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-SEP-2022** TIME: **1630** HOURS

2. OPERATOR: **Anadarko Petroleum Corporation**
   REPRESENTATIVE:
   TELEPHONE:
   CONTRACTOR: **Helix Energy Solutions**
   REPRESENTATIVE:
   TELEPHONE:

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

4. LEASE: **G14205**
   AREA: **EB** LATITUDE:
   BLOCK: **602** LONGITUDE:

5. PLATFORM:
   RIG NAME: **HELIX Q-4000**

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

7. TYPE:
   INJURIES:
   - [ ] HISTORIC INJURY

	OPERATOR	CONTRACTOR
[ ] REQUIRED EVACUATION		
[ ] 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

- [ ] STRUCTURAL DAMAGE
- [ ] CRANE
- [X] OTHER LIFTING **Air Tugger**
- [ ] DAMAGED/DISABLED SAFETY SYS.
- [ ] INCIDENT >$25K
- [ ] H2S/15MIN./20PPM
- [ ] REQUIRED MUSTER
- [ ] SHUTDOWN FROM GAS RELEASE
- [ ] OTHER

8. OPERATION:
   - [ ] PRODUCTION
   - [ ] DRILLING
   - [X] WORKOVER
   - [ ] COMPLETION
   - [ ] HELICOPTER
   - [ ] MOTOR VESSEL
   - [ ] PIPELINE SEGMENT NO.
   - [ ] OTHER

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

10. WATER DEPTH: **3681** FT.
11. DISTANCE FROM SHORE: **102** MI.
12. WIND DIRECTION:
    SPEED: **3** M.P.H.
13. CURRENT DIRECTION:
    SPEED: M.P.H.
14. SEA STATE: **1** FT.
15. PICTURES TAKEN:
16. STATEMENT TAKEN:

17. investigation findings

Summary

On September 10, 2022, at approximately 1600 hours, an incident occurred onboard the Helix Q 4000 located at East Brakes 602. The designated operator of East Breaks 602 is Anadarko Petroleum Corporation. After completing abandonment operations while rigging down, the Helix Drilling crew was removing the Torpedo Guide / Bullet Frame (TG) from the drill-string onboard the Helix Q-4000. During the TG removal, a floor-hand suffered an injury from the swinging door of the TG. The Injured Person's (IP) right arm was pinned between the swinging door and the TG frame. The IP was sent ashore for evaluation and was diagnosed with a fractured right arm resulting in lost time greater than (3) days.

Timeline

On September 10, 2022, at 1200 hours the Helix crew prepped and reviewed the Job Safety Analysis (JSA) for the removal of the TG. The Helix crew attached two air hoist lines and the Sand Line Crane (SLC)to the TG. Members of the Helix crew lifted the TG with the air tuggers with two members, one on the left and one on the right and used their hands on the TG frame for load stability.

At approximately 1600 hours the TG was lifted up and clear of the production tubing stump. Next, the IP used his hands to push on the left side of the TG frame as the air hoists and SLC attempted to lower the TG to the floor. While maneuvering the TG the unsecured TG door opened and pinned the IP's right arm against the TG frame. The air tuggers were slacked off and the TG door swung away from the IP releasing his arm. The job was stopped, and the IP was seen by the onboard medic. After discussions with onshore medical personnel, the IP was subsequently evacuated to shore for further evaluation.

Investigation findings

Onsite investigation was conducted on September 12, 2022.

The BSEE Accident Investigator (AI) requested and reviewed Job Safety Analysis (JSA), Work permits, Work instructions, Procedure, Witness Statements, Helix lifting procedures Daily Reports, Photographs, and Helix' Health and Safety Manual WOUS-HS-MA02 Rev. 06 Date 28 July 2022.

During the onsite investigation it was verified that the IP was wearing all required Personal Protective Equipment (PPE) when the incident occurred.

Helix' Health and Safety Manual WOUS-HS-MA02 Rev. 06 Date 28 July 2022 paragraph number 23.4.6 states "Using taglines only as outlined by JSA / Lift Plan or instruction of CO/ ACO" and "Working Hands Free unless the task dictates that hands must be used to control the load. This must be documented in a Critical Lift Plan". Critical lift plan, if completed and used, was not provided to BSEE.

TG does not have engineered lifting points. The air tugger lines were choked around the TG frame. Along with this no taglines or push poles were used during the lift. All were verified during the onsite investigation and through photographs.

A written procedure for the removal of the TG was not provided to BSEE. During the onsite investigation BSEE was informed that the procedure used was only what was documented on the JSA. The JSA used for the removal of the TG included job steps for the installation of the TG but did not identify any steps for removal. The Helix crew stated during the BSEE onsite investigation that, "the removal steps were just the reverse of installation". JSA identifies known swinging door hazard, yet no engineering mitigations have been initiated. JSA stated use hands to mitigate swinging door hazard. IP failed to maintain control of the TG door. JSA is titled install and remove torpedo tube but only describes installation steps, removal steps are not described in the document.

Hazard mitigation steps taken by the company. Create a task specific JSA for the removal of the TG. Evaluate feasibility and application to use mechanical devices

(i.e. - tugger and snatch blocks, sandline crane or other rigging configurations) for maneuvering the torpedo guide when suspended. Paint / stencil specific NO-GO Zones to highlight line of fire hazard in relation to the torpedo guide door and cross beam to

make personnel aware of pinch/ crush point. Modify TG door so that when the door is in the open position it can be secured to prevent movement.

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

Human Performance Error:
IP failed to control the movement of the TG door while manually pushing on the TG frame as stated in the JSA.

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

Management Systems:
Inadequate written job procedures – JSA was titled install and removal of the TG, but JSA only discussed installation. Removal was said to be the reverse of the installation.

20. LIST THE ADDITIONAL INFORMATION:

None

21. PROPERTY DAMAGED:

None

NATURE OF DAMAGE:

N/A

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

BSEE has no recommendations for the Office of incident investigations at this time.

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

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

G-112 C issued 30 CFR 250.107
THE LESSEE FAILED TO PROVIDE FOR THE SAFETY OF ALL PERSONNEL AND TAKE ALL NECESSARY PRECAUTIONS TO CORRECT AND REMOVE ANY HAZARDOUS OR OTHER HEALTH, SAFETY, OR FIRE HAZARDS. On 10 September 2022, at approximately 4:00 pm the Helix crew was removing the torpedo guide, during the removal the (IP) Injured Person suffered a right arm injury. The (JSA) Job Safety Analysis identified the hazard of the door swinging during install and removal. JSA stated "maintain hand control on torpedo guide door". The identified hazard was not controlled by the IP as stated in the JSA. IP's hands were on the torpedo frame but were not on the torpedo frame door to prevent it from swinging open. IP's arm was pinned between the swinging door and the torpedo guide frame resulting in injury, evacuation, and more than three days of lost time. Lessee must ensure personnel follow JSA's and/ or apply engineering controls to mitigate identified hazards and prevent incidents.

25. DATE OF ONSITE INVESTIGATION:

12-SEP-2022

28. ACCIDENT CLASSIFICATION:

26. Investigation Team Members/Panel Members:

Perry Brady /

29. ACCIDENT INVESTIGATION PANEL FORMED:

NO

27. OPERATOR REPORT ON FILE:

OCS REPORT:

30. DISTRICT SUPERVISOR:

Stephen Martinez