

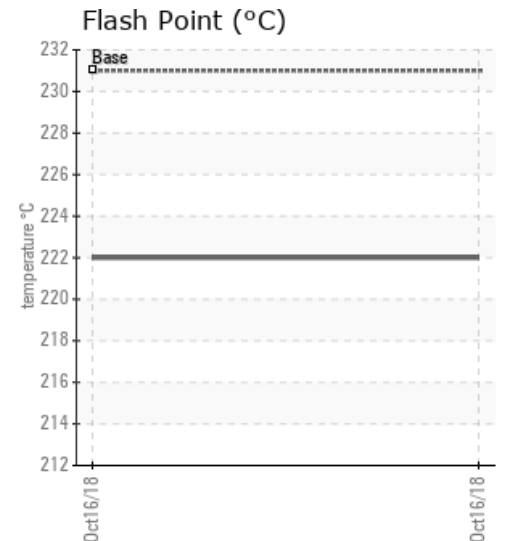
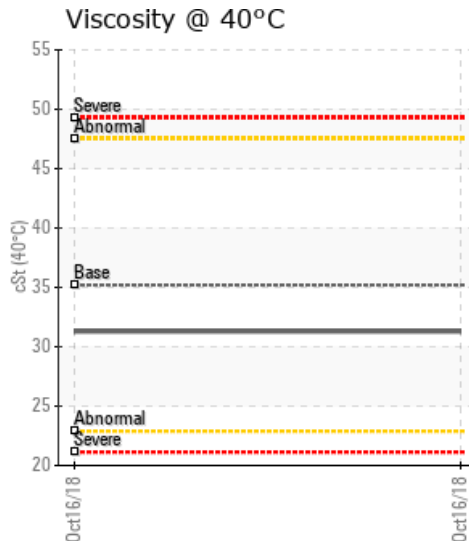
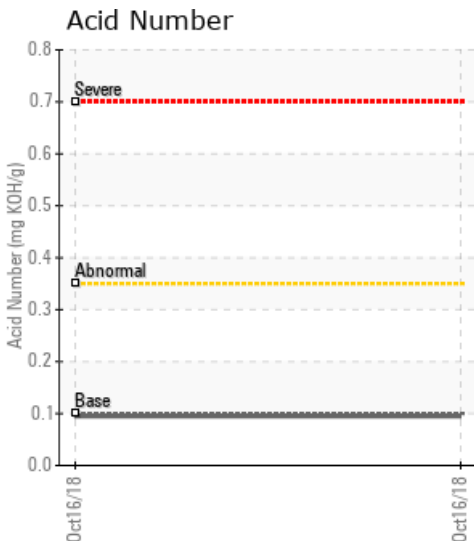
## [SUNCOR MACKAY RIVER] PAD750

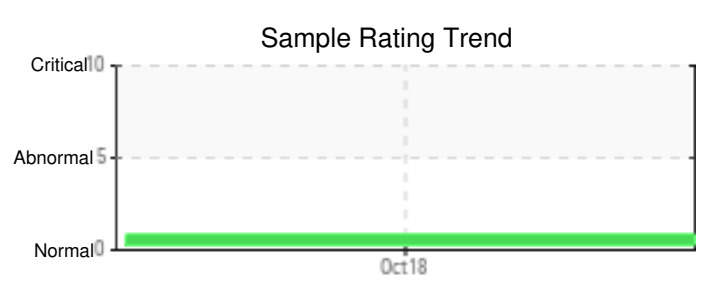
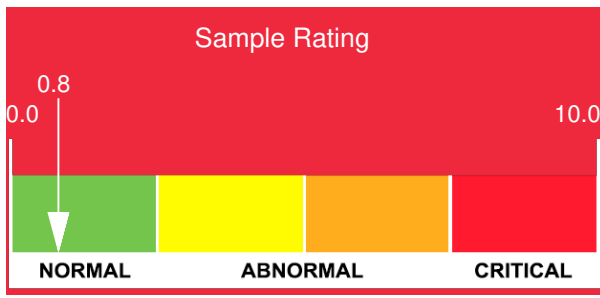
Customer: PTRHTF20196	System Information	Sample Information
SUNCOR ENERGY MACKAY RIVER PROJECT DOCK M FORT MCMURRAY, AB T9H 4W1 Canada Attn: Patrick Spargo Tel: (780)792-2977	System Volume: 0 ltr Bulk Operating Temp: 482F / 250C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO HTF Make:	Lab No: 02248010 Analyst: Benjamin Latorre Sample Date: 10/16/18 Received Date: 10/29/18 Completed: 11/08/18

Recommendation: Except for the low Phosphorus, sample appears Normal/Acceptable. Resample at next interval.

Comments: Wear metals low. 1. Water and Acid Number are acceptable. 2. Hazy appearance from 0.2% Emulsified Water. 1. Viscosity is slightly below minimum acceptable. 2. Phosphorus additive is below minimum acceptable level.

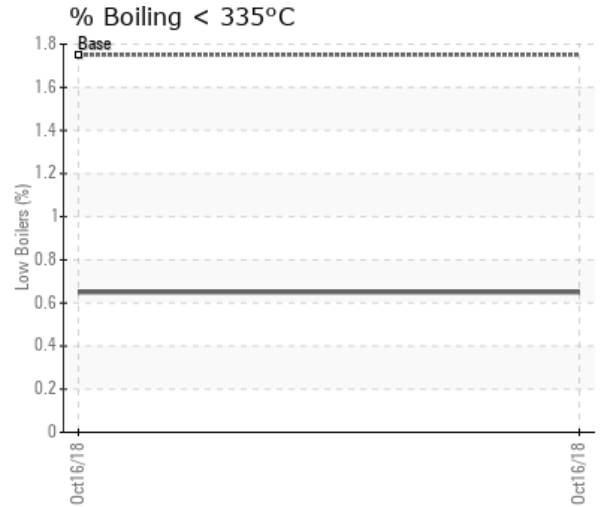
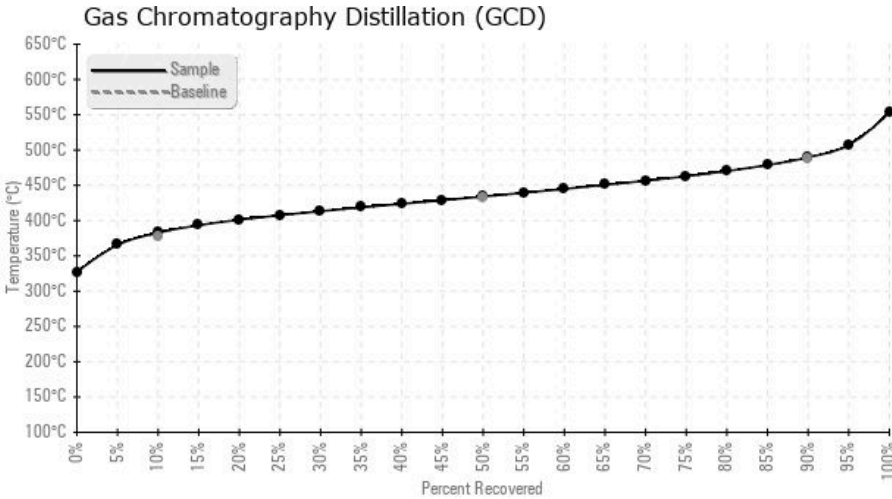
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
10/16/18	10/29/18	0d		432 / 222	190.0	31.3	0.095	0.047	721 / 383	813 / 434	913 / 490	0.65
Baseline Data				448 / 231		35.20	.1		712 / 378	810 / 432	910 / 488	1.75





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
10/16/18	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	11	0
<b>Baseline Data</b>			0	0						0			0	0					0				280	

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



### Historical Comments


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