June 4, 2025

Andrew Verbonitz
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QB Energy Operating, LLC (Operator: 10844)
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Report of Work Completed – Flowline Release Investigation

ECMC Location Name (ID)	N. Parachute/EF P27 595 (335806)
Operator Location Name	P27 595 16C-27
ECMC Spill/Release Point ID	489807
Legal Description	SESE Sec. 27 T5S-R95W
Coordinates (Lat/Long)	39.579433 / -108.033247
County	Garfield County, Colorado

Introduction

Confluence Compliance Companies, LLC (Confluence) prepared this Report of Work Completed (ROWC) for QB Energy Operating, LLC (QB) to document remedial investigation activities associated with a flowline release at the P27 595 well pad (Location). The Location is 8.8 miles north of Parachute, Colorado, in Garfield County as illustrated in the attached Topographic Map. Additional information on the Location and the associated remediation project is provided in the title block above and attached Site Diagrams. This ROWC provides background on the Location, methods used to complete the investigation, results of the investigation, and recommendations for how to proceed with this information.

Confluence was contracted to conduct an initial investigation to assess potential soil impacts related to the flowline release. The point of release (POR) was exposed and flowline trenched to allow for inspection and repair. One soil sample was collected from beneath the POR at approximately 5.5 feet below ground surface (bgs), and one composite sample was collected from stockpiled soil. Site conditions suggest no viable pathway to groundwater. Additionally, arsenic exceedances appear to be representative of native soil conditions. Confluence recommends that QB request closure of Spill/Release Point ID 489807 with a no further action (NFA) determination, along with approval to reuse the compliant stockpiled soil as backfill.

Background

On April 9, 2025, QB identified a leak in the flowline associated with the N. Parachute #EF01A-34 P27595 (P27 1A-34) wellhead (API: 05-045-20294). QB production personnel calculated the release volume to be 1.89 barrels (bbls) of produced water. The release was reported via Energy & Carbon Management Commission (ECMC) Form 19 Document 404159696 to open Spill/Release Point ID 489807.

Methodology

On April 17, 2025, Confluence completed initial site investigation activities to characterize potential soil impacts associated with the release. Prior to investigation activities, the POR was exposed using a hydrovacuum truck and the associated flowline was trenched to allow access for repairs. The trench base and sidewalls were field screened for evidence of impacts using visual and olfactory indicators, as well as a photoionization detector (PID). One discrete soil sample was collected from the most impacted area of the excavation as indicated by field screening, located directly beneath the POR at a depth of approximately 5.5 feet bgs. Additionally, one composite soil sample was collected from the approximate 70 cubic yards of excavated soil stockpiled on site.

All samples were collected in laboratory-provided jars, immediately placed on ice, and shipped under completed chain-of-custody forms to Elevation Diagnostics for analysis of ECMC Table 915-1 constituents of concern.

Results

These results summarize observations from onsite remedial investigation efforts and associated laboratory analytical results. For organizational and presentation purposes, the results summary is divided between general observations of lithology and hydrogeology for the entire Location and site investigation activities. Collected spatial data are depicted in the attached Site Diagrams and summarized in the Analytical Results Tables.

Lithology and Hydrogeology

Lithology at the Location is characterized by poorly-graded gravels with gravel-sand mixtures. Groundwater is expected to flow northwest toward East Fork Parachute Creek and ultimately to the Colorado River, located 9.0 miles south of the Location. Historic soil boring data (Oil Shale BG5) collected 640 feet south of the Location indicates depth to groundwater greater than 40 feet bgs. The soil boring was located at an elevation 30 feet below the Location; therefore, depth to groundwater at the Location is estimated to be greater than 70 feet bgs. See the attached Soil Boring Log and Supporting Sample site diagram for further information associated with Oil Shale BG5.

Investigation Results

Field screening PID measurements range from 6.3 to 88.8 parts per million (ppm). Laboratory analysis of the soil sample collected beneath the POR indicates that concentrations of organic constituents are compliant with Table 915-1 Protection of Groundwater Soil Screening Levels (PGSSL), with the exception of the following compounds: benzene (0.15 milligrams per kilogram [mg/kg]), 1,2,4-trimethylbenzene (0.15 mg/kg), 1,3,5-trimethylbenzene (0.36 mg/kg), 1-methylnaphthalene (0.161 mg/kg), 2-methylnaphthalene (0.514 mg/kg), and naphthalene (0.290 mg/kg). Exceedances of metals above PGSSL include arsenic (22.35 mg/kg), barium (2,062.97 mg/kg), cadmium (0.56 mg/kg), lead (15.32 mg/kg), and selenium (5.41 mg/kg).

When evaluated against Table 915-1 Residential Soil Screening Levels (RSSL), the sample results are within allowable limits for all constituents except arsenic. All values are within the allowable limits for Soil Suitability for Reclamation (SSR) standards.

Stockpile Composite Results

Field screening indicated a PID measurement of 4.3 ppm. Analytical results from the sample indicate compliance with PGSSL for all organic constituents, with the exception of 1,3,5-trimethylbenzene (0.014 mg/kg).

Analytical results of metals also exceeded PGSSL, including arsenic (21.26 mg/kg), barium (2,250.68 mg/kg), cadmium (0.48 mg/kg), and selenium (4.43 mg/kg). When compared to RSSL, the sample results meet allowable limits for all constituents except arsenic. Levels of pH exceeded the SSR standard with a value of 8.48.

Analysis and Recommendations

Due to the estimated depth to groundwater of more than 70 feet bgs, a pathway to groundwater does not appear to exist. For this reason, Confluence recommends that QB request to compare analytical results of release investigation to RSSL.

Levels of arsenic exceeding RSSL remain within the investigation area. However, site specific background data indicates these results are within native levels at the Location. Background samples were collected less than 400 feet to the northeast and southeast of the Location, and the elevation difference of collected background samples compared to site investigation samples range from the same relative elevation as the Location to approximately 88 feet above the release area, indicating consistently elevated arsenic levels throughout the area. Background soil samples and the investigation area also share an identical soil type: Rock outcrop-Torriorthents complex with very stony colluvium and alluvium derived from calcareous shale parent material. For these reasons, it is reasonable to conclude that elevated levels of arsenic at the Location are consistent with native conditions. Confluence recommends that QB request an alternative allowable limit for arsenic of 36.23 mg/kg, in accordance with Table 915-1
Footnote 11.

Although levels of pH exceeding SSR were observed in the soil stockpile, source water characterization data collected from the P27 1D-34 wellhead indicates that produced water from the wellhead is not a significant source of basic pH. Analytical results of source water characterization indicate a near-neutral pH value of 6.88; therefore, it is reasonable to conclude that elevated level of pH is not attributed to oil and gas operations at the Location. Per ECMC Rule 915.e.(2).C., Confluence recommends that QB requests to remove pH and as a constituent of concern.

Assuming the proposed screening levels, alternative allowable limit, and operator knowledge are approved, all constituents of concern are within Table 915-1 or proposed alternative allowable limits, including the stockpiled material. Based on this information, Confluence recommends that QB request closure of Spill/Release Point ID 489807 with a no further action (NFA) determination and request to utilize the compliant material as excavation backfill.

Confluence is grateful for the opportunity to support you with this project. If you have any questions about the methods, results or recommendations presented here, please do not hesitate to contact us.

Regards,

Andrew Smith
Project Manager
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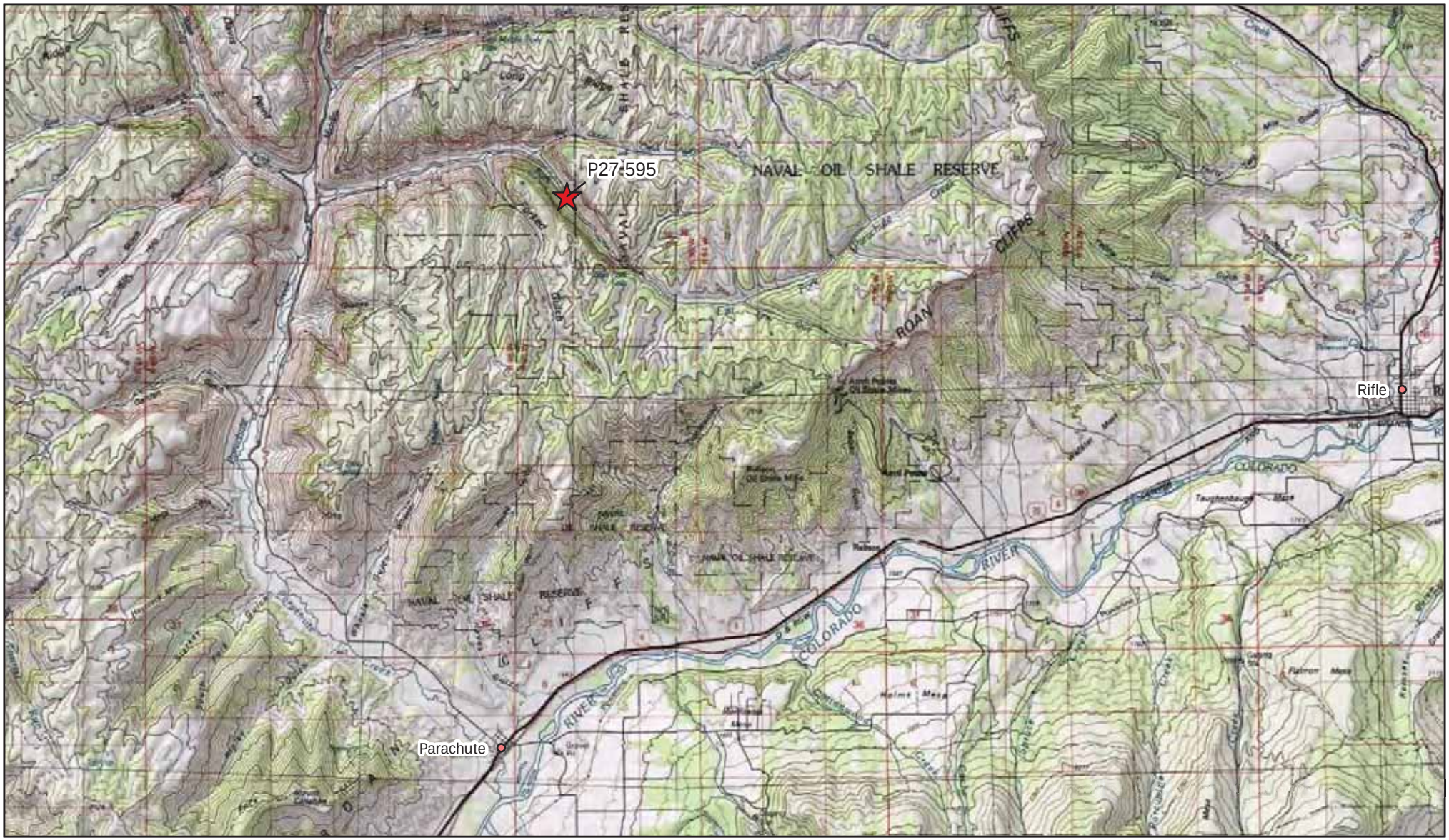
Attachments

- Topographic Location Map
- Site Diagram – Site Investigation
- Site Diagram – Supporting Samples
- QB – Soil Analytical Results Table
- QB – Water Analytical Results Table
- Photographic Log
- Oil Shale BG5 Boring Log



Site Diagram - Topographic Location

operator name (#): QB Energy Operating, LLC (10844)
name (API/ID): N. Parachute/EF P27 595 (335806)
legal description: SESE Sec. 27 T5S-R95W
city, county: Unincorporated, Weld County
lat/long: 39.579433 / -108.033247

0 15 30 60 Feet

N

CONFLUENCE
COMPLIANCE COMPANIES

Spatial data was collected using a small unmanned aircraft system. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. The position of illustrated data may have been manually adjusted to align with the aerial imagery in a manner more representative of field conditions for presentation purposes only.

Map Drafted by: Miranda Beard on 05/14/2025 | Filepath: Documents\CLIENTS\Caerus\P27_595_335806\2025_Release_(16C-27_Flowline)\Figures | Map Projected using WGS 84 (Auxiliary Sphere) | Imagery Sourced from NAIP (2001-2002)

Site Diagram - Site Investigation (P27 595 16C-27)

operator name (#): QB Energy Operating, LLC (10844)
name (API/ID): N. Parachute/EF P27 595 (335806)
legal description: SESE Sec. 27 T5S-R95W
city, county: Unincorporated, Weld County
lat/long: 39.579433 / -108.033247

Feet
0 15 30 60

Point of Release
Soil Samples: Field Screened Only
Excavation Extent: 04/17/2025
Excavation Stockpile: Composite Sample 20250417-P27 595-(STOCK)

N
1:410

CONFLUENCE
COMPLIANCE COMPANIES

Spatial data was collected using a small unmanned aircraft system. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. The position of illustrated data may have been manually adjusted to align with the aerial imagery in a manner more representative of field conditions for presentation purposes only.

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Site Diagram - Supporting Samples (P27 595 16C-27)

operator name (#): QB Energy Operating, LLC (10844)
name (API/ID): N. Parachute/EF P27 595 (335806)
legal description: SESE Sec. 27 T5S-R95W
city, county: Unincorporated, Weld County
lat/long: 39.579433 / -108.033247

0 105 210 420 Feet

- Point of Release
- Produced Water Sample
- Background Soil Sample
- Historic Soil Boring
- NRSC Soil Survey: Map Unit Boundary

N

1:2,750

CONFLUENCE COMPLIANCE COMPANIES

Spatial data was collected using a small unmanned aircraft system. Illustration discrepancies may be present in this diagram due to the inherent limitations of data accuracy for both project data and the underlying aerial imagery. The position of illustrated data may have been manually adjusted to align with the aerial imagery in a manner more representative of field conditions for presentation purposes only.

Map Drafted by: Miranda Beard on 05/14/2025 | Filepath: Documents\CLIENTS\Caerus\P27_595_335806\2025_Release_(16C-27_Flowline)\Figures | Map Projected using WGS 84 (Auxiliary Sphere) | Imagery Sourced from NAIP (2001-2002)

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SOIL ANALYTICAL RESULTS TABLE
P27 595

Analyte				Total TPH	GRO	DRO	ORO	Benzene	Toluene	Ethylbenzene	Total Xylenes	1,2,4-TMB	1,3,5-TMB	Acenaphthene	Anthracene	Benz(a)anthracene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Chrysene	DIbenz(a,h)anthracen	Fluoranthene	Fluorene	Indeno(1,2,3-cd)Pyre	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Pyrene
915-1 PROTECTION OF GW					500			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.55	5.8	0.011	0.3	2.9	0.24	9	0.096	5.9	0.54	0.98	0.006	0.019	0.0038	1.3
915-1 RESIDENTIAL SOIL					500			1.2	490	5.8	58	30	27	360	1800	1.1	1.1	11	0.11	110	0.11	240	240	1.1	18	24	2	180
Units					mg/kg			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Name	**Sample Type**	**Sample Date**	**Lab Report**																									
20250417-P27 595-POR@5.5	POR	04/17/2025	4377	256.9	6.60	< 100.00	150.30	**0.15**	0.41	0.025	0.86	**0.15**	**0.36**	< 0.10	< 0.10	**< 0.10**	< 0.10	< 0.10	< 0.10	< 0.10	**< 0.10**	< 0.10	< 0.10	< 0.10	**0.161**	**0.514**	**0.290**	< 0.10
20250417-P27 595-STOCK	Stockpile	04/17/2025	4376	248.998	0.358	< 100	148.64	< 0.00242	< 0.00263	< 0.005	< 0.00654	< 0.00245	**0.014**	**< 2**	< 2	**< 2**	**< 2**	< 2	**< 2**	< 2	**< 2**	< 2	**< 2**	**< 2**	**< 0.626**	**< 2**	**< 2**	**< 2**

Notes:
Bold with silver highlight: Exceeds RSSLs
"<" (as in, less than laboratory reporting detection limit)

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SOIL ANALYTICAL RESULTS TABLE
P27 595

Analyte				EC	SAR	pH	HWS Boron	Arsenic	Barium	Cadmium	Chromium VI	Copper	Lead	Nickel	Selenium	Silver	Zinc
915-1 PROTECTION OF GW				4	6	8.3	2	0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
915-1 RESIDENTIAL SOIL				4	6	8.3	2	0.68	15000	71	0.3	3100	400	1500	390	390	23000
Units				mmhos/cm	No Unit	SU	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Name	**Sample Type**	**Sample Date**	**Lab Report**														
20250417-P27 595-POR@5.5	POR	04/17/2025	4377	0.72	0.70	8.15	0.21	**22.35**	**2062.97**	**0.56**	**< 0.080**	32.63	**15.32**	17.39	**5.41**	< 0.25	79.56
20250417-P27 595-STOCK	Stockpile	04/17/2025	4376	0.5	1.97	**8.48**	0.42	**21.26**	**2250.68**	**0.48**	**< 0.08**	27.63	12.35	16.4	**4.43**	< 0.25	67.42

Notes:
Bold with silver highlight: Exceeds RSSLs
Bold with blue highlight: Exceeds POGs
"<" (as in, less than laboratory reporting detection limit)

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SOIL ANALYTICAL RESULTS TABLE
NPRBG

Analyte				EC	SAR	pH	HWS Boron	Arsenic	Barium	Cadmium	Chromium VI	Copper	Lead	Nickel	Selenium	Silver	Zinc
915-1 PROTECTION OF GW				4	6	8.3	2	0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
915-1 RESIDENTIAL SOIL				4	6	8.3	2	0.68	15000	71	0.3	3100	400	1500	390	390	23000
Units				mmhos/cm	No Unit	SU	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample Name	**Sample Type**	**Sample Date**	**Lab Report**														
20240726-NPRBG-(P27595-N)@0.5	Background	07/26/2024	AA10686					**28.98**	**386.078**	**0.517**	**< 0.08**	34.072	**22.456**	24.263	**3.985**	< 0.25	82.602
20240726-NPRBG-(P27595-NE)@0.5	Background	07/26/2024	AA10685					**14.557**	**314.362**	**0.588**	**< 0.08**	29.297	**18.303**	23.571	**3.106**	< 0.25	83.288
20240726-NPRBG-(P27595-S)@0.5	Background	07/26/2024	AA10687					**23.576**	3.05	**0.43**	**< 0.08**	27.713	**18.407**	20.239	**3.097**	< 0.25	70.177

Notes:
Bold with silver highlight: Exceeds RSSLs
Bold with blue highlight: Exceeds POGs
"<" (as in, less than laboratory reporting detection limit)

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WATER ANALYTICAL RESULTS
TABLE NPRSOURCE

Analyte				Arsenic	Barium	Cadmium	Copper	Lead	Nickel	pH	Selenium	Silver	Zinc	Chromium VI
Units				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	SU	mg/L	mg/L	mg/L	mg/L
Sample Name	**Sample**	**Sample**	**Lab Report**											
20240726-NPRSOURCE-(P27595 20324)	Source Fluid	07/26/2024	AA10688	0.001215	48.603858	0.003118	0.012987	< 0.00025	0.057713	6.88	< 0.000985	< 0.0001	2.833007	<0.1

Notes:
Bold with blue highlight: Exceeds POGs
"<" (as in, less than laboratory reporting detection limit)

Photographic Log

Remediation Investigation
P27 596 16C-27 (ECMC Location ID: 335806)

P27 595 16C-27 Excavation: View Southwest

(POR)@5.5 Sample Location

(WW)@5 Sample Location

Photographic Log

Remediation Investigation
P27 596 16C-27 (ECMC Location ID: 335806)

(BASE01)@5.5 Sample Location

(BASE02)@5.5 Sample Location

(BASE03)@5.5 Sample Location

(BASE04)@5.5 Sample Location

(SW)@5 Sample Location

(EW)@5 Sample Location

(NW)@5 Sample Location

Soil Stockpiles: View Northwest

ENTRADA
CONSULTING GROUP

Caerus Oil and Gas LLC
143 Diamond Ave
Parachute, CO 81635

Site Name: North Parachute Ranch

Soil Boring ID: Oil Shale BG5

Date Started	: 2022-06-22
Detector	: MiniRae PID
Hole Diameter	: 6"
Drilling Method	: Solid Stem Auger
Sampling Method	: Split Spoon
Drilling Company	: CO Drilling and Sampling
Latitude	: 39.577731°
Longitude	: -108.032025°
Project Number	: 022-050
Logged By	: R. Johnson & C. Mace

Depth (ft)	USCS	GRAPHIC	DESCRIPTION	Moisture (%)	Fines (%)	Structure	PID (ppm)	Staining	Recovery (in)	Sample	Blow Count
0			0-5' Rocky.								
5	GC		5-7' Brown, moist clay w/ angular decomposing shale fragments	moist	80	M	0.5	N	14	5-7	8, 10, 22
10	GC		10-11' Brown, moist clay into tan dry silt w/ trace gravel	dry	95	M	1.2	N	12	10-11	4, 4, 19
	SH		11-13' Shale, platy, grey to tan, moderately decomposed, dry	dry	90	M	9.0	N	13	11-13	19, 24, 33, 30
15				-	-	-	-	-	6	none	50
	GM		16-17' Sandy silt, tan, gravelly w/ angular shale fragments	sl moist	90	M	20.7	N	10	16-17	12, 21, 30 (3")
20	SH		20-21' Silty clay into platy gravelly clay into shale. Noted bitumen in shale.	sl moist	90	P	2.8	N	18	20-21	16, 50
25	GC		25-27' Brown to tan, sandy clay, 50-70% gravel composed of shale fragments. Noted bitumen odor.	sl moist	90	P	3.2	N	20	25-27	8, 7, 50
30	GC		30-31' Tan silty sandy shale gravel w/ bitumen odor	moist	90	M	7.3	N	9	30-31	15, 50
	GC		31-33' Moist grey to tan shale fragments ranging from coarse sand-size to gravel and cobble size w/ bitumen odor	moist	90	M	0.6	N	15	none	8, 7, 8
35	GC		35-37' Brown silty sandy clay w/trace gravel-sized angular shale fragments.	v moist	90	M	0.5	N	20	35-37	21, 5, 10, 10
40	GC		40-42' Brown clay into coarse shaley clay w/ orange and red decomposing shale. Noted white, fibrous fungus(?) in lower 3" of sample.	wet	90	M	1.4	N	15	40-42	5, 7, 6
45	GC		45-47' Brown shaley gravel (7") decomposing w/ orange fragments into sandy clay (9"). Wet.	wet	80	M	-	N	16	45-47	6, 10, 4, 6
50			TD at 47ft MD								