

UNITED STATES DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE
GULF OF MEXICO REGION

ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: 13-NOV-2009 TIME: 0741 HOURS

2. OPERATOR: **McMoRan Oil & Gas LLC**
REPRESENTATIVE: **Blair Spencer**
TELEPHONE: **(504) 582-4241**
CONTRACTOR: **ISLAND OPERATORS CO. INC.**
REPRESENTATIVE: **Justin Lewis**
TELEPHONE: **(303) 583-1098**

- 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: **G02023**
AREA: **WC** LATITUDE:
BLOCK: **593** LONGITUDE:

- PRODUCTION
- DRILLING
- WORKOVER
- COMPLETION
- HELICOPTER
- MOTOR VESSEL
- PIPELINE SEGMENT NO.
- OTHER **Hot bolting the contact tower**

5. PLATFORM: **A**
RIG NAME:

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

8. CAUSE:

7. TYPE:

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

- 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

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

9. WATER DEPTH: 205 FT.

10. DISTANCE FROM SHORE: 115 MI.

11. WIND DIRECTION: S
SPEED: 3 M.P.H.

12. CURRENT DIRECTION: S
SPEED: M.P.H.

13. SEA STATE: 1 FT.

17. INVESTIGATION FINDINGS:

All platform personnel participated in a general safety meeting at approximately 0545 hours on the morning of the event. Following the initial safety meeting with the entire crew, the night tower operator (night man) initiated a JSA to focus on specifics of "Hot bolting valves and flanges on Contact Tower". The three production operators then began hot bolting existing studs and nuts on the contact tower with three studs removed and successfully replaced. In an attempt to remove the 4th stud, the night man struck the top of the stud with a 5 lb. sledge hammer when the hammer inadvertently bounced up to strike and break a grease fitting. The grease fitting released 950 psi of line pressure into the direction of the line heater's flame arrestor located approximately 10 feet from the contact tower's inlet valve. The night man immediately shutdown the line heater, then proceeded to the sub-sea well panel and shut-in the incoming sub-sea well. Operations personnel retreated to a safe distance away from the line heater and monitored the situation while 16 non essential personnel mustered at the life boats and waited for further instructions. Approximately 30 seconds later the gas stream ignited and flames emanated from the line heaters flame arrestor. One of the operators pulled the ESD and sounded the general alarm. Operations personnel extinguished the fire with a 30 lb. handheld fire extinguisher and a 125 lb. wheel unit. Approximately 10 seconds later the fire reignited and the operators utilized the remainder of the 125 lb. wheel unit and a 350 lb. wheel unit to extinguish the fire. The operators then isolated the contact tower and leaking inlet valve by closing the departing pipeline valve and valve upstream of the contact tower. Operations personnel proceeded to bleed the contact tower to zero through 1-inch ball valves located on top of the contact tower.

A construction crew was in the process of installing a rental crane at the time of the incident, with a total of 20 personnel onboard when the fire occurred. There were no injuries associated with the incident.

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

Approximately 950 psi of natural gas emanated from the broken grease fitting before igniting on the hot surface of the line heater.

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

Although a task-specific JSA was conducted before the hot bolting project began, critical hazards and mitigating measures were not identified from an expanded "walk-through" of the area as follows:

- * Failure to identify the fired line heater in the immediate vicinity as a potential hazard and shutting down the unit prior to initiating the job.
- * Hot bolting the flange in close proximity to the fired line heater.
- * Failure to isolate and depressurize the inlet valve prior to initiating the job.
- * Failure to identify the close proximity of the grease fitting as being a potential hazard.

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

The flame arrestor and associated components on the line heater.

NATURE OF DAMAGE:

The flame arrestor and associated components were destroyed as a result of heat damage from the fire.

ESTIMATED AMOUNT (TOTAL): \$1,500

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The Lake Charles District recommends that the MMS Regional Office of Safety Management (OSM) issue a Safety Alert to heighten industry's awareness of the hazards involved with Hot Bolting Operations in close proximity of heated components.

The following narrative is recommended as part of the safety alert.

Although hot-bolting is a common practice in the Gulf of Mexico, each case should be evaluated for feasibility. In a situation where there is a heat source in the immediate area with the possibility of flammable contents being released, hot bolting is not advised. A safer option would be to shut-in the effected equipment and bleed off all pressure before commencing the bolting operation.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: YES

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

G-110 - Failure to identify critical hazards and implement mitigating measures during hot bolting operations resulted in a fire. The following are contributing causes of the incident:

- * Failure to identify the fired line heater in the immediate vicinity as a potential hazard and shutting down the unit prior to initiating the job.
- * Hot bolting the flange in close proximity to the fired line heater.
- * Failure to isolate and depressurize the inlet valve prior to initiating the job.
- * Failure to identify the grease fitting's potential hazard.

25. DATE OF ONSITE INVESTIGATION:

18-NOV-2009

26. ONSITE TEAM MEMBERS:

Scott Mouton / Cody LeBlanc / Mike Jardell / Jarrott Guillory /

29. ACCIDENT INVESTIGATION

PANEL FORMED: NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

Larry Williamson

APPROVED

DATE: 26-JAN-2010

FIRE/EXPLOSION ATTACHMENT

1. SOURCE OF IGNITION: **Line Heater**

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

3. FUEL SOURCE: **Broken grease fitting on inlet valve of Contact Tower**

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 **foam unit**

INJURY/FATALITY/WITNESS ATTACHMENT

OPERATOR REPRESENTATIVE

CONTRACTOR REPRESENTATIVE

OTHER _____

INJURY

FATALITY

WITNESS

NAME :

HOME ADDRESS :

CITY :

STATE :

WORK PHONE :

TOTAL OFFSHORE EXPERIENCE :

YEARS

EMPLOYED BY :

BUSINESS ADDRESS :

CITY :

STATE :

ZIP CODE :

OPERATOR REPRESENTATIVE

CONTRACTOR REPRESENTATIVE

OTHER _____

INJURY

FATALITY

WITNESS

NAME :

HOME ADDRESS :

CITY :

STATE :

WORK PHONE :

TOTAL OFFSHORE EXPERIENCE :

YEARS

EMPLOYED BY :

BUSINESS ADDRESS :

CITY :

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INJURY/FATALITY/WITNESS ATTACHMENT

OPERATOR REPRESENTATIVE

CONTRACTOR REPRESENTATIVE

OTHER _____

INJURY

FATALITY

WITNESS

NAME :

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