

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: **27-OCT-2014** TIME: **0210** HOURS

2. OPERATOR:

Marathon Oil Company

REPRESENTATIVE:

TELEPHONE: -

CONTRACTOR: **Maersk Drilling USA Inc. -**

REPRESENTATIVE: -

TELEPHONE:

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

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

6. OPERATION:

4. LEASE:

G33379

AREA: **WR** LATITUDE:

BLOCK: **578** LONGITUDE: -

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

5. PLATFORM:

RIG NAME: **MAERSK VALIANT**

6. ACTIVITY:

- EXPLORATION (POE)
- DEVELOPMENT/PRODUCTION (DOCD/POD)

8. CAUSE:

- EQUIPMENT FAILURE
- HUMAN ERROR
- EXTERNAL DAMAGE -
- SLIP/TRIP/FALL -
- WEATHER RELATED
- LEAK
- UPSET H2O TREATING
- OVERBOARD DRILLING FLUID
- OTHER **Gas influx after drilling salt**

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

9. WATER DEPTH: **6958** FT.

10. DISTANCE FROM SHORE: **180** MI.

11. WIND DIRECTION: -
SPEED: M.P.H.

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

13. SEA STATE: FT.

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

On October 27, 2014, while conducting drilling operations for Marathon Oil Company, the Maersk Valiant experienced a well control incident in which approximately 55 barrels of mud was blown onto the rig floor.

At the time of the incident, the rig was located in Walker Ridge Block 578, Lease number OCSG-33379. The rig had been drilling at a depth of 15,902 feet and increasing the weight of the mud in the well from 11.8ppg to 12.0ppg when the incident occurred. The crew first recognized the influx after drilling 3 feet into a salt zone when the flow out of the well increased by 41 percent. An influx of approximately 238 barrels was detected within two minutes. The drill crew spaced out the drill pipe and shut the well in utilizing the Upper Annular. During the kick, it was estimated that a total of 55 barrels of mud had been discharged onto the rig floor.

Following the shut in of the well, the crew began to experience fluid losses and was unable to build pressure in the well as more fluid was pumped. It was determined that fluid losses were a result of both the formation and the 22 inch casing shoe being fractured during the shut in of the well. When the well was shut in, the initial pressure increase inside the well reached a point in which the formation and shoe were unable to contain. BSEE was notified of the incident and discussions began on a safe way to move forward.

The Remotely Operated Vehicle (ROV) was sent down to verify that the influx had not broached the seafloor. A wireline unit was set up to run pressure and temperature logs to confirm that no cross-flow had occurred within the well. As a result of these investigations, it was determined that seafloor broaching and cross flow did not occur. An open hole plug was set to secure the zone that had produced the kick and isolation of the 22 inch shoe was confirmed before approval was given to continue with operations.

On November 21, 2014, after drilling out of the 18 inch liner shoe, another influx of 16 barrels was taken from the well. The depth of the well at the time of the incident was 15,906 feet with a mud weight of 12.8ppg in the hole. The drill crew shut in the well, weighted up the mud to 13.3ppg, and circulated out the kick. The second kick was entirely contained with no release to the surface.

Notification of the second incident was made and a conference call was held between Marathon Oil Company and BSEE to discuss a safe plan for moving forward. The rig was informed to continue sending daily updates of the rigs daily operations. Neither incident resulted in any injuries or pollution to the environment.

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

-After drilling into a salt zone, located at 15,902 feet, a gas influx was encountered resulting in approximately 55 barrels of mud reaching the surface before the well could be shut-in.

-After shutting in the well, the shut-in casing pressure combined with the weight of the mud in the well caused the formation and the 22 inch casing shoe to break down.

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

N/A

20. LIST THE ADDITIONAL INFORMATION:

While circulating gas out of the well following the first incident, a gas detector located in the Shaker House sounded an alarm when a 60 percent Lower Explosive Limit (LEL) was reached. The crew onboard the vessel reported to their emergency muster stations while the situation was assessed. After the initial spike in the gas reading, the gas detector returned to a 0 LEL reading with no other gas detectors detecting any gas present. Crew members with handheld gas detectors inspected the area for any unsafe conditions and determined that there was no threat in the area. The crews were allowed to return to work once it was deemed safe to do so.

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

N/A -

N/A

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

The Houma District has no recommendations for the BSEE Region at this time.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

N/A

25. DATE OF ONSITE INVESTIGATION:

26. ONSITE TEAM MEMBERS: -

James Richard /

29. ACCIDENT INVESTIGATION

PANEL FORMED: - NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

Bryan A. Domangue

APPROVED
DATE:

27-JAN-2014

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