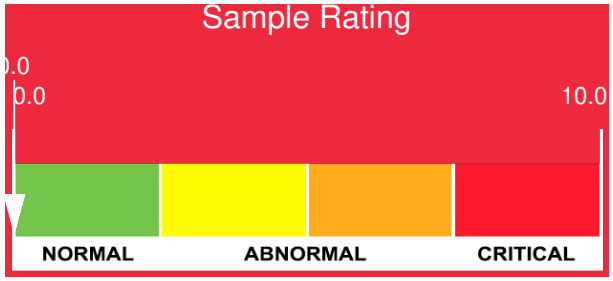
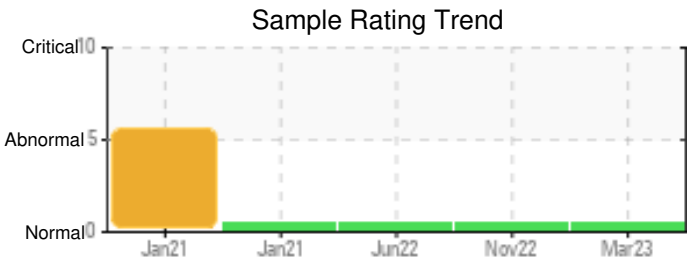




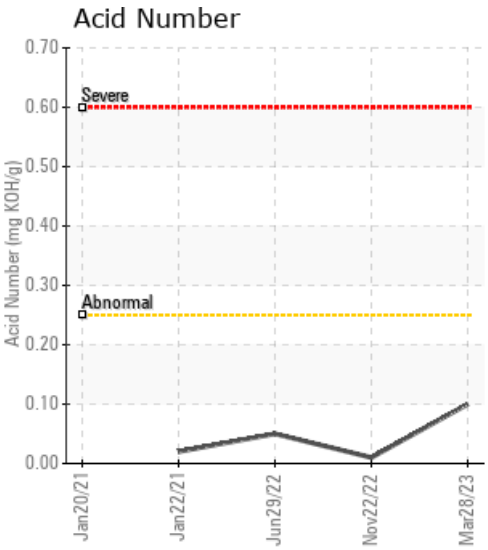
[01-21-63-02W6] LATOR 1 HEAT MEDIUM

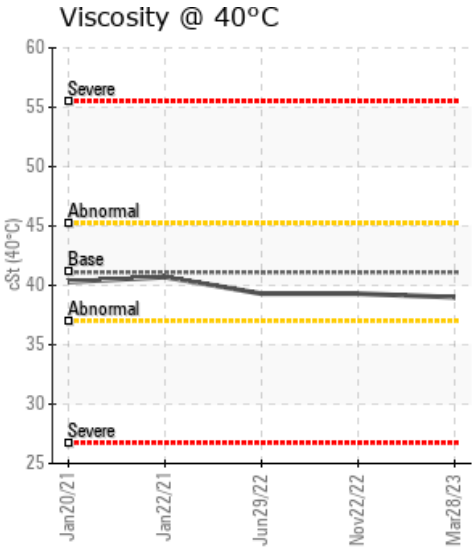
Customer: PTRHTF20207	System Information	Sample Information
Arc Resources Grande Prairie, AB T8V 8H7 Canada Attn: Randy Ward Tel: (780)490-9024 E-Mail: randy.ward@arcresources.com	System Volume: 8000 ltr Bulk Operating Temp: 302F / 150C Heating Source: Blanket: Fluid: CHEVRON HEAT TRANSFER OIL 46 Make: PETRO TECH	Lab No: 02550725 Analyst: Bill Quesnel CLS,OMA II,MLA-III,LLA-I Sample Date: 03/28/23 Received Date: 04/11/23 Completed: 05/01/23 Bill Quesnel CLS,OMA II,MLA-III,LLA-I

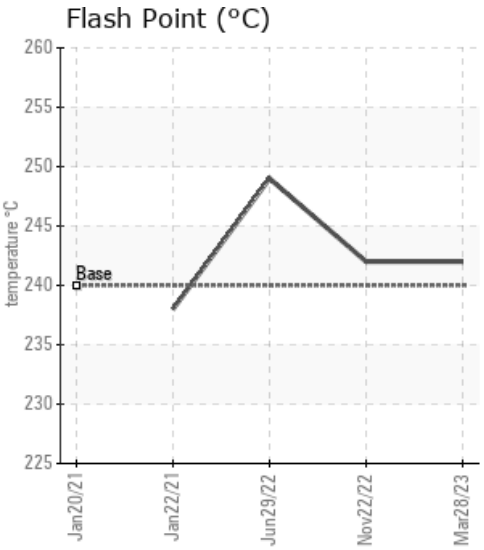
Recommendation: Sample results indicate that the heat transfer fluid is in suitable condition for continued service. Please re-sample after 12 months.

Comments:

Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
03/28/23	04/11/23	4.0y		468 / 242	50.2	39.0	0.10	0.039	749 / 398	840 / 449	930 / 499	1.34
11/22/22	12/02/22	3.0y	pump discharge	468 / 242	24.8	39.3	0.01	0.030	750 / 399	840 / 449	931 / 500	1.16
06/29/22	07/20/22	3.2y	Pump discharge	480 / 249	30.9	39.3	0.05	0.062	747 / 397	840 / 449	928 / 498	1.21
01/22/21	02/19/21	2.5y	Pump discharge	460 / 238	20.5	40.7	0.02	0.086	751 / 399	841 / 449	928 / 498	0.00
01/20/21	01/28/21	2.5y			6052.6	40.3			750 / 399	840 / 449	927 / 497	0.04
Baseline Data				464 / 240		41.1			727 / 386	828 / 442	932 / 500	1.4







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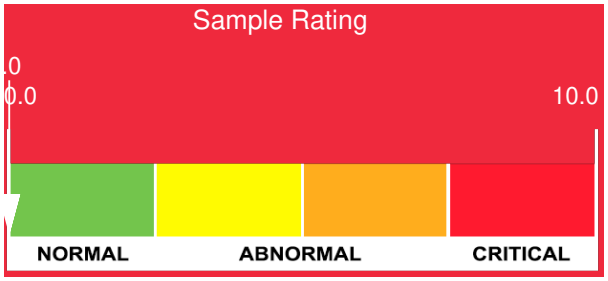
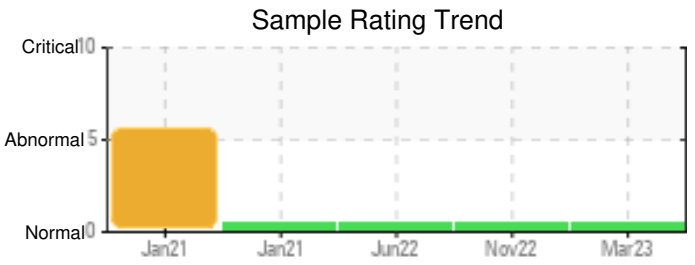
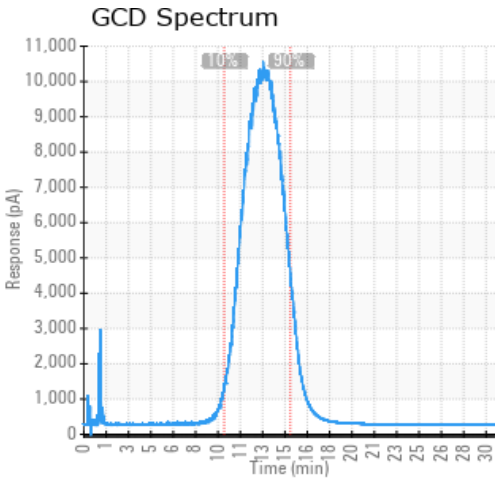
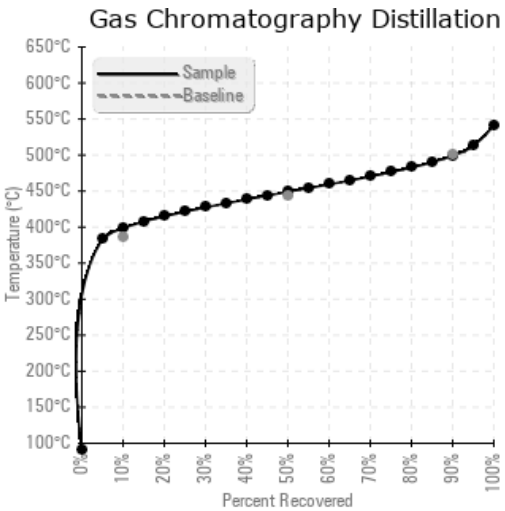


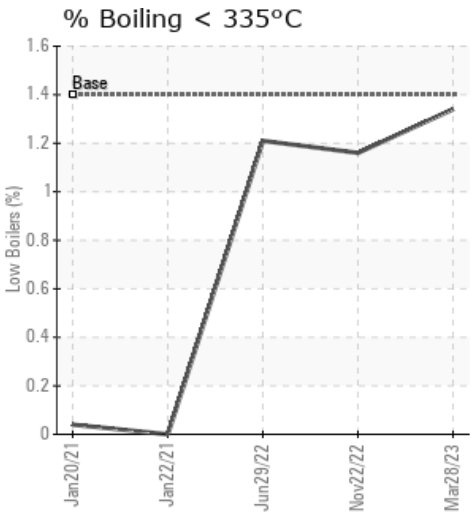


Sample Date	Iron	Chromium	Nickel	Aluminum	Copper	Lead	Tin	Cadmium	Silver	Vanadium	Silicon	Sodium	Potassium	Titanium	Molybdenum	Antimony	Manganese	Lithium	Boron	Magnesium	Calcium	Barium	Phosphorus	Zinc
03/28/23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11/22/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06/29/22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01/22/21	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01/20/21	27	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0
Baseline Data			0	0						0			0	0					0				0	

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







Historical Comments

11/22/22	Sample results indicate that the heat transfer fluid is in suitable condition for continued service. Please re-sample after 12 months.
06/29/22	Sample results indicate that the heat transfer fluid is in suitable condition for continued service. Please re-sample in 12 months.
01/22/21	Sample results indicate that the fluid is in suitable condition for continued service; this re-sample was taken after the previous sample contained excessive amounts of water contamination. Water is now at 20ppm which is very low.Please re-sample in 12 months.
01/20/21	Sample results indicate excessive water contamination of the heat transfer fluid. Water in oil is >6,000 ppm and the sample contains approx. 10% free water. Water may be from cross contamination and/or a sample being pulled from a low spot or dead leg. If representative, this much water would pose a safety risk due to boil over. Drain any low spots of the system to remove any excess water. Beyond the water contamination, the fluid is suitable for continued service. Please re-sample immediately but only after ensuring that the sample is being drawn from a hot and turbulent zone (pump discharge is ideal) and any free water is drained off. Ensure that the sample valve and any related piping or tubing is thoroughly purged PRIOR to filling the sample container. Water contamination levels are severely high.

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