

# D1ROCKDALE

**Customer: PTRHTF30107**  
 D-CONSTRUCTION  
 16805 QUARRY RD  
 MORRIS, IL 60450 USA  
 Attn: Chris Lenzie  
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 E-Mail: clenzie@sandenoinc.com

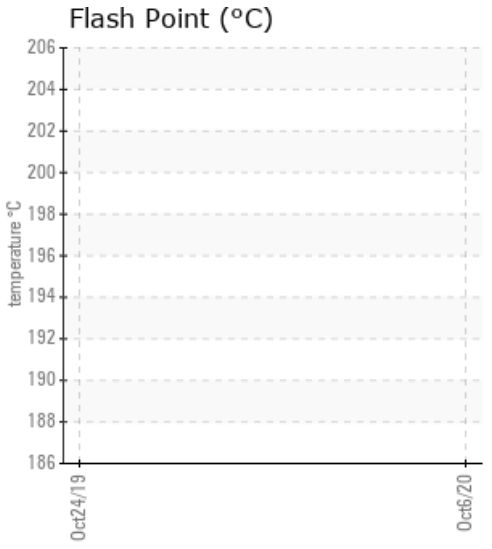
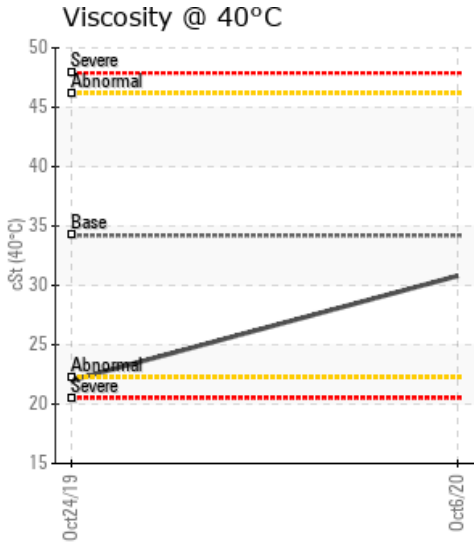
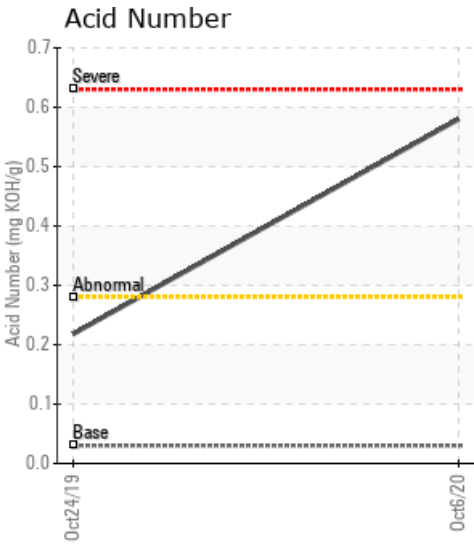
**System Information**  
 System Volume: 600 gal  
 Bulk Operating Temp: 340F / 171C  
 Heating Source:  
 Blanket:  
 Fluid: PETRO CANADA PETRO-THERM  
 Make: BURKE

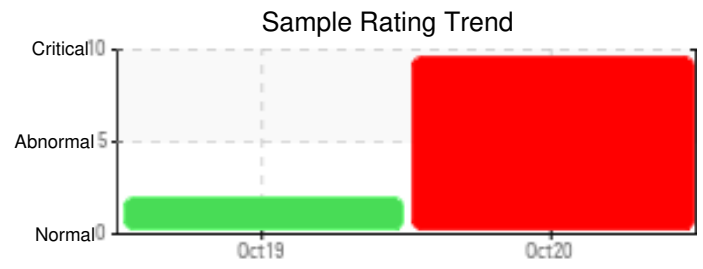
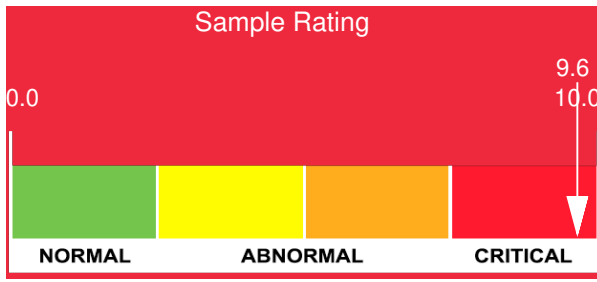
**Sample Information**  
 Lab No: 02381719  
 Analyst: Yvette Trzcinski  
 Sample Date: 10/06/20  
 Received Date: 10/16/20  
 Completed: 10/22/20  
 Yvette Trzcinski  
 yvette.trzcinski@petrocanadalsp.com

**Recommendation:** This sample has over 10% water (15,000 ppm) and a high insoluble rate. Questioning where this sample was taken this amount of water would affect the performance of the system. Recommend re-sampling the system. Sample should be representative of the circulating fluid. Not taken from site gauges, or dead legs.

**Comments:** Water contamination levels are severely high. Water contamination levels are severely high.. ppm Water contamination levels are severely high. Pentane Insolubles levels are abnormally high. Acid Number (AN) is abnormally high. Acid Number (AN) is abnormally high.. (GCD) 90% Distillation Point is abnormally low.

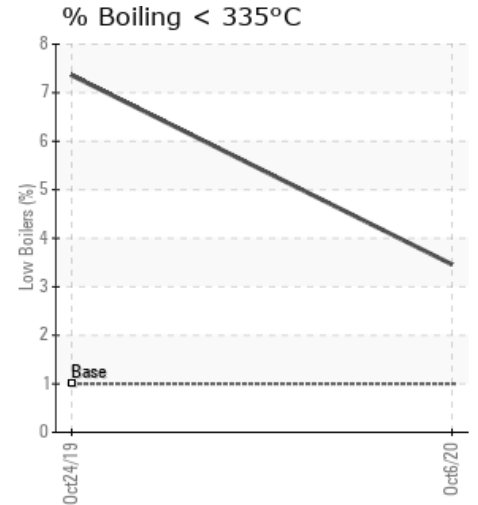
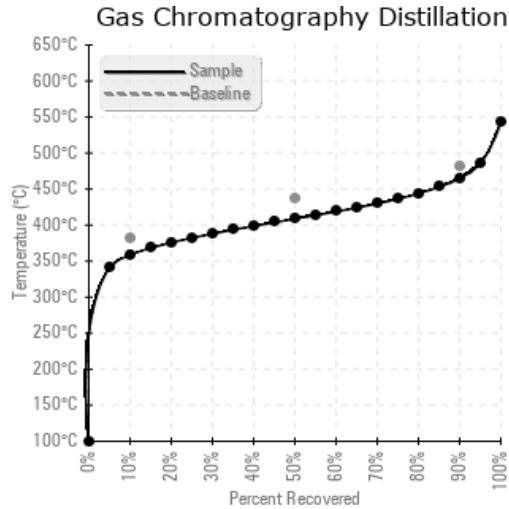
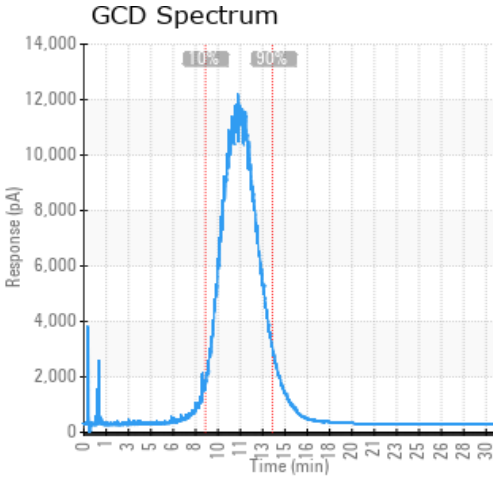
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
10/06/20	10/16/20	0h	RESERVOIR		15856.4	30.8	0.58	0.399	677 / 358	768 / 409	869 / 465	3.46
10/24/19	11/22/19	0h		385 / 196	30.8	22.0	0.218	0.241	645 / 341	735 / 390	835 / 446	7.36
<b>Baseline Data</b>				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
10/06/20	32	0	0	0	6	0	0	0	0	0	0	4	0	0	0	0	0	0	3	0	8	0	0	4
10/24/19	16	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	8	0	0	5
<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

10/24/19	Customer stated sample is Pritherm NF-1 an ISO 22 heat transfer fluid the 90% distillation point is high which would mean the fluid is beginning to degrade or oxidize, but the acid number and viscosity appear within specification and the solids are low. Resample in 6 months (GCD) 90% Distillation Point is severely high.