

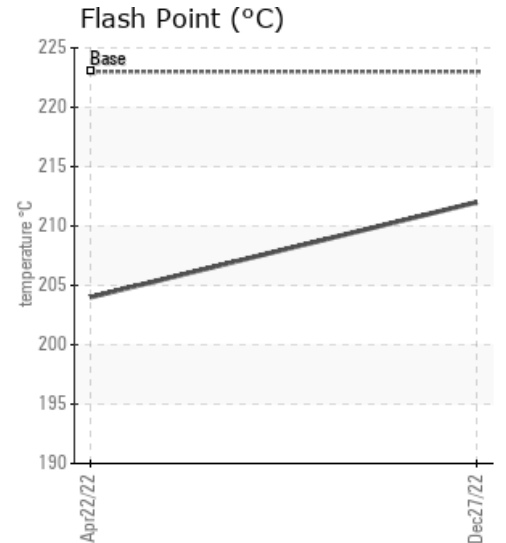
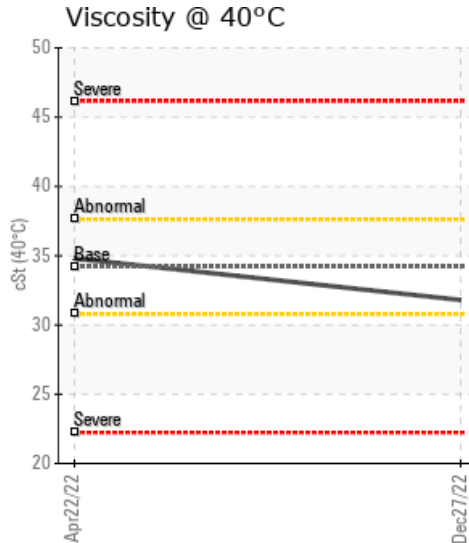
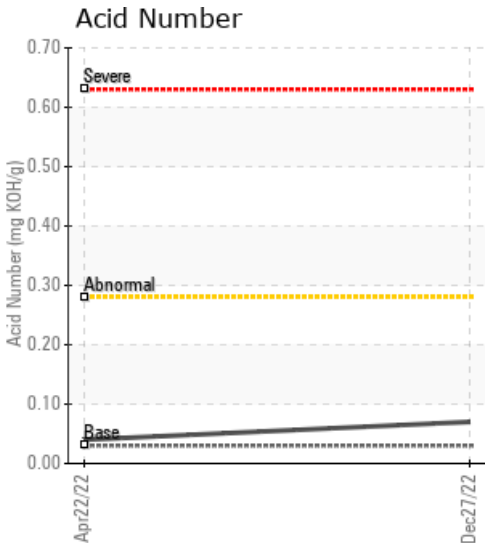
[6-18-72-7W5] P690A

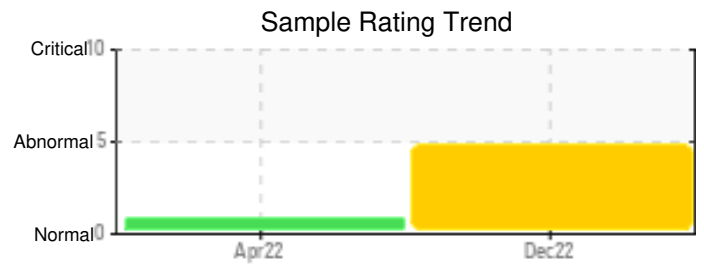
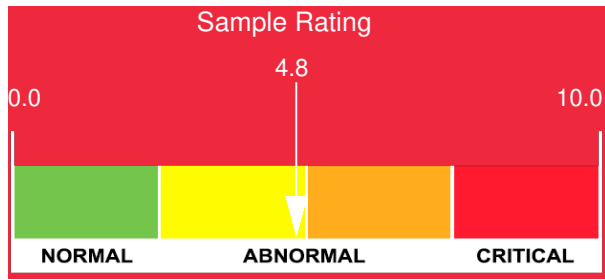
Customer: PTRHTF20265	System Information	Sample Information
IPC CANADA LTD 6-18-72-7W5 SLAVE LAKE, AB T0G 2A0 Canada Attn: Todd Laing Tel: (780)849-0635 E-Mail: todd.laing@international-petroleum.com	System Volume: 3822 ltr Bulk Operating Temp: 500F / 260C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: PETRO-TECH HEATERS	Lab No: 02530737 Analyst: Clinton Buhler Sample Date: 12/27/22 Received Date: 12/28/22 Completed: 01/05/23 Clinton Buhler Clinton.Buhler@HFSinclair.com

Recommendation: Unable to run GCD testing due to excessive water content of 5% free water. Please re-sample after a thorough purge of the sample valve and related tubing. Please ensure sample is drawn hot from pump discharge and not from a low lying area.

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	%
12/27/22	12/28/22	9.0y	PUMP DISCHARGE	414 / 212	282.8	31.8	0.07	0.040				
04/22/22	05/18/22	10.0y	Pump discharge	399 / 204	42.2	34.8	0.04	0.048	724 / 385	814 / 435	919 / 493	1.14
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00

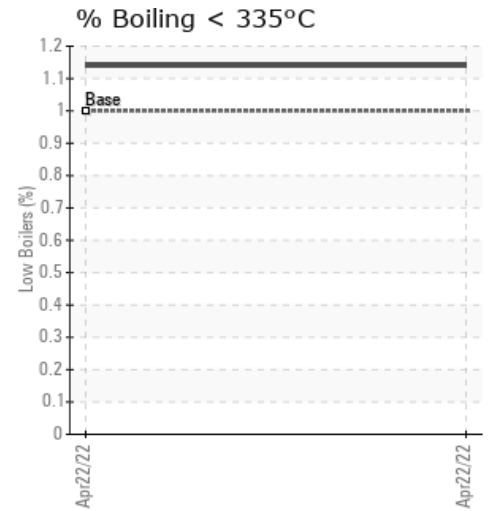




Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
12/27/22	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04/22/22	16	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	0	0	0	3	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%]

GCD Spectrum



Historical Comments

04/22/22	Sample Results indicate the fluid is in suitable condition for continued service. Please re-sample in 12 months (GCD) 90% Distillation Point is marginally high.

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