

[BONAVISTA PETROLEUM MARLBORO / 05-29-55-19W5] BONAVISTA

Customer: PTRHTF20158
 BONAVISTA ENERGY
 16-11-54-15-W5
 PEERS, AB T0E 1W0 Canada
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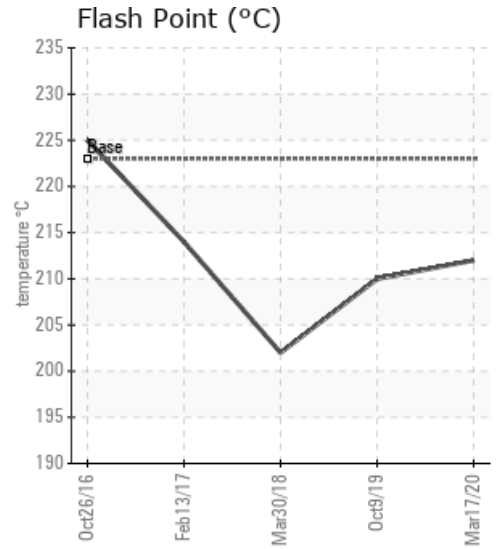
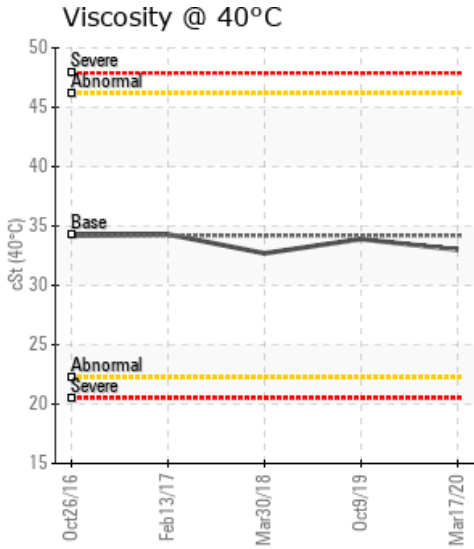
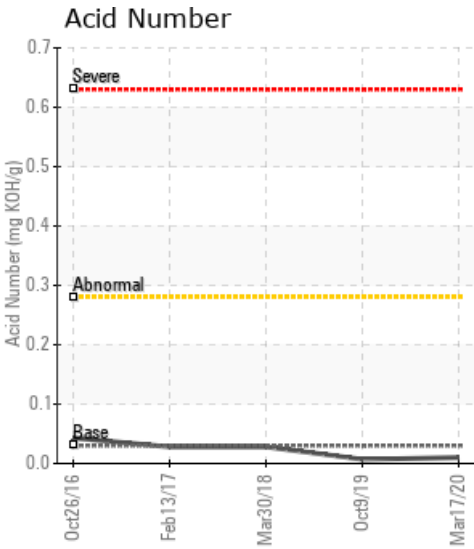
System Information
 System Volume: 3500 gal
 Bulk Operating Temp: 329F / 165C
 Heating Source:
 Blanket:
 Fluid: PETRO CANADA PETRO-THERM
 Make: POWERFLAME

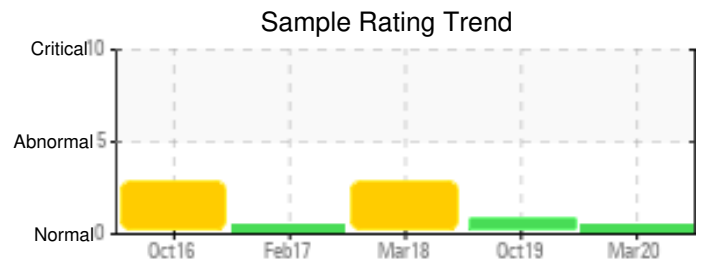
Sample Information
 Lab No: 02346701
 Analyst: Peter Hartevelde
 Sample Date: 03/17/20
 Received Date: 03/31/20
 Completed: 05/04/20
 Peter Hartevelde
 peter.hartevelde@petrocanadalsp.com

Recommendation: The fluid is in good condition and suitable for further use. Please re-sample in 6 months.

Comments:

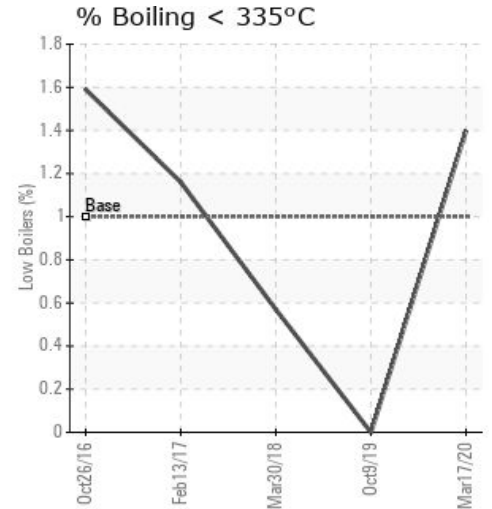
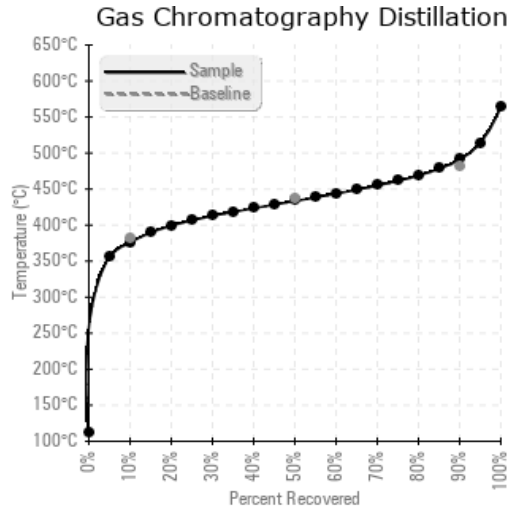
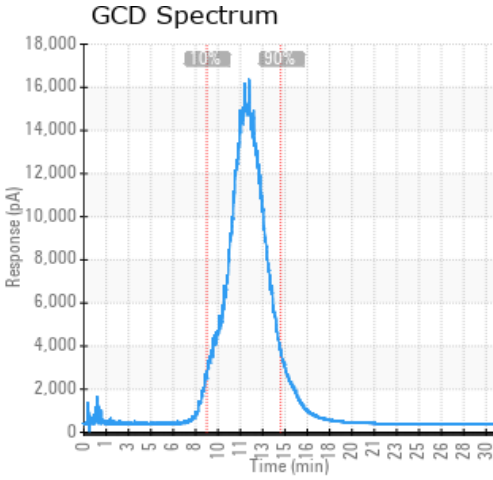
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
03/17/20	03/31/20	9y	FILTER	414 / 212	116.8	33.0	0.01	0.105	708 / 376	812 / 433	915 / 491	1.40
10/09/19	10/23/19	8y		410 / 210	75.4	33.9	0.007	0.124	721 / 383	820 / 438	923 / 495	0.00
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	
03/17/20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	
10/09/19	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
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	0
02/13/17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/26/16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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

10/09/19	The fluid is in good condition and suitable for further use. Please re-sample in 12 months. (GCD) 90% Distillation Point is marginally high.
03/30/18	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. (GCD) 90% Distillation Point is severely high.
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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