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: 20-JUL-2013 TIME: 0410 HOURS

2. OPERATOR: BP Exploration & Production Inc.
   REPRESENTATIVE:
   TELEPHONE:
   CONTRACTOR: ENSCO International Company
   REPRESENTATIVE:
   TELEPHONE:

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

4. LEASE: G09868
   AREA: MC LATITUDE: 28.19048192
   BLOCK: 778 LONGITUDE: -88.49537359

5. PLATFORM:
   RIG NAME: THUNDER HORSE PDQ

6. ACTIVITY:
   [ ] EXPLORATION (PEO)
   [x] 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
   [ ] FATALLTY
   [ ] 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: 6040 FT.

10. DISTANCE FROM SHORE: 90 MI.

11. WIND DIRECTION: SSW
    SPEED: 16 M.P.H.

12. CURRENT DIRECTION: W
    SPEED: 1 M.P.H.

13. SEA STATE: 0 FT.
17. INVESTIGATION FINDINGS:

On 20 July 2013 at approximately 0410 hours, an event occurred on the Thunder Horse PDQ that resulted in 66 barrels of 14 ppg (pound per gallon) Synthetic Based Mud (SBM) being discharged into offshore waters.

During the operation of pumping sea water out of pit #610 the Driller received an alarm indicating that pits #608 and #609, containing 14 ppg SBM, were losing volume. At this time, the Driller notified the Derrick Hand that pits #608 and #609 were losing mud. The Derrick Hand then started checking valves on the other pits, which were locked out in the closed position, to ensure they were fully closed. The Derrick Hand noticed that the valve handle on pit #608 was loose, so he turned off the transfer pump and closed the master dump valve. Once the master dump valve was closed the discharging of mud overboard ceased.

Upon further investigation it was discovered that the clean out valve on pit #608 had a shaker screen rubber caught in the butterfly valve preventing the valve from fully closing.

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

A shaker screen rubber was caught in the butterfly valve which prevented the valve from fully closing.

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

1) All the pit clean out drain valves are connected to a manifold with no way of knowing if the valves are leaking until the overboard valve is opened.
2) No filter screen was in place to prevent debris from getting to the pit clean out dump valves.

20. LIST THE ADDITIONAL INFORMATION:

The 14 ppg SBM that was discharged overboard consisted of 53% Oil, 17% Water Phase, and 30% Solids.
21. PROPERTY DAMAGED: SBM
   NATURE OF DAMAGE: Discharged overboard

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: YES

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:
   E-100 Failure to prevent unauthorized discharge of pollutants into offshore waters.
   On 7-20-2013 at approximately 0410 hours an incident occurred that resulted in a 66
   barrel discharge of 14 pound per gallon Synthetic Based Mud into offshore waters.

25. DATE OF ONSITE INVESTIGATION:
   23-JUL-2013

26. ONSITE TEAM MEMBERS:
   Michael "Joe" Sonnier / Theodore Yao

29. ACCIDENT INVESTIGATION
   PANEL FORMED: NO
   OCS REPORT:

30. DISTRICT SUPERVISOR:
   David Trocquet

APPROVED DATE: 19-MAR-2014
INJURY/FATALITY/WITNESS ATTACHMENT

☐ OPERATOR REPRESENTATIVE ☐ INJURY
☐ CONTRACTOR REPRESENTATIVE ☐ FATALITY
☐ OTHER ________________________ ☑ WITNESS

NAME:
HOME ADDRESS:
CITY: STATE:

WORK PHONE: TOTAL OFFSHORE EXPERIENCE: YEARS

EMPLOYED BY:
BUSINESS ADDRESS:
CITY: STATE:

ZIP CODE:

☐ OPERATOR REPRESENTATIVE ☐ INJURY
☑ CONTRACTOR REPRESENTATIVE ☐ FATALITY
☐ OTHER ________________________ ☑ WITNESS

NAME:
HOME ADDRESS:
CITY: STATE:

WORK PHONE: TOTAL OFFSHORE EXPERIENCE: YEARS

EMPLOYED BY:
BUSINESS ADDRESS:
CITY: STATE:

ZIP CODE:
1. VOLUME: GAL - 66 BBL
   YARDS LONG X YARDS WIDE

   APPEARANCE: BARELY VISIBLE

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

3. SOURCE OF HYDROCARBON RELEASED: Clean out valve on pit #608

4. WERE SAMPLES TAKEN? NO

5. WAS CLEANUP EQUIPMENT ACTIVATED? NO
   IF SO, TYPE: [ ] SKIMMER
   [ ] CONTAINMENT BOOM
   [ ] ABSORPTION EQUIPMENT
   [ ] DISPERGANTS
   [ ] 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