

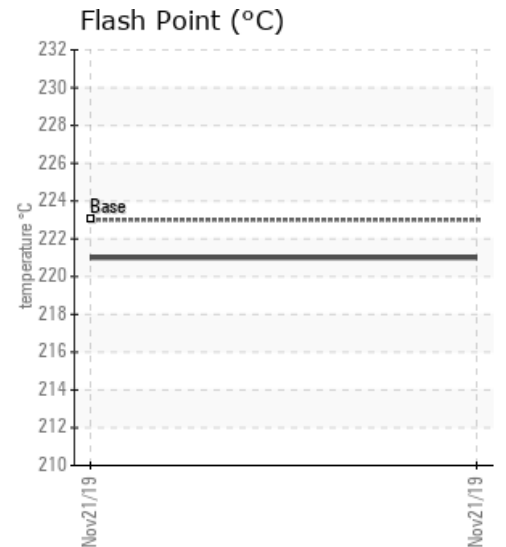
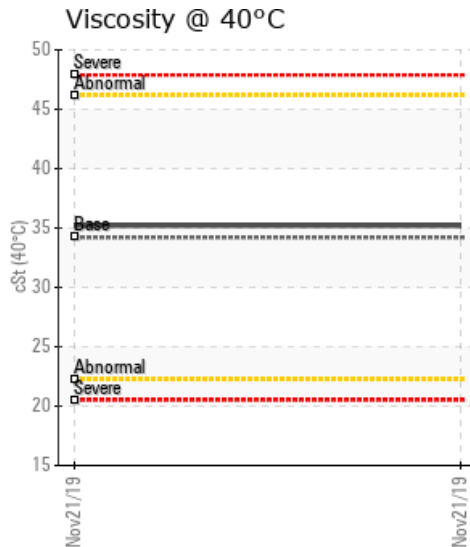
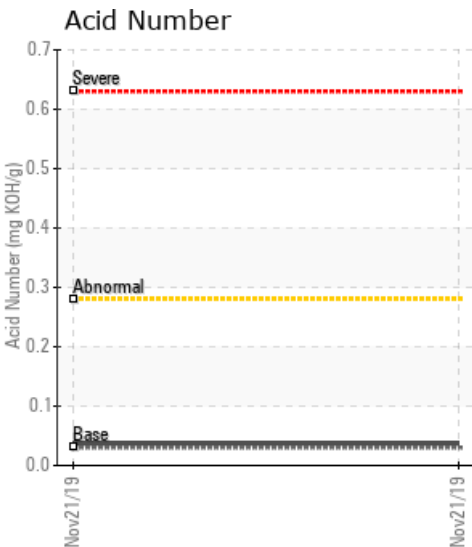
[LSD 11-21-66-3W6] PHASE #3 HEAT MEDIUM

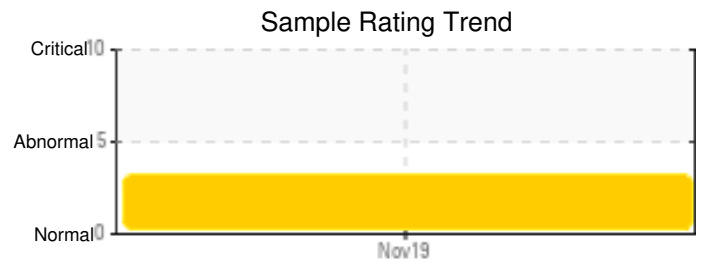
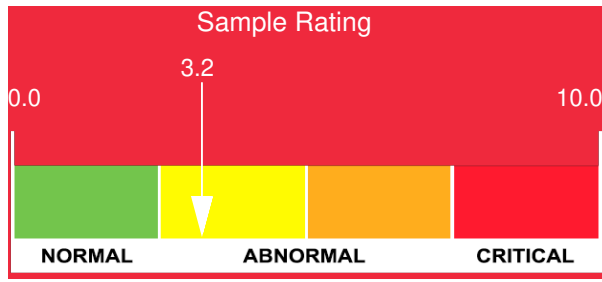
Customer: PTRHTF20236	System Information	Sample Information
Semcams Mldstream 11-21-66-3w6 Grande Prairie, AB Canada Attn: Don Dempsey Tel: (780)208-5089 E-Mail: ddempsey@semgroup.com	System Volume: 55000 ltr Bulk Operating Temp: 392F / 200C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: HEATEC	Lab No: 02335523 Analyst: Clinton Buhler Sample Date: 11/21/19 Received Date: 02/03/20 Completed: 02/20/20 Clinton Buhler Clinton.Buhler@PetroCanadaLSP.com

Recommendation: Sample results indicate that there is excess water in the system. This may be related to initial construction and commissioning or may also be related to where the sample could have been drawn from (stagnant low lying area where water can collect) and/or perhaps the sample valve and piping was not purged out thoroughly before taking the sample. Water vapor should be safely and thoroughly vented from the system expansion tank. Check for water at low spots in the system. Once this is completed, please re-sample in ~3-6 months, being cognizant to thoroughly purge the sample valve and piping before obtaining the sample.

Comments: Water contamination levels are abnormally high

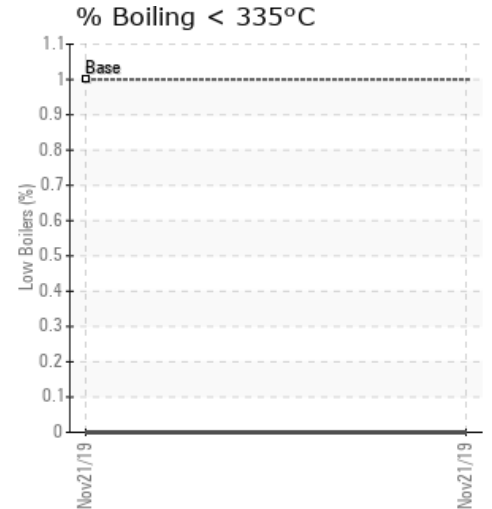
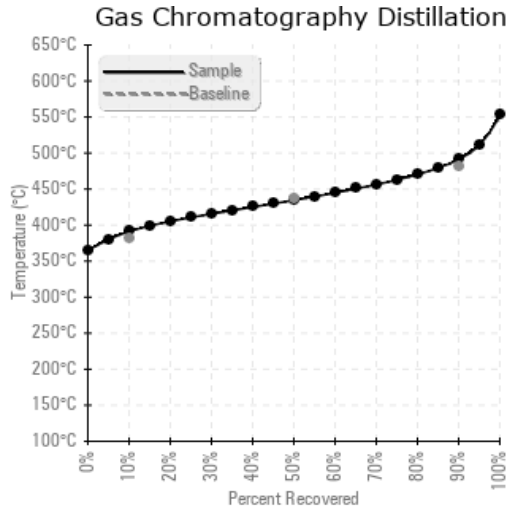
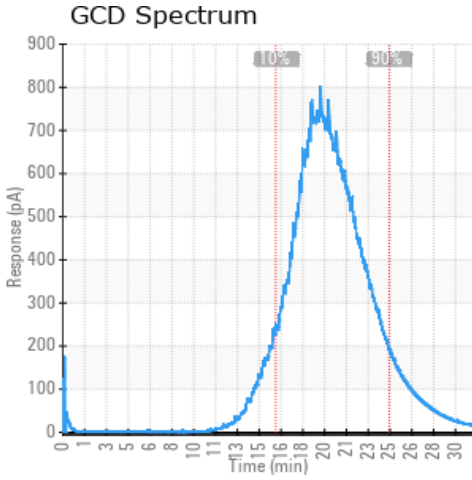
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
11/21/19	02/03/20	1m	PUMP SUCTION	430 / 221	814.9	35.2	0.037	0.050	736 / 391	814 / 435	916 / 491	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
11/21/19	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
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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