

UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT  
GULF OF AMERICA REGION

For Public Release

# ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **27-APR-2025** TIME: **1520** HOURS

2. OPERATOR: **Cantium, LLC**

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 **Items Overboard**

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

4. LEASE: **00375**

AREA: **MP** LATITUDE: **29.400787**

BLOCK: **42** LONGITUDE: **-89.035219**

5. PLATFORM: **D**

RIG NAME:

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

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

☐ POLLUTION

☐ FIRE

☒ EXPLOSION

LWC ☐ HISTORIC BLOWOUT

☐ UNDERGROUND

☐ SURFACE

☐ DEVERTER

☐ SURFACE EQUIPMENT FAILURE OR PROCEDURES

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

8. OPERATION:

- ☒ PRODUCTION ☐ TEMP ABAND  
☐ DRILLING ☐ PERM ABAND  
☐ WORKOVER ☐ DECOM PIPELINE  
☐ COMPLETION ☐ DECOM FACILITY  
☐ HELICOPTER ☐ SITE CLEARANCE  
☐ MOTOR VESSEL  
☐ PIPELINE SEGMENT NO.  
☐ OTHER

9. CAUSE:

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

10. WATER DEPTH: **35** FT.

11. DISTANCE FROM SHORE: **9** 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:

## INCIDENT SUMMARY:

On 27 April 2025, at 1520 hours, Main Pass (MP) 42 Delta (D) platform, operated by Cantium LLC (Cantium). experienced Nitrogen bottles explode. The nitrogen bottles were stored on a 12-bottle rack, with each of the Nitrogen bottles containing 300 cubic feet of Nitrogen. The bottles were stored in an aluminum cage rack, located on the top deck of the platform. When the explosion occurred, the rack became compromised and the explosion sent the nitrogen bottles flying in multiple directions across the platform. There were personnel on the top deck in the general vicinity at the time of the explosion, however, no one was injured. Damage occurred to the bottles and the aluminum bottle rack, that held the 12 nitrogen bottles. Several nitrogen bottles were found to be missing and/or damaged. In addition, there was damage found to a welding machine door and a section of the solid decking on the top deck of the platform.

## SEQUENCE OF EVENTS:

On 27 April 2025, at approximately 1522 hours, Cantium Personnel had just gotten off the personnel basket, after being lifted from the field boat, and the Cantium Crane Operator had lowered the boom into the cradle and walked 35 feet from the crane towards the bridge leading to the "M" platform when a loud boom was heard. Witnesses reported hearing items hitting the storage boxes and buildings nearby. These witnesses were shielded by several large container toolboxes and Connex storage buildings on the top deck. Shortly after the explosion, witnesses looked over the handrail near the crane base and observed bubbles (from the N2 bottles that were lost overboard) in the Gulf below. Cantium notified the Bureau of Safety and Environmental Enforcement (BSEE) by phone call and email to the afterhours engineer at 1611 hours on the same day, and submitted an incident report in the BSEE eWell Incident Reporting System on 06 May 2025.

## BSEE INVESTIGATIONS:

The BSEE Accident Investigator (AI) and BSEE Inspector arrived to MP 42 D on 20 May 2025 and met with Cantium's HSE Coordinator, HSE Specialist, and interviewed several witnesses, who were present at the time of the incident. The witnesses consisted of the Crane Operator and one Crew Boat Employee who were present at the time of the incident. The AI requested, received, and reviewed documentation from the incident, performed a walkthrough of the area where the incident occurred was performed, and took photographs of the incident location.

The 12-bottle nitrogen rack was initially located approximately 15 feet from the base of the crane, behind a 10 foot tall storage container and next to several connex boxes and toolboxes. At the time of the on-site investigation, there was only one (1) nitrogen bottle, which was severely damaged (blown apart) that was still in the aluminum rack. The bottle showed signs of being blown apart from within. The other 11 nitrogen bottles were not present on the facility at the time of the on-site investigation. Four (4) of the bottles went overboard into the Gulf of America waters, Cantium personnel located the seven (7) remaining bottles scattered across the top deck. The 7 bottles that were on the top deck had been shipped to shore, prior to the arrival of the BSEE Investigators. The bottle that was still in the damaged rack showed signs of rust at the base (bottom) of the exploded bottle. Statements taken from personnel involved in the clean-up of the affected area suggests that one (1) nitrogen bottle ruptured originally. This then caused, the valves to be knocked off of several of the other nitrogen bottles, which then were launched outward, in several directions across the platform. The large container/storage boxes near the bottle rack

likely prevented the exploding bottles from causing additional damage to the platform and/or injury to personnel. No significant damage was reported on the container/storage boxes, although slight cosmetic damage to the container/storage boxes may have occurred. Air Gas is the provider of the nitrogen bottles for Cantium.

The BSEE investigation revealed that the bottles were "daisy chained" together, meaning that the bottles were all connected with 1/4 inch stainless steel tubing, connecting the isolation valves located on top of each bottle. The tubing then formed a manifold that is connected to a pressure regulator. This setup is commonly used when operators are performing API RP 14 C safety device testing. Due to the bottles being "daisy chained," once one nitrogen bottle ruptured, the force of the rupture ripped the "daisy chained" tubing and isolation valves from the remaining bottles, causing them to explode as well, scattering across the platform.

#### IN CONCLUSION:

Due to the 12-nitrogen bottle rack's configuration, with the bottles being "daisy-chained" together. Once the first corroded nitrogen bottle ruptured, the force of the explosion ripped the "daisy chained" tubing and some of the isolation valves off the top of the bottles, causing them to take flight once the aluminum bottle rack had been compromised. In an Annual Performance Review meeting between BSEE and Cantium, Cantium personnel stated that the 12 nitrogen bottles involved in the incident were at least 1 year overdue for inspection. As a result of this incident, Cantium required all nitrogen cylinders on their platforms across the Gulf to be inspected to attempt to identify similar deficiencies and prevent similar issues from occurring in the future.

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

**Equipment Failure:** Inadequate equipment/testing/calibration/inspection - One of the 12 (twelve) 300 cubic feet nitrogen bottles had corrosion at the base of the bottle. Had the bottle been properly inspected, the corrosion may have been noticed before the bottle had a chance to rupture.

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

**Management Systems:** No or inadequate hazard analysis/written job procedures - Had a proper hazard analysis been performed, the corrosion on the base of the bottle may have been noticed prior to the explosion. Also, there was no maintenance/inspection program to require routine inspection of the nitrogen bottles being used offshore. After the inspection, Cantium later found out that the bottles were overdue for inspection.

#### 20. LIST THE ADDITIONAL INFORMATION:

A Safety Alert has been noted by BSEE, which occurred regarding nitrogen cylinder ruptures at another location in the Gulf of America.

1. Safety Alert No. 494 which occurred on 24 January 2025. The rupture of an improperly inspected nitrogen cylinder, that led to multiple injuries and equipment damage.

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

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Welding machine door, section of iron deck  
floor. Aluminum cage and nitrogen bottles.

Explosion due to nitrogen bottle rupture.

ESTIMATED AMOUNT (TOTAL):                      **\$5,500**

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

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

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

25. DATE OF ONSITE INVESTIGATION:

28. ACCIDENT CLASSIFICATION:

**20-MAY-2025**

26. Investigation Team Members/Panel Members: 29. ACCIDENT INVESTIGATION PANEL FORMED:  
**NO**

27. OPERATOR REPORT ON FILE:

OCS REPORT:

30. DISTRICT SUPERVISOR:

**Michael Saucier**

APPROVED

DATE:                      **31-JUL-2025**