

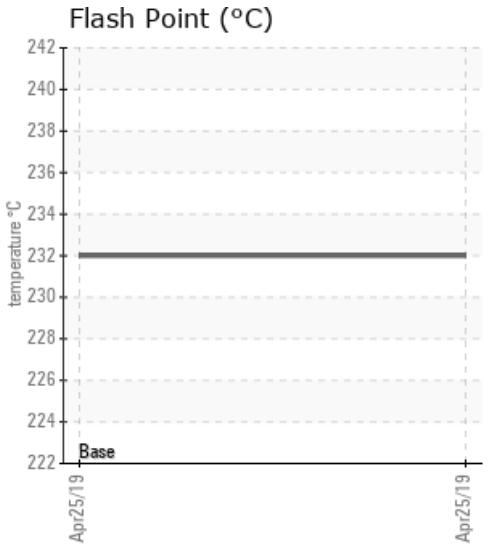
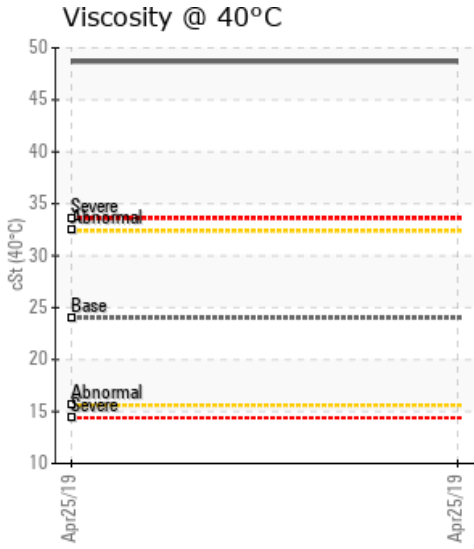
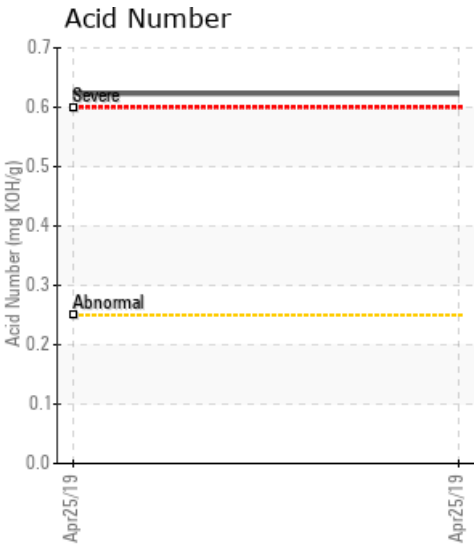
[TIDEWATER MIDSTREAM LSD / 5-1-39-1W5] TIDEWATER SYLOON LAKE

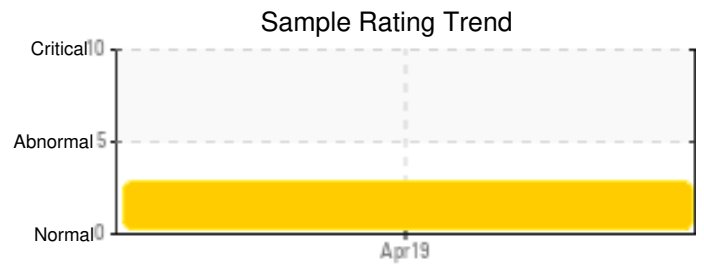
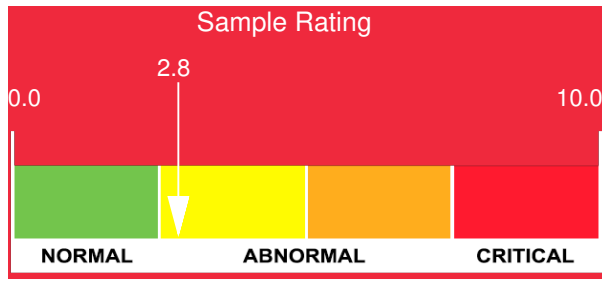
Customer: PTRHTF20006	System Information	Sample Information
Tidewater 21 Oxford Pl. Alder Flats, AB T0C 0A0 Canada Attn: Travis Smith Tel: (780)679-2498 E-Mail: tsmith@tidewatermidstream.com	System Volume: 20000 ltr Bulk Operating Temp: 345F / 174C Heating Source: Blanket: Fluid: CHEVRON HEAT TRANSFER OIL 22 Make: PROPAEK	Lab No: 02286540 Analyst: Terry Veenstra Sample Date: 04/25/19 Received Date: 05/22/19 Completed: 05/27/19

Recommendation: Acid Number is severely high, GCD Distillation number is severely high for 10% and 50%, Viscosity is high. Oxidation has resulted in increased viscosity, increased TAN and elevated GCD tests. Ensure gas blanket is in place to prevent oxidation of fluid from occurring. Consider sweetening oil in system with new oil.

Comments: Acid Number (AN) is severely high. (GCD) 10% Distillation Point is severely high. (GCD) 50% Distillation Point is severely high. Visc @ 40°C is severely high. (GCD) 90% Distillation Point is abnormally high.

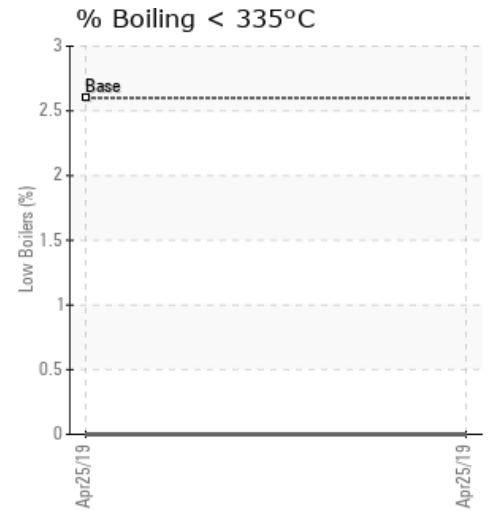
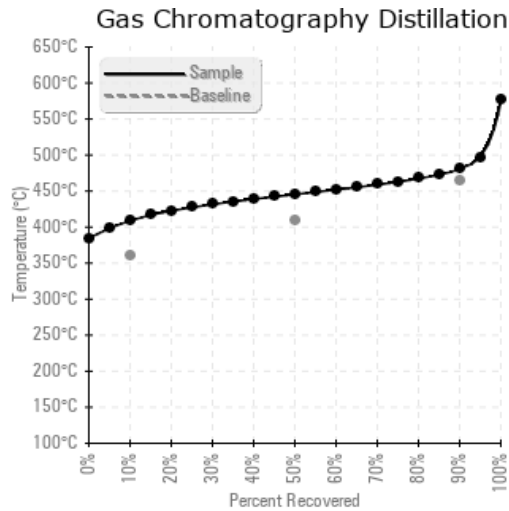
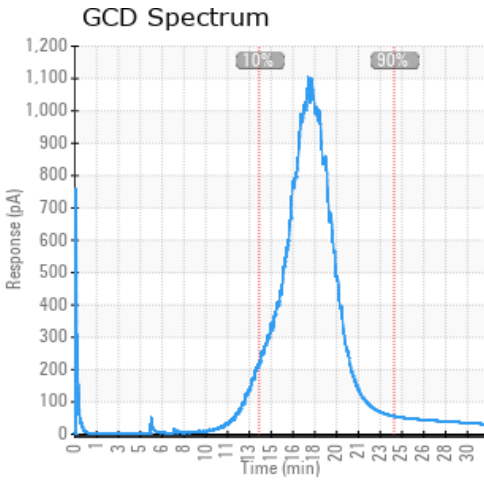
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
04/25/19	05/22/19	5y	OFF BOILER	450 / 232	14.9	48.7	0.623	0.080	768 / 409	834 / 445	897 / 481	0.00
Baseline Data				408 / 209		24			680 / 360	768 / 409	867 / 464	2.6





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
04/25/19	9	0	0	0	0	2	0	0	0	0	0	0	0	0	2	0	0	0	0	0	9	0	3	3
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

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