

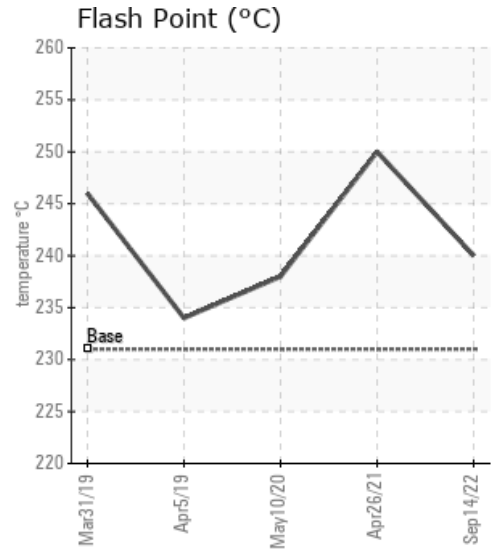
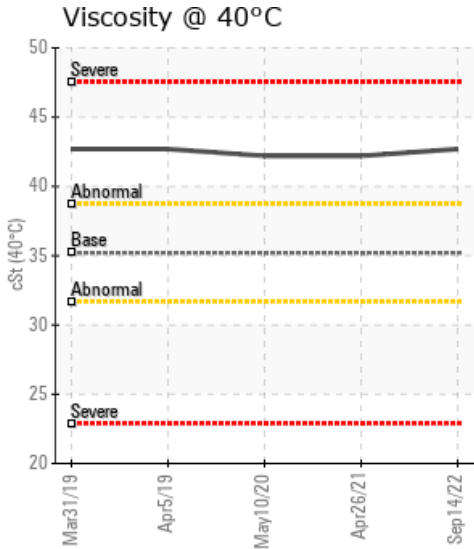
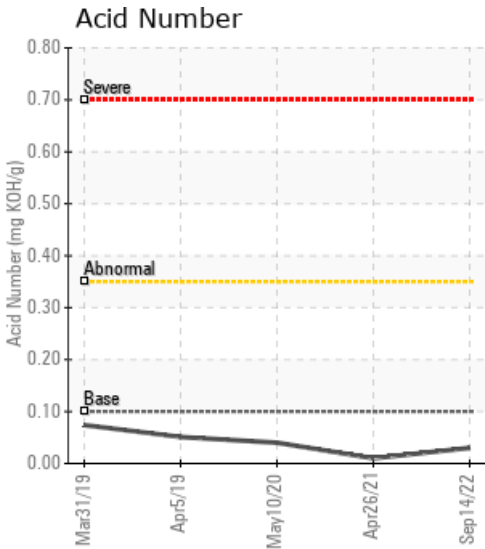
## [16-17-064-26W5] H800

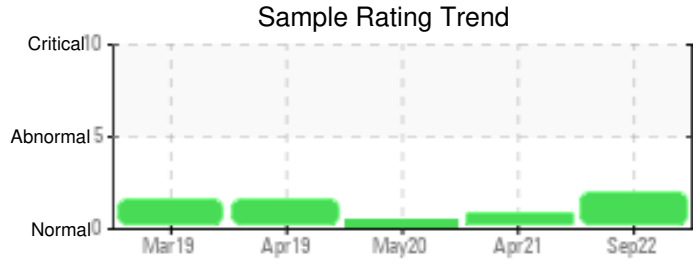
Customer: PTRHTF20211	System Information	Sample Information
Paramount Resources Inc.	System Volume: 6000 ltr	Lab No: 02513674
Simonette, AB Canada	Bulk Operating Temp: 365F / 185C	Analyst: Clinton Buhler
Attn: Ryan Holtet	Heating Source:	Sample Date: 09/14/22
Tel: (780)622-7078	Blanket:	Received Date: 09/28/22
E-Mail: ryan.holtet@paramountres.com	Fluid: PETRO CANADA CALFLO HTF	Completed: 10/04/22
	Make: FOSTER WHEELER	Clinton Buhler
		Clinton.Buhler@HFSinclair.com

Recommendation: Sample results indicate the fluid is in suitable condition for continued service. Although fluid viscosity and GCD temperatures remain elevated compared to new fluid, these parameters remain steady year over year and do not suggest ongoing fluid degradation. Please re-sample in 12 months.

Comments:

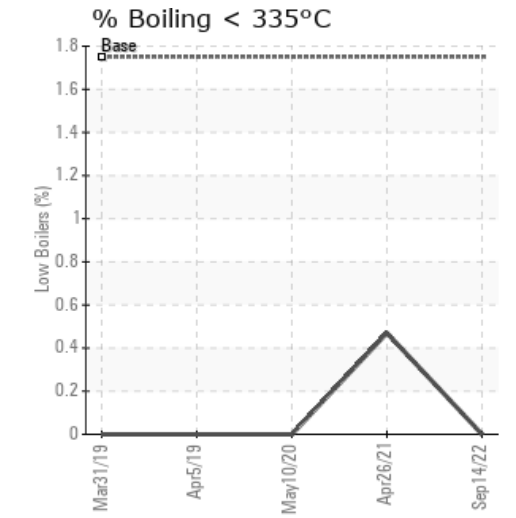
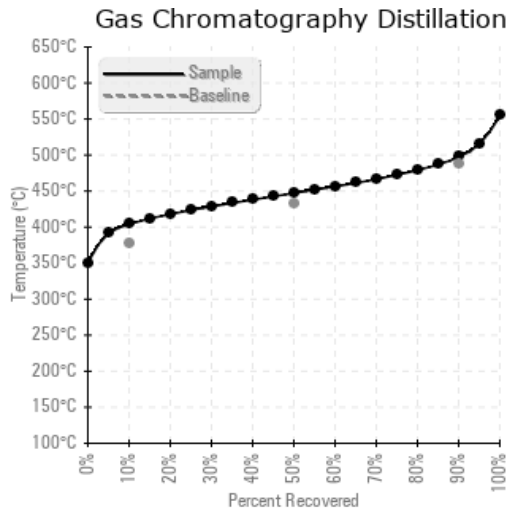
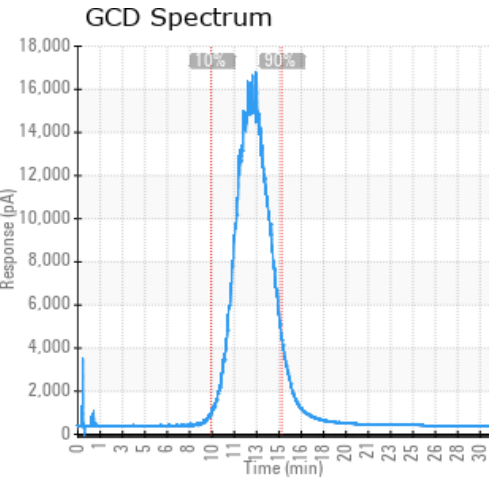
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
09/14/22	09/28/22	12.0y	pump discharge	464 / 240	27.1	42.7	0.03	0.057	759 / 404	837 / 447	927 / 497	0.00
04/26/21	05/19/21	10.0y	Pump Discharge	482 / 250	5.6	42.2	0.01	0.104	746 / 397	821 / 438	918 / 492	0.47
05/10/20	06/12/20	5.0y	PUMP SUCTION	460 / 238	0.00	42.2	0.04	0.064	759 / 404	838 / 448	927 / 497	0.00
04/05/19	04/12/19	800.0y	PUMP DISCHARGE	453 / 234	101.6	42.7	0.051	0.070	757 / 403	839 / 449	936 / 502	0.00
03/31/19	04/12/19	0.0y	PUMP DISCHARGE	475 / 246	70.6	42.7	0.074	0.069	760 / 404	839 / 449	933 / 501	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
09/14/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	55	0
04/26/21	3	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	3	0	53	0
05/10/20	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	0	49	0
04/05/19	4	0	0	0	0	0	0	0	0	0	0	5	2	0	0	0	0	0	0	1	5	0	54	0
03/31/19	2	0	0	0	0	0	0	0	0	0	0	8	3	0	0	0	0	0	0	2	6	0	62	0
<b>Baseline Data</b>			0	0						0		0	0				0	0					280	

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



Historical Comments	
04/26/21	Sample results indicate that the fluid is in suitable condition for continued service. Viscosity and GCD results remain slightly elevated which can indicate mixture with a heavier fluid but there aren't major indicators of fluid degradation. Please re-sample in 12 months.
05/10/20	The fluid is in a good condition and suitable for further use. Viscosity is slightly high. This combined with elevated distillation temperatures indicates that the fill contains a heavier fluid, possibly Sunoil 21. This is not a problem. Please re-sample in 12 months. (GCD) 10% Distillation Point is abnormally high. (GCD) 50% Distillation Point is marginally high.
04/05/19	The fluid is in good condition and suitable for further use. Viscosity is high. This in combination with elevated distillation temperatures indicates that the system fill is a mix of Calfo HTF with a heavier fluid. (GCD) 90% Distillation Point is abnormally high. (GCD) 10% Distillation Point is marginally high.
03/31/19	The fluid is in a good condition and suitable for further use. High viscosity, Flash Point in combination with elevated distillation temperatures indicates that the system fill consists of a mix of Calfo HTF and a heavier fluid. (GCD) 90% Distillation Point is abnormally high. (GCD) 10% Distillation Point is marginally high.

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