

Distribution

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**Deepwater Horizon
Technical Rig Audit
January 2005**

Prepared by

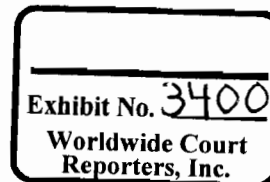
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Kevan Davies, Rig Audit Group
24 January 2005

Approved by

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Norman Wong, Head of Rig Audit
29 January 2005

[APG]

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The scope of work that Transocean is performing is extensive and includes

- Wellhead connector change out
- Pod upgrades and swap out
- All rubber goods changed out
- MUX cable subsea plug upgrade and integration of safety equipment to reduce the possibility of SEM flooding
- Installation of test rams in the lower BOP cavity.

The latest lubrication and torque requirements have been circulated regarding riser bolts. Transocean are making up new BOP test procedures utilising the installed test rams. Most of the inspection work has been completed and most of the work scope is on the

There is a practice by maintenance personnel to close out maintenance work orders even though not all tasks are completed. Critical checks and inspections are consequently being missed. This was noted on numerous occasions during review of the maintenance history files. Maintenance work orders assigned to the incorrect craft has also resulted in

system server is maintained onboard the vessel and regularly backed up. The maintenance management system was rigorously interrogated with focus on maintenance of the primary drilling equipment and systems. The size of the maintenance crew is reasonable considering the size of the vessel and the nature of the equipment although the First Engineer position has recently been discontinued. A relatively high staff turnover has also recently been experienced due to the migration of personnel leaving. This has resulted in premature promotion for some personnel.

The audit has identified a number of deficiencies within EMPAC that have potential to cause an incident or equipment downtime.

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critical maintenance tasks including NDT inspection of the drilling load path being missed.

Maintenance history files were generally found to be unsatisfactory although a few were exemplary. Work undertaken and measurements requested in the maintenance procedure were frequently omitted from the history files. An auditable trail of maintenance performed on equipment was often not possible from interrogation of the maintenance history. For example the dead line anchor bolts were recommended for replacement following unsatisfactory NDT inspection during October 2004. The status of these bolts is presently unknown.

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