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: **10-AUG-2023** TIME: **1735** HOURS
2. OPERATOR: **Apache Corporation**
   REPRESENTATIVE:
   TELEPHONE:
   CONTRACTOR: **Manson Construction Co.**
   REPRESENTATIVE:
   TELEPHONE:

- [ ] STRUCTURAL DAMAGE
- [X] 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: **G15050**
   AREA: **WC** LATITUDE:
   BLOCK: **33** LONGITUDE:

5. PLATFORM: **1**
   RIG NAME: *** BARGE RIG TO BE DETERMINED**

6. ACTIVITY:
   - [ ] EXPLORATION(POE)
   - [X] DEVELOPMENT/PRODUCTION (DOCD/POD)

7. TYPE:
   INJURIES:
   - [ ] HISTORIC INJURY

	OPERATOR	CONTRACTOR
[X] REQUIRED EVACUATION	**0**	**1**
[ ] LTA (1-3 days)		
[X] LTA (>3 days)	**0**	**1**
[ ] 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.
   - [X] DECOMMISSIONING
     - [X] PA [ ] PIPELINE [ ] SITE CLEARANCE
     - [ ] TA [X] PLATFORM
   - [ ] OTHER

9. CAUSE:
   - [X] EQUIPMENT FAILURE
   - [X] HUMAN ERROR
   - [ ] EXTERNAL DAMAGE
   - [ ] SLIP/TRIP/FALL
   - [ ] WEATHER RELATED
   - [ ] LEAK
   - [ ] UPSET H2O TREATING
   - [ ] OVERBOARD DRILLING FLUID
   - [ ] OTHER _____

10. WATER DEPTH: **30** FT.
11. DISTANCE FROM SHORE: **4** MI.
12. WIND DIRECTION: **SSW**
    SPEED: **20** M.P.H.
13. CURRENT DIRECTION:
    SPEED: M.P.H.
14. SEA STATE: **7** FT.
15. PICTURES TAKEN:
16. STATEMENT TAKEN:

On August 10, 2023, at 6:08 pm, Apache Corporation (Apache) reported a crane incident that occurred at West Cameron 33 #1 (WC-33 #1) platform, lease G15050, while conducting crane operations from the Derrick Barge Wotan (DB) operated by Manson Construction. An Offshore Technical Services (OTS) employee, hereafter referred to as the injured person (IP), was struck by wire rope slings connected to a water abrasive cutter (abrasive cutter) in Well #1 on the platform WC-33#1.

On August 10, 2023, at 11:19 am, the DB 500-ton crane lowered the abrasive cutter, operated by a crew from OTS, into the 48-inch caisson and set the cutter at 20 feet below the mud line. At 1:05 pm, the 48-inch caisson was connected to the DB 500-ton crane to support and pull the caisson with platform attached. At 1:20 pm, OTS started cutting the 48-inch caisson with the abrasive cutter. At 4:55 pm, OTS completed cutting the 48-inch caisson. The DB 500-ton crane then lifted the 48-inch caisson confirming the OTS cut at 20 feet below the mud line was successful.

At 4:55 pm, the deck crew maneuvered and rigged a smaller DB 150-ton Link Belt crane to the abrasive cutter to facilitate the removal of the cutter from the caisson. To assist in this task, a DB crew member was positioned on the platform deck surrounding the top of the caisson along with the IP. The DB Deck Foreman operated the Link Belt crane while additional OTS personnel were positioned at the abrasive cutter umbilical spool to feed or retract the umbilical as necessary during the lift. At 5:15 pm, the crane began lifting the abrasive cutter, and after approximately 5 to 10 feet, the abrasive cutter hung up in the caisson. The abrasive cutter was lowered until free and lifted again. At approximately the same point in the lift as before, the abrasive cutter hung up simultaneously to a wave surge with the IP standing next to the caisson. A 2.5-ton wire rope sling in the abrasive cutter lifting arrangement parted and struck the IP on his head and neck area causing him to fall to his knees next to the 48-inch open caisson. The IP was transferred to the DB in a personnel basket and escorted to the quarters by the medic where first aid was provided.

At 5:45 p.m., a medevac helicopter was called for the evacuation of the IP. At 6:08 pm, the Bureau of Safety and Environmental Enforcement (BSEE), Lake Charles District Office, received a phone call reporting the evacuation of the IP. At 7:30 p.m., the medevac operator called the DB saying they did not have a crew for the flight. Subsequently, the DB called the Motor Vessel Hannah Ray for the evacuation of the IP. At 9:00 pm, the Motor Vessel Hannah Ray arrived and departed with the IP at 9:15 pm. At 10:49 pm, the Motor Vessel Hannah Ray arrived at the Cameron dock and transferred the IP to an awaiting ambulance. Apache reported the IP had received 16 stitches for a forehead laceration and had suffered a fracture on the C6 vertebrae.

On August 14, 2023, the BSEE Lake Charles District investigators (investigators) conducted an onsite incident follow-up inspection. Investigators met with the Apache representative on location and received a briefing of the incident. The forty-eight-inch caisson and platform involved with the incident were removed and placed on a transport barge prior to the arrival of the investigators by DB.

Investigators collected all prepared witness statements; collected Job Safety and Environmental Analysis (JSA) for the date of the incident; took pictures; and completed a physical inspection of the OTS abrasive cutter and wire rope sling assembly.

There was no visual damage to the abrasive cutter. The remainder of the physical inspection process focused on the failure of the slings and/or sling assembly.

The wire rope sling assembly consisted of the following items: 1) one three-foot long, two-leg sling attached to a tool lift beam, 2) a two foot long, single-leg vertical sling, 3) a five foot long, single-leg vertical sling, 4) three individual 25 foot

long, single-leg vertical slings, and 5) eight shackles.

The individual slings are assembled with a sleeve crimp and thimble in the eye. The vertical safe working limit is 2.5 tons for all five slings in the sling assembly below the tool lift beam. However, the one three-foot long, two-leg sling attached to the tool lift beam has a safe working limit of 2.5 tons to 4.4 tons (i.e., depending on the angle attached to a tool lift beam). Each sling has an information tag with the serial number, date of manufacturing, date of the test, owner of the sling, diameter of the wire rope, length of the sling, and maximum operating weights.

The shackles are 5/8 inch in size and have a safe working limit of 3.25 tons.

First item, the one three-foot long, two-leg sling attached to a tool lift beam had no visual damage.

Second item, a two foot long, single-leg vertical sling was parted at the eye of the sling and the thimble and sleeve were missing and not recovered.

Third item, a five foot long, single-leg vertical sling eyes and thimbles were elongated.

Fourth item, the three individual 25 foot long, single-leg vertical slings eyes and thimbles were elongated.

Fifth item, seven of the eight shackles had no visible damage. One shackle was elongated but its location in the actual assembly was not determined.

Investigators reviewed the written statements received from Apache representatives. In one of the witness's statements, the IP was witnessed looking down the 48-inch caisson when the wire rope sling parted. The witness’s statement reads, “I see [IP] looking down in [the] caisson and see [DB crew member] standing beside him and about that time I hear a pop noise and [IP] hit his knees and go to ground.”

Investigators reviewed the JSAs from Manson Construction for crane operations to lift the abrasive cutter. In the JSA, the total weight to be lifted was not mentioned nor were the limitations of the slings described. Sea states were reported in the Manson Construction’s daily report at 5 to 7 feet at the time of the incident. The JSA listed adverse wind and sea conditions as a Potential Hazard, and the recommendation to eliminate or reduce potential hazards was to “Call All Stop If Necessary”. The JSA did not have written threats of the dynamic loading of waves during the lift or the lift hanging up in the 48-inch caisson. During the lift, the abrasive cutter hung up in the caisson. An all-stop was not called to address any new threats. The abrasive cutter was lowered until free and then lifted again. At approximately the same point in the lift, the abrasive cutter hung up simultaneously to a wave surge and the two-foot single-leg sling parted at the eye.

Investigators reviewed the JSAs from OTS for crane operations lifting the abrasive cutter. In the JSA, the total weight of the lift was not written. In a written request to OTS, investigators received the total weight of the crane lift. The total weight of the crane lift and rigging was 2,205 pounds including the abrasive cutter, slings, cutter lift beam, and umbilical. The JSA required personnel to “stay well clear of suspended loads”.

Investigators reviewed the pictures submitted by Apache of the platform directly after the incident and later in the day when the abrasive cutter was retrieved from inside the 48-inch caisson. Investigators noted there were no handrails around the open 48-inch caisson on the deck of the platform in the picture directly after the incident. Investigators reviewed the pictures from later in the day when the abrasive cutter was

retrieved from inside the 48-inch caisson. Inspectors noted there were two workers on the platform helping retrieve the stuck abrasive cutter without handrails around the 48-inch caisson. The 48-inch caisson opening is approximately one foot above the walking deck of the platform as seen in submitted pictures. A safety meeting document dated August 10, 2023, from Manson Construction with both OTS and Manson personnel attending lists the following hazard: "open holes". The recommendation to eliminate or reduce potential hazards was to "flag barricade off open holes". Inspectors could see in the pictures the 48-inch caisson/platform was connected to the DB 500-ton crane for support. Investigators also noted the personnel were not wearing safety harnesses as required in the safety meeting.

BSEE investigators have determined Apache did not address the possible hazards with adverse sea conditions with sea states at 5 to 7 feet. The maximum lift for retrieving the abrasive cutter was 2.5 tons, which was the safe working limit of the wire rope slings. The abrasive cutter hung up simultaneously to a wave surge introducing an undetermined amount of dynamic loading parting the two-foot single-leg sling. Apache did not address personnel standing near the suspended load at the time of the incident. The parted wire rope sling struck the IP on his head and neck causing a laceration to his forehead and a fracture of the C6 vertebrae.

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

Management Systems:
The JSA did not address the possible hazards with adverse sea conditions with sea states at 5 to 7 feet (dynamic loading). The abrasive cutter hung up simultaneously to a wave surge introducing an undetermined amount of dynamic loading parting the two-foot single-leg sling.

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

Management Systems:
The JSA did not have the maximum lift weight for retrieving the abrasive cutter 2.5 tons, which was the safe working limit of the wire rope slings.

Supervision:
An all-stop was not called to address any new threats after the abrasive cutter hung up in the 48-inch caisson the first time.

The JSA required personnel to "stay well clear of suspended loads", personnel were allowed to stand near the suspended load.

20. LIST THE ADDITIONAL INFORMATION:

N/A

21. PROPERTY DAMAGED: **N/A**

NATURE OF DAMAGE: **N/A**

ESTIMATED AMOUNT (TOTAL): **$**

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

N/A

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

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

G-110 30 CFR 250.107
During crane lifting operations, an all-stop was not called to address any new threats after the abrasive cutter hung up in the 48-inch caisson. Apache did not address personnel standing near the suspended load at the time of the incident. The parted wire rope sling struck the IP on his head and neck causing a laceration to his forehead and a fracture of the C6 vertebrae.

Z-114 33 CFR 142.87
Handrails were not installed around the open 48-inch caisson during cutting operations on the platform deck.

25. DATE OF ONSITE INVESTIGATION:

14-AUG-2023

26. Investigation Team Members/Panel Members:

Mitchell Klumpp / Preston White / Joey Adams /

27. OPERATOR REPORT ON FILE:

28. ACCIDENT CLASSIFICATION:

29. ACCIDENT INVESTIGATION PANEL FORMED:

NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

Beau Boudreaux

APPROVED DATE: **31-OCT-2023**