

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: 23-NOV-2012 TIME: 1345 HOURS

2. OPERATOR: **Anadarko Petroleum Corporation**

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR:

REPRESENTATIVE:

TELEPHONE:

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

4. LEASE: **G22987**

AREA: **GC** LATITUDE:

BLOCK: **680** LONGITUDE:

5. PLATFORM: **A (Constitution**

RIG NAME:

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

7. TYPE:

HISTORIC INJURY

REQUIRED EVACUATION

LTA (1-3 days)

LTA (>3 days) 1

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 **Leg Injury**

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

9. WATER DEPTH: 504 FT.

10. DISTANCE FROM SHORE: 134 MI.

11. WIND DIRECTION: N
SPEED: 1 M.P.H.

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

13. SEA STATE: 1 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**

