

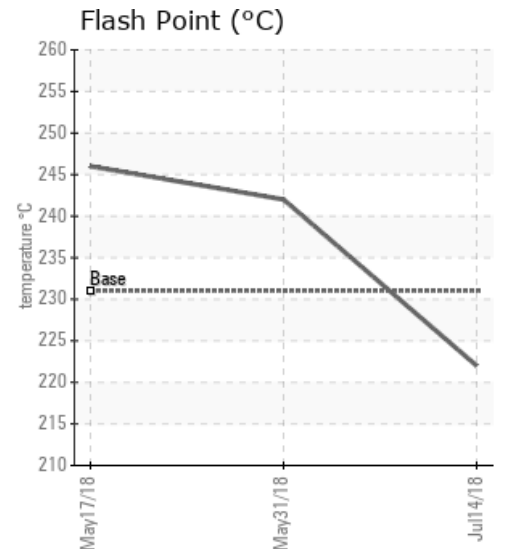
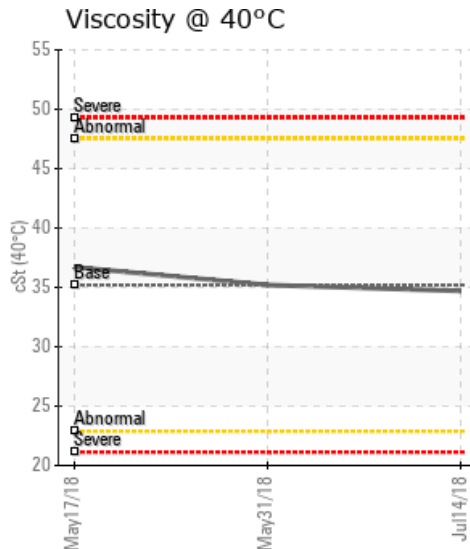
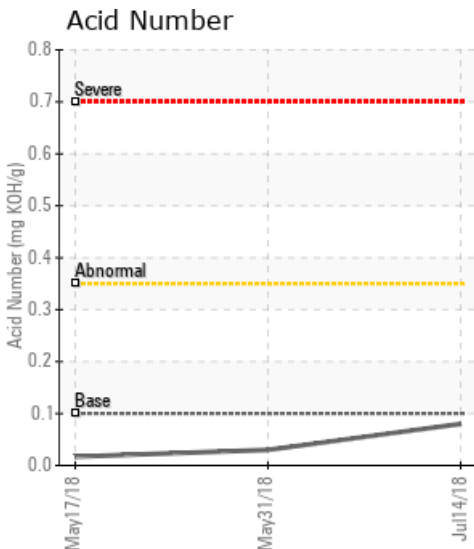
[SUNCOR MACKAY RIVER] WELL 750

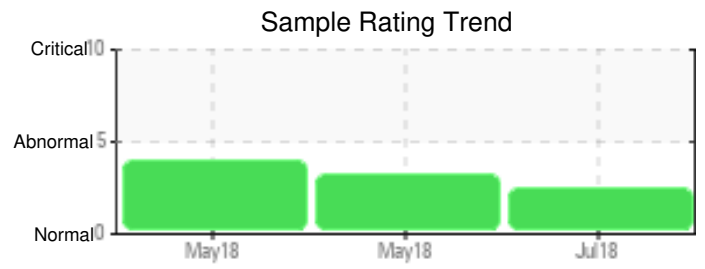
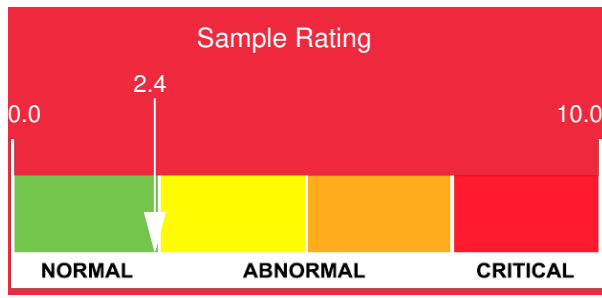
Customer: PTRHTF20196	System Information	Sample Information
SUNCOR ENERGY MACKAY RIVER PROJECT DOCK M FORT MCMURRAY, AB T9H 4W1 Canada Attn: Patrick Spargo Tel: (780)792-2977	System Volume: 13000 ltr Bulk Operating Temp: 518F / 270C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO HTF Make: HOCS	Lab No: 02229556 Analyst: Benjamin Latorre Sample Date: 07/14/18 Received Date: 07/20/18 Completed: 09/04/18 To discuss this report contact Benjamin Latorre at (587)275-0499

Recommendation: 1. Vent the expansion tank regularly to reduce water contaminants and low boilers. 2. Wear metals, Pentane Insolubles and Acid Number are low/normal. 3. Resample periodically to check on trending of test values.

Comments: Water contamination levels are marginally high.

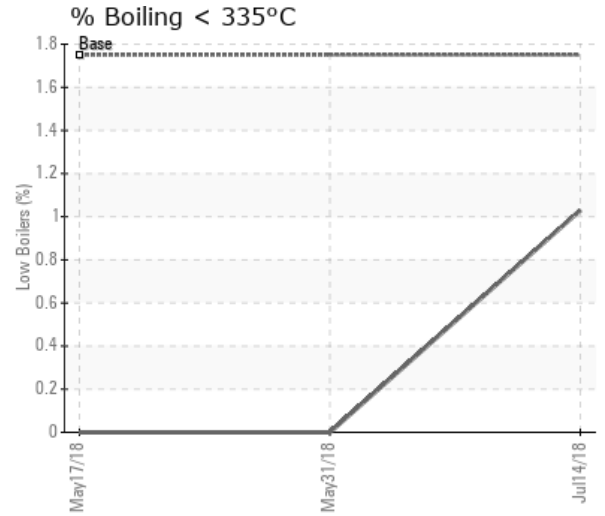
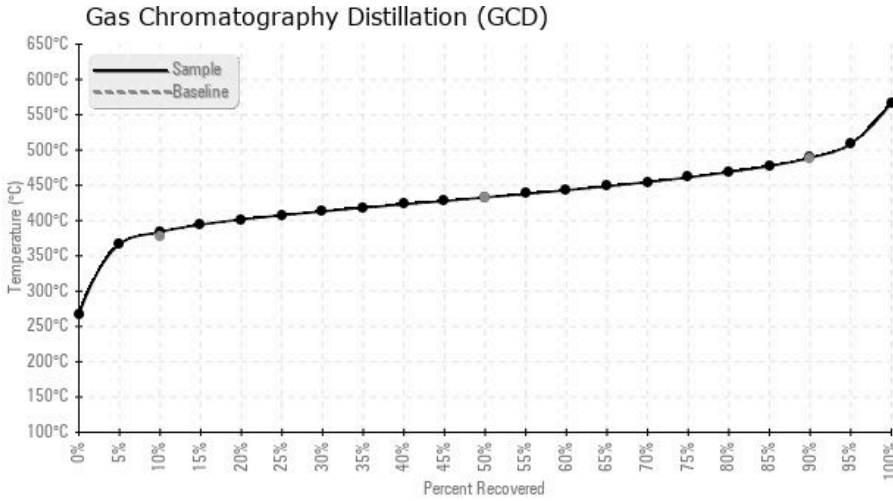
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
07/14/18	07/20/18	0d		432 / 222	554.3	34.7	0.08	0.013	723 / 384	811 / 433	912 / 489	1.03
05/31/18	06/12/18	0d	WELL RETURN #2	468 / 242	2006.6	35.2	0.03	0.053	715 / 379	787 / 420	893 / 478	0.00
05/17/18	05/28/18	2d	WELL RETURN #2	475 / 246	6027.8	36.7	0.017	0.041	726 / 386	805 / 429	905 / 485	0.00
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
07/14/18	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	10	0
05/31/18	5	0	0	0	0	0	0	0	0	0	8	0	1	0	0	0	0	0	1	1	2	0	106	0
05/17/18	8	0	0	0	0	0	0	0	0	0	7	1	1	0	1	0	0	0	2	0	8	0	293	1
Baseline Data			0	0						0			0	0					0				280	

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



Historical Comments	
05/31/18	Water contamination levels are severely high. Water contamination levels are severely high.. ppm Water contamination levels are severely high.
05/17/18	Water contamination levels are severely high. Water contamination levels are severely high.. ppm Water contamination levels are severely high.

Petro-Canada makes no representation or warranty of any kind, either express or implied, as to the accuracy or completeness of the analysis and assumes no responsibility and shall have no liability whatsoever with respect to such analysis, or a party's use of it. Petro-Canada is a division of HollyFrontier Corporation.