

REMEDIAL EXCAVATION REPORT

JOHNSON C29-28 FLOWLINE

ECMC SPILL TRACKING #'s 487480,
487473, & 487479
ECMC REMEDIATION # 34724

Prepared for:



2115 117th Avenue
Greeley, CO 80631

Prepared by:



6855 W. 119th Ave
Broomfield, CO 80020

TABLES

TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE ENERGY, INC - 100322
JOHNSON C 29-28, WELD COUNTY, COLORADO
REM # 34724

Sample ID	Sample Date	Depth (ft. bgs)	GPS Data Latitude/Longitude		PDOP Value	VOC Concentration (ppm)
FL01R-W@3'	7/2/2024	3	40.291064	-104.575378	1.0	0.0
FL01-01@3'	7/2/2024	3	40.290923	-104.575649	0.8	0.3
FL01-02@3'	7/2/2024	3	40.290872	-104.575761	0.8	0.5
FL01-03@3'	7/2/2024	3	40.290822	-104.575922	0.9	0.0
FL01-04@3'	7/2/2024	3	40.290833	-104.576278	0.9	0.0
FL01-05@3'	7/2/2024	3	40.290850	-104.576857	0.9	0.0
FL01-06@3'	7/2/2024	3	40.290833	-104.577182	0.9	0.1
FL01-07@3'	7/2/2024	3	40.290844	-104.578008	0.8	2.4
FL01-08@3'	7/2/2024	3	40.290875	-104.578535	1.0	0.2
FS01-FL01-02@4.5'	8/2/2024	4.5	40.290868	-104.575760	NC	1.3
SS01-FL01-02@3'	8/2/2024	3	40.290892	-104.575760	1.2	1.2
SS02-FL01-02@3'	8/2/2024	3	40.290869	-104.575734	1.2	1.0
SS03-FL01-02@3'	8/2/2024	3	40.290846	-104.575760	1.2	1.8
SS04-FL01-02@3'	8/2/2024	3	40.290861	-104.575792	1.2	1.5
FS01-FL01-03@4'	8/1/2024	4	40.290811	-104.575920	0.9	0.0
SS01-FL01-03@3'	8/1/2024	3	40.290841	-104.575930	0.8	0.0
SS02-FL01-03@3'	8/1/2024	3	40.290822	-104.575895	0.8	0.0
SS03-FL01-03@3'	8/1/2024	3	40.290804	-104.575918	0.9	0.0
SS04-FL01-03@3'	8/1/2024	3	40.290821	-104.575947	0.9	0.0
FS01-FL01R-W@4'	8/2/2024	4	40.291063	-104.575385	1.3	1.3
SS01-FL01R-W@3'	8/2/2024	3	40.291098	-104.575394	1.4	1.1
SS02-FL01R-W@3'	8/2/2024	3	40.291063	-104.575352	1.7	1.8
SS03-FL01R-W@3'	8/2/2024	3	40.291044	-104.575391	1.3	4.0
SS04-FL01R-W@3'	8/2/2024	3	40.291068	-104.575418	1.3	0.8
BKG01@3'	7/2/2024	3	40.291245	-104.575239	NC	0.0
BKG02@3'	8/1/2024	3	40.291261	-104.576534	1.1	0.0
BKG02@4'	8/1/2024	4	40.291261	-104.576534	1.1	0.0
BKG03@3'	8/1/2024	3	40.291383	-104.576335	1.1	2.7
BKG03@4'	8/1/2024	4	40.291383	-104.576335	1.1	0.7
BKG04@3'	8/1/2024	3	40.291427	-104.575610	1.0	0.7
BKG04@4'	8/1/2024	4	40.291427	-104.575610	1.0	0.6
BKG05@3'	8/1/2024	3	40.291641	-104.575533	1.0	0.3
BKG05@4'	8/1/2024	4	40.291641	-104.575533	1.0	1.0
BKG06@3'	8/1/2024	3	40.291054	-104.574825	NC	0.1
BKG06@4'	8/1/2024	4	40.291054	-104.574825	NC	0.0

Notes:

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

bgs = Below ground surface

NC = Data not collected

= Source material characterization sample, excavated and transported off site for disposal.

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY, INC - 100322
JOHNSON C 29-28, WELD COUNTY, COLORADO
REM # 34724

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**		
FL01-02@3'	7/2/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FL01-03@3'	7/2/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	0.0210	<500	<0.50	<50	<50
FL01R-W@3'	7/2/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FS01-FL01-02@4.5'	8/2/2024	4.5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SS01-FL01-02@3'	8/2/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SS02-FL01-02@3'	8/2/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SS03-FL01-02@3'	8/2/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SS04-FL01-02@3'	8/2/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FS01-FL01-03@4'	8/1/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SS01-FL01-03@3'	8/1/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SS02-FL01-03@3'	8/1/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SS03-FL01-03@3'	8/1/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SS04-FL01-03@3'	8/1/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FS01-FL01R-W@4'	8/2/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SS01-FL01R-W@3'	8/2/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SS02-FL01R-W@3'	8/2/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SS03-FL01R-W@3'	8/2/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SS04-FL01R-W@3'	8/2/2024	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

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

= Source material characterization sample, excavated and transported off site for disposal.

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY, INC - 100322
JOHNSON C 29-28, WELD COUNTY, COLORADO
REM # 34724

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
FL01-02@3'	7/2/2024	3	0.663	0.745	0.994	0.682	0.942	0.370	0.938	0.131	2.84	0.750	0.411	2.23	0.116	0.234
FL01-03@3'	7/2/2024	3	0.376	0.701	1.07	0.739	1.03	0.411	1.04	0.160	2.89	0.464	0.464	2.24	0.0349	0.0774
FL01R-W@3'	7/2/2024	3	<0.00500	0.0111	0.0207	0.0138	0.0211	0.00516	0.0208	<0.00500	0.055	0.00727	0.0119	0.0453	<0.00500	<0.00500
FS01-FL01-02@4.5'	8/2/2024	4.5	<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
SS01-FL01-02@3'	8/2/2024	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
SS02-FL01-02@3'	8/2/2024	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
SS03-FL01-02@3'	8/2/2024	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
SS04-FL01-02@3'	8/2/2024	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
FS01-FL01-03@4'	8/1/2024	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
SS01-FL01-03@3'	8/1/2024	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
SS02-FL01-03@3'	8/1/2024	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
SS03-FL01-03@3'	8/1/2024	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
SS04-FL01-03@3'	8/1/2024	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
FS01-FL01R-W@4'	8/2/2024	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
SS01-FL01R-W@3'	8/2/2024	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
SS02-FL01R-W@3'	8/2/2024	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
SS03-FL01R-W@3'	8/2/2024	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
SS04-FL01R-W@3'	8/2/2024	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

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

Source material characterization sample, excavated and transported off site for disposal.

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY, INC - 100322
JOHNSON C 29-28, WELD COUNTY, COLORADO
REM # 34724

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
FL01-02@3'	7/2/2024	3	8.07	0.460	2.08	<2.00
FL01-03@3'	7/2/2024	3	8.36	0.471	2.80	<2.00
FL01R-W@3'	7/2/2024	3	8.17	0.520	1.65	<2.00
FS01-FL01-02@4.5'	8/2/2024	4.5	8.49	0.433	1.59	<2.00
SS01-FL01-02@3'	8/2/2024	3	8.71	0.332	1.18	<2.00
SS02-FL01-02@3'	8/2/2024	3	8.90	0.287	0.840	<2.00
SS03-FL01-02@3'	8/2/2024	3	8.58	0.422	1.04	<2.00
SS04-FL01-02@3'	8/2/2024	3	8.84	0.306	1.24	<2.00
FS01-FL01-03@4'	8/1/2024	4	7.98	0.636	2.53	<2.00
SS01-FL01-03@3'	8/1/2024	3	8.10	1.51	5.81	<2.00
SS02-FL01-03@3'	8/1/2024	3	8.17	0.470	1.54	<2.00
SS03-FL01-03@3'	8/1/2024	3	7.89	0.367	1.50	<2.00
SS04-FL01-03@3'	8/1/2024	3	8.24	0.417	1.84	<2.00
FS01-FL01R-W@4'	8/2/2024	4	8.40	0.597	1.92	<2.00
SS01-FL01R-W@3'	8/2/2024	3	8.65	0.564	2.83	<2.00
SS02-FL01R-W@3'	8/2/2024	3	8.62	0.231	0.495	<2.00
SS03-FL01R-W@3'	8/2/2024	3	8.44	0.619	2.96	<2.00
SS04-FL01R-W@3'	8/2/2024	3	8.19	0.833	3.91	<2.00
BKG01@3'	7/2/2024	3	8.36	1.03	3.97	<2.00
BKG02@3'	8/1/2024	3	8.11	4.36	13.3	2.29
BKG02@4'	8/1/2024	4	7.82	5.49	11.4	<2.00
BKG03@3'	8/1/2024	3	8.52	3.16	15.3	3.32
BKG03@4'	8/1/2024	4	8.12	2.97	10.5	<2.00
BKG04@3'	8/1/2024	3	8.03	1.91	6.56	<2.00
BKG04@4'	8/1/2024	4	8.14	1.29	4.05	<2.00
BKG05@3'	8/1/2024	3	8.35	0.853	3.76	<2.00
BKG05@4'	8/1/2024	4	7.99	0.959	2.50	<2.00
BKG06@3'	8/1/2024	3	8.19	0.974	3.64	<2.00
BKG06@4'	8/1/2024	4	8.31	0.640	1.02	<2.00
Maximum Background Concentration			8.52	-	-	-

Notes:

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

Source material characterization sample, excavated and transported off site for disposal.

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE ENERGY, INC - 100322
JOHNSON C 29-28, WELD COUNTY, COLORADO
REM # 34724

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
FL01-02@3'	7/2/2024	3	1.37	74.1	<0.179	<0.30*	3.84	5.83	3.85	<0.232	0.127	17.0
FL01-03@3'	7/2/2024	3	1.58	76.8	<0.200	<0.30*	4.48	6.74	4.12	<0.260	0.0525	17.6
FL01R-W@3'	7/2/2024	3	1.59	65.6	<0.200	<0.30*	3.65	6.07	4.34	<0.260	0.0462	16.8
FS01-FL01-02@4.5'	8/2/2024	4.5	1.56	61.5	<0.200	<0.30*	2.57	4.06	3.86	<0.260	0.0205	13.7
SS01-FL01-02@3'	8/2/2024	3	1.79	91.7	<0.200	<0.30*	3.93	5.55	4.45	<0.260	0.0352	17.7
SS02-FL01-02@3'	8/2/2024	3	1.68	53.8	<0.200	<0.30*	2.98	4.08	3.64	<0.260	0.0281	14.1
SS03-FL01-02@3'	8/2/2024	3	1.75	49.9	<0.200	<0.30*	2.69	4.17	3.89	<0.260	0.0267	13.5
SS04-FL01-02@3'	8/2/2024	3	1.79	52.8	<0.200	<0.30*	2.84	4.28	3.90	<0.260	0.0232	14.3
FS01-FL01-03@4'	8/1/2024	4	1.80	74.1	<0.180	<0.30*	3.66	5.49	4.42	<0.234	0.0260	16.0
SS01-FL01-03@3'	8/1/2024	3	4.20	71.8	<0.200	<0.30*	4.07	5.76	5.40	<0.260	0.0387	16.9
SS02-FL01-03@3'	8/1/2024	3	2.95	65.4	<0.200	<0.30*	3.39	4.76	4.89	<0.260	0.0240	14.8
SS03-FL01-03@3'	8/1/2024	3	2.70	57.8	<0.200	<0.30*	3.53	4.98	4.92	<0.260	0.0271	15.1
SS04-FL01-03@3'	8/1/2024	3	2.15	50.8	<0.200	<0.30*	3.36	4.31	4.35	<0.260	0.0277	13.4
FS01-FL01R-W@4'	8/2/2024	4	0.832	60.1	<0.200	<0.30*	2.13	3.82	3.36	<0.260	<0.0200	12.8
SS01-FL01R-W@3'	8/2/2024	3	1.25	60.8	<0.179	<0.30*	2.22	3.81	3.70	<0.232	0.0202	13.0
SS02-FL01R-W@3'	8/2/2024	3	1.62	51.5	<0.200	<0.30*	3.09	5.62	4.04	<0.260	0.0253	15.2
SS03-FL01R-W@3'	8/2/2024	3	1.52	43.8	<0.200	<0.30*	2.47	4.12	3.72	<0.260	<0.0200	13.5
SS04-FL01R-W@3'	8/2/2024	3	1.67	52.4	<0.200	<0.30*	2.66	3.88	3.75	<0.260	<0.0200	13.8
BKG01@3'	7/2/2024	3	1.16	74.8	<0.181	<0.30*	2.95	5.05	4.21	<0.236	0.0233	15.5
BKG02@3'	8/1/2024	3	3.73	83.5	<0.200	<0.30*	4.16	6.49	5.37	<0.260	0.0355	19.8
BKG02@4'	8/1/2024	4	2.63	73.1	<0.180	<0.30*	3.42	5.05	4.26	<0.234	0.0230	15.4
BKG03@3'	8/1/2024	3	3.46	81.8	<0.200	<0.30*	5.23	7.31	5.75	<0.260	0.0456	21.3
BKG03@4'	8/1/2024	4	3.12	87.1	<0.179	<0.30*	3.57	5.40	4.91	<0.232	0.0245	16.0
BKG04@3'	8/1/2024	3	2.66	61.4	<0.200	<0.30*	3.47	5.06	4.82	<0.260	0.0299	14.9
BKG04@4'	8/1/2024	4	2.14	69.1	<0.200	<0.30*	3.49	4.74	4.74	<0.260	0.0260	15.1

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
BKG05@3'	8/1/2024	3	2.50	65.3	<0.200	<0.30*	3.23	4.72	4.66	<0.260	0.0279	14.4
BKG05@4'	8/1/2024	4	1.87	62.6	<0.180	<0.30*	2.70	4.17	4.26	<0.234	<0.0180	12.2
BKG06@3'	8/1/2024	3	1.84	52.7	<0.200	<0.30*	2.82	4.28	3.85	<0.260	<0.0200	13.5
BKG06@4'	8/1/2024	4	1.59	56.3	<0.200	<0.30*	2.81	4.89	3.57	<0.260	0.0229	14.6
Maximum Background Concentration X 1.25			4.66	109	-	-	-	-	-	-	-	-

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) above 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

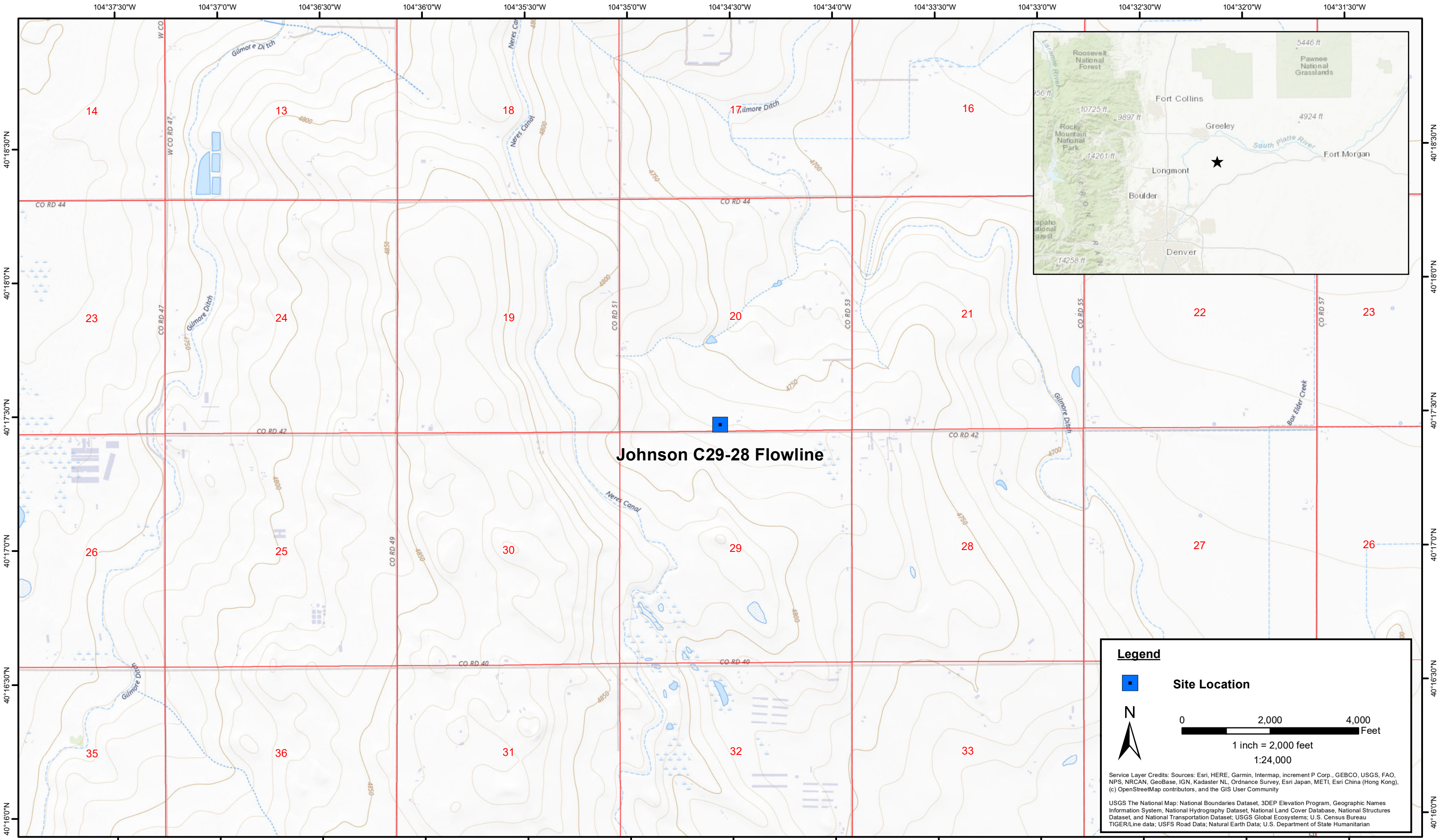
ft. = Feet

bgs = Below ground surface

* Indicates laboratory minimum detection limit in excess of SSL

 = Source material characterization sample, excavated and transported off site for disposal.

FIGURES



DATE:	July 2024
DESIGNED BY:	B. Nelson
DRAWN BY:	J. Clonts



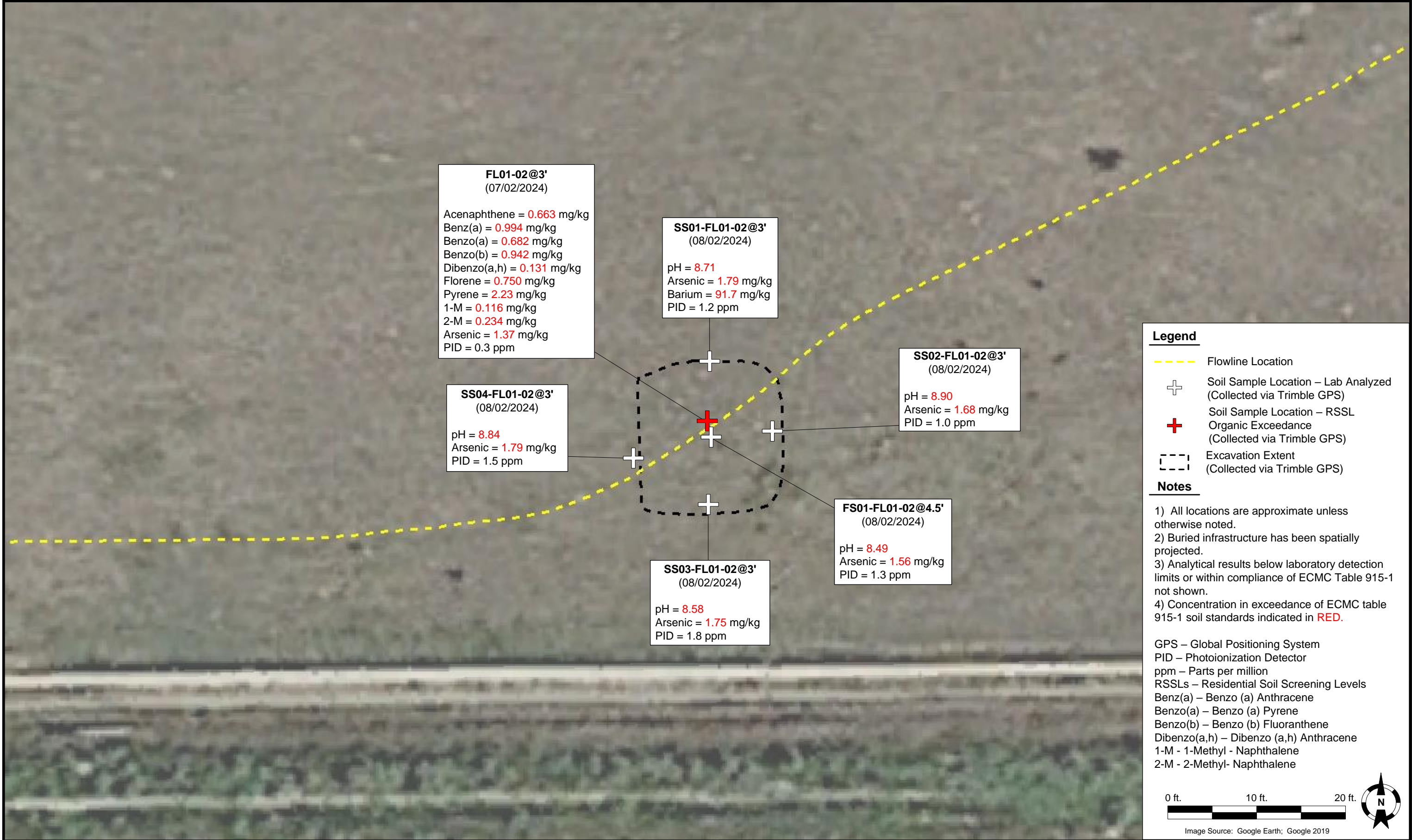
Tasman, Inc.
6855 W. 119th Ave
Broomfield, CO 80020

Noble Energy, Inc. – DJ Basin
Johnson C29-28 Flowline
SESW, Section 20, Township 4 North, Range 64 West
Weld County, Colorado

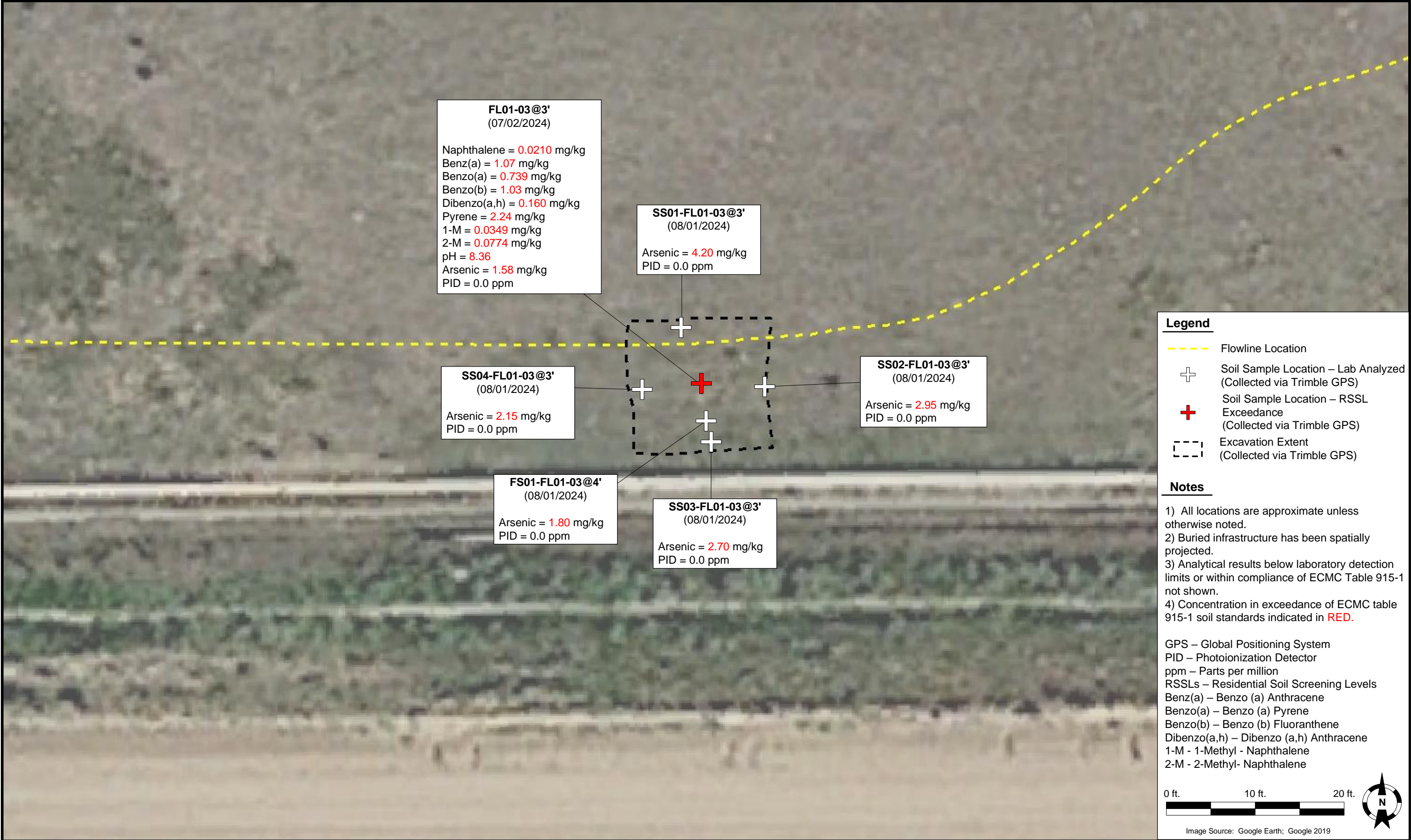
Site Location Map

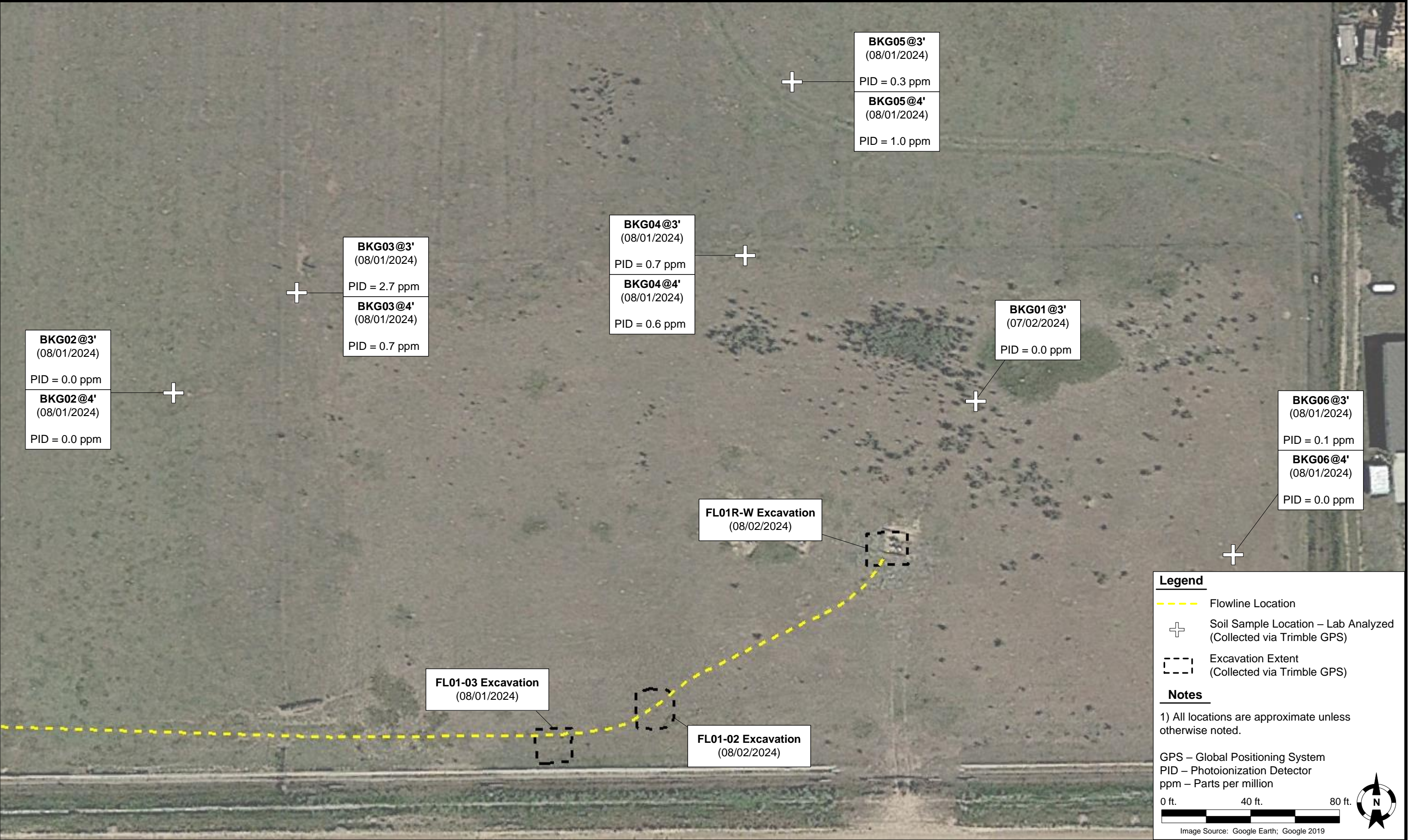
Figure
1





DATE:	April 17, 2025		Noble Energy, Inc. – 100322 – DJ Basin Johnson C29-28 Flowline SESW, Section 20, Township 4 North, Range 64 West Weld County, Colorado	Excavation Soil Analytical Results Map (07/02/2024, 08/02/2024)	FIGURE 3
DESIGNED BY:	JW				
DRAWN BY:	L. Buck				





ATTACHMENT A
STRATER LOGS



6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Tasman

LOGGED BY: SB, JA

PROJECT MANAGER: J. Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: Hand Auger

DRILL BIT SIZE (INCHES): 3.25"

DATE STARTED - COMPLETED:8/01/2024-08/01/2024

TOTAL WELL DEPTH (FT. BGS): 4

DEPTH WATER ENCOUNTERED (FT. BGS): NM

Johnson C29-28 Flowline

BORING/WELL ID: BKG02

LOCATION: Weld County

Latitude (NAD 83): 40.291260548409

Longitude (NAD 83): -104.57653396761

GROUND ELEVATION (FT. AMSL): NM

ABANDONMENT METHOD: Native Material

Depth (feet)	Drill Tooling	% Rec. 25 50 75	Lithologic Description	USCS	PID (ppm) 100 1000	Lab	Depth (feet)
0			Brown, clayey sand, fine grain, well sorted, dry, no staining, no odor				0
			Brown, clayey sand, fine grain, well sorted, moist, no staining, no odor	SC			

Drilling / Sample Method:

Macro-Core

Expendable Well Tip

Hand Auger

HydroPunch Groundwater Sampler

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Tasman	Johnson C29-28 Flowline
LOGGED BY: SB, JA	
PROJECT MANAGER: J. Whritenour	BORING/WELL ID: BKG03
DRILLING CONTRACTOR: Tasman	
DRILLING EQUIPMENT: Hand Auger	LOCATION: Weld County
DRILL BIT SIZE (INCHES): 3.25"	Latitude (NAD 83): 40.291383019765
DATE STARTED - COMPLETED:8/01/2024-08/01/2024	Longitude (NAD 83): -104.57633455839
TOTAL WELL DEPTH (FT. BGS): 4	GROUND ELEVATION (FT. AMSL): NM
DEPTH WATER ENCOUNTERED (FT. BGS): NM	ABANDONMENT METHOD: Native Material

Depth (feet)	Drill Tooling	% Rec.			Lithologic Description	USCS	PID (ppm)		Lab	Depth (feet)
0		25	50	75	Brown, clayey sand, fine grain, well sorted, dry, no staining, no odor		100	1000		0
					Brown, clayey sand, fine grain, well sorted, moist, no staining, no odor	SC				

Drilling / Sample Method:

Macro-Core

Expendable Well Tip

Hand Auger

HydroPunch Groundwater Sampler

Laboratory Sample Types:

Geotechnical Lab

Analytical Chemistry Lab

Geotechnical & Analytical Chemistry Lab



6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Tasman	Johnson C29-28 Flowline
LOGGED BY: SB, JA	
PROJECT MANAGER: J. Whritenour	BORING/WELL ID: BKG04
DRILLING CONTRACTOR: Tasman	
DRILLING EQUIPMENT: Hand Auger	LOCATION: Weld County
DRILL BIT SIZE (INCHES): 3.25"	Latitude (NAD 83): 40.291426729499
DATE STARTED - COMPLETED:8/01/2024-08/01/2024	Longitude (NAD 83): -104.57560971218
TOTAL WELL DEPTH (FT. BGS): 4	GROUND ELEVATION (FT. AMSL): NM
DEPTH WATER ENCOUNTERED (FT. BGS): NM	ABANDONMENT METHOD: Native Material

Depth (feet)	Drill Tooling	% Rec. 25 50 75	Lithologic Description	USCS	PID (ppm)		Lab	Depth (feet)
					100	1000		
0			Brown, clayey sand, fine grain, well sorted, dry, no staining, no odor					0
			Brown, clayey sand, fine grain, well sorted, moist, no staining, no odor	SC				

Drilling / Sample Method:

- Macro-Core
- Hand Auger
- Expendable Well Tip
- HydroPunch Groundwater Sampler

Laboratory Sample Types:

- Geotechnical Lab
- Geotechnical & Analytical Chemistry Lab
- Analytical Chemistry Lab



6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Tasman	Johnson C29-28 Flowline
LOGGED BY: SB, JA	
PROJECT MANAGER: J. Whritenour	BORING/WELL ID: BKG05
DRILLING CONTRACTOR: Tasman	
DRILLING EQUIPMENT: Hand Auger	LOCATION: Weld County
DRILL BIT SIZE (INCHES): 3.25"	Latitude (NAD 83): 40.291641193714
DATE STARTED - COMPLETED:8/01/2024-08/01/2024	Longitude (NAD 83): -104.57553325442
TOTAL WELL DEPTH (FT. BGS): 4	GROUND ELEVATION (FT. AMSL): NM
DEPTH WATER ENCOUNTERED (FT. BGS): NM	ABANDONMENT METHOD: Native Material

Depth (feet)	Drill Tooling	% Rec. 25 50 75	Lithologic Description	USCS	PID (ppm)		Lab	Depth (feet)
					100	1000		
0			Brown, clayey sand, fine grain, well sorted, dry, no staining, no odor					0
			Brown, clayey sand, fine grain, well sorted, moist, no staining, no odor	SC				

Drilling / Sample Method:

- Macro-Core
- Hand Auger
- Expendable Well Tip
- HydroPunch Groundwater Sampler

Laboratory Sample Types:

- Geotechnical Lab
- Geotechnical & Analytical Chemistry Lab
- Analytical Chemistry Lab



6855 W. 119th Ave.
Broomfield, CO 80020

CLIENT: Tasman

LOGGED BY: SB, JA

PROJECT MANAGER: J. Whritenour

DRILLING CONTRACTOR: Tasman

DRILLING EQUIPMENT: Hand Auger

DRILL BIT SIZE (INCHES): 3.25"

DATE STARTED - COMPLETED: 8/01/2024-08/01/2024

TOTAL WELL DEPTH (FT. BGS): 4

DEPTH WATER ENCOUNTERED (FT. BGS): NM

Johnson C29-28 Flowline

BORING/WELL ID: BKG06

LOCATION: Weld County

Latitude (NAD 83): 40.291053877299

Longitude (NAD 83): -104.57482539098

GROUND ELEVATION (FT. AMSL): NM

ABANDONMENT METHOD: Native Material

Depth (feet)	Drill Tooling	% Rec. 25 50 75	Lithologic Description	USCS	PID (ppm) 100 1000	Lab	Depth (feet)
0			Brown, clayey sand, fine grain, well sorted, dry, no staining, no odor				0
			Brown, clayey sand, fine grain, well sorted, moist, no staining, no odor	SC			

Drilling / Sample Method:

- Macro-Core
- Hand Auger
- Expendable Well Tip
- HydroPunch Groundwater Sampler

Laboratory Sample Types:

- Geotechnical Lab
- Geotechnical & Analytical Chemistry Lab
- Analytical Chemistry Lab