**UNITED STATES DEPARTMENT OF THE INTERIOR**  
**MINERALS MANAGEMENT SERVICE**  
**GULF OF MEXICO REGION**  
**ACCIDENT INVESTIGATION REPORT**

1. **OCCURRED**  
   **DATE:** 23–JAN–2010  
   **TIME:** 2145  
   **HOURS**

2. **OPERATOR:** Marathon Oil Company  
   **REPRESENTATIVE:** Cole, Janet  
   **TELEPHONE:** (713) 296–3205

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

4. **LEASE:** G11043  
   **AREA:** GC  
   **LATITUDE:**  
   ** BLOCK:** 244  
   **LONGITUDE:**

5. **PLATFORM:**  
   **RIG NAME:** Noble Paul Romano

6. **ACTIVITY:**  
   - [X] EXPLORATION (POE)  
   - [ ] DEVELOPMENT/PRODUCTION (DOCD/POD)

7. **TYPE:**  
   - [ ] HISTORIC INJURY  
   - [X] REQUIRED EVACUATION  
     - [X] LTA (1–3 days)  
     - [ ] LTA (>3 days)  
     - [ ] RW/JT (1–3 days)  
     - [ ] RW/JT (>3 days)  
     - [ ] Other Injury  
   - [ ] FATALITY  
   - [ ] POLLUTION  
   - [ ] FIRE  
   - [ ] EXPLOSION  
   - [X] HISTORIC BLOWOUT  
     - [ ] UNDERGROUND  
     - [ ] SURFACE  
     - [X] DEVERTER  
     - [ ] SURFACE EQUIPMENT FAILURE OR PROCEDURES

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

9. **WATER DEPTH:** 2950 FT.

10. **DISTANCE FROM SHORE:** 105 MI.

11. **WIND DIRECTION:** N  
    **SPEED:** 1 M.P.H.

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

13. **SEA STATE:** 1 FT.
17. INVESTIGATION FINDINGS:

On 23 January 2010 at 2145 hours, approximately 6.25 barrels of 14.9 ppg Zinc Bromide (ZnBr2) completion fluid was discharged into the Gulf of Mexico when the upper slip joint seal on the spider gimble slip joint failed. The discharge was halted subsequent to closing the backup slip joint seal.

An investigation conducted by rig personnel determined that the failure was due to a separation of the slip joint packing elements in both the outer and inner split packing assembly. Wear was also noted on the slip joint inner barrel. The failed slip joint packing elements were manufactured by . The Original Equipment Manufacturer (OEM) is , but due to availability issues Noble opted to use the packing elements. Noble has noted that this is the second packing element to fail in the last six months.

The failed slip joint packer assembly was installed on 19 November 2009 and was put into service on 22 November 2009. The slip joint packing elements failed after only sixty-two days of service, with an average life span of slip joint packing elements of approximately five years.

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

Failure of the slip joint packing elements in both the outer and inner split packing assembly.

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

*Due to supply shortages, the packing elements were used from another company in lieu of the OEM.

*Wear was noted on the slip joint inner barrel.

20. LIST THE ADDITIONAL INFORMATION:

The current slip joint assembly was put into service on 2 February 2010 and consists of a primary slip joint packer assembly and a secondary assembly. The feasibility of installing an alarm or back-up energizing system upon failure of the primary slip joint packer is being investigated. Noble has advised that they will be changing out the riser slip joint assembly with a refurbished assembly once this well is completed (estimated completion date is 8 March 2010). Upon completion Noble intends to utilize only OEM slip joint packing elements for future wells.

21. PROPERTY DAMAGED: NATURE OF DAMAGE:
ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:
   Due to the specific nature of this incident the MMS Houma District has no recommendations to advise to the MMS Region.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

25. DATE OF ONSITE INVESTIGATION:

26. ONSITE TEAM MEMBERS:
   J Ladner /

29. ACCIDENT INVESTIGATION PANEL FORMED: NO

OCS REPORT:

30. DISTRICT SUPERVISOR:
    Bryan A. Domangue

APPROVED
DATE: 16-MAR-2010
1. VOLUME: GAL 6.25 BBL

YEARS LONG X YEARS WIDE

APPEARANCE:

2. TYPE OF HYDROCARBON RELEASED: □ OIL □ DIESEL □ CONDENSATE
□ HYDRAULIC □ NATURAL GAS
□ OTHER 14.9 ppg Zinc Bromide

3. SOURCE OF HYDROCARBON RELEASED: Equipment Failure

4. WERE SAMPLES TAKEN? NO

5. WAS CLEANUP EQUIPMENT ACTIVATED? NO

   IF SO, TYPE: □ SKIMMER
   □ CONTAINMENT BOOM
   □ ABSORPTION EQUIPMENT
   □ DISPERSANTS
   □ OTHER

6. ESTIMATED RECOVERY: GAL BBL

7. RESPONSE TIME: HOURS

8. IS THE POLLUTION IN THE PROXIMITY OF AN ENVIRONMENTALLY SENSITIVE AREA (CLASS I)? NO

9. HAS REGION OIL SPILL TASK FORCE BEEN NOTIFIED? NO

10. CONTACTED SHORE: NO IF YES, WHERE:

11. WERE ANY LIVE ANIMALS OBSERVED NEAR: NO

12. WERE ANY OILED OR DEAD ANIMALS OBSERVED NEAR SPILL: NO