

[OBSIDIAN ENERGY / LSD 14-01-42-07 W5] LSD 14-01-42-07W5

Customer: PTRHTF20039

BRENNTAG CANADA INC 3124-54TH AVENUE SE

CALGARY, AB T2C 0A8 Canada

Attn: Matthew Kryska

Tel:

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System Information

System Volume: 12000 ltr

Bulk Operating Temp: 365F / 185C

Heating Source:

Blanket:

Fluid: PETRO CANADA PETRO-THERM

Make:

Sample Information

Lab No: 02400094

Analyst: Kevin McDermott Sample Date: 01/14/21 Received Date: 01/27/21 Completed: 02/01/21

Kevin McDermott

kevin.mcdermott@hollyfrontier.com

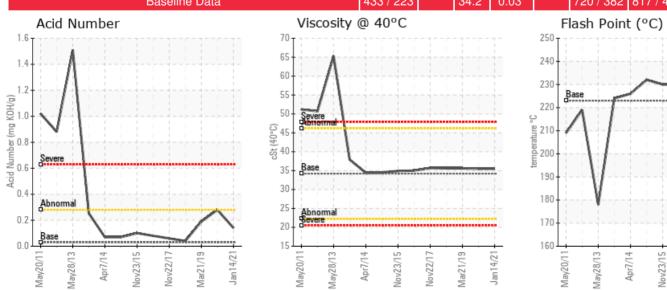
Mar21/19

Vov22/17

Recommendation: Fluid is in excellent condition. Recommendation to submit samples annually to proactively monitor fluid condition.

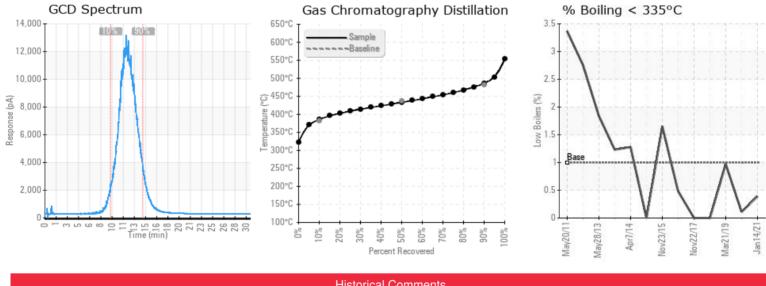
Comments:

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	%
01/14/21	01/27/21	0.0y	Pump Bleed	428 / 220	3.4	35.5	0.14	0.098	726 / 385	812 / 433	907 / 486	0.39
05/26/20	06/15/20	0.0y	PUMP	460 / 238	0.00	35.5	0.28	0.338	728 / 387	813 / 434	912 / 489	0.11
03/21/19	03/29/19	12.0y	HOT OIL SKID	437 / 225	13.0	35.6	0.190	0.074	714 / 379	804 / 429	899 / 481	0.97
08/02/18	08/14/18	11.0y	HOT OIL SKID	442 / 228	21.2	35.6	0.04	0.084	716 / 380	802 / 428	900 / 482	0.00
11/22/17	12/06/17	10.0y		435 / 224	15.6	35.7	0.06	0.309	710 / 377	793 / 423	912 / 489	0.00
Baseline Data				433 / 223		34.2	0.03		720 / 382	817 / 436	900 / 482	1.00





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



Historical Comments								
05/26/20	Fluid condition remains very good. Slight increase in Acid Number (AN). Continue with annual samples to monitor fluid condition.							
03/21/19	This oil appears to be in good condition and is suitable for further use. Resample in 6 months.							
08/02/18	Fluid condition remains excellent. Suggest continue to submit samples annually to monitor fluid condition - sooner if fluid gets exposed to severe conditions.							
11/22/17	Fluid remains in excellent condition. Suggest to submit annual samples to proactively monitor fluid condition.							

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