UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
GULF OF MEXICO REGION

ACCIDENT INVESTIGATION REPORT

For Public Release

1. OCCURRED
   DATE: 18-DEC-2011 TIME: 0800 HOURS

2. OPERATOR: Shell Gulf of Mexico Inc.
   REPRESENTATIVE: DiCarlo, Theresa
   TELEPHONE: (504) 728-6237
   CONTRACTOR: Transocean Offshore
   REPRESENTATIVE: Paul Macon
   TELEPHONE: (504) 728-8985

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

4. LEASE: G19939
   AREA: MC LATITUDE: 28.630253
   BLOCK: 348 LONGITUDE: -87.9871026

5. PLATFORM:
   RIG NAME: T.O. DEEPWATER NAUTILUS

6. ACTIVITY: EXPLORATION (POE)

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

8. CAUSE:
   EQUIPMENT FAILURE
   HUMAN ERROR
   EXTERNAL DAMAGE
   SLIP/TRIP/FALL
   WEATHER RELATED
   LEAK
   UPSET H2O TREATING
   OVERBOARD DRILLING FLUID
   OTHER

9. WATER DEPTH: 7257 FT.

10. DISTANCE FROM SHORE: 88 MI.

11. WIND DIRECTION: NE
    SPEED: 10 M.P.H.

12. CURRENT DIRECTION: NW
    SPEED: 3 M.P.H.

13. SEA STATE: 4 FT.
On December 16, 2011, the ROV dived and inspected the riser and wellhead displaying no indication of pollution or seal failure of the boost line. On December 17, 2011, the ROV did not dive due to maintenance. On December 18, 2011, the Transocean Deepwater Nautilus was drilling ahead on well 003 sidetrack 01 utilizing Synthetic Base Mud (SBM). Between the hours of 0600 and 0700, a loss of returns at a rate of 1 barrel per minute (BPM) was noticed. The rate of loss decreased between the hours of 0700 and 0800 to 1/2 BPM, and at 0810 hour the rate increased to 2.4 BPM. By 0915 hour, the loss of returns had increased to 4 BPM. At approximately 0930 hour, while the ROV was descending to inspect the riser and wellhead, SBM was identified leaking from the boost line near joints 5 and 6 of the riser (6,865 ft). The pumps were stopped and the boost line was isolated stopping the leak. It was calculated that approximately 319 barrels (BBLS) of SBM was lost. The base oil concentration of the SBM was 57%, totaling 180.2 BBLS of base oil discharged. Regulatory authorities were notified as well as the National Response Center (NRC) #998417. While BSEE Inspectors were on site, a negative pressure test was being conducted. After successful results of the negative pressure test, rig personnel intended to displace the marine riser with seawater and pull the LMRP and riser to conduct a visual inspection of the boost line seal at the point of the leak. The BOP stack will be left on the wellhead with the blind shear rams closed and tested. On December 19, 2011, a storm packer was set and a positive pressure test had been conducted.

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

The probable cause of the leak was a seal failure on the boost line connection. Analysis conducted by Stress Engineering showed scratches on the pin surface was the most likely cause of the primary leak.

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

The scratches on the pin surface were caused by the pin repeatedly striking against hard particles embedded in the seals. The hard particles in the seals may have been pulled out of the coating.

20. LIST THE ADDITIONAL INFORMATION:
21. PROPERTY DAMAGED:  
   2 Seals @65.00 each / 319 bbls of SBM  (CONFIDENTIAL PER OPERATOR EMAIL ATTACHED overboard (F) NOTE: NO ESTIMATED COST IS BEING PROVIDED PER THE CONFIDENTIAL NATURE OF THE MATERIAL.

   ESTIMATED AMOUNT (TOTAL): $ 

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:  
The BSEE New Orleans District makes no recommendations to the Agency

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING NARRATIVE:  
   E - 100 On December, 18, 2011, Shell Offshore reported a spill of approximately 319 BBLS of synthetic base mud. Reference NRC # 998417. No further pollution was observed.

25. DATE OF ONSITE INVESTIGATION: 19-DEC-2011

26. ONSITE TEAM MEMBERS: Joel Moore / Evan Graham /

29. ACCIDENT INVESTIGATION PANEL FORMED: NO

30. DISTRICT SUPERVISOR: David J. Trocquet
1. VOLUME: GAL 319 BBL
   YARDS LONG X YARDS WIDE

   APPEARANCE:

2. TYPE OF HYDROCARBON RELEASED: [ ] OIL
   [ ] DIESEL
   [ ] CONDENSATE
   [ ] HYDRAULIC
   [ ] NATURAL GAS
   [X] OTHER Synthetic-based Mud

3. SOURCE OF HYDROCARBON RELEASED: Seal failure on the boost line connection

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 0 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: [ ] IF YES, WHERE:

11. WERE ANY LIVE ANIMALS OBSERVED NEAR: NO

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