

### **OIL ANALYSIS REPORT**



# SALTONS HINTONWOOD

Hydraulic System

PETRO CANADA HYDREX AW 68 (13750 LTR)

#### DIAGNOSIS

#### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. Please note that this is a corrected copy for data entry updates.

#### Wear

All component wear rates are normal.

#### Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

#### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

				Dec2023		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PC		
Sample Date		Client Info		06 Dec 2023		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Sample Status				ATTENTION		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	9		
Chromium	ppm	ASTM D5185(m)	>20	2		
Nickel	ppm	ASTM D5185(m)	>20	<1		
Titanium	ppm	ASTM D5185(m)		0		
Silver	ppm	ASTM D5185(m)		<1		
Aluminum	ppm	ASTM D5185(m)	>20	0		
Lead	ppm	ASTM D5185(m)	>20	<1		
Copper	ppm	ASTM D5185(m)		1		
Tin		ASTM D5185(m)	>20	0		
Antimony	ppm ppm	ASTM D5185(m)	20	0		
Vanadium		ASTM D5185(m)		0		
	ppm	( )				
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	0	<1		
Boron Barium	ppm ppm	ASTM D5185(m) ASTM D5185(m)		<1 <1		
		( )				
Barium	ppm	ASTM D5185(m)	0 0	<1		
Barium Molybdenum	ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0	<1 0		
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	<1 0 0		
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0	<1 0 0 <1		 
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 50	<1 0 0 <1 36		 
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 50 330	<1 0 0 <1 36 329	  	 
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 50 330 430	<1 0 0 <1 36 329 425	  	 
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 0 50 330 430	<1 0 <1 36 329 425 737	   	 
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 50 330 430 760	<1 0 0 <1 36 329 425 737 <1 current		
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 50 330 430 760	<1 0 0 <1 36 329 425 737 <1 <1 current <1		      history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	0 0 0 50 330 430 760 Limit/base >15	<1 0 0 <1 36 329 425 737 <1 current <1 3	      history1	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185(m) ASTM D5185(m)	0 0 0 50 330 430 760 <b>limit/base</b> >15 >20	<1 0 0 <1 36 329 425 737 <1 <i>current</i> <1 3 0	      history1	     history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D5185(m)	0 0 0 50 330 430 760 <b>limit/base</b> >15 >20 >0.05	<1 0 0 <1 36 329 425 737 <1 <i>current</i> <1 3 0 0 0.008	      history1  	      history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water ppm Water	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185(m) ASTM D5304*	0 0 0 50 330 430 760 <b>b</b> <b>b</b> <b>b</b> <b>b</b> <b>b</b> <b>b</b> <b>b</b> <b>b</b> <b>b</b> <b>b</b>	<1 0 0 <1 36 329 425 737 <1 <1 <1 <1 3 0 0 0.008 88	      history1    	      history2    
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water ppm Water FLUID CLEANI	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185(m) ASTM D5185(m)	0 0 0 50 330 430 760 <b>imit/base</b> >15 >15 >20 >0.05 >500 <b>imit/base</b>	<1 0 0 <1 36 329 425 737 <1 current <1 3 0 0.008 88 current	      history1      history1	<ul> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li></li></ul>
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water ppm Water FLUID CLEANI Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D6304*	0 0 0 0 0 5 0 3 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 3 0 4 0 4	<1 0 0 <1 36 329 425 737 <1 <1 <1 3 0 0.008 88 Current ▲ 6539	      history1    	      history2    
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water ppm Water FLUID CLEANI Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185(m) ASTM D5304" ASTM D6304" ASTM D6304"	0 0 0 50 330 430 760 2 15 20 2 500 2 20 5500 2 1 3 20 2 2 2 3 2 0 2 2 2 3 2 0 2 3 2 0 2 3 2 0 3 2 3 2	<1 0 0 <1 36 329 425 737 <1 <1 <1 3 0 0.008 88 Current ▲ 6539 535	      history1      history1	<ul> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li></li></ul>
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water ppm Water FLUID CLEANI Particles >4µm Particles >4µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D76477 ASTM D7647	0 0 0 50 330 430 760 3 1 5 0 5 0 5 0 0 5 0 0 5 0 0 5 0 0 5 0 0 5 0 0 5 0 0 5 0 0 5 0 0 5 0 0 5 0 0 5 0 0 5 0	<1 0 0 <1 36 329 425 737 <1 ••••••••••••••••••••••••••••••••••	      history1     history1 	<ul> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li></li></ul>
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water ppm Water FLUID CLEANI Particles >4µm Particles >6µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D6304* ASTM D76477 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 50 330 430 760 3 <b>bimit/base</b> >15 >20 >15 >20 >0.05 >500 <b>bimit/base</b> >5000 >1300 >160 >40	<1 0 0 41 36 329 425 737 <1 Current <1 3 0 0 0.008 88 current < 6539 535 19 8	       history1     history1	<ul> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li></li></ul>
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Vater ppm Water FLUID CLEANI Particles >4µm Particles >4µm Particles >21µm Particles >38µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185(m) ASTM D50407 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 0 50 330 430 760 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<1 0 0 41 36 329 425 737 <1  Current < 1 3 0 0 0.008 88  Current	       history1    history1	       history2    history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Lithium CONTAMINAN Silicon Sodium Potassium Water ppm Water Ppm Water Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D6304* ASTM D76477 ASTM D7647 ASTM D7647 ASTM D7647	0 0 0 0 0 0 50 330 430 760 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<1 0 0 41 36 329 425 737 <1 Current <1 3 0 0 0.008 88 current < 6539 535 19 8	      history1    history1   history1	<ul> <li></li> <li>history2</li> <li></li> <li></li></ul>



## **OIL ANALYSIS REPORT**

A Particle Count	FLUID DEGRAD	ATION	method	limit/base	current	history1	history2			
122,880 Severe	Acid Number (AN)	mg KOH/g	ASTM D974*	0.60	0.48					
	VISUAL		method	limit/base	current	history1	history2			
7,680 (benormal 1,920 480 480 120 480 120 120 120 120 120 120 120 120 120 12	White Metal	scalar	Visual*	NONE	NONE					
16 0 Cleani	Yellow Metal	scalar	Visual*	NONE	NONE					
a 30	Precipitate	scalar	Visual*	NONE	NONE					
-10 Cc de	Silt	scalar	Visual*	NONE	NONE					
	Debris	scalar	Visual*	NONE	NONE					
$4\mu$ $6\mu$ $14\mu$ $21\mu$ $38\mu$ $71\mu^{2}$	Sand/Dirt	scalar	Visual*	NONE	NONE					
A Particle Trend	Appearance	scalar	Visual*	NORML	NORML					
6k 4µm	Odor	scalar	Visual*	NORML	NORML					
$\widehat{E}_{5k}$	Emulsified Water	scalar	Visual*	>0.05	NEG					
99 94 44 96 93 44	Free Water	scalar	Visual*		NEG					
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2			
	Visc @ 40°C	cSt	ASTM D7279(m)	67.4	62.3					
0k	Visc @ 100°C	cSt	ASTM D7279(m)	8.9	8.9					
Dects/23	Viscosity Index (VI)	Scale	ASTM D2270*	105	118					
	COC Flash Point	°C	ASTM D92*	242	264					
Flash Point (°C) 275	SEDIMENT		method	limit/base	current	history1	history2			
270	Pentane Insolubles	%	ASTM D893(m)*		0.142					
မှ မ္ဘာ 265	SIMULATED DISTILLA	FON (GCD)	method	limit/base	current	history1	history2			
80	(GCD) % < 335°C	°C	ASTM D2887*		1.10					
255 -	(GCD) Initial Boiling Point	°C	ASTM D2887*		99.3					
250 Base	(GCD) 5% Distillation Point	°C	ASTM D2887*		407.5					
Dec6/23	(GCD) 10% Distillation Point	°C	ASTM D2887*		427.8					
0 	(GCD) 20% Distillation Point	°C	ASTM D2887*		451.0					
Water (KF)	(GCD) 30% Distillation Point	°C	ASTM D2887*		466.7					
6000 T	(GCD) 40% Distillation Point	°C	ASTM D2887*		479.8					
5000 + <b>Severe</b>	(GCD) 50% Distillation Point	°C	ASTM D2887*		491.7					
Ē <sup>4000</sup>	(GCD) 60% Distillation Point		ASTM D2887*		503.4					
습 波 3000 -	(GCD) 70% Distillation Point	°C	ASTM D2887*		515.7					
<sup>≥</sup> <sub>2000</sub> -	(GCD) 80% Distillation Point	°C	ASTM D2887*		528.4					
1000 Abnormal	(GCD) 90% Distillation Point	°C	ASTM D2887*		544.1					
	(GCD) FBP% Distillation Point	°C	ASTM D2887*		592.2					
Dec6/23	SAMPLE IMAG	ES	method	limit/base	current	history1	history2			
Acid Number	Color					no image	no image			
¥ 0,40- ма 0,30- Чем 0,20- 0,10-	Bottom					no image	no image			
Image: Constraint of the second of the se										
Validity of results and interpreta							780)865-8901			