

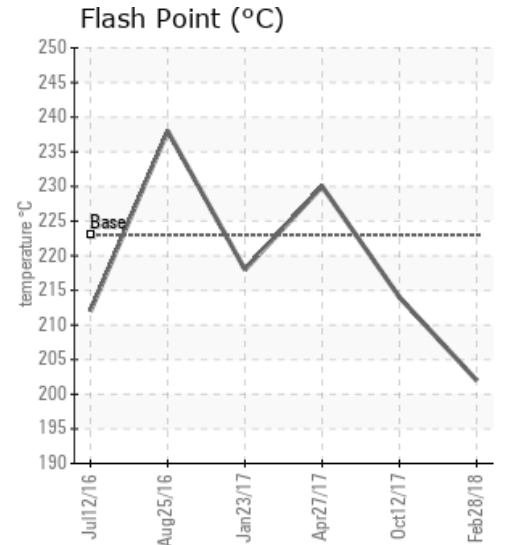
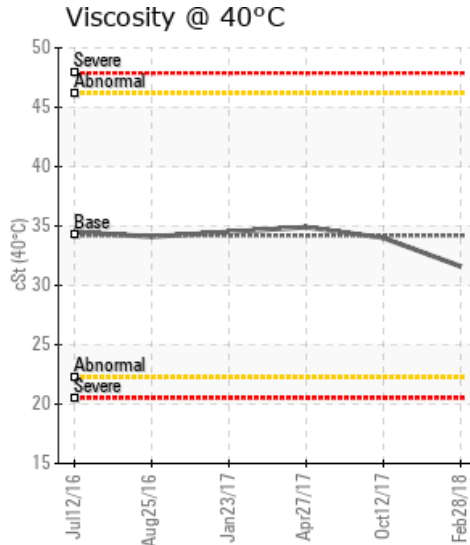
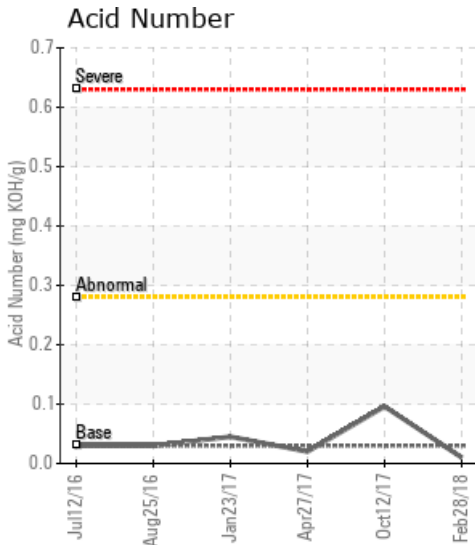
6-8-62-3W6

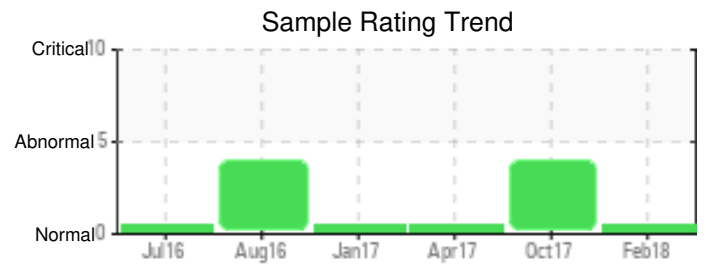
Customer: PTRHTF20191	System Information	Sample Information
STRATH RESOURCES 66-8-62-3W6 GRANDE PRAIRIE, AB Canada Attn: Ken Irving Tel: (250)361-6180 E-Mail: kenirving@gmail.com	System Volume: 19300 gal Bulk Operating Temp: 464F / 240C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: OEL	Lab No: 02203262 Analyst: Clinton Buhler Sample Date: 02/28/18 Received Date: 03/12/18 Completed: 03/20/18 To discuss this report contact Clinton Buhler at 780-516-9920

Recommendation: Sample results indicate that the fluid is suitable for continued service and has improved since last sample as both water and total Acid Number have reduced significantly. The percentage boil off <335C has increased from 0.75 to 1.46 and there has been a slight reduction in flash point. This can indicate possible thermal degradation or contamination. Consider regular venting of the expansion tank after which time the blanket gas is turned back on. Re-sample in 6-12 months.

Comments:

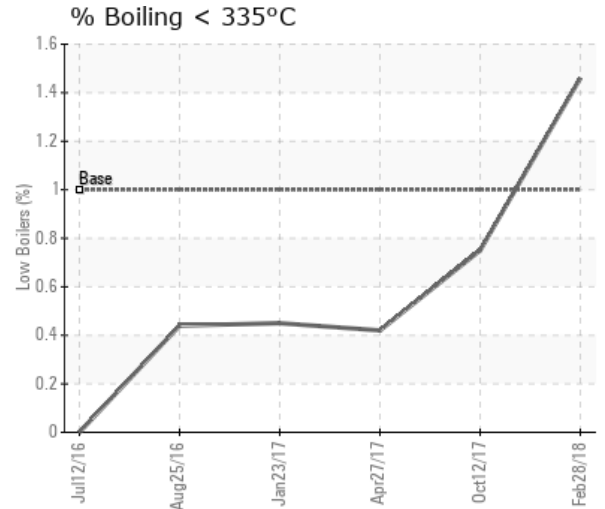
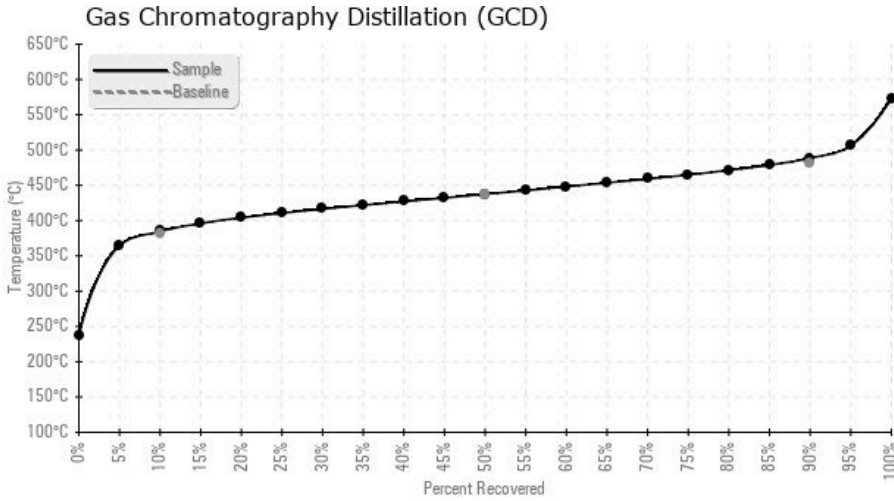
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
02/28/18	03/12/18	28m		396 / 202	45.8	31.6	0.01	0.042	724 / 385	820 / 438	911 / 489	1.46
10/12/17	10/18/17	25m		417 / 214	1774.0	34.0	0.096	0.044	723 / 384	813 / 434	910 / 488	0.75
04/27/17	04/28/17	20m	PUMP DISCHARGE	446 / 230	115.9	34.9	0.02	0.035	724 / 385	813 / 434	909 / 487	0.42
01/23/17	02/10/17	16m	PUMP INLET	424 / 218	58.9	34.5	0.045	0.027	723 / 384	811 / 433	913 / 490	0.45
08/25/16	08/29/16	11m	PUMP DISCHARGE	460 / 238	1029.9	34.1	0.03	0.052	725 / 385	812 / 434	915 / 490	0.44
07/12/16	07/19/16	10m		414 / 212	59.8	34.5	0.03	0.021	736 / 391	808 / 431	909 / 487	0.00
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	
02/28/18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10/12/17	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0
04/27/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
01/23/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
08/25/16	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
07/12/16	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	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

10/12/17	Water contamination can be a result of the expansion tank being exposed to precipitation. Slight increase in silicon (dirt/dust) may support this. Ensure points of ingress are sealed. Also confirm that sample was not drawn from a dead leg. Please always ensure a thorough purge before drawing sample. Allow water to boil off from expansion tank before putting blanket gas back into use. Aside from the water level in the oil, sample results indicate that the fluid is fit for continued service. Once water contamination has been vented and resolved, re-sample system in 6 months. Water contamination levels are severely high.
04/27/17	results indicate fluid is suitable for further use. GCD results, although consistent from previous results, can indicate the onset of oxidation. Re-sample within 12 months.
01/23/17	This sample indicates that the oil is in good condition and suitable for continued use. Resample in 6 months.
08/25/16	Besides the high water content the fluid is in a good condition. Water has since this sample was taken been removed by filtration and boil-off. It is recommended to continue to boil-off the water in order to reduce it to a more acceptable level (<500 ppm.) Please re-sample in one month. Water contamination levels are severely high. Water contamination levels are severely high.. ppm Water contamination levels are severely high.
07/12/16	The fluid is in excellent condition. Please re-sample in 6 months.