

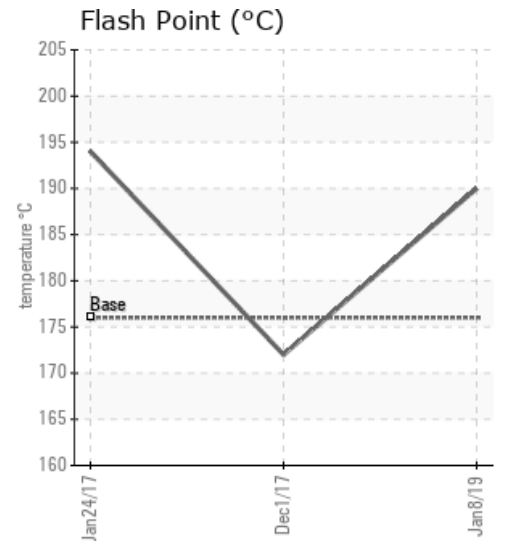
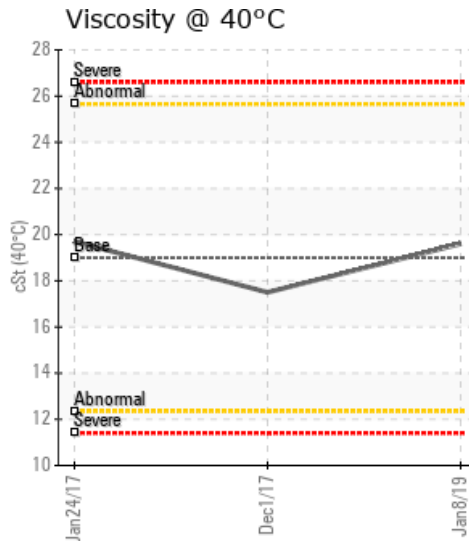
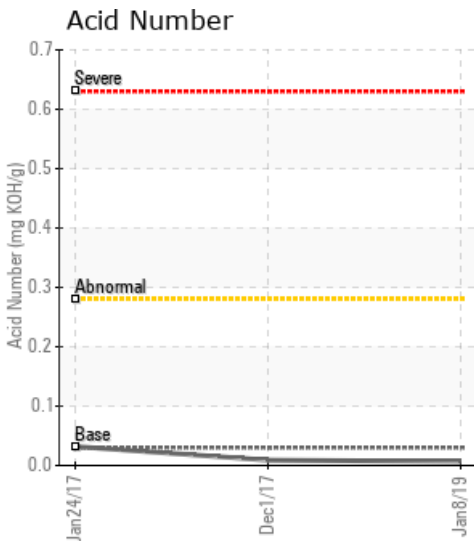
[CRESCENT POINT ENERGY / 9-16-1-14W2] FLAT LAKE HOT OIL SYSTEM

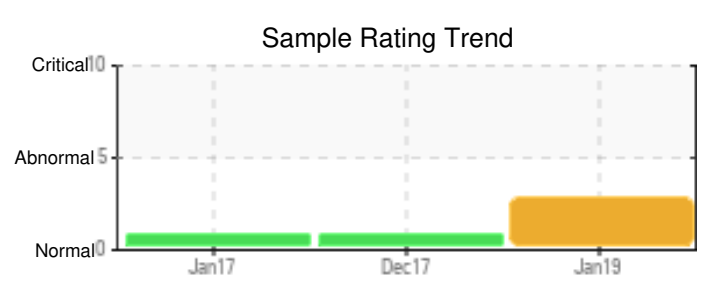
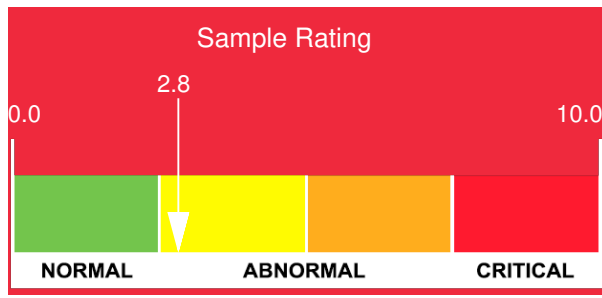
Customer: PTRHTF20180	System Information	Sample Information
CRESCENT POINT ENERGY 801 RAILWAY AVE W CARLYLE, SK S0C 0R0 Canada Attn: Jared Garnier Tel: E-Mail: jgarnier@crescentpointenergy.com	System Volume: 35000 ltr Bulk Operating Temp: 347F / 175C Heating Source: Blanket: Fluid: MONSANTO THERMINOL 55 Make: HEAT TECH	Lab No: 02262635 Analyst: Gloria Gonzalez Sample Date: 01/08/19 Received Date: 01/16/19 Completed: 02/07/19

Recommendation: Fluid remains in good condition however there are early indications (see comments from the lab) that some thermal cracking has taken place. Suggest another sample in 6 months to determine the direction of the trend.

Comments: (GCD) 90% Distillation Point is abnormally high. (GCD) % < 335°C is marginally high.

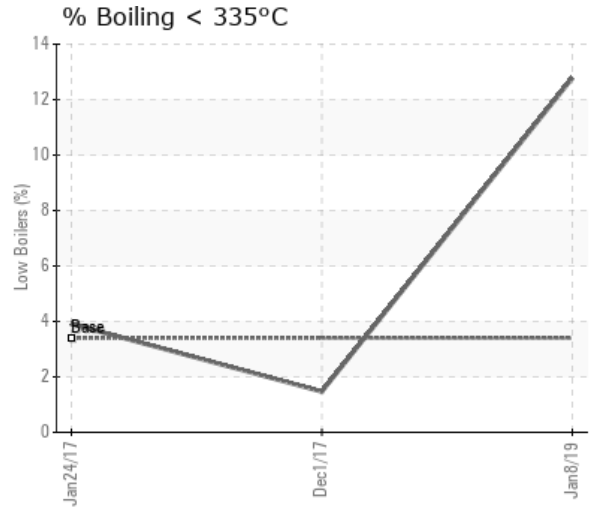
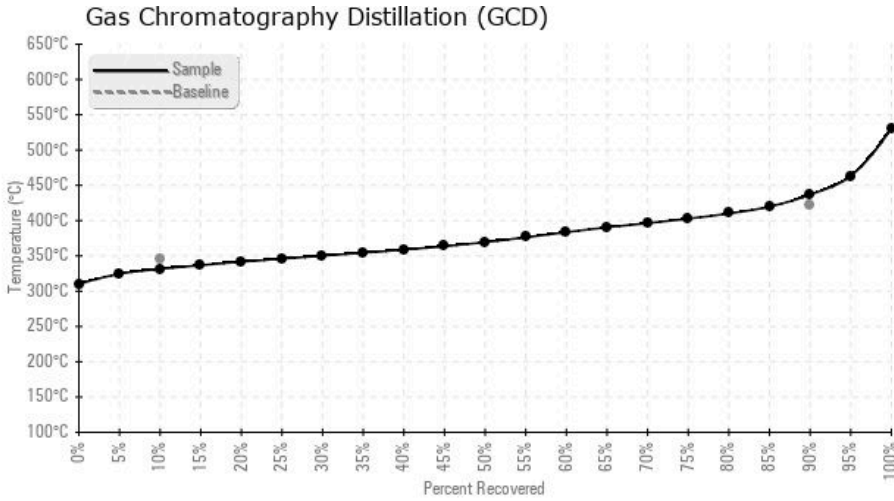
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
01/08/19	01/16/19	39m		374 / 190	157.2	19.6	0.007	0.052	629 / 331	697 / 369	818 / 437	12.78
12/01/17	12/08/17	25m		342 / 172	50.6	17.5	0.009	0.032	657 / 347	719 / 382	822 / 439	1.47
01/24/17	01/27/17	15m	CIRC PUMP SUCTION	381 / 194	144.5	19.7	0.032	0.009	649 / 343	706 / 375	795 / 424	3.91
Baseline Data				349 / 176		19.0	0.03		655 / 346		790 / 421	3.40





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
01/08/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/01/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01/24/17	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4	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	
12/01/17	Fluid remains in very good overall condition. No sign of free water that we saw in Jan 2017. Slight increase in GCD temps. Suggest annual sampling to be proactive. (GCD) Distillation Points are increasing slightly, particularly the 90% value is in the 'abnormal' range.
01/24/17	Fluid is in very good condition. The only concern is the .2% free water. To be proactive, suggest submitting samples annually or sooner but only if the system conditions become severe.

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