

FREMONT ENVIRONMENTAL INC.

November 15, 2022

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

Subject: **Facility Closure Data Submittal**
MILLAGE C-64N64W 12SEW
API # 05-123-25437
SEW Sec. 12, T4N, R64W
Weld County, Colorado
Fremont Project No. C022-149
Facility # 309832, Remediation #20432

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted Facility Closure activities for the Noble Energy Inc. (Noble) Millage C-64N64W 12SEW. Impacted soil was not encountered during abandonment activities. Details of the Millage C-64N64W 12SEW facility closure activities are documented in the attached Closure Report. Groundwater was not encountered during the facility 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
- Laboratory Reports

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

Third Party Removal Date									
Sample taken? Location/Sample									
PID Readings									
Photo Number(s)									

Other Facility Equipment

Equipment type	Combustion Unit	Combustion Unit		
Equipment Condition	No Damage	No Damage		
Age	2008	2008		
Soil impacts	No Impacts	No Impacts		
PID Readings	High @ 0.0ppm	High @ 0.1ppm		
Sample taken? Location/Sample	SECD01@6.0"	NECD01@6.0"		
Photo Number(s)	Photo 8A	Photo 9A		

Other observations regarding other facility or third party equipment:

Combustion units removed prior to sampling event

Summary

Was impacted soil identified?	
No	Yes - less than 10 cubic yards Yes - more than 10 cubic yards
Total number of samples field screened: 2 Samples	Total number of samples collected: 7 Samples
Highest PID Reading: High at 21.6ppm (SSEP01@3.0')	Total number of samples submitted to lab for analysis: 5 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: MILLAGE C-64N64W 12SENW Facility ID: 309832		Date: 10/20/2022		Remediation Project #: 20432				
Associated Wells: MILLAGE C12-18 Facility ID: 234 API: 05-123-25437		Age of Site: 2008		Number of Photos Attached: 9 Photos				
Location: (GPS coordinates of vault or southeastern tank berm for multiple) Eastern PWV: 40.333930, -104.499115 Western PWV: 40.333930, -104.499158							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: Sandy Clay				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) Staining and odor was observed at the dumpline separator tie-in (NDL01@5.0'). NDL01@5.0' passed for volatile organics and polycyclic aromatic hydrocarbons. Further Investigation is not required. Refer to Tables 2 and 3 for reference. Exceedances in pH concentrations were discovered at the base and northern sidewall of the western PWV excavation (PWVB02@6.0' & PWVN02@5.0'). Refer to Table 4 for reference. Exceedances in both pH and SAR concentrations were also discovered at the dumpline separator tie-in (NDL01@5.0') and for the local background samples. Refer to Table 4 for reference								
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	Produced Water						
Size (barrels)	<50 BBLs	<50 BBLs						
Age	2008	2008						
Construction Material	PBV Concrete	PBV Concrete						
Visual Integrity of Tank	No Damage	No Damage						
Condition of tank	No Impacts	No Impacts						
PID Readings	High @ 10.9ppm	High @ 5.0ppm						
Condition of Dumpline	No Damage	No Damage						
PID Readings	High @ 3.8ppm NDL01@5.0'	High @ 3.8ppm NDL01@5.0'						
Sample taken? Location/Sample ID#	PWVB01@6.0' PWVN01@5.0'	PWVB02@6.0' PWVN02@5.0'						
Photo Number(s)	Photo 3A-3D & 7A	Photo 4A-4D & 7A						
Other observations regarding partially buried vessels: The southern sidewall of both PWV excavations was the tie-in points for the dumpline to the separator. Dumplines were not trenched.								
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: 9 samples				
Highest PID Reading: High @ 10.9ppm (PWVN01@5.0')				Total number of samples submitted to lab for analysis: 5 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? No								
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
MILLAGE C-64N64W 12SENW, WELD COUNTY, COLORADO
REM # 20432

Sample ID	Sample Date	Depth (ft)	GPS Data		PDOP Value	VOC Concentration (ppm)
			Latitude/Longitude			
WAST01@6.0"	10/20/2022	0.5 Ft	40.333935	-104.499164	-	10.6
EAST01@6.0"	10/20/2022	0.5 Ft	40.333968	-104.499113	-	12.1
NECD01@6.0"	10/20/2022	0.5 Ft	40.333823	-104.498852	-	0.0
SECD01@6.0"	10/20/2022	0.5 Ft	40.333783	-104.498865	-	0.0
SSEP01@3.0'	10/20/2022	3.0 Ft	40.333900	-104.498934	-	21.6
NSEP01@5.0'	10/20/2022	5.0 Ft	40.333935	-104.498932	-	13.1
NDL01@5.0'	10/20/2022	5.0 Ft	40.333936	-104.498946	-	3.8
PWVN01@5.0'	10/20/2022	5.0 Ft	40.333950	-104.499117	-	10.9
PWVS01@5.0'	10/20/2022	5.0 Ft	40.333913	-104.499116	-	2.1
PWVE01@5.0'	10/20/2022	5.0 Ft	40.333931	-104.499085	-	8.2
PWVN02@5.0'	10/20/2022	5.0 Ft	40.333953	-104.499162	-	2.9
PWVS02@5.0'	10/20/2022	5.0 Ft	40.333911	-104.499160	-	1.7
PWVW01@5.0'	10/20/2022	5.0 Ft	40.333930	-104.499191	-	2.0
PWVB01@6.0'	10/20/2022	6.0 Ft	40.333930	-104.499115	-	7.3
PWVB02@6.0'	10/20/2022	6.0 Ft	40.333930	-104.499158	-	5.0

TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE 100322
MILLAGE C-64N64W 12SENW, WELD COUNTY, COLORADO
REM # 20432

Sample ID	Sample Date	Depth (ft)	GPS Data		PDOP Value	VOC Concentration (ppm)
			Latitude	Longitude		
BKG01@6.0"	10/20/2022	0.5 Ft	40.333774	-104.498634	-	0.0
BKG1	2/18/2025	1.0 Ft, 3.0 Ft, 5.0 Ft, 6.0 Ft, 16.0, Ft, 17.0 Ft	40.3340297	-104.4997299	0.8	0.0
BKG2	2/18/2025	1.0 Ft, 3.0 Ft, 5.0 Ft, 6.0 Ft, 16.0, Ft, 17.0 Ft	40.3336747	-104.4995057	0.8	0.0
BKG3	2/18/2025	1.0 Ft, 3.0 Ft, 5.0 Ft, 6.0 Ft, 16.0, Ft, 17.0 Ft	40.3335263	-104.4989578	0.8	0.0
BKG4	2/18/2025	1.0 Ft, 3.0 Ft, 5.0 Ft, 6.0 Ft, 16.0, Ft, 17.0 Ft	40.3335659	-104.4984018	0.8	0.0
BKG5	2/18/2025	1.0 Ft, 3.0 Ft, 5.0 Ft, 6.0 Ft, 16.0, Ft, 17.0 Ft	40.3339369	-104.4983999	0.9	0.0

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
MILLAGE C-64N64W 12SEW, WELD COUNTY, COLORADO
REM # 20432

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**		
WAST01@6.0"	10/20/2022	0.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
EAST01@6.0"	10/20/2022	0.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SSEP01@3.0'	10/20/2022	3.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
NSEP01@5.0'	10/20/2022	5.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
NDL01@5.0'	10/20/2022	5.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWVN01@5.0'	10/20/2022	5.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWVN02@5.0'	10/20/2022	5.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWVB01@6.0'	10/20/2022	6.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWVB02@6.0'	10/20/2022	6.0 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

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

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

NA - Not analyzed

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE 100322
MILLAGE C-64N64W 12SEW, WELD COUNTY, COLORADO
REM # 20432

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
WAST01@6.0"	10/20/2022	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
EAST01@6.0"	10/20/2022	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
SSEP01@3.0'	10/20/2022	3.0 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
NSEP01@5.0'	10/20/2022	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
NDL01@5.0'	10/20/2022	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
PWVN01@5.0'	10/20/2022	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
PWVN02@5.0'	10/20/2022	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@6.0'	10/20/2022	6.0 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
PWVB02@6.0'	10/20/2022	6.0 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

4. ** Summation of GRO+DRO+ORO must be less than 500 mg/kg

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

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

NA - Not analyzed

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE 100322
MILLAGE C-64N64W 12SEW, WELD COUNTY, COLORADO
REM # 20432

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
WAST01@6.0"	10/20/2022	0.5 Ft	8.57	0.528	3.45	0.289
EAST01@6.0"	10/20/2022	0.5 Ft	8.27	0.508	2.95	0.250
SSEP01@3.0'	10/20/2022	3.0 Ft	8.47	0.424	3.65	0.129
NSEP01@5.0'	10/20/2022	5.0 Ft	8.19	0.410	0.869	0.0572
NDL01@5.0'	10/20/2022	5.0 Ft	8.35	0.961	6.25	0.104
PWVN01@5.0'	10/20/2022	5.0 Ft	8.25	0.490	2.95	0.160
PWVN02@5.0'	10/20/2022	5.0 Ft	8.40	0.503	2.85	0.324
PWVB01@6.0'	10/20/2022	6.0 Ft	8.23	0.303	0.654	0.145
PWVB02@6.0'	10/20/2022	6.0 Ft	8.31	0.330	1.29	0.0761

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE 100322
MILLAGE C-64N64W 12SEW, WELD COUNTY, COLORADO
REM # 20432

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
BKG01@6.0"	10/20/2022	0.5 Ft	7.88	6.06	6.84	0.522
BKG1 1Ft	02/18/2025	1.0 Ft	8.06	0.367	0.86	<2.00
BKG2 1Ft	02/18/2025	1.0 Ft	8.51	0.253	1.55	<2.00
BKG3 1Ft	02/18/2025	1.0 Ft	8.57	0.351	2.99	<2.00
BKG4 1Ft	02/18/2025	1.0 Ft	7.76	1.89	1.95	<2.00
BKG5 1Ft	02/18/2025	1.0 Ft	7.87	1.39	3.04	<2.00
BKG1 3Ft	02/18/2025	3.0 Ft	7.64	1.10	3.73	<2.00
BKG2 3Ft	02/18/2025	3.0 Ft	7.80	3.87	8.22	<2.00
BKG3 3Ft	02/18/2025	3.0 Ft	8.11	1.89	9.59	<2.00
BKG4 3Ft	02/18/2025	3.0 Ft	7.91	2.20	6.51	<2.00
BKG5 3Ft	02/18/2025	3.0 Ft	7.58	2.39	3.35	<2.00
BKG1 5Ft	02/18/2025	5.0 Ft	8.04	1.70	9.72	<2.00
BKG2 5Ft	02/18/2025	5.0 Ft	8.01	2.80	6.24	<2.00
BKG3 5Ft	02/18/2025	5.0 Ft	8.02	2.62	4.63	<2.00
BKG4 5Ft	02/18/2025	5.0 Ft	8.41	2.25	15.3	<2.00
BKG5 5Ft	02/18/2025	5.0 Ft	8.04	2.48	6.84	<2.00
BKG1 6Ft	02/18/2025	6.0 Ft	8.13	2.05	8.90	<2.00
BKG2 6Ft	02/18/2025	6.0 Ft	8.15	1.92	7.59	<2.00
BKG3 6Ft	02/18/2025	6.0 Ft	8.16	1.98	5.07	<2.00
BKG4 6Ft	02/18/2025	6.0 Ft	8.44	1.78	14.0	<2.00
BKG5 6Ft	02/18/2025	6.0 Ft	8.16	2.80	6.01	<2.00
BKG1 16Ft	02/18/2025	16.0 Ft	8.27	1.35	6.69	<2.00

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE 100322
MILLAGE C-64N64W 12SEW, WELD COUNTY, COLORADO
REM # 20432

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
BKG2 16Ft	02/18/2025	16.0 Ft	7.98	1.51	6.68	<2.00
BKG3 16Ft	02/18/2025	16.0 Ft	8.16	1.50	5.19	<2.00
BKG4 16Ft	02/18/2025	16.0 Ft	8.00	1.64	6.75	<2.00
BKG5 16Ft	02/18/2025	16.0 Ft	7.99	1.86	5.08	<2.00
BKG1 17Ft	02/18/2025	17.0 Ft	8.40	1.12	7.34	<2.00
BKG2 17Ft	02/18/2025	17.0 Ft	8.15	1.22	5.75	<2.00
BKG3 17Ft	02/18/2025	17.0 Ft	8.42	1.46	4.86	<2.00
BKG4 17Ft	02/18/2025	17.0 Ft	7.90	1.36	5.72	<2.00
BKG5 17Ft	02/18/2025	17.0 Ft	8.23	2.13	5.85	<2.00
Maximum Background Concentration		0.5 Ft - 1.0 Ft	8.57	6.06	6.84	0.522
Maximum Background Concentration		3.0 Ft	8.11	3.87	9.59	<2.00
Maximum Background Concentration		5.0 Ft	8.41	2.80	15.3	<2.00
Maximum Background Concentration		6.0 Ft	8.44	2.80	14.0	<2.00
Maximum Background Concentration		16.0 Ft	8.27	1.86	6.75	<2.00
Maximum Background Concentration		17.0 Ft	8.42	2.13	7.34	<2.00

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
MILLAGE C-64N64W 12SENW, WELD COUNTY, COLORADO
REM # 20432

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
WAST01@6.0"	10/20/2022	0.5 Ft	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
EAST01@6.0"	10/20/2022	0.5 Ft	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SSEP01@3.0'	10/20/2022	3.0 Ft	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NSEP01@5.0'	10/20/2022	5.0 Ft	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NDL01@5.0'	10/20/2022	5.0 Ft	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PWVN01@5.0'	10/20/2022	5.0 Ft	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PWVN02@5.0'	10/20/2022	5.0 Ft	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PWVB01@6.0'	10/20/2022	6.0 Ft	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PWVB02@6.0'	10/20/2022	6.0 Ft	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BKG01@6.0"	10/20/2022	0.5 Ft	1.18	111	0.346	<0.30	10.0	10.5	7.41	<0.320	0.797	39.4
BKG1 1Ft	02/18/2025	1.0 Ft	3.84	132	0.449	<0.30	8.07	13.4	6.24	<0.260	0.0609	34.0
BKG2 1Ft	02/18/2025	1.0 Ft	4.39	157	0.564	<0.30	8.94	16.9	7.04	<0.260	0.0818	40.3
BKG3 1Ft	02/18/2025	1.0 Ft	4.15	137	0.479	<0.30	8.27	15.3	6.68	<0.260	0.0734	35.1
BKG4 1Ft	02/18/2025	1.0 Ft	3.98	134	0.443	<0.30	7.67	13.4	6.61	<0.260	0.0729	30.1
BKG5 1Ft	02/18/2025	1.0 Ft	4.66	150	0.453	<0.30	9.43	14.9	7.63	0.302	0.0759	38.8
BKG1 3Ft	02/18/2025	3.0 Ft	5.44	158	0.455	<0.30	8.37	14.3	7.46	<0.260	0.0727	27.6
BKG2 3Ft	02/18/2025	3.0 Ft	3.24	97.2	0.312	<0.30	6.17	9.23	5.32	<0.260	0.0582	21.3
BKG3 3Ft	02/18/2025	3.0 Ft	3.71	144	0.426	<0.30	7.79	12.3	6.61	<0.260	0.0791	26.1
BKG4 3Ft	02/18/2025	3.0 Ft	4.07	138	0.459	<0.30	8.14	13.7	7.01	<0.260	0.0737	31.8
BKG5 3Ft	02/18/2025	3.0 Ft	5.06	97.8	0.375	<0.30	8.78	12.6	7.05	<0.260	0.0649	31.3
BKG1 5Ft	02/18/2025	5.0 Ft	4.41	109	0.489	<0.30	8.41	13.7	7.35	<0.260	0.0863	27.9
BKG2 5Ft	02/18/2025	5.0 Ft	4.38	190	0.471	<0.30	8.53	12.8	7.15	<0.260	0.0835	28.3
BKG3 5Ft	02/18/2025	5.0 Ft	2.15	77.4	0.204	<0.30	4.41	6.09	4.22	<0.260	0.0314	16.3
BKG4 5Ft	02/18/2025	5.0 Ft	4.50	212	0.431	<0.30	9.18	13.3	7.60	<0.260	0.0754	31.9
BKG5 5Ft	02/18/2025	5.0 Ft	4.32	170	0.400	<0.30	8.80	12.6	7.12	<0.260	0.0726	30.7
BKG1 6Ft	02/18/2025	6.0 Ft	4.67	201	0.581	<0.30	9.65	15.8	7.73	<0.260	0.0991	31.1
BKG2 6Ft	02/18/2025	6.0 Ft	2.87	113	0.225	<0.30	4.81	7.43	5.54	<0.260	0.0340	19.6
BKG3 6Ft	02/18/2025	6.0 Ft	3.73	137	0.340	<0.30	6.60	10.1	7.10	<0.260	0.0520	25.6
BKG4 6Ft	02/18/2025	6.0 Ft	3.73	141	0.356	<0.30	8.04	10.8	6.54	<0.260	0.0555	27.7

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE 100322
MILLAGE C-64N64W 12SENW, WELD COUNTY, COLORADO
REM # 20432

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
BKG5 6Ft	02/18/2025	6.0 Ft	2.99	130	0.231	<0.30	5.85	8.1	5.95	<0.260	0.0331	23.3
BKG1 16Ft	02/18/2025	16.0 Ft	2.24	66.6	0.200	<0.30	4.24	5.74	3.83	<0.260	0.0319	16.6
BKG2 16Ft	02/18/2025	16.0 Ft	1.10	12.3	<0.200	<0.30	1.58	2.50	1.48	<0.260	<0.0200	7.73
BKG3 16Ft	02/18/2025	16.0 Ft	0.436	7.62	<0.200	<0.30	0.834	1.79	0.956	<0.260	<0.0200	4.97
BKG4 16Ft	02/18/2025	16.0 Ft	1.97	86.0	<0.200	<0.30	5.02	6.21	4.61	<0.260	0.0276	19
BKG5 16Ft	02/18/2025	16.0 Ft	0.914	20.2	<0.200	<0.30	1.91	1.93	2.38	<0.260	<0.0200	5.89
BKG1 17Ft	02/18/2025	17.0 Ft	0.334	8.44	<0.200	<0.30	0.762	1.54	0.843	<0.260	<0.0200	4.5
BKG2 17Ft	02/18/2025	17.0 Ft	1.11	17.6	<0.200	<0.30	1.70	3.15	3.05	<0.260	<0.0200	8.84
BKG3 17Ft	02/18/2025	17.0 Ft	0.208	4.13	<0.200	<0.30	1.03	1.21	1.10	<0.260	<0.0200	4.08
BKG4 17Ft	02/18/2025	17.0 Ft	0.417	11.3	<0.200	<0.30	1.39	1.72	1.29	<0.260	<0.0200	8.36
BKG5 17Ft	02/18/2025	17.0 Ft	7.29	33.8	<0.200	<0.30	2.23	1.49	1.34	<0.260	<0.0200	6.71
1.25x Maximum Background Concentration		0.5 Ft - 1.0 Ft	5.83	196	0.705	<0.30	12.5	21.1	9.54	0.378	0.996	50.4
1.25x Maximum Background Concentration		3.0 Ft	6.80	198	0.574	<0.30	11.0	17.9	9.33	<0.260	0.0989	39.8
1.25x Maximum Background Concentration		5.0 Ft	5.63	265	0.611	<0.30	11.5	17.1	9.50	<0.260	0.108	39.9
1.25x Maximum Background Concentration		6.0 Ft	5.84	251	0.726	<0.30	12.1	19.8	9.66	<0.260	0.124	38.9
1.25x Maximum Background Concentration		16.0 Ft	2.80	108	0.250	<0.30	6.28	7.76	5.76	<0.260	0.0399	23.8
1.25x Maximum Background Concentration		17.0 Ft	9.11	42.3	<0.200	<0.30	2.79	3.94	3.81	<0.260	<0.0200	11.1

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.

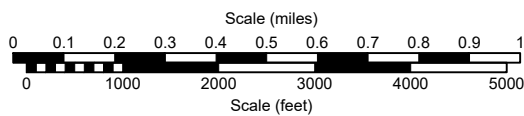
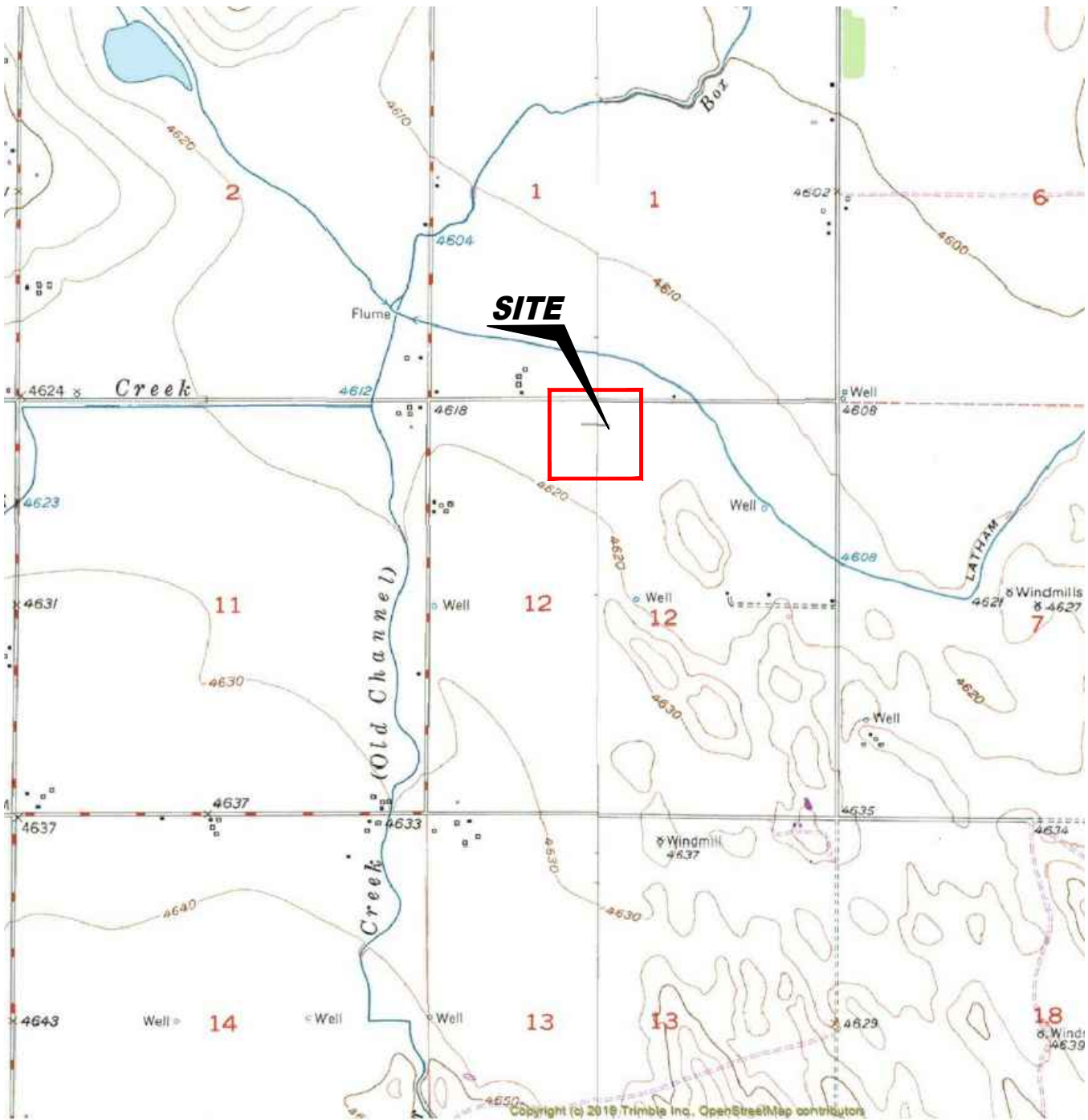
mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed/Not applicable



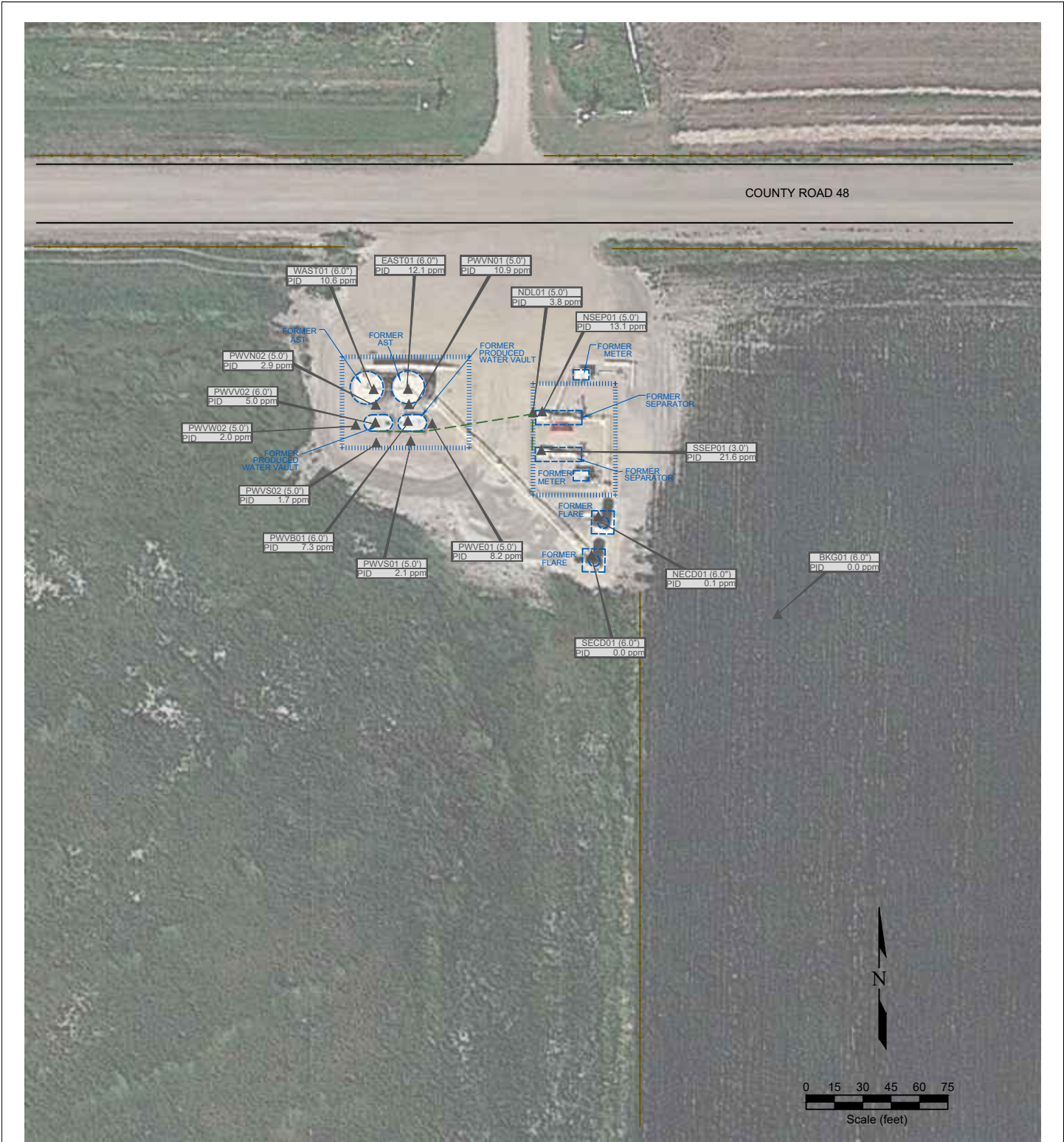
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Noble Energy, Inc. ~ Millage C-64N64W 12SENW
 SENW Sec. 12, T4N, R64W, 6th PM
 Weld County, Colorado
 40.333857°, -103.498861°

Project # C022-149	API #	Facility # 309832
Date 5/15/25	Remediation # 20432	Filename 22149T





LEGEND

- ▲ PID READING LOCATION
 - ABOVE GROUND STORAGE TANK
 - FORMER FACILITY
 - CONTAINMENT BERM
 - DUMP LINE
 - FENCE LINE
- EAST01 (6.0') PID 12.1 ppm
WAS101 (6.0') PID 10.6 ppm
 PID READING LOCATION IDENTIFICATION PHOTO IONIZATION DETECTION (ppm)

**Figure 2
SITE MAP**

Noble Energy, Inc. ~ Millage C-64N64W 12SENW
 SENW Sec. 12, T4N, R64W, 6th PM
 Weld County, Colorado
 40.333857°, -103.498861°

Project No. C022-149	Drawn By	Facility # 309832
Date 5/15/25	Reviewed By 20432	Filename 22149Q



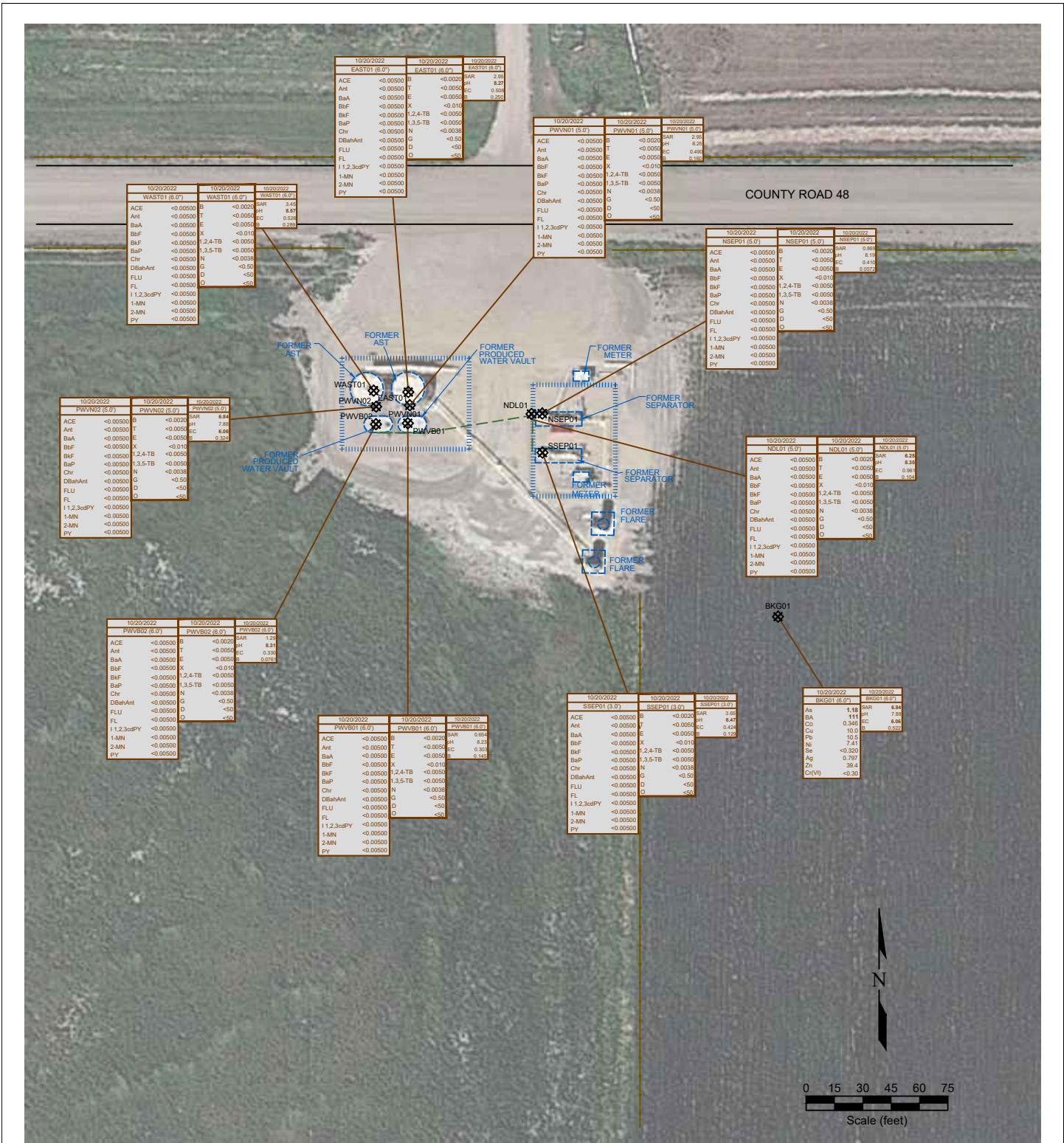


Figure 3
SOIL CHEMISTRY MAP

Noble Energy, Inc. ~ Millage C-64N64W 12SENW
SENW Sec. 12, T4N, R64W, 6th PM
Weld County, Colorado
40.333857°, -103.498861°

LEGEND

- SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- CONTAINMENT BERM
- DUMP LINE
- FENCE LINE

10/20/2022	DATE SAMPLED	10/20/2022	DATE SAMPLED
WAST01 (6.0')	SAMPLE ID and DEPTH (ft)	WAST01 (6.0')	SAMPLE ID and DEPTH (ft)
ACE	<0.0050	B	<0.0020
Ant	<0.0050	T	<0.0050
BaA	<0.0050	E	<0.0050
BbF	<0.0050	X	<0.010
BaP	<0.0050	1,2,4-TB	<0.0050
Chr	<0.0050	1,3,5-TB	<0.0050
DBahAnt	<0.0050	N	<0.0038
FLU	<0.0050	G	<0.50
1,1,2,3cdPY	<0.0050	D	<50
1-MN	<0.0050	O	<50
2-MN	<0.0050		
PY	<0.0050		

10/20/2022	DATE SAMPLED	10/20/2022	DATE SAMPLED
WAST01 (6.0')	SAMPLE ID and DEPTH (ft)	WAST01 (6.0')	SAMPLE ID and DEPTH (ft)
ACE	<0.0050	B	<0.0020
Ant	<0.0050	T	<0.0050
BaA	<0.0050	E	<0.0050
BbF	<0.0050	X	<0.010
BaP	<0.0050	1,2,4-TB	<0.0050
Chr	<0.0050	1,3,5-TB	<0.0050
DBahAnt	<0.0050	N	<0.0038
FLU	<0.0050	G	<0.50
1,1,2,3cdPY	<0.0050	D	<50
1-MN	<0.0050	O	<50
2-MN	<0.0050		
PY	<0.0050		

10/20/2022	DATE SAMPLED	10/20/2022	DATE SAMPLED
BKG01 (6.0')	SAMPLE ID and DEPTH (ft)	BKG01 (6.0')	SAMPLE ID and DEPTH (ft)
As	1.18	BAR	6.84
Ba	111	BH	7.88
Ca	0.365	EC	6.86
Cu	10.0	B	0.522
Pb	10.5		
Ni	7.41		
Se	<0.320		
Ag	0.797		
Zn	39.4		
Cr(VI)	<0.30		

10/20/2022	DATE SAMPLED	10/20/2022	DATE SAMPLED
WAST01 (6.0')	SAMPLE ID and DEPTH (ft)	WAST01 (6.0')	SAMPLE ID and DEPTH (ft)
ACE	<0.0050	B	<0.0020
Ant	<0.0050	T	<0.0050
BaA	<0.0050	E	<0.0050
BbF	<0.0050	X	<0.010
BaP	<0.0050	1,2,4-TB	<0.0050
Chr	<0.0050	1,3,5-TB	<0.0050
DBahAnt	<0.0050	N	<0.0038
FLU	<0.0050	G	<0.50
1,1,2,3cdPY	<0.0050	D	<50
1-MN	<0.0050	O	<50
2-MN	<0.0050		
PY	<0.0050		

10/20/2022	DATE SAMPLED	10/20/2022	DATE SAMPLED
BKG01 (6.0')	SAMPLE ID and DEPTH (ft)	BKG01 (6.0')	SAMPLE ID and DEPTH (ft)
As	1.18	ARSENIC (mg/kg)	
Ba	111	BARUM (mg/kg)	
Ca	0.365	CALCIUM (mg/kg)	
Cu	10.0	COPPER (mg/kg)	
Pb	10.5	LEAD (mg/kg)	
Ni	7.41	NICKEL (mg/kg)	
Se	<0.320	SELENIUM (mg/kg)	
Ag	0.797	SILVER (mg/kg)	
Zn	39.4	ZINC (mg/kg)	
Cr(VI)	<0.30	HEXAVALENT CHROMIUM (mg/kg)	

Project No. C022-149	Drawn By	Facility # 309832
Date 5/15/25	Reviewed By 20432	Filename 22149Q





SAMPLE DATE	SAMPLE ID	DEPTH (ft)	SAMPLE DATE	SAMPLE ID	DEPTH (ft)
BA	ARSENIC (mg/kg)	PH	PH (pH-units)	BA	ARSENIC (mg/kg)
BA	BARILUM (mg/kg)	EC	EC (microsiemens)	BA	BARILUM (mg/kg)
CD	CADMIUM (mg/kg)	BAR	BAR (units)	CD	CADMIUM (mg/kg)
CR(V)	CHROMIUM (mg/kg)	B	BORON (mg/L)	CR(V)	CHROMIUM (mg/kg)
CU	COPPER (mg/kg)			CU	COPPER (mg/kg)
PB	LEAD (mg/kg)			PB	LEAD (mg/kg)
NI	NICKEL (mg/kg)			NI	NICKEL (mg/kg)
SE	SELENIUM (mg/kg)			SE	SELENIUM (mg/kg)
AG	SILVER (mg/kg)			AG	SILVER (mg/kg)
Z	ZINC (mg/kg)			Z	ZINC (mg/kg)

Project No. C022-149	API #	Facility # 309832	
Date 5/15/25	Remediation # 20432	Filename 22149Q2	

Photo Log



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