

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-DEC-2015 TIME: 1120 HOURS

2. OPERATOR: Chevron U.S.A. Inc.
REPRESENTATIVE:
TELEPHONE:
CONTRACTOR: Transocean Offshore
REPRESENTATIVE:
TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING DEVICE
- DAMAGED/DISABLED SAFETY SYS.
- INCIDENT >\$25K **Electrical failure**
- 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: G17015
AREA: WR LATITUDE:
BLOCK: 758 LONGITUDE:

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

5. PLATFORM:
RIG NAME: T.O. DISCOVERER CLEAR LEADER

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 _____

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: 6967 FT.
10. DISTANCE FROM SHORE: 204 MI.
11. WIND DIRECTION: SE
SPEED: 14 M.P.H.
12. CURRENT DIRECTION: SE
SPEED: M.P.H.
13. SEA STATE: 3 FT.

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

On December 23, 2015, at 11:20 hours, Transocean's drillship 'Discoverer Clear Leader' experienced an incident involving an electrical fire on the ship's #2 thruster. The incident led to a muster and a loss of the ship's #2 and #6 thrusters.

At the time of the incident, the 'Discoverer Clear Leader' was performing Abandonment operations for Chevron U.S.A and was located in Walker Ridge Block 758, Lease G17015. The rig had just finished setting the last cement plug in the PS001 wellbore when the incident occurred; therefore the well was in a secure state. The ship was able to maintain its position over the well throughout the incident and was able to make a controlled disconnect shortly thereafter.

On the morning of the incident, the bridge received a 'Smoke/Temp' alarm on thruster #2. The emergency stop was immediately initiated from the bridge and the fire team was dispatched into the hull of the ship to investigate the cause of the alarm. All personnel onboard the vessel reported to their designated muster stations after the sounding of the ship's fire alarm. The fire crew arrived to the site of the alarm to find the ship's thruster machinery space filled with smoke. The team was able to identify the source of the smoke originating from the Motor Side of the #2 thruster. Several fire extinguishers were discharged onto the source of the smoke, although no flames were seen by the fire crew. The damage from the incident was contained to the Motor Side 'A section' of the thruster, which rendered the #2 thruster inoperable. In addition, the #6 thruster was also shut in for a brief period of time, when smoke from the #2 thruster triggered a smoke sensor inside the #6 thruster and initiated a shut down. The #6 thruster was able to be brought back online shortly after the incident.

An "All Clear" was called at approximately 12:53 hours, which allowed all personnel to stand down and return to normal operations. Although the rig was still attached to the PS001 well, the loss of the #2 and #6 thrusters did not compromise the station keeping abilities of the drill ship. Notifications of the incident were sent to both the United States Coast Guard (USCG) and the Bureau of Safety and Environmental Enforcement (BSEE) immediately following the incident. With the well already secured and permitted operations complete, the rig was allowed to perform a controlled disconnect from the well without incident. The drillship was relocated to a safe area and an investigation into the cause of the incident was initiated.

The investigation that followed the incident showed the primary cause to be the failure of the capacitors on the Motor Side of the #2 thruster. The failure of the capacitors was tied back to a similar issue which occurred on the Line Side of the #2 thruster on May 15, 2015. Although the system was tested and deemed fit for service following the May 15, 2015 incident, it is believed that the stress that was put on the capacitors at that time is what ultimately led to their failure.

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

- 1) **Equipment Failure:** Failure of the capacitors on the Motor Side of the #2 thruster. The failure led to high temperatures, high pressure build up, and the release of conductive gases.

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

- 1) A previous incident on the Line Side of the #2 thruster led to excessive force being exerted on the capacitors for the Motor Side of the thruster. Several test of the system were performed following the incident, with no indication of any sustained damages being inflicted to the rest of the system. The excessive wear to the equipment during the May 15, 2015 incident is believed to have been what ultimately led to the failure of the capacitors.
- 2) The discharge of hot conductive gases led to additional damage to the incident site due to arcing between the buses.

20. LIST THE ADDITIONAL INFORMATION:

Attached to the report is a copy of Transocean's 'Investigation Report' following the May 15, 2015 incident.

21. PROPERTY DAMAGED:

Motor Side of the ship's #2 thruster.

NATURE OF DAMAGE:

Excessive damage to the electrical equipment due to heat and smoke.

ESTIMATED AMOUNT (TOTAL): \$175,000

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

The Houma District has no recommendations for the Office Of Incident Investigations 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:

11-JAN-2016

26. ONSITE TEAM MEMBERS:

29. ACCIDENT INVESTIGATION

PANEL FORMED: NO

OCS REPORT:

APPROVED

DATE:

20-FEB-2016