

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: 13-JUL-2022 TIME: 2045 HOURS

2. OPERATOR: **Murphy Exploration & Production** ()
REPRESENTATIVE: ()
TELEPHONE: ()
CONTRACTOR: ()
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:

8. OPERATION:

4. LEASE: **G16623**
AREA: **MC** LATITUDE:
BLOCK: **582** LONGITUDE:

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

5. PLATFORM: **A-Medusa Spar**
RIG NAME:

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

9. CAUSE:

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

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

- POLLUTION
- FIRE
- EXPLOSION

LWC HISTORIC BLOWOUT
 UNDERGROUND
 SURFACE
 DEVERTER
 SURFACE EQUIPMENT FAILURE OR PROCEDURES

10. WATER DEPTH: **2223** FT.
11. DISTANCE FROM SHORE: **36** 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:

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

INCIDENT SUMMARY:

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On 13 July 2022, a gas release and muster event occurred at Mississippi Canyon (MC), Block 582 A Medusa Spar, a production facility owned and operated by Murphy Exploration & Production Company - USA (Murphy). A compressor shutdown caused backpressure on the blind flange of another out of service compressor. Gas escaped out of the blind flange due to an improper installation of a flange. Production was automatically shut in when a nearby gas detector sensed the release. All 31 Personnel on Board (POB) safely mustered. No damage or pollution occurred from this incident.

SEQUENCE OF EVENTS:

On 13 July 2022 at approximately 2045 hours, an overspeed trip caused Compressor #1 to initiate shutdown. As a result, backpressure fed into the low pressure side of the Compressor #2 and escaped out of a blind flange. The gas release triggered a nearby gas detector, which shutdown the platform and sounded an alarm to muster. Within an estimated 10 minutes, all 31 POB safely reported to the Lifeboat B muster station.

Once the situation was assessed, personnel decided to bleed down pressure. Out of an abundance of caution, personnel were relocated to a safer location at the Lifeboat A muster station before the bleed-down commenced. Personnel remained at the muster station for approximately 1.5 hours until the "all clear" was given.

BSEE INVESTIGATION:

On 26 July 2022 at 1156 hours, the Bureau of Safety and Environmental Enforcement (BSEE) received notification of the incident.

On 2 August 2022, the BSEE Accident Investigator (AI) requested documents from Murphy's Sr. Regulatory Specialist.

On 4 August 2022, the BSEE AI received the requested documentation from Murphy. An onsite investigation was not possible due to unfavorable weather in the area. These documents revealed that on 21 February 2022, the Compressor #2 package was isolated out of service by lock-out, tag-out (LOTO) and blind flanged. The Compressor #2 was sent onshore for repair and returned to the facility. The Compressor #2 installation was ongoing at the time of the incident. The installation is a complex task that takes several days to complete. According to Murphy's report, a blind flange was removed to facilitate the piping line-up procedure. After the line-up procedure, the blind flange was reinstalled. However, personnel did not reinstall the required gasket on the blind flange.

Murphy documents also revealed that the LOTO program failed to account for the possibility of the valve BDV 5030BF opening. This valve automatically opened when the Compressor #1 shut down. The opening of this valve allowed the high pressure flare gas to back-feed through the improperly installed flange. BSEE notes that if the shutdown of Compressor #1, blowdown valve opening, and back pressure scenario would have occurred when the blind flange was open and personnel were working in the area, the result could have been fatal.

CONCLUSIONS:

Personnel failed to properly safe-out Compressor #2 while performing work. Also, personnel performing work on Compressor #2 failed to properly install a blind flange.

When a shutdown on Compressor #1 occurred, gas back-fed through the system and escaped through the blind flange causing a platform shutdown and muster.

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

- Human Performance Error - Not aware of hazards: Personnel failed to properly safe-out Compressor #2 while performing work.
- Human Performance Error -Inattention to task: personnel performing work on Compressor #2 failed to properly install a blind flange.

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

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The BSEE New Orleans District has no recommendations for the Office of Incident Investigations 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-JUL-2022

26. INVESTIGATION TEAM MEMBERS:

Nathan Bradley /

27. OPERATOR REPORT ON FILE:

28. ACCIDENT CLASSIFICATION:

29. ACCIDENT INVESTIGATION

PANEL FORMED: **NO** *For Public Release*

OCS REPORT:

30. DISTRICT SUPERVISOR:

David Trocquet

APPROVED

DATE: **14-SEP-2022**