

PHASE 1

Customer: PTRHTF10092

REC GROUP

119410 RICK JONES WAY

BUTTE (SILVER BOW), MT 59750 USA

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System Information

System Volume: 41640 gal

Bulk Operating Temp: 425F / 218C

Heating Source:

Blanket:

Fluid: PETRO CANADA CALFLO AF

Make: EXOTHERM

Sample Information

Lab No: 02379937 Analyst: Ron LeBlanc Sample Date: 10/01/20 Received Date: 10/07/20 Completed: 10/13/20

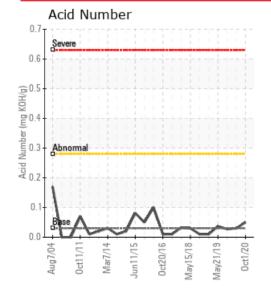
Ron LeBlanc

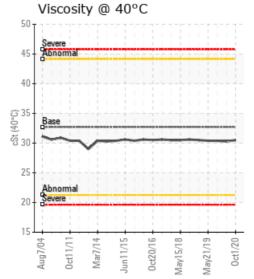
Ronald.LeBlancSr@petrocanadalsp.com

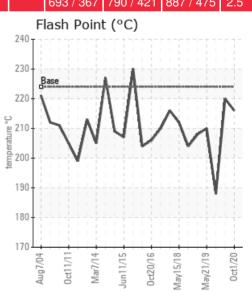
Recommendation: Sample appears normal. All product typicals are within acceptable parameters. Re-sample in 6 months.

Comments:

Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	%06 QO5	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/ g	%wt	°F/°C	°F/°C	°F/°C	%
10/01/20	10/07/20	15y		421 / 216	12.6	30.5	0.05	0.051	698 / 370	793 / 423	887 / 475	1.50
05/13/20	05/29/20	0y	p-1712a	428 / 220	27.9	30.3	0.03	0.146	694 / 368	790 / 421	882 / 472	1.93
10/11/19	11/04/19	0y	PL 1 HOT OIL	370 / 188	1.7	30.4	0.027	0.115	648 / 342	743 / 395	856 / 458	6.90
05/21/19	06/05/19	0y		410 / 210	12.6	30.4	0.037	0.056	687 / 364	788 / 420	884 / 473	2.10
01/04/19	01/25/19	15y		406 / 208	13.9	30.5	0.01	0.060	666 / 352	765 / 407	861 / 460	3.88
Baseline Data				435 / 224		32.7	0.03		693 / 367	790 / 421	887 / 475	2.5

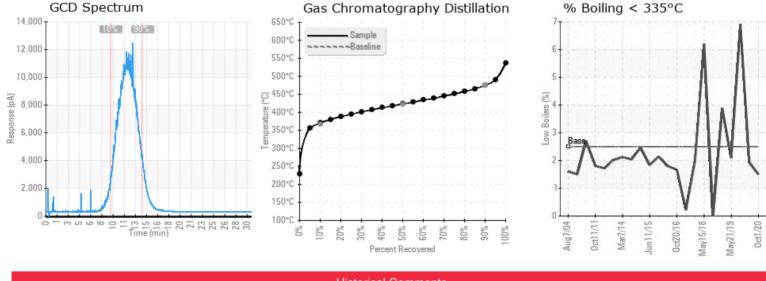








Elemental analysis results (above) in parts per million (ppm). [10,000 ppm = 1.0%]



Historical Comments							
05/13/20	Sample appears normal. Resample in 3 months.						
10/11/19	COC Flash Point is low. GCD 90% Point is slightly low. Add some new oil to bring the results up. Check to make sure oil was purged before sample was taken. Take another sample in 30 days to check results. (GCD) 90% Distillation Point is abnormally low. COC Flash Point is marginally low.						
05/21/19	Sample appears normal. Re-sample at normal interval.						
01/04/19	The (GCD) 90% point has dropped from previous sample. The Pentane insolubles have risen compared to last sample. Take a sample in 1 month and purge very well before taking sample. (GCD) 90% Distillation Point is marginally low.						

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