

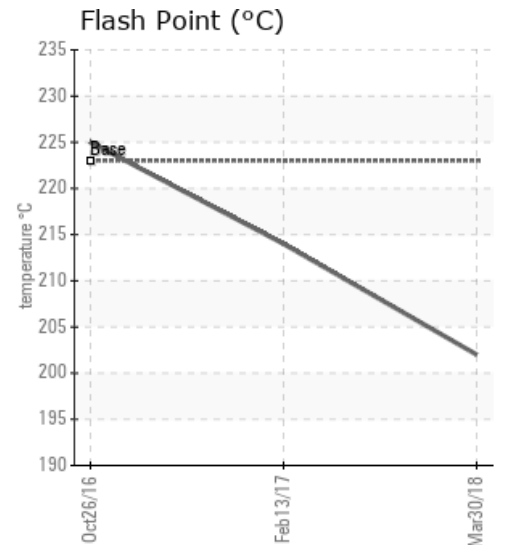
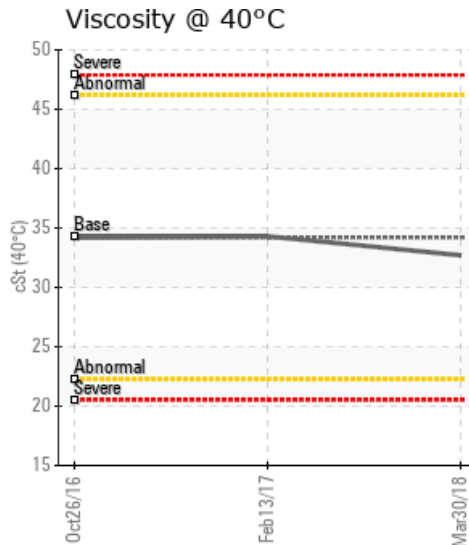
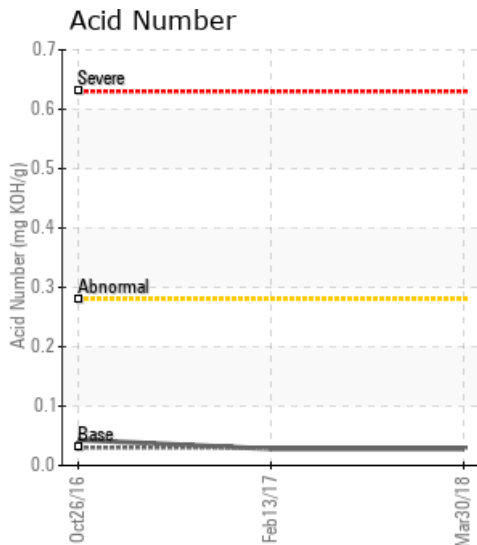
## [BONAVISTA PETROLEUM MARLBORO / 05-29-55-19W5] CL#1703-0315-01

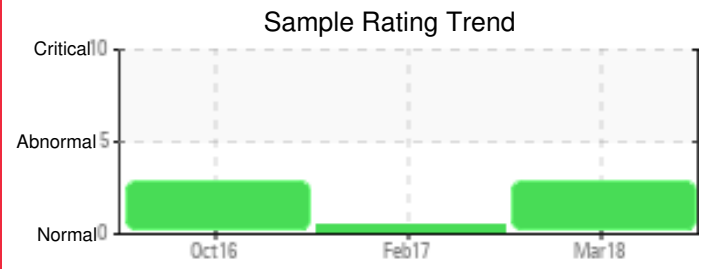
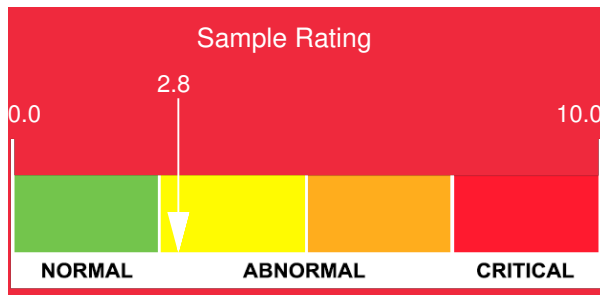
Customer: PTRHTF20039	System Information	Sample Information
BRENNTAG CANADA INC 3124-54TH AVENUE SE CALGARY, AB T2A 0A8 CANADA Attn: Sarada Palakodeti Tel: (403)720-5659 E-Mail: spalakodeti@brenntag.ca	System Volume: 3500 gal Bulk Operating Temp: 329F / 165C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: PETRO-TECH HEATERS	Lab No: 02209873 Analyst: Clinton Buhler Sample Date: 03/30/18 Received Date: 04/13/18 Completed: 04/20/18 To discuss this report contact Clinton Buhler at 780-516-9920

Recommendation: The fluid is in a good condition and suitable for further use. There is some normal degradation ongoing which has resulted in a high 90% GCD temperature. Please resample in 12 months.

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

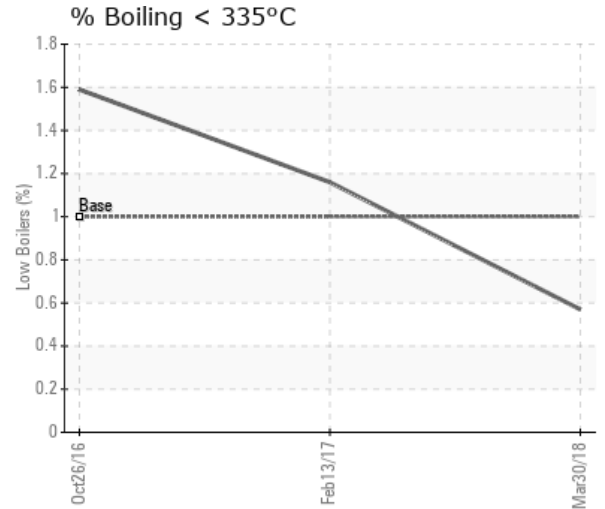
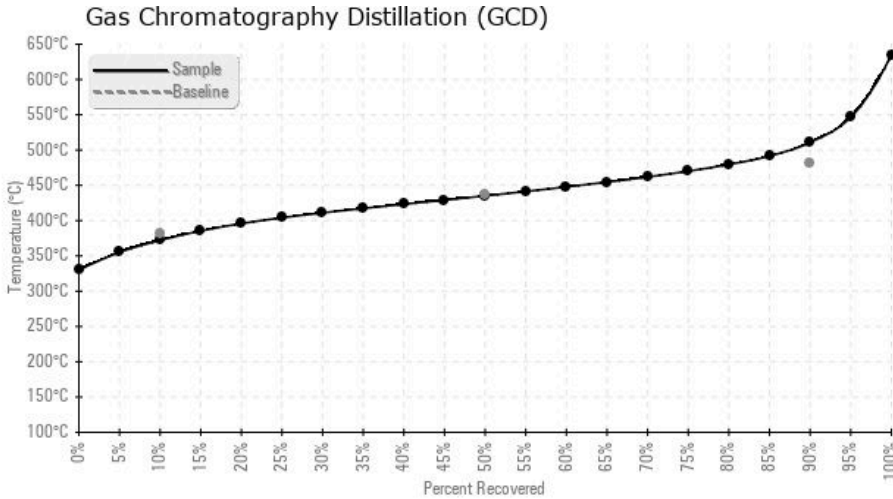
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
03/30/18	04/13/18	7y		396 / 202	210.0	32.7	0.028	0.008	702 / 372	815 / 435	951 / 511	0.57
02/13/17	03/24/17	0y		417 / 214	14.6	34.3	0.028	0.049	708 / 376	817 / 436	926 / 497	1.16
10/26/16	10/31/16	6y		437 / 225	275.8	34.2	0.043	0.020	695 / 369	805 / 430	912 / 489	1.59
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
03/30/18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02/13/17	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
10/26/16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	
02/13/17	Please completely fill in sample card information as this important data improves analysis. Sample results indicate that the fluid is in very good shape. No further action required at this time. Please re-sample in 12 months. (GCD) 90% Distillation Point is marginally high.
10/26/16	The fluid shows some thermal degradation but this is not a concern at this time. The water content is slightly elevated. It is recommended to boil-off the water. The fluid is suitable for further use.

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