

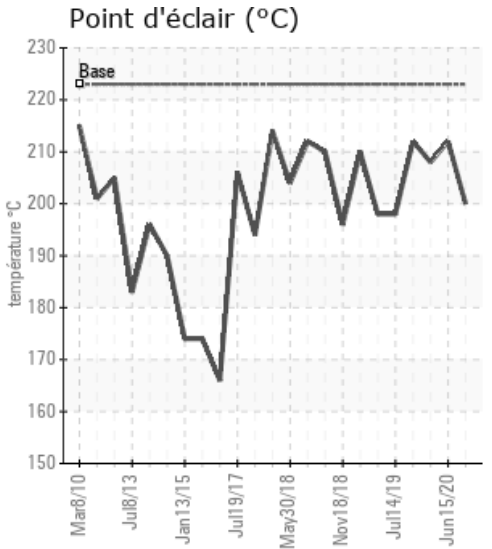
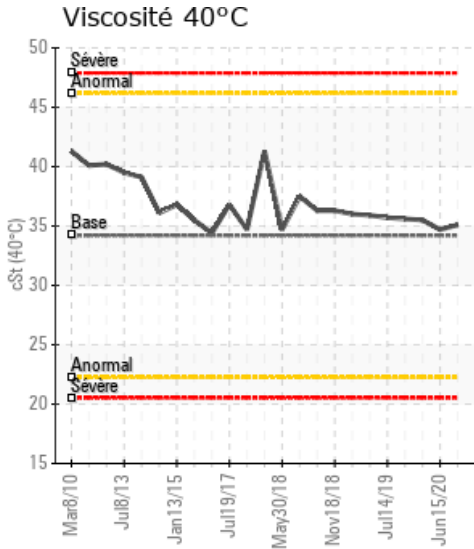
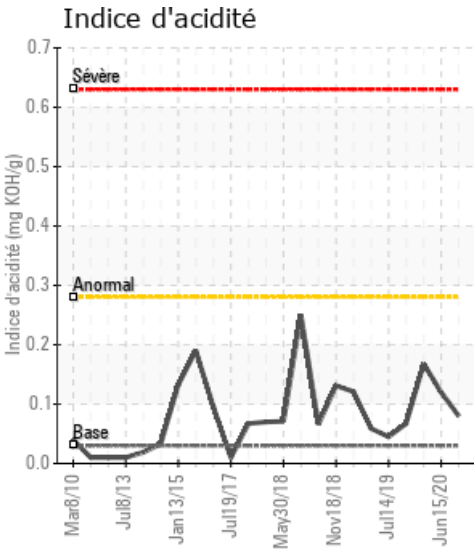
VOLCANO PANVAL #1

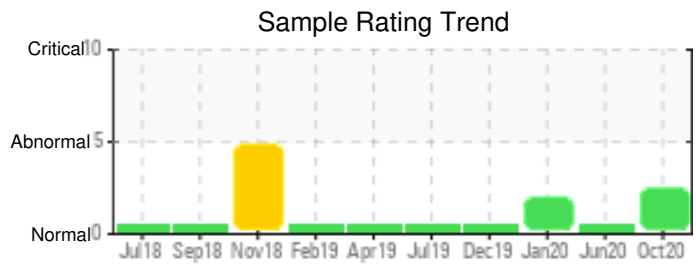
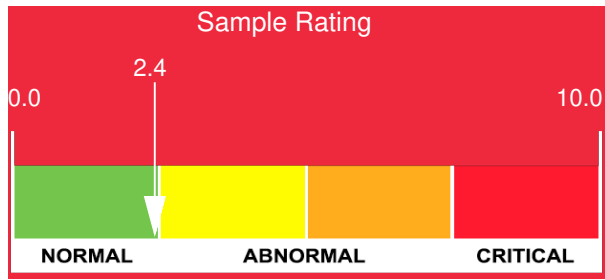
Customer: PTRHTF30042	System Information	Sample Information
UNIBOARD CANADA 152 ROUTE POULIOT SAYABEC, QC G0J 3K0 Canada Attn: ALAIN COUTURE Tel: (418)536-5465E X:T65405 E-Mail: alain.couture@uniboard.com	System Volume: 51500 ltr Bulk Operating Temp: 500F / 260C Heating Source: Blanket: Fluid: PETRO CANADA PETRO-THERM Make: VOLCANO EL24	Lab No: 02379735 Analyst: Jean Lacharite Sample Date: 10/01/20 Received Date: 10/06/20 Completed: 10/20/20 Jean Lacharite jean.lacharite@petrocanadalsp.com

Recommendation: Graphique GCD léger craquage des fractions a bas point d'ébullition (low boiler). GCD 10%, 50% et 90% sont ok, Pentane insolubles 0.060 ok, Viscosité @ 40C ok, Nombre Acid (AN) 0.08 ok, Eau 70.6 ppm ok. Seul la présence de Sodium (Na) et Potassium (K) sont anormale, contaminant extérieur. surveiller. Le résultat semble normale, Refaire une analyse dans 10-12 mois.

Comments:

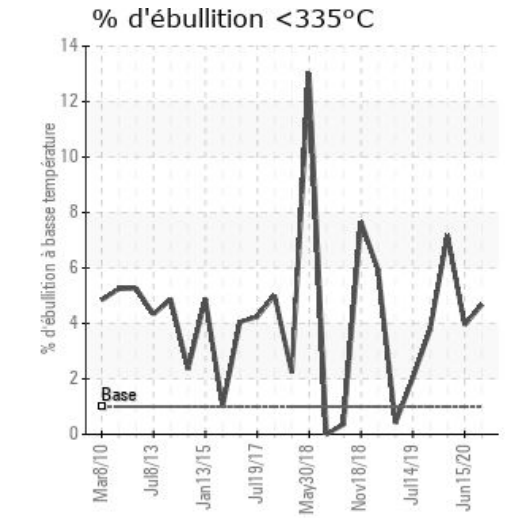
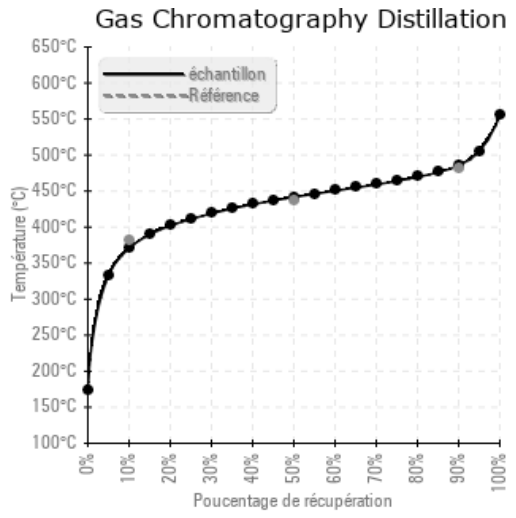
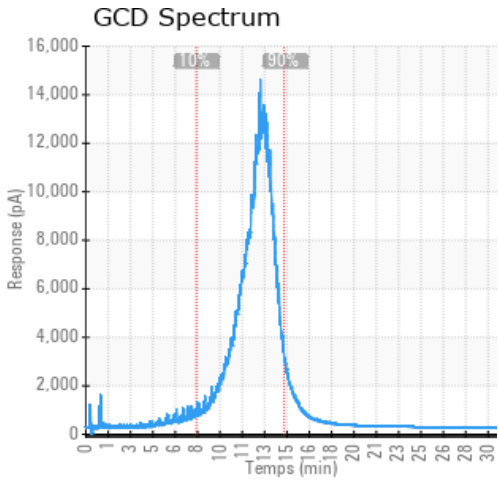
Sample Date	Received Date	Fluid Age	Sample Location	Flash Point (COC)	Water (KF)	Viscosity (40°C)	Acid Number	Solids	GCD 10%	GCD 50%	GCD 90%	GCD % < 335°C
	mm/dd/yy			°F/°C	ppm	cSt	mg/KOH/g	%wt	°F/°C	°F/°C	°F/°C	%
10/01/20	10/06/20	0y	Refroidisseur Specia	392 / 200	70.6	35.1	0.08	0.060	699 / 371	827 / 442	906 / 486	4.68
06/15/20	06/16/20	36y	REFROIDISSEUR	414 / 212	24.8	34.7	0.12	0.106	708 / 376	830 / 443	907 / 486	3.94
01/28/20	01/29/20	36y	REFROIDESSEUR	406 / 208	3.2	35.5	0.168	0.088	667 / 353	816 / 436	895 / 479	7.18
12/03/19	12/04/19	36y		414 / 212	2.8	35.6	0.067	0.111	694 / 368	811 / 433	893 / 478	3.77
07/14/19	07/15/19	36y		388 / 198	20.5	35.7	0.045	0.112	713 / 378	822 / 439	902 / 484	2.03
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
10/01/20	0	0	0	0	0	0	0	0	0	0	0	22	26	0	0	0	0	0	0	0	0	0	0	0
06/15/20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01/28/20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12/03/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07/14/19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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%]



Historical Comments	
06/15/20	la courbe est bien. les GCD distillation point sont bien, pas de fer, viscosité bonne. continuer.
01/28/20	La valeur de la viscosité, COC flash point et acide number sont bonne. Nous avons une dégradation thermique ce qui cause une augmentation de low boilers. le graphique nous donne la présence de low boilers encore en basse quantité. On peut diminuer les low boilers avec une ventilation de la chambre d'expansion.
12/03/19	Ok, pour usage continu. refaire une autre analyse dans un période de six mois, juillet 2020.
07/14/19	Le fluide est ok, pour usage continu

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