

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
GULF OF MEXICO REGION

ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: 06-OCT-2010 TIME: 1300 HOURS

2. OPERATOR: **Black Elk Energy Offshore Operatio**

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR:

REPRESENTATIVE:

TELEPHONE:

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

4. LEASE:

AREA: **HI** LATITUDE:
BLOCK: **A 571** LONGITUDE:

5. PLATFORM: **B-AUX**

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
- DAMAGED/DISABLED SAFETY SYS.
- INCIDENT >\$25K **Piping/tree valves sand**
- H2S/15MIN./20PPM **cut**
- REQUIRED MUSTER
- SHUTDOWN FROM GAS RELEASE
- OTHER

6. OPERATION:

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

8. CAUSE:

- EQUIPMENT FAILURE
- HUMAN ERROR
- EXTERNAL DAMAGE
- SLIP/TRIP/FALL
- WEATHER RELATED
- LEAK
- UPSET H2O TREATING
- OVERBOARD DRILLING FLUID
- OTHER **PSV piping sand cut**

9. WATER DEPTH: 283 FT.

10. DISTANCE FROM SHORE: 116 MI.

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

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

13. SEA STATE: FT.

17. INVESTIGATION FINDINGS:

On Wednesday, 10/6/2010, the adjustable choke on the HI-A571 "A" A-15 well was found to be "cut out" due to the well producing sand. Operators re-built the choke and placed the well back on production to the test separator around 4:00 pm. The choke was set at 4/64 after rebuild instead of the original setting of 8/64 to help control sand. At approximately 1:30 am, 10/7/2010, platform personnel described being awakened by noise described as a "storm". Upon looking outside the living quarters, the operators heard a gas leak and observed a large gas cloud in the area where the test separator was located. The platform "A" Operator then headed to the wellbay to insure all wells had been shut-in. The gas compressor and generator shut-in while an operator was in-route to the wellbay. Upon arriving at the wellbay, the "A" Operator noticed all wells shut-in except for A-15. Black Elk stated platform shutdown was due to an ASH Gas Detector reaching 60% LEL. A-15 remained open and gas continued to leak. The "A" Operator then manually closed the wing valve and the gas leak stopped. Large amounts of sand were observed in the area around damaged piping. The range charts being run on the test separator at the time the incident occurred showed that at approximately 6:00 pm, the well flow began to increase. It is believed the choke was once again "cut out" at this time. The PSV began to relieve at some point as flow increased. The source of the leak was found to be the A-15 flowline PSV discharge piping as it was cut out at two 90 degree "elbow" sections. The chart shows the pressure at the test separator stayed below the PSH setting of 1368 psi. The PSH and PSL located on the flowline were found to have sensing lines plugged with sand and therefore did not function. The report from Xtreme Pressure Services stated the SSV of the A-15 well was found to have large amounts of sand, which was believed to be responsible for the A-15 SSV failing to actuate to the closed position.

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

Produced formation sand plugged the PSH sensing lines, and SSV void spaces prevented the safety systems from automatically shutting-in the well. Sand cut out the PSV piping allowing gas to vent to the atmosphere.

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

After the choke was initially cut out by sand and rebuilt, the Operators did not take shake-outs to determine if the sand was still present in the well stream.

20. LIST THE ADDITIONAL INFORMATION:

A-15 SSV should have closed due to either an ASH (60% LEL) or a flowline PSH trip. Black Elk states that sand filled the void space of the SSV not allowing actuation. The shutdown relay designated for the ASH Gas Detection signal was found in bypass on the Master Control Panel during the BOEMRE onsite investigation. Several incidents of Noncompliance were issued and are being forwarded for civil penalty review.

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

*Flowline PSV discharge piping The A-15 well flowline PSV vent piping and
*Tree valves(SSV, SDV and manual valves). tree valves were sand cut.

ESTIMATED AMOUNT (TOTAL): \$100,000

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The Lake Jackson District has no recommendations for the Regional office.

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

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

**P-103 Gas Detection System found to be in bypass during BOEMRE on-site investigation.
G-115 Operations not being conducted in accordance with approved plans.
G-110 Unsafe workmanlike practices for operators failing to monitor for sand production after initial choke was cut out.
G-132 Failure to report incident to the Lake Jackson District BOEMRE.
P-402 PSH failed to shut-in well A-15 upon process upset conditions.
P-412 SSV Failed to shut-in well A-15 upon process upset.**

25. DATE OF ONSITE INVESTIGATION:

18-OCT-2010

26. ONSITE TEAM MEMBERS:

Marco Deleon / Phillip Couvillion /

29. ACCIDENT INVESTIGATION

PANEL FORMED: **NO**

OCS REPORT:

30. DISTRICT SUPERVISOR:

Stephen Martinez

APPROVED

DATE: **31-JAN-2011**

