

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: 12-NOV-2017 TIME: 1830 HOURS

2. OPERATOR: EPL Oil & Gas, Inc.

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR: Blake International, Inc.

REPRESENTATIVE:

TELEPHONE:

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

3. OPERATOR/CONTRACTOR REPRESENTATIVE/SUPERVISOR 8. OPERATION:

ON SITE AT TIME OF INCIDENT:

4. LEASE: G04464

AREA: ST LATITUDE:

BLOCK: 200 LONGITUDE:

5. PLATFORM: A

RIG NAME: BLAKE 651

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

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

9. CAUSE:

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

10. WATER DEPTH: 131 FT.

11. DISTANCE FROM SHORE: 41 MI.

12. WIND DIRECTION: NE
SPEED: 25 M.P.H.

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

14. SEA STATE: 6 FT.

COLLISION HISTORIC >\$25K <=\$25K

On November 12, 2017, the Blake 651 platform rig was conducting abandonment operations for Energy Partners Limited Oil and Gas, Inc. (EPL) on South Timbalier 200 A facility (ST200A). While drilling a bridge plug at 474 feet with the annular preventer closed, the drill pipe was suddenly forced up 15 feet and bent the drill pipe in the derrick. This pushed the top drive outward toward the open side of the derrick while pushing the drill pipe against the back side of the derrick. Operations were suspended and EPL contacted the Bureau of Safety and Environmental Enforcement (BSEE) to discuss how to move forward. There were no injuries to personnel as a result of this incident.

Well A001 abandonment operations started on November 10, 2017. The crew checked the well-bore and the casings for pressure and documented them all to be 0 psi, and removed the dry hole tree. The rig's blow out preventers (BOPs) were installed and pressure tested to the approved BSEE pressures, and on November 11, 2017, the crew started the well abandonment procedure. Cement was tagged at 257 feet, and the crew started drilling cement. The cast iron bridge plug (CIBP) was found at 474 feet on the morning of November 12, 2017, and after circulating the well clean with 8.6 pound per gallon seawater, the crew held a well control drill and pulled out of the hole. The crew went back into the hole with a magnet assembly and recovered a single, small piece of metal. After pulling the magnet assembly, the crew went back into the hole with a 6.875 inch mud motor and a 8.5 inch flat bottom shoe assembly to mill the 9.625 inch CIBP. Once the crew reached the CIBP, the annular preventer was closed, and the system was lined up to take returns through the rig choke and vented through the gas buster. While milling, the crew was pumping 7 barrels per minute at 480 psi, with the mud motor rotating 80 revolutions per minute with approximately 7,500 pounds of weight on bit applied. The estimated applied force on the CIBP with the weight of the drill pipe (also called the work string) was 31,000 pounds. After milling 3 inches of the 9.625 inch CIBP, the 3.5 inch work string shot 15 feet out of the hole and bent the drill pipe in the derrick. This pushed the top drive outward toward the open side of the derrick while pushing the drill pipe against the back side of the derrick. The pumps were immediately stopped and the well was checked to see if it was still flowing. The well was not flowing, and the crew shut down operations to evaluate the situation.

EPL contacted BSEE Houma District and worked with District Engineers to formulate and approve the plan forward, which included the use of a snubbing unit to finish milling the CIBP. BSEE Inspectors also conducted an on-sight investigation on November 13, 2017. Evidence was collected, and they interviewed the crew about the incident. Once the Inspectors were satisfied that the situation was contained, they departed the rig.

The well was static, but circulation could not be established down the drill string due to the bends of the pipe in the derrick. The lower pipe rams were closed, and slip rams were installed in the upper pipe rams. Once installed, the slip rams were closed in addition to the lower pipe rams. The drill string in the derrick was secured with chains to prevent accidental movement during the next phase of the operation. A hot tap was used to safely tap into the drill pipe, and an ice plug was placed in the drill pipe to isolate the drill string from the well bore. The drill pipe was then cut approximately 15 feet above the rotary table and a Full Opening Safety Valve (FOSV) was installed to secure the drill pipe. With the drill string secure, the rig crew removed the top drive from the derrick and sent it in for repairs. The bent drill pipe was also removed and sent in. A snubbing unit was then rigged up on top of the rig's BOP stack and pressure tested to the BSEE approved pressures. The snubbing unit was then used to mill and burn the 9.625 inch CIBP and clean out the casing. Once this was done, the snubbing unit was rigged down, and the rig finished abandoning the well using standard rig equipment.

The investigation determined that the CIBP was forced up the hole without allowing gas

to vent. It released with the seal elements still intact and did not allow the pressure to vent as expected. Well pressure acted on the surface area of the 9.625 inch CIBP and exceeded the weight on bit applied by the rig. In the future, EPL will drill small pilot holes in large bridge plugs to ensure pressure is vented prior to actually drilling out the plugs and not compromising the CIBP holding slips.

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

- The 9.625 inch CIBP was forced up the hole without allowing gas to vent. Well pressure acted on the surface area of the 9.625 inch CIBP instead of the 3.5 inch drill pipe as expected, and overcame applied weight on bit from the rig.

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

20. LIST THE ADDITIONAL INFORMATION:

- EPL merged with Energy XXI in 2014.

- This lease expired in 2014, and the work had to be completed in the name of the lease holder from the time it expired.

- Energy XXI permitted and completed this abandonment under the name of EPL due to the lease expiration.

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

3 1/2" drill pipe
Top Drive

Bent drill pipe
Damaged Top Drive

ESTIMATED AMOUNT (TOTAL): \$45,000

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The Houma District has no recommendations for 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:

28. ACCIDENT INVESTIGATION
PANEL FORMED: NO

13-NOV-2017

OCS REPORT:

26. INVESTIGATION TEAM MEMBERS:

29. DISTRICT SUPERVISOR:

Paul Reeves / Chris Treland / Troy
Boudreaux /

Bryan Domangue

APPROVED

Date: 02-MAR-2018

