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

ACCIDENT INVESTIGATION REPORT

1. OCCURRED

   DATE: **20-MAR-2006** TIME: **0822** HOURS

2. OPERATOR: **BP Exploration & Production Inc.**

   REPRESENTATIVE: **Scherie Douglas**

   TELEPHONE: **(281) 366-6843**

3. LEASE: **G17003**

   AREA: **WR** LATITUDE:

   BLOCK: **544** LONGITUDE:

4. PLATFORM:

   RIG NAME: **DIAMOND OCEAN CONFIDENCE**

5. ACTIVITY:
   - [ ] EXPLORATION(POE)
   - [X] DEVELOPMENT/PRODUCTION (DOCD/POD)

6. TYPE:
   - [ ] FIRE
   - [ ] EXPLOSION
   - [ ] BLOWOUT
   - [ ] COLLISION
   - [ ] INJURY NO. **0**
   - [ ] FATALITY NO. **0**
   - [X] POLLUTION
   - [X] OTHER **Riser Disconnect**

7. OPERATION:
   - [ ] PRODUCTION
   - [X] DRILLING
   - [ ] WORKOVER
   - [ ] COMPLETION
   - [ ] MOTOR VESSEL
   - [ ] PIPELINE SEGMENT NO. _____
   - [ ] OTHER _____

8. CAUSE:
   - [X] EQUIPMENT FAILURE
   - [ ] HUMAN ERROR
   - [ ] EXTERNAL DAMAGE
   - [ ] SLIP/TRIP/FALL
   - [X] WEATHER RELATED
   - [ ] LEAK
   - [ ] UPSET H2O TREATING
   - [ ] OVERBOARD DRILLING FLUID
   - [X] OTHER **Emergency Riser Disconnect**

9. WATER DEPTH: **6844** FT.

10. DISTANCE FROM SHORE: **160** MI.

11. WIND DIRECTION:

    SPEED: **36** M.P.H.

12. CURRENT DIRECTION:

    SPEED: **3** M.P.H.

13. SEA STATE: **12** FT.

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

    Brett Cocales-WSL

CONTRACTOR: **Diamond Offshore Drilling, Inc.**

CONTRACTOR REPRESENTATIVE/ SUPERVISOR ON SITE AT TIME OF INCIDENT:

Marshall Perez-Master/OIM

17. DESCRIBE IN SEQUENCE HOW ACCIDENT HAPPENED:

At 2100 hours on 19 March 2006, while conducting drilling operations on Well No. 1, the dynamically positioned semi-submersible drilling rig Diamond Ocean Confidence began experiencing high environmental loads due to the approaching western edge of an Eddy (over 2 knots) and approaching weather system (~30 knot winds). The Dynamic Position Operator (DPO) was able to keep the vessel at a heading of 190 degrees forward and 10 degrees aft. The Master/OIM (Offshore Installation Manager) called for a Yellow Alert following company station keeping guidelines. The Bottom Hole Assembly (BHA) was pulled inside the 13-5/8 inch casing with the bit at the shoe, the drill string was hung off on the middle pipe ram and the riser, choke and kill lines displaced with sea water by 0137 hours in anticipation of a possible disconnect. During this operation, approximately 2368 bbls of Synthetic Based Mud (SBM) was recovered from the riser, choke and kill lines.

A Red Alert was initiated at 0649 hours when the total power consumption for the Dynamic Positioning (DP) system consistently exceeded 80% due to the high winds and current. Total Power consumption above 80% is criteria for Red Alert per company station keeping guidelines. The percentage of total power consumption is figured from 400 tons of available thrust, so 80% total power consumption is operating with 320 tons of thrust.

At 0730 hours, environmental conditions caused the total power consumption to exceed 85%. The pipe in the BOP was manually sheared and the pipe in the riser was pulled clear of the Blow Out Preventer (BOP). Once the drill pipe was cut, the SBM inside the drill pipe was circulated into the riser in an attempt to recover this fluid.

Weather conditions began to improve so the Master/OIM had the rig crew stand by, secure from Red Alert and remain in Yellow Alert. At 0817 hours engine #7 developed a fuel leak and was taken out of service for repair. With the engine #7 off line, the total power consumption rose to over 80% again, the Master/OIM again ordered a Red Alert to be initiated. During the displacement of the SBM in the riser from the cut drill string, an Emergency Disconnect Sequence (EDS) from the BOP was performed at 0822 hours. Approximately 218 bbls of SBM were lost to the Gulf of Mexico. The drilling fluid contained 69% synthetic base material.

At 0825 hours, once the driller confirmed the Lower Marine Riser Package (LMRP) had been raised 20 feet, the DPO moved the rig with the DP system 10 feet west in order to move the LMRP away from the BOP. With only seven DP engines on line, at 0828 hours the engine #5 tripped off line due to high cooling water temperature. The DPO deselected thrusters #1 and #8 to prevent the loss of more engines. The remaining six DP engines tripped off line due to under voltage/frequency within the system because two engines were not operating and the given environmental conditions. The rig was then in blackout and began to drift. Recovery from the blackout failed to restart the engines, in order to restore power to the rig to regain control of the DP system, due to the high cooling water temperature. The engines were restarted manually one by one, allowing the rig to regain a holding position. The rig was determined to be 1960 feet off location. Environmental conditions were such that the system was running at 80% total power consumption. The Master/OIM did not attempt to move the rig back towards location until the weather improved.

The well status at 0845 hours was such that the Blind/Shear rams were closed with drill pipe hung off below. The 13-5/8 inch casing shoe is at a depth of feet MD/TVD and the open hole is at a depth of feet MD/TVD.

All personnel were accounted for and there were no injuries or fatalities.

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

The engine #7 fuel leak and its subsequent unavailability increased demand on the remaining engines.

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

High winds and currents, originating from the same general direction, combined to drive total power consumption above 80%.

21. PROPERTY DAMAGED:

One joint of drill pipe.

NATURE OF DAMAGE:

Drill pipe was sheared by BOP rams after drill string was hung off prior to disconnecting from the well.

ESTIMATED AMOUNT (TOTAL): **$5,000**

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

Due to the nature of this event, the Houma District has no recommendations to the Regional Office.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: **NO**

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

25. DATE OF ONSITE INVESTIGATION:

12-APR-2006

26. ONSITE TEAM MEMBERS:

Kelly Bouzigard-Inspector / Ben Coco-Field Engineer /

29. ACCIDENT INVESTIGATION PANEL FORMED: **NO**

OCS REPORT:

30. DISTRICT SUPERVISOR:

Michael J. Saucier

APPROVED

DATE: **11-MAY-2006**

POLLUTION ATTACHMENT

1. VOLUME: GAL **150** BBL

   YARDS LONG X YARDS WIDE

   APPEARANCE:

2. TYPE OF HYDROCARBON RELEASED:
   - [ ] OIL
   - [ ] DIESEL
   - [ ] CONDENSATE
   - [ ] HYDRAULIC
   - [ ] NATURAL GAS
   - [X] OTHER **Synthetic Based Drilling Fluid**

3. SOURCE OF HYDROCARBON RELEASED: **SBM from riser disconnect (Total 218 bbls X 0.69 synthetic fluid)**

4. WERE SAMPLES TAKEN? **NO**

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

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

6. ESTIMATED RECOVERY: 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**