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:
   26-MAR-2015 TIME: **0900** HOURS

2. OPERATOR: **Shell Offshore Inc.**
   REPRESENTATIVE:
   TELEPHONE:
   CONTRACTOR: **NOBLE DRILLING (U.S.) INC. -**
   REPRESENTATIVE:
   TELEPHONE:

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

4. LEASE: **G17001**
   AREA: **WR** LATITUDE:
   BLOCK: **508** LONGITUDE: -

5. PLATFORM:
   RIG NAME: **NOBLE JIM DAY**

6. ACTIVITY:
   - [ ] EXPLORATION(POE)
   - [X] 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.
   - [X] INCIDENT >$25K **Dropped 22" Casing**
   - [ ] H2S/15MIN./20PPM
   - [ ] REQUIRED MUSTER
   - [ ] SHUTDOWN FROM GAS RELEASE
   - [X] OTHER **Item Lost Overboard**

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
   - [X] WEATHER RELATED
   - [ ] LEAK
   - [ ] UPSET H2O TREATING
   - [ ] OVERBOARD DRILLING FLUID
   - [ ] OTHER _____

9. WATER DEPTH: **7600** FT.

10. DISTANCE FROM SHORE: **168** MI.

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

12. CURRENT DIRECTION: **NNE**
    SPEED: **6** M.P.H.

13. SEA STATE: **2** FT.

17. INVESTIGATION FINDINGS: -

On March 26, 2015, while performing drilling operations, the Noble Jim Day dropped approximately 3,107' of 22" casing onto the seafloor.

At the time of the incident, the Noble Jim Day was located in Walker Ridge 508 and was in the process of drilling Shell Offshore's 'Stone #7' well. The rig had successfully ran the 36" drive pipe and drilled the 28" hole section of the well to 12,820'. The decision was made to pre-run the 22" casing, hanging it from the rig, in an attempt to minimize downtime in between coming out of the hole with the drilling assembly and running into the hole with the 22" casing. The extended weather forecast on the rig called for currents to be between 2-3 knots during the week prior to the incident. Given these weather conditions, the rig didn't foresee any issues with hanging off the 22" casing while pulling out of the hole.

On March 25, 2015, all drilling operations on the rig were shut down due to the increasing surface currents that were now ranging from 3.5 to 4.5 knots. Unable to neither run nor pull the 22" casing, the rig held its position and waited for the currents to subside. Over the next day, the loop currents continued to increase. When the currents reached 4.9 knots, the rig began to have trouble maintaining their dynamic position due to high environmental loads on their engines and thrusters. After it was determined safe to do so, the rig began a controlled drift to the north at approximately 0.5 knots. By using a controlled drift the rig was able to decrease the loads to the engines and thrusters as well as on the suspended string of casing. On the morning of March 26th at approximately 09:00, the controlled drift was stopped when the marine crew felt an uncommon rig movement, indicating a mechanical failure. Upon investigating the occurrence, it was found that the 22" casing had been dropped to the seafloor.

The Bureau of Safety and Environmental Enforcement (BSEE) was notified immediately after the incident occurred. The Remotely Operated Vehicle (ROV) on the rig was launched in an attempt to locate the dropped casing and ensure that no subsea infrastructure had been damaged as a result of the incident. None of the equipment on the rig or on the seafloor was damaged due to the dropped casing.

Further investigation into the incident showed that the failure point occurred within one of the O-Ring grooves of the Wellhead Running Tool (WHRT) Mandrel, were it had snapped in two. The WHRT Mandrel is a tool used to assist in the running of casing. Metallurgical test that were performed on the WHRT equipment showed no anomalies that would have resulted in the failure of the equipment. Once all testing was complete, it was determined that the failure of the tool was due to the excessive force from the weight of the casing along with the high loop currents experienced at the time of the incident. Discussions between BSEE and Shell are ongoing to develop a plan forward on recovering the casing from the seafloor.

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

- Unforeseen loop currents, up to 5 knots, ultimately caused the casing to fall due to the increased force introduced to the string of casing as it hung under the rig.

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

N/A

20. LIST THE ADDITIONAL INFORMATION:

All equipment and casing that could be salvaged was sent in for testing. All test showed no flaws or malfunctions in any of the equipment or casing.

21. PROPERTY DAMAGED:

3,120' of 22" Casing

NATURE OF DAMAGE:

Dropped to the seafloor

ESTIMATED AMOUNT (TOTAL): **$2,800,000**

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The Houma District Office has no recommendations for the 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:

04-APR-2015

26. ONSITE TEAM MEMBERS:

Clinton Campo / James Richard /

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

OCS REPORT:

30. DISTRICT SUPERVISOR:

Bryan Domangue

APPROVED DATE: **11-SEP-2015**