

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

ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **24-NOV-2012** TIME: **1130** HOURS

2. OPERATOR: **Anadarko Petroleum Corporation**

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR: **EnSCO Offshore Co.**

REPRESENTATIVE:

TELEPHONE:

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

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

6. OPERATION:

4. LEASE: **G21444**

AREA: **KC** LATITUDE:

BLOCK: **875** LONGITUDE:

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

5. PLATFORM:

RIG NAME: **ENSCO 8500**

6. ACTIVITY: EXPLORATION(POE)
 DEVELOPMENT/PRODUCTION
(DOCD/POD)

8. CAUSE:

7. TYPE:

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

- EQUIPMENT FAILURE
- HUMAN ERROR
- EXTERNAL DAMAGE
- SLIP/TRIP/FALL
- WEATHER RELATED
- LEAK
- UPSET H2O TREATING
- OVERBOARD DRILLING FLUID
- OTHER _____

- FATALITY
- POLLUTION
- FIRE
- EXPLOSION

9. WATER DEPTH: **6820** FT.

- LWC
- HISTORIC BLOWOUT
 - UNDERGROUND
 - SURFACE
 - DEVERTER
 - SURFACE EQUIPMENT FAILURE OR PROCEDURES

10. DISTANCE FROM SHORE: **212** MI.

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

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

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

13. SEA STATE: FT.

17. INVESTIGATION FINDINGS:

On 24 November 2012, the Ensco 8500 semi-submersible rig under contract with Anadarko Petroleum Corporation (Anadarko), was conducting drilling operations on Well SS001 located at the surface location of Keathley Canyon Block 875 when the primary slip joint packer on the upper telescopic joint failed resulting in the discharge of approximately 14.0 barrels of 12.8 pounds per gallon (ppg) Synthetic Based Mud (SBM) into the Gulf of Mexico. The secondary packer was energized and sealed off the slip joint preventing further SBM discharge. Anadarko reported no visible surface sheen or recoverable quantity; therefore, no cleanup activities were initiated. Anadarko notified the National Response Center (Incident Report #1031429) about the incident. The upper telescopic joint packer was shipped to Drip-Quip for analysis to determine the cause of the failure.

Based on the investigation findings and analysis of the telescopic joint, the probable causes of the incident were attributed to the following: 1) failure of the Upper Split Insert Wiper Seal (SIWS) and 2) debonding failure in the Upper Slip Joint Packer.

The Upper SIWS was found to be granulated and it came apart when removed from the Packer Housing. Moreover, the upper SIWS elastomer was worn through leaving it too thin to absorb potential heat by friction during well operations.

When the Upper Packer was removed, it had a through wall breach near the lower end ring. This was considered to possible debonding failure of the end ring to rubber. The Upper Packer had two inner diameter breaches and one outer diameter crack that were adjacent to the metal end ring major bond surface indicating a developing debonding situation since this is the origin of control pressure failure.

The upper SIWS had excessive wear that allowed the Upper Packer, located on the outside of the SIWS, to move further inward toward the Inner Barrel. In addition, higher stresses than normal may have been applied SWIS resulting in the urethane wiper moving away from the center end rings until it compressed against the outer retaining rings and became stuck.

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

Based on the investigation findings and analysis of the telescopic joint, the probable causes of the incident were attributed to the following: 1) failure of the Upper Split Insert Wiper Seal (SIWS) and 2) debonding failure in the Upper Slip Joint Packer.

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

The upper SIWS had excessive wear that allowed the Upper Packer, located on the outside of the SIWS, to move further inward toward the Inner Barrel. In addition, higher stresses than normal may have been applied SIWS resulting in the urethane wiper moving away from the center end rings until it compressed against the outer retaining rings and became stuck.

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

**Upper Slip Joint Packer and Split Insert
Wiper Seal.**

NATURE OF DAMAGE:

**Breaches and cracks in the Upper Slip
Joint Packer. Excessive ware and
deterioration of the Upper Split Insert
Wiper Seal.**

ESTIMATED AMOUNT (TOTAL): **\$150,000**

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

The BSEE Lafayette District makes no recommendations to the Agency.

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

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

None

25. DATE OF ONSITE INVESTIGATION:

26. ONSITE TEAM MEMBERS:

Troy Naquin /

29. ACCIDENT INVESTIGATION

PANEL FORMED: **NO**

OCS REPORT:

30. DISTRICT SUPERVISOR:

Elliott S. Smith

APPROVED

DATE: **07-FEB-2013**

