





SITE NAME: UPRC 23-1117 Flowline							DATE: 8/8/2024	REM. PROJECT #: 35496	WEATHER: 60s, cloudy		
SITE DIRECTIONS: 1 mile East of CR 21, 1/4 mile North of CR 42							CLIENT: Noble				
LEGALS AND LAT/LONG: 40.293863, -104.859407							TASMAN PERSONNEL: KH, SW				
SOIL TYPES: Clayey Sand - SC							SURFACE GRADIENT: South				
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)				
8/8/2024 11:05	FL01R-W@3'	0.0	No Staining	No Odor	Yes	Lab	Buried or Partially Buried Vessel				
8/8/2024 10:50	FL01-01@2'	0.0	No Staining	No Odor	Yes	Lab	Separator				
8/8/2024 10:49	FL01-02@2'	0.0	No Staining	No Odor	Yes	Lab	Emission Control Device (ECD)				
							Dump Line				
							Wellhead				
							Flowline	1	✓		
							Other:				
							Soil Loads Removed				
							IMPACTED SOIL IDENTIFIED?				
							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:				

					
Material:	Volume:	Contents:	Material:	Volume:	Contents:
Notes/Conditions:			Notes/Conditions:		



Equipment ID: FL01R-W@3'		Equipment Type:		Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			



SITE NAME: UPRC-64N67W 23SESW							DATE: 8/8/2024	REM. PROJECT #: 35500	WEATHER: 60s, cloudy		
SITE DIRECTIONS: OFF CR 21 1 MILE TO THE EAST							CLIENT: Noble				
LEGALS AND LAT/LONG: 40.293867, -104.859171							TASMAN PERSONNEL: KH, SW				
SOIL TYPES: Clayey Sand - SC							SURFACE GRADIENT: South				
SOIL SAMPLING							FACILITY INFRASTRUCTURE				
Date/Time	Soil Sample ID	PID (ppm)	Visual	Olfactory	Photo?	Grab or Lab Sample?	EQUIPMENT	Quantity	Photo?		
8/8/2024 09:48	PWV01-B@4'	0.0	No Staining	No Odor	Yes	Lab	Above Ground Storage Tank (AST)	1	✓		
8/8/2024 09:50	PWN01-N@2'	0.5	No Staining	No Odor	Yes	Lab	Buried or Partially Buried Vessel	1	✓		
8/8/2024 09:52	PWV01-E@2'	0.0	No Staining	No Odor	Yes	On-hold	Separator	2	✓		
8/8/2024 09:54	PWV01-S@2'	0.0	No Staining	No Odor	Yes	On-hold	Emission Control Device (ECD)	1	✓		
8/8/2024 09:56	PWV01-W@2'	0.0	No Staining	No Odor	Yes	On-hold	Dump Line	1	✓		
8/8/2024 10:06	MH01@0-6"	0.3	No Staining	No Odor	Yes	Grab	Wellhead				
8/8/2024 10:04	FLARE01@0-6"	0.0	No Staining	No Odor	Yes	Grab	Flowline				
8/8/2024 10:12	GS01@0-6"	0.1	No Staining	No Odor	Yes	Grab	Other: GS01, MH01		✓		
8/8/2024 10:10	SEP01-FL@2'	0.0	No Staining	No Odor	Yes	Lab	Soil Loads Removed				
8/8/2024 10:08	SEP02-FL@3'	0.0	No Staining	No Odor	Yes	Lab	IMPACTED SOIL IDENTIFIED?				
8/8/2024 10:02	AST01@0-6"	0.0	No Staining	No Odor	Yes	Lab	ESTIMATED VOLUME OF IMPACTS:				
8/8/2024 11:02	SEP01-DL@2'	0.5	No Staining	No Odor	Yes	Lab	Date	Number	CY		
8/8/2024 11:16	BKG01@0-6"	0.1	No Staining	No Odor	Yes	Lab					
8/8/2024 11:18	BKG01@2'	0.0	No Staining	No Odor	Yes	Lab					
8/8/2024 11:22	BKG01@3'	0.0	No Staining	No Odor	Yes	Lab					
8/8/2024 11:24	BKG01@4'	0.0	No Staining	No Odor	Yes	Lab	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:				



Equipment ID: SEP02-FL@3'		Equipment Type:		Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			



Equipment ID: BKG01@0-6", 2', 3, & 4'		Equipment Type:	
Material:	Volume:	Contents:	
Notes/Conditions:			

Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:	
Notes/Conditions:			

TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE ENERGY, INC. - 100322
UPRC 23-1117 FLOWLINE, WELD COUNTY, COLORADO
REM # 35496

Sample ID	Sample Date	Depth (ft. bgs)	GPS Data Latitude/Longitude		PDOP Value	VOC Concentration (ppm)
FL01R-W@3'	8/8/2024	3	40.293863	-104.859395	1.0	0.0
FL01-01@2'	8/8/2024	2	40.293645	-104.859135	1.0	0.0
FL01-02@2'	8/8/2024	2	40.293632	-104.859117	1.0	0.0
SEPO2-FL@3' ^[a]	8/8/2024	3	40.293596	-104.859130	1.2	0.0
BKG01@2' ^[a]	8/8/2024	2	40.293967	-104.859223	1.0	0.0
BKG01@3' ^[a]	8/8/2024	3	40.293967	-104.859223	1.0	0.0

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).

[a] Soil sample collected under the nearby UPRC-64N67W 23SESW Tank Battery, Rem #35500.

PDOP = Position Dilution of Precision

ppm = Parts per million

ft. = Feet

bgs = Below ground surface

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY, INC. - 100322
UPRC 23-1117 FLOWLINE, WELD COUNTY, COLORADO
REM # 35496

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'	8/8/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FL01-01@2'	8/8/2024	2	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FL01-02@2'	8/8/2024	2	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP02-FL@3' ^[a]	8/8/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<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. * Indicates laboratory minimum detection limit in excess of SSL.
4. ** Summation of GRO+DRO+ORO must be less than 500 mg/kg.

[a] Soil sample collected under the nearby UPRC-64N67W 23SESW Tank Battery, Rem #35500.

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
NOBLE ENERGY, INC. - 100322
UPRC 23-1117 FLOWLINE, WELD COUNTY, COLORADO
REM # 35496

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'	8/8/2024	3	<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
FL01-01@2'	8/8/2024	2	<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
FL01-02@2'	8/8/2024	2	<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
SEP02-FL@3' ^(a)	8/8/2024	3	<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).
3. * Indicates laboratory minimum detection limit in excess of SSL.

[a] Soil sample collected under the nearby UPRC-64N67W 23SESW Tank Battery, Rem #35500.

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
NOBLE ENERGY, INC. - 100322
UPRC 23-1117 FLOWLINE, WELD COUNTY, COLORADO
REM # 35496

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'	8/8/2024	3	8.19	1.54	2.20	<2.00
FL01-01@2'	8/8/2024	2	8.43	0.311	0.139	<2.00
FL01-02@2'	8/8/2024	2	8.38	0.396	0.372	<2.00
SEP02-FL@3' ^[a]	8/8/2024	3	8.39	0.517	0.234	<2.00
BKG01@2' ^[a]	8/8/2024	2	8.01	0.773	0.397	<2.00
BKG01@3' ^[a]	8/8/2024	3	8.29	4.86	7.64	<2.00
Maximum Background Concentration			8.29	-	-	-

Notes:

- Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within background concentrations.
- Bold** faced values exceed the ECMC Table 915-1 limit(s) and are above native background concentrations.
- Brown highlighted soil analytical values indicate a regulatory exceedance.

[a] Soil sample collected under the nearby UPRC-64N67W 23SESW Tank Battery, Rem #35500.

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
NOBLE ENERGY, INC. - 100322
UPRC 23-1117 FLOWLINE, WELD COUNTY, COLORADO
REM # 35496

Sample ID	Sample Date	Depth (ft. bgs)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) ^[4] (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'	8/8/2024	3	5.40	217	0.298	<0.30*	6.97	9.70	7.76	<0.260	0.0493	25.4
FL01-01@2'	8/8/2024	2	4.55	185	0.297	<0.30*	6.29	8.36	7.20	<0.260	0.0444	22.6
FL01-02@2'	8/8/2024	2	5.14	190	0.296	<0.30*	6.38	9.19	7.50	<0.260	0.0467	23.0
SEP02-FL@3 ^[a]	8/8/2024	3	4.80	152	0.238	<0.30*	6.22	8.16	7.28	<0.260	0.0458	23.5
BKG01@2 ^[a]	8/8/2024	2	5.67	463	0.242	<0.30*	6.56	10.1	7.16	<0.260	0.0505	24.8
BKG01@3 ^[a]	8/8/2024	3	6.19	150	<0.200	<0.30*	5.39	8.98	6.70	<0.260	0.0394	23.4
Maximum Background Concentration X 1.25			7.74	579	-	-	-	-	-	-	-	-

Notes:

- Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within 1.25x background concentrations.
- Red** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.
- Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL).
- Compound falls within ECMC Table 915-1 Footnote 9.
- Non-detect background results accounted for in the highest background concentration by using the reporting limit.

[a] Soil sample collected under the nearby UPRC-64N67W 23SESW Tank Battery, Rem #35500.

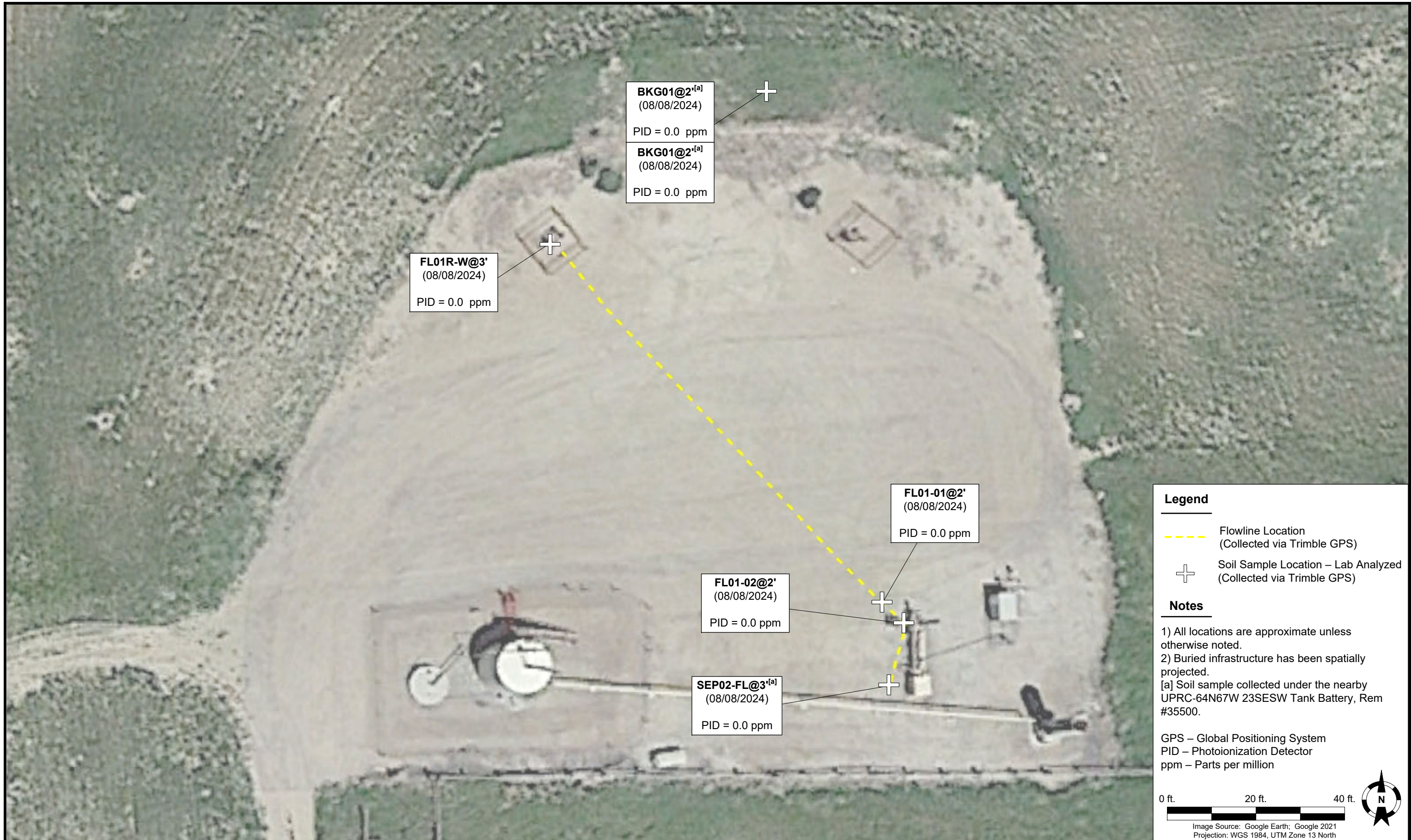
ECMC = Energy & Carbon Management Commission

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

mg/kg = Milligrams per kilogram

ft. = Feet

bgs = Below ground surface



Legend

- Flowline Location
(Collected via Trimble GPS)
- +
 Soil Sample Location – Lab Analyzed
(Collected via Trimble GPS)

Notes

- 1) All locations are approximate unless otherwise noted.
- 2) Buried infrastructure has been spatially projected.

[a] Soil sample collected under the nearby UPRC-64N67W 23SESW Tank Battery, Rem #35500.

GPS – Global Positioning System
 PID – Photoionization Detector
 ppm – Parts per million

0 ft. 20 ft. 40 ft.

Image Source: Google Earth; Google 2021
 Projection: WGS 1984, UTM Zone 13 North

DATE:	August 8, 2024
DESIGNED BY:	J. Whritenour
DRAWN BY:	L. Reed



TASMAN Tasman, Inc.
 6855 W 119th Avenue
 Broomfield, CO 80020

Noble Energy, Inc. – 100322 – DJ Basin
UPRC 23-1117 Flowline
 SESW, Section 23, Township 4 North, Range 67 West
 Weld County, Colorado

Soil Sample
 Location Map
 (08/08/2024)

Figure
 1