

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: 21-SEP-2015 TIME: 1747 HOURS

2. OPERATOR: Anadarko Petroleum Corporation

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR:

REPRESENTATIVE:

TELEPHONE:

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

4. LEASE: G09184

AREA: EB LATITUDE: 27.353556  
BLOCK: 643 LONGITUDE: -94.625306

5. PLATFORM: A-Boomvang Spar

RIG NAME:

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 winch
- DAMAGED/DISABLED SAFETY SYS.
- INCIDENT >\$25K
- H2S/15MIN./20PPM
- REQUIRED MUSTER
- SHUTDOWN FROM GAS RELEASE
- OTHER

6. OPERATION:

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

8. CAUSE:

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

9. WATER DEPTH: 3650 FT.

10. DISTANCE FROM SHORE: 113 MI.

11. WIND DIRECTION: ENE  
SPEED: 14 M.P.H.

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

13. SEA STATE: FT.

On 21-Sept-2015 at approximately 1745 hours, a chemical release occurred at Anadarko Petroleum's East Breaks 643 Boomvang SPAR; Lease OCS-G-09184. While lowering an umbilical to the sea floor during abandonment operations, the umbilical hung on the hard tank umbilical guide. This resulted in a breach of the umbilical and release of approximately 41 barrels of methanol and ethylene glycol. Methanol and ethylene glycol protect against freezing, corrosion, microbiological degradation and is water soluble.

The umbilical was being lowered through a guide in the hard tank section of the Boomvang SPAR to the sea floor utilizing a Versabuild VB50-50 winch. The Versabuild VB50-50 winch was located on the SPAR topside. The lowering operation was being monitored by a Remotely Operated Vehicle (ROV), which was positioned at the bottom of the hard tank section of the SPAR at a depth of approximately 500'. During the lowering operation, the umbilical was observed via the ROV to quickly drop 10' to 15'. An "All Stop" was called to inspect the winch for damage. The winch was found to be operable and in safe condition. When the lowering operation resumed, a 10' to 15' breach in the umbilical was observed by the ROV below the umbilical pull head. The ROV observed three of eleven inner umbilical tubes had sustained damage and were leaking methanol and ethylene glycol.

The Lessee believes the umbilical became hung on the hard tank guide while being lowered with the Versabuild VB50-50 winch. The umbilical was equipped with centralizers to help guide it through the hard tank segmented tubes. Some of the centralizers are believed to have become stuck as a result of biological marine growth. It is also believed when the centralizers became stuck on the hard tank guide, it caused the pull head to lie over at an angle. The pull head then became stuck in the hard tank over the edge of a guide. This impact is thought to have cut the umbilical and three inner tubes.

The winch operator was unable to determine the umbilical (load) had become hung on the hard tank umbilical guides because the Versabuild VB50-50 winch was not equipped with a load indicator or tension monitoring system. The umbilical guides are subsurface and located within the hard tank of the SPAR, therefore visual confirmation was not possible with the ROV or by the winch operator.

The ROV inspected the damaged umbilical when the pull head was laid on the seafloor and no fluid was observed to be leaking from the three parted tubes. Methanol and ethylene glycol are water soluble therefore no cleanup or recovery was possible. The umbilical was placed on the seafloor at 00:17 on 22-Sep-2015.

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

Biological marine growth caused the umbilical centralizers to become stuck on the hard tank umbilical guide. This caused the pull head to lie over at an angle. The impact is thought to have cut the umbilical and three inner tubes.

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

The umbilical guides are subsurface and located within the hard tank of the SPAR, therefore visual confirmation was not possible by the ROV or the winch operator. The Versabuild VB50-50 winch was not equipped with a weight indicator or tension monitoring system to alert the winch operator the umbilical (load) was not descending.

## 20. LIST THE ADDITIONAL INFORMATION:

Approximately 41 barrels of methanol and ethylene glycol were released. Methanol and ethylene glycol are water soluble therefore no cleanup or recovery was possible.

21. PROPERTY DAMAGED:

**Umbilical. Not repaired due to abandonment.**

NATURE OF DAMAGE:

**Umbilical breach and chemical release occurred during abandonment operations.**

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ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

**The Lake Jackson District has no recommendations to the region for this incident.**

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

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

25. DATE OF ONSITE INVESTIGATION:

**29-SEP-2015**

26. ONSITE TEAM MEMBERS:

**Jacob Trevino / Mike Hankamer /**

29. ACCIDENT INVESTIGATION

PANEL FORMED: **NO**

OCS REPORT:

30. DISTRICT SUPERVISOR:

**John McCarroll**

APPROVED

DATE: **21-NOV-2015**

