

# ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **14-MAR-2026** TIME: **0936** HOURS

2. OPERATOR: **Arena Offshore, LP**

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR:

REPRESENTATIVE:

TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING
- DAMAGED/DISABLED SAFETY SYS.
- INCIDENT >\$25K **\$1,800,000 (Estimated)**
- H2S/15MIN./20PPM
- REQUIRED MUSTER
- SHUTDOWN FROM GAS RELEASE
- OTHER

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

4. LEASE: **G01241**

AREA: **ST** LATITUDE:

BLOCK: **52** LONGITUDE:

5. PLATFORM: **A**

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

9. CAUSE:

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

10. WATER DEPTH: **61** FT.

11. DISTANCE FROM SHORE: **13** 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:**

On March 14, 2026, a shutdown from gas release incident occurred that resulted in a fire, a facility muster, and damages greater than \$25,000 at the South Timbalier Block 52 Complex facility (ST-52) operated by Arena Offshore in the Gulf of America. On March 14, four operators heard what they described as a Jake-break sound followed by an explosion. The operators proceeded to the area of the sound and noticed that a large fire had erupted on the compressor deck. The four operators manned two fire hoses on each side of the compressor deck and extinguished the fire. Upon investigating the area, it was discovered that the Variable Pocket Adjuster (VPA) used for the Variable Volume Clearance Pocket (VVCP) on the third stage discharge cylinder of the C-1 Compressor had blown out of the cylinder, struck the adjacent C-2 Compressor. The gas that was subsequently released as a result of the blow out ignited, spreading a large rolling flame throughout the underside of the compressor enclosure. The facility emergency shutdown (ESD) was immediately activated by personnel, and the facility mustered to their primary locations.

**Sequence of Events:**

ST-52 is a fixed complex facility comprised of four separate structures connected via bridges. The structures consist of A-Platform, C-Platform, CA-Platform, and B-Platform. On March 14, 2026, the Arena Offshore person in charge (PIC) and a third-party mechanic (Mechanic) were working on C-platform while two contract operators (DO #1 and DO #2) were in the gauger's shack located on the production deck of A-platform. At approximately 9:30 A.M., all four operators heard what they described as a tractor trailer Jake brake sound that lasted a few seconds followed by the sound of gas being released and then a loud boom. Once the sounds were heard, the PIC and the Mechanic looked over towards A-platform where the gas compressors are located underneath a large canopy enclosure that also contains the helipad. They noticed flames emitting out from under the enclosure and immediately hit the facility ESD. The PIC and the Mechanic ran across the bridge towards A-Platform activating the fire water from the bridge. Once they reached A-Platform they proceeded to the bottom of the compressor deck to verify flames had not spread. Once the area was verified clear, the PIC and the Mechanic made their way to the compressor deck to man a fire hose and attempt to extinguish the fire. The two contract operators were in the gauger's shack located on the production deck of A-Platform. DO #1 reported that at approximately 9:30 A.M., they heard the Jake brake sound followed by the loud boom. DO #2 reported that they felt the structure shake when the boom occurred. DO #1 and DO #2 immediately exited the shack hitting a facility ESD station in route to the compressor deck. Upon arrival at the enclosure, they witnessed large rolling flames that encapsulated the entire upper area of the enclosure. DO #1 and DO #2 manned another firehose reel on the opposite side of the compressor deck from the PIC and the Mechanic in an attempt to extinguish the fire. Communication was made between the PIC and the contract operators via radio when the incident occurred. They strategically planned for two personnel to man a fire hose on one side of the compressor deck while the other two made their way around the back side of the enclosure to fight the fire from both angles. Once both teams were in place, they began placing water on the flames. All personnel stated that the fire was extinguished in less than a minute; however, they continued to put water on the area for another 30 minutes. Once all the remaining flames were verified out, water was placed on the area for another 15 minutes.

Upon initial investigation of the scene, it was discovered that the VPA on the C-1 compressor's third stage discharge cylinder had blown out, releasing all the gas held within the cylinder. The VPA struck the adjacent C-2 compressor, igniting all the gas released from the cylinder. The exact source of ignition was unable to be identified, however, there were multiple ignition sources in the area at the time of the incident. The windy conditions on that day caused the flames to create a rolling motion all throughout the enclosure, charring most of the electrical components on the

C-2 compressor, as well as the ceiling, walls, and panels throughout the deck. Major components of the C-2 compressor were also damaged rendering it inoperable after the incident.

#### BSEE Investigation:

At approximately 1:00 P.M. on March 14, 2026, the BSEE Houma District After Hours received an initial notification via phone call regarding a fire and muster event that occurred on the ST-52 Complex. Pictures of the scene were included in the email communication chain after the follow-up email. BSEE investigators were made aware of the situation, and the decision was made to conduct a follow-up investigation the following morning.

On March 15, 2026, BSEE investigators flew offshore to conduct a follow-up investigation. Upon arrival, BSEE investigators met with Arena personnel as well as third-party contract personnel. Interviews were conducted with all personnel involved as well as a walkthrough assessment of the area and pictures were taken. The investigation revealed that the C-1 compressor had been fully overhauled ten days prior to the incident. Investigators requested the full inspection report as well as quarterly and daily inspection reports for the C-1 compressor. The reports did not reveal any major findings that needed immediate attention. Factory Acceptance Testing (FAT) was also completed on February 28, 2026, which identified several minor deficiencies that were all repaired on March 2, 2026.

BSEE investigators then walked down the incident scene to further investigate the damage and take photographs. Operators pointed out to the investigators that evidence of fluid ingestion was visible on the exterior of the 3rd stage cylinder. Black fluid had pooled under where the VPA separated from the cylinder, as well as dripped from the valve cover on top of the cylinder.

During the follow-up investigation, Arena management requested to tear down the 3rd stage cylinder, once approved by BSEE, for further investigation. Approval was given by BSEE investigators once the investigation was deemed satisfactory. Arena Rotating and Equipment Specialists disassembled the 3rd stage cylinder Head-End and Crank-End valve caps and removed the piston for BSEE investigators to observe. No signs of equipment malfunction or damage were observed on the piston or inside the valves. However, evidence of fluid intrusion was identified on top of the suction valve cages. Once the cylinder work was completed, Arena conducted further investigation into the fluid intrusion. It was suspected that the 2nd and/or 3rd stage filter separators could have experienced inefficiencies in filtering gas prior to the compressor suction. Arena removed the separators on March 31st and sent them to a third-party contractor to be inspected further. The third-party contractor disassembled the separators on April 1st and confirmed that the internal fluid filter and extractor elements had been compromised. Meaning, they were not operating as per the manufacturer's specifications. The compromise of these internal components contributed to saturated gas inside the compressor cylinder.

#### Conclusion:

After all the evidence gathered during the phone calls and initial communications made following the incident, BSEE concludes that the direct cause of the incident that occurred on March 14 was the fluid intrusion that occurred on the 3rd stage discharge cylinder of the C-1 compressor, which caused hydro-lock within the cylinder. Since liquid cannot be compressed, this caused a significant increase in hydraulic pressure within the cylinder pocket, exceeding the rating for the VVCP. One contributing cause that led to the incident was the compromised filtration system and mist extractor inside of the 2nd and 3rd stage gas filter separators. Proper functioning of the system would have extracted the liquid from the gas vapors, preventing the liquid intrusion.

Arena implemented several corrective actions following this incident including inspection of like-in-kind filtration separator equipment on two other Arena facilities. No deficiencies were identified. Arena also updated their Inspection Checklist to include Suction Filter-Separators with differential pressure gauges added

where applicable for inspection during Compressor Daily Reports. These inspections will be conducted by assigned Rotating Equipment Mechanics. In addition, Arena coordinated to establish a bi-annual filter replacement within Gas Filter-Separators, where those Peco Filter components are utilized. Arena will also repair and replace all damaged components on both compressors as well as in the enclosure. Based on the results gathered from the separator inspection, the 2nd and 3rd stage separators are currently being fully refurbished, including full replacement of the internal components prior to being returned offshore.

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

Equipment Failure (Capacity of equipment exceeded): Fluid intrusion into the 3rd stage discharge compressor cylinder caused a significant increase in hydraulic pressure within the cylinder pocket that exceeded the maximum pressure rating of the variable volume clearance pocket.

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

Equipment Failure (Inoperable equipment): The 2nd and 3rd stage Gas Filter Separator internal fluid filter and extractor elements were found to be compromised after teardown inspection, contributing to liquid intrusion into the cylinder.

20. LIST THE ADDITIONAL INFORMATION:

N/A

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

- \*C-1 Compressor 3rd Stage Discharge Cylinder
  - \*C-2 Compressor components and electrical systems
  - \*Electrical components inside of compressor enclosure
  - \*Panels of compressor enclosure
- \*Thermal Damage
  - \*Sheared bolts
  - \*Cracked VVCP base

ESTIMATED AMOUNT (TOTAL): \$1,800,000

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

N/A

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

N/A

25. DATE OF ONSITE INVESTIGATION:

15-MAR-2026

28. ACCIDENT CLASSIFICATION:

26. Investigation Team Members/Panel Members:

29. ACCIDENT INVESTIGATION PANEL FORMED:

NO

27. OPERATOR REPORT ON FILE:

OCS REPORT:

30. DISTRICT SUPERVISOR:

***For Public Release***

**Amy Gresham**

APPROVED

DATE:

**28-MAY-2026**