

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: 27-JUL-2016 TIME: 0520 HOURS

2. OPERATOR: Exxon Mobil Corporation  
REPRESENTATIVE:  
TELEPHONE:  
CONTRACTOR: Maersk Drilling USA Inc.  
REPRESENTATIVE:  
TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING DEVICE Vital Level Hoist
- 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:

6. OPERATION:

4. LEASE: G20351  
AREA: WR LATITUDE:  
BLOCK: 584 LONGITUDE:

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

5. PLATFORM:  
RIG NAME: MAERSK VIKING

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

8. CAUSE:

7. TYPE:  
 HISTORIC INJURY  
 REQUIRED EVACUATION 1  
 LTA (1-3 days)  
 LTA (>3 days)  
 RW/JT (1-3 days)  
 RW/JT (>3 days)  
 Other Injury

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

- FATALITY
- POLLUTION
- FIRE
- EXPLOSION

LWC  HISTORIC BLOWOUT  
 UNDERGROUND  
 SURFACE  
 DEVERTER  
 SURFACE EQUIPMENT FAILURE OR PROCEDURES

9. WATER DEPTH: 7140 FT.  
10. DISTANCE FROM SHORE: 185 MI.  
11. WIND DIRECTION: N  
SPEED: 1 M.P.H.  
12. CURRENT DIRECTION: NW  
SPEED: 1 M.P.H.  
13. SEA STATE: FT.

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

## 17. INVESTIGATION FINDINGS:

On July 27, 2016, while performing riser running operations on Exxon's JU104 well, an incident occurred onboard the Maersk Viking involving the rig's riser skate system. The riser skate trolley, used to transfer riser joints from the rig's riser deck to the rig floor, derailed from its track. When the rig crew attempted to repair the skate using a chain hoist (3.2 ton Vital Lever Hoist), one employee was injured. A Bureau of Safety and Environmental Enforcement (BSEE) onsite visit was performed on July 29, 2016. Onsite interviews were conducted and paperwork related to the incident was collected.

On the day of the incident, the rig was running roughly 7,000 feet of riser in order to latch the subsea Blowout Prevent (BOP) to the wellhead. The Driller was using the riser skate to shuttle riser joints from the staging area into the derrick. The riser skate trolley was being operated in "trolley freewheeling mode" rather than "trolley drive fwd/aft mode" during the riser running process. The "trolley freewheeling mode" allows the riser trolley to move freely along the conveyer system's track with no relative speed control. The only means of regulating the trolley's movement is by restricting the rig's Top Drive lifting rate when hoisting the riser joint into the derrick. The "trolley drive fwd/aft mode" operates a dual chain drive that attaches the riser skate trolley to the rig's riser conveyer system. The dual chain drive is used to control the riser trolley's speed and position when a riser joint is being hoisted up by the rig's top drive. During this process, a riser joint got caught on the trolley's front cradle causing it to derail on the rig floor. The rig had to suspend riser running operations until the skate could be repositioned back onto its track. In order to reposition the riser skate, the rig crew decided that a chain hoist (come-a-long) would be quicker than using the rig's crane. The crew proceeded to anchor the riser skate to a rig floor snubbing post using a 3.2 ton Vital Lever Hoist with a braided metal sling. When tension was applied to the chain hoist, the hoist malfunctioned, causing the hoist handle to spin. The handle struck the employee operating the hoist on the wrist resulting in a bone fracture. The injured person (IP) was sent to shore for further evaluation. The IP returned to the rig the next day with a cast on his wrist and he was placed on restricted work duty.

An investigation by Maersk and Exxon was conducted after the incident. The operator investigation concluded that the incident occurred due to a defective chain hoist still in service on the rig floor. The chain hoist was missing a vital retaining pawl latch that prevents the hoist from freely distributing chain from its ratchet mechanism. Due to multiple chain hoist styles available on the rig, the crew was unfamiliar with the specific hoist selected. This resulted in a failure to notice the missing latch when the specific equipment was selected for the job. The selection of the proper lifting equipment was also brought into question due to a crane being available to perform the lift rather than the chain hoist method.

The primary cause for this incident was the defective chain hoist, but poor job planning/hazard recognition, improper pre-use inspection of the equipment, and inadequate training also contributed. Had the crane been used to lift the trolley back onto the tracks, this incident could have been prevented. Had the chain hoist been properly inspected prior to use, the missing pawl latch would have been found and the damaged hoist would not have been used. If the employees using the chain hoist had been properly trained on how to use and inspect the chain hoist, this incident may have been prevented. All of these factors combined allowed this incident to occur.

In an effort to prevent another incident like this in the future, the rig will consider all use of non-standard lifting and rigging (NSRs) devices to be a level one permitted activity. The operator will implement a new process checklist for all chain and lever hoist usage. This includes an evaluation for different alternative

lifting methods before work is started with NSRs. All chain and leveling hoists available for use will also be from a single source manufacturer to standardize the training and knowledge base for the rig crew.

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

\* **The chain hoist used was missing an essential pawl latch.**

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

- \* **Poor job planning/hazard recognition**
- \* **Improper pre-use inspection of equipment**
- \* **Inadequate training on the equipment being used**

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

**N/A**

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

**The Houma District has no recommendations at this time.**

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: **NO**

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

25. DATE OF ONSITE INVESTIGATION:

26. ONSITE TEAM MEMBERS:

29. ACCIDENT INVESTIGATION

PANEL FORMED: **NO**

30. DISTRICT SUPERVISOR:

**Bryan Domangue**

APPROVED

DATE: **14-OCT-2016**