

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

ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **20-NOV-2009** TIME: **1730** HOURS

2. OPERATOR: **BHP Billiton Petroleum (GOM) Inc.**
REPRESENTATIVE: **Wilson, Susan**
TELEPHONE: **(713) 599-6349**
CONTRACTOR:
REPRESENTATIVE:
TELEPHONE:

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

4. LEASE: **G20084**
AREA: **GC** LATITUDE:
BLOCK: **653** LONGITUDE:

5. PLATFORM: **A (MPLP Shenzi)**
RIG NAME:

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

7. TYPE:

HISTORIC INJURY
 REQUIRED EVACUATION **1**
 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
 H2S/15MIN./20PPM
 REQUIRED MUSTER
 SHUTDOWN FROM GAS RELEASE
 OTHER **Arc Flash**

6. OPERATION:

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

8. CAUSE:

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

9. WATER DEPTH: **4375** FT.

10. DISTANCE FROM SHORE: **175** MI.

11. WIND DIRECTION:
SPEED: **25** M.P.H.

12. CURRENT DIRECTION: **SE**
SPEED: **1** M.P.H.

13. SEA STATE: **7** FT.

17. INVESTIGATION FINDINGS:

On 20-Nov-2009 at 1730 hours, a BHP Billiton Petroleum (BHPB) electrician was investigating the cause for the loss of electrical power to the Quarters building. As the electrician was investigating inside the Motor Control Center (MCC) building, an arc flash occurred from a 480 volt breaker panel to result in first degree burns on the left side of the electrician's face and neck. The fire alarm bell automatically activated when the MCC building sensors detected smoke, and a total platform shut-in was initiated with all personnel mustered to their designated duty stations.

BHPB's incident investigation determined that a cable gland, mated to a Hub connector, was loose. This Hub connector seals to the Quarters building 480 volt power cable junction box located outside the Quarters building. The loose Hawke cable gland connection allowed rain and salt water spray to enter into the junction box. The water build-up inside the junction box eventually migrated by gravity feed approximately 185 feet through a conduit void from the power breakers to the Topside Control Center breaker enclosure.

BHPB's investigation of the breaker internals showed evidence of water entrance and corrosion which suggests that small amounts of water entered the Quarters building power breaker over a long period of time. The water build-up inside the breaker broke down the insulation between phase A and phase B, and the arc flash was caused by a short between phase A and phase B.

Following the investigation, the Myer hub connector and glands were tightened at the Quarters building junction box to prevent water from entering into the junction box. Also, the power cable that was delivering the power from the breaker to the junction box was dried and then successfully tested according to manufacturer recommendation and industry practice.

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

Water build-up in the breaker broke down the insulation between phase A and phase B. This resulted in an arc flash caused by a short between the two phases.

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

The water build-up was due to a loose cable gland connection. This loose cable gland connector allowed water to enter into the junction box and migrate by gravity feed to the Topside Control Center breaker enclosure through the void inside the power breakers.

20. LIST THE ADDITIONAL INFORMATION:

During the entire time the onboard Medic treated the injured electrician, the Medic was in consultation with the Safety Management System's onshore doctor. The electrician was evacuated for diagnosis and given a non-prescription topical cream for his injuries, returning to work on 20-Nov-2009. On 21-Nov-2009, the electrician requested additional medical treatment and was transferred by regular helicopter flight for further evaluation at the companies preferred Bourgeois Medical Clinic located in Morgan City, Louisiana. The electrician was prescribed a non-prescription topical cream and was given a full release to return back to work for full duty. He returned back to the Shenzi Tension Leg Platform for full duty on 22-Nov-2009.

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

The Quarters building breaker in the MCC building. It was found to be inoperable and was replaced. N/A

ESTIMATED AMOUNT (TOTAL): \$5,572

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

Due to the specific nature of this incident, the Houma District has no recommendations to report to the Regional Office.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: **NO**

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

N/A

25. DATE OF ONSITE INVESTIGATION:

26. ONSITE TEAM MEMBERS:

Casey Bisso /

29. ACCIDENT INVESTIGATION

PANEL FORMED: **NO**

OCS REPORT:

30. DISTRICT SUPERVISOR:

Bryan A. Domangue

APPROVED

DATE: **08-JAN-2010**

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: