

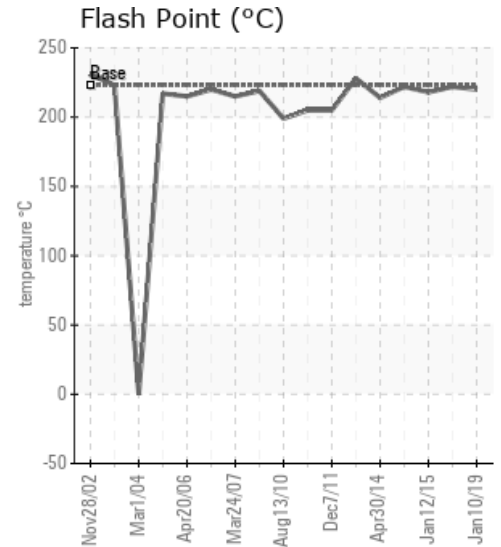
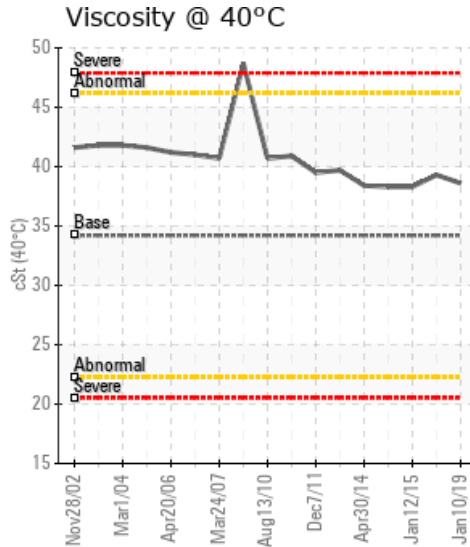
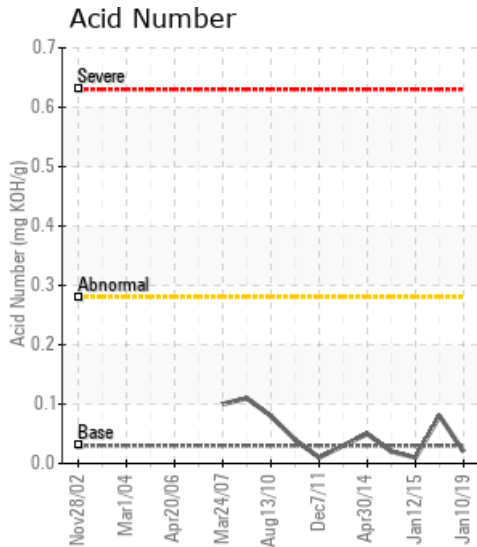
## GTS (LOG POND LOOP)

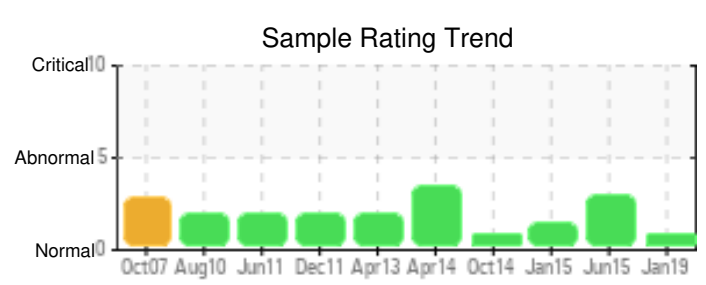
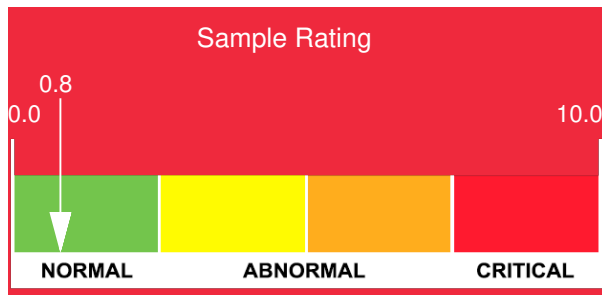
Customer: PTRHTF20049	System Information	Sample Information
WEYERHAEUSER CO. LTD. HUDSON BAY OSB 2000 HIGHWAY 9 SOUTH PO BOX 40 HUDSON BAY, SK S0E 0Y0 Canada Attn: SERVICE Tel: E-Mail:	System Volume: 50000 gal Bulk Operating Temp: 509F / 265C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: GTS	Lab No: 02263394 Analyst: Ray Rolston Sample Date: 01/10/19 Received Date: 01/21/19 Completed: 01/22/19

Recommendation: All inspections are normal. Fluid is suitable for continued use. Re-sample in one year to monitor fluid condition.

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

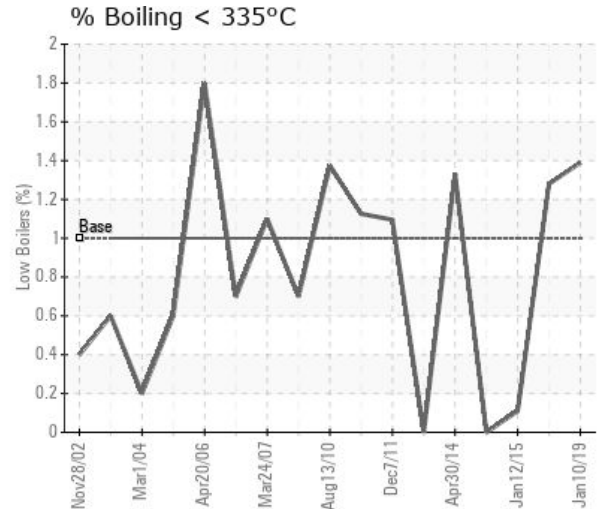
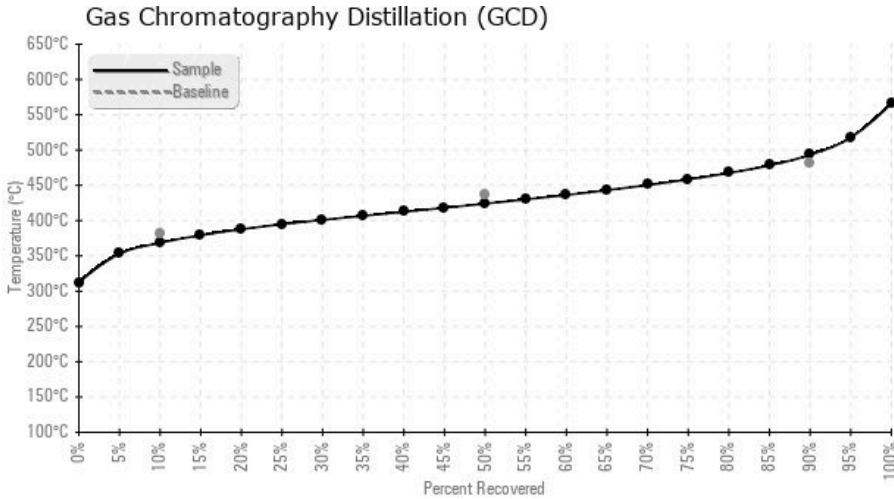
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
01/10/19	01/21/19	18y		428 / 220	7.1	38.6	0.02	0.053	695 / 368	795 / 424	920 / 493	1.39
06/26/15	07/03/15	15y	PRIMARY LOOP	432 / 222	7.3	39.3	0.08	0.080	715 / 380	823 / 440	951 / 511	1.28
01/12/15	01/16/15	15y	TOP OF GREEN ENDLOOP	424 / 218	24.9	38.3	0.01	0.050	719 / 382	826 / 441	945 / 507	0.11
10/31/14	11/07/14	15y	LONG POND LOOP	432 / 222	20.3	38.3	0.02	0.077	726 / 386	822 / 439	946 / 508	0.00
04/30/14	05/06/14	15y	LOG POND LOOP	417 / 214	14.3	38.4	0.05	0.034	713 / 378	820 / 438	945 / 507	1.33
04/29/13	05/07/13	13y	LOG POND LOOP	442 / 228	0.00	39.7	0.03	0.091	731 / 389	821 / 438	939 / 504	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
01/10/19	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/26/15	69	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	0	0	2
01/12/15	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10/31/14	30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/30/14	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
04/29/13	12	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
<b>Baseline Data</b>			0	0						0		0	0						0				0	

Elemental analysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]



Historical Comments	
06/26/15	The flash point, TAN, solid level are all normal. The current fluid is suitable for further use. The higher viscosity and higher 90% GCD reading indicate the elevated fluid oxidation. Please take one sample in 6 months to monitor the condition. I believe the current oil life is 16 years, please confirm that when you take the next sample. (GCD) 90% Distillation Point is severely high.
01/12/15	The viscosity, flash point, TAN, solid level are all normal. The current fluid is suitable for further use. The higher 90% GCD reading indicates some mild oxidation. Please take one sample in 6 months to monitor the condition. (GCD) 90% Distillation Point is abnormally high.
10/31/14	The current fluid has virtually no changes by comparing with the last sample in April 2014 and suitable for further use. Please take one sample in 6 months to monitor. (GCD) 90% Distillation Point is abnormally high.
04/30/14	The current fluid is suitable for further use. However, the elevated GCD @ 90% shows the sign of oxidation. Please submit another sample in 6 months to monitor the condition. (GCD) 90% Distillation Point is high.
04/29/13	Oil appears in good condition and suitable for further use. Elevated GCD@90% indicates that the fluid is beginning to show signs of oxidation, which should be monitored through regular oil analysis. Please submit another sample at the regular interval (9 months). (GCD) 90% Distillation Point is severely high.

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