



## HOT OIL SYSTEM

Customer: PTRHTF20165	System Information	Sample Information
Alberta Innovates Technology Future... 250 Karl Clark Rd Edmonton, AB T6N 1E4 Canada Attn: Jeff Maunder Tel: (780)450-5219 E-Mail: jeff.maunder@innotechalberta.ca	System Volume: 600 ltr Bulk Operating Temp: 446F / 230C Heating Source: Blanket: Fluid: PETRO CANADA CALFLO AF Make: THERMAL FLUID SYSTEM	Lab No: 02025744 Analyst: Gordon Susinski Sample Date: 09/30/15 Received Date: 10/06/15 Completed: 10/13/15 To discuss this report contact Gordon Susinski at (587)582-4118

Recommendation: Note the sample colour is darker than new oil values (indicative of the oils age) however all results appear to be within normal ranges. This darker colour could be an indicator of carboning up of the heat transfer surfaces. This can cause the syetem to require more energy to produce the same amount of heat and make the system inefficient. Also note the inital boiling point is decreasing from new oil values indicating that thermal cracking may be occuring (also aligns with the dark colour of the oil). Also note the decreasing flash point.

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	%
09/30/15	10/06/15	0y		414 / 212	13.1	31.4	0.11	0.040	689 / 365	784 / 418	887 / 475	1.95
Baseline Data				435 / 224		32.7	0.03		693 / 367	790 / 421	887 / 475	2.5



