

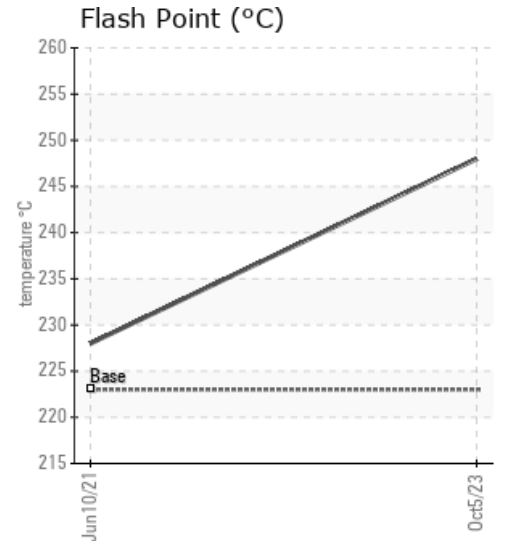
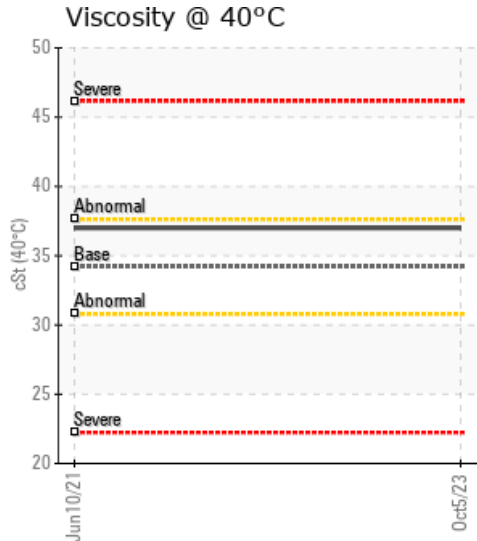
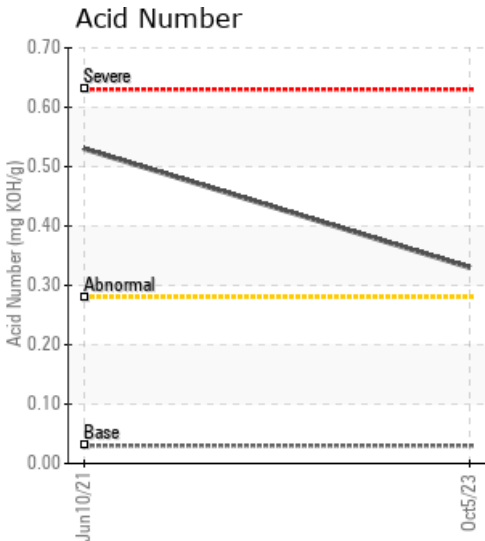
[LSD: 14-01-42-07W5] HEAT TRANSFER

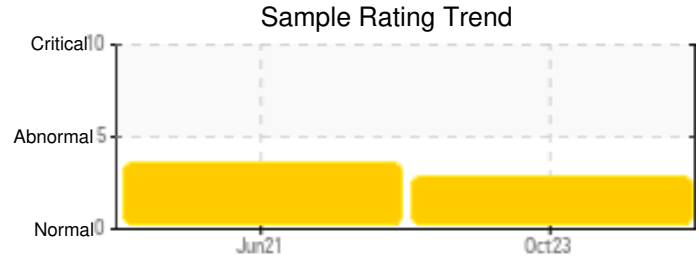
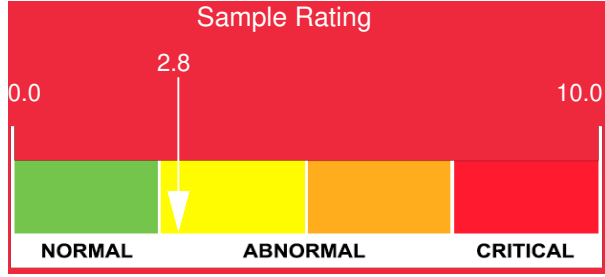
Customer: PTRHTF20255	System Information	Sample Information
OBSIDIAN ENERGY 14-01-42-07W5 ROCKY MOUNTAIN HOUSE, AB T4T 1T1 CA Attn: Greg Kent Tel: E-Mail: greg.kent@obsidianenergy.com	System Volume: 0 gal Bulk Operating Temp: 599F / 315C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: PROPAK	Lab No: 02595244 Analyst: Lyle Dach Sample Date: 10/05/23 Received Date: 11/08/23 Completed: 01/02/24 Lyle Dach lyle.dach@HFSinclair.com

Recommendation: Pentane insolubles are very high. Consider filtration of oil if this is a representative sample. Sample collection location could give misleading results, collecting a sample from a low point drain where material tends to settle could cause results that are not relevant to the whole system. Ensure samples are collected from a location that would properly represent the fluid in the system, low point drains, bridles or site glasses are not recommended, if these must be used flush the sample point to help get a representative sample. Total Acid number is moderately high but has decreased slightly since last sample. Ensure gas blanket is in place and periodically vent the system to eliminate low boilers.

Comments: Pentane Insolubles levels are severely high. Acid Number (AN) is abnormally high.

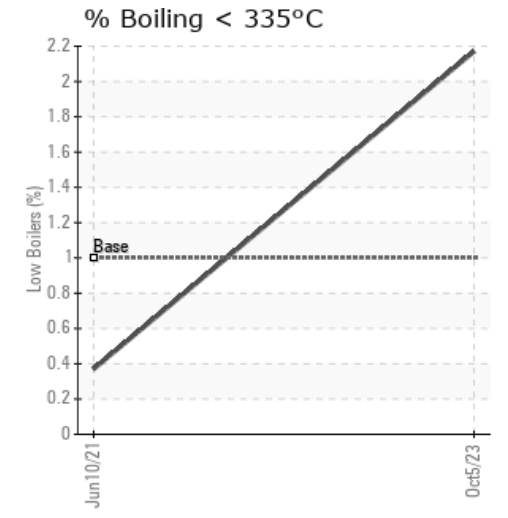
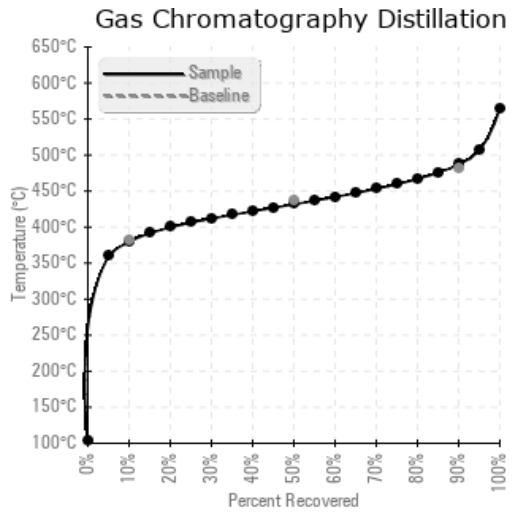
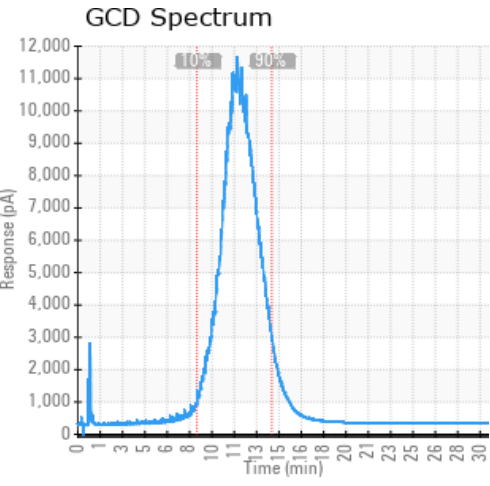
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
10/05/23	11/08/23	0.0h		478 / 248	13.0	37.0	0.33	0.736	715 / 379	809 / 432	908 / 487	2.17
06/10/21	06/16/21	0.0h	DISCH. OF PUMP	442 / 228	92.5	37.0	0.53	0.561	715 / 380	798 / 426	930 / 499	0.37
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00





Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
10/05/23	55	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	2	0	0	1
06/10/21	26	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0
Baseline Data			0	0						0			0	0					0				0	

Elemental analysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]



Historical Comments	
06/10/21	Pentane Insolubles are very high. Consider filtration of oil. Total Acid number in moderately high. Ensure gas blanket is in place and periodically vent system to eliminate low boilers. Pentane Insolubles levels are severely high. Acid Number (AN) is abnormally high. (GCD) 90% Distillation Point is abnormally high.

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