

PHASE 1

Customer: PTRHTF10092

REC GROUP 119410 RICK JONES WAY

BUTTE (SILVER BOW), MT 59750 USA

Attn: ZACK KELLY Tel: (406)496-9717

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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: 02356545 Analyst: Ron LeBlanc Sample Date: 05/13/20 Received Date: 05/29/20 Completed: 06/01/20

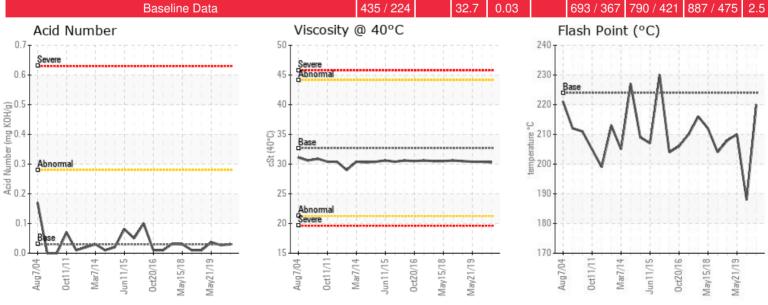
Ron LeBlanc

Ronald.LeBlancSr@petrocanadalsp.com

Recommendation: Sample appears normal. Resample in 3 months.

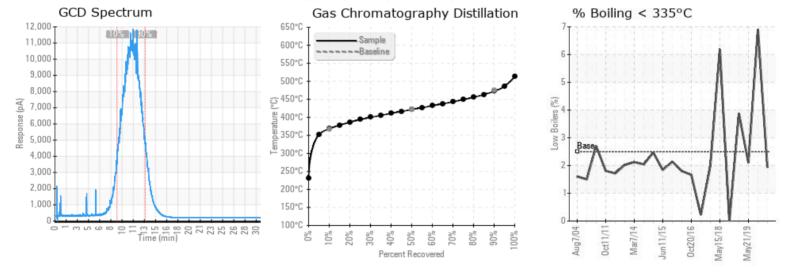
Comments:

Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	%06 QСБ	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/ g	%wt	°F/°C	°F/°C	°F/°C	%
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
09/21/18	10/10/18	0y		399 / 204	12.2	30.6	0.01	0.023	699 / 371	778 / 414	865 / 463	0.00
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							
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.						
09/21/18	GCD 90% distillation point slightly low. Could be due to sample point or not enough purge from sample point. Re-Sample in 60 days to observe results. (GCD) 90% Distillation Point is marginally low.						

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