

# ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **18-JAN-2024** TIME: **1303** HOURS

2. OPERATOR: **Murphy Exploration & Production (**  
REPRESENTATIVE:  
TELEPHONE: CONTRACTOR: **NOBLE DRILLING**  
**CORPORATION** REPRESENTATIVE:  
TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING **Top Drive**
- DAMAGED/DISABLED SAFETY SYS.
- INCIDENT >\$25K **15,078,323**
- H2S/15MIN./20PPM
- REQUIRED MUSTER
- SHUTDOWN FROM GAS RELEASE
- OTHER **22" casing parted at rigfloor**

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

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

5. PLATFORM:  
RIG NAME: **NOBLE STANLEY LAFOSSE (FKA PACIFIC SHARAV)**

6. ACTIVITY:  EXPLORATION(POE)  
 DEVELOPMENT/PRODUCTION  
(DOCD/POD)

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

POLLUTION  
 FIRE  
 EXPLOSION

LWC  HISTORIC BLOWOUT  
 UNDERGROUND  
 SURFACE  
 DEVERTER  
 SURFACE EQUIPMENT FAILURE OR PROCEDURES

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

8. OPERATION:

- PRODUCTION
- DRILLING
- WORKOVER
- COMPLETION
- HELICOPTER
- MOTOR VESSEL
- PIPELINE SEGMENT NO. **20562**
- DECOMMISSIONING
- PA  PIPELINE  SITE CLEARANCE
- TA  PLATFORM
- 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: **3764** FT.

11. DISTANCE FROM SHORE: **115** MI.

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

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

14. SEA STATE: FT.

15. PICTURES TAKEN:

16. STATEMENT TAKEN:

On January 18, 2024, an incident occurred on the drillship Noble Stanley Lafosse, which was working under contract for Murphy Exploration & Production Company - USA (Murphy). Drilling operations were being conducted at GC 478, OCS-G35662, Well 004. The drill crew was running 22" casing when the S -90/MT connection failed. Seventy-two joints of casing fell partially in the hole and on the seafloor due to connection failure. No injuries or environmental impacts are associated with this incident.

On January 17, 2024, at 04:00 hours, a pre-job safety meeting (PJSM) is held with crews on running 22" casing. Casing operations start at 04:30 but are shut down to the repair the Rotating Link Adapter on the top drive. The crews start running casing at 08:30. After 3rd party crew change, the work process changed to opening the slips and lowering the connection to install anti-rotation keys. Next, the crew switched from horizontal to vertical anti rotational keys. On January 18, 2024, at 12:00, the drill crew changes tour. At 12:30 hours, joint 16 is stabbed into joint 17 and made-up using tongs. The slips are opened and casing lowered to install anti-rotation keys.

On January 17, 2024, the drill crew started running 22" casing on the Auxiliary (AUX) rotary. The drill crew made up and ran 72 joints of 22" casing below the rotary. Around 12:30 hours on January 18, 2024, the S-90/MT pin connection of joint 16 was made up to S-90/MT box end of joint 17. The crew failed to notice the joint cross threaded. The flush-mounted slips holding joint 17 were temporarily opened to lower the connection to install two vertical anti-rotation keys in the connection. When the slips opened, the axial load of the 22" was transferred to the connection, the pin separated from the box, resulting in the casing parting at the rig floor.

The 22" casing parting at the rig floor resulted in 72 joints falling partially into the hole and on the seabed below the AUX rotary. The casing broke apart as it fell and impacted several components of critical pressure containing subsea infrastructure to flowing oil wells. This could have led to a catastrophic oil release incident. An investigation committee was formed by the operator on January 19, 2024, and plans to begin recovery operations were initiated. The well was successfully plugged and the casing was recovered on February 11, 2024. Murphy's primary root cause for the event was the casing only making up  $\frac{1}{4}$  -  $\frac{3}{8}$  turn instead of  $\frac{1}{2}$  -  $\frac{3}{4}$  turn as specified by the contractor's procedures for proper make up. Also, the contractor's rig-site rep did not complete a visual inspection of the makeup as per the approved contractor's running procedure, missing an approximately 0.143" gap between the pin indicator and box connection.

The Bureau of Safety and Environmental Enforcement (BSEE) Houma District office was notified orally and a written report was submitted in eWell within 15 days. The BSEE Houma District inspectors (inspectors) were able to collect some documents and pictures related to the incident from the operator and contractor. A BSEE onsite investigation was conducted on February 7, 2024, additional pictures were taken and documents obtained. Also, BSEE Houma District issued an immediate preservation order for all equipment and casing related to this incident. An Incident follow up was conducted in Fourchon to look at the casing in the quarantine yard. Inspectors from Lake Charles District conducted an Incident Follow up in Houston to witness connection testing. Murphy additionally performed metallurgical testing of the casing connections at a materials lab in Houston for their investigation.

A review of still pictures from the rig video indicated that the connection rotated only  $\frac{1}{4}$  -  $\frac{3}{8}$  turn during the makeup, instead of the  $\frac{1}{2}$  -  $\frac{3}{4}$  turn specified in the contractor's procedure. The contractor's onsite representative failed to identify this discrepancy. They also did not complete a visual inspection of makeup as per the approved Contractor's running procedure and missed an approximately 0.143" gap between the pin indicator and the box connection. If a visual inspection of the connection

was performed the evidence of cross threading could have been noticed.

A change in the work process was observed after a crew change when casing joint 51 was made up in the string. The rotary slips were temporarily opened and the connection was lowered to facilitate the installation of the anti-rotation keys. Anti-rotation keys on previous connections were installed without lowering the connection. After looking through the JSA and the Contractor's running procedure we could not find supporting documents showing if the anti-rotation keys are to be installed before the slips are opened. Damages to the casing, well head, and subsea infrastructure is estimated to be over \$15,000,000.00.

Upon reviewing pictures, documents, witness statements, and Murphy's incident report, BSEE concluded that cross threading the 22" casing connection was the probable cause of the incident. The second probable cause is the Contractor's onsite reps failing to verify the connection before the slips were released. Finally, the last probable cause was the JSA and running procedure failing to identify when to install the anti-rotation keys. This led to the slips being released before the anti-rotation keys were installed, this took away another chance to verify the connection was made up properly. A contributing cause to this incident was the Contractor trainee signaling for the casing to be repositioned without the Contractor supervisor verifying the connection is made up properly.

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

Human Performance Error - Did not verify the makeup turn was not adequate. Did not visually inspect connection to ensure it wasn't cross threaded.

Communication - The JSA and running procedure did not indicate when to install the anti-rotation keys.

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

Supervision - The contractor's trainee signal for the casing to be repositioned in the slips without the Contractor's supervisor verifying the connection.

20. LIST THE ADDITIONAL INFORMATION:

N/A

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

Damage to subsea infrastructure and 22" casing.

Bent header beam. Connector on well head. Jumper bent and intervention panel damaged. MPFM damaged and EFL no longer connected.

ESTIMATED AMOUNT (TOTAL): \$15,000,000

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

The Houma District has no recommendations to 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:

**07-FEB-2024**

28. ACCIDENT CLASSIFICATION: *For Public Release*

26. Investigation Team Members/Panel Members: 29. ACCIDENT INVESTIGATION PANEL FORMED:

27. OPERATOR REPORT ON FILE:

OCS REPORT:

30. DISTRICT SUPERVISOR:

**Amy Pellegrin**

APPROVED

DATE:

**27-JUN-2024**