FREMONT ENVIRONMENTAL INC.

July 25, 2024

Mr. Daniel Peterson
Noble Energy Inc.
2115 117th Avenue
Greeley, CO 80634

Subject: **Facility Closure Data Submittal**
Ewing Robert Fed T4N-R66W-S14 L01
NWNE Sec. 14, T4N, R66W
Weld County, Colorado
Fremont Project No. C024-109
Facility # 332527, Remediation #32879

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted Facility Closure activities for the Noble Energy Inc. (Noble) Ewing Robert Fed T4N-R66W-S14 L01. Impacted soil was not encountered during abandonment activities. Details of the Ewing Robert Fed T4N-R66W-S14 L01 facility closure activities are documented in the attached Closure Report. Groundwater was not encountered during flowline abandonment activities.

Please contact me at (303) 956-8714 if you require any additional information. Fremont appreciates the opportunity to provide this service.

Sincerely,

FREMONT ENVIRONMENTAL INC.

Paul V. Henehan, P.E.
Senior Consultant

Attachments:
Facility Closure Checklist
Tables
Figures
Photos

1759 REDWING LANE, BROOMFIELD, CO 80020
(303) 956-8714 (DIRECT)

Tank Battery Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure	X	Partially Buried Vault Closure

Site Name & COGCC Facility Number: Ewing Robert Fed T4N-R66W-S14 L01 Facility ID:332527	*Date:* 05/03/2024	*Remediation Project #:* 32879
Associated Wells: Robert 28-14, Robert Federal 21-14, Robert Federal 34-12, Ewing Federal 31-14	*Age of Site:* 1993	*Number of Photos Attached:* 17 Photos
Location: *(GPS coordinates of southeaster berm)* 40.318986, -104.740497		*Estimated Facility Size (acres):* ~1 Acre

General Condition of Site: *(General observations regarding housekeeping, corrosion, waste management, etc.)*

Good housekeeping. General condition for all the on-site equipment looked fine. Waste management well maintained.

USCS Soil Type: SW & SC	*Estimated Depth to Groundwater:* N/A

Hydrocarbon Impacted Soils / Spills: *(Note estimated size and if impact appears to be surficial or extends to an unknown depth)*

None observed

Salt Crusted Soils or Impacted Vegetation: *(Note estimated size and if impact appears to be surficial or extends to an unknown depth)*

None observed

Tanks

Tank Contents	Oil	Oil	Oil	Oil					
Size (barrels)	300 BBLS	300 BBLS	300 BBLS	300 BBLS					
Age	1993	1993	1993	1993					
Construction Material	Steel	Steel	Steel	Steel					
Tank type (AST/BBV, etc.)	AST	AST	AST	AST					
Visual Integrity of Tank	No Damage	No Damage	No Damage	No Damage					
Condition of tank footprint	No Impacts Noted	No Impacts Noted	No Impacts Noted	No Impacts Noted					
PID Readings	High @ 0.2ppm	High @ 0.0ppm	High @ 0.0ppm	High @ 0.0ppm					
Soil impacts present at valves or hatches?	No Impacts Noted	No Impacts Noted	No Impacts Noted	No Impacts Noted					
PID Readings	N/A	N/A	N/A	N/A					
Sample taken? Location/ Sample ID#	40.3189949, -104.7399906 AST01@6.0"	40.3189427, -104.7399885 AST02@6.0"	40.3189917, -104.7399376 AST03@6.0"	40.3189897, -104.7400612 AST04@6.0"					
Photo Number(s)	Photo 1A	Photo 2A	Photo 3A	Photo 4A					

Other observations regarding tanks: Tanks removed prior to sampling event. An exceedance in pH and barium was discovered at the above ground storage tank sample location AST03@6.0", and exceedances in arsenic were discovered at all AST sample locations. Furthermore, several local background samples were found exceeding in pH and barium, and all local background samples were found exceeding in arsenic. Thus, it is proposed that these exceedances be contributed to native soil conditions. Refer to the soil suitability for reclamation chemistry table (Table 4) and metals in soil chemistry table (Table 5) for reference.

Separators

Separator size	UNK	UNK	UNK	UNK					
Vertical or Horizontal	Horizontal	Horizontal	Horizontal	Horizontal					
Age	1993	1993	1993	1993					
Soil impacts observed? Hyperlink	No Impacts Noted	No Impacts Noted	No Impacts Noted	No Impacts Noted					
PID Readings	High @ 0.0ppm	High @ 0.0ppm	High @ 0.0ppm	High @ 0.0ppm					
Sample taken? Location/ Sample ID#	40.3190129, -104.7404122 SEP01@5.0'	40.3190100, -104.7404499 SEP02@5.0'	40.3190122, -104.7405098 SEP03@5.0'	40.3190128, -104.7405593 SEP04@5.0'1					
Photo Number(s)	Photo 5A	Photo 6A	Photo 7A	Photo 8A					

Other observations regarding separators Separators removed prior to sampling event. An exceedance in pH was discovered at separator sample locations SEP01@5.0' and SEP04@5.0', and exceedances in arsenic were discovered at all separator sample locations. Furthermore, several local background samples were found exceeding in pH and all local background samples were found exceeding in arsenic. Thus, it is proposed that these exceedances be contributed to native soil conditions. Refer to the soil suitability for reclamation chemistry table (Table 4) and metals in soil chemistry table (Table 5) for reference.

Third Party Equipment

Type	Meter Shed	Meter Shed							
Age	1993	1993							

Third Party Operator	Unknown	Unknown							
Removal Date	Still On-Site	Still On-Site							
Sample taken? Location/Sample	MET01@6.0"	MET02@6.0"							
PID Readings	High @ 0.0ppm	High @ 0.0ppm							
Photo Number(s)	Photo 11A	Photo 12A							

Other Facility Equipment

Equipment type	Combustion Unit	Sales Line Risers			
Equipment Condition	No Damage	No Damage			
Age	1993	1993			
Soil impacts observed during	No Impacts Noted	No Impacts Noted			
PID Readings	High @ 0.0ppm	High @ 0.0ppm			
Sample taken? Location/Sample	ECD01@6.0"	GL01@5.0'			
Photo Number(s)	Photo 13A	Photo 10A			

Other observations regarding other facility or third party equipment:
Combustion Unit removed prior to sampling event. GL01@5.0' was the riser tie-in point for gas from separators to third party meter sheds

Summary

Was impacted soil identified?
No Yes - less than 10 cubic yards Yes - more than 10 cubic yards

Total number of samples field screened: 4 Samples	*Total number of samples collected:* 27 Samples
Highest PID Reading: High at 0.2ppm (AST01@6.0")	*Total number of samples submitted to lab for analysis:* 23 Samples
If more than 10 cubic yards of impacted soil were observed:	
Vertical extent: N/A	*Estimated spill volume:* N/A
Lateral extent: N/A	*Volume of soil removed:* N/A
Is additional investigation required? N/A	

Was groundwater encountered during the investigation?
No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils

Measured depth to groundwater: N/A	*Was remedial groundwater removal conducted?* Yes No
Date Groundwater was encountered: N/A	*Commencement date of removal:* N/A
Sheen on groundwater? Yes No	*Volume of groundwater removed prior to sampling:* N/A
Free product observed? Yes No	*Volume of groundwater removed post sampling:* N/A
Total number of samples collected: N/A	*Total Volume of groundwater removed:* N/A
Total number of samples submitted to lab for analysis: N/A	

Buried or Partially Buried Vessel Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure	X	Tank Battery Closure

Site Name & COGCC Facility Number: Ewing Robert Fed T4N-R66W-S14 L01 Facility ID: 332527	*Date:* 05/03/2024	*Remediation Project #:* 32879
Associated Wells: Robert 28-14, Robert Federal 21-14, Robert Federal 34-12, Ewing Federal 31-14	*Age of Site:* 1993	*Number of Photos Attached:* 5 Photos
Location: *(GPS coordinates of vault or southeastern tank berm for multiple)* 40.3189443, -104.7400497		*Estimated Facility Size (acres):* ~1 acre

General Condition of Site: *(General observations regarding housekeeping, corrosion, waste management, etc.)*

Good housekeeping. General condition for all the on-site equipment looked fine. Waste management well maintained.

USCS Soil Type: SW	*Estimated Depth to Groundwater:* N/A

Hydrocarbon Impacted Soils / Spills: *(Note estimated size and if impact appears to be surficial or extends to an unknown depth)*

None observed

Salt Crusted Soils or Impacted Vegetation: *(Note estimated size and if impact appears to be surficial or extends to an unknown depth)*

None observed

Buried or Partially Buried Vessels

Tank Contents	Produced Water								
Size (barrels)	100 BBLS								
Age	1993								
Construction Material	Fiberglass								
Visual Integrity of Tank	No Damage								
Condition of tank footprint	No Impacts Noted								
PID Readings	High @ 0.0ppm								
Condition of dump line	No Damage								
PID Readings	N/A								
Sample taken? Location/Sample ID#	PWVB01@5.0' PWVE01@4.0'								
Photo Number(s)	Photo 9A-9E								

Other observations regarding partially buried vessels: Dumplines were not trenched. The dumpline tie-in points were at all separator sample locations and sample location PWVE01@4.0'. An exceedance in pH was discovered at sample location PWVE01@4.0', and exceedances in arsenic were discovered at both samples taken from the PWV excavation. Furthermore, several local background samples were found exceeding in pH and all local background samples were found exceeding in arsenic. Thus, it is proposed that these exceedances be contributed to native soil conditions. Refer to the soil suitability for reclamation chemistry table (Table 4) and metals in soil chemistry table (Table 5) for reference

Summary

Was impacted soil identified?

No Yes - less than 10 cubic yards Yes - more than 10 cubic yards

Total number of samples field screened: 3 samples	*Total number of samples collected:* 5 samples
Highest PID Reading: High @ 0.0ppm (All Samples)	*Total number of samples submitted to lab for analysis:* 2 samples
If more than 10 cubic yards of impacted soil were observed:	
Vertical extent: N/A	*Estimated spill volume:* N/A
Lateral extent: N/A	*Volume of soil removed:* N/A
Is additional investigation required? N/A	

Was groundwater encountered during the investigation?

No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils

Measured depth to groundwater: N/A	*Was remedial groundwater removal conducted?* Yes No
Date Groundwater was encountered: N/A	*Commencement date of removal:* N/A
Sheen on groundwater? Yes No	*Volume of groundwater removed prior to sampling:* N/A
Free product observed? Yes No	*Volume of groundwater removed post sampling:* N/A
Total number of samples collected: N/A	*Total Volume of groundwater removed:* N/A
Total number of samples submitted to lab for analysis: N/A	

TABLE 1

FIELD DATA SUMMARY TABLE

NOBLE 100322

EWING ROBERT FED T4N-R66W-S14 L01, WELD COUNTY, COLORADO

REM # 32879

Sample ID	Sample Date	Depth	GPS Data Latitude/Longitude		PDOP Value	VOC Concentration (ppm)
AST01@6.0"	5/3/2024	0.5 Ft	40.3189949	-104.7399906	0.80	0.2 ppm
AST02@6.0"	5/3/2024	0.5 Ft	40.3189427	-104.7399885	0.80	0.0 ppm
AST03@6.0"	5/3/2024	0.5 Ft	40.3189917	-104.7399376	0.70	0.0 ppm
AST04@6.0"	5/3/2024	0.5 Ft	40.3189897	-104.7400612	0.70	0.0 ppm
SEP01@5.0'	5/3/2024	5.0 Ft	40.3190129	-104.7404122	0.80	0.0 ppm
SEP02@5.0'	5/3/2024	5.0 Ft	40.3190100	-104.7404499	0.90	0.0 ppm
SEP03@5.0'	5/3/2024	5.0 Ft	40.3190122	-104.7405098	0.80	0.0 ppm
SEP04@5.0'	5/3/2024	5.0 Ft	40.3190128	-104.7405593	0.80	0.0 ppm
PWVB01@5.0'	5/3/2024	5.0 Ft	40.3189443	-104.7400497	0.80	0.0 ppm
PWVE01@4.0'	5/3/2024	4.0 Ft	40.3189567	-104.7400116	0.90	0.0 ppm

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum (NAD) 83 UTMZone 13 North.
2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

in. = Inches

ft. = Feet

bgs = Below ground surface

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE 100322
EWING ROBERT FED T4N-R66W-S14 L01, WELD COUNTY, COLORADO
REM # 32879

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4-Trimethyl-Benzene (mg/kg)	1,3,5-Trimethyl-Benzene (mg/kg)	Naphthalene (mg/kg)	TPH (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500		500**	
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500		500**	
AST01@6.0"	5/3/2024	0.5 Ft	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<500*	*<0.50*	*<50*	*<50*
AST02@6.0"	5/3/2024	0.5 Ft	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<500*	*<0.50*	*<50*	*<50*
AST03@6.0"	5/3/2024	0.5 Ft	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<500*	*<0.50*	*<50*	*<50*
AST04@6.0"	5/3/2024	0.5 Ft	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<500*	*<0.50*	*<50*	*<50*
SEP01@5.0'	5/3/2024	5.0 Ft	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<500*	*<0.50*	*<50*	*<50*
SEP02@5.0'	5/3/2024	5.0 Ft	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<500*	*<0.50*	*<50*	*<50*
SEP03@5.0'	5/3/2024	5.0 Ft	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<500*	*<0.50*	*<50*	*<50*
SEP04@5.0'	5/3/2024	5.0 Ft	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<500*	*<0.50*	*<50*	*<50*
PWVB01@5.0'	5/3/2024	5.0 Ft	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<500*	*<0.50*	*<50*	*<50*
PWVE01@4.0'	5/3/2024	4.0 Ft	*<0.0020*	*<0.0050*	*<0.0050*	*<0.010*	*<0.0050*	*<0.0050*	*<0.0038*	*<500*	*<0.50*	*<50*	*<50*

1. Bold values exceed the ECMC Table 915-1 limit(s)
2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
3. * Indicates laboratory minimum detection limit in excess of SSL
4. ** Summation of GRO+DRO+ORO must be less than 500 mg/kg

NA - Not analyzed

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE 100322
EWING ROBERT FED T4N-R66W-S14 L01, WELD COUNTY, COLORADO
REM # 32879

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl-Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
AST01@6.0"	5/3/2024	0.5 Ft	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*
AST02@6.0"	5/3/2024	0.5 Ft	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*
AST03@6.0"	5/3/2024	0.5 Ft	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*
AST04@6.0"	5/3/2024	0.5 Ft	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*
SEP01@5.0'	5/3/2024	5.0 Ft	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*
SEP02@5.0'	5/3/2024	5.0 Ft	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*
SEP03@5.0'	5/3/2024	5.0 Ft	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*
SEP04@5.0'	5/3/2024	5.0 Ft	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*
PWVB01@5.0'	5/3/2024	5.0 Ft	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*
PWVE01@4.0'	5/3/2024	4.0 Ft	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*	*<0.00500*

1. Bold values exceed the ECMC Table 915-1 limit(s)
2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
3. * Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE 100322
EWING ROBERT FED T4N-R66W-S14 L01, WELD COUNTY, COLORADO
REM # 32879

Sample ID	Sample Date	Depth (ft)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
AST01@6.0"	5/3/2024	0.5 Ft	7.53	0.0994	0.132	*<2.00*
AST02@6.0"	5/3/2024	0.5 Ft	7.43	0.413	1.92	*<2.00*
AST03@6.0"	5/3/2024	0.5 Ft	**8.32**	0.2	0.234	*<2.00*
AST04@6.0"	5/3/2024	0.5 Ft	8.00	0.164	0.0439	*<2.00*
SEP01@5.0'	5/3/2024	5.0 Ft	**8.38**	0.267	0.463	*<2.00*
SEP02@5.0'	5/3/2024	5.0 Ft	7.51	0.0678	0.0571	*<2.00*
SEP03@5.0'	5/3/2024	5.0 Ft	7.87	0.169	0.0554	*<2.00*
SEP04@5.0'	5/3/2024	5.0 Ft	**8.42**	0.216	0.109	*<2.00*
PWVB01@5.0'	5/3/2024	5.0 Ft	8.29	0.198	0.156	*<2.00*
PWVE01@4.0'	5/3/2024	4.0 Ft	**8.81**	0.156	0.0252	*<2.00*
BKG01@6.0"	5/3/2024	0.5 Ft	8.16	0.16	0.604	*<2.00*
BKG01@4.0'	5/3/2024	4.0 Ft	8.21	0.0512	0.345	*<2.00*
BKG01@5.0'	5/3/2024	5.0 Ft	**8.35**	0.0514	0.346	*<2.00*
BKG02@6.0"	5/3/2024	0.5 Ft	**8.4**	0.26	0.35	*<2.00*
BKG02@4.0'	5/3/2024	4.0 Ft	**9.06**	0.354	1.38	*<2.00*
BKG02@5.0'	5/3/2024	5.0 Ft	**8.96**	0.401	1.87	*<2.00*
BKG03@6.0"	5/3/2024	0.5 Ft	**9.04**	0.248	1.29	*<2.00*
BKG03@4.0'	5/3/2024	4.0 Ft	**8.54**	0.407	2.69	*<2.00*
BKG03@5.0'	5/3/2024	5.0 Ft	**8.88**	0.468	3.19	*<2.00*
BKG04@6.0"	5/3/2024	0.5 Ft	8.27	0.239	0.785	*<2.00*
BKG04@4.0'	5/3/2024	4.0 Ft	**9.07**	0.242	0.911	*<2.00*
BKG04@5.0'	5/3/2024	5.0 Ft	**9.04**	0.283	0.948	*<2.00*
BKG05@6.0"	5/3/2024	0.5 Ft	7.99	0.361	0.966	*<2.00*
BKG05@4.0'	5/3/2024	4.0 Ft	**9.36**	0.212	0.317	*<2.00*
BKG05@5.0'	5/3/2024	5.0 Ft	**9.56**	0.174	0.422	*<2.00*
Maximum Background Concentration			9.56	*NA*	*NA*	*NA*

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within background concentrations.
2. **Bold** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.
3. Brown highlighted soil analytical values indicate a regulatory exceedance.

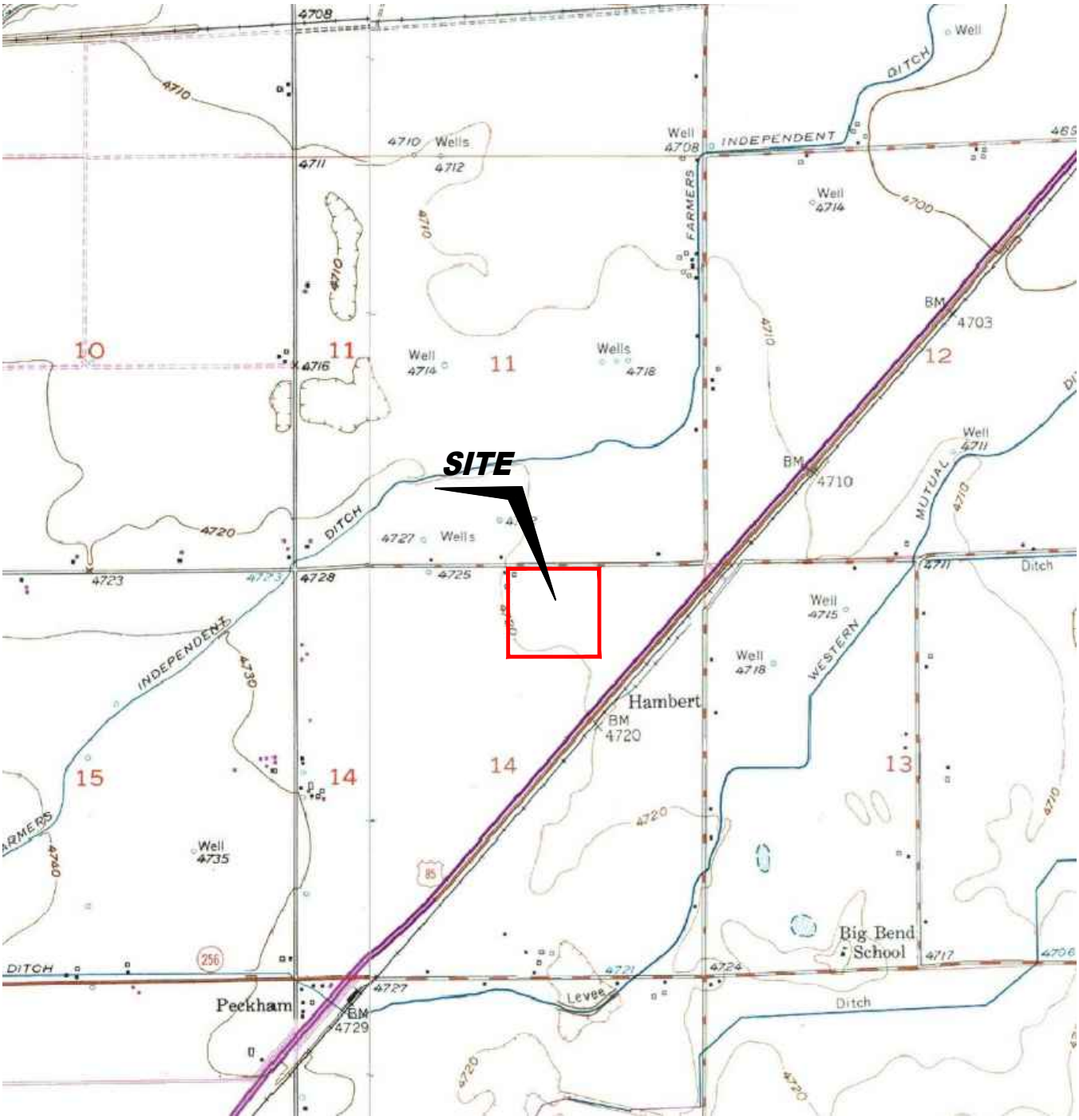
NA - Not analyzed/Not applicable

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE 100322
EWING ROBERT FED T4N-R66W-S14 L01, WELD COUNTY, COLORADO
REM # 32879

Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
AST01@6.0"	5/3/2024	0.5 Ft	**3.84**	79.8	0.374	*<0.30*	13.7	12.4	8.07	*<0.260*	0.131	52.7
AST02@6.0"	5/3/2024	0.5 Ft	**3.52**	79.4	0.333	*<0.30*	13.6	13.4	8.1	*<0.260*	0.143	49.2
AST03@6.0"	5/3/2024	0.5 Ft	**3.48**	**90.8**	0.278	*<0.30*	6.26	13.8	2.8	*<0.260*	0.151	44.8
AST04@6.0"	5/3/2024	0.5 Ft	**2.51**	62	0.197	*<0.30*	4.74	8.52	2.57	*<0.236*	0.0714	29.5
SEP01@5.0'	5/3/2024	5.0 Ft	**2.66**	71.5	*<0.200*	*<0.30*	3.94	8.53	2.97	*<0.260*	0.0556	29.3
SEP02@5.0'	5/3/2024	5.0 Ft	**2.3**	58.6	*<0.200*	*<0.30*	3.96	7.92	3.09	*<0.260*	0.035	25.7
SEP03@5.0'	5/3/2024	5.0 Ft	**2.53**	74.6	*<0.200*	*<0.30*	4.52	9.08	2.82	*<0.260*	0.0564	27.7
SEP04@5.0'	5/3/2024	5.0 Ft	**1.31**	53.4	*<0.200*	*<0.30*	3.1	7.79	2.33	*<0.260*	0.0482	27.1
PWVB01@5.0'	5/3/2024	5.0 Ft	**1.02**	42.9	*<0.200*	*<0.30*	2.99	4.92	1.91	*<0.260*	0.0209	17.8
PWVE01@4.0'	5/3/2024	4.0 Ft	**2.9**	80.5	0.233	*<0.30*	4.94	10.6	2.81	*<0.260*	0.095	34.7
BKG01@6.0"	5/3/2024	0.5 Ft	**6.53**	**103**	**1.03**	*<0.30*	21.2	**36.9**	5.24	**0.307**	0.524	69.7
BKG01@4.0'	5/3/2024	4.0 Ft	**3.77**	**101**	0.224	*<0.30*	5.02	10.1	5.87	*<0.260*	0.0614	22.9
BKG01@5.0'	5/3/2024	5.0 Ft	**2.81**	**82.1**	0.207	*<0.30*	4.93	8.36	5.12	*<0.260*	0.0454	20.5
BKG02@6.0"	5/3/2024	0.5 Ft	**4.09**	78.1	**0.439**	*<0.30*	12	**17**	5	*<0.260*	0.183	47.5
BKG02@4.0'	5/3/2024	4.0 Ft	**2.77**	78.9	*<0.200*	*<0.30*	4.04	6.04	4.05	*<0.260*	0.0317	16.2
BKG02@5.0'	5/3/2024	5.0 Ft	**2.62**	64.6	*<0.200*	*<0.30*	3.83	5.63	3.73	*<0.260*	0.0292	15.1
BKG03@6.0"	5/3/2024	0.5 Ft	**4.62**	63.5	**0.629**	*<0.30*	19.8	**30**	4.05	*<0.260*	0.4	61.9
BKG03@4.0'	5/3/2024	4.0 Ft	**2.03**	44.7	*<0.200*	*<0.30*	4.43	6.04	3.4	*<0.260*	0.0366	15.7
BKG03@5.0'	5/3/2024	5.0 Ft	**2.21**	43.8	*<0.200*	*<0.30*	5.02	8.43	2.78	*<0.260*	0.0629	18.6
BKG04@6.0"	5/3/2024	0.5 Ft	**3.35**	55.8	**0.426**	*<0.30*	12.4	**18.7**	3.6	*<0.260*	0.203	46.4
BKG04@4.0'	5/3/2024	4.0 Ft	**1.7**	42.2	*<0.200*	*<0.30*	3.5	4.76	3.31	*<0.260*	0.0334	13.4
BKG04@5.0'	5/3/2024	5.0 Ft	**1.38**	34.2	*<0.180*	*<0.30*	2.76	4.42	2.79	*<0.234*	0.0254	11.7
BKG05@6.0"	5/3/2024	0.5 Ft	**3.77**	63.7	**0.383**	*<0.30*	10.5	**15.4**	4.18	*<0.260*	0.159	42.1
BKG05@4.0'	5/3/2024	4.0 Ft	**2.69**	50.4	*<0.180*	*<0.30*	3.63	5.34	3.3	*<0.234*	0.0377	14.8
BKG05@5.0'	5/3/2024	5.0 Ft	**2.32**	43.2	*<0.200*	*<0.30*	2.88	4.62	2.78	*<0.260*	0.0238	12.3
1.25x Maximum Background Concentration			8.16	129	1.2875	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within 1.25x background concentrations.
2. **Bold** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.
3. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL).
4. Non-detect background results accounted for in the highest background concentration by using the reporting limit.

ECMC = Energy & Carbon Management Commission
(<) = Analytical result is less than the indicated laboratory reporting limit.
mg/kg = Milligrams per kilogram
ft. = Feet
bgs = Below ground surface
* Indicates laboratory minimum detection limit in excess of SSL
NA - Not analyzed/Not applicable



N

Scale (miles)
0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1
0 1000 2000 3000 4000 5000
Scale (feet)

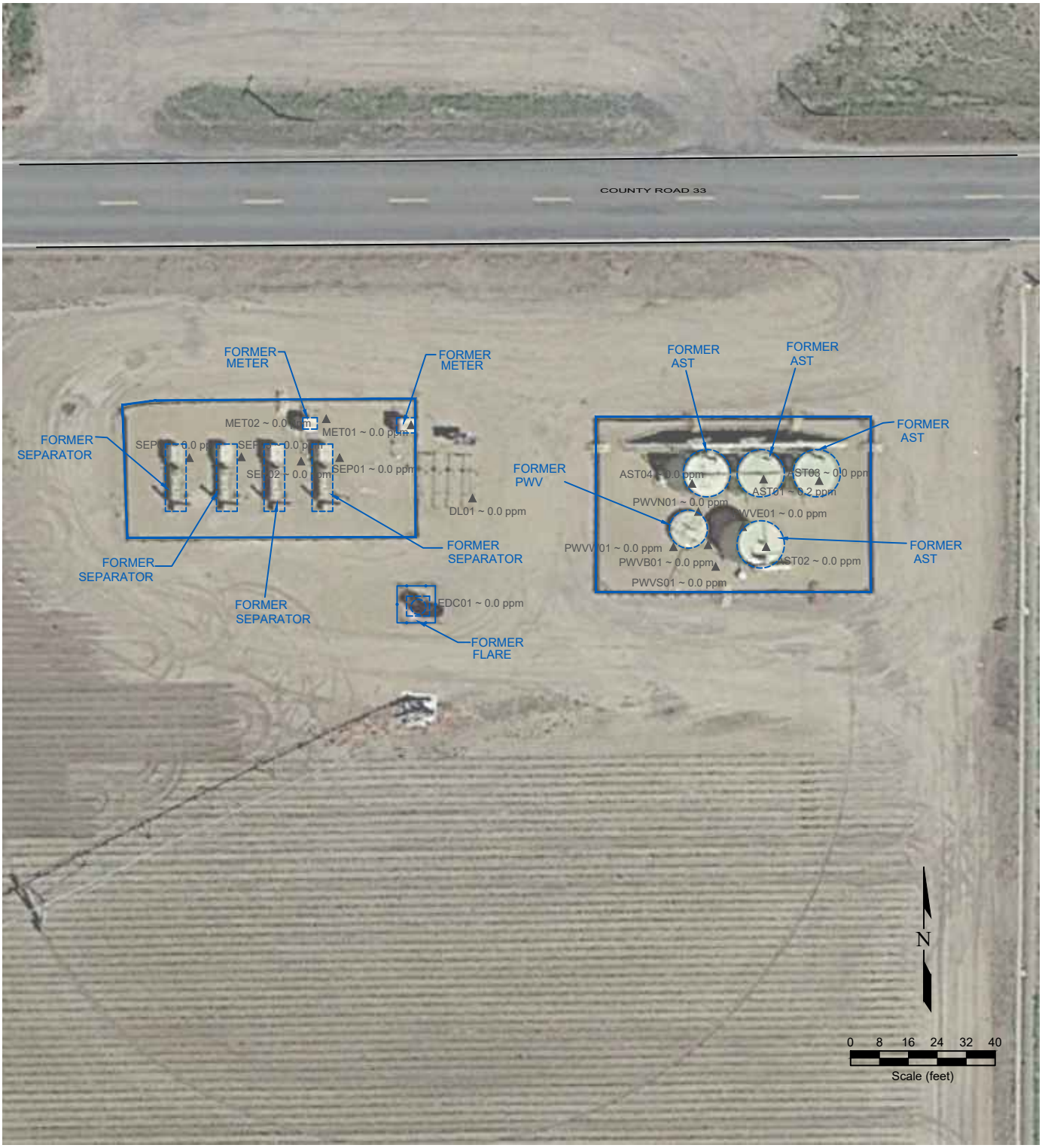
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Noble Energy, Inc. ~ Ewing-64N66W 14NWNE
NWNE Sec. 14, T4N, R66W, 6th PM
Weld County, Colorado
40.318986°, -104.740497°

Project #	API #	Facility #
C024-109		**332527**
Date	Remediation #	Filename
10/28/24	**32879**	**24109T**

FREMONT ENVIRONMENTAL



LEGEND

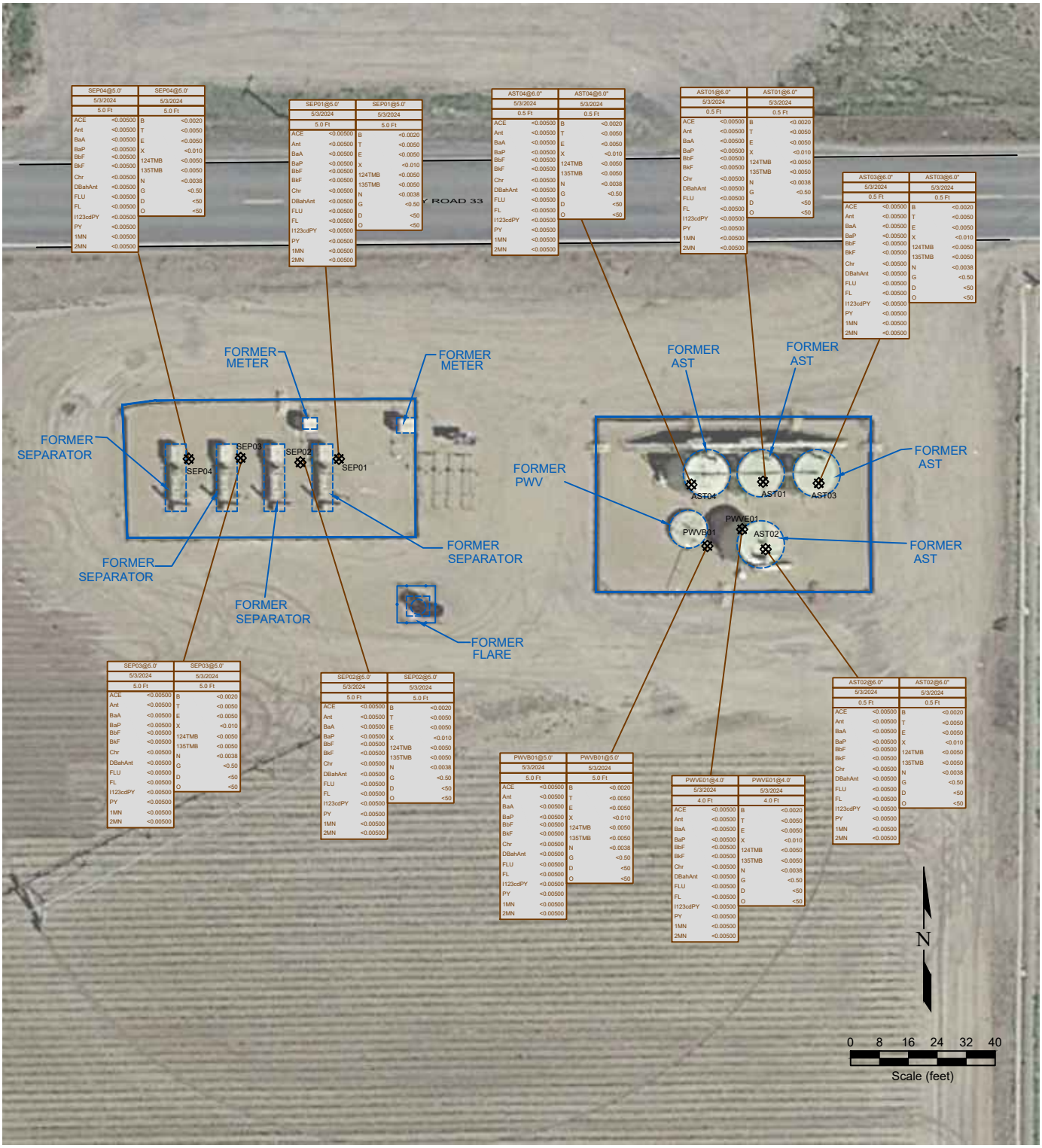
- WELL HEAD LOCATION
- PID READING LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- FLOWLINE
- FENCE LINE
- CONTAINMENT BERM
- CONTAINMENT WALL

Figure 2
SITE MAP

Noble Energy, Inc. ~ Ewing-64N66W 14NWNE
NWNE Sec. 14, T4N, R66W, 6th PM
Weld County, Colorado
40.318986°, -104.740497°

Project No.	API #	Facility #
C024-109		**332527**
Date	Remediation #	Filename
10/28/24	**32879**	**24109Q**

FREMONT ENVIRONMENTAL



LEGEND

- WELL HEAD LOCATION
- SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- NA — NOT ANALYZED
- FLOWLINE
- FENCE LINE
- CONTAINMENT BERM
- CONTAINMENT WALL

SAMPLE ID	SAMPLE ID
DATE	DATE SAMPLED
DEPTH	DEPTH (ft)
ACE	ACENAPHTHENE (mg/kg)
Ant	ANTHRACENE (mg/kg)
BaA	BENZO (A) ANTHRACENE (mg/kg)
BaP	BENZO (A) PYRENE (mg/kg)
BbF	BENZO (B) FLUORANTHENE (mg/kg)
BkF	BENZO (K) FLUORANTHENE(mg/kg)
Chr	CHRYSENE (mg/kg)
DBahAnt	DIBENZ (A,H) ANTHRACENE (mg/kg)
FLU	FLUORANTHENE (mg/kg)
FL	FLUORENE (mg/kg)
I123cdPY	INDENO (1,2,3-CD) PYRENE(mg/kg)
PY	PYRENE (mg/kg)
1MN	1-METHYLNAPHTHALENE (mg/kg)
2MN	2-METHYLNAPHTHALENE (mg/kg)

SAMPLE	SAMPLE ID
DATE	DATE SAMPLED
DEPTH	DEPTH (ft)
B	BENZENE (mg/kg)
T	TOLUENE (mg/kg)
E	ETHYLBENZENE (mg/kg)
X	TOTAL XYLENES (mg/kg)
124TMB	1,2,4-TRIMETHYLBENZENE (mg/kg)
135TMB	1,3,5-TRIMETHYLBENZENE (mg/kg)
N	NAPHTHALENE (mg/kg)
G	TPH-GRO (mg/kg)
D	TPH-DRO (mg/kg)
O	TPH-ORO (mg/kg)

Figure 3

ORGANIC SOIL CHEMISTRY MAP

Noble Energy, Inc. ~ Ewing-64N66W 14NWNE

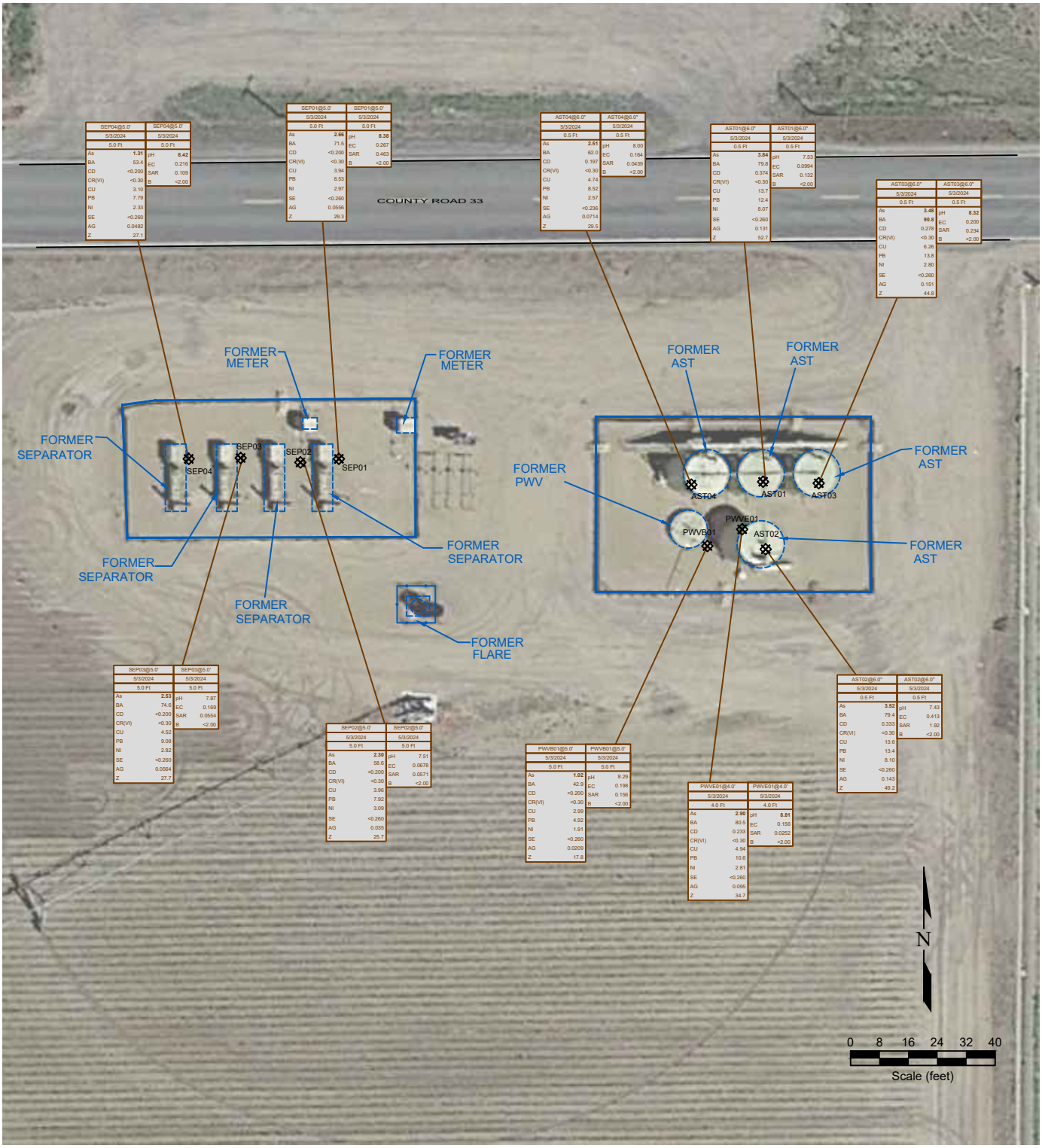
NWNE Sec. 14, T4N, R66W, 6th PM

Weld County, Colorado

40.318986°, -104.740497°

Project No.	API #	Facility #
C024-109		**332527**
Date	**Remediation #**	**Filename**
10/28/24	**32879**	**24109Q**

FREMONT ENVIRONMENTAL



LEGEND

- WELL HEAD LOCATION
- SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- FLOWLINE
- FENCE LINE
- CONTAINMENT BERM
- CONTAINMENT WALL

SAMPLE ID, DATE SAMPLED, DEPTH (ft), ARSENIC (mg/kg), BARIUM (mg/kg), CADMIUM (mg/kg), CHROMIUM (mg/kg), COPPER (mg/kg), LEAD (mg/kg), NICKEL (mg/kg), SELENIUM (mg/kg), SILVER (mg/kg), ZINC (mg/kg)

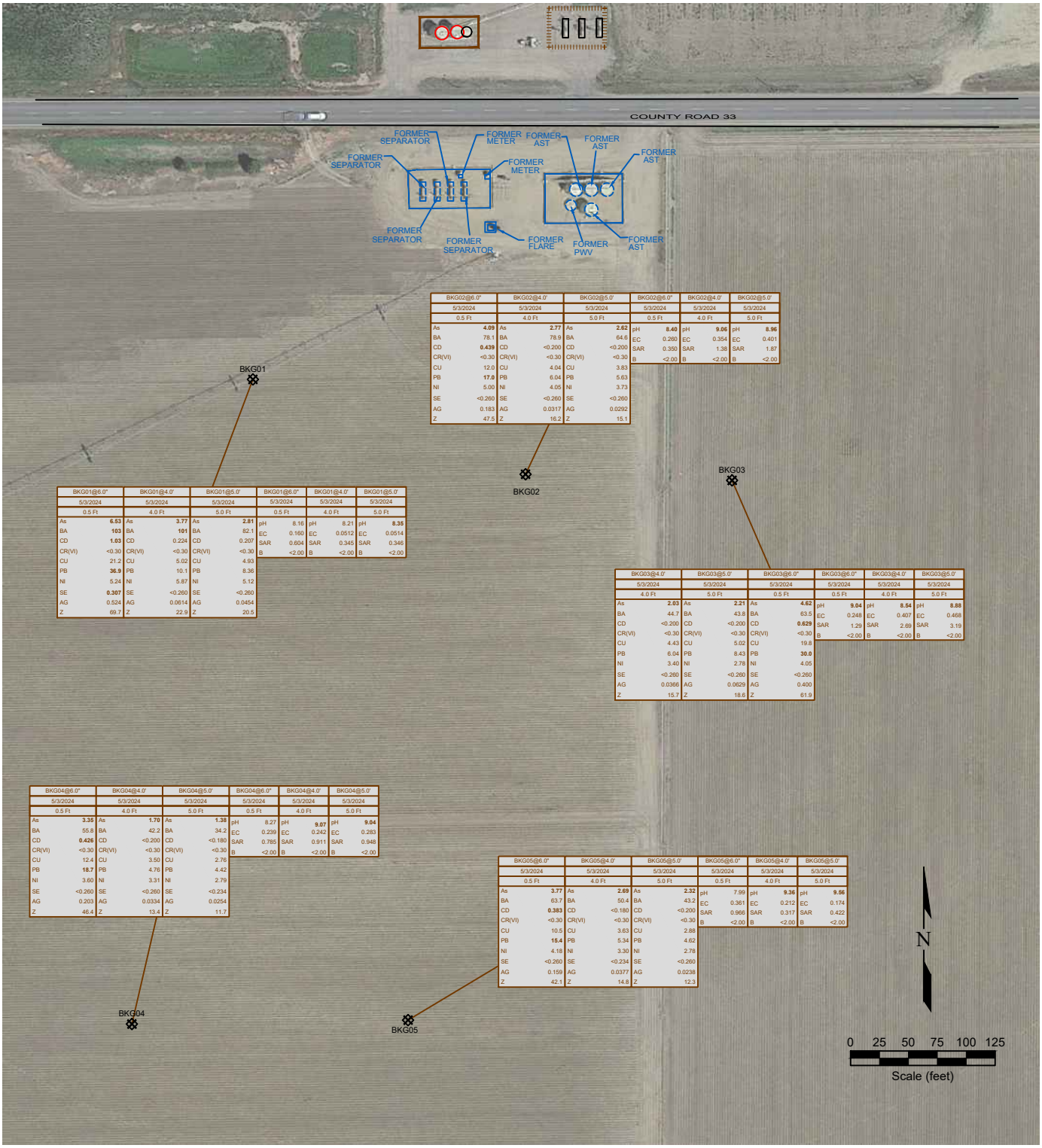
SAMPLE ID, DATE SAMPLED, DEPTH (ft), pH (pH units), EC (mmhos/cm), SAR (units), BORON (mg/L)

Figure 4
METALS AND INORGANIC SOIL CHEMISTRY MAP

Noble Energy, Inc. ~ Ewing-64N66W 14NWNE
NWNE Sec. 14, T4N, R66W, 6th PM
Weld County, Colorado
40.318986°, -104.740497°

Project No.	API #	Facility #
C024-109		**332527**
Date	**Remediation #**	**Filename**
10/28/24	**32879**	**24109Q**

FREMONT ENVIRONMENTAL



BKG02@6.0"	BKG02@4.0'	BKG02@5.0'	BKG02@6.0"	BKG02@4.0'	BKG02@5.0'
5/3/2024	5/3/2024	5/3/2024	5/3/2024	5/3/2024	5/3/2024
0.5 Ft	4.0 Ft	5.0 Ft	0.5 Ft	4.0 Ft	5.0 Ft
As **4.09**	As **2.77**	As **2.62**	pH **8.40**	pH **9.06**	pH **8.96**
BA 78.1	BA 78.9	BA 64.6	EC 0.260	EC 0.354	EC 0.401
CD **0.439**	CD <0.200	CD <0.200	SAR 0.350	SAR 1.38	SAR 1.87
CR(VI) <0.30	CR(VI) <0.30	CR(VI) <0.30	B <2.00	B <2.00	B <2.00
CU 12.0	CU 4.04	CU 3.83			
PB **17.0**	PB 6.04	PB 5.63			
NI 5.00	NI 4.05	NI 3.73			
SE <0.260	SE <0.260	SE <0.260			
AG 0.183	AG 0.0317	AG 0.0292			
Z 47.5	Z 16.2	Z 15.1			

BKG01@6.0"	BKG01@4.0'	BKG01@5.0'	BKG01@6.0"	BKG01@4.0'	BKG01@5.0'
5/3/2024	5/3/2024	5/3/2024	5/3/2024	5/3/2024	5/3/2024
0.5 Ft	4.0 Ft	5.0 Ft	0.5 Ft	4.0 Ft	5.0 Ft
As **6.53**	As **3.77**	As **2.81**	pH 8.16	pH 8.21	pH **8.35**
BA **103**	BA **101**	BA 82.1	EC 0.160	EC 0.0512	EC 0.0514
CD **1.03**	CD 0.224	CD 0.207	SAR 0.604	SAR 0.345	SAR 0.346
CR(VI) <0.30	CR(VI) <0.30	CR(VI) <0.30	B <2.00	B <2.00	B <2.00
CU 21.2	CU 5.02	CU 4.93			
PB **36.9**	PB 10.1	PB 8.36			
NI 5.24	NI 5.87	NI 5.12			
SE **0.307**	SE <0.260	SE <0.260			
AG 0.524	AG 0.0614	AG 0.0454			
Z 69.7	Z 22.9	Z 20.5			

BKG03@4.0'	BKG03@5.0'	BKG03@6.0"	BKG03@6.0"	BKG03@4.0'	BKG03@5.0'
5/3/2024	5/3/2024	5/3/2024	5/3/2024	5/3/2024	5/3/2024
4.0 Ft	5.0 Ft	0.5 Ft	0.5 Ft	4.0 Ft	5.0 Ft
As **2.03**	As **2.21**	As **4.62**	pH **9.04**	pH **8.54**	pH **8.88**
BA 44.7	BA 43.8	BA 63.5	EC 0.248	EC 0.407	EC 0.468
CD <0.200	CD <0.200	CD **0.629**	SAR 1.29	SAR 2.69	SAR 3.15
CR(VI) <0.30	CR(VI) <0.30	CR(VI) <0.30	B <2.00	B <2.00	B <2.00
CU 4.43	CU 5.02	CU 19.8			
PB 6.04	PB 8.43	PB **30.0**			
NI 3.40	NI 2.78	NI 4.05			
SE <0.260	SE <0.260	SE <0.260			
AG 0.0366	AG 0.0629	AG 0.400			
Z 15.7	Z 18.6	Z 61.9			

BKG04@6.0"	BKG04@4.0'	BKG04@5.0'	BKG04@6.0"	BKG04@4.0'	BKG04@5.0'
5/3/2024	5/3/2024	5/3/2024	5/3/2024	5/3/2024	5/3/2024
0.5 Ft	4.0 Ft	5.0 Ft	0.5 Ft	4.0 Ft	5.0 Ft
As **3.35**	As **1.70**	As **1.38**	pH 8.27	pH **9.07**	pH **9.04**
BA 55.8	BA 42.2	BA 34.2	EC 0.239	EC 0.242	EC 0.283
CD **0.426**	CD <0.200	CD <0.180	SAR 0.785	SAR 0.911	SAR 0.948
CR(VI) <0.30	CR(VI) <0.30	CR(VI) <0.30	B <2.00	B <2.00	B <2.00
CU 12.4	CU 3.50	CU 2.76			
PB **18.7**	PB 4.76	PB 4.42			
NI 3.60	NI 3.31	NI 2.79			
SE <0.260	SE <0.260	SE <0.234			
AG 0.203	AG 0.0334	AG 0.0254			
Z 46.4	Z 13.4	Z 11.7			

BKG05@6.0"	BKG05@4.0'	BKG05@5.0'	BKG05@6.0"	BKG05@4.0'	BKG05@5.0'
5/3/2024	5/3/2024	5/3/2024	5/3/2024	5/3/2024	5/3/2024
0.5 Ft	4.0 Ft	5.0 Ft	0.5 Ft	4.0 Ft	5.0 Ft
As **3.77**	As **2.69**	As **2.32**	pH 7.99	pH **9.36**	pH **9.56**
BA 63.7	BA 50.4	BA 43.2	EC 0.361	EC 0.212	EC 0.174
CD **0.383**	CD <0.180	CD <0.200	SAR 0.966	SAR 0.317	SAR 0.422
CR(VI) <0.30	CR(VI) <0.30	CR(VI) <0.30	B <2.00	B <2.00	B <2.00
CU 10.5	CU 3.63	CU 2.88			
PB **15.4**	PB 5.34	PB 4.62			
NI 4.18	NI 3.30	NI 2.78			
SE <0.260	SE <0.234	SE <0.260			
AG 0.159	AG 0.0377	AG 0.0238			
Z 42.1	Z 14.8	Z 12.3			

LEGEND

- WELL HEAD LOCATION
- SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- FLOWLINE
- FENCE LINE
- CONTAINMENT BERM
- CONTAINMENT WALL

SAMPLE	SAMPLE ID
DATE	DATE SAMPLED
DEPTH	DEPTH (ft)
As <0.01	ARSENIC (mg/kg)
BA <0.01	BARIUM (mg/kg)
CD <0.01	CADMIUM (mg/kg)
CR(VI) <0.05	CHROMIUM (mg/kg)
CU <0.01	COPPER (mg/kg)
PB <0.05	LEAD (mg/kg)
NI <0.05	NICKEL (mg/kg)
SE <0.5	SELENIUM (mg/kg)
AG <0.05	SILVER (mg/kg)
Z <0.05	ZINC (mg/kg)

SAMPLE	SAMPLE ID
DATE	DATE SAMPLED
DEPTH	DEPTH (ft)
pH <500	pH (pH units)
EC 7.00	EC (mmhos/cm)
SAR <1	SAR (units)
B <2	BORON (mg/L)

Figure 5

BACKGROUND SAMPLE SOIL CHEMISTRY MAP

Noble Energy, Inc. ~ Ewing-64N66W 14NWNE

NWNE Sec. 14, T4N, R66W, 6th PM

Weld County, Colorado

40.318986°, -104.740497°

Project No.	API #	Facility #
C024-109		**332527**
Date	Remediation #	Filename
10/28/24	**32879**	**24109QBKG**

FREMONT ENVIRONMENTAL

Photo Log

Description:

#1A - Ewing Robert Fed T4N-R66W-S14 L01 - 1st Above Ground Storage Tank (Oil) - AST01@6.0" - No Impacts Noted - PID: 0.2ppm

Photo Log

Description:

#2A - Ewing Robert Fed T4N-R66W-S14 L01 - 2nd Above Ground Storage Tank (Oil) - AST02@6.0" - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#3A - Ewing Robert Fed T4N-R66W-S14 L01 - 3rd Above Ground Storage Tank (Oil) - AST03@6.0" - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#4A - Ewing Robert Fed T4N-R66W-S14 L01 - 4th Above Ground Storage Tank (Oil) - AST04@6.0" - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#5A - Ewing Robert Fed T4N-R66W-S14 L01 - 1st Separator - SEP01@5.0' - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#6A - Ewing Robert Fed T4N-R66W-S14 L01 - 2nd Separator - SEP02@5.0' - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#7A - Ewing Robert Fed T4N-R66W-S14 L01 - 3rd Separator - SEP03@5.0' - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#8A - Ewing Robert Fed T4N-R66W-S14 L01 - 4th Separator - SEP04@5.0' - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#9A - Ewing Robert Fed T4N-R66W-S14 L01 - Floor of Produced Water Vault (PWV) Excavation - PWVB01@5.0' - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#9B - Ewing Robert Fed T4N-R66W-S14 L01 - North Sidewall of PWV Excavation - PWVN01@4.0' - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#9C - Ewing Robert Fed T4N-R66W-S14 L01 - South Sidewall of PWV Excavation - PWVS01@4.0' - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#9D - Ewing Robert Fed T4N-R66W-S14 L01 - East Sidewall of PWV Excavation - PWVE01@4.0' - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#9E - Ewing Robert Fed T4N-R66W-S14 L01 - West Sidewall of PWV Excavation - PWVW01@4.0' - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#10A - Ewing Robert Fed T4N-R66W-S14 L01 - Gas Lines Tie-in from Separators - GL01@5.0' - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#11A - Ewing Robert Fed T4N-R66W-S14 L01 - 1st Third Party Meter Shed - MET01@6.0" - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#12A - Ewing Robert Fed T4N-R66W-S14 L01 - 2nd Third Party Meter Shed - MET02@6.0" - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#13A - Ewing Robert Fed T4N-R66W-S14 L01 - Combustion Unit - ECD01@6.0" - No Impacts Noted - PID: 0.0ppm

Photo Log

Description:

#14A - Ewing Robert Fed T4N-R66W-S14 L01 - 1st local Background Sample Bore - BKG01 - Samples Collected at 0.5ft, 4.0ft and 5.0ft

Photo Log

Description:

#14B - Ewing Robert Fed T4N-R66W-S14 L01 - 2nd local Background Sample Bore - BKG02 - Samples Collected at 0.5ft, 4.0ft and 5.0ft

Photo Log

Description:

#14C - Ewing Robert Fed T4N-R66W-S14 L01 - 3rd local Background Sample Bore - BKG03 - Samples Collected at 0.5ft, 4.0ft and 5.0ft

Photo Log

Description:

#14D - Ewing Robert Fed T4N-R66W-S14 L01 - 4th local Background Sample Bore - BKG04 - Samples Collected at 0.5ft, 4.0ft and 5.0ft

Photo Log

Description:

#14E - Ewing Robert Fed T4N-R66W-S14 L01 - 5th local Background Sample Bore - BKG05 - Samples Collected at 0.5ft, 4.0ft and 5.0ft