

TABLE 1 - F23 6D WELL SPILL ASSESSMENT
SOIL ANALYTICAL RESULTS
CAERUS OIL AND GAS LLC
PICEANCE BASIN, COLORADO

PARAMETER	COGCC CONCENTRATION LEVELS	UNITS	F23 6D POR	F23 6D N WALL	F23 6D E WALL	F23 6D S WALL	F23 6D W WALL	F23 6D BOT	F23 6D S WALL	F23 6D E WALL
Sample Date			8/3/2020	8/20/2020	8/20/2020	8/20/2020	8/20/2020	8/20/2020	9/30/2020	9/30/2020
Sample Matix			Spill	Spill	Spill	Spill	Spill	Spill	Spill	Spill
Arsenic	0.39	mg/kg	21	18.3	18.2	26.6	17.7	21.2	20.4	25.5
Barium	15,000	mg/kg	536	616	338	807	1710	783	613	541
Cadmium	70	mg/kg	0.566	<0.500	<0.500	<0.500	<0.500	0.628	0.533	<0.500
Chromium (III)	120,000	mg/kg	23.9	25.2	24.2	22.4	23.9	29.6	22.7	20.5
Chromium (VI)	23	mg/kg	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
Copper	3,100	mg/kg	30.7	24.1	28	25.5	24.5	29.3	27	28.1
Lead	400	mg/kg	16.3	17	16.9	16.1	15.2	18.6	15.9	18
Mercury	23	mg/kg	0.181	<0.0400	<0.0400	0.127	<0.0400	0.0514	<0.0400	<0.0400
Nickel	1,600	mg/kg	20.5	21.5	21	20.5	23.9	25.9	20.6	19.7
Selenium	390	mg/kg	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00
Silver	390	mg/kg	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Zinc	23,000	mg/kg	61.4	61.3	64	59.8	63.8	81.9	53	54
EC	4 or 2x background	mmhos/cm	2.92	1.71	1.59	3.45	1.11	0.701	1.43	0.548
pH	6-9	SU	9.23	9.39	9.32	9.12	9.68	8.96	10	9.62
SAR	12	unitless	28.8	33.8	23.5	27.4	14.8	13.8	11	3.73
TPH-DRO			2180	30.1	16.3	3680	44.2	137	106	84.1
TPH-GRO			1300	1.84	88.8	2780	1.96	3.28	0.489	0.281
TPH	500	mg/kg	3480	31.94	105.1	6460	46.16	140.28	106.489	84.381
Benzene	0.17	mg/kg	1.58	0.023	0.26	0.413	0.0049	0.0273	<0.00100	<0.00100
Toluene	85	mg/kg	16.6	0.246	7.07	12.4	0.0763	0.165	<0.00500	<0.00500
Ethylbenzene	100	mg/kg	2.17	0.0518	0.358	1.85	0.0248	0.0132	<0.00250	<0.00250
Total Xylenes	175	mg/kg	58.5	3.15	17.7	125	0.722	0.293	0.078	<0.00650
Acenaphthene	1,000	mg/kg	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	0.00792	<0.00600	<0.00600
Anthracene	1,000	mg/kg	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Benz(a)anthracene	0.22	mg/kg	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Benzo(b)fluoranthene	0.22	mg/kg	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Benzo(k)fluoranthene	2.2	mg/kg	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Benzo(a)pyrene	0.022	mg/kg	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Chrysene	22	mg/kg	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Dibenzo(a,h)anthracene	0.022	mg/kg	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Fluoranthene	1,000	mg/kg	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Fluorene	1,000	mg/kg	0.336	<0.00600	<0.00600	0.391	<0.00600	0.0202	<0.00600	<0.00600
Indeno(1,2,3,c,d)pyrene	0.22	mg/kg	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600	<0.00600
Naphthalene	23	mg/kg	3.01	0.115	0.086	5.04	0.0202	0.177	0.0332	<0.0200
Pyrene	1,000	mg/kg	<0.00600	<0.00600	<0.00600	0.00605	<0.00600	<0.00600	<0.00600	<0.00600

Notes:
< - less than the stated reporting limit
Highlight - indicates result exceeds the COGCC concentration level
COGCC - Colorado Oil and Gas Conservation Commission
EC - electrical conductivity
mg/kg - milligrams per kilogram
mmhos/cm - millimhos per centimeter
NA - not analyzed
ND - non detect
SAR - sodium adsorption ratio
SU - standard unit
TPH-GRO - total petroleum hydrocarbons-gasoline range organics
TPH-DRO - total petroleum hydrocarbons-diesel range organics
TPH - combination of TPH-GRO and TPH-DRO