

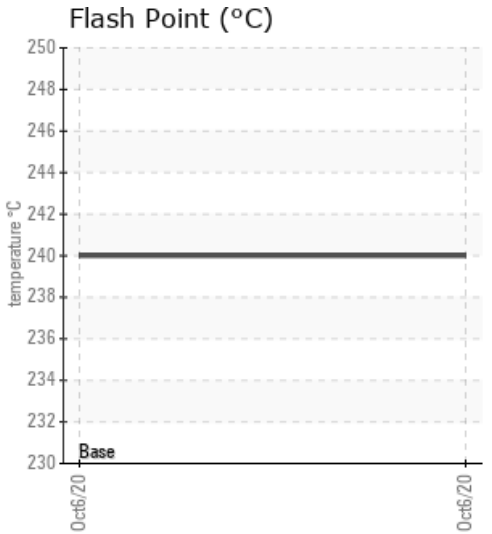
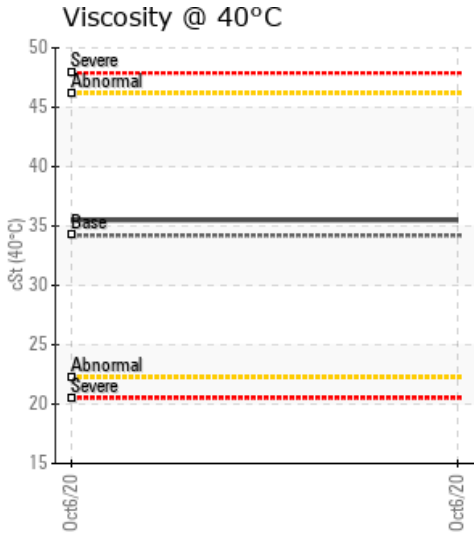
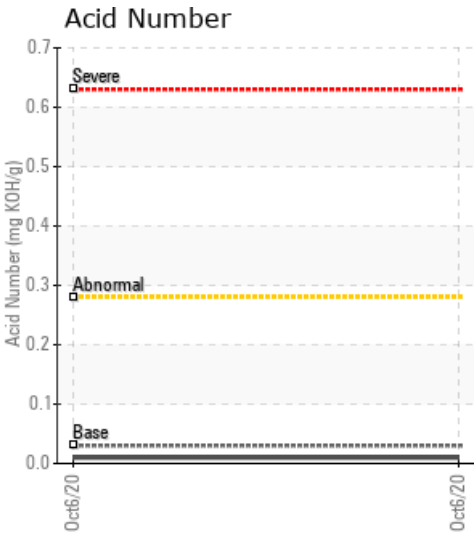
### [LSD: 06-31-32-24W4] HOT OIL UNIT

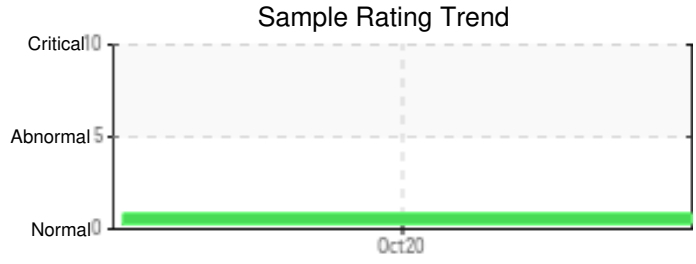
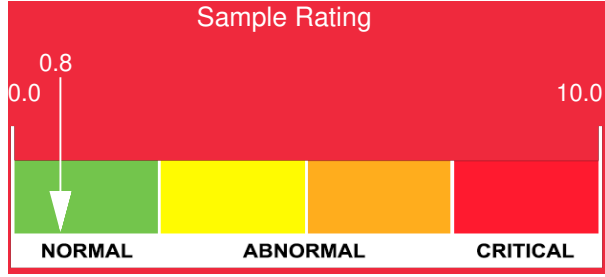
Customer: PTRHTF20244	System Information	Sample Information
PINE CLIFF ENERGY LTD 1015 4 ST SW CALGARY, AB T2R 1J4 Canada Attn: Shaen Ferguson Tel: (403)318-4914 E-Mail: sferguson@pinecliffenergy.com	System Volume: 6500 ltr Bulk Operating Temp: 356F / 180C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make:	Lab No: 02381181 Analyst: Kevin McDermott Sample Date: 10/06/20 Received Date: 10/14/20 Completed: 10/27/20 Kevin McDermott kevin.mcdermott@petrocanadalsp.com

Recommendation: This fluid is in excellent condition. Avoid hot fluid exposure to air by keeping vent hatch closed and blanket gas operational. Suggest annual sample submission to proactively monitor fluid condition.

Comments:

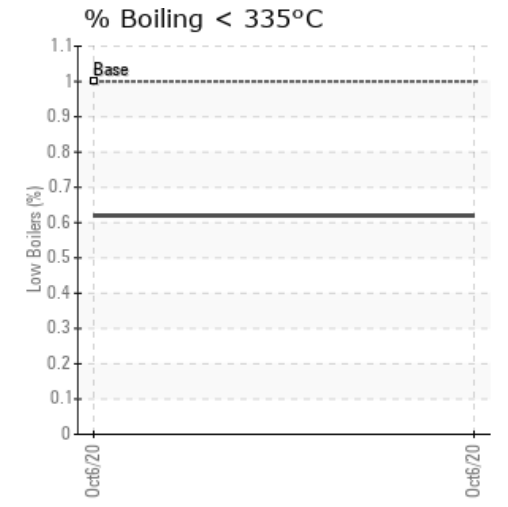
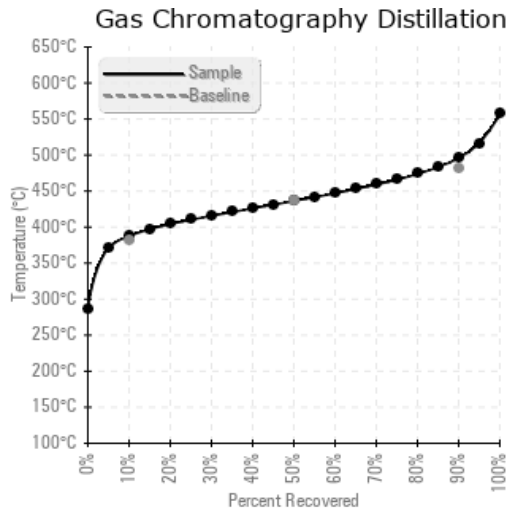
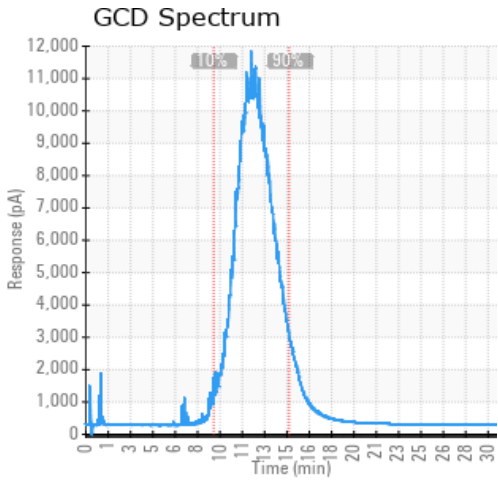
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
10/06/20	10/14/20	5y	DISCHARGE	464 / 240	29.3	35.5	0.01	0.027	730 / 388	817 / 436	925 / 496	0.62
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
10/06/20	0	0	0	0	0	0	0	0	0	0	0	0	0	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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