

**[Orlen Upstream Canada / 16-7-63-5W6] HEAT MEDIUM 5500 ORLEN**

**Customer: PTRHTF20175**

QUADRA CHEMICALS  
7802 98 STREET  
CLAIRMONT, AB T0H 0W0 Canada  
Attn: Quadra Samples  
Tel:  
E-Mail: quadra\_samples@quadra.ca

**System Information**

System Volume: 13000 ltr  
Bulk Operating Temp: 356F / 180C  
Heating Source:  
Blanket:  
Fluid: PETRO CANADA PETRO-THERM  
Make:

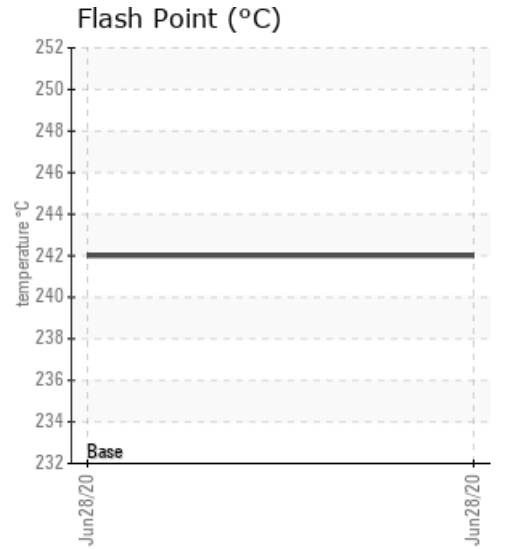
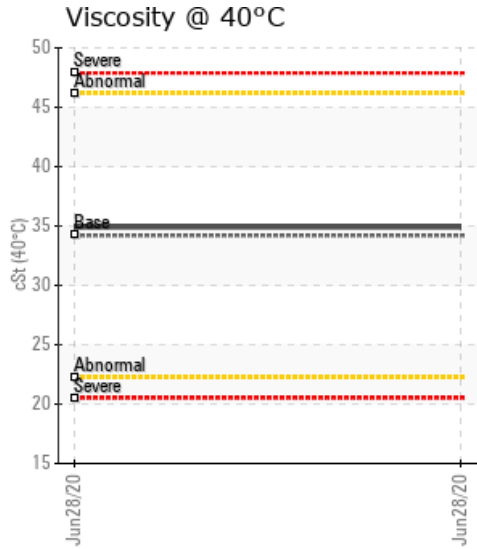
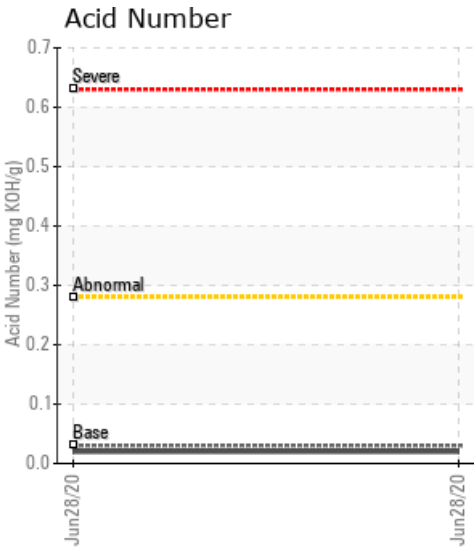
**Sample Information**

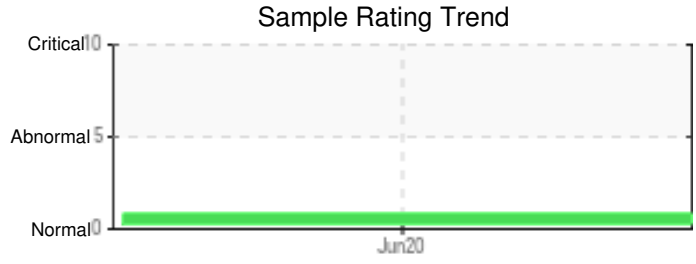
Lab No: 02364171  
Analyst: Peter Harteveld  
Sample Date: 06/28/20  
Received Date: 07/13/20  
Completed: 07/16/20  
Peter Harteveld  
peter.harteveld@petrocanadalsp.com

Recommendation: The fluid is in a good condition and suitable for further use. 10% and 90% GCD temperatures are slightly high. This is no concern at this time. Please re-sample in 12 months.

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

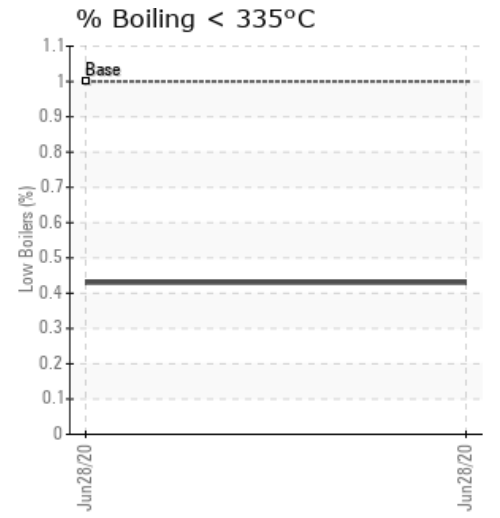
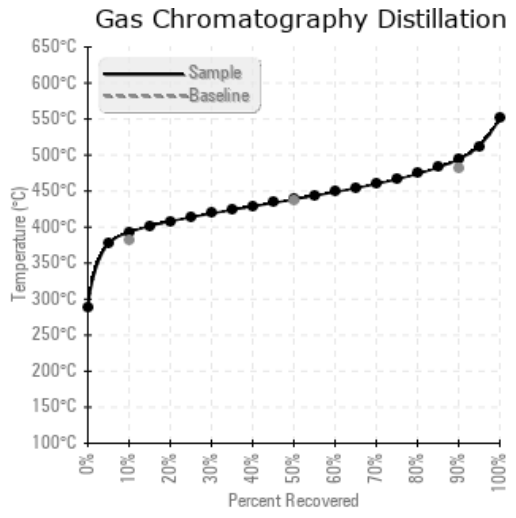
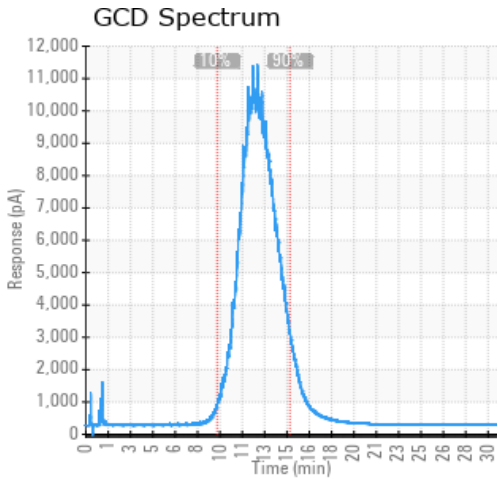
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
06/28/20	07/13/20	24m		468 / 242	36.0	34.9	0.02	0.042	739 / 393	821 / 438	921 / 494	0.43
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
06/28/20	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


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