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: **26-NOV-2016** TIME: **1406** HOURS

2. OPERATOR: **Shell Offshore Inc.**
   REPRESENTATIVE:
   TELEPHONE:
   CONTRACTOR:
   REPRESENTATIVE:
   TELEPHONE:

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

4. LEASE: **G21861**
   AREA: **WR** LATITUDE:
   BLOCK: **551** LONGITUDE:

5. PLATFORM: **A - Turritella**
   RIG NAME:

6. ACTIVITY:
- [ ] EXPLORATION(POE)
- [X] 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
- [ ] H2S/15MIN./20PPM
- [ ] REQUIRED MUSTER
- [X] SHUTDOWN FROM GAS RELEASE
- [ ] OTHER

6. OPERATION:
- [X] PRODUCTION
- [ ] DRILLING
- [ ] WORKOVER
- [ ] COMPLETION
- [ ] HELICOPTER
- [ ] MOTOR VESSEL
- [ ] PIPELINE SEGMENT NO.
- [ ] OTHER

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: **9560** FT.

10. DISTANCE FROM SHORE: **163** MI.

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

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

13. SEA STATE: FT.

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17. INVESTIGATION FINDINGS:

At approximately 1406 hours on November 26, 2016, an incident occurred on the Floating Production, Storage, and Offloading (FPSO) vessel Turritella. The FPSO is located at Walker Ridge (WR) Block 551-A, lease OCS-G 21861 (Stones development). The operator of record is Shell Offshore, Inc.

A high pressure gas release occurred around the gas export metering skid, resulting in an automatic shutdown and blowdown of the production system. Alarms sounded, and personnel went to their assigned muster stations. No evacuation was necessary.

During normal operations on the day of the incident, the production superintendant instructed the production supervisor and the lab technician to prepare to collect gas samples at the gas export sample board located on Module 16. Upon realizing that the sample point had been seal-locked by the pipeline company, the lab technician felt uncomfortable with the operation. At that time, the production supervisor contacted an engineer to assist him in locating an alternate gas sample point on the skid. When both employees returned to the skid, they found what they believed to be a possible collection point at a double block and bleed valve. While the production supervisor was looking inside the panel, the engineer mistakenly pulled a half-inch plug from the side of the valve without bleeding down the line. (It should be noted that both employees saw that there were up to 2500 pounds per square inch of pressure on the system in that area at the time.) The plug was not isolated from the system pressure, and once the plug was removed, the gas escape occurred, slightly injuring the engineer. The escaping gas was detected by the gas detection system, causing a process shutdown. The engineer proceeded to close several valves to stop the escaping gas; then both men went to their assigned muster area. After production resumed, the engineer received treatment and a tetanus shot from the onboard medic and was released back to work.

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

The probable cause was human error. The engineer mistakenly pulled a half-inch plug from the side of the valve without bleeding down the line. The plug was not isolated from the system pressure, and once the plug was removed, gas escaped. The escaping gas was detected by the gas detection system, causing a process shutdown.

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

It appears from information gathered during the investigation that either miscommunication or a lack of understanding of the instructions given to the workers by the production superintendant may have been a contributing factor in the chain of events that led to the incident. Also, when the lab technician stated he felt uncomfortable with taking the gas sample, stop work authority should have been implemented, and the production superintendant should have been notified.

20. LIST THE ADDITIONAL INFORMATION:

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21. PROPERTY DAMAGED:

N/A

NATURE OF DAMAGE:

N/A

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The Houma District has no recommendations for the Office of Incident Investigations.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: **YES**

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

On December 1, 2016, during an onsite investigation, BSEE inspectors issued an Incident of Non-Compliance (INC G-110 W) for the incident occurring on November 26,2016. The INC was issued for unsafe and non-workmanlike practice under the authority 30 CFR 250.107. The INC states as follows: "On December 1,2016 at approximately 1030 hours, [BSEE inspectors] responded to Turritella (Walker Ridge-551) in reference to an incident that occurred on November 26, 2016. Subject attempted to take a gas sample, in doing so failed to double block and bleed a Gas Export line resulting in a gas release. It should be noted the release resulted in a total facility shut in."

25. DATE OF ONSITE INVESTIGATION:

01-DEC-2016

26. ONSITE TEAM MEMBERS:

Terry Hollier / Jason Manuel / Amber Wyatt / Keith Barrios /

29. ACCIDENT INVESTIGATION PANEL FORMED: **NO**

OCS REPORT:

30. DISTRICT SUPERVISOR:

Bryan Domangue

APPROVED DATE: **14-APR-2017**