

UNITED STATES DEPARTMENT OF THE INTERIOR
 MINERALS MANAGEMENT SERVICE
 GULF OF MEXICO REGION
ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **17-AUG-2006** TIME: **0200** HOURS

2. OPERATOR: **BHP Billiton Petroleum (GOM) Inc.**

REPRESENTATIVE: **Mark Jackson**
 TELEPHONE: **(281) 925-7600**

CONTRACTOR: **Global Marine Drilling Co.**

REPRESENTATIVE: **Andy Dywan**
 TELEPHONE: **(713) 599-6303**

3. OPERATOR/CONTRACTOR REPRESENTATIVE/SUPERVISOR
 ON SITE AT TIME OF INCIDENT:

4. LEASE: **G08035**

AREA: **AT** LATITUDE:
 BLOCK: **574** LONGITUDE:

5. PLATFORM:

RIG NAME: **GSF DEVELOPMENT DRILLER I**

6. ACTIVITY:

EXPLORATION (POE)
 DEVELOPMENT/PRODUCTION
 (DOCD/POD)

7. TYPE:

HISTORIC INJURY
 REQUIRED EVACUATION
 LTA (1-3 days)
 LTA (>3 days)
 RW/JT (1-3 days)
 RW/JT (>3 days)
 Other Injury

FATALITY
 POLLUTION
 FIRE
 EXPLOSION

LWC HISTORIC BLOWOUT
 UNDERGROUND
 SURFACE
 DEVERTER
 SURFACE EQUIPMENT FAILURE OR PROCEDURES

COLLISION HISTORIC >\$25K <=\$25K

STRUCTURAL DAMAGE
 CRANE
 OTHER LIFTING DEVICE
 DAMAGED/DISABLED SAFETY SYS.
 INCIDENT >\$25K
 H2S/15MIN./20PPM
 REQUIRED MUSTER
 SHUTDOWN FROM GAS RELEASE
 OTHER **Pollution**

6. OPERATION:

PRODUCTION
 DRILLING
 WORKOVER
 COMPLETION
 HELICOPTER
 MOTOR VESSEL
 PIPELINE SEGMENT NO.
 OTHER

8. CAUSE:

EQUIPMENT FAILURE
 HUMAN ERROR
 EXTERNAL DAMAGE
 SLIP/TRIP/FALL
 WEATHER RELATED
 LEAK
 UPSET H2O TREATING
 OVERBOARD DRILLING FLUID
 OTHER **Hydraulic fluid.**

9. WATER DEPTH: **6213** FT.

10. DISTANCE FROM SHORE: **100** MI.

11. WIND DIRECTION: **NE**
 SPEED: **5** M.P.H.

12. CURRENT DIRECTION: **E**
 SPEED: **1** M.P.H.

13. SEA STATE: **2** FT.

17. DESCRIBE IN SEQUENCE HOW ACCIDENT HAPPENED:

While a Subsea engineer was carrying out his daily check around 01.00 am (third check on the night), he observed fluid on the moonpool deck. He went to observe tensioner # 11 and # 12 and noticed the "can catchers" were overflowing with tensioner fluid, he continued to go to tensioner # 9 and # 10 and they were the same, the can catchers were overflowing. The Toolpusher was notified and Subsea engineer made his way to the rig floor and noticed when he brought up the riser tensioner screen on the X-Com panel that "RARS Recoil Mode Activated" red alarm. This was reset and when looking at the tensioner pairs (#11 and # 12) across the readings were approximately 305 Kips each. They were brought up to 333 kips each.

Findings:

1. On 08/16/06 the BOP was tested, at 18:30 hours the Subsea engineer switched from Sem A to Sem B on the inactive blue pod on the BOP stack. (Sem is a control computer in the pod). The switching resulted in a spurious signal being sent the BOP control computer on surface indicating that the LMRP had released. The BOP control computer then sends a signal to the riser tensioner system which in turns activates the Olmsted valves on the tensioners venting hydraulic fluid. However, in this case the venting went unnoticed for 7 hours. In total 500 gallons were vented, 50 gallons remain in the vent tanks, 200 gallons was contained on the deck and a catch pan and 250 gallons spilled into the sea.
2. Riser recoil system was not physically activated by anyone on the rig floor.
3. Recoil system when fired is designed to release fluid out the Olmstead valve.
4. NOV continued checking the alarms and data logger for problems. Also contacted Sense Norway to download data information and send to rig.
5. The LMRP did not disconnect and riser integrity maintained through the incident.
6. The BOP vendor is working on a software solution to the problem. The alarm system is being revised.
7. Presently a strict monitoring program is in place to identify any repeat of the event.
8. Recoil alarm is set at the lowest priority which does not give the Driller an audible alarm and there is no pop up screen. In this case the venting went unnoticed on for seven hours.

18. LIST THE PROBABLE CAUSE(S) OF ACCIDENT:

On 08/16/06 the BOP was tested, at 18:30 hours the Subsea engineer switched from Sem A to Sem B on the inactive blue pod on the BOP stack. (Sem is a control computer in the pod). The switching resulted in a spurious signal being sent the BOP control computer on surface indicating that the LMRP had released. The BOP control computer then sends a signal to the riser tensioner system which in turns activates the valves, Olmsted valves, on the tensioners venting hydraulic fluid. However, in this case the venting went unnoticed for 7 hours. In total 500 gallons were vented, 50 gallons remain in the

vent tanks, 200 gallons was contained on the deck and a catch pan and 250 gallons spilled into the sea.

19. LIST THE CONTRIBUTING CAUSE(S) OF ACCIDENT:

Recoil alarm is set at the lowest priority which does not give the Driller an audible alarm and there is no pop up screen.

21. PROPERTY DAMAGED: 250 gallons of hydraulic fluid.
NATURE OF DAMAGE: Lost overboard

ESTIMATED AMOUNT (TOTAL): \$3,250

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

No recommendations to MMS

The MMS concurs with the Operators recommendations to prevent recurrence.

1. In the mean time we are pulling the fuse and jumpers between Hydril and NOV recoil system during a SEM switch which eliminates the possibility of firing the recoil system.

2. We are looking into a modification which will return the fluid from the overflow tank back to the high pressure accumulator, in other words making it a closed loop system which would reduce the possibility of fluid discharge.

3. Hydril is working on a software fix which will not be implemented until they have one and the LMRP/BOP's must be unlatched. We would prefer to do this software upgrade once the BOP is back on surface due to the whole system will require rebooting.

4. We have requested for Sense to change the alarm priority from low to high which will give the Driller an audible and pop-up screen alarm. This software change can not be performed during normal Drilling operations.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

25. DATE OF ONSITE INVESTIGATION:

26. ONSITE TEAM MEMBERS:

n/a /

29. ACCIDENT INVESTIGATION

PANEL FORMED: NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

FPausina for TTrosclair

APPROVED

DATE: 16-OCT-2006

POLLUTION ATTACHMENT

1. VOLUME: GAL **5.95** BBL
YARDS LONG X YARDS WIDE

APPEARANCE:

2. TYPE OF HYDROCARBON RELEASED: OIL
 DIESEL
 CONDENSATE
 HYDRAULIC
 NATURAL GAS
 OTHER _____

3. SOURCE OF HYDROCARBON RELEASED: **Riser tensioner can catchers.**

4. WERE SAMPLES TAKEN? **NO**

5. WAS CLEANUP EQUIPMENT ACTIVATED? **NO**

IF SO, TYPE: SKIMMER
 CONTAINMENT BOOM
 ABSORPTION EQUIPMENT
 DISPERSANTS
 OTHER _____

6. ESTIMATED RECOVERY: **0** GAL BBL

7. RESPONSE TIME: HOURS

8. IS THE POLLUTION IN THE PROXIMITY OF AN ENVIRONMENTALLY SENSITIVE AREA (CLASS I)? **NO**

9. HAS REGION OIL SPILL TASK FORCE BEEN NOTIFIED? **NO**

10. CONTACTED SHORE: **NO** IF YES, WHERE:

11. WERE ANY LIVE ANIMALS OBSERVED NEAR: **NO**

12. WERE ANY OILED OR DEAD ANIMALS OBSERVED NEAR SPILL: **NO**