



CDH Consulting, LLC  
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## **Wellhead Closure Investigation and Environmental Summary**

CHAMPLIN 67 AMOCO F UNIT 1 Wellhead

ECMC Remediation Project #41643

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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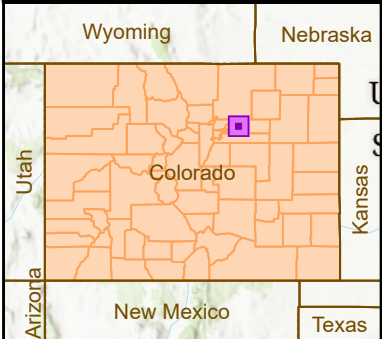
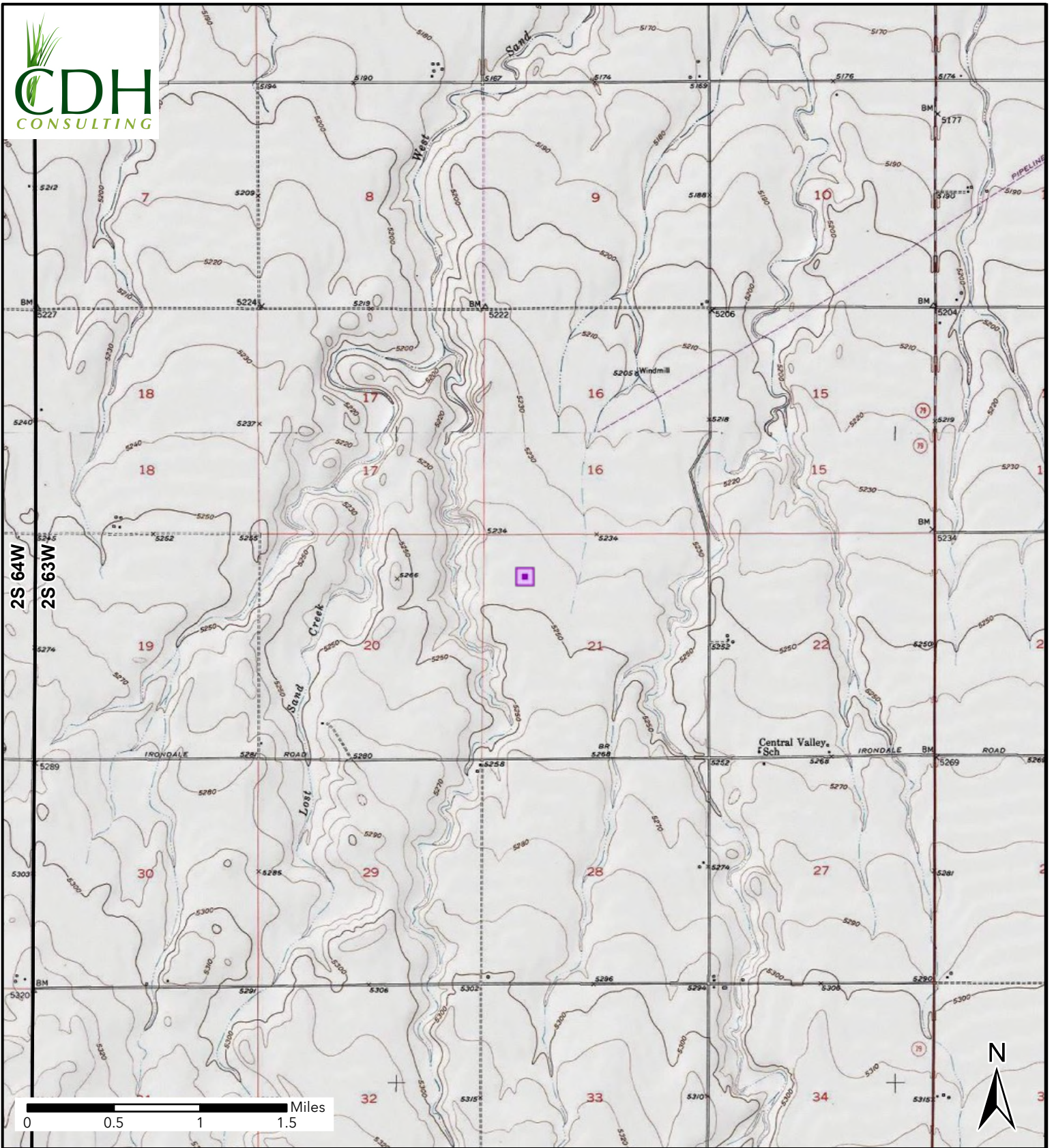
## **FIELD FORM**





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## FIGURES



**Figure 1**  
**Site Location**  
**CHAMPLIN 67 AMOCO F UNIT 1**  
NWNW SEC 21-T2S-R63W  
Weld County, Colorado  
PDC Energy Inc

 Site Location

**BKG01**

**Proposed BKG**

**WH01@4'**  
Date: 10/17/2025  
SAR: **8.74**

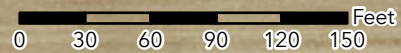
WH01-W@3' WH01-N@3'  
WH01@4' WH01-E@3'  
WH01-S@3'

**BKG02**

**BKG03**

**Proposed BKG**

NOTE:  
XXXX@X = Sample Name @ Depth in Feet  
**BOLD** - Above ECMC Table 915-1 Standards



**Figure 2**  
**Soil Sample and Field Screening Locations Map**  
**CHAMPLIN 67 AMOCO F UNIT 1**  
NWNW-SEC 21-T2S-R63W  
Weld County, Colorado  
PDC Energy Inc

- Soil Sample
- Background Sample
- Screening Point



**Figure 3**  
**Supplemental Site Investigation Map**  
**CHAMPLIN 67 AMOCO F UNIT 1**  
 NWNW-SEC 21-T2S-R63W  
 Weld County, Colorado  
 PDC Energy Inc

- Soil Sample
- Background Sample
- Screening Point



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## **TABLES**

**TABLE 1**  
**FIELD DATA SUMMARY TABLE**  
**PDC 69175**  
**CHAMPLIN 67 AMOCO F UNIT 1, ADAMS COUNTY, COLORADO**  
**REM # 41643**

Sample ID	Sample Date	Depth (ft)	GPS Data		PDOP Value	VOC Concentration (ppm)
			Latitude	Longitude		
WH01@4'	10/17/2025	4	39.865779	-104.448065	0.985339	0.9
WH01-N@3'	10/17/2025	3	39.865796	-104.448075	NM	0.4
WH01-S@3'	10/17/2025	3	39.865776	-104.448075	NM	1.1
WH01-E@3'	10/17/2025	3	39.865792	-104.448061	NM	0.7
WH01-W@3'	10/17/2025	3	39.865790	-104.448085	NM	0.1
BKG01@3.5'	10/20/2025	3.5	39.866622	-104.448598	1.100000	0.9
BKG02@3.5'	10/20/2025	3.5	39.865495	-104.446915	0.900000	0.6
BKG03@3.5'	10/20/2025	3.5	39.865107	-104.449135	1.200000	0.8

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  
PDC 69175  
CHAMPLIN 67 AMOCO F UNIT 1, ADAMS COUNTY, COLORADO  
REM # 41643

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'	10/17/2025	4	<0.0012	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0023	174	<0.24	52.9	121
BKG01@3.5'	10/20/2025	3.5	<0.00052	<0.0052	<0.0010	<0.0021	<0.0052	<0.0052	<0.0023	<18.5	<0.21	11.4	<6.90
BKG02@3.5'	10/20/2025	3.5	<0.00054	<0.0054	<0.0011	<0.0021	<0.0054	<0.0054	<0.0024	<12.0	<0.21	<4.70	<7.10
BKG03@3.5'	10/20/2025	3.5	<0.00054	<0.0054	<0.0011	<0.0022	<0.0054	<0.0054	<0.0024	<12.0	<0.22	<4.70	<7.10

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  
PDC 69175  
CHAMPLIN 67 AMOCO F UNIT 1, ADAMS COUNTY, COLORADO  
REM # 41643

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'	10/17/2025	4	<0.0046	<0.0046	<0.0058	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
BKG01@3.5'	10/20/2025	3.5	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023
BKG02@3.5'	10/20/2025	3.5	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024
BKG03@3.5'	10/20/2025	3.5	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024	<0.0024

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**  
**PDC 69175**  
**CHAMPLIN 67 AMOCO F UNIT 1, ADAMS COUNTY, COLORADO**  
**REM # 41643**

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'	10/17/2025	4	7.83	2.4	<b>8.74</b>	<0.500
BKG01@3.5'	10/20/2025	3.5	<b>8.63</b>	0.89	2.56	0.667
BKG02@3.5'	10/20/2025	3.5	7.16	0.40	0.382	<0.500
BKG03@3.5'	10/20/2025	3.5	7.61	0.51	0.209	<0.500
Maximum Background Concentration			8.63	0.89	2.56	0.667

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

TABLE 5  
SUMMARY OF METALS IN SOIL CHEMISTRY DATA  
PDC 69175  
CHAMPLIN 67 AMOCO F UNIT 1, ADAMS COUNTY, COLORADO  
REM # 41643

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'	10/17/2025	4	<b>5.1</b>	<b>224</b>	0.24	<0.49*	13.6	12.3	13.8	<0.22	<0.11	46.7
BKG01@3.5'	10/20/2025	3.5	<b>5.5</b>	<b>277</b>	<0.23	<0.44*	12.7	12.0	14.9	<0.57	<0.23	50.6
BKG02@3.5'	10/20/2025	3.5	<b>5.1</b>	<b>235</b>	<0.23	<0.47*	11.6	10.6	13.0	<0.58	<0.23	46.2
BKG03@3.5'	10/20/2025	3.5	<b>5.4</b>	<b>263</b>	0.24	<0.49*	12.4	11.6	13.8	<0.59	<0.24	50.7
1.25x Maximum Background Concentration			6.9	346	0.30	NA	15.9	15.0	18.6	NA	NA	63.4

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**

CHAMPLIN 67 AMOCO F UNIT 1 REM #41643

PDC Energy, Inc.

10/17/2025 & 10/20/2025



**Photo 1:** View of wellhead excavation, facing north

**Photographic Log**

CHAMPLIN 67 AMOCO F UNIT 1 REM #41643

PDC Energy, Inc.

10/17/2025 & 10/20/2025



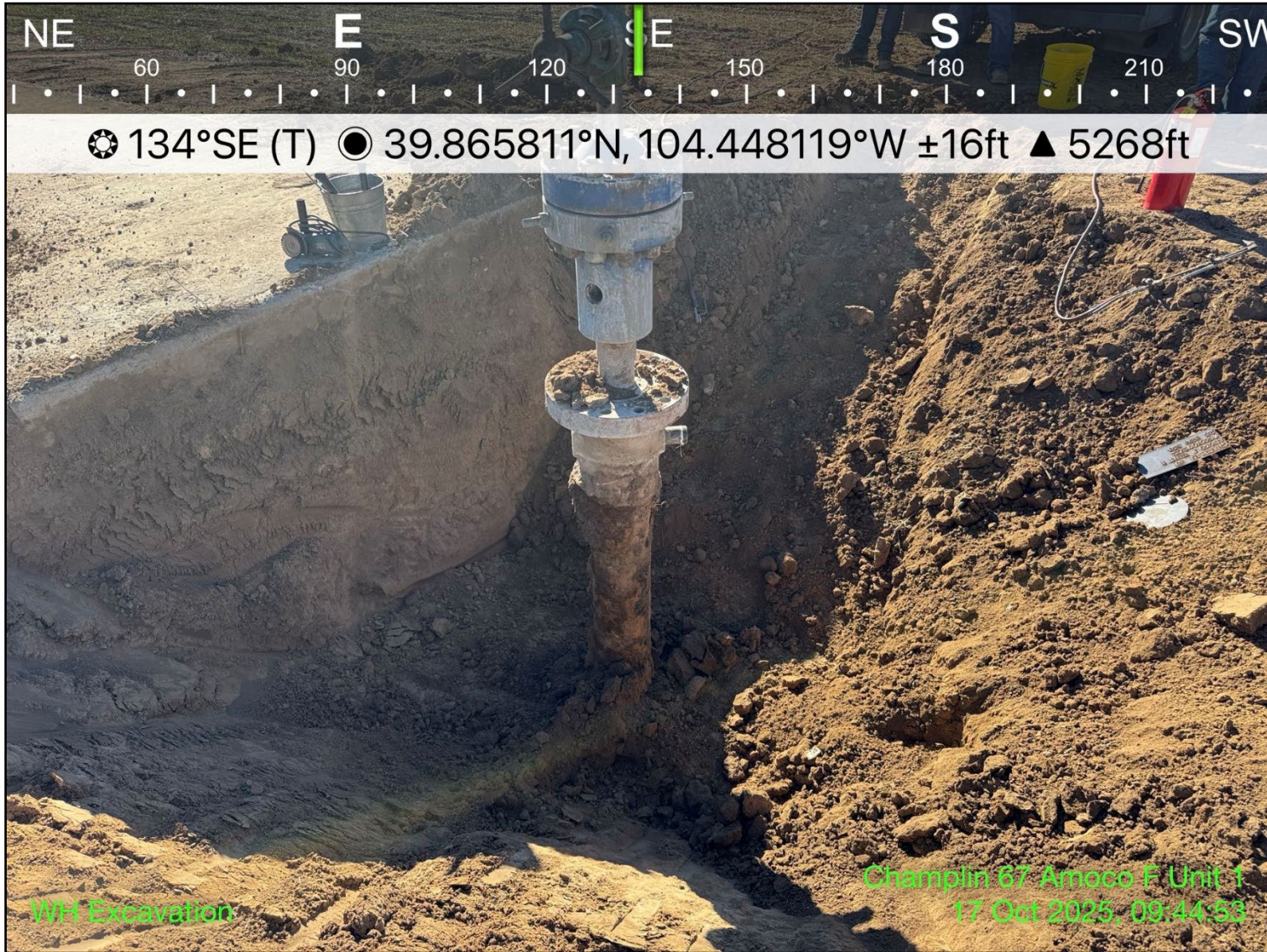
Photo 2: View of wellhead excavation extent, facing north

**Photographic Log**

CHAMPLIN 67 AMOCO F UNIT 1 REM #41643

PDC Energy, Inc.

10/17/2025 & 10/20/2025



**Photo 3:** View of wellhead excavation extent, facing southeast

**Photographic Log**

CHAMPLIN 67 AMOCO F UNIT 1 REM #41643

PDC Energy, Inc.

10/17/2025 & 10/20/2025



**Photo 4:** View of background sample location 1, facing north

**Photographic Log**

CHAMPLIN 67 AMOCO F UNIT 1 REM #41643

PDC Energy, Inc.

10/17/2025 & 10/20/2025



**Photo 5:** View of background sample location 2, facing west

**Photographic Log**

CHAMPLIN 67 AMOCO F UNIT 1 REM #41643

PDC Energy, Inc.

10/17/2025 & 10/20/2025



**Photo 6:** View of background sample location 3, facing west-southwest



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## **WELLHEAD CLOSURE CHECKLIST**

## 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: CHAMPLIN 67 AMOCO F UNIT 1 / Facility ID # 201798	Date: 10/17/2025 & 10/20/2025	Remediation Project #: 41643
Associated Wells: CHAMPLIN 67 AMOCO F UNIT 1	Age of Site: 12/23/1976 (Spud date)	Number of Photos Attached: 6
Location: 39.865788, -104.448071		Estimated Facility Size (acres): ~0.1

*General Condition of Site: Good*

USCS Soil Type: Clayey Sands (SC) and Silty Sands (SM)      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	05-001-07202					
Age	12/23/1976 (Spud date)					
Condition of surface around wellhead	Good					
PID Readings	0.1ppm - 1.1ppm					
Condition of subsurface (staining present)	Good					
PID Readings	0.1ppm - 1.1ppm					
Sample taken? Location/Sample ID#	See attached					
Photo Number(s)	See attached					

Other observations regarding wellheads: None

#### Summary

Was impacted soil identified? <b>No</b> Yes - less than 10 cubic yards      Yes - more than 10 cubic yards	
Total number of samples field screened: 5	Total number of samples collected: 1
Highest PID Reading: 1.1 ppm	Total number of samples submitted to lab for analysis: 1
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? <b>No</b> 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:	