

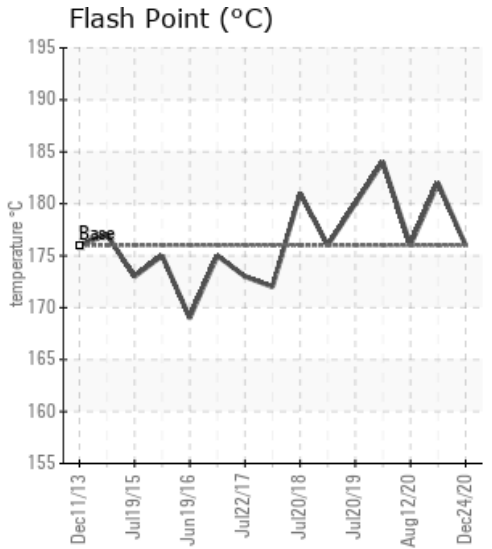
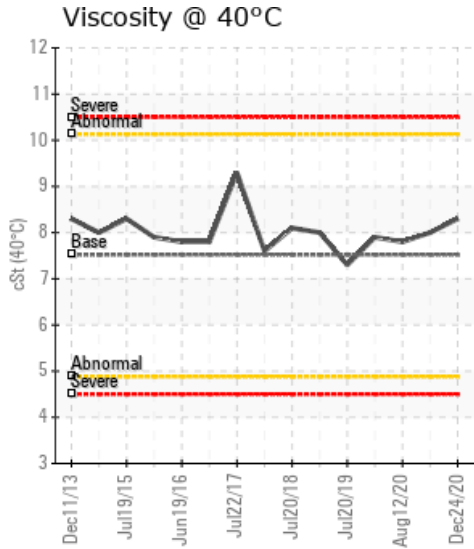
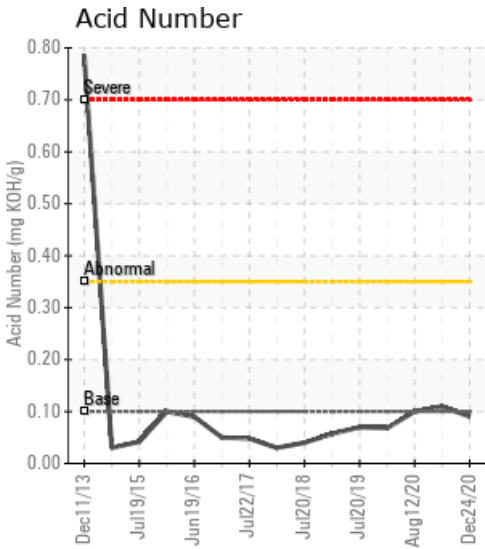
## [ATHABASCA OIL CORP / 14-22-078-10W4M] L2 (PAD B) LIESMER

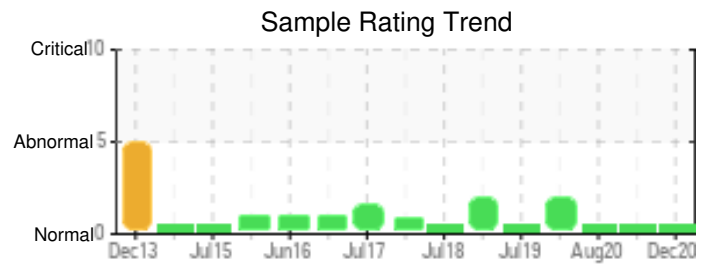
Customer: PTRHTF20133	System Information	Sample Information
ATHABASCA OIL CORP. LEISMER DEMONSTRATION PLANT LSD2-79-10-W4M NEAR CONKLIN, AB Canada Attn: George Ball Tel: (587)233-1312 E-Mail: gball@atha.com	System Volume: 8000 ltr Bulk Operating Temp: 212F / 100C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO LT Make: TORNADO TECHNOLOGIES	Lab No: 02395380 Analyst: Benjamin Latorre Sample Date: 12/24/20 Received Date: 01/04/21 Completed: 01/08/21 Benjamin Latorre benjamin.latorre@petrocanadalsp.com

Recommendation: Fluid in very good condition. This is the second of two samples that were taken December 24 and therefore has almost identical results compared to the first one.

Comments:

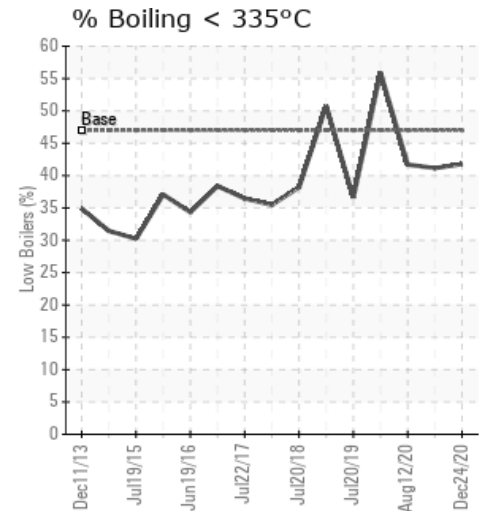
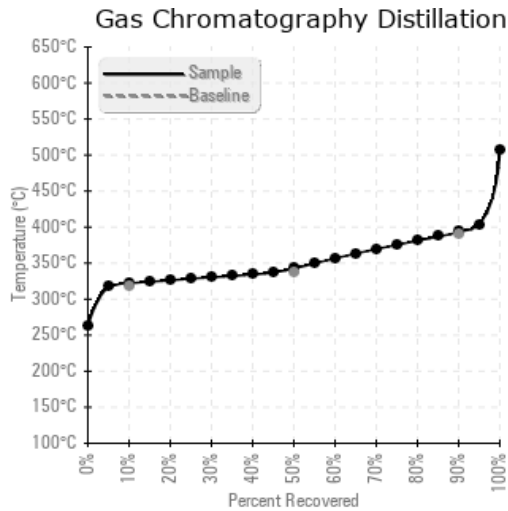
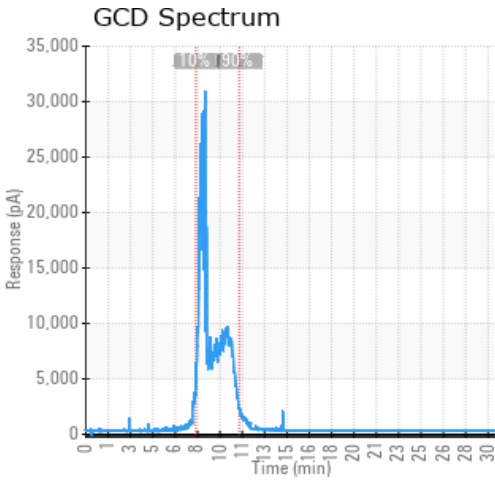
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
12/24/20	01/04/21	0y		349 / 176	41.5	8.3	0.09	0.037	611 / 322	649 / 343	740 / 393	41.77
12/24/20	01/04/21	0y	Return tree	360 / 182	12.0	8.0	0.11	0.038	612 / 322	649 / 343	739 / 393	41.15
08/12/20	08/31/20	0y	PT0285	349 / 176	107.9	7.8	0.10	0.047	612 / 322	650 / 343	739 / 393	41.69
01/16/20	02/10/20	0y	HORM-12B-0009-001	363 / 184	19.3	7.9	0.068	0.084	583 / 306	621 / 327	704 / 373	55.91
07/20/19	08/09/19	0y		356 / 180	4.6	7.3	0.070	0.095	611 / 322	651 / 344	738 / 392	36.59
Baseline Data				349 / 176		7.52	0.1		604 / 318	640 / 338	734 / 390	47.0





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
12/24/20	8	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	180	0
12/24/20	8	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	181	0
08/12/20	8	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	188	0
01/16/20	8	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	184	0
07/20/19	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	184	0
<b>Baseline Data</b>			0	0						0			0	0				0	0				270	

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



Historical Comments	
12/24/20	Fluid is in very good condition. No change since the previous sample in August 2020. Chlorine content 4.7 ppm
08/12/20	Results Normal. No action needed at this time. Resample at next scheduled date.
01/16/20	Consider venting of system tank to reduce water and low boilers. Resample after venting. Wear metals low. Contaminants & Free Water levels are low. Emulsified water at 2000 ppm. (GCD) 90% Distillation Point is abnormally low. (GCD) % < 335°C is marginally high.
07/20/19	Test results are normal. No immediate action required. Resample at the next interval.

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