



CDH Consulting, LLC
Thornton, Colorado
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Wellhead Closure Investigation and Environmental Summary

TOOL F35-24 Wellhead
ECMC Remediation Project #42057
Weld County, Colorado

Attachments:

Field Form

Figure 1 – Site Location Map

Figure 2 – Soil Sample and Field Screening Locations Map

Figure 3 – Supplemental Site Investigation Map

Table 1 – Field Data Summary Table

Table 2 – Summary of Volatile Organic Soil Chemistry Data

Table 3 – Summary of Polycyclic Aromatic Hydrocarbon Soil Chemistry Data

Table 4 – Summary of Soil Suitability for Reclamation

Table 5 – Summary of Metals in Soil Chemistry Data

Photographic Log

Wellhead Closure Checklist



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FIELD FORM

SITE NAME / REM: TOOL F35-24 / REM# 42057								DATE: 9/4/25	WEATHER: 70F, sunny	
TYPE OF WORK: Wellhead Cut & Cap								CLIENT: Noble Energy Inc.		
LAT/LONG: 40.349119/-104.626214								PERSONNEL: JW & NI		
ESTIMATED DEPTH TO GROUNDWATER: No groundwater encountered								OTHER OBSERVATIONS: No flowline riser present		
SOIL SAMPLING								FACILITY INFRASTRUCTURE		
Date	Soil Sample ID	Soil Type	PID (ppm)	Staining (Y/N)	Odor (Y/N)	Time	Sent to lab on Ice? (Y/N)	EQUIPMENT		Quantity
								Above Ground Storage Tank (AST)		0
9/4/2025	WH01@4'	SW	5.2	N	N	11:36	Y	Buried or Partially Buried Vessel		0
9/4/2025	WH01-N@3'	SW	4.3	N	N	11:38	Y	Separator		0
9/4/2025	WH01-E@3'	SW	3.0	N	N	-	N	Emission Control Device (ECD)		0
9/4/2025	WH01-S@3'	SW	0.9	N	N	-	N	Dump Line		0
9/4/2025	WH01-W@3'	SW	1.7	N	N	-	N	Wellhead		1
9/4/2025	BKG01@3.5'	SW	1.6	N	N	11:53	Y	Flowline		0
9/4/2025	BKG02@3.5'	SW	1.4	N	N	12:12	Y	Third Party Equipment:		0
9/4/2025	BKG03@3.5'	SW	1.9	N	N	12:44	Y	Other:		0
								Soil Loads Removed		
								IMPACTED SOIL IDENTIFIED? No		
								ESTIMATED VOLUME OF IMPACTS: n/a		
								Date	Number	CY
								Total Removed		
								Disposal Facility:		
								Groundwater Recovery		
								DATE GW ENCOUNTERED:		DEPTH:
								GROUNDWATER IN CONTACT WITH IMPACTED SOIL?		
								LNAPL OR SHEEN OBSERVED ON GW?		
GROUNDWATER SAMPLING								Date	BBLS	
Date/Time	Groundwater Sample ID	Depth Collected	Turbid?	Sheen?	Odor?	Photo?	Sent to lab on Ice? (Y/N)			
									Total Removed	
									Disposal Facility:	





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FIGURES

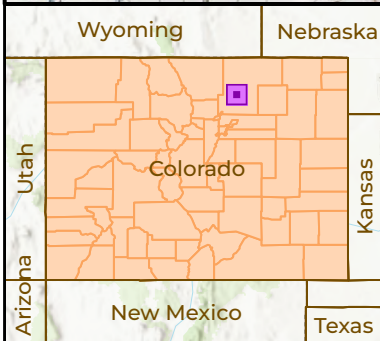
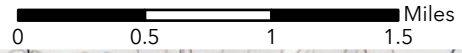
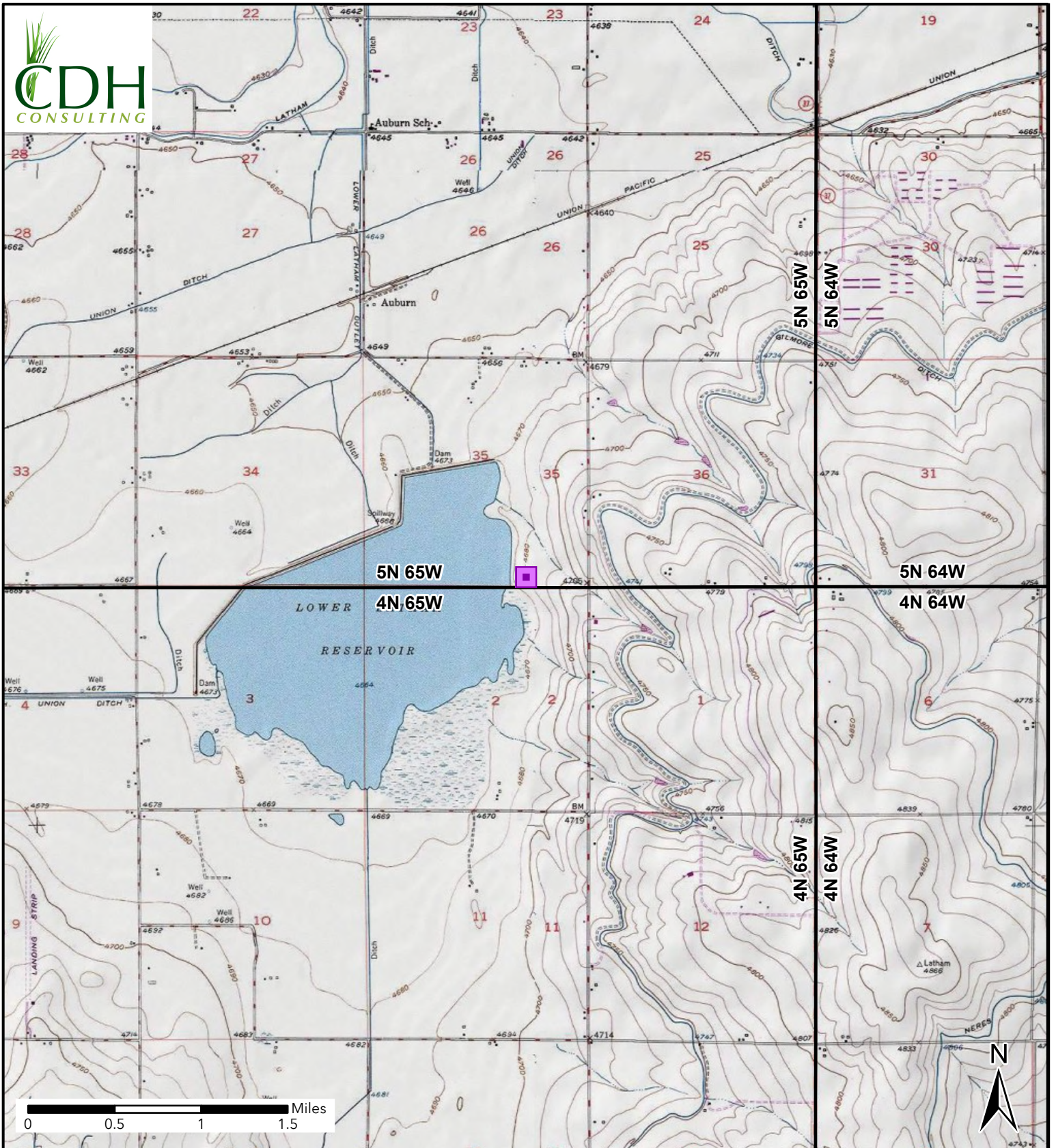

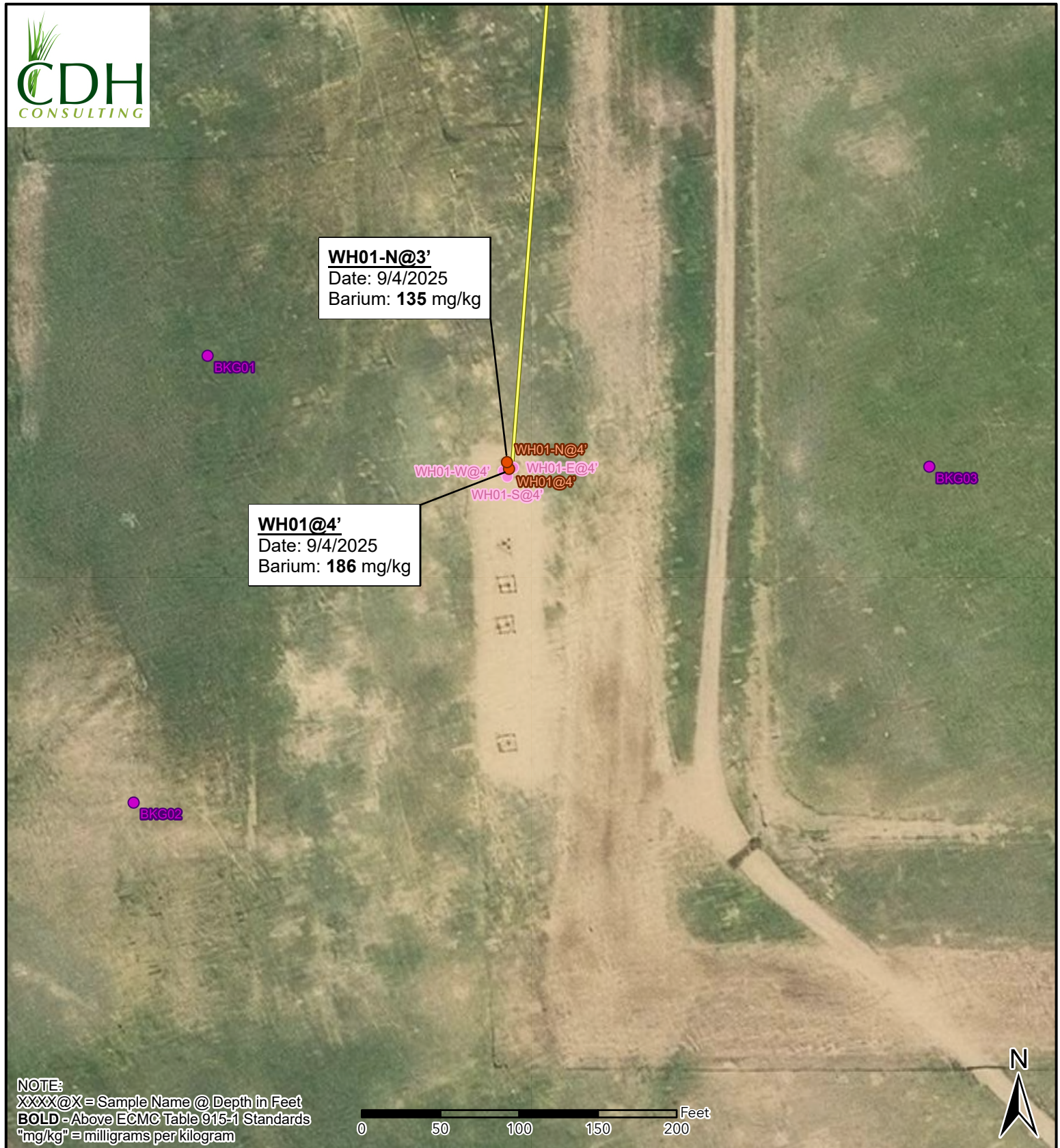


Figure 1
Site Location
TOOL F35-24
SWSE-SEC 35-T5N-R65W
Weld County, Colorado
Noble Energy Inc

 Site Location



NOTE:
 XXXX@X = Sample Name @ Depth in Feet
BOLD - Above ECMC Table 915-1 Standards
 "mg/kg" = milligrams per kilogram

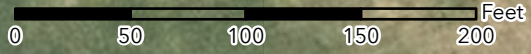


Figure 2
Soil Sample Location Map
 TOOL F35-24
 SWSE-SEC 35-T5N-R65W
 Weld County, Colorado
 Noble Energy Inc.

- Soil Sample
- Background Sample
- Screening Point
- Flowline Abandoned In Place

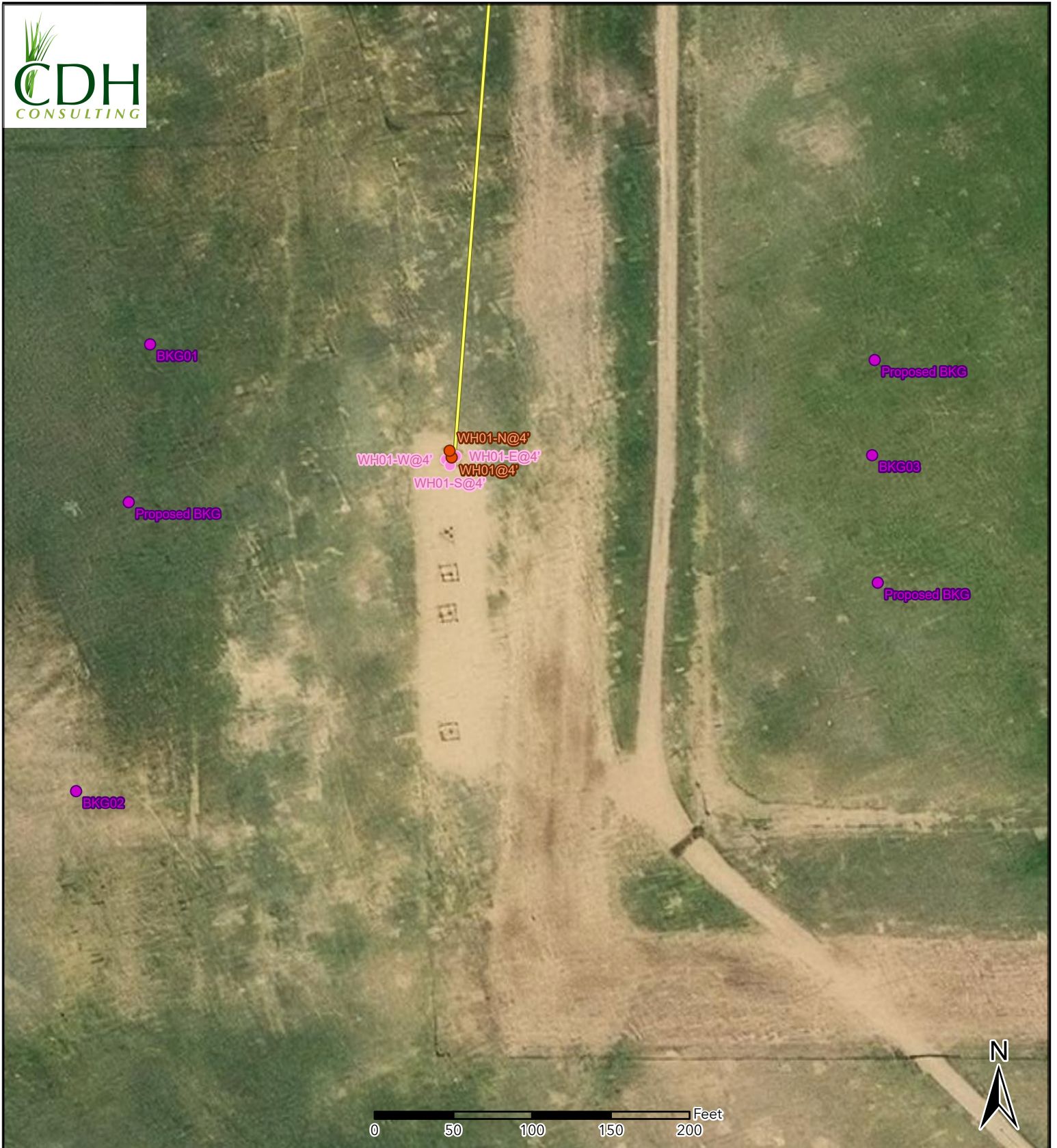


Figure 3 Supplemental Site Investigation Map

TOOL F35-24
SWSE-SEC 35-T5N-R65W
Weld County, Colorado
Noble Energy Inc.

- Soil Sample
- Background Sample
- Screening Point
- Flowline Abandoned In Place



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TABLES

TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE 100322
TOOL F35-24, WELD COUNTY, COLORADO
REM # 42057

Sample ID	Sample Date	Depth (ft)	GPS Data		PDOP Value	VOC Concentration (ppm)
			Latitude	Longitude		
WH01@4'	9/4/2025	4	40.349120	-104.626218	1.200000	5.2
WH01-N@3'	9/4/2025	3	40.349131	-104.626223	1.000000	4.3
WH01-E@3'	9/4/2025	3	40.349122	-104.626208	1.000000	3.0
WH01-S@3'	9/4/2025	3	40.349106	-104.626222	1.100000	0.9
WH01-W@3'	9/4/2025	3	40.349116	-104.626231	0.900000	1.7
BKG01@3.5'	9/4/2025	3.5	40.349325	-104.626914	1.200000	1.6
BKG02@3.5'	9/4/2025	3.5	40.348547	-104.627087	1.000000	1.4
BKG03@3.5'	9/4/2025	3.5	40.349127	-104.625270	1.000000	1.9

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

ft = Feet

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE 100322
TOOL F35-24, WELD COUNTY, COLORADO
REM # 42057

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**		
WH01@4'	9/4/2025	4	<0.0012	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	60.9	<0.25	32.0	28.9
WH01-N@3'	9/4/2025	3	<0.0011	<0.0022	<0.0022	<0.0022	<0.0022	<0.0022	<0.0023	14.5	<0.22	4.54	9.92

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
 5. Samples are reported as dry weight unless otherwise indicated in the laboratory PDF report(s)
- (<) = 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

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE 100322
TOOL F35-24, WELD COUNTY, COLORADO
REM # 42057

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
WH01@4'	9/4/2025	4	<0.0049	<0.0049	<0.0062	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
WH01-N@3'	9/4/2025	3	<0.0045	<0.0045	<0.0057	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045

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. Samples are reported as dry weight unless otherwise indicated in the laboratory PDF report(s)

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

mg/kg = Milligrams per kilogram

ft = Feet

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE 100322
TOOL F35-24, WELD COUNTY, COLORADO
REM # 42057

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
WH01@4'	9/4/2025	4	7.56	1.7	7.84	<0.50
WH01-N@3'	9/4/2025	3	7.73	0.50	2.84	<0.50
BKG01@3.5'	9/4/2025	3.5	7.81	3.3	14.50	0.514
BKG02@3.5'	9/4/2025	3.5	7.74	0.11	18.60	0.809
BKG03@3.5'	9/4/2025	3.5	7.65	0.88	6.48	<0.50
Maximum Background Concentration			7.81	3.3	18.60	0.809

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

2. **Red** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.

3. Brown highlighted soil analytical values indicate a regulatory exceedance.

4. Samples are reported as dry weight unless otherwise indicated in the laboratory PDF report(s)

ft = Feet

EC = Electrical Conductivity

SAR = Sodium adsorption ratio

mmhos/cm = millimhos per centimeter

mg/L = milligrams per liter

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

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE 100322
TOOL F35-24, WELD COUNTY, COLORADO
REM # 42057

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
WH01@4'	9/4/2025	4	2.8	186	0.061	<0.50*	4.4	7.2	7.0	<0.24	<0.060	32.9
WH01-N@3'	9/4/2025	3	3.0	135	<0.055	<0.45*	4.2	6.3	6.2	<0.22	<0.055	27.8
BKG01@3.5'	9/4/2025	3.5	2.6	56.8	0.067	<0.44*	4.6	4.9	6.0	<0.20	<0.050	17.4
BKG02@3.5'	9/4/2025	3.5	3.4	64.2	<0.053	<0.46*	4.0	7.2	7.4	0.59	<0.053	37.1
BKG03@3.5'	9/4/2025	3.5	2.0	44.8	0.070	<0.45*	5.3	4.6	5.9	<0.25	<0.062	19.3
1.25x Maximum Background Concentration			4.3	80.3	0.088	NA	6.6	9.0	9.3	0.74	NA	46.4

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

2. **Red** 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.

5. Samples are reported as dry weight unless otherwise indicated in the laboratory PDF report(s)

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

mg/kg = Milligrams per kilogram

ft = Feet

* Indicates laboratory minimum detection limit in excess of SSL

NA = Not analyzed



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PHOTOGRAPHIC LOG

Photographic Log
TOOL F35-24 REM #42057
Noble Energy, Inc.
09/04/2025

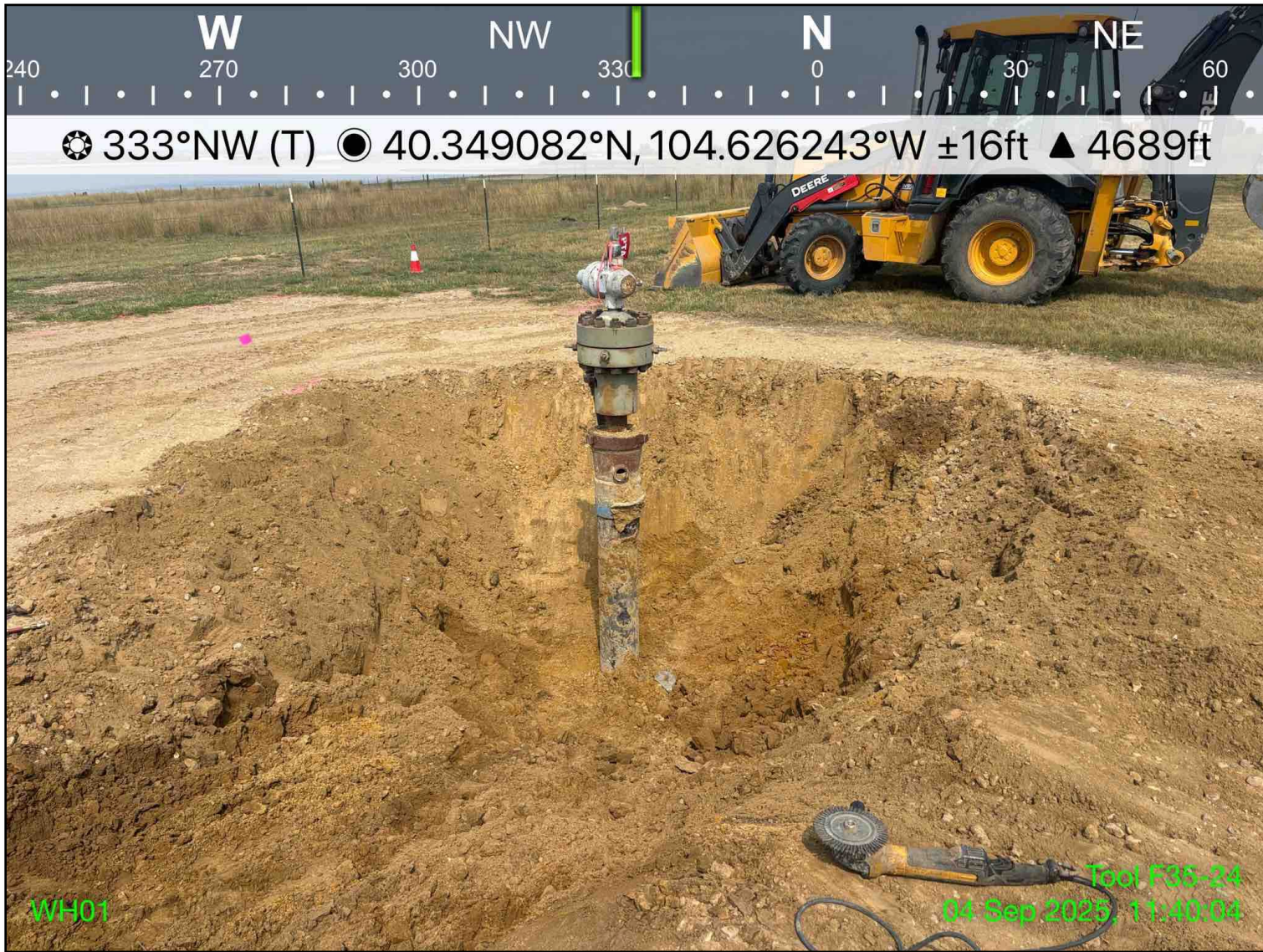


Photo 1: View of wellhead excavation extent, facing north-northwest

Photographic Log
TOOL F35-24 REM #42057
Noble Energy, Inc.
09/04/2025



Photo 2: View of wellhead excavation extent, facing southwest

Photographic Log
TOOL F35-24 REM #42057
Noble Energy, Inc.
09/04/2025

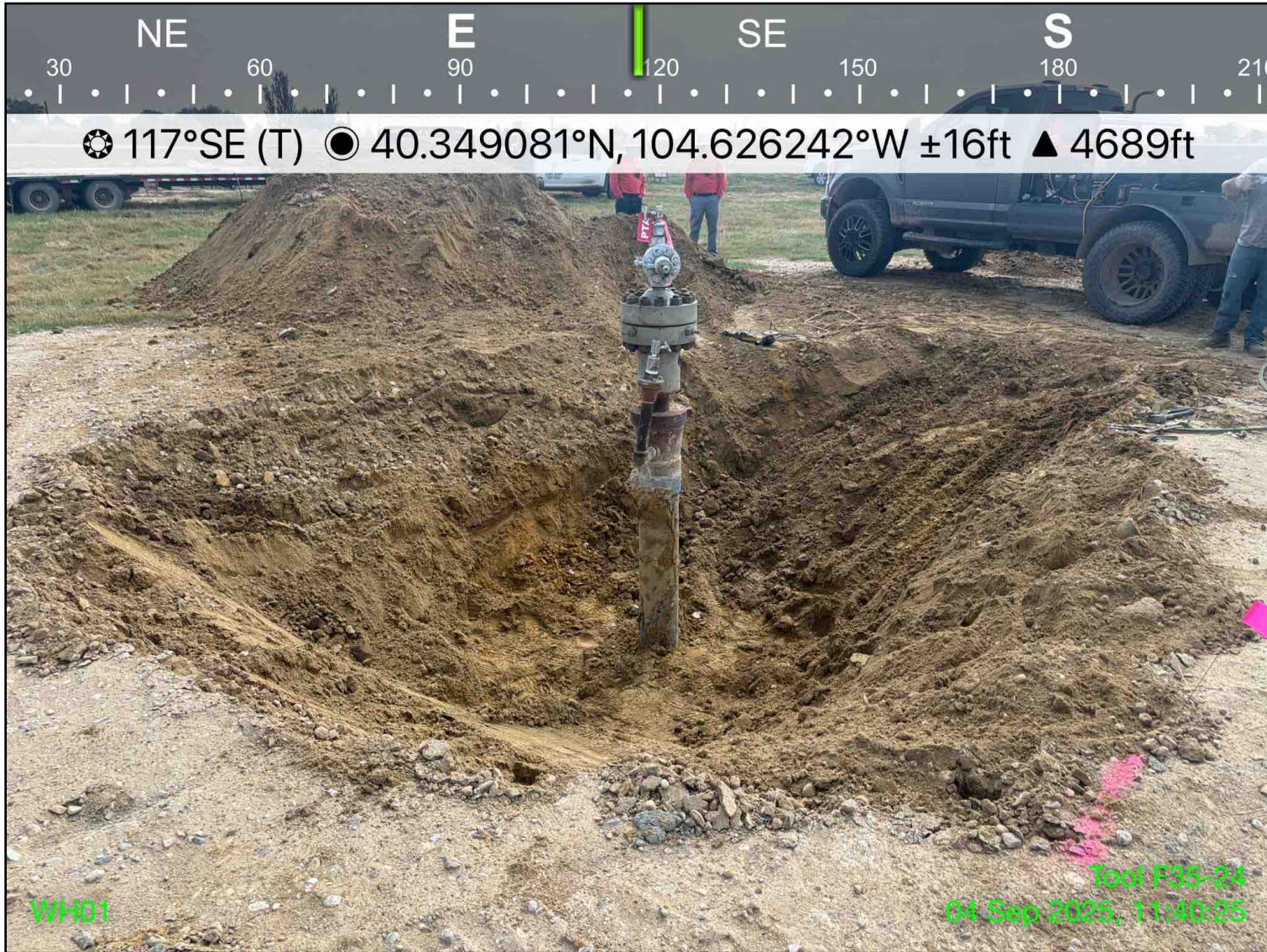


Photo 3: View of wellhead excavation extent, facing east-southeast

Photographic Log
TOOL F35-24 REM #42057
Noble Energy, Inc.
09/04/2025

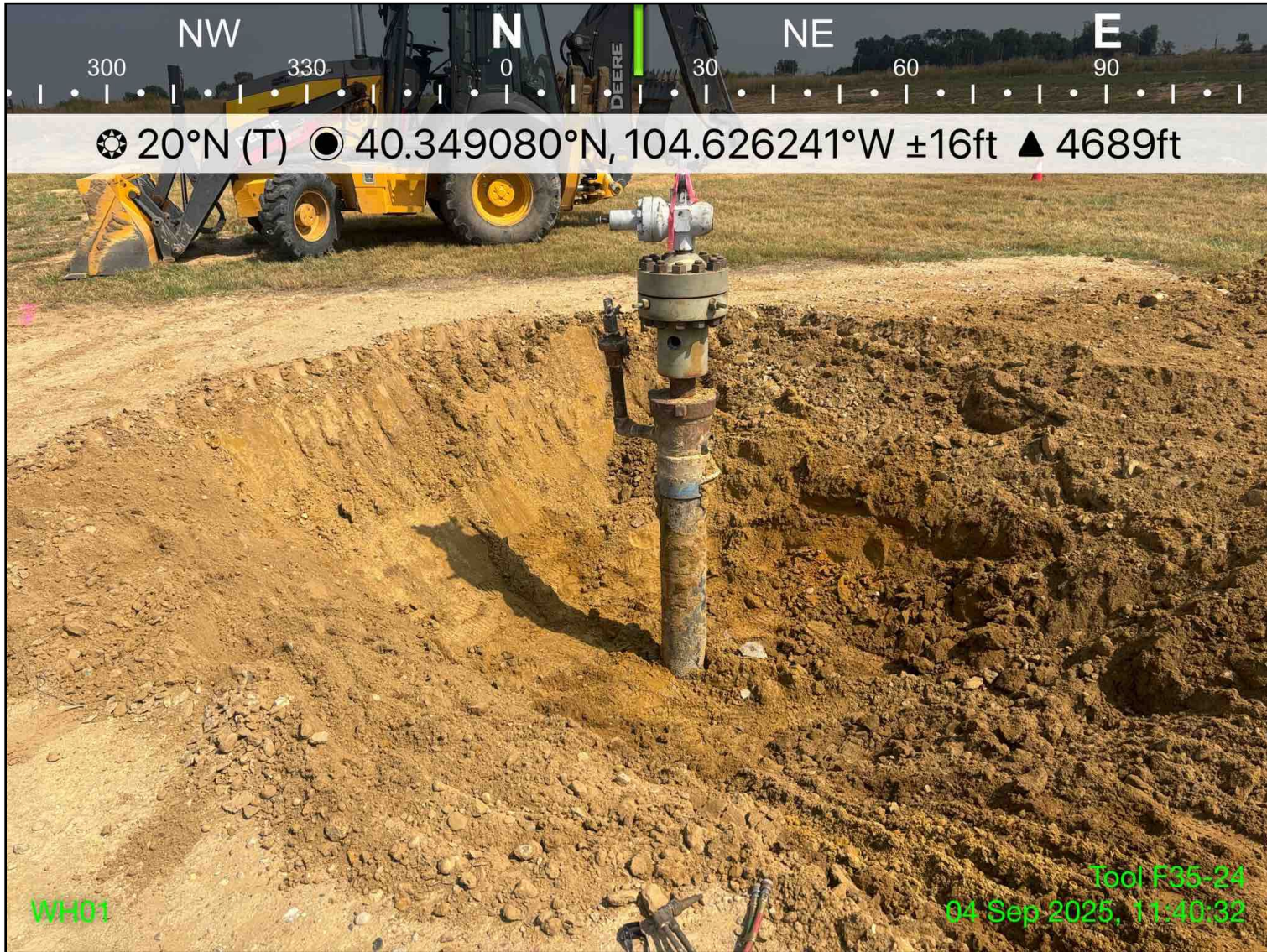


Photo 4: View of wellhead excavation extent, facing north-northeast

Photographic Log
TOOL F35-24 REM #42057
Noble Energy, Inc.
09/04/2025



Photo 5: View of background location 1, facing east

Photographic Log
TOOL F35-24 REM #42057
Noble Energy, Inc.
09/04/2025



Photo 6: View of background location 2, facing east-southeast

Photographic Log
TOOL F35-24 REM #42057
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09/04/2025



Photo 7: View of background location 3, facing west



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WELLHEAD CLOSURE CHECKLISTS

Wellhead Closure Checklist

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

Additional attachments (optional):		Pit Closure		Tank Battery Closure		Flowline Closure		Partially Buried Vault Closure
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Site Name & COGCC Facility Number: TOOL F35-24 / Facility ID# 294614	Date: 09/04/25	Remediation Project #: 42057
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Associated Wells: TOOL F35-24	Age of Site: 4/29/2008 (Spud date)	Number of Photos Attached: 7
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Location: 40.349119/-104.626214	Estimated Facility Size (acres): ~0.1
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General Condition of Site: Good

USCS Soil Type: Well-graded Sands (SW)	Estimated Depth to Groundwater: No groundwater encountered
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Hydrocarbon Impacted Soils / Spills: Not encountered

Salt Crusted Soils or Impacted Vegetation: Not encountered

Wellhead(s)

Well API	05-123-25521					
Age	4/29/2008 (Spud date)					
Condition of surface around wellhead	Good					
PID Readings	0.9ppm - 5.2ppm					
Condition of subsurface (staining present?)	Good					
PID Readings	0.9ppm - 5.2ppm					
Sample taken? Location/Sample ID#	See attached					
Photo Number(s)	See attached					

Other observations regarding wellheads: None

Summary

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

Total number of samples field screened: 5	Total number of samples collected: 2
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Highest PID Reading: 5.2 ppm	Total number of samples submitted to lab for analysis: 2
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If more than 10 cubic yards of impacted soil were observed:

Vertical extent:	Estimated spill volume:
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Lateral extent:	Volume of soil removed:
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Is additional investigation required?

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