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INSPECTION REPORT

Prepared for:

SUNCOR Energy
Firebag 100/6-12-95-6W4M
P2P1 SAGD

March 28, 2005
Inspection Report # 2723

* Mark of Schlumberger

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EQUIPMENT INSPECTION REPORT

		Unique Well ID	WELL	FIELD	AREA
COMPANY	**SUNCOR Energy**	**P2P1**	**100/6-12-95-6W4M**	**Firebag**	**AB**
PULL DATE	**03/22/2005**	INSPECTION DATE	**03/23/2005**		

MOTOR

Part Number	100010918	562 Series HX-S	SAGD Application	
#1HB4C-54027	150 HP	2234Volts/41Amps		58 Days In-Well

INSPECTION RESULTS

General Mechanical Condition of Motor	GOOD
Electrical Condition of Motor	GOOD
Motor Shows Sign of Excessive Heat	NO
Corrosion on Motor	NEGLIGIBLE

COMMENTS:

*** KMC thrust bearing
*** Dual base bushings
*** PEEK insulation
*** SLK rotor bearings

There was no sign of any corrosion formation noted on the housing of this motor. The head and base of the motor looked good and the shaft turned free and easy and the settings were within manufacturing specifications.

Oil condition: The oil samples taken from the motor were dark in color (please see left cup, picture below). The motor oil was drained and the motor was flushed and filled with fresh, new oil (right cup, picture below). The dielectric strength of the oil before the flush broke down at 18,000 volts and after the flush was good up to 24,000 volts.

Electrical condition: Prior to the draining and flushing of the motor oil, the motor tested 1.24 ohms balanced phase-to-phase with 2000 mega-ohms resistance phase-to-ground. The motor passed the motor idle slant test (MIST) and the high potential segment of the electrical test at 7200 volts DC with only 2.4 micro-amps current leakage detected.

Vibration Test: The motor passed the vibration test conducted at 60 HZ with readings of 0.03485, 0.02829, and 0.03204 ips-peak, at the head, center, and base respectively of the motor. These results were well within specification of 0.156 ips-peak maximum.

The motor was in good electrical and mechanical condition overall.

PROTECTOR Part Number 100008798 Advanced Protector SAGD Application
3FB4D-58404 540 Series LSMPMPM 58 Days In-Well

INSPECTION RESULTS

General Mechanical Condition of Protector	GOOD
Mechanical Condition of Protector Seals	GOOD
Protector Thrust Bearing indicates	NOT APPLICABLE
Corrosion of Protector	NEGLIGIBLE

COMMENTS:

*** All metal bellows
*** TC bushings and sleeves
*** KMC/B thrust bearings
*** High strength shaft

There was no sign of any corrosion formation noted on the housing of this protector. The shaft turned free and easy with no excessive side play. The shaft settings were within manufacturing specifications. No sign of leak was detected from the housing joints during the compressed air pressure test.

Relief valve: The high-pressure relief valve was in good mechanical and functional condition. The valve opened at 8psi and after the pressure was released closed at 4psi.

Seals: The seals and the shaft seal bellows passed air pressure test with no sign of any leak detected. The protector also passed communication test between chambers.

Oil condition: The fluids contained outside the metal bellows were dark in color similar to the quality of oil seen from the motor. However, the fluids drawn from inside the bellows and from the thrust chamber were clean with no indication of any form of contamination. Due to the inherently high viscosity of the oil in the protector and considering the construction of the metal bellows, draining and flushing the protector with fresh, clean oil does not guarantee that the chambers outside the metal bellows is absolutely free of any contamination.

Overall, the protector was in good mechanical condition.

REMARKS:

The equipment was pulled from the well after the submersible pumping system failed to produce fluids to surface and the motor was going down on inverter overload. Before the equipment failed, the Firebag plant apparently suffered from a power failure and after power was restored, attempts to re-start the unit failed. Downhole electrical readings indicated that the cable and the motor were in good operational condition. It was suspected that the twin-screw pump was stuck.

As soon as the string of downhole equipment reached the surface, the Field Service Technician noted in his activity report that the Can-K pump was stuck and the shaft would not rotate. The protector and motor shafts spun freely with no excessive shaft play noted and the oil in the motor and the protector were clean with no sign of well fluid contamination. The motor and the cable tested 2.5 ohms balanced phase-to-phase with 600 mega-ohms phase-to-ground resistance prior to the pull. After the pull, the cable tested 2000 mega-ohms phase-to-ground on all three legs. The motor tested 1.25 ohms balanced phase-to-phase with 2000 mega-ohms phase-to-ground resistance after the cable was removed. The Can-K representatives took the Can-K pump and the protector-to-pump coupling to their shop. The Protector, motor, and the cable string was shipped to the Nisku ART Center for shop testing.

Disposition for these equipment were as follows:

The subject motor passed all electrical tests and was drained, flushed, and filled with fresh new oil. This motor has accumulated a total of 58 days in the well at the time of test. This motor is now awaiting schedule for re-installation in the well.

The subject protector passed mechanical and functional tests and was drained, flushed, and filled with fresh new oil. This protector has accumulated a total of 58 days in the well at the time of test. Although this protector passed all the tests conducted in the shop, we are recommending to the customer not to re-run this protector as is. Instead, we are suggesting that this protector should be dismantled for inspection of the internal components to ensure the cleanliness of the metal bellows and the integrity of the seals and

the relief valves. This protector can then be re-built once the internal components are verified to be in good functional condition, and free of any contamination.

The cable string with the pothead attached was also inspected and tested. The cable and the pothead assembly passed all electrical tests but the pothead must be replaced to ensure integrity of the seals. The cable that was initially earmarked for installation before it was replaced by the cable installed in the well will be supplied to the customer instead.

Enrique "Ricky" Santos