

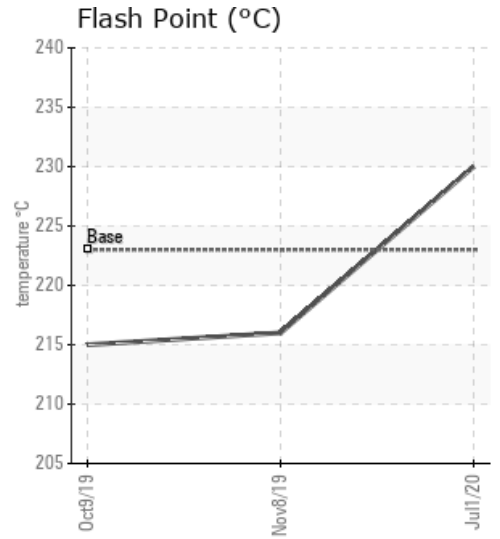
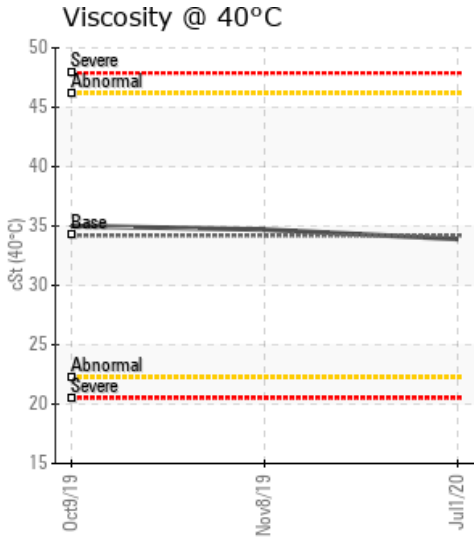
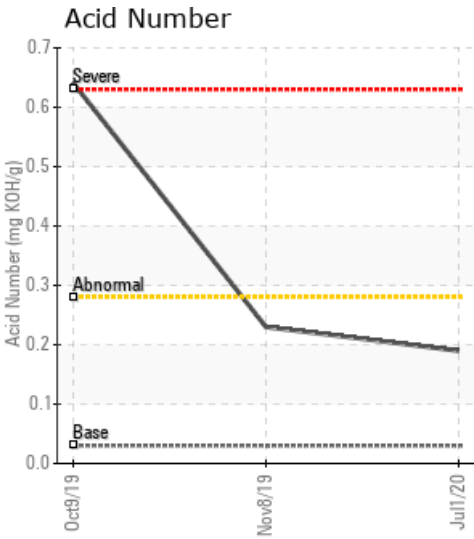
### [4-21-55-23-W5] H-1311

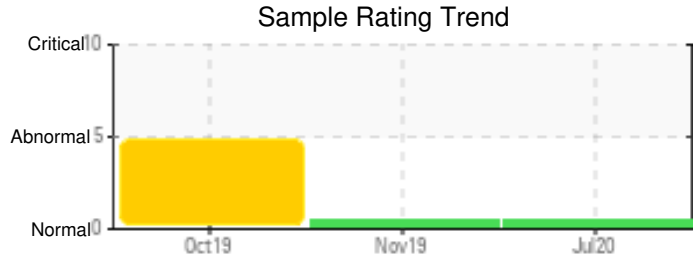
Customer: PTRHTF20089	System Information	Sample Information
PEYTO ENERGY TRUST - WILDHAY Box 7198 Edson, AB T4E 1V4 Canada Attn: Sonny Claybo Tel: (780)817-4339 E-Mail: sclaybo@peyto.com	System Volume: 18000 ltr Bulk Operating Temp: 351F / 177C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: ALCO	Lab No: 02378291 Analyst: Terry Veenstra Sample Date: 07/01/20 Received Date: 09/28/20 Completed: 10/05/20 Terry Veenstra terry.veenstra@petrocanadalsp.com

Recommendation: Sample indicates that the fluid looks to be in good condition. Resample in 6 months.

Comments:

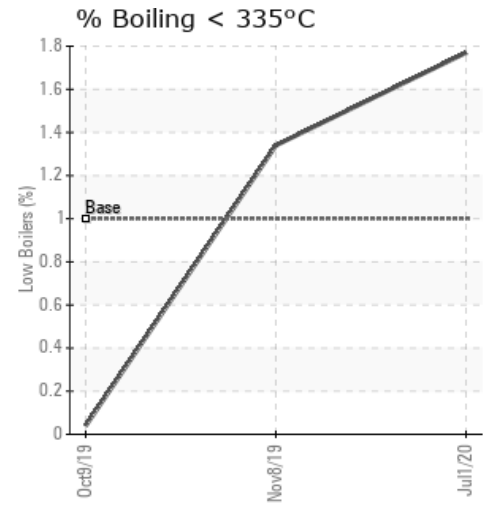
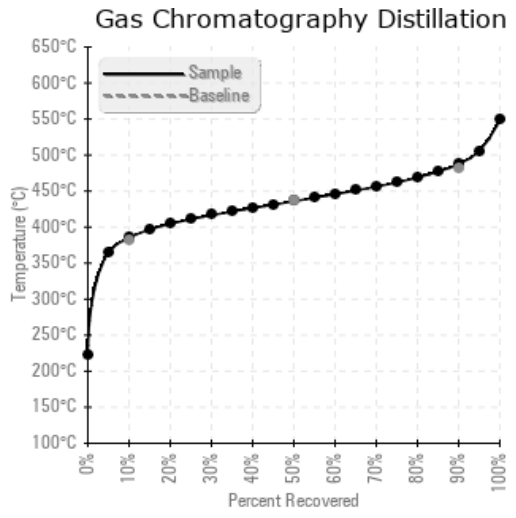
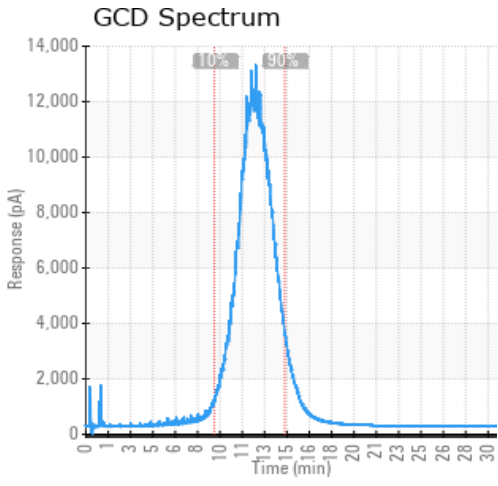
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
07/01/20	09/28/20	11m	Pump Discharge	446 / 230	14.5	33.9	0.19	0.316	725 / 385	817 / 436	910 / 488	1.77
11/08/19	11/18/19	90m	DISCHARGE	421 / 216	0.8	34.7	0.230	0.253	711 / 377	805 / 430	899 / 481	1.34
10/09/19	10/16/19	60m		419 / 215	5.8	35.0	0.641	0.462	741 / 394	832 / 445	927 / 497	0.04
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
07/01/20	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
11/08/19	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
10/09/19	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	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

11/08/19	The fluid is in a good condition and suitable for further use. The AN has decreased to 0.23 which is acceptable. The fluid is no longer acidic which minimizes corrosion. Please re-sample in 6 months.
10/09/19	For a fluid that has been in service for 60 days it is in poor condition. The AN is high, fluid is slightly acidic. Fe content of 30 ppm is indicative of that. (corrosion) The 90% GCD temperature is high. This in combination with the high AN indicates fluid degradation by oxidation. Pentane Insoluble (solids) content is slightly high with 0.46% (reportable limit is 0.5%). Filtration of the fluid has to be considered. To stop the fluid from becoming more acidic, causing further system corrosion, it is recommended the sweeten 25% of the fill with fresh fluid. Please re-sample after sweetening. Pentane Insolubles levels are abnormally high. Acid Number (AN) is severely high. (GCD) 90% Distillation Point is abnormally high.

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