1. OCCURRED
   DATE: 06-FEB-2017  TIME: 0740  HOURS

2. OPERATOR: BHP Billiton Petroleum (GOM) Inc.
   REPRESENTATIVE:
   TELEPHONE:
   CONTRACTOR: Transocean Offshore
   REPRESENTATIVE:
   TELEPHONE:

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

4. LEASE: G34986
   AREA: GC  LATITUDE: 521  LONGITUDE:

5. PLATFORM:
   RIG NAME: T.O. DEEPWATER INVICTUS

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

7. TYPE:
   x HISTORIC INJURY
   REQUIRED EVACUATION
   LTA (1-3 days)
   LTA (>3 days)
   RW/JT (1-3 days)
   RW/JT (>3 days)
   Other Injury

   x FIRE

   x EXPLOSION

   HISTORIC BLOWOUT
   UNDERGROUND
   SURFACE
   DEVERTER
   SURFACE EQUIPMENT FAILURE OR PROCEDURES

   x COLLISION

   x HISTORIC
   >$25K
   <=$25K

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

9. WATER DEPTH: 4036 FT.

10. DISTANCE FROM SHORE: 110 MI.

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

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

13. SEA STATE: FT.
On February 6, 2017, on board the Transocean Deepwater Invictus drillship operating for BHP Billiton Petroleum in Green Canyon block 521, the Modular Derrick Drilling Machine (MDDM) came into contact with the box end of the drill pipe while the drill crew was in the process of pulling out of the hole (POOH). Personnel cleared the rig floor and there were no injuries reported.

On the morning of February 6, 2017, the Driller was pulling out of the hole with 6 5/8 inch drill pipe. A stand of drill pipe was set in the slips and the drill floor crew positioned the iron roughneck to the well center to break the drill pipe connection. The Assistant Driller (AD) activated the pipe handling system to hold the stand of drill pipe once the iron roughneck was positioned. After verbal verification from the AD to the Driller, the elevator was unlatched and the MDDM dolly was retracted. The drill floor crew then closed the iron roughneck around the drill pipe, causing the upper tool joint to flex towards the MDDM. At this time the Driller started lowering the MDDM and the box end of the drill pipe struck the MDDM while it was descending to the rig floor. The drill pipe bowed, shearing the bolts on the Temperature Sonic Sensor and severed a hydraulic fitting on the MDDM. The sensor remained suspended by its cables on the MDDM but the hydraulic fitting fell approximately 110 feet, striking the drill floor.

Bureau of Safety and Environmental Enforcement (BSEE) Inspectors conducted an inspection / investigation on February 6, 2017 and collected documentation for the incident. The investigation determined that there was poor communication between the Driller, AD and the Iron Roughneck Operator according to incident statements given. The AD stated that he had informed the Driller that he could unlatch the drill pipe elevators, but he did not inform him that he could start coming down with the MDDM. Neither the Driller nor the Iron Roughneck Operator statements included any information about communication during the incident. BSEE Houma District has concluded that the timing between the Driller, AD, and the Iron Roughneck Operator was off due to poor communication. The Driller should not have gone down with the MDDM while the drill pipe was being gripped and spun by the iron roughneck. Had communication been better between the personnel operating the equipment this incident could have been avoided. Transocean has revised its communication procedure, requiring the Iron Roughneck Operator to give a verbal and a visual signal to the AD before he activates the pipe handling system. Once the pipe has been backed out, the MDDM can descend past the upper tool joint.

Transocean contracted a third party inspector to perform an inspection on the pipe handling system for misalignment due to the theory that there could be a misalignment of the pipe handling system and the well center. In the investigation, it was determined that the distance between the MDDM and stand of drill pipe was minimal. The third party inspector reviewed the video of the incident and noted in his findings that the Gripper Head was tilted down with no load connected to it. The Gripper Head is assisted by a spring return assembly which indicated that the spring was not operating properly. The tilting bracket was replaced together with a new gripper head and now it operates as designed. Given the tight tolerance of the operating area, the Gripper Head being tilted down could have contributed to this incident's occurrence.

$10,000
18. LIST THE PROBABLE CAUSE(S) OF ACCIDENT:

- Poor communication between the Driller, AD, and the Iron Roughneck Operator.

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

- The Gripper Head springs were slightly worn out, allowing it to tilt slightly without a load connected to it.

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:  

- Hydraulic fitting on MDDM  
- Sheared bolts on Temperature Sonic Sensor  
- Bent drill pipe  

NATURE OF DAMAGE:  

MDDM struck box end of drill pipe while descending  

Recommendations to BSEE to Prevent Recurrence Narrative:

22. The Houma District Office has no recommendations to make to 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:

06-FEB-2017

26. ONSITE TEAM MEMBERS:

Cedric Bernard / Clint Campo / Paul Reeves / Adriano Garcia /

29. ACCIDENT INVESTIGATION PANEL FORMED: NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

Bryan Domangue

APPROVED DATE: 28-APR-2017