

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-FEB-2016 TIME: 1325 HOURS

2. OPERATOR: Castex Offshore, Inc.

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR:

REPRESENTATIVE:

TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING DEVICE
- 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:

6. OPERATION:

4. LEASE: G34025

AREA: HI LATITUDE:

BLOCK: 117 LONGITUDE:

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

5. PLATFORM: A

RIG NAME:

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

8. CAUSE:

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

7. TYPE:

- HISTORIC INJURY
 - REQUIRED EVACUATION
 - LTA (1-3 days)
 - LTA (>3 days)
 - RW/JT (1-3 days)
 - RW/JT (>3 days)
 - Other Injury

- FATALITY
- POLLUTION
- FIRE
- EXPLOSION

- LWC
- HISTORIC BLOWOUT
 - UNDERGROUND
 - SURFACE
 - DEVERTER
 - SURFACE EQUIPMENT FAILURE OR PROCEDURES

9. WATER DEPTH: 51 FT.
10. DISTANCE FROM SHORE: 23 MI.
11. WIND DIRECTION: SE
SPEED: 10 M.P.H.
12. CURRENT DIRECTION:
SPEED: M.P.H.
13. SEA STATE: FT.

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

On 13-Feb-2016 at approximately 1325 hours a fire was reported by the Contract Operator (CO) for Castex Offshores' HI 117 'A' facility, Lease G-34025. Upon arrival at HI 117 'A', the CO noticed the stairs and some piping on the production deck were discolored with soot. The CO looked through the grating and observed the Instrument Air Compressor (IAC), model XP185WJD, had burnt. The CO proceeded to the IAC and observed a small flame approximately 6 to 8 inches in height in the IAC skid pan.

The operator extinguished the flame utilizing (1) 30 lb. ABC fire extinguisher. The flame re-ignited and was extinguished again. The IAC was still smoldering so the CO quenched the unit with water to cool it off and prevent re-ignition. The fire was contained in the IAC skid pan. Minor collateral damage was sustained to a Self-Contained Breathing Apparatus (SCBA) located approximately 5 feet from the IAC.

HI 117 'A' is an unmanned offshore facility that produces approximately 5 million cubic feet of natural gas per day. The natural gas contains 43 parts per million of Hydrogen Sulfide upstream of the Scavenger chemical injection point. HI 117 'A' is remotely monitored from Cameron, LA via a Supervisory Control and Data Acquisition (SCADA) system. The SCADA system indicated the platform shut in on 11-Feb-2016 at 2330 hours due to a loss of instrument air. This is believed to be the time of ignition, and the fire continued until it was extinguish 13-Feb-2016 at 1325 hours.

The initial fire melted the poly flow tubing connected to the Temperature Safety Elements (TSE's) on the IAC, which activated the Emergency Shut Down (ESD) system. No melted TSE's were observed during the investigation. The fuel source was a 550 gallon tote tank containing diesel which was positioned about 4 feet to the West of the IAC. Two rubber diesel fuel lines (feed and return) from the diesel tote tank to the IAC engine melted which allowed diesel to slowly gravity feed to the IAC skid pan. This caused the fire to continue to burn until it was extinguished by the CO on 13-Feb-2016.

The Manufacturers Service Manager / Subject Matter Expert (SME) performed a failure analysis and concluded with reasonable certainty the thermal event was a result of overheating caused by a lack of compressor oil in the air/oil separator tank. The Lessee indicated the oil level in the air/oil separator tank had not been verified since the IAC was installed 22-Dec-2015.

The inside of the separator tank showed signs of an ignition event causing an extreme rise in pressure. The rise in pressure caused the Pressure Safety Valve (PSV) on the air/oil separator tank to lift and relieve. The sudden release of pressure blew a hole in the air/oil filter element. The hole in the air/oil filter element is indicative of the PSV relieving but did not cause or contribute to the thermal event.

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

Overheating caused by a lack of compressor oil in the air/oil separator tank.

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

A lack of compressor oil in the air/oil separator tank caused the air compressor

rotors to create a spark which ignited the air/oil mixture in the separator tank. Two rubber diesel fuel lines (feed and return) from the diesel tote tank to the IAC engine subsequently melted which allowed diesel to slowly gravity feed to the IAC skid pan.

20. LIST THE ADDITIONAL INFORMATION:

The fuel source was a 550 gallon tote tank containing diesel. The IAC had been in service since it was installed on 22-Dec-2015. The initial fire melted the poly flow tubing connected to the TSE's on the IAC which activated the ESD system. Minor collateral damage was sustained to a Self-Contained Breathing Apparatus (SCBA) located approximately 5 feet from the IAC.

| | |
|---|-------------------|
| 21. PROPERTY DAMAGED: | NATURE OF DAMAGE: |
| Instrument air compressor and SCBA breathing gear | Fire damage. |

ESTIMATED AMOUNT (TOTAL): **\$19,325**

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

The Lake Jackson 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:

14-FEB-2016

26. ONSITE TEAM MEMBERS:

Mike Hankamer /

29. ACCIDENT INVESTIGATION

PANEL FORMED: **NO**

OCS REPORT:

30. DISTRICT SUPERVISOR:

John McCarroll

FIRE/EXPLOSION ATTACHMENT

1. SOURCE OF IGNITION: **Instrument air compressor**

2. TYPE OF FUEL:
- GAS
 - OIL
 - DIESEL
 - CONDENSATE
 - HYDRAULIC
 - OTHER

3. FUEL SOURCE: **550 gallon tote tank**

4. WERE PRECAUTIONS OR ACTIONS TAKEN TO ISOLATE
KNOWN SOURCES OF IGNITION PRIOR TO THE ACCIDENT ? **NO**

5. TYPE OF FIREFIGHTING EQUIPMENT UTILIZED:
- HANDHELD
 - WHEELED UNIT
 - FIXED CHEMICAL
 - FIXED WATER
 - NONE
 - OTHER