

[15-24-61-19-W5] CHEVRON WHITECOURT

Customer: PTRHTF20175
 QUADRA CHEMICALS
 7802 98 STREET
 CLAIRMONT, AB T0H 0W0 Canada
 Attn: Quadra Samples
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 E-Mail: quadra_samples@quadra.ca

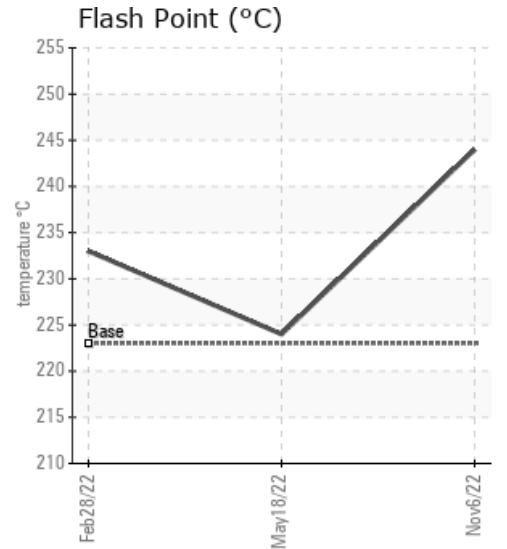
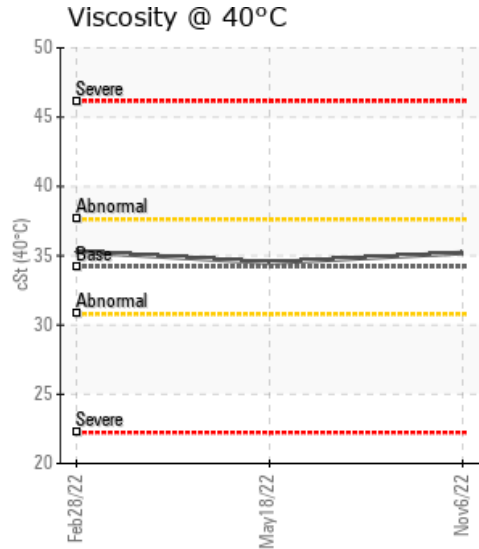
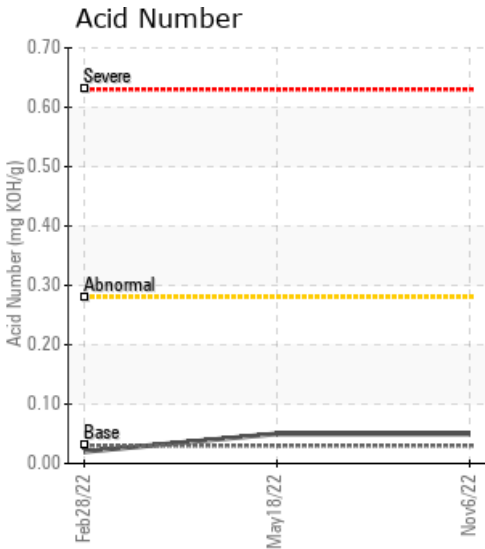
System Information
 System Volume: 9230 ltr
 Bulk Operating Temp: 248F / 120C
 Heating Source:
 Blanket:
 Fluid: PETRO CANADA PETRO-THERM
 Make:

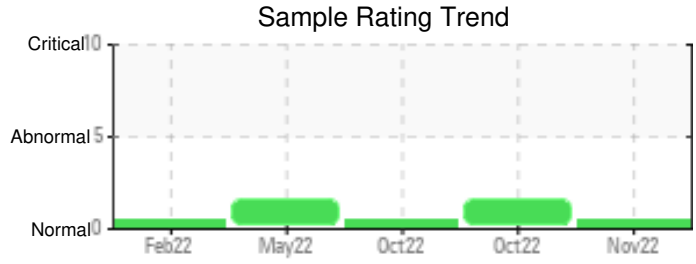
Sample Information
 Lab No: 02526849
 Analyst: Clinton Buhler
 Sample Date: 11/06/22
 Received Date: 12/05/22
 Completed: 12/07/22
 Clinton Buhler
 Clinton.Buhler@HFSinclair.com

Recommendation: Sample results indicate the fluid is in suitable condition for continued service whereas the samples drawn October 6 and 18 2022 contained excessive water; so much that the fluid could not be analyzed. Please re-sample in 3 months to build a trend going forward. Please thoroughly purge sample port prior to collecting sample.

Comments:

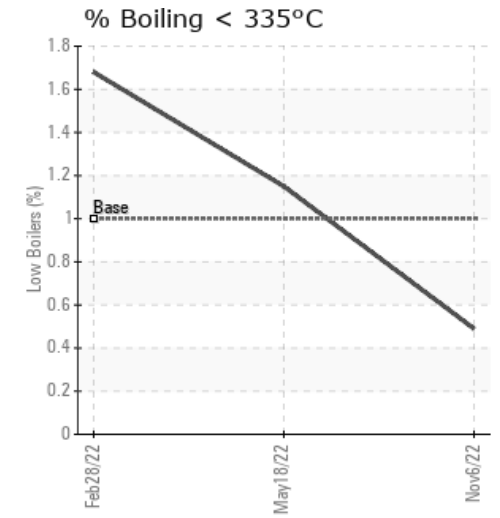
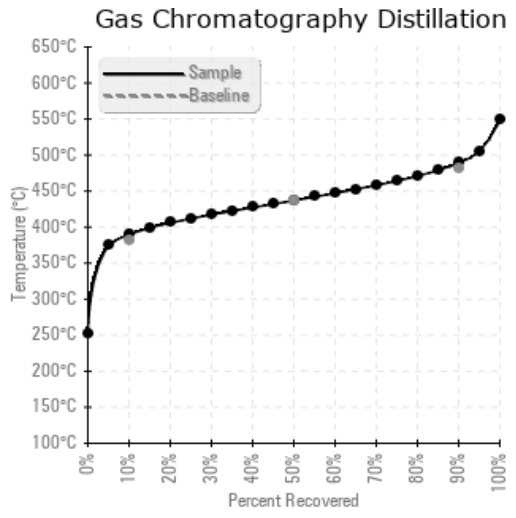
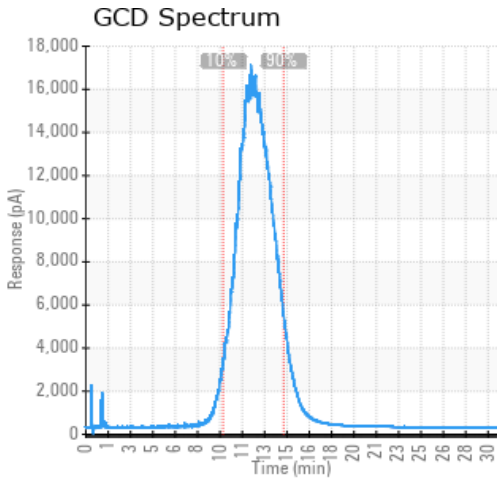
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
11/06/22	12/05/22	32.0w	bottom of line heater	471 / 244	10.5	35.2	0.05	0.055	733 / 389	818 / 437	912 / 489	0.49
10/18/22	12/05/22	32.0w	after 2nd boil over									
10/06/22	12/05/22	32.0w	after 1st boil over									
05/18/22	05/30/22	16.0w		435 / 224	55.1	34.5	0.05	0.048	729 / 387	814 / 435	905 / 485	1.15
02/28/22	03/07/22	1.0w	LINE HEATER	451 / 233	23.7	35.3	0.02	0.020	726 / 386	813 / 434	905 / 485	1.68
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
11/06/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
10/18/22																								
10/06/22																								
05/18/22	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	0
02/28/22	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	2
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

10/18/22	*** Sample is contaminated water (>99% water) ***
10/06/22	*** Sample is >99% water *** Unable to run further tests
05/18/22	Sample results indicate the fluid is in suitable condition for continued service. Please re-sample in 6 months.
02/28/22	This is the first sample from a new system after start-up. Sample results indicate the fluid is in suitable condition for continued service. Please re-sample in 3 months.

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