

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: **24-JUN-2022** TIME: **1300** HOURS

2. OPERATOR: **Renaissance Offshore, LLC**

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR: **Fluid Crane and Construction**

REPRESENTATIVE:

TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING
- 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:

4. LEASE: **G02274**

AREA: **VR** LATITUDE:

BLOCK: **369** LONGITUDE:

5. PLATFORM: **A**

RIG NAME: *** HYDRAULIC WORKOVER UNIT**

8. OPERATION:

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

6. ACTIVITY:

- EXPLORATION(POE)
- DEVELOPMENT/PRODUCTION
(DOCD/POD)

9. CAUSE:

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

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

10. WATER DEPTH: **316** FT.

11. DISTANCE FROM SHORE: **100** 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:

POLLUTION

FIRE

EXPLOSION

LWC HISTORIC BLOWOUT

UNDERGROUND

SURFACE

DEVERTER

SURFACE EQUIPMENT FAILURE OR PROCEDURES

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

On June 24, 2022, Renaissance Offshore, LLC (Renaissance) documented an incident that occurred at Vermilion Block 369 (VR-369) platform A during completion operations. The incident occurred at approximately 12:30 pm when the crane wire rope guard assembly for the main load line idler sheave carrier fell striking the deck. Renaissance contracted Cased Hole Well Services (CHWS) to operate a hydraulic workover unit on location and Fluid Crane and Construction (FC) to operate the American Aero OM 450 platform crane.

The contractors arrived at VR-369 on June 22, 2022, at approximately 10:30 am and began offloading equipment from the motor vessel Harvey Steeler. On June 24, 2022, the morning of the incident at 6:00 am, the Person in Charge (PIC) held the daily safety meeting to review the job task and potential hazards. At 6:20 am the FC operator completed the platform crane pre-use inspection form, and crane operations then began.

At approximately 12:30 pm a CHWS contractor started removing a sling from the crane auxiliary load line hook and heard a loud bang on the deck within 4 feet from where he was standing. He picked up the pieces of metal and brought them to his supervisor. The PIC had the crane operator move the crane boom over the heliport to inspect the boom tip. The PIC discovered the wire rope guard assembly for the main load line idler sheave carrier was missing. The PIC placed the main load line out of service.

Renaissance flew a Gulf Crane (GC) mechanic to VR-369 to inspect the crane and the missing rope guard, the mechanic replaced the rope guard and placed the main load line back in service. The mechanic found the auxiliary load line with high stranding damage from abrading on the rope guard and placed the auxiliary load line out of service. On June 26, 2022, the GC mechanic installed a new auxiliary load line.

On July 21, 2022, the BSEE investigators (investigators) arrived at VR-369. During the initial questioning, the PIC explained to the investigator the auxiliary load line jumped over the main load line idler sheave carrier plate and came to rest on the wire rope guard. The auxiliary load line abraded through the rope guard. The wire rope guard assembly is a 1/2" X 3-3/4" hex head bolt and nut with a 1-7/8" pipe spacer and two washers. The total assembly weight is approximately 1/2 pound. The wire rope guard assembly and damaged auxiliary load line were discarded and not on location for investigators to document. The total length of high stranding damage to the auxiliary load line is 130'. At the time of the incident, the crane boom was at a 63-degree angle. At a 63-degree angle, the main load line idler sheave carrier is 103' above the platform deck. It is therefore estimated the pieces of the wire rope guard assembly fell 103' to the platform deck.

On July 27, 2022, investigators conducted an on-site incident follow-up. During the incident follow-up, investigators collected additional documents and requested all unavailable documents associated with the incident. Investigators discovered the auxiliary load line was abrading the side plate and pin boss of the main load line idler sheave carrier. While at the platform a GC mechanic arrived. When investigators questioned him about the auxiliary load line abrading various spots on the main load line idler sheave carrier, he confirmed that he observed the same issue on June 24, 2022. He attempted to mitigate the wearing and painted the sheave to monitor for further wear. The PIC decided to place the auxiliary load line out of service for further investigation.

Renaissance requested a GC engineer to inspect the damage on the Idler sheave and make recommendations. On August 8, 2022, GC submitted an engineering report of findings to Renaissance. GC recommended that the main load line idler sheave carrier be replaced with a double-sheave idler. The new double idler sheave carrier allows the main load line and the auxiliary load line to run independently and avert abrading on the new idler sheave carrier.

On September 12, 2022, the investigators interviewed the GC engineer that submitted the corrective action recommendations to Renaissance. During the interview, the engineer informed the investigators that it is common for the auxiliary load line and boom line to run close to the side plates of the idler sheave carrier. He also mentioned that when running the auxiliary load line at a high rate of speed, the line can sometimes contact the main load line idler sheave carrier. Furthermore, this allowed the auxiliary load line to jump over the main load line idler sheave carrier plate and came to rest on the wire rope guard. The GC engineer informed the investigators this is an issue with the American Aero OM 450 platform crane, and they are correcting this issue as it is identified.

Investigators reviewed the crane records and noted the auxiliary load line was replaced due to damage in October 2017, July 2021, and June 2022. Investigators could not find any documents having information on what caused the damage to the auxiliary load lines in October 2017 and July 2021. Investigators reviewed the annual inspection reports for the crane from 2017 through 2022. There was no mention in the reports of the auxiliary load line or the boom line running in close proximity to the main load line idler sheave carrier. Furthermore, there was no documentation of the auxiliary load line or the boom lines contacting the main load line idler sheave carrier. Investigators reviewed the pre-use form for the month of June 2022, and no deficiencies were noted for the auxiliary load line or the main load line idler sheave carrier.

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

Flawed equipment design: The auxiliary load line and boom line run in close proximity to the main load line idler sheave carrier. The auxiliary load line came in contact with the main load line idler sheave carrier when running at a high rate of speed. The auxiliary load line abraded the main load line idler sheave carrier in various locations (pin boss, side plates, and wire rope guard assembly).

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

Inadequate equipment inspection: For the month of June 2022 no deficiencies were noted in the pre-use form for the auxiliary load line or the main load line idler sheave carrier. The annual inspection reports for the crane from 2017 through 2022 did not mention the auxiliary load line or the boom line running in close proximity to the main load line idler sheave carrier. Furthermore, there was no mention of the auxiliary load line or the boom line abrading the main load line idler sheave carrier.

20. LIST THE ADDITIONAL INFORMATION:

N/A

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

N/A

N/A

ESTIMATED AMOUNT (TOTAL):

\$

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

The BSEE Lake Charles District recommends that the office of Incident Investigations or Safety and Incident Investigations Division should consider issuing a Safety Alert regarding the incident.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO

25. DATE OF ONSITE INVESTIGATION:

07-JUL-2022

28. ACCIDENT CLASSIFICATION:

26. INVESTIGATION TEAM MEMBERS:

**Mitchell Klumpp / Joey Adams / Marcus
Mouton / Carl Matte /**

29. ACCIDENT INVESTIGATION

PANEL FORMED: **NO**

OCS REPORT:

27. OPERATOR REPORT ON FILE:

30. DISTRICT SUPERVISOR: **Beau**

Boudreaux

APPROVED

DATE:

28-SEP-2022