

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: 04-SEP-2018 TIME: 0217 HOURS

2. OPERATOR: Walter Oil & Gas Corporation

REPRESENTATIVE:
TELEPHONE:

CONTRACTOR:
REPRESENTATIVE:
TELEPHONE:

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

3. OPERATOR/CONTRACTOR REPRESENTATIVE/SUPERVISOR ON SITE AT TIME OF INCIDENT: 8. OPERATION:

4. LEASE: G31418

AREA: ST LATITUDE:
BLOCK: 311 LONGITUDE:

5. PLATFORM: A
RIG NAME: H&P 100

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

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

9. CAUSE:

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

- 10. WATER DEPTH: 391 FT.
- 11. DISTANCE FROM SHORE: 64 MI.
- 12. WIND DIRECTION: S
SPEED: 17 M.P.H.
- 13. CURRENT DIRECTION:
SPEED: M.P.H.
- 14. SEA STATE: 4 FT.
- 15. PICTURES TAKEN:
- 16. STATEMENT TAKEN:

17. INVESTIGATION FINDINGS:

On September 03, 2018, an incident occurred on the Helmerich & Payne (H&P) platform rig 100, which was working under contract for Walter Oil and Gas. Drilling operations were being conducted at South Timbalier-311-A platform-OCS-G-31418 well A002. There was an unintentional discharge of approximately 517 barrels of synthetic based mud (SBM) into the Gulf of Mexico. The accidental discharge was due to a butterfly valve that failed during the transfer of SBM from the work boat to the platform rig.

On the afternoon of September 03, 2018, Walter Oil and Gas was completing the cement job on the 10.125 inch liner. Later that evening, additional SBM drilling fluid was needed to begin drilling the next hole section. The SBM was to be transferred from the work boat "Esplanade" to the rig's mud pit system. Prior to commencing the transfer of the SBM drilling fluid, a Job Safety & Environmental Analysis (JSEA) was reviewed and signed by the Toolpusher, Driller, Assistant Driller, Derrickhand, and a Floorhand (Pit Hand). The Motorman was making preparations to receive fuel from another vessel on the eastern side of the platform, so the decision was made to transfer SBM from the western side of the platform. The Floorhand aligned the 4 inch hose and valves in order to receive SBM in reserve pit 1. Once aligned, he radioed the work boat to start pumping the 15.6 pound per gallon SBM. At approximately 22:00 hours, he received a call on his hand held radio from the Motorman to shut-down the fluid transfer. The Floorhand initiated an "All Stop" and immediately radioed the work boat to discontinue the transfer. He proceeded down stairs to the Motorman's location and noticed that the east side transfer hose was positioned on the deck. He also noticed that the TODO Dry Break valve was detached, which left the hose open ended allowing the SBM to leak into the Gulf of Mexico. The Toolpusher was alerted on the drill floor of the situation and he proceeded to the area where the incident had taken place. A TODO Dry Break valve was re-installed and the transfer proceeded until there was enough drilling fluid to complete the fluid transfer operation. Clean up of the area commenced, the Company Man was advised, and the Bureau of Safety Environmental Enforcement office in Houma was notified.

The Bureau of Safety and Environmental Enforcement (BSEE) investigation team conducted the onsite initial investigation on September 05, 2018. The team took pictures, collected statements, and interviewed personnel involved. The team's investigation revealed that the facility was equipped with two 4 inch transfer lines, located on the east and west side of the rig. Both stations would allow the transfer of drilling fluids into the rig's mud pit system. Each transfer line was equipped with a 4 inch butterfly valve and a TODO Dry Break valve which allows for a spill-free disconnect. The team also discovered that the day rig crew had locked the 4 inch butterfly valve in a closed position and detached the TODO valve from the east side transfer line because they thought there was a problem with the west side TODO valve. After the west side TODO valve was removed from the 4 inch hose, a plug consisting of old dehydrated drilling fluid was discovered to be obstructing the flow. The plug was removed, and the west side TODO valve was reattached and put back into service with no issues. The Deck Foreman stated that he communicated to the night crew that the east side TODO valve needed to be re-installed prior to the fluid transfer. The night rig crew did not re-attach the east side TODO valve which left the transfer hose open ended and the single butterfly valve closed making it the only barrier to prevent SBM from escaping. The source of the leak was attributed to a gasket failure in the 4 inch butterfly valve and the second barrier of the TODO valve not being installed. Approximately 517 barrels of SBM was inadvertently discharged overboard before an all stop was called and the SBM transfer was ceased. There was not a requirement identified in any of the procedures, JSA's, or checklists that were available to the investigation team showing that the rig crew needed to have the TODO valve installed prior to fluid transfers. During interviews, it was stated that the TODO valve was required to be installed as secondary spill prevention in case the butterfly valve failed. The investigation team could not locate this requirement in writing. The

investigation team identified the failed butterfly valve as the primary cause of this non-permitted discharge of SBM, but it may have been prevented if the TODO valve had been installed. The lack of a written requirement to have the TODO valve installed was a contributing cause to this incident.

Since the incident, H&P has replaced the failed butterfly valve with a new valve and installed an additional gate valve at each transfer station. The combination of the butterfly valves and gate valves at each transfer station gives redundant integrity to the mud system to prevent future discharges. There will also be a low pressure test on the mud system prior to any fluid transfers to ensure the system is sealed as required prior to any transfer of fluids.

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

1) Gasket failure in the 4 inch butterfly valve.

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

1) The TODO dry break valve was considered a secondary mechanism to prevent a release of fluid, but was not installed.

2) Neither the Fluid transfer procedure or JSA identified the inspection of the transfer hose or TODO Dry Break valve.

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

N/A

N/A

ESTIMATED AMOUNT (TOTAL):

\$

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

BSEE Houma District has no recommendations for the Office of Incident Investigations at this time.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: YES

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

E-100: On 09/03/2018 the Operator inadvertently discharged approximately 517 barrels of synthetic based mud (245 barrels pure base oil) into the Gulf of Mexico during fluid transfer operations.

G-110: On 09/03/2018 while conducting a fluid transfer operation the Operator failed to follow their own transfer operation procedure, resulting in a non-permitted discharge of approximately 517 barrels of synthetic based mud (245 barrels of pure base oil) into the Gulf of Mexico.

25. DATE OF ONSITE INVESTIGATION:

28. ACCIDENT CLASSIFICATION:

05-SEP-2018

29. ACCIDENT INVESTIGATION

26. INVESTIGATION TEAM MEMBERS:

Paul Reeves / Clint Campo / Cedric
Bernard /

PANEL FORMED: NO *For Public Release*

OCS REPORT:

30. DISTRICT SUPERVISOR:

Bryan A. Domangue

27. OPERATOR REPORT ON FILE:

APPROVED

DATE: **14-JAN-2019**