



## FLOWLINE ABANDONMENT FORM

SITE NAME: KLAUSNER 1							DATE: 1/22/2025	REM. PROJECT #: 37555	WEATHER: 19 Party Cloudy	
SITE DIRECTIONS: HWY 79 S TO 144TH AVE E TO CR 38 N TO SITE							CLIENT: PDC			
LEGALS AND LAT/LONG: (40.0060586, -104.3459880)							TASMAN PERSONNEL: DE, JO			
SOIL TYPES: Silty Sand - SM							SURFACE GRADIENT: East			
SOIL SAMPLING							FACILITY INFRASTRUCTURE			
Date/Time	Soil Sample ID	PID (ppm)	Visual	Olfactory	Photo?	Grab or Lab Sample?	EQUIPMENT	Quantity	Photo?	
							Above Ground Storage Tank (AST)			
1/22/2025 09:02	FL01R-W@3'	0.0	No Staining	No Odor	Yes	Lab	Buried or Partially Buried Vessel			
1/22/2025 09:15	FL01R-S@4'	0.7	No Staining	No Odor	Yes	Lab	Separator			
1/22/2025 10:15	BKG01@1'	0.1	No Staining	No Odor	Yes	Lab	Emission Control Device (ECD)			
1/22/2025 10:20	BKG01@2'	0.2	No Staining	No Odor	Yes	Lab	Dump Line			
1/22/2025 10:25	BKG01@3'	2.5	No Staining	No Odor	Yes	Lab	Wellhead			
1/22/2025 10:30	BKG01@4'	0.4	No Staining	No Odor	Yes	Lab	Flowline	1	✓	
1/22/2025 10:35	BKG02@1'	0.3	No Staining	No Odor	Yes	Lab	Other:			
1/22/2025 10:40	BKG02@2'	0.2	No Staining	No Odor	Yes	Lab	Soil Loads Removed			
1/22/2025 10:45	BKG02@3'	0.2	No Staining	No Odor	Yes	Lab	IMPACTED SOIL IDENTIFIED?			
1/22/2025 10:50	BKG02@4'	0.5	No Staining	No Odor	Yes	Lab	ESTIMATED VOLUME OF IMPACTS:			
							Date	Number	CY	
							Total Removed	0	0	
							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?				
							Total Removed	0		
							Disposal Facility:			



Site Area/AOC: KLAUSNER 1 Client: PDC

Daily Forecast/Weather: 19 Party Cloudy Personnel: DE, JO

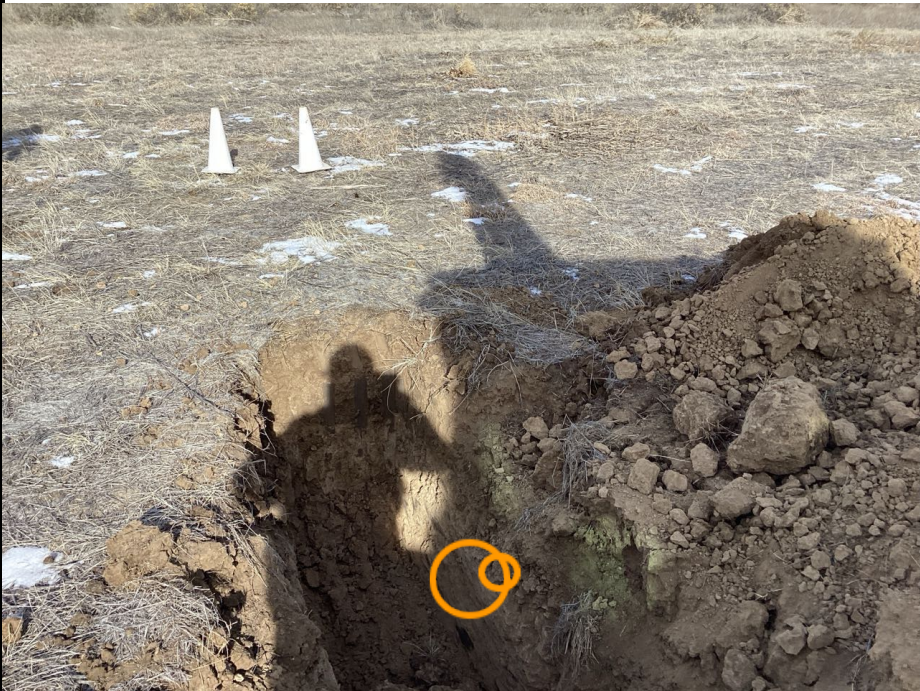

Task/Location Description: Flowline decommissioning soil sample

Need photo log?



							
Equipment ID: FL01R-W@3'		Equipment Type: Flowline		Equipment ID: FL01R-S@4'		Equipment Type: Flowline	
Material: Steel		Volume:		Material: Steel		Volume:	
Contents: Oil/Gas/Water				Contents: Oil/Gas/Water			
Notes/Conditions:				Notes/Conditions:			



					
<b>Equipment ID:</b> BKG01@1',2',3',4'		<b>Equipment Type:</b>			
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>			
<b>Notes/Conditions:</b> Facing North					
<b>Equipment ID:</b> BKG02@1',2',3',4'		<b>Equipment Type:</b>			
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>			
<b>Notes/Conditions:</b> FACING SE					

**TABLE 1**  
**FIELD DATA SUMMARY TABLE**  
**PDC ENERGY, INC. - 69175**  
**KLAUSNER 1 FLOWLINE, WELD COUNTY, COLORADO**  
**REM # 37555**

Sample ID	Sample Date	Depth (ft. bgs)	GPS Data Latitude/Longitude		PDOP Value	VOC Concentration (ppm)
FL01R-W@3'	1/22/2025	3	40.006160	-104.345777	0.8	0.0
FL01R-S@4'	1/22/2025	4	40.006054	-104.346152	0.9	0.7
BKG01@1'	1/22/2025	1	40.006296	-104.346092	0.8	0.1
BKG01@2'	1/22/2025	2	40.006296	-104.346092	0.8	0.2
BKG01@3'	1/22/2025	3	40.006296	-104.346092	0.8	2.5
BKG01@4'	1/22/2025	4	40.006296	-104.346092	0.8	0.4
BKG02@1'	1/22/2025	1	40.006400	-104.345912	1.0	0.3
BKG02@2'	1/22/2025	2	40.006400	-104.345912	1.0	0.2
BKG02@3'	1/22/2025	3	40.006400	-104.345912	1.0	0.2
BKG02@4'	1/22/2025	4	40.006400	-104.345912	1.0	0.5

**Notes:**

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum (NAD) 83 UTM Zone 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

bgs = Below ground surface

TABLE 2  
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA  
PDC ENERGY, INC. - 69175  
KLAUSNER 1 FLOWLINE, WELD COUNTY, COLORADO  
REM # 37555

Sample ID	Sample Date	Depth (ft. bgs)	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**		
FL01R-W@3'	1/22/2025	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<b>1,930</b>	<50	<b>830</b>	<b>1,100</b>
FL01R-S@4'	1/22/2025	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<50	<0.50	<50

**Notes:**

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

ECMC = Energy & Carbon Management Commission

(<) = 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

TABLE 3  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
PDC ENERGY, INC. - 69175  
KLAUSNER 1 FLOWLINE, WELD COUNTY, COLORADO  
REM # 37555

Sample ID	Sample Date	Depth (ft. bgs)	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	1,800	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
FL01R-W@3'	1/22/2025	3	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00810	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01R-S@4'	1/22/2025	4	<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

**Notes:**

1. **Bold** values exceed the ECMC Table 915-1 limit(s).

2. Pink & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL).

ECMC = Colorado Energy & Carbon Management Commission

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

ft. = Feet

bgs = Below ground surface

mg/kg = Milligrams per kilogram

TABLE 4  
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION  
PDC ENERGY, INC. - 69175  
KLAUSNER 1 FLOWLINE, WELD COUNTY, COLORADO  
REM # 37555

Sample ID	Sample Date	Depth (ft. bgs)	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
FL01R-W@3'	1/22/2025	3	7.96	0.314	0.483	<2.00
FL01R-S@4'	1/22/2025	4	9.17	0.206	0.376	<2.00
BKG01@1'	1/22/2025	1	8.27	0.239	0.301	<2.00
BKG01@2'	1/22/2025	2	8.58	0.135	0.334	<2.00
BKG01@3'	1/22/2025	3	8.11	0.248	0.385	<2.00
BKG01@4'	1/22/2025	4	8.46	0.353	1.72	<2.00
BKG02@1'	1/22/2025	1	8.63	0.124	0.178	<2.00
BKG02@2'	1/22/2025	2	8.84	0.172	0.716	<2.00
BKG02@3'	1/22/2025	3	8.71	0.440	1.84	<2.00
BKG02@4'	1/22/2025	4	8.77	1.03	8.04	<2.00
Maximum Background Concentration			8.84	-	-	-

**Notes:**

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.

ECMC = Colorado Energy & Carbon Management Commission

EC = Electrical conductivity

SAR = Sodium adsorption ratio

mmhos/cm = millimhos per centimeter

mg/L = milligram per liter

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

ft. = Feet

bgs = Below ground surface



TABLE 5  
SUMMARY OF METALS IN SOIL CHEMISTRY DATA  
PDC ENERGY, INC. - 69175  
KLAUSNER 1 FLOWLINE, WELD COUNTY, COLORADO  
REM # 37555

Sample ID	Sample Date	Depth (ft. bgs)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) <sup>[4]</sup> (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	15,000	71	0.3	3,100	400	1,500	390	390	23,000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
FL01R-W@3'	1/22/2025	3	<b>1.36</b>	<b>152</b>	<b>0.438</b>	<0.30*	7.03	<b>107</b>	3.34	<0.260	0.0770	20.3
FL01R-S@4'	1/22/2025	4	<b>1.31</b>	<b>239</b>	<b>0.448</b>	<0.30*	2.76	10.7	3.09	<0.260	0.0639	10.2
BKG01@1'	1/22/2025	1	1.49	232	0.288	<0.30*	2.80	10.9	3.22	<0.260	0.0904	11.9
BKG01@2'	1/22/2025	2	1.37	210	0.300	<0.30*	2.58	9.93	3.05	<0.260	0.0728	9.25
BKG01@3'	1/22/2025	3	1.39	260	0.322	<0.30*	2.83	11.4	3.27	<0.260	0.0866	12.4
BKG01@4'	1/22/2025	4	1.22	637	0.302	<0.30*	2.48	10.1	2.88	<0.260	0.0607	9.65
BKG02@1'	1/22/2025	1	1.28	226	0.310	<0.30*	2.60	10.6	3.08	<0.260	0.0786	9.73
BKG02@2'	1/22/2025	2	1.38	197	0.300	<0.30*	2.64	10.2	3.05	<0.260	0.109	12.4
BKG02@3'	1/22/2025	3	1.51	192	0.406	<0.30*	3.00	11.3	3.61	0.366	0.0814	33.3
BKG02@4'	1/22/2025	4	1.16	268	0.250	<0.30*	2.52	9.20	2.88	<0.260	0.0738	10.0
Maximum Background Concentration			1.51	637	0.406	-	-	11.4	-	-	-	-
Maximum Background Concentration X 1.25			1.89	796	0.508	-	-	14.3	-	-	-	-

**Notes:**

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. Compound falls within ECMC Table 915-1 Footnote 9.
5. Non-detect background results accounted for in the highest background concentration by using the reporting limit.

ECMC = Energy & Carbon Management Commission

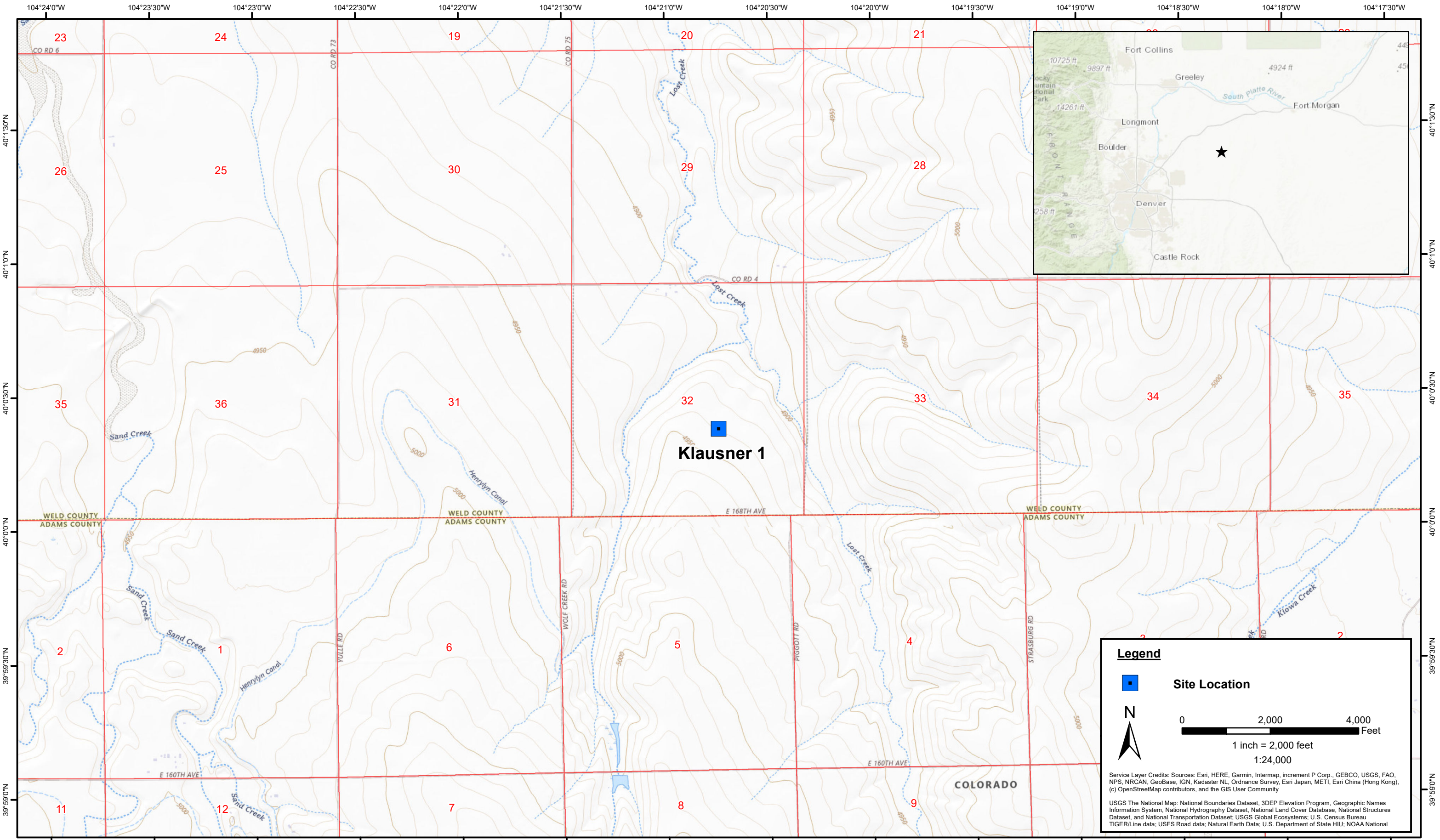
(<) = Analytical result is less than the indicated laboratory reporting limit.

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface

\* Indicates laboratory minimum detection limit in excess of SSL



DATE:	March 2025
DESIGNED BY:	B. Nelson
DRAWN BY:	L. Reed



**PDC Energy, Inc. – 69175 – DJ Basin**  
**Klausner 1**  
NWSE, Section 32, Township 1 North, Range 62 West  
Weld County, Colorado

Site Location Map

Figure  
1





DATE: January 22, 2025		Noble Energy, Inc. – 100322 – DJ Basin Klausner 1 NWSE, Section 32, Township 1 North, Range 62 West Weld County, Colorado	Flowline Decommissioning & Soil Analytical Results Map (01/22/2025)	FIGURE 2
DESIGNED BY: J. Whritenour				
DRAWN BY: J. Clonts				