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: 25-DEC-2020 TIME: 1800 HOURS
   STRUCTURAL DAMAGE
   CRANE
   OTHER LIFTING
   DAMAGED/DISABLED SAFETY SYS.
   INCIDENT >$25K
   H2S/15MIN./20PPM
   REQUIRED MUSTER
   SHUTDOWN FROM GAS RELEASE
   X OTHER Compressor Backfired

2. OPERATOR: Fieldwood Energy LLC
   REPRESENTATIVE: 
   TELEPHONE: 
   CONTRACTOR: 
   REPRESENTATIVE: 
   TELEPHONE: 
   DESIGNED TO
   TELEPHONE: 
   ENSURE SAFETY
   TELEPHONE: 
   OPERATE EFFICIENTLY
   TELEPHONE: 
   REQUIRED TO
   TELEPHONE: 
   FOLLOW PROCEDURES
   TELEPHONE: 
   HUMAN ERROR
   TELEPHONE: 
   REQUIRED EVACUATION
   TELEPHONE: 
   LTA (1-3 days)
   TELEPHONE: 
   LTA (>3 days)
   TELEPHONE: 
   RW/JT (1-3 days)
   TELEPHONE: 
   RW/JT (>3 days)
   TELEPHONE: 
   PASTALITY
   TELEPHONE: 
   OTHER INJURY
   TELEPHONE: 
   HISTORIC INJURY
   TELEPHONE: 
   OPERATOR
   TELEPHONE: 
   CONTRACTOR

3. OPERATOR/CONTRACTOR REPRESENTATIVE/SUPERVISOR
   ON SITE AT TIME OF INCIDENT:
   X PRODUCTION
   DRILLING
   WORKOVER
   COMPLETION
   HELICOPTER
   MOTOR VESSEL
   PIPELINE SEGMENT NO.
   OTHER

4. LEASE: G01967
   AREA: MP
   LATITUDE: 
   BLOCK: 153
   LONGITUDE: 
   X PRODUCTION
   DRILLING
   WORKOVER
   COMPLETION
   HELICOPTER
   MOTOR VESSEL
   PIPELINE SEGMENT NO.
   OTHER

5. PLATFORM: B
   RIG NAME: 
   WELL: 
   COMPLETION BLOCK: 153
   X PRODUCTION
   DRILLING
   WORKOVER
   COMPLETION
   HELICOPTER
   MOTOR VESSEL
   PIPELINE SEGMENT NO.
   OTHER

6. ACTIVITY: 
   X DEVELOPMENT/PRODUCTION
   (DOCD/POD)
   HISTORIC INJURY
   OPERATOR
   CONTRACTOR
   REQUIRED EVACUATION
   LTA (1-3 days)
   LTA (>3 days)
   RW/JT (1-3 days)
   RW/JT (>3 days)
   PASTALITY
   OTHER INJURY
   HISTORIC INJURY
   OPERATOR
   CONTRACTOR
   REQUIRED EVACUATION
   LTA (1-3 days)
   LTA (>3 days)
   RW/JT (1-3 days)
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   PASTALITY
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   HISTORIC INJURY
   OPERATOR
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   HISTORIC INJURY
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   PASTALITY
   OTHER INJURY

7. TYPE:
   X EQUIPMENT FAILURE
   HUMAN ERROR
   EXTERNAL DAMAGE
   SLIP/TRIP/FALL
   WEATHER RELATED
   LEAK
   UPSET H2O TREATING
   OVERBOARD DRILLING FLUID
   OTHER

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

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

10. WATER DEPTH: 300 FT.
11. DISTANCE FROM SHORE: 10 MI.
12. WIND DIRECTION:
    SPEED: 0 M.P.H.
13. CURRENT DIRECTION:
    SPEED: 0 M.P.H.
14. SEA STATE: 0 FT.
15. PICTURES TAKEN:
16. STATEMENT TAKEN:

MMS - FORM 2010
EV2010R
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26-MAR-2021
On 25 December 2020 at approximately 18:00, a backfire occurred while trying to start the compressor engine at the Main Pass (MP) Block 153 “B” platform, owned and operated by Fieldwood Energy, LLC. (Fieldwood). The platform remained shut in as a result of the incident. No injuries were reported. There was damage to the wall siding, lights in the compressor building, the sliding side window in the crane, and several air filters.

Sequence of Events:

On 25 December 2020 prior to 18:00, the platform shut in and could not get the permissive signals to start the compressor. After several hours of troubleshooting the panel, a pneumatic tech was able to get a permissive on the panel to start the engine. The operator pulled the start relay to crank the engine, but it did not crank. He waited a few minutes and pulled the starter relay again. The engine started rolling over and, at about that same time, the compressor backfired. The PIC shut the operation down and identified the muffler separated from the engine. As result of the blast, wall siding was damaged, several lights in the compressor building went out, debris was blown onto the platform, the sliding side window in the crane was cracked, and several air filters were blown from their position.

On 26 December 2020 at 12:42, BSEE received an email with photos and an incident summary.

On 28 December 2020 at 13:18, BSEE received an email from Fieldwood's Health, Safety, and Environment (HSE) representative requesting approval to begin cleanup of the area affected by incident. BSEE approved the cleanup operations.

On 5 January 2021 at 10:28, Fieldwood requested to begin scaffolding operations in preparation to repair the damages incurred from the incident. At 10:32, BSEE granted permission to proceed into the post-incident phase.

BSEE Investigation:

A BSEE Accident Investigator (AI) spoke with the HSE representative and requested photos of the scene of the incident. The AI received photos of the compressor air intake filter housing, compressor wall, crane cab, muffler, debris, and fuel valve.

On 29 December 2020, a BSEE Lead Inspector flew to MP 153 B to conduct a Production Complete annual inspection and to gather additional photos and documentation.

On 6 January 2021, the AI accompanied by another BSEE Inspector visited the platform to take pictures and gather more information.

BSEE concurs with Fieldwood’s report that the direct cause of the incident was a fuel valve relay that was sticking, which allowed unburnt fuel outside the engine’s combustion chamber into the exhaust which resulted in a backfire. The backfire caused the muffler to separate from the engine. The muffler, as a projectile, damaged the wall siding, lights in the compressor building, and the window in the crane. Other debris was blown about as well as several engine air filters.

Conclusion:

A sticking relay in a pneumatic panel in the start fuel/ignition circuit allowed the engine to be saturated with unburnt fuel, which caused a backfire upon the second attempt to start the engine.
18. LIST THE PROBABLE CAUSE(S) OF ACCIDENT:

Equipment Failure: Inoperable equipment - A sticking relay in a pneumatic panel in the start fuel/ignition circuit allowed the engine to be saturated with unburnt fuel, which caused a backfire upon the second attempt to start the engine.

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

n/a

20. LIST THE ADDITIONAL INFORMATION:

n/a

21. PROPERTY DAMAGED: Compressor Muffler, wall siding, lights in the compressor building, sliding side window in the crane, and several air filters.

NATURE OF DAMAGE: Equipment was damaged from the impact of the backfire blast.

ESTIMATED AMOUNT (TOTAL): $22,600

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The BSEE New Orleans District makes no recommendations to the Office of Incident Investigation.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

25. DATE OF ONSITE INVESTIGATION: 26-JAN-2021

26. INVESTIGATION TEAM MEMBERS:

Nathan Bradley / Eric Mcgowan / Eric Neal /

27. OPERATOR REPORT ON FILE: APPROVED

DATE: 26-MAR-2021

28. ACCIDENT CLASSIFICATION:

29. ACCIDENT INVESTIGATION PANEL FORMED:

NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

David Trocquet