

ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **05-MAR-2024** TIME: **0415** HOURS

2. OPERATOR: **Shell Offshore Inc.**

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR: **Transocean Offshore**

REPRESENTATIVE:

TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING
- DAMAGED/DISABLED SAFETY SYS.
- INCIDENT >\$25K **Estimated \$1,000,000**
- H2S/15MIN./20PPM
- REQUIRED MUSTER
- SHUTDOWN FROM GAS RELEASE
- OTHER **List of damages in remarks.**

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

4. LEASE: **G26252**

AREA: **MC** LATITUDE: **28.61875602**

BLOCK: **391** LONGITUDE: **-88.02607444**

5. PLATFORM:

RIG NAME: **T.O. DEEPWATER POSEIDON**

6. ACTIVITY: EXPLORATION(POE)

DEVELOPMENT/PRODUCTION (DOCD/POD)

DECOMMISSIONING

8. OPERATION:

- PRODUCTION
- DRILLING
- WORKOVER
- COMPLETION
- HELICOPTER
- MOTOR VESSEL
- PIPELINE SEGMENT NO.
- OTHER
- TEMP ABAND
- PERM ABAND
- DECOM PIPELINE
- DECOM FACILITY
- SITE CLEARANCE

7. TYPE:

INJURIES:

HISTORIC INJURY

OPERATOR CONTRACTOR

REQUIRED EVACUATION

LTA (1-3 days)

LTA (>3 days)

RW/JT (1-3 days)

RW/JT (>3 days)

FATALITY

Other Injury

9. CAUSE:

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

POLLUTION

FIRE

EXPLOSION

LWC HISTORIC BLOWOUT

UNDERGROUND

SURFACE

DEVERTER

SURFACE EQUIPMENT FAILURE OR PROCEDURES

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

10. WATER DEPTH: **7164** FT.

11. DISTANCE FROM SHORE: **63** MI.

12. WIND DIRECTION: **N**
SPEED: **96** M.P.H.

13. CURRENT DIRECTION: **SSW**
SPEED: **1** M.P.H.

14. SEA STATE: **7** FT.

15. PICTURES TAKEN:

16. STATEMENT TAKEN:

INCIDENT SUMMARY:

On March 5, 2024, at approximately 04:15 hrs., the Transocean Deepwater Poseidon Drillship experienced extreme unexpected change in wind speed and direction due to strong thunderstorms in the area (Mississippi Canyon Block 391). The Drillship was drilling the AW003 well (API# 608174148700, OCS-G 26252). This event resulted in a forced excursion of the vessel's planned position and the vessel had an Emergency Disconnect Sequence (EDS). Shell reported the incident to the Bureau of Safety and Environmental Enforcement (BSEE) New Orleans District (NOD). There was also a release of pollutant fluid from the riser that was reported to the National Response Center (NRC) #1393053, #1393194, #393195).

SEQUENCE OF EVENTS:

On March 5, 2024, while drilling out the 18" shoe track on the AW003 well in MC 391, adverse weather conditions were experienced on the Transocean Deepwater Poseidon. At 04:00 hours, the wind speed increased from 30 kts to 40-45 kts from the South, prompting a heading change to face into the wind. Subsequently, at 04:03 hrs, the wind shifted to the West and intensified to 60 kts, which was not forecasted.

As the vessel attempted to adjust its heading into the wind, the wind speed dropped to zero momentarily before shifting again to the North and escalating to 83 kts. The vessel excursion accelerated due to this rapid increase in wind speed and change in direction, with the wind now hitting the vessel broadside. Communication was established with the bridge and rig floor to prepare for hanging off the drill pipe as the vessel approached the Red Watch Circle. Meanwhile, the Driller on tour had already begun to place the 6-5/8 in drill pipe in a hang-off position once the top drive was made up. The drill string was lowered to a space-out position and the middle pipe ram was closed. Once the gallon count was confirmed, the Driller continued to hang off with a 500k lb. hook load. As the drillship approached the red watch circle limit (90.3 ft), the Driller was on speakerphone, being informed of distances off well center. The Shell Company Representative was present on the bridge and was advised of the need to EDS by the Transocean Captain. The decision to initiate the EDS was made by the Shell Company Representative and the EDS sequence was functioned from the Driller's console. The vessel was within 5-7 ft of approaching the Red Watch Circle when confirmation from the bridge team of a successful liftoff was received. The bit depth was 15,924 ft at the time of the EDS. The vessel drifted approximately 750 ft from the well in a South-Southwest direction, away from any flowlines. The vessel stabilized at a distance of 40 feet from the well location. The Lower Marine Riser Package (LMRP) was approximately 48 ft off the bottom, and the Remote Operated Vehicle (ROV) prepared to dive for an inspection of the well, Blowout Preventers (BOPs), and Riser. The ROV did verify that the well was secure.

According to Transocean, a sequence of events occurred leading up to a critical moment. At 23:02 hrs, a Squall and Frontal Passage 24-hour checklist was initiated. At 01:58 hrs, a WeatherOps Hazardous Thunderstorm Watch was issued. At 02:07 hrs, a supply boat was sent to standby, and all the Marine Diesel Generators (MDGs) and Thrusters were online. At 04:00hrs., the Captain of the drillship was called to the bridge. At 04:03 hrs., the rig started a heading change to starboard. At 04:14:09 hrs, the Middle Pipe Ram close command was given, followed by the Middle Pipe Ram being locked at 04:15:52 hrs. The driller-initiated EDS Mode 2 button was pressed from Drill Floor, which completed a 68-sec sequence where the casing shear was fired first, followed by the upper blind shear ram second. By 04:16 hrs. the red watch circle of 90.3 ft. was exceeded.

BSEE INVESTIGATION:

The BSEE Accident Investigator (AI) received and reviewed information submitted through emails, phone communications, and witness statements from Shell concerning the EDS weather event. The BSEE investigation team arrived on the Transocean Deepwater Poseidon on March 6, 2024, for an onsite investigation. The team requested the NRC report associated with the synthetic based mud loss along with Material Safety Data Sheets associated with the fluids that were released from the riser. The weather reports were provided along with the Well Specific Operational Criteria Report. There were three NRC reports submitted for this incident; one on 3/5/2024 (#1393053) and two on 3/24/2024 (#1393194 and #1393195). A BSEE Offshore Incident Report was also submitted.

During the EDS event, three joints of 6-5/8 in pipe and a Managed Pressure Drilling (MPD) bearing (that were all connected together in one stand) fell from its position in the derrick on the auxiliary side of the drill floor and landed on top of the Driller's shack. This pipe and bearing assembly weighed approximately 13,200 lbs. The metal protective barrier on top and on the side of the Driller's shack was damaged due to this impact.

The drill floor had been made a black zone until daylight hours preventing inspections in the derrick from being performed. Once the area was deemed safe, senior personnel and the drill crew formulated a plan to recover the MPD bearing from across the drill floor and driller's shack. A set of lifting elevators were installed on the top joint of 6-5/8 in pipe, and weight was taken off the stand to allow the welder to cut the lower pipe bumper that the lower joint had slid under. Once this was cut, the joint was lifted until the auxiliary pipe racker was in position to grab the stand.

The stand was then latched into the auxiliary top drive. Once secure in the top drive, the hoist and lifting elevators were removed. The lower joint was bent at a significant angle resulting in having to cut the lower joint just below the upper box end tool joint to allow it to be laid out. Once this was laid out, the bearing was removed from the remaining double, laid out, and sent ashore for inspection. The double was also laid out and sent ashore. Once this was cleared, operations for relatching to BOP commenced.

This event with the pipe and bearing assembly falling across the drill floor was never brought up or mentioned during the onsite interviews with Transocean personnel. Transocean's investigation report did not include this event, nor did Shell reveal this information during interviews and email notifications. This aspect of the incident was discovered by BSEE investigators while conducting an inspection on June 24, 2024, when inspectors noticed the drill shack's protective barrier was damaged and inquired how it happened.

CONCLUSIONS:

BSEE concludes that the incident occurred due to the adverse weather conditions that were not forecasted on weather reports or radar. These adverse weather conditions that the vessel experienced at the time of the event had wind speeds reaching 83 kts from the North.

At 04:00 hrs. the wind speed increased from 30 kts to 40-45 kts from the South, prompting a heading change to face into the wind. Subsequently, at 04:03 hrs, the wind shifted to the West and intensified to 60 kts, which was not forecasted. As the vessel attempted to adjust its heading responding to the wind, the wind speed dropped to zero momentarily before shifting again to the North and escalating to 83 kts. The vessel excursion accelerated due to this rapid increase in wind speed and change in direction, with the wind now hitting the vessel broadside.

At 04:00 hrs., the excursion initially reached the Yellow Watch Circle (as defined by

the Well Specific Operational Criteria Report) that immediately raised the Dynamic Positioning (DP) Yellow Alert. With the winds increasing (60 knots), the excursion continued further. Meanwhile, the Driller on tour had already begun to get the 6-5/8 in drill pipe in a hang-off position in the middle pipe ram (once the top drive was made up).

Prior to this event occurring, the operation being conducted was drilling out the 18 in liner shoe track. At 04:15 hrs, as the rig approached the red watch circle limit (90.3 ft), the driller was on speakerphone, being informed of distances off well; and the Shell Company Man was present on the bridge and was advised of the need to disconnect. The decision to initiate the EDS was made within 5-7 ft of approaching the Red Watch Circle, and confirmation of a successful EDS was received. The vessel drifted approximately 750 ft from the well in a South-Southwest direction, away from any flowlines. The vessel stabilized at a distance of 40 feet from the well location. The LMRP was approximately 48 ft off the bottom, and the ROV performed a dive for an inspection of the well, BOP, and Riser. There was approximately 2875 bbls of Synthetic Based Mud (Bara ECD), of which contained 1,667 bbls of base oil that was released to the seafloor.

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

The extreme unexpected changes in wind speed and direction due to strong thunderstorms caused an excursion of the vessel's planned position. Due to these rapid changes, the vessel was unable to maintain position while being latched up to the well. This event subsequently resulted in an EDS from the well.

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

-The weather forecasts did not predict the adverse weather conditions that were witnessed on location.

-The vessel's radar did not show the actual weather conditions that were witnessed on location.

20. LIST THE ADDITIONAL INFORMATION:

None

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

- LMRP Mandrel/Connector, Rubber goods, BOP control fluid, misc. parts (ring gaskets, etc.)

- General parts replacement and sheared drill pipe drag across LMRP connector upon EDS.

- MPD Bearing

- 6-5/8 in pipe and MPD bearing fell on the drill shack protective barrier

- Metal protective barrier around drill shack

ESTIMATED AMOUNT (TOTAL): \$1,000,000

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

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

For Public Release

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: **YES**

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

1) G-113 - 30 CFR 250.132 (W)

During the on-site investigation on 3/6/2024 for the EDS event neither Shell or Transocean representatives revealed during interviews that the MPD bearing and three joints of 6 5/8" pipe fell on top the drill shack damaging the metal guard on top and the front. This information was revealed while performing an inspection on 6/24/2024 when asked how the metal guard on the drill shack got damaged.

2) G 131- 30 CFR 250.188 (W)

The District Manager was not notified with a written statement within 15 days of the incident that resulted in damages greater than \$25,000 when the three joints of drill pipe and MPD weighing approximately 13,000 pounds fell on top of the drill shack during the EDS event. The damages included the metal guard on top and front of the drill shack, MPD bearing and 6 5/8" drill pipe.

25. DATE OF ONSITE INVESTIGATION:

06-MAR-2024

28. ACCIDENT CLASSIFICATION:

26. Investigation Team Members/Panel Members:

Frank Musacchia / Jason Schollian /

29. ACCIDENT INVESTIGATION PANEL FORMED:

NO

27. OPERATOR REPORT ON FILE:

OCS REPORT:

30. DISTRICT SUPERVISOR:

David Trocquet

APPROVED

DATE:

04-DEC-2024