

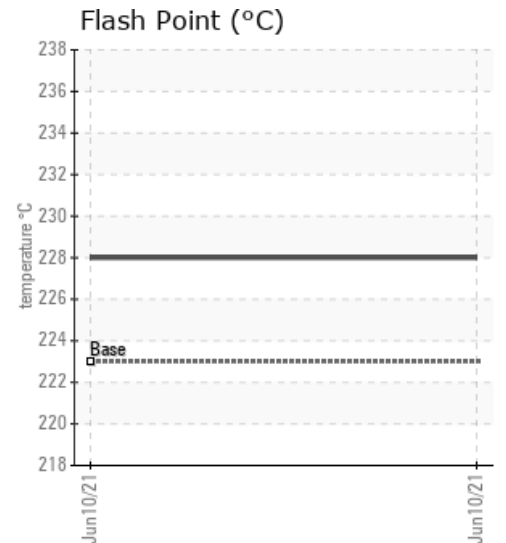
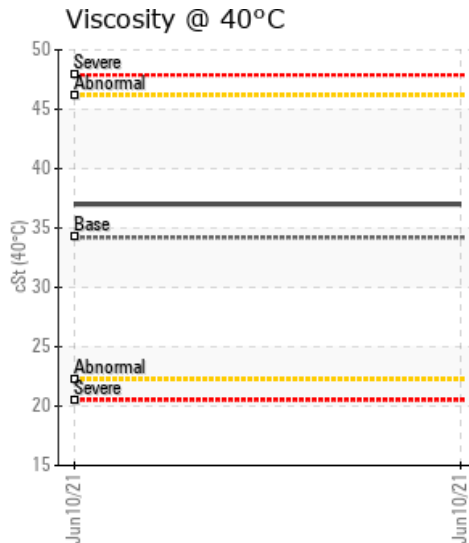
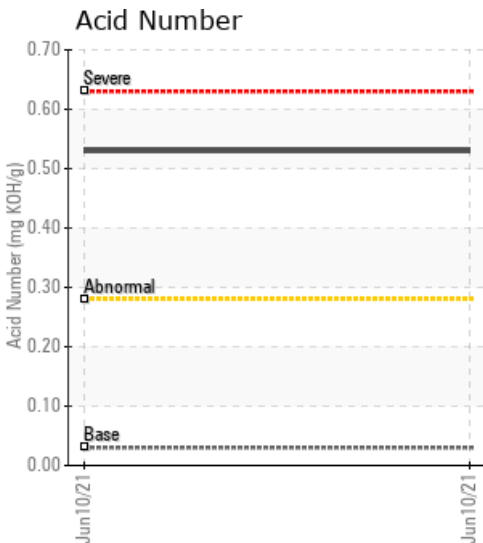
[LSD: 14-01-42-07W5] HEAT TRANSFER

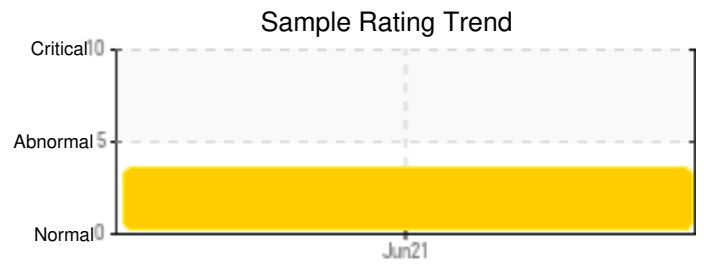
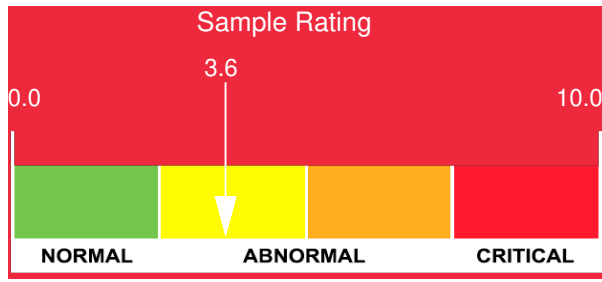
Customer: PTRHTF20255	System Information	Sample Information
OBSIDIAN ENERGY 14-01-42-07W5 ROCKY MOUNTAIN HOUSE, AB T4T 1T1 Canada Attn: Greg Kent Tel: E-Mail: greg.kent@obsidianenergy.com	System Volume: 0 gal Bulk Operating Temp: 599F / 315C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: PROPAK	Lab No: 02427529 Analyst: Terry Veenstra Sample Date: 06/10/21 Received Date: 06/16/21 Completed: 07/06/21 Terry Veenstra terry.veenstra@hollyfrontier.com

Recommendation: 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.

Comments: Pentane Insolubles levels are severely high. Acid Number (AN) is abnormally high. (GCD) 90% Distillation Point is abnormally high.

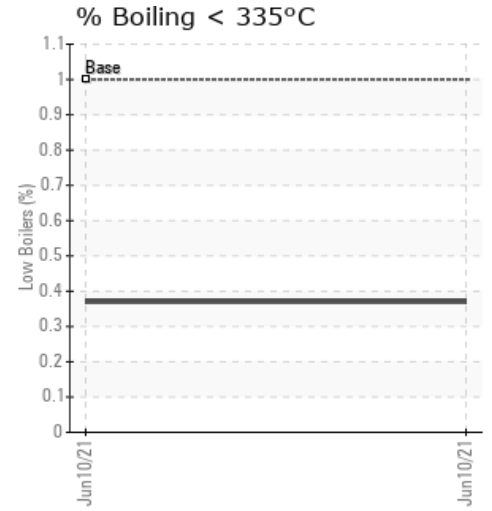
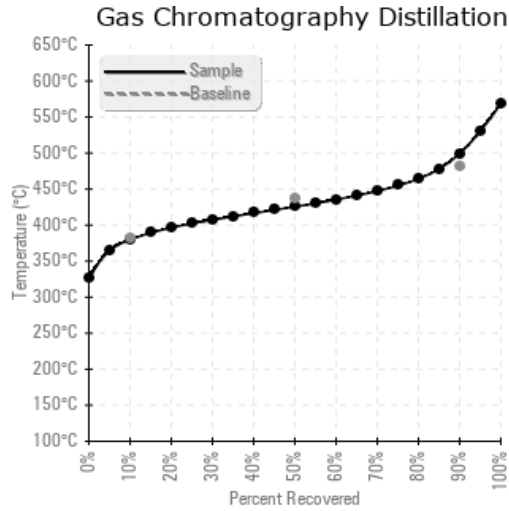
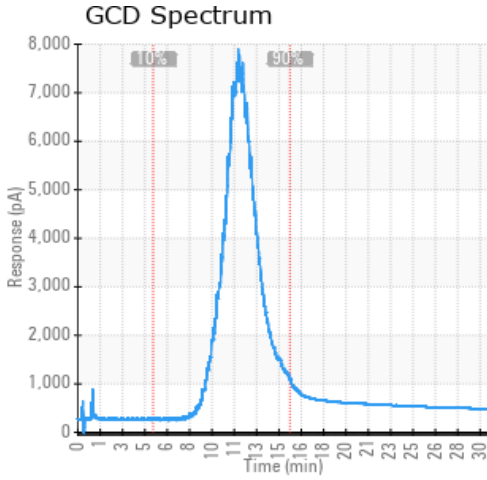
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
06/10/21	06/16/21	0.0h	DISCH. OF PUMP	442 / 228	92.5	37.0	0.53	0.561	715 / 380	798 / 426	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
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

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