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: **07-APR-2017** TIME: **1500** HOURS

2. OPERATOR: **LLOG Exploration Offshore, L.L.C.**
   REPRESENTATIVE:
   TELEPHONE:
   CONTRACTOR: **Seadrill Limited**
   REPRESENTATIVE:
   TELEPHONE:

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

4. LEASE: **G35662**
   AREA: **GC** LATITUDE:
   BLOCK: **478** LONGITUDE:

5. PLATFORM:
   RIG NAME: **SEADRILL SEVAN LOUISIANA**

6. ACTIVITY:
- [X] 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
- [X] CRANE
- [ ] OTHER LIFTING DEVICE
- [ ] DAMAGED/DISABLED SAFETY SYS.
- [ ] INCIDENT >$25K
- [ ] H2S/15MIN./20PPM
- [ ] REQUIRED MUSTER
- [ ] SHUTDOWN FROM GAS RELEASE
- [ ] OTHER

6. OPERATION:
- [ ] PRODUCTION
- [X] DRILLING
- [ ] WORKOVER
- [ ] COMPLETION
- [ ] HELICOPTER
- [ ] MOTOR VESSEL
- [ ] PIPELINE SEGMENT NO.
- [ ] OTHER

8. CAUSE:
- [X] EQUIPMENT FAILURE
- [ ] HUMAN ERROR
- [ ] EXTERNAL DAMAGE
- [ ] SLIP/TRIP/FALL
- [ ] WEATHER RELATED
- [ ] LEAK
- [ ] UPSET H2O TREATING
- [ ] OVERBOARD DRILLING FLUID
- [ ] OTHER _____

9. WATER DEPTH: **3801** FT.

10. DISTANCE FROM SHORE: **112** MI.

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

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

13. SEA STATE: FT.

14. PICTURES TAKEN:

15. STATEMENT TAKEN:

17. INVESTIGATION FINDINGS:

On April 7, 2017, on board the Seadrill Sevan Louisiana operating for LLOG Exploration in Green Canyon Block 478, a joint of 9 7/8”casing was dropped by the Pipe Deck Pipe Handler (PDPH) crane. The joint of 9 7/8” casing was being transferred from one pipe bay to another pipe bay. All personnel assigned for this job scope were standing in the safe zone and outside of the pipe bay area. There was no damage to equipment, and no injuries were reported.

On the afternoon of the incident, the deck crew began transferring single joints of 9 7/8” casing from the aft pipe bay to the forward pipe bay using a PDPH knuckle boom crane. To initialize the casing gripper, the crane operator first selected the mode in the PDPH crane so that this particular size pipe could be picked up. The crane operator selected the pipe range of 7” to 10 ¾” and then activated the crane grippers from the open position to the closed position. An audible beeping tone acknowledged that the system was initialized and ready to proceed with picking up the casing. After lifting and transferring approximately 5 joints, the crane operator had to stop in order to reinitialize the casing setting. Re-initialization was necessary because the crane grippers would deactivate periodically. When transferring the first joint of casing after the re-initialization, the flagger noticed the casing joint was slipping out of the aft gripper. The casing slippage occurred during the first four feet of the lift and resulted in one end of the casing falling to the deck. This in turn jolted the opposite end of the casing free from the forward gripper, allowing it to also fall to the deck. The joint of casing came to rest on the wood-covered beams in the pipe bay.

Bureau of Safety and Environmental Enforcement (BSEE) Inspectors conducted an onsite inspection/investigation on April 19, 2017, and collected documentation for this incident. The crane operator was also interviewed, and during questioning he could not clarify what “periodically” meant in relation to how often he had to re-initialize the PDPH. The investigation revealed that a hydraulic seal was leaking on the aft pipe adapter cylinder, which ultimately led to the dropped casing joint. The leaking seal allowed the pipe stop on the gripper to override its setting for picking up the selected size of casing, thereby deactivating the initial setting. Once the settings were deactivated, the crane operator had to reselect the appropriate size casing. Though this was a re-occurring issue, the crane operator did not question if the system was working properly or if the crane needed to be inspected. As hydraulic pressure was lost, the gripper slowly lost its closing pressure and eventually allowed the casing to slip out of the gripper.

The crane’s gripper function has been removed from service until a full technical investigation is completed and repairs have been made. The contractor is currently working with the original equipment manufacturer to replace the automated pipe adapter system with a manual pin style system, which will reduce the likelihood of equipment failure by eliminating the possibility of leaking hydraulic seals. The manual pin system will also give visual confirmation of a positive latch onto the selected casing.

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

- A leaking hydraulic seal on the aft pipe handler cylinder.

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

- Lack of awareness. The crane operator did not identify an issue with having to continously re-initiate the casing settings. This continous re-initialization was evidence of a hydraulic leak that needed to be addressed.

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

N/A

NATURE OF DAMAGE:

N/A

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

BSEE 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:

25. DATE OF ONSITE INVESTIGATION:

19-APR-2017

26. ONSITE TEAM MEMBERS:

Gabe Orellana / Daniel Ballard / Paul Reeves /

28. ACCIDENT CLASSIFICATION:

29. ACCIDENT INVESTIGATION PANEL FORMED: **NO**

OCS REPORT:

30. DISTRICT SUPERVISOR:

Bryan Domangue

27. OPERATOR REPORT ON FILE:

APPROVED DATE: **23-JUN-2017**