



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area  
**SMELTER 61**  
Machine Id  
**61-37-000-2014**  
Component  
**Hydraulic System**  
Fluid  
**FORSYTHE NO FIRE HPWG 46B (--- GAL)**

## RECOMMENDATION

We advise that you add water to increase the water concentration level to 39%. Ensure that only distilled water or boiler feed water condensate are used for make-up. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid.

## WEAR

All component wear rates are normal.

## CONTAMINATION

There is no indication of any contamination in the component(unconfirmed).

## FLUID CONDITION

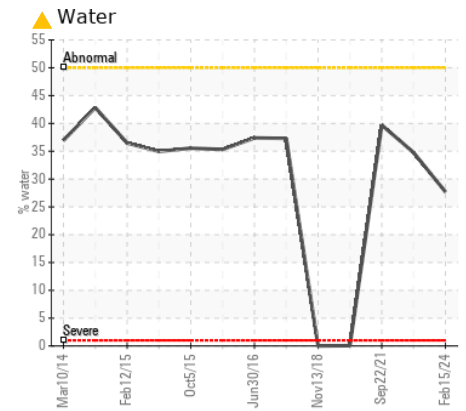
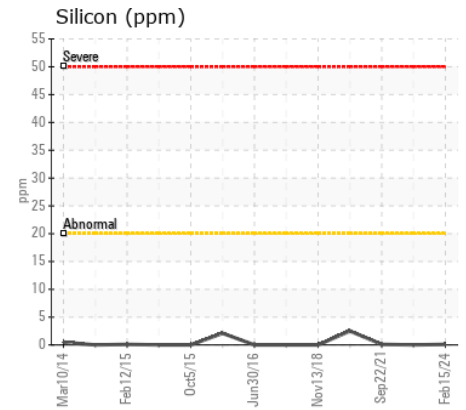
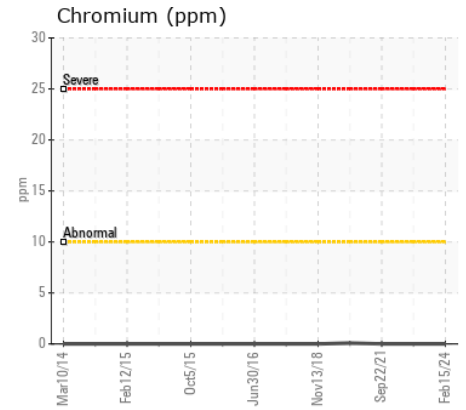
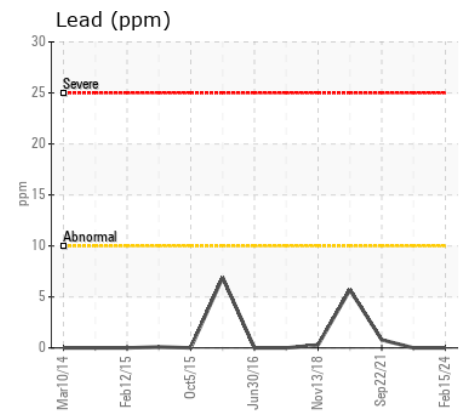
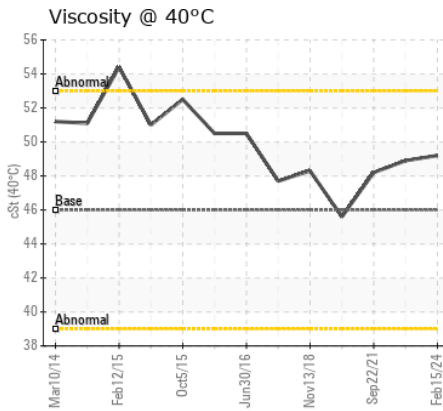
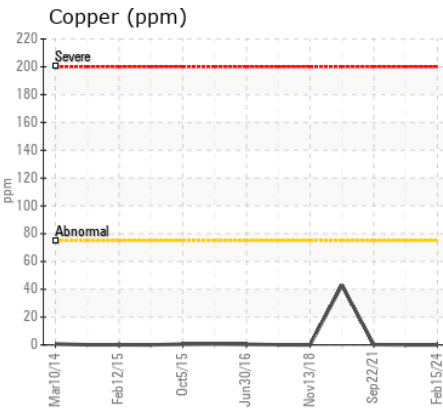
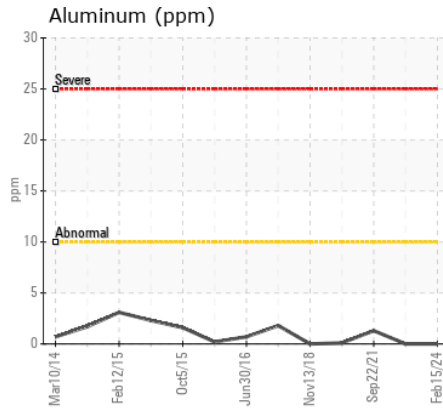
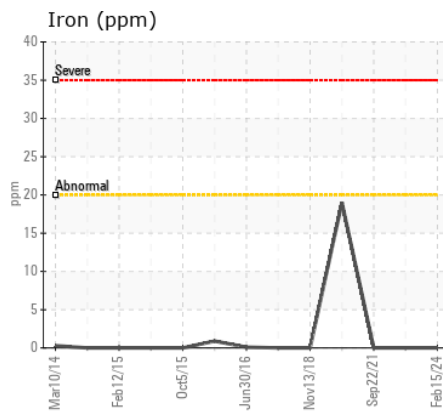
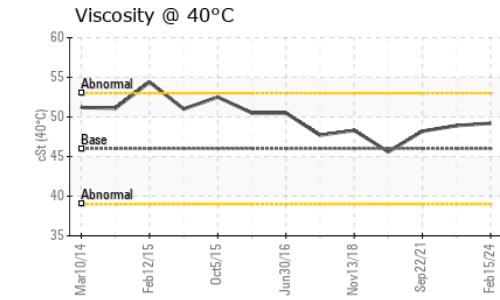
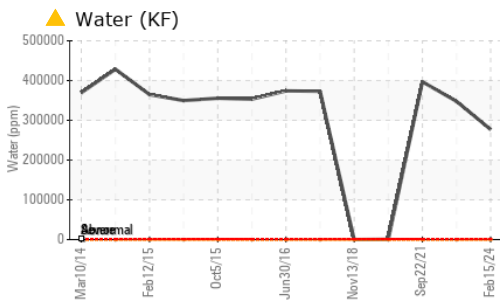
The water concentration level is lower than acceptable for this fluid.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0304929</b>	WC0304808	WC0303440
Sample Date		Client Info		<b>15 Feb 2024</b>	15 Aug 2023	22 Sep 2021
Machine Age	mths	Client Info		<b>0</b>	0	0
Oil Age	mths	Client Info		<b>0</b>	0	0
Filter Age	mths	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	Not Changd	N/A
Filter Changed		Client Info		<b>N/A</b>	Not Changd	N/A
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

Iron	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Silver	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185(m)	>10	<b>0</b>	0	1
Lead	ppm	ASTM D5185(m)	>10	<b>0</b>	0	<1
Copper	ppm	ASTM D5185(m)	>75	<b>0</b>	0	<1
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

Silicon	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	0	<1
Potassium	ppm	ASTM D5185(m)	>20	<b>31</b>	0	42
Water	%	ASTM D6304*	>50	<b>▲ 27.7</b>	34.77	39.69
ppm Water	ppm	ASTM D6304*		<b>▲ 277000</b>	347743.0	396970.2
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	Visual*	NORML	<b>FRGLY</b>	FRGLY	NORML
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	Visual*	>50	<b>&gt;10%</b>	>10%	NEG

Sodium	ppm	ASTM D5185(m)		<b>8</b>	0	6
Boron	ppm	ASTM D5185(m)	0.0	<b>&lt;1</b>	0	1
Barium	ppm	ASTM D5185(m)	0.2	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0.7	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185(m)	2.7	<b>&lt;1</b>	<1	<1
Calcium	ppm	ASTM D5185(m)	3.1	<b>&lt;1</b>	<1	<1
Phosphorus	ppm	ASTM D5185(m)	6.8	<b>2</b>	0	<1
Zinc	ppm	ASTM D5185(m)	2.1	<b>0</b>	0	0
Sulfur	ppm	ASTM D5185(m)	326	<b>56</b>	52	11
Visc @ 40°C	cSt	ASTM D7279(m)	46	<b>49.2</b>	48.9	48.2



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0304929  
**Lab Number** : 02619076  
**Unique Number** : 5736186  
**Test Package** : MOB 1 ( Additional Tests: KF )

**Received** : 29 Feb 2024  
**Tested** : 06 Mar 2024  
**Diagnosed** : 06 Mar 2024 - Kevin Marson

**Vale - Copper Cliff Smelter**  
 COPPER CLIFF SMELTER WAREHOUSE, 155 BALSAM ST.  
 COPPER CLIFF, ON  
 CA P0M 1N0  
 Contact: Andy Kozachanko  
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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.