

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

ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **15-MAY-2012** TIME: **1415** HOURS

2. OPERATOR: **Mariner Gulf of Mexico LLC**
REPRESENTATIVE:
TELEPHONE:
CONTRACTOR: **Chet Morrison Contractors, Inc.**
REPRESENTATIVE:
TELEPHONE:

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

4. LEASE: **G15781**
AREA: **HI** LATITUDE:
BLOCK: **A 7** LONGITUDE:

5. PLATFORM: **A**
RIG NAME: *** LIFT BOAT**

6. ACTIVITY: EXPLORATION (POE)
 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

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 **Crane & Deck repair-**
 H2S/15MIN./20PPM **clean up.**
 REQUIRED MUSTER
 SHUTDOWN FROM GAS RELEASE
 OTHER **Well Control Incident**

6. OPERATION:

PRODUCTION
 DRILLING
 WORKOVER
 COMPLETION
 HELICOPTER
 MOTOR VESSEL
 PIPELINE SEGMENT NO.
 OTHER **Plug and Abandon**

8. CAUSE:

EQUIPMENT FAILURE
 HUMAN ERROR
 EXTERNAL DAMAGE
 SLIP/TRIP/FALL
 WEATHER RELATED
 LEAK
 UPSET H2O TREATING
 OVERBOARD DRILLING FLUID
 OTHER **Trapped pressure below CIBP**

9. WATER DEPTH: **49** FT.

10. DISTANCE FROM SHORE: **32** MI.

11. WIND DIRECTION: **NNE**
SPEED: **16** M.P.H.

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

13. SEA STATE: **3** FT.

14. PICTURES TAKEN: **YES**

15. STATEMENT TAKEN: **YES**

17. INVESTIGATION FINDINGS:

The well was Temporary Abandoned (TA'd) by Mariner Gulf of Mexico LLC on July 22, 2010. The subject well was TA'd with a surface cement plug consisting of a Cast Iron Bridge Plug (CIBP) with 200' cement on top and all existing plugs below were successfully tested at that time on all annulus. An APM permit was submitted by Mariner Gulf of Mexico LLC (Apache Corporation) and approved on April 25 & 26, respectively, to repair the annulus sustained casing pressure (SCP), cut and remove all the remaining casings at 15' BML. When Apache Corporation made their routine assessment, they discovered the 11-7/8" by 16" annuli had 100 psi SCP. As a result, Apache Corporation submitted two RPMs permits and they were approved to re-enter the TA'd well, drill out the surface cement plug, clean out deeper, cut 3-1/2" tubing deeper, cut 7-5/8" and 11-7/8" casings, set CIBP /retainer as needed with cement on top, repair the 100 psi SCP, and then finalize the abandonment.

On May 15, 2012, the 200' of cement on top of the CIBP was drilled out and the crew was attempting to drill out the CIBP at 483' RKB. Loss of well control occurred due to a pressure encounter below the CIBP which blew/ejected 485' of 3-1/2" work string, Bottom Hole Assembly (BHA), and tubular out of the well. A small diesel tank was struck by a mule shoe (part of the BHA) which resulted in a 400'x 200' of sheen in the water. The crew acted in a timely manner to contain the diesel that was leaking out of tank which helped to minimize pollution to the Gulf waters. The Emergency Shut Down (ESD) was activated immediately, and the Blow out Preventers (BOP) components functioned as designed to completely seal the wellbore. There were no injuries with minor pollution, approximately 5 gallons, from the diesel tank leak and no pollution from BOP control.

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

The operator was aware of the initial 100 psi SCP found on the 11-7/8" by 16" annuli. No other pressures were reported and the approved RPM permit documented same. All hydrocarbon zones were properly isolated, and tested at the time the well was TA'd on July 22, 2010. It appeared a gas source had migrated through cement by possibly channeling in the 11-7/8" annulus, or plugs, and this pressure build-up occurred over a period of time just below the CIBP.

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

The constant 100 psi SCP was the only reported pressure when the RPM permit was submitted and approved. There was no indication of a pressure build-up below the CIBP until the 200' of cement was drilled out, and the CIBP was penetrated; however, additional planned diagnostic tests are being conducted on the well.

20. LIST THE ADDITIONAL INFORMATION:

After a diagnostic procedure is performed, and BOP components are inspected, the operator will submit a plan in e-well (RPM) to continue finalizing the well abandonment in a safe manner. For similar situations in the future, the abandonment procedure will be reviewed further by the Agency and Operator to avoid such a well control situation by using different techniques and equipment while drilling out through cement plugs including CIBPs. Based on a case-by-case basis, a possible usage of coiled tubing, snubbing hydraulic unit, and/or a workover rig will be considered. Also, a cement balanced plug may be required to be placed immediately above the production packer, and cement squeezed to extend above the packer bore to improve zonal isolation.

21. PROPERTY DAMAGED: NATURE OF DAMAGE:
Handrails, roof, deck, both cranes and light fixtures were damaged on the L/B Caitlin. Also, the diesel tank, BHA, 400' of 3-1/2" drill pipe, including stabilizers, and the top frame of the accumulator. Loss of well control due to pressure encountered below the CIBP blew/ejected all of the 3-1/2" work string including the BHA out of the well, resulting in damaged surface equipment.

ESTIMATED AMOUNT (TOTAL): \$165,000

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:
The Lake Jackson District recommends that the BSEE Office of Safety Management (OSM), issue a Safety Alert related to this incident.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: YES

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:
Due to approximate 400' x 200' diesel sheen (~5 gallons) entering the Gulf waters, an INC (E-100) was issued. Based on a surveillance video located on the L/B Caitlin; the Lake Jackson District engineering staff witnessed the crew acted in a timely manner to contain the diesel leak which minimized pollution to the Gulf waters. Also, the ESD was activated immediately and the blind/shear ram BOP component closed in as designed and sealed the well bore completely.

25. DATE OF ONSITE INVESTIGATION: 15-MAY-2012
28. ACCIDENT CLASSIFICATION: MAJOR

26. ONSITE TEAM MEMBERS: Mark Osterman / Robert Carroll / James Holmes /
29. ACCIDENT INVESTIGATION PANEL FORMED: NO
OCS REPORT:

30. DISTRICT SUPERVISOR:
John McCarroll

27. OPERATOR REPORT ON FILE: YES

APPROVED
DATE: 01-JUN-2012

