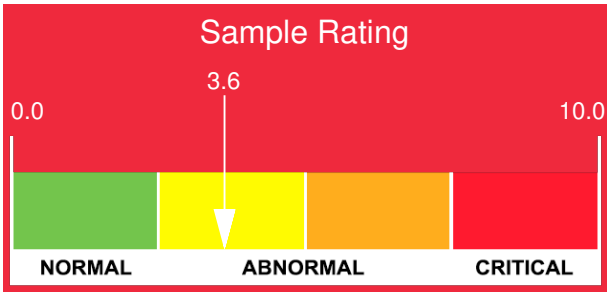
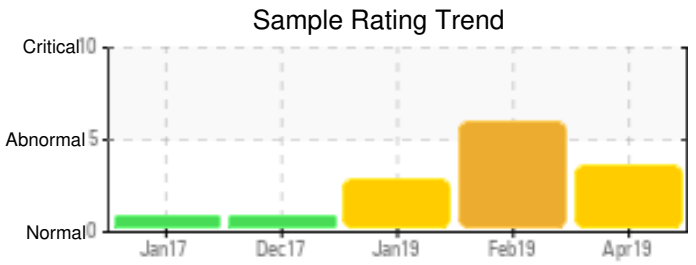
PETRO-CANADA LUBRICANTS





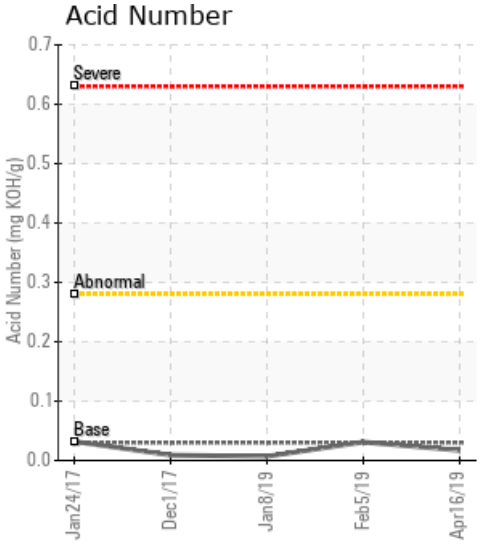
[CRESCENT POINT ENERGY / 9-16-1-14W2] FLAT LAKE HOT OIL SYSTEM

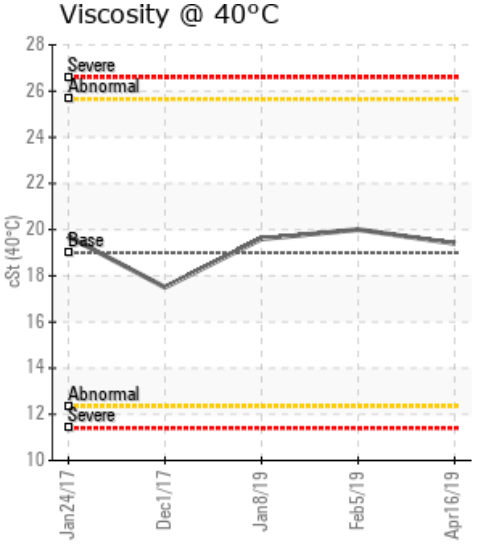
Customer: PTRHTF20180	System Information	Sample Information
CRESCENT POINT ENERGY 801 RAILWAY AVE W CARLYLE, SK S0C 0R0 Canada Attn: Marius Wotta Tel: (306)577-9417 E-Mail: mwotta@crescentpointenergy.com	System Volume: 35000 ltr Bulk Operating Temp: 347F / 175C Heating Source: Blanket: Fluid: EASTMAN THERMINOL 55 Make: HEAT TECH	Lab No: 02281681 Analyst: Kevin McDermott Sample Date: 04/16/19 Received Date: 04/26/19 Completed: 04/29/19

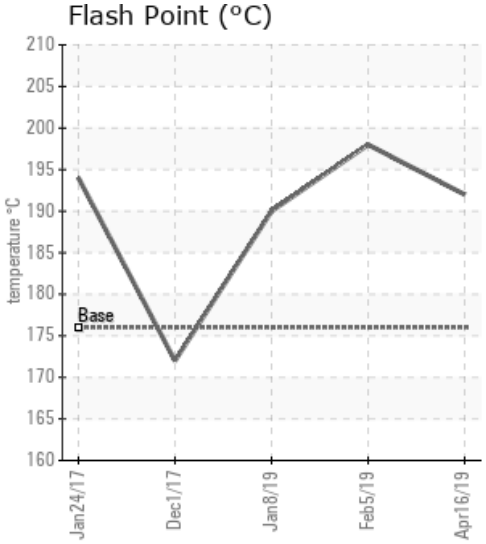
Recommendation: The low-boiler content (GCD<335c) has come down to normal level since venting.

Comments: Fluid condition is good, much improved from previous sample which is due to the venting of the fluid. Suggest another sample in 6 months or so. Water contamination levels are somewhat higher than expected. The low-boiler content (GCD<335c) has come down to normal level since venting. The GCD 90% is high which is likely due to the percentages of other fluids, Petro-Therm & Chevron HT 46.

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	%
04/16/19	04/26/19	41m	PUMP SUCTION	378 / 192	736.6	19.4	0.017	0.054	651 / 344	719 / 382	837 / 447	3.08
02/05/19	02/12/19	40m		388 / 198	462.9	20.0	0.031	0.023	626 / 330	692 / 366	827 / 442	14.27
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







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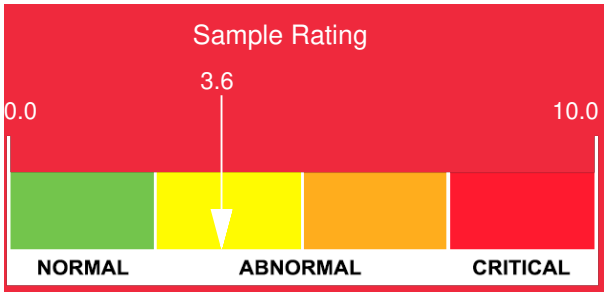
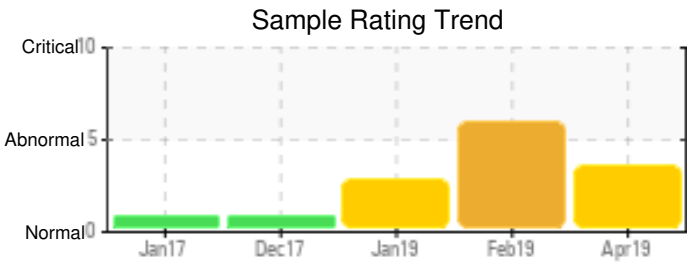
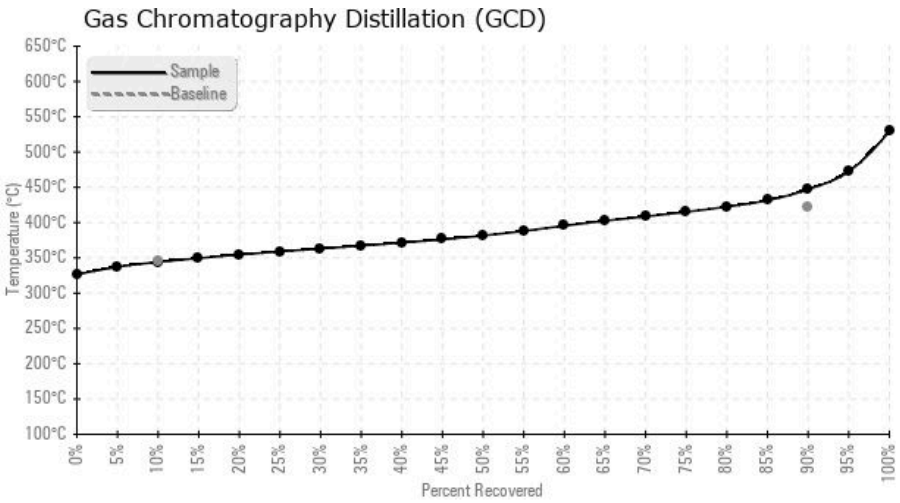
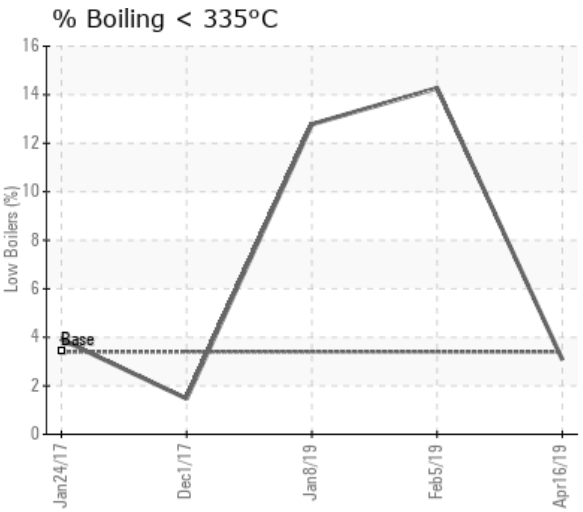




Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
04/16/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02/05/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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 anaysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]





Historical Comments

02/05/19	No significant change since the January sample other than increase in water content. Suggest venting the expansion tank to reduce the low boiler vapors and water content. Re-sample in 6 months. ppm Water contamination levels are marginally high. Water contamination levels are marginally high. (GCD) % < 335°C is abnormally high. (GCD) 90% Distillation Point is abnormally high.
01/08/19	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. (GCD) 90% Distillation Point is abnormally high. (GCD) % < 335°C is marginally high.
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.