

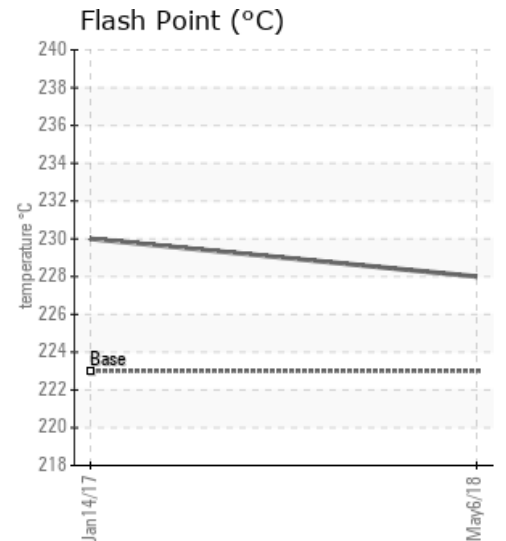
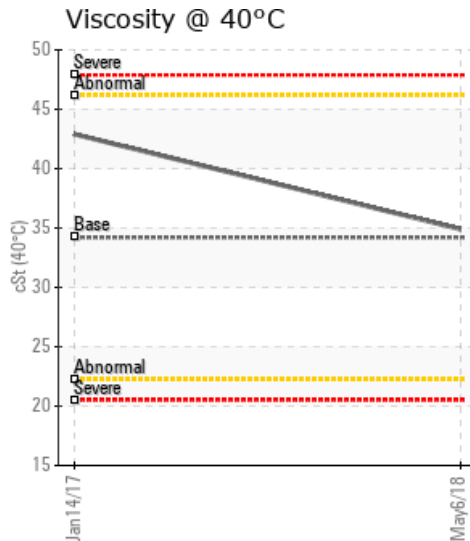
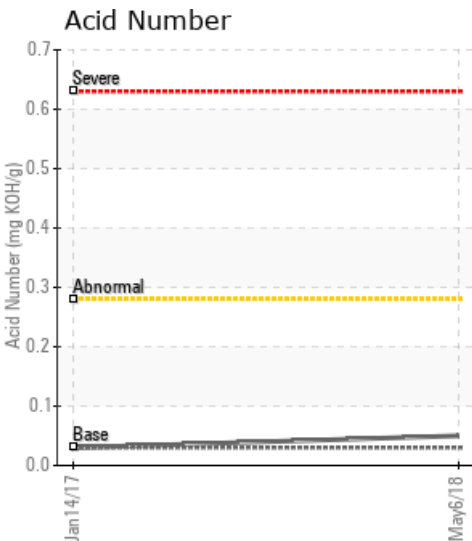
[STORM RESOURCES / C-39-D/94-H-3] H-4030

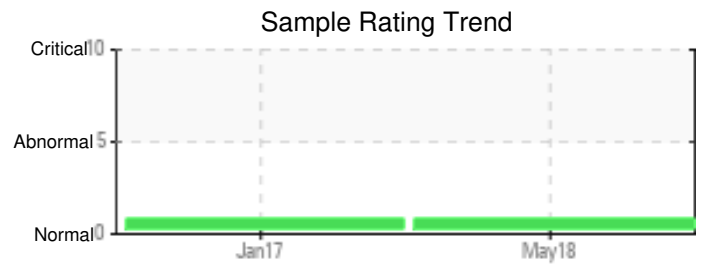
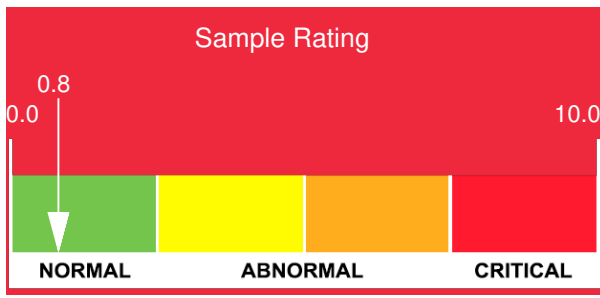
Customer: PTRHTF20182	System Information	Sample Information
Storm Resources Ltd. PO Box 1420, Stn M Calgary, AB T2P 2L6 Canada Attn: Travis Cameron Tel: (250)263-1263 E-Mail: travisc@stormresourcesltd.com	System Volume: 14000 ltr Bulk Operating Temp: 284F / 140C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: ALCO	Lab No: 02214441 Analyst: Clinton Buhler Sample Date: 05/06/18 Received Date: 05/07/18 Completed: 06/07/18 To discuss this report contact Clinton Buhler at 780-516-9920

Recommendation: Sample results indicate that fluid is suitable for continued service. Please note the % boil-off below 335C: 2.82%. This can be an indication of thermal degradation while slightly increased 90% distillation value of 492C can be an indication of oxidation. As part of a robust thermal fluid maintenance program, perform regular venting of expansion tank to release the low boiling vapors. Ensure expansion tank blanket gas is operational after venting and set between 2-3 psi. Re-sample in 12 months.

Comments: (GCD) 90% Distillation Point is marginally high.

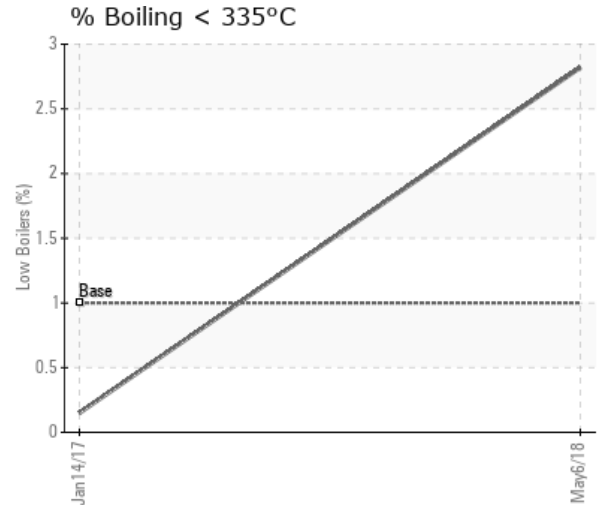
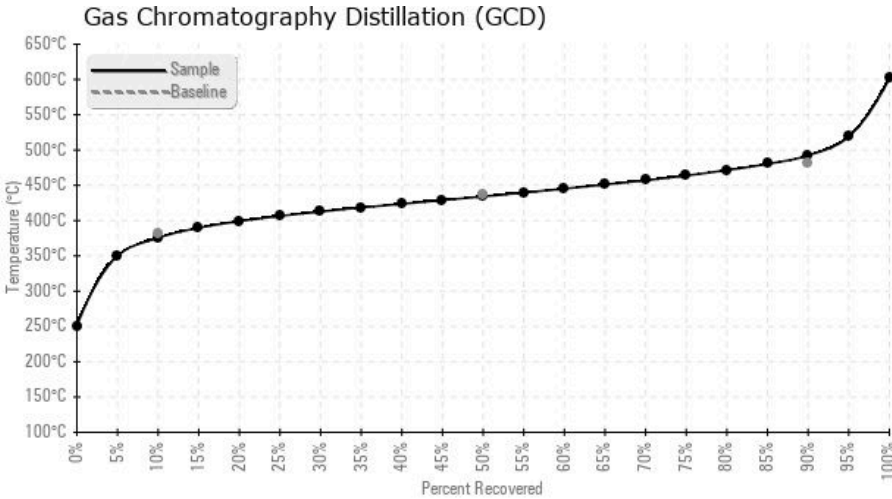
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
05/06/18	05/07/18	13000h		442 / 228	18.4	34.9	0.05	0.043	708 / 376	814 / 434	918 / 492	2.82
01/14/17	02/13/17	4h	SIGHT GLASS	446 / 230	13.5	42.9	0.03	0.062	727 / 386	813 / 434	907 / 486	0.15
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
05/06/18	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
01/14/17	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
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

01/14/17	(GCD) 90% Distillation Point is marginally low. TAN, Flashpoint and Viscosity all are within limits. Continue to operate and resample in 6 months. (GCD) 90% Distillation Point is marginally low.
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