA	-	-

**Notes:**

- Groundwater standards referenced from 2 CCR 404-1, Table 915-1, January 15, 2021.
- Depth to water measurements were measured from ground surface for excavation samples. Monitoring well measurements were collected from top of casing and adjusted using survey data to reflect depth of water

ECMC = Colorado Energy and Carbon Management Commission  
mg/L = Milligrams per liter  
(<) = Analytical result is less than the indicated laboratory reporting limit.  
ft. = feet  
bgs = below ground surface  
TOC = Top of Monitoring Well Casing  
NM = Not measured  
NA = Constituent not analyzed  
BKG = Background  
= Up-gradient and/or cross-gradient well location used for background concentration.  
Maximum historic background concentration used to compare to site inorganic parameters

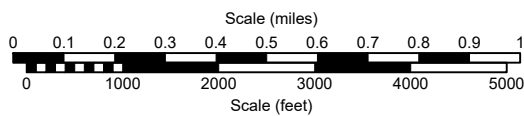
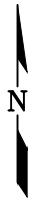
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**NOBLE 100322**  
**REI 25-10, WELD COUNTY, COLORADO**  
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Sample ID	Sample Date	Total Dissolved Solids (mg/L)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)	Depth to Groundwater <sup>(2)</sup> (ft. Below TOC)	Groundwater Elevation (ft. Below TOC)
ECMC Table 915-1 Limits <sup>(1)</sup>		<1.25 x local background	250 or <1.25 x local background	250 or <1.25 x local background		

**Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within 1.25x background concentrations.

**Bold** faced values exceed the ECMC Table 915-1 limit(s) and greater than 1.25x background concentrations.

# FIGURES



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

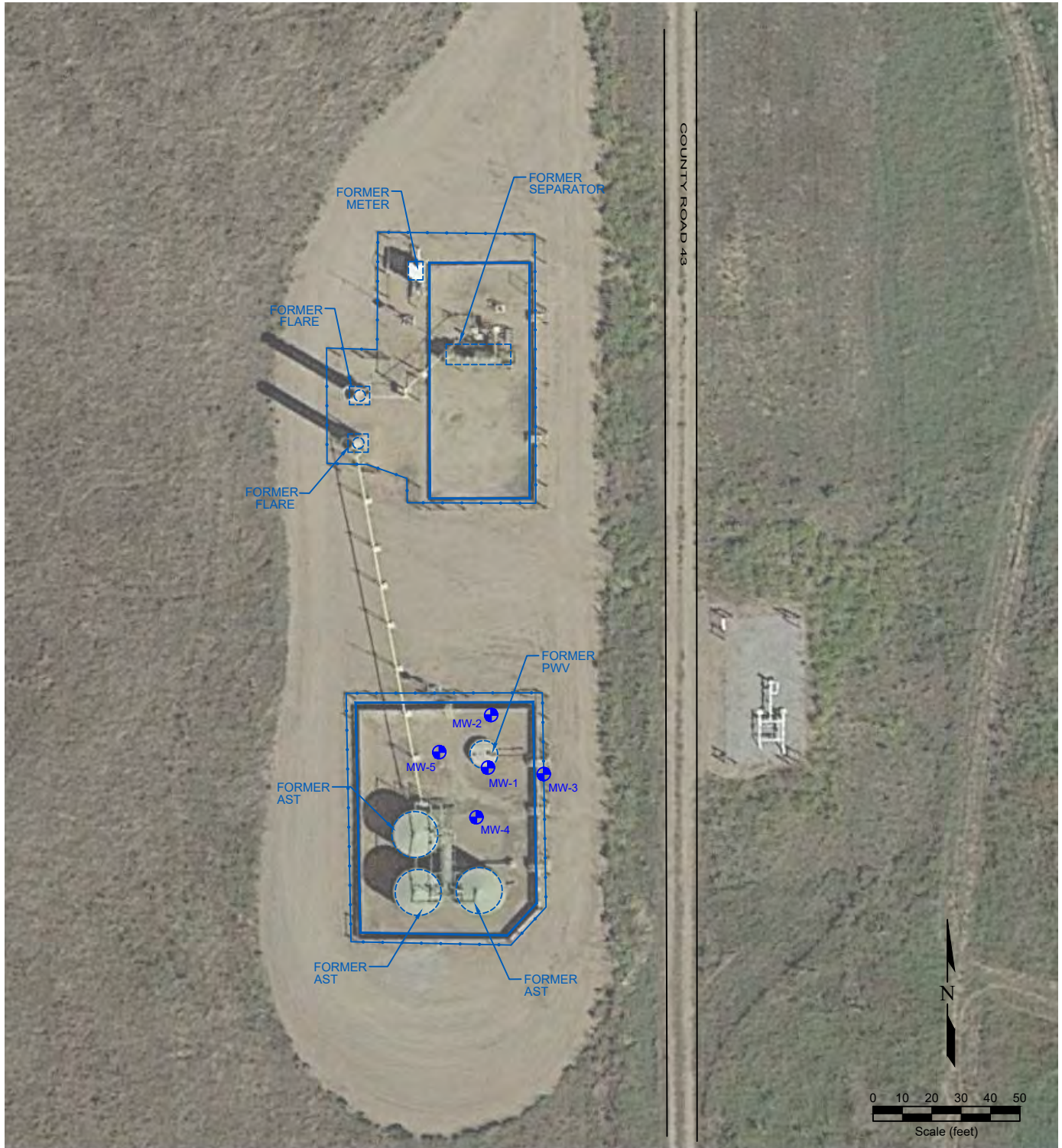
Figure 1

**SITE LOCATION MAP**

**Q3 2025 Groundwater Monitoring  
Noble Energy, Inc. ~ Rei 25-10**  
SWSW Sec. 10, T3N, R65W, 6th PM  
Weld County, Colorado  
40.231578°, -104.658323°

Project No. <b>CO24-137</b>	API #	Facility # <b>336608</b>
Date <b>10/29/25</b>	Remediation # <b>34864</b>	Filename <b>24137T</b>





**LEGEND**

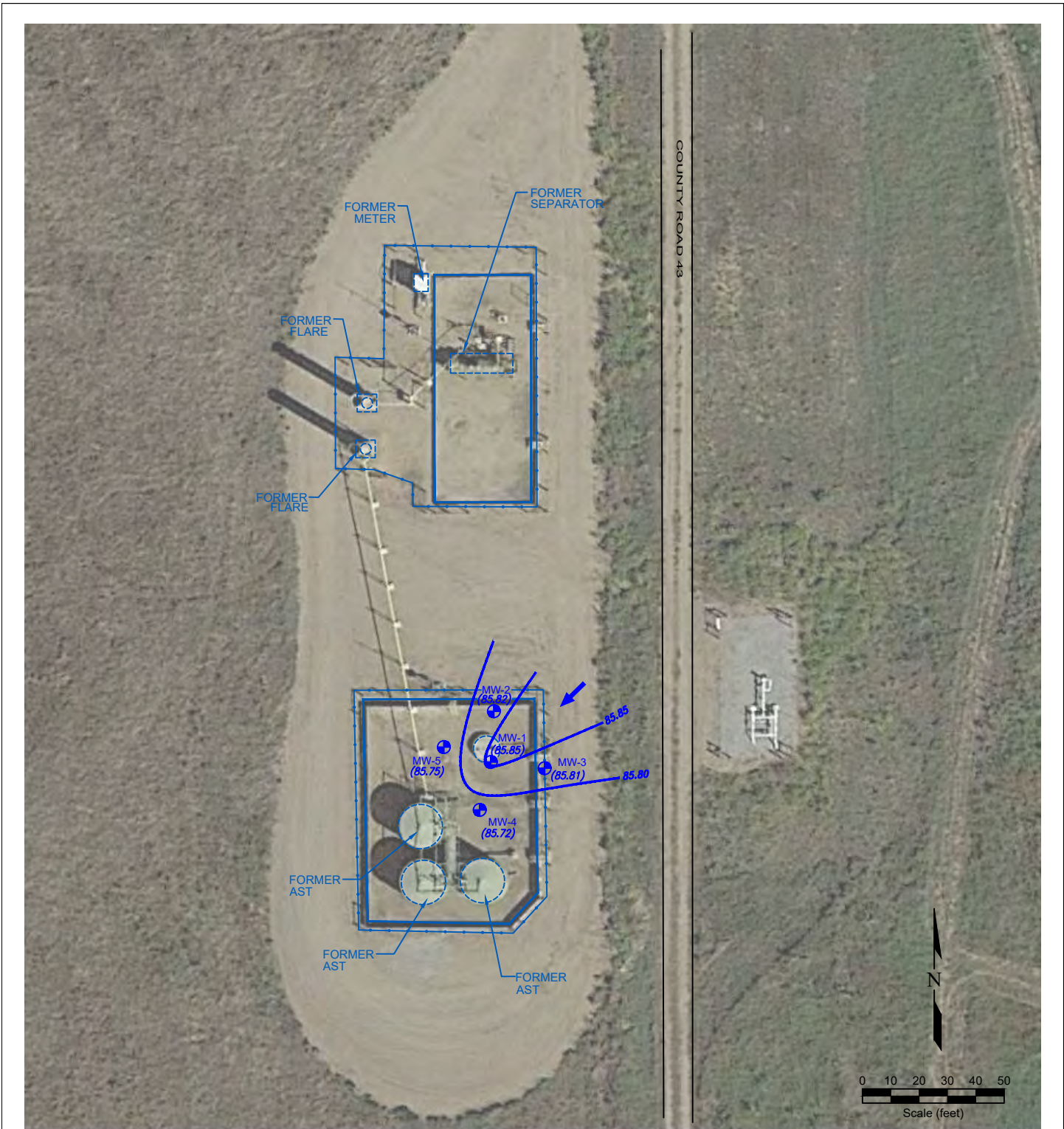
- WELL HEAD LOCATION
- ABOVE GROUND STORAGE TANK
- ⊕ MONITORING WELL LOCATION
- FORMER FACILITY
- FENCE LINE
- CONTAINMENT BERM
- CONTAINMENT WALL

**Figure 2  
SITE MAP**

**Q3 2025 Groundwater Monitoring  
Noble Energy, Inc. ~ Rei 25-10**  
SWSW Sec. 10, T3N, R65W, 6th PM  
Weld County, Colorado  
40.231578°, -104.658323°

Project No. <b>CO24-137</b>	API #	Facility # <b>336608</b>
Date <b>10/29/25</b>	Remediation # <b>34864</b>	Filename <b>24137Q</b>





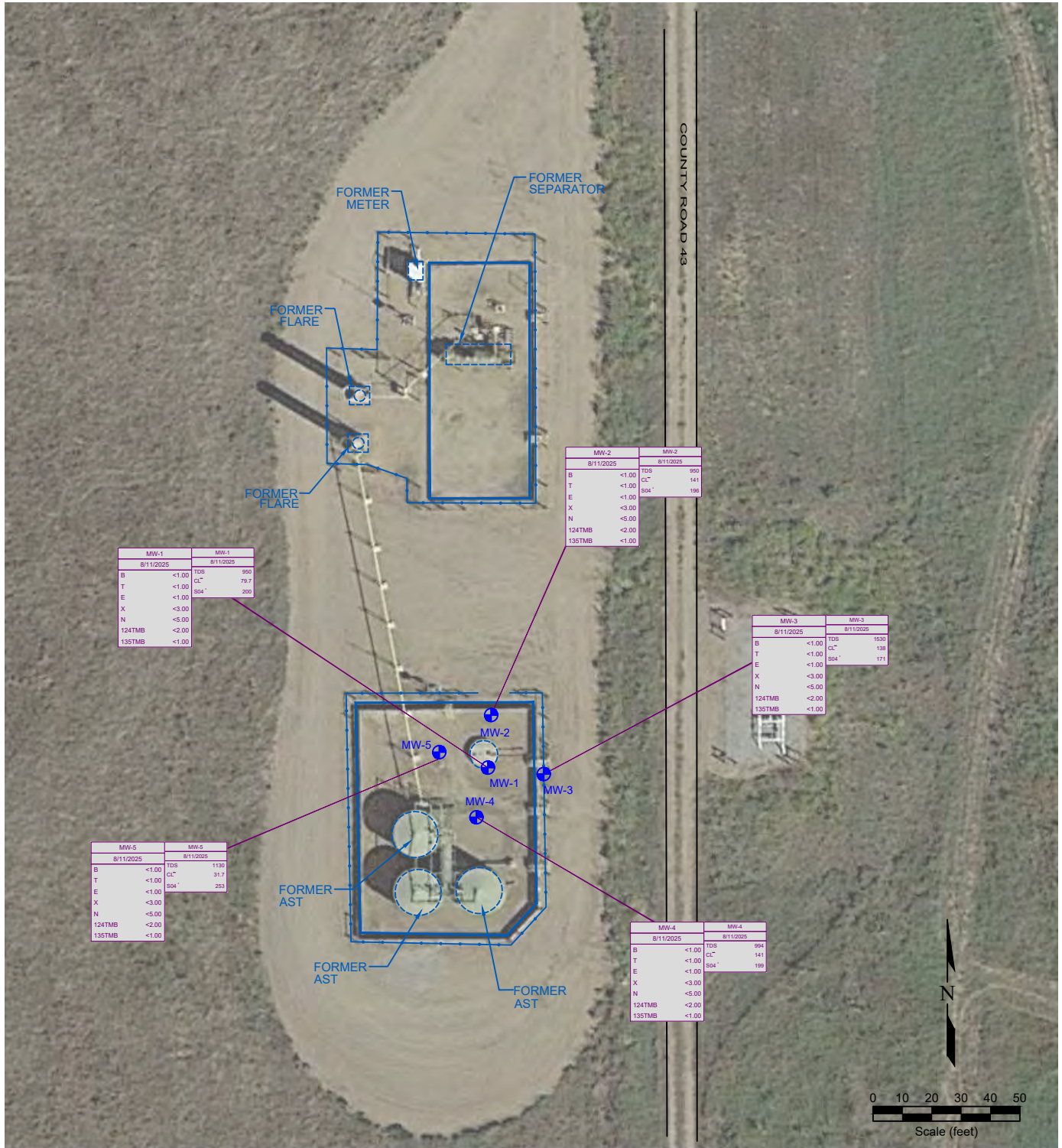
**LEGEND**

- WELL HEAD LOCATION
- ABOVE GROUND STORAGE TANK
- ⊕ MONITORING WELL LOCATION
- (87.20) NOT MEASURED
- 85.80 GROUND WATER ELEVATION (ft above arbitrary datum)
- 85.80 WATER TABLE CONTOUR
- GROUND WATER FLOW DIRECTION
- FORMER FACILITY
- CONTAINMENT BERM
- CONTAINMENT WALL
- FENCE LINE

Figure 3  
**INFERRED GROUNDWATER CONTOUR MAP**  
 August 11, 2025  
**Q3 2025 Groundwater Monitoring**  
**Noble Energy, Inc. ~ Rei 25-10**  
 SWSW Sec. 10, T3N, R65W, 6th PM  
 Weld County, Colorado  
 40.231578°, -104.658323°

Project No. <b>CO24-137</b>	API #	Facility # <b>336608</b>
Date <b>11/14/25</b>	Remediation # <b>34864</b>	Filename <b>24137Q</b>





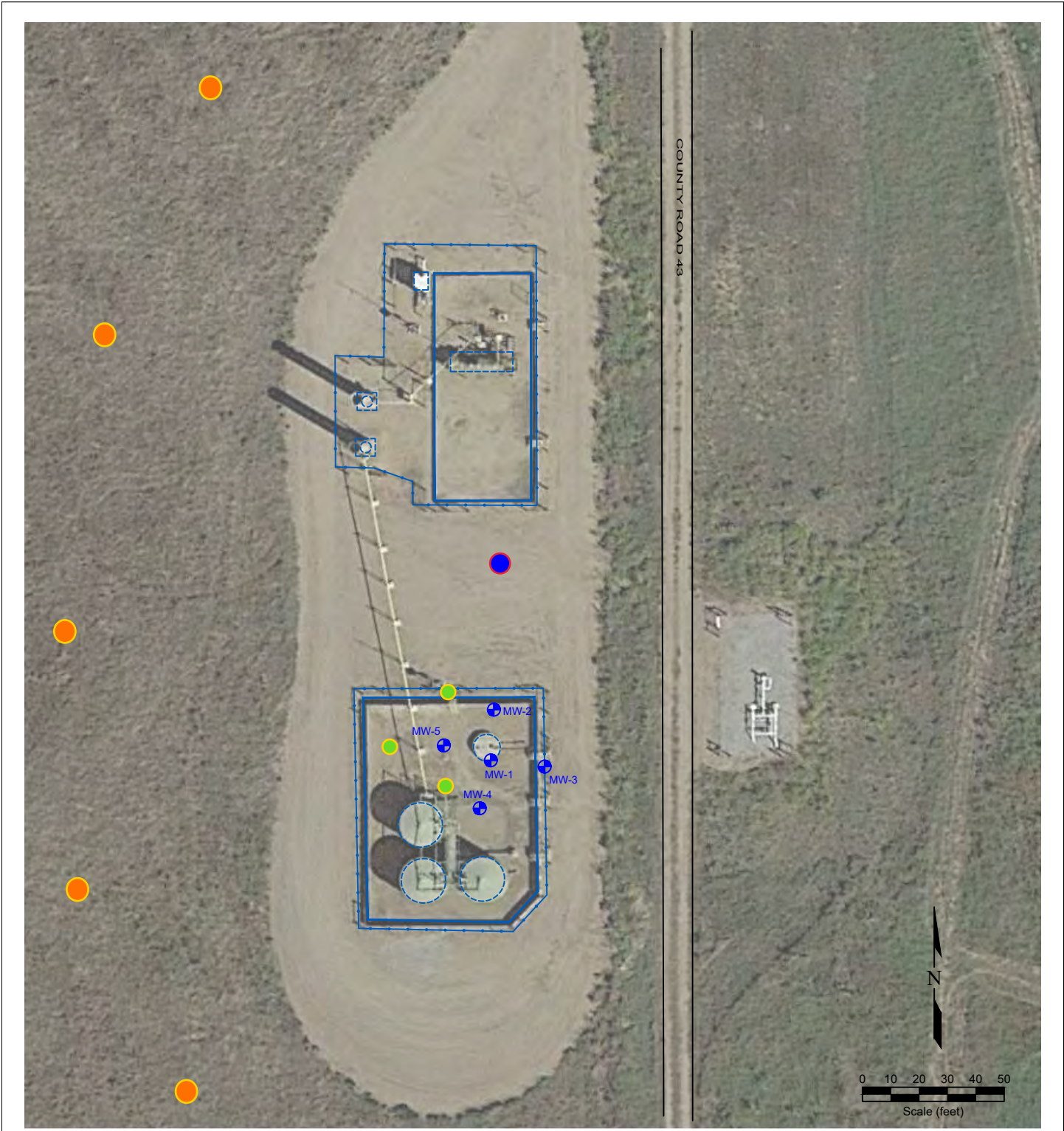
**LEGEND**

- WELL HEAD LOCATION
- ABOVE GROUND STORAGE TANK
- ☐ FORMER FACILITY
- FENCE LINE
- ⊕ MONITORING WELL LOCATION
- ||||| CONTAINMENT BERM
- CONTAINMENT WALL

08/11/2025	DATE SAMPLED	08/11/2025	DATE SAMPLED
MW-1	SAMPLE ID	MW-1	SAMPLE ID
B	BENZENE (ug/L)	TDS	TOTAL DISSOLVED SOLIDS (mg/L)
T	TOLUENE (ug/L)	CL <sup>-</sup>	CHLORIDE ION (mg/L)
E	ETHYLBENZENE (ug/L)	SO4 <sup>-</sup>	SULFATE ION (mg/L)
X	TOTAL XYLENES (ug/L)		
N	NAPHTHALENE (ug/L)		
124TMB	1,2,4-TRIMETHYLBENZENE (ug/L)		
135TMB	1,3,5-TRIMETHYLBENZENE (ug/L)		

Figure 4  
**GROUNDWATER CHEMISTRY MAP**  
 August 11, 2025  
**Q3 2025 Groundwater Monitoring**  
**Noble Energy, Inc. ~ Rei 25-10**  
 SWSW Sec. 10, T3N, R65W, 6th PM  
 Weld County, Colorado  
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Date <b>11/14/25</b>	Remediation # <b>34864</b>	Filename <b>24137Q</b>	



**LEGEND**

- WELL HEAD LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FORMER FACILITY
- FENCE LINE
- ⊕ MONITORING WELL LOCATION
- ⊕ CONTAINMENT BERM
- CONTAINMENT WALL
- Proposed Background Monitoring Well
- Proposed Impacted Soil Delineation Boring
- Proposed Background Soil Samples

**Figure 5**  
**PROPOSED SAMPLE LOCATIONS**

**Noble Energy, Inc. ~ REI 25-10**  
 SWSW Sec. 10, T3N, R65W, 6th PM  
 Weld County, Colorado  
 40.231578°, -104.658323°

Project No. <b>CO24-137</b>	API #	Facility # <b>336608</b>	
Date <b>8/19/25</b>	Remediation # <b>34864</b>	Filename <b>24137Q</b>	