

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: 20-JUL-2012 TIME: 2245 HOURS

2. OPERATOR: **McMoRan Oil & Gas LLC**

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR:

REPRESENTATIVE:

TELEPHONE:

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

4. LEASE: **G02857**

AREA: **EC** LATITUDE:

BLOCK: **42** LONGITUDE:

5. PLATFORM: **B**

RIG NAME: *** HYDRAULIC WORKOVER UNIT (LC)**

6. ACTIVITY: EXPLORATION (POE)

DEVELOPMENT/PRODUCTION
(DOCD/POD)

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

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

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING DEVICE
- DAMAGED/DISABLED SAFETY SYS.
- INCIDENT >\$25K **\$808,923**
- H2S/15MIN./20PPM
- REQUIRED MUSTER
- SHUTDOWN FROM GAS RELEASE
- OTHER

6. OPERATION:

- PRODUCTION
- DRILLING
- WORKOVER
- COMPLETION
- HELICOPTER
- MOTOR VESSEL
- PIPELINE SEGMENT NO.
- OTHER **P&A activities**

8. CAUSE:

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

9. WATER DEPTH: **45 FT.**

10. DISTANCE FROM SHORE: **9 MI.**

11. WIND DIRECTION: **E**
SPEED: **100 M.P.H.**

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

13. SEA STATE: **FT.**

17. INVESTIGATION FINDINGS:

On 18 July 2012, International Snubbing Services (ISS) crew finished installing a snubbing jack and work basket to complete the installation of rig #21 on the B-3 well. Guy wires were connected to the snubbing unit on one end and to pad eyes welded to the platform on the other end. The desired angle is 45 degrees. The cable in question to the north east had an angle of 72 degrees calculated from measurements given to BSEE inspectors by the ISS crew supervisor, as well as engineering calculations provided by a report from the lease operator. Guy wire available strength is based on API 4F Section 8.1.3 and 8.1.2. Section 8.1.3 states that:" The available strength of a wire rope guy wire shall have a 2.5 safety factor with respect to its nominal strength." Section 8.1.2 allows for a 33% increase in available strength for unexpected storm conditions. The 5/8" wire rope being used for the guy lines at the time of the incident meets the API 4F guidance for construction, safety factor and increase in load for storm conditions.

On July 20, 2012 the ISS rig crew was continuing with BOP test on rig # 21 that was nipped up on the B-3 well and down hole well operations had not yet begun. The lift boat Donny Paul and the work boat M/V Mrs. Meggie were on location to support the work over operation. Violent weather rolled in fast from the north east and the crew on tower was forced to seek shelter on the lift boat because of lightening in the area. At 2230 hours the rig crew received a warning from the work boat warning the lift boat crew and passengers that they observed three water spouts on their radar. The work boat was positioned approximately one half to one mile away from the platform on stand-by. At approximately 2230 hours, the captain of the work boat informed the crew and personnel on the lift boat that through his radar, what appeared to be a water spout was in their general vicinity. The captain of the work boat relayed to the lift boat captain, that at his position he recorded wind speeds in excess of 85-90 mph. The night crew supervisor then notified all personnel on board of the situation. Evacuation from the lift boat at this point was too late and the crew would have to remain on the vessel.

At 2300 hours, the rig crew watched as the weather worsened. ISS rig #21 was overcome by the wind and started to lean. The north east cable snapped and the rig fell across the platform towards the south east. The upper section of the rig broke off right above the #3 BOP and fell into the Gulf waters. From the #3 BOP's to the bottom of the riser was still attached but significantly damaged. Other equipment was also damaged and damage to the platform was sustained, e.g. handrails and heliport skirting. There were no injuries or pollution associated with this incident.

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

1. The high wind speed and turbulence accompanying these waterspouts and incorrect guy line angle are the likely cause of rig #21 being toppled and equipment and platform damage.

2 A waterspout was detected on radar and approximate wind speeds between 85-90 mph were recorded by the onsite work boat at the time ISS rig #21 was toppled. Another waterspout was detected within 15 minutes of the first and passed nearby the platform shortly after.

3 The angle of the guy wires were 72 degrees instead of the recommended 45 degrees by ISS policy. Also, additional cables were not added to help support rig #21.

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

1) Small deck area:

The small deck area changed the angle of the cable and caused a loss in support from the lines installed. The guy cables used to support rig #21 were short in length. Additional cables could have been added or the rig could have been lowered.

2) The large surface area:

The large surface area of the rig also caused more wind drag; thus, creating more force against the rig.

3) Too few Guy cables:

If more cables were added, rig #21 would have been adequately supported.

20. LIST THE ADDITIONAL INFORMATION:

Rigging used to support the unit included:

- 1) 7/8" shackles with a working load limit of 6.5 tons each.
- 2) 1" Turnbuckles with a 5 ton load rating each.
- 3) 5/8" Guy lines with certification tags in place (20.6 ton break strength).
- 4) All rigging was examined during the onsite investigation and appeared to be in good serviceable condition.

21. PROPERTY DAMAGED:

4-1/16 inch BOP assembly, riser, side entry sub, low torque valves, gin pole, work basket, snubbing unit hydraulic system, BOP console, snubbing tong assembly, skid mounted accumulator system, and tongs with clincher back-up.

NATURE OF DAMAGE:

Structural damage to BOP stack, riser, snubbing jack assembly, and accumulator skid. Submersion of upper BOP assembly, hydraulic hoses, part of riser, and miscellaneous equipment.

ESTIMATED AMOUNT (TOTAL): \$808,924

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The Lake Charles District recommends to the Office of Safety Management that a Safety Alert be issued with recommendations for maintaining proper angle of guy lines when attaching to snubbing units, hydraulic workover units, or similar well servicing units to include guidance provided by API Spec 4F for such operations. Also recommend additional guy lines be installed when angle of guy lines increases due to limited deck space.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

N/A

25. DATE OF ONSITE INVESTIGATION:

24-JUL-2012

26. ONSITE TEAM MEMBERS:

29. ACCIDENT INVESTIGATION PANEL FORMED: NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

Larry Miller / Charles Tippeconnic
/ Carl Matte / Wayne Meaux /

Williamson, Larry

APPROVED

DATE: 13-SEP-2012

INJURY/FATALITY/WITNESS ATTACHMENT

OPERATOR REPRESENTATIVE

INJURY

CONTRACTOR REPRESENTATIVE

FATALITY

OTHER _____

WITNESS

NAME :

HOME ADDRESS :

CITY :

STATE :

WORK PHONE :

TOTAL OFFSHORE EXPERIENCE :

YEARS

EMPLOYED BY :

BUSINESS ADDRESS :

CITY :

STATE :

ZIP CODE :

