



CDH Consulting, LLC
Thornton, Colorado
720.431.7468
www.CDHConsult.com

Wellhead Closure Investigation and Environmental Summary

WELLS RANCH USX AE19-07 Wellhead

ECMC Remediation Project #42043

Weld County, Colorado

Attachments:

Field Form

Figure 1 – Site Location Map

Figure 2 – Soil Sample and Field Screening Locations Map

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Table 2 – Summary of Volatile Organic Soil Chemistry Data

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Photographic Log

Wellhead Closure Checklist



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FIELD FORM

SITE NAME / REM: WELLS RANCH USX AE19-07 / REM# 42043								DATE: 9/22/2025	WEATHER: 60F, Sunny	
TYPE OF WORK: Wellhead Cut & Cap								CLIENT: Noble Energy Inc.		
LAT/LONG: 40.473677/-104.363361								PERSONNEL: JW, SHG		
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
9/22/2025	WH01@4'	SW	0.7	N	N	8:40	Y	Buried or Partially Buried Vessel		0
9/22/2025	WH01-N@3'	SW	0.7	N	N	-	N	Separator		0
9/22/2025	WH01-E@3'	SW	0.8	N	N	8:44	Y	Emission Control Device (ECD)		0
9/22/2025	WH01-S@3'	SW	0.6	N	N	-	N	Dump Line		0
9/22/2025	WH01-W@3'	SP	0.3	N	N	-	N	Wellhead		1
9/22/2025	BKG01@3.5'	SP	0.0	N	N	8:55	Y	Flowline		0
9/22/2025	BKG02@3.5'	SP	0.0	N	N	9:06	Y	Third Party Equipment:		0
9/22/2025	BKG03@3.5'	SP	0.0	N	N	9:20	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

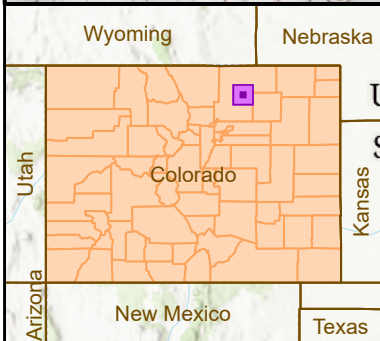
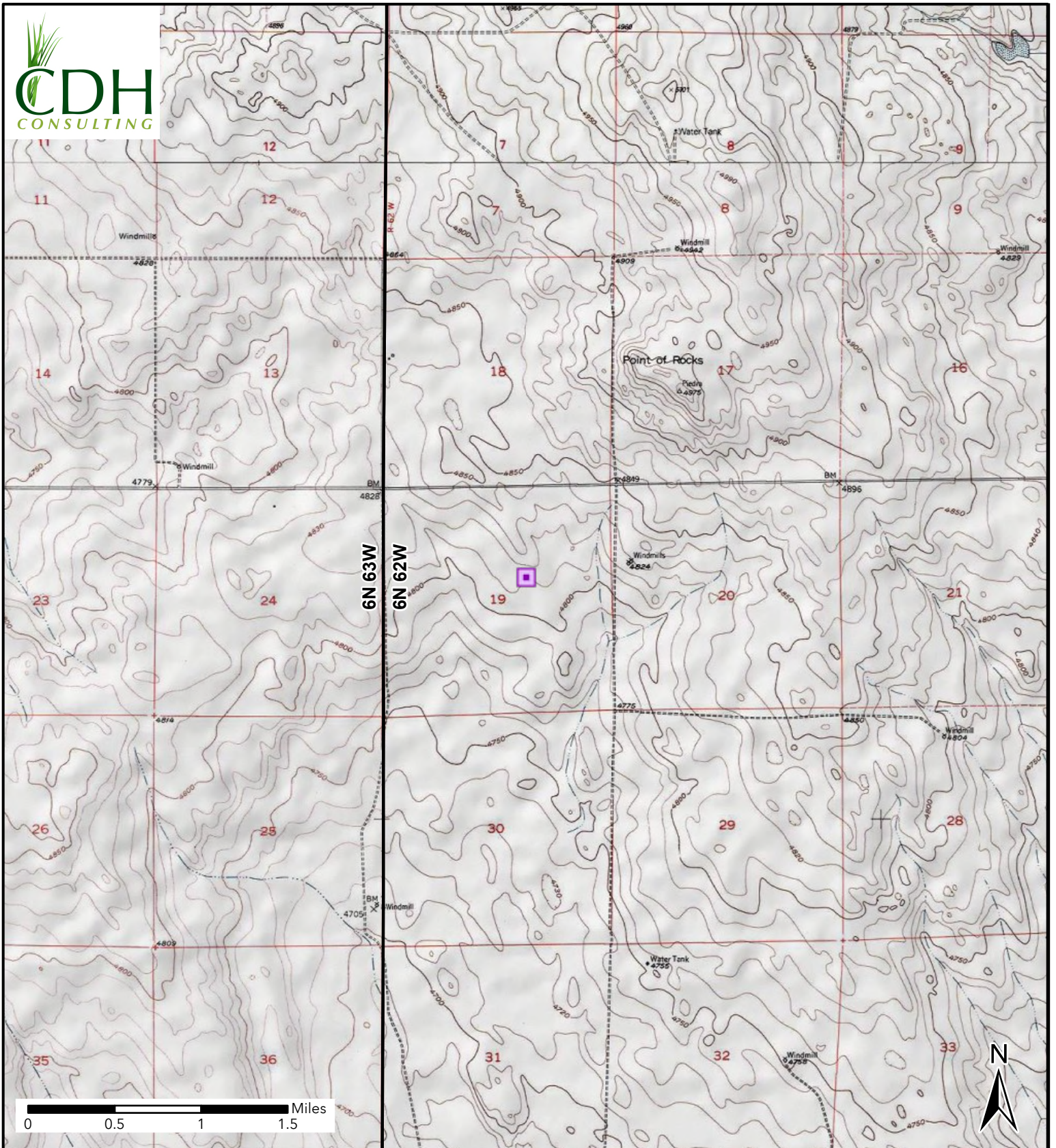
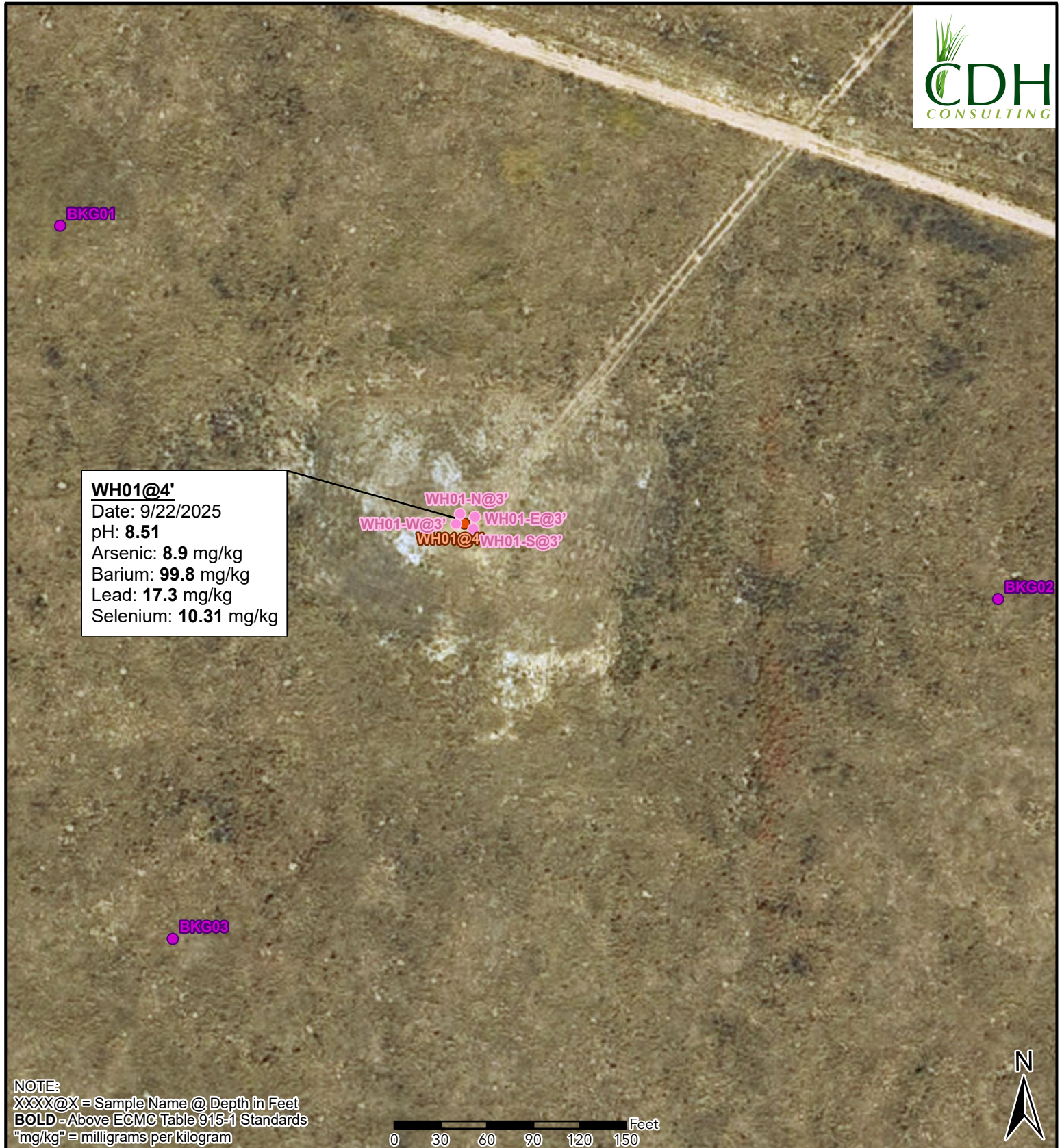


Figure 1
Site Location Map
WELLS RANCH USX AE 19-07
SWNE SEC 19-T6N-R62W
Weld County, Colorado
Noble Energy Inc

 Site Location



WH01@4'
 Date: 9/22/2025
 pH: **8.51**
 Arsenic: **8.9** mg/kg
 Barium: **99.8** mg/kg
 Lead: **17.3** mg/kg
 Selenium: **10.31** mg/kg

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

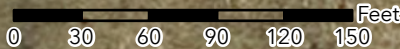


Figure 2
Soil Sample and Field
Screening Locations Map
WELLS RANCH USX AE 19-07
 SWNE-SEC 19-T6N-R62W
 Weld County, Colorado
 Noble Energy Inc

- Soil Sample
- Background Sample
- Screening Point

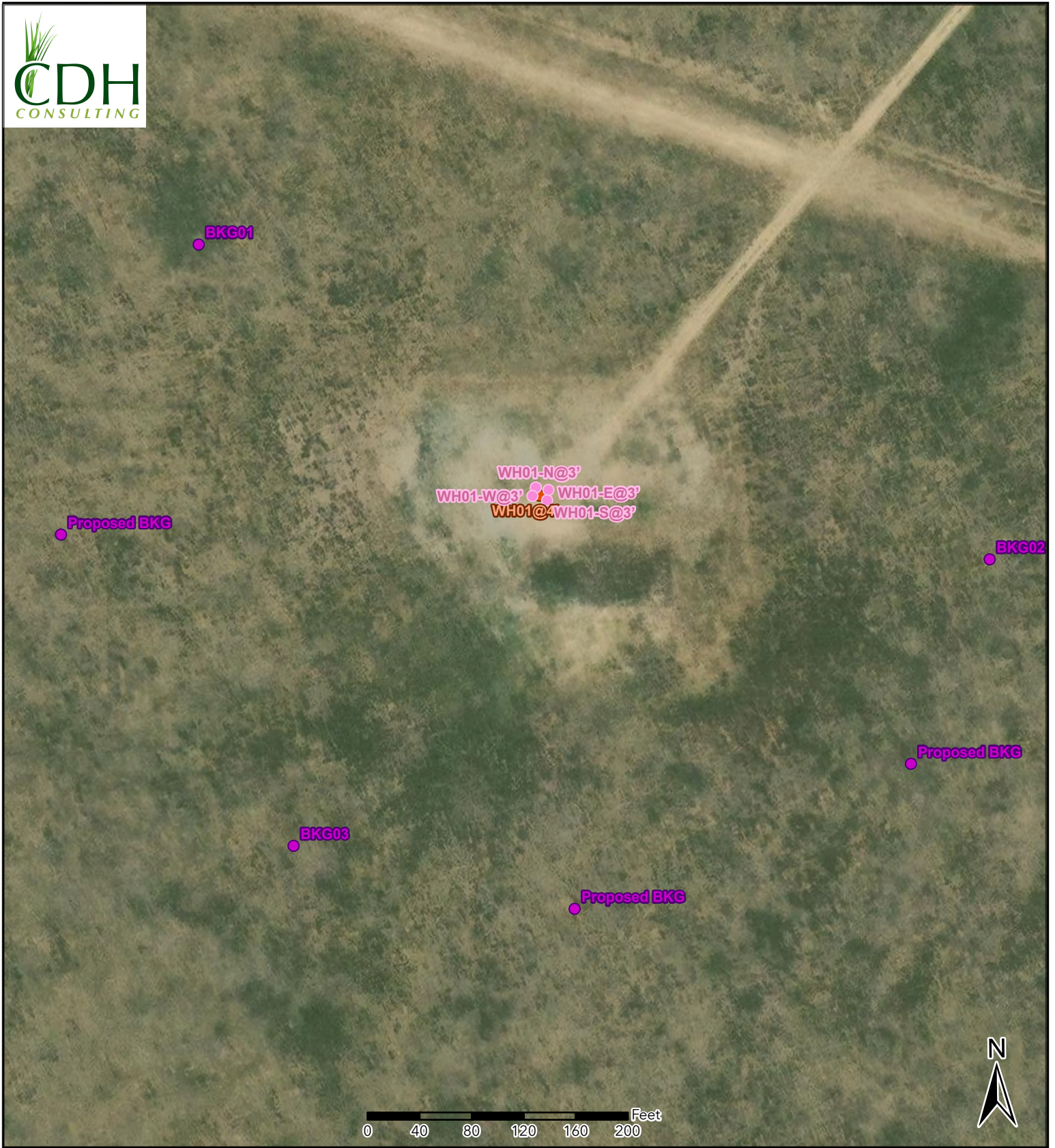


Figure 3
Supplemental Site Investigation Map
WELLS RANCH USX AE 19-07
 SWNE-SEC 19-T6N-R62W
 Weld County, Colorado
 Noble Energy Inc

- Soil Sample
- Background Sample
- Screening Point



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TABLES

TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE 100322
WELLS RANCH USX AE19-07, WELD COUNTY, COLORADO
REM # 42043

Sample ID	Sample Date	Depth (ft)	GPS Data		PDOP Value	VOC Concentration (ppm)
			Latitude	Longitude		
WH01@4'	9/22/2025	4	40.473682	-104.363374	1.200000	0.7
WH01-N@3'	9/22/2025	3	40.473690	-104.363380	1.500000	0.7
WH01-E@3'	9/22/2025	3	40.473685	-104.363362	1.400000	0.8
WH01-S@3'	9/22/2025	3	40.473660	-104.363360	1.200000	0.6
WH01-W@3'	9/22/2025	3	40.473667	-104.363381	1.300000	0.3
BKG01@3.5'	9/22/2025	3.5	40.474218	-104.364312	NM	0.0
BKG02@3.5'	9/22/2025	3.5	40.473526	-104.362129	1.091117	0.0
BKG03@3.5'	9/22/2025	3.5	40.472940	-104.364061	1.094931	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

ft = Feet

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE 100322
WELLS RANCH USX AE19-07, WELD COUNTY, COLORADO
REM # 42043

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'	9/22/2025	4	<0.00067	<0.0067	<0.0013	<0.0027	<0.0067	<0.0067	<0.0026	22.56	<0.27	9.46	13.1
WH01-E@3'	9/22/2025	3	<0.00051	<0.0051	<0.0010	<0.0021	<0.0051	<0.0051	<0.0021	<10.91	<0.21	<4.3	<6.4

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
WELLS RANCH USX AE19-07, WELD COUNTY, COLORADO
REM # 42043

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'	9/22/2025	4	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026	<0.0026
WH01-E@3'	9/22/2025	3	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021	<0.0021

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
WELLS RANCH USX AE19-07, WELD COUNTY, COLORADO
REM # 42043

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'	9/22/2025	4	8.51	2.03	0.909	<0.50
WH01-E@3'	9/22/2025	3	7.33	0.448	0.419	<0.50
BKG01@3.5'	9/22/2025	3.5	7.10	0.302	1.14	<0.50
BKG02@3.5'	9/22/2025	3.5	7.40	0.235	0.545	<0.50
BKG03@3.5'	9/22/2025	3.5	7.22	0.438	0.729	<0.50
Maximum Background Concentration			7.40	0.438	1.14	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.

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

NA = Not analyzed

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE 100322
WELLS RANCH USX AE19-07, WELD COUNTY, COLORADO
REM # 42043

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'	9/22/2025	4	8.9	99.8	0.18	<0.53*	24.0	17.3	14.4	0.31	<0.11	64.3
WH01-E@3'	9/22/2025	3	2.5	30.1	<0.078	<0.44*	3.3	4.0	2.7	0.11	<0.078	13.2
BKG01@3.5'	9/22/2025	3.5	2.7	39.4	0.089	<0.41*	3.3	5.6	2.9	0.12	<0.055	12.2
BKG02@3.5'	9/22/2025	3.5	2.8	58.0	0.10	<0.41*	4.9	6.4	6.5	0.16	<0.065	19.7
BKG03@3.5'	9/22/2025	3.5	4.1	62.4	0.088	<0.42*	5.5	6.9	8.3	0.19	<0.057	23.6
1.25x Maximum Background Concentration			5.1	78.0	0.13	NA	6.9	8.6	10.4	0.24	NA	29.5

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
WELLS RANCH USX AE19-07 REM #42043
Noble Energy, Inc.
09/22/2025



Photo 1: View of wellhead excavation area, facing west-northwest

Photographic Log
WELLS RANCH USX AE19-07 REM #42043
Noble Energy, Inc.
09/22/2025



Photo 2: View of wellhead excavation area, facing north

Photographic Log
WELLS RANCH USX AE19-07 REM #42043
Noble Energy, Inc.
09/22/2025



Photo 3: View of wellhead excavation area, facing east

Photographic Log
WELLS RANCH USX AE19-07 REM #42043
Noble Energy, Inc.
09/22/2025



Photo 4: View of wellhead excavation area, facing south-southwest

Photographic Log
WELLS RANCH USX AE19-07 REM #42043
Noble Energy, Inc.
09/22/2025

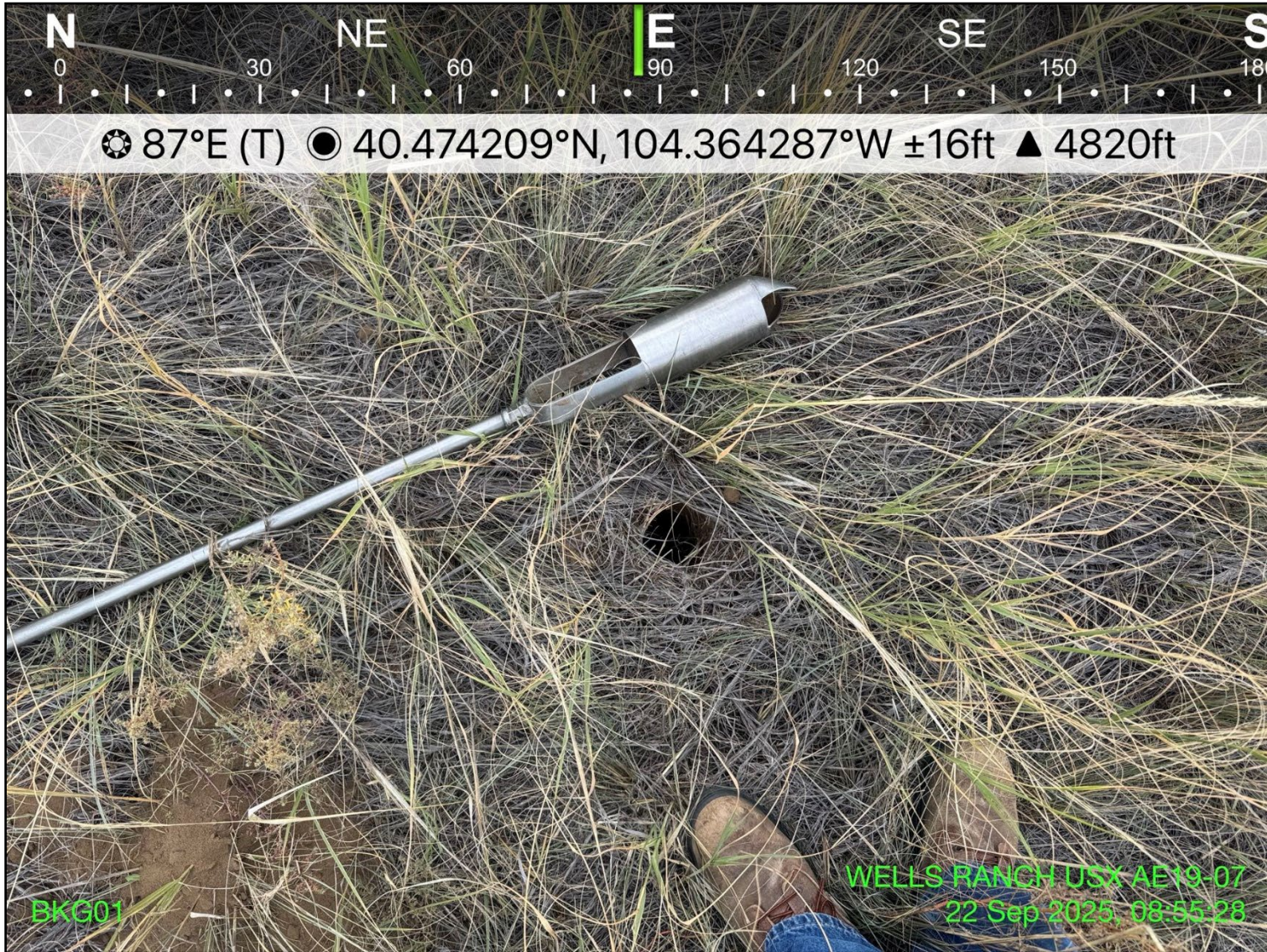


Photo 5: View of background location 1, facing east

Photographic Log
WELLS RANCH USX AE19-07 REM #42043
Noble Energy, Inc.
09/22/2025



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

Photographic Log
WELLS RANCH USX AE19-07 REM #42043
Noble Energy, Inc.
09/22/2025

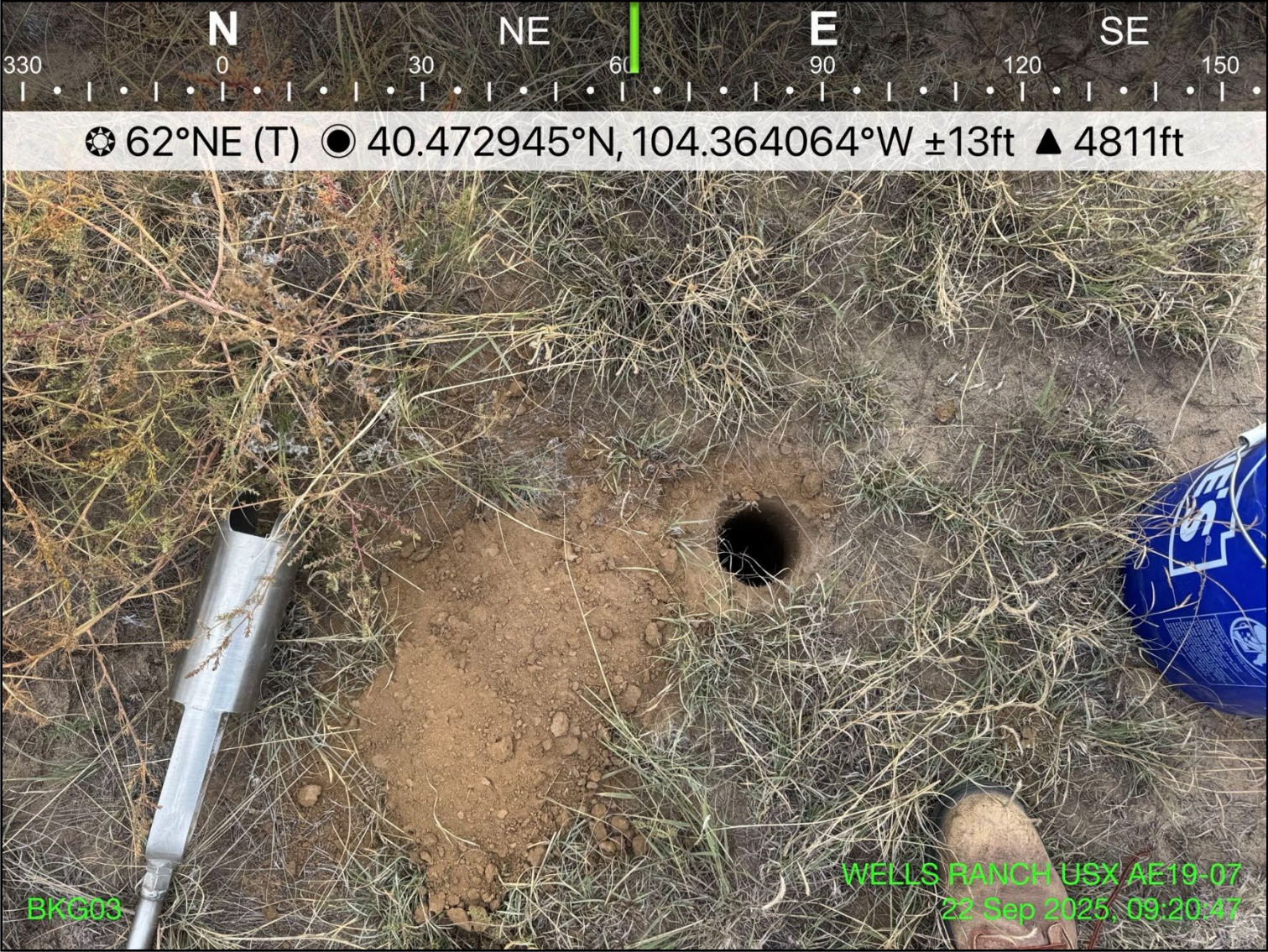


Photo 7: View of background location 3, facing east-northeast



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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	
Site Name & COGCC Facility Number: WELLS RANCH USX AE19-07 / Facility ID #298433		Date: 09/22/2025						Remediation Project #: 42043	
Associated Wells: WELLS RANCH USX AE19-07		Age of Site: 05/29/2009 (Spud date)						Number of Photos Attached: 4	
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) 40.473677/-104.363361								Estimated Facility Size (acres): ~0.1	
General Condition of Site: Good									
USCS Soil Type: Well-graded Sands (SW) and Poorly-graded Sands (SP)					Estimated Depth to Groundwater: No groundwater encountered				
Hydrocarbon Impacted Soils / Spills: Not encountered									
Salt Crusted Soils or Impacted Vegetation: Not encountered									
Wellhead(s)									
Well API	05-123-29063								
Age	05/29/2009 (Spud date)								
Condition of surface around wellhead	Good								
PID Readings	0.3ppm - 0.8ppm								
Condition of subsurface (staining present?)	Good								
PID Readings	0.3ppm - 0.8ppm								
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				
Highest PID Reading: 0.8ppm					Total number of samples submitted to lab for analysis: 2				
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:					Estimated spill volume:				
Lateral extent:					Volume of soil removed:				
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	
Date Groundwater was encountered:					Commencement date of removal:				
Sheen on groundwater?			Yes	No	Volume of groundwater removed prior to sampling:				
Free product observed?		Yes	No	Volume of groundwater removed post sampling:					
Total number of samples collected:					Total Volume of groundwater removed:				
Total number of samples submitted to lab for analysis:									