

[7-14-63-20W5] ATHABASCA OIL CORP.

Customer: PTRHTF20046

QUADRA CHEMICALS
12925 146TH STREET
EDMONTON, AB T5L 2H6 CANADA
Attn: Quadra Samples
Tel:
E-Mail: quadra_samples@quadra.ca

System Information

System Volume: 29000 ltr
Bulk Operating Temp: 320F / 160C
Heating Source:
Blanket:
Fluid: PETRO CANADA PETRO-THERM
Make:

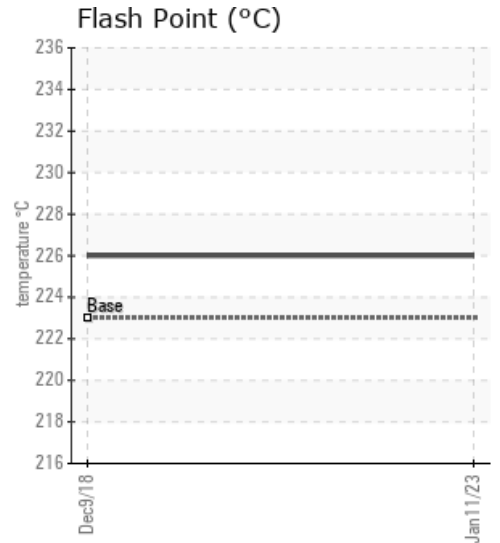
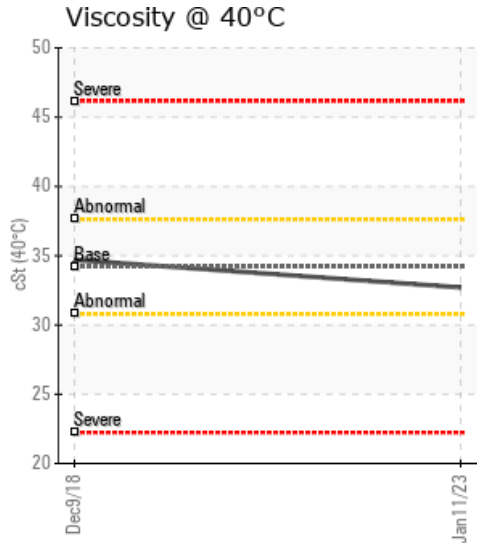
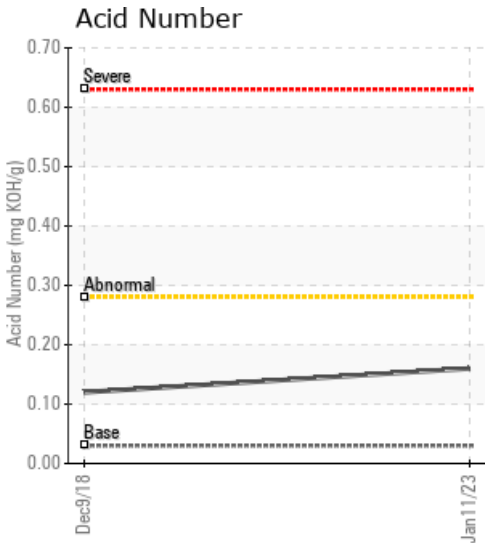
Sample Information

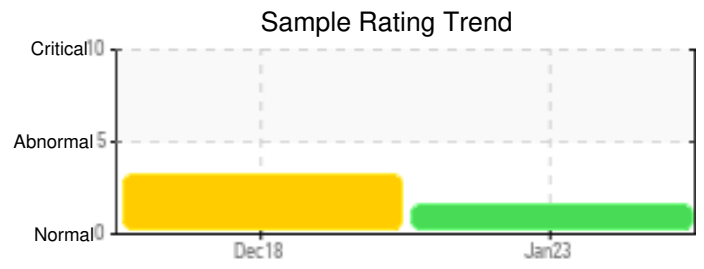
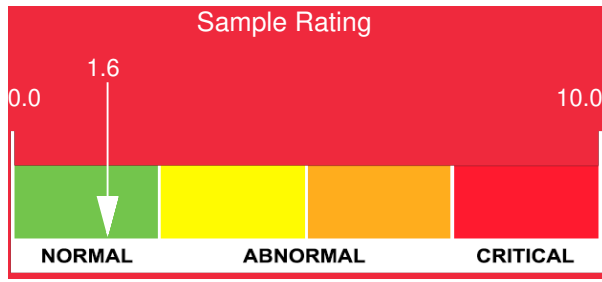
Lab No: 02534808
Analyst: Clinton Buhler
Sample Date: 01/11/23
Received Date: 01/20/23
Completed: 01/25/23
Clinton Buhler
Clinton.Buhler@HFSinclair.com

Recommendation: Sample results indicate the fluid is in suitable condition for continued service. Water content is elevated, although lower than the last sample taken in 2018. Please vent off water vapor and take measures to reduce water ingress into the system. re-sample in 12 months.

Comments:

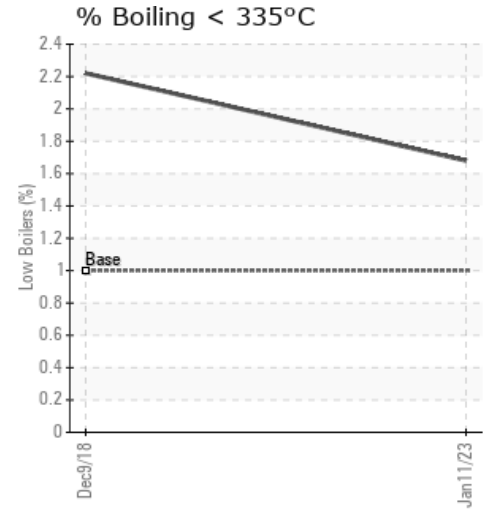
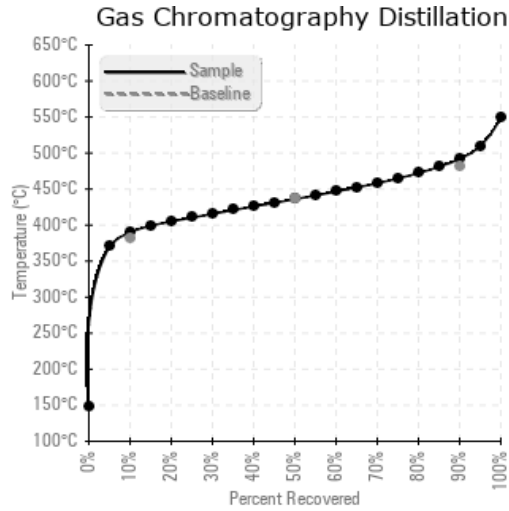
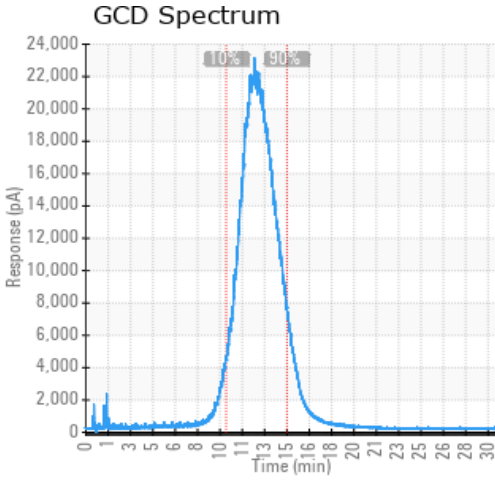
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
01/11/23	01/20/23	0.0y	1279407-1	439 / 226	598.3	32.7	0.16	0.076	734 / 390	817 / 436	918 / 492	1.68
12/09/18	12/14/18	5.0y	PUMP SUCTION	439 / 226	1032.4	34.7	0.12	0.088	710 / 377	809 / 431	914 / 490	2.22
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
01/11/23	25	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0
12/09/18	22	0	0	0	0	0	0	0	0	0	1	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

12/09/18	The water content of the fluid is high. Please boil-off the water. Aside from the water the fluid is in good condition and suitable for further use. Please re-sample in 6 months.

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