

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: **31-OCT-2020** TIME: **1800** HOURS

2. OPERATOR: **LLOG Exploration Offshore, L.L.C.**

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR: **Seadrill Limited**

REPRESENTATIVE:

TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING
- 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:

4. LEASE: **G27277**

AREA: **MC** LATITUDE: **28.46045976**

BLOCK: **503** LONGITUDE: **-89.01157372**

5. PLATFORM:

RIG NAME: **SEADRILL WEST NEPTUNE**

6. ACTIVITY:

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

7. TYPE:

INJURIES:

HISTORIC INJURY

REQUIRED EVACUATION

LTA (1-3 days)

LTA (>3 days)

RW/JT (1-3 days)

RW/JT (>3 days)

FATALITY

Other Injury

OPERATOR

CONTRACTOR

0

2

0

2

8. OPERATION:

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

9. CAUSE:

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

10. WATER DEPTH: **3201** FT.

11. DISTANCE FROM SHORE: **36** MI.

12. WIND DIRECTION: **NE**

SPEED: **7** M.P.H.

13. CURRENT DIRECTION: **NE**

SPEED: **9** M.P.H.

14. SEA STATE: **3** FT.

15. PICTURES TAKEN:

16. STATEMENT TAKEN:

POLLUTION

FIRE

EXPLOSION

LWC HISTORIC BLOWOUT

UNDERGROUND

SURFACE

DEVERTER

SURFACE EQUIPMENT FAILURE OR PROCEDURES

COLLISION

HISTORIC

>\$25K

<=\$25K

On October 31, 2020 at approximately 17:58 hours, LLOG Exploration Offshore, LLC. (LLOG) experienced a dropped object incident which occurred onboard the drillship SeaDrill West Neptune rig at Mississippi Canyon 503, Well #007. The incident involved a spider dog safety door (a piece of grating) falling through the rotary table to the top of the Blow Out Preventers (BOP) injuring two people. At 20:08 hours, LLOG reported the incident to the Bureau of Safety and Environmental Enforcement (BSEE) New Orleans District.

The sequence of events began after repairing the Blind Shear Rams; the BOP was being prepared to be reinstalled on the well. The drill floor (driller) was notified by the subsea engineer to rig up riser running equipment for deploying the BOP. The riser skate bridge was raised, and the BOP was moved to the transporter to be deployed. When the BOP was placed in the transporter, the riser skate bridge was lowered, and the first joint of riser was placed on the skate. At this time the subsea engineer instructed two floor hands to prepare for mobilizing to the top of the BOP to check the riser adapter and to accept the first joint of riser.

The two floor hands donned safety harnesses and personal flotation devices and entered the maintenance basket near the riser adapter walkway. The floor hands exited the basket and positioned themselves on the walkway and performed the inspection of the service line stabs and the pin connection of the riser adapter. When the inspection was completed, the floor hands notified the night tour auxiliary driller they were ready to accept the first 90 ft. slick joint of riser.

While making their way (the two floor hands) to the maintenance basket, the drill crew functioned the spider dogs to the open position. The dogs failed to fully open and therefore reverted to the closed position. At that time, it was noted the back plates of the work platform were still down preventing the dogs from opening. The night tour auxiliary driller went to the spider and raised all 4 back plates.

The dogs were functioned to the open position a second time. It was during this function that the port (left side) aft (toward the back) spider dog safety door was dislodged from the dog. The safety door then fell off the end and down through the rotary to the riser adapter where the two floor hands were stationed (as they had not made it back into the maintenance basket and off of the walkway).

The spider dog safety door struck the riser adapter and the two floor hands knocking them from the walkway and sustaining various injuries. One injured person (IP) had facial lacerations and the other IP had a fractured rib.

The rig personnel scaled the BOP to assist the two floor hands as they were suspended from their self-retracting lifelines. One of the floor hands was upside down, with his left ankle caught between the grating of the walkway and boost (line) valve. The other floor hand had swung off the walkway and was able to plant his feet on the BOP main structure to stop himself from swinging.

The two injured personnel (IPs) were brought down in the maintenance basket and walked under their own power to the infirmary for treatment and evaluation. The IPs were evaluated by the medic on site and the decision was made to send the IPs to shore via med-evac for further evaluation at West Jefferson Hospital in New Orleans, LA. On November 3, 2020, BSEE started conducting an incident investigation consisting of communicating with Company Representative and HSE representative on location. BSEE requested daily reports, photos, witness statements, work permits and procedures.

After reviewing the statements, photos, and drawings, BSEE concluded there was an inadequate secondary retention chain for securing the grating on the riser spider. This retention chain did not prevent the grating from falling forward into the hole

once the two bolts that initially secured the spider dog safety door were sheared.

Human Performance Error:

The safety grating was secured to the spider dog by a bracket and was attached to the dog with 4 bolts. The bolts were sheared off due to the back plate remaining in the down position and not in the open position on the work platform. Therefore, when the spider dog was raised to the vertical position, the back plate forced the safety grating forward shearing the bolts. The back plate must be manually opened or placed in the up position before the dog is raised, see the attached presentation/photos.

The secondary means of securing the safety grating to the spider dog is a chain which attaches both ends of the chain to opposite sides of the spider dog. The chain was attached to the bracket (which secured the safety grating spider dog) and spider dog by one of the 4 bolts. The chain rapped around the spider dog and is designed to prevent the spider dog safety grating from falling away from the well center to the work platform while the dogs are in the open/vertical position. Since the chain was bolted to the bracket and the bolts were sheared, this allowed the grating to fall into the well center and the moon pool; again, please see the attached presentation/photos.

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

Human Performance Error:

- The two bolts that secured the spider dog safety door were sheared off due to the back plates not being raised on the work platform.
- Inadequate secondary safety for securing the spider dog safety door to the spider dog; the chain prevents the spider dog safety door from falling into the work platform area but does not retain the spider dog safety door from falling towards well center and to the moon pool.
- Standard Operating Manual was not followed by the rig floor by personnel.

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

- Communication failure between the rig floor personnel and the moonpool personnel.

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

2 Bolts

Sheared bolts (used to secure the grating).

ESTIMATED AMOUNT (TOTAL): \$100

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The BSEE New Orleans District has no recommendations for the Office of Incident Investigations at this time.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: YES

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

PINC: G-110-(C) Does the lessee perform all operations in a safe and workmanlike manner and provide for the preservation and conservation of property and the environment? Regulation (30 CFR 250.107a) Standard Operating Manual procedures were not followed and Communication failure between the rig floor and the moonpool personnel which didn't allow personnel to clear the moonpool before operating spider dogs above them.

* The retention chain did not prevent the grating from falling forward into the hole once the two bolts that initially secured the grating were sheared off.

25. DATE OF ONSITE INVESTIGATION:

28. ACCIDENT CLASSIFICATION:

29. ACCIDENT INVESTIGATION

PANEL FORMED: NO

26. INVESTIGATION TEAM MEMBERS:

OCS REPORT:

Frank Musacchia /

30. DISTRICT SUPERVISOR:

27. OPERATOR REPORT ON FILE:

David Trocquet

APPROVED

DATE: 14-SEP-2020