



EQUIPMENT ACCEPTANCE SIGN OFF SHEET FOR MTR-2

EQUIPMENT DESCRIPTION: Top Drive

VENDOR: NOV.

DATE: 4th April 2008.

COMPANY	NAME	SIGN	PASS	FAIL
MERMAID PROJECT TEAM	Michael Ryder	<i>[Signature]</i>	OK.	
MERMAID OPERATION TEAM	Lee Hood / Jerry Hill	<i>[Signature]</i>	OK	
CHEVRON REPRESENTATIVE	Jon Eckel Gheorghe Orbu	<i>[Signature]</i>	OK	

REMARKS: We were requested to witness the final testing of the Top Drive at the NOV workshop, Tuas Avenue 5, Tuas, Singapore. The first test was carried out on the 26th March 2008 and could not be completed due to several faults being noted. This was attended by Michael Ryder, ModuSpec Surveyor; Lee Hood, Mermaid Drilling Maintenance Supervisor; and Jon Eckel, Chevron Company Man.

We were requested to witness the final FAT of the Top Drive and VFD house on the 4th April 2008. This was to witness the correction of the faults previously noted and to ensure that they had been repaired correctly. This was attended by Michael Ryder, ModuSpec Surveyor; Jerry Hill, Mermaid Drilling Maintenance Supervisor; Gheorghe Orbu, Chevron Company Man.

Top Drive model: TDS-9SA

The first and second acceptance test was supervised by Marvin Lee from NOV and commenced at 14:30 hours and 16:30 hours respectively. Both the test's was carried out over a period of 1 1/2 hours. There were several anomalies during the initial testing and these needed to be addressed before the final acceptance testing could be carried out.

The test criteria was NOV, s standard Top Drive factory acceptance procedures.

5.3 Top Drive.

The top drive was powered up using a standby generator and all functions were tested.

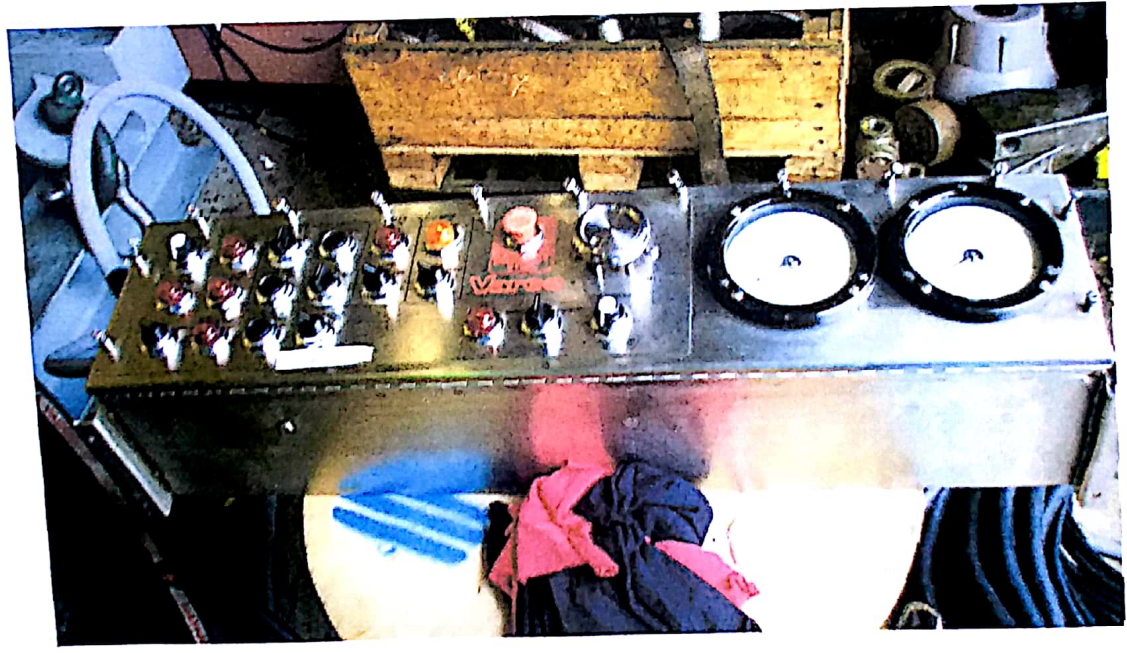
- The issues from the initial tests were:
- Stability of Spin Speed at 25 rpm.
- Drill string torque.
- Make up torque.
- No load Maximum speed.
- Voltage Spikes.
- Oil spillage on the hydraulic block.

Results of final FAT.

The Spin Speed was checked out and noted at 25 RPM.
The drill string torque was tested and noted at 31,000 Ft/Lb.
The Make-Up torque was tested and noted at 45,000 Ft/Lb.
No load Maximum speed was tested and noted at 220 RPM. The reverse maximum speed was noted at 125 RPM.

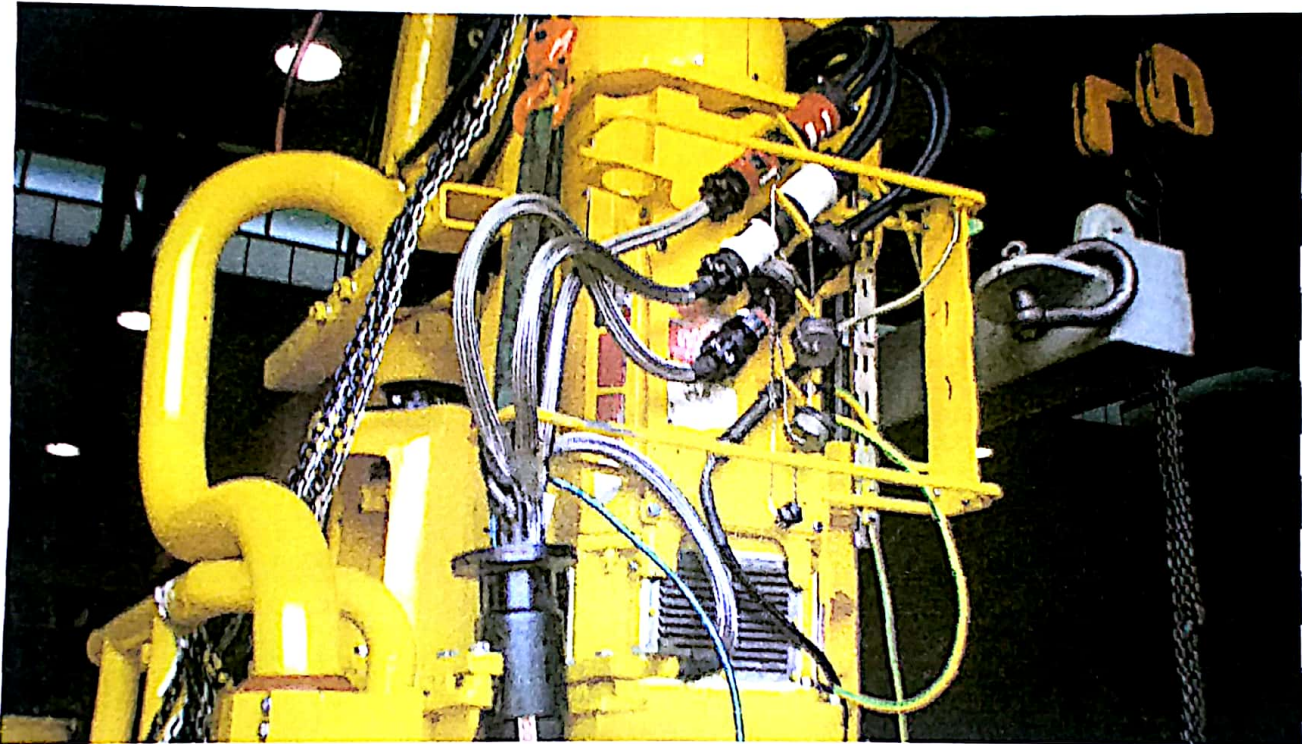
During maximum no load speed check's it was noted that the top drive oil pressure was 1.75 Bar and the Hydraulic Oil pressure at 125.5 Bar.

FIG #1



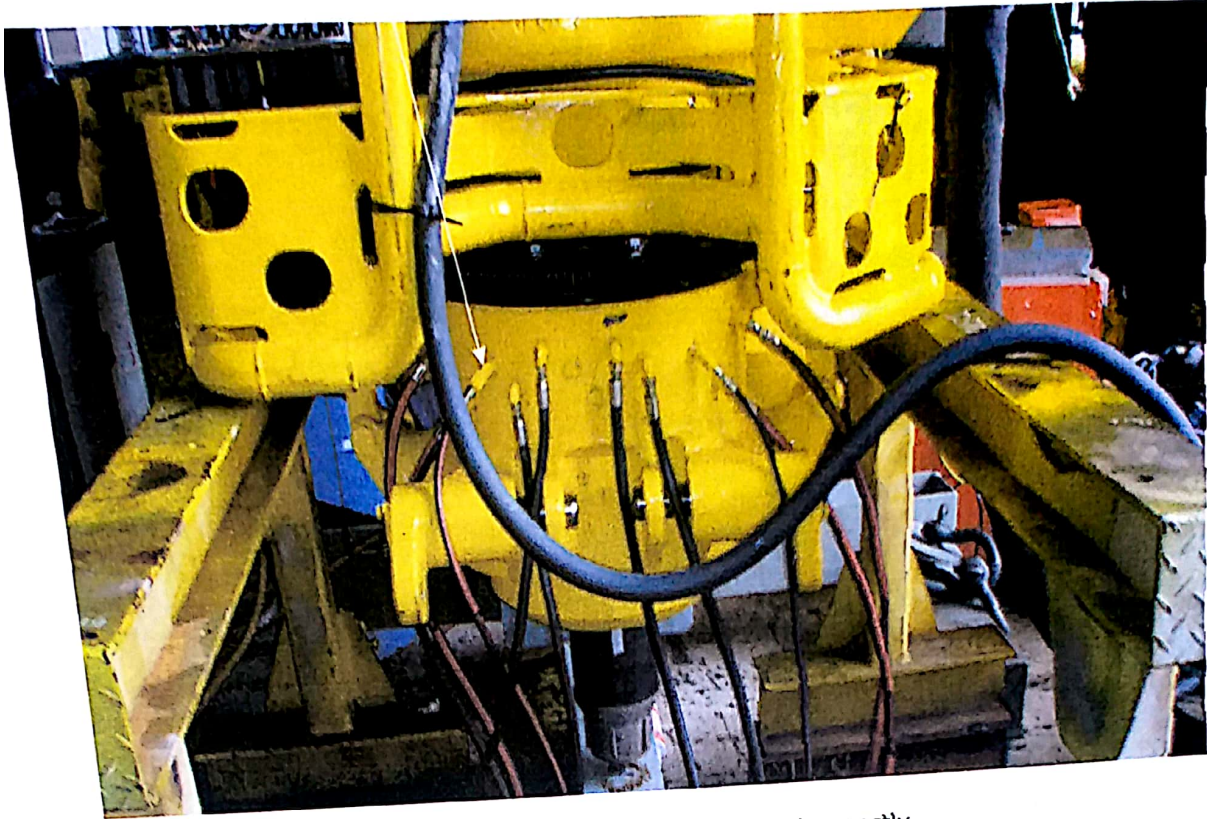
The control Panel was set up as shown. All push buttons and switches were function tested. Only alarm cancel was non-operational for the test.

FIG #3



The top drive plug in connections were checked and found to be secure. The support bracket for the cable tube had been modified previously, and spacers added, but it will be reverted to its original NOV recommended set-up, so as to ensure a safe and secure fixing of the tube.

FIG #4



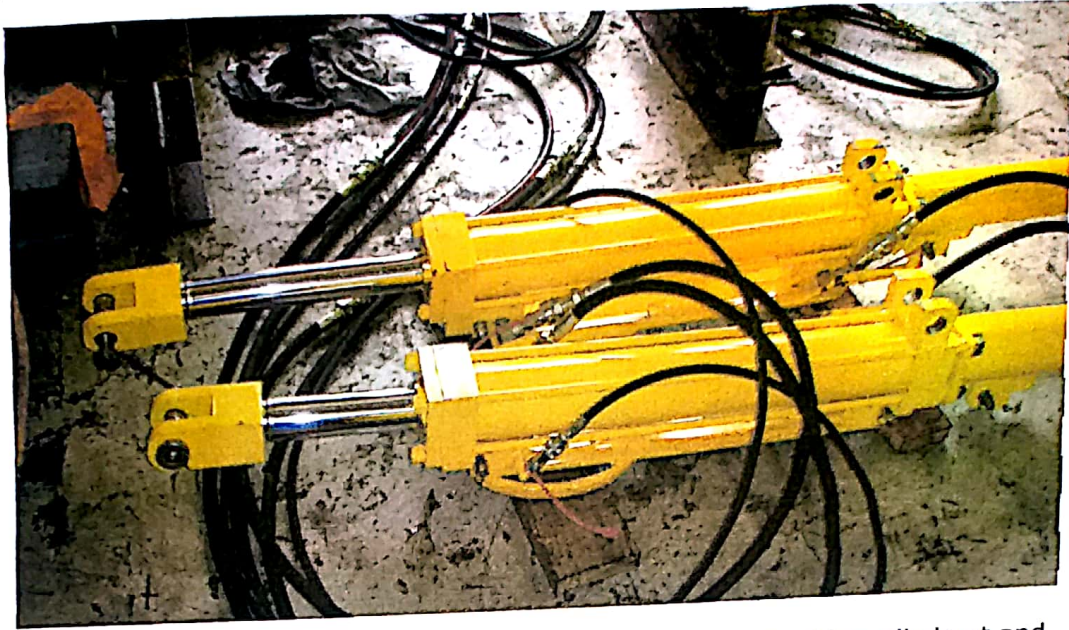
Rotating head was operated in both directions and functioned correctly.

FIG#5



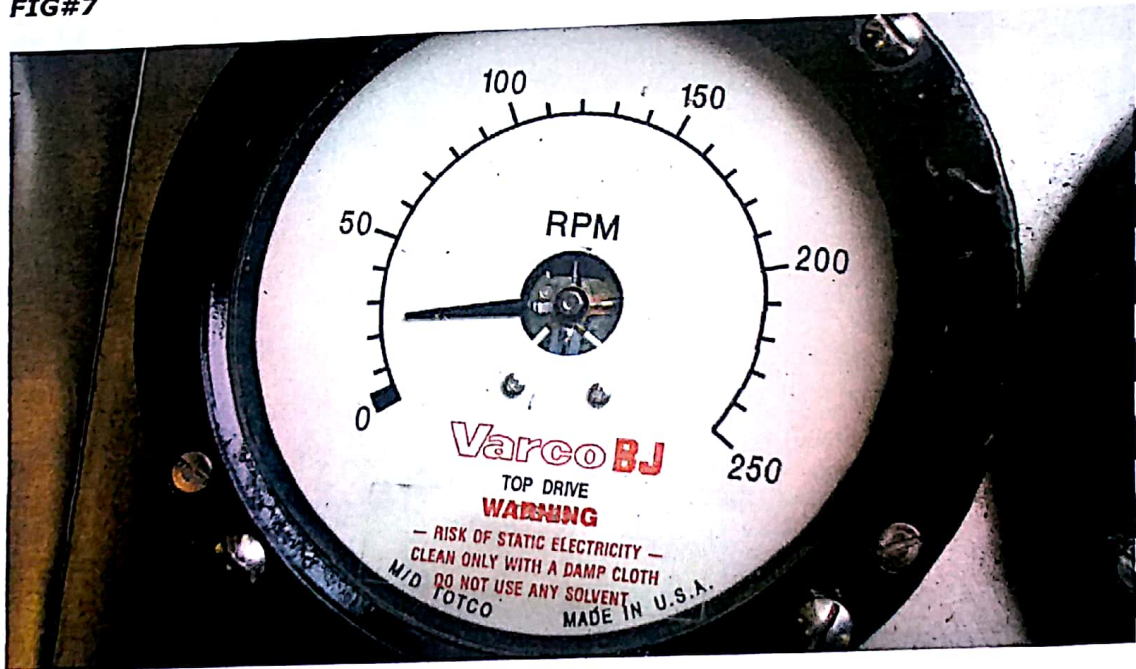
The pipe clamp was function tested and operated correctly in both directions.

FIG#6



The above bails were stroked out to the maximum length. Both travelled out and retracted at different speeds. This would not occur under load, stroke travel would be equal.

FIG#7



The spin speed was re-checked and noted at 25 RPM. (see above). This was confirmed by the above photograph.