

UNITED STATES DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE
GULF OF MEXICO REGION

ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **26-AUG-2009** TIME: **1311** HOURS

2. OPERATOR: **Stone Energy Corporation**

REPRESENTATIVE: **Walters, Amy**

TELEPHONE: **(337) 521-2274**

CONTRACTOR:

REPRESENTATIVE:

TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING DEVICE
- 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:

6. OPERATION:

4. LEASE: **G03135**

AREA: **VR** LATITUDE:

BLOCK: **267** LONGITUDE:

- PRODUCTION
- DRILLING
- WORKOVER
- COMPLETION
- HELICOPTER
- MOTOR VESSEL
- PIPELINE SEGMENT NO.
- OTHER **P&A of Toppled Platform**

5. PLATFORM: **C**

RIG NAME:

6. ACTIVITY: EXPLORATION (POE)
 DEVELOPMENT/PRODUCTION
(DOCD/POD)

8. CAUSE:

7. TYPE:

- HISTORIC INJURY
 - REQUIRED EVACUATION
 - LTA (1-3 days)
 - LTA (>3 days)
 - RW/JT (1-3 days)
 - RW/JT (>3 days)
 - Other Injury

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

- FATALITY
- POLLUTION
- FIRE
- EXPLOSION

- LWC HISTORIC BLOWOUT
- UNDERGROUND
 - SURFACE
 - DEVERTER
 - SURFACE EQUIPMENT FAILURE OR PROCEDURES

9. WATER DEPTH: **169** FT.

10. DISTANCE FROM SHORE: **71** MI.

11. WIND DIRECTION: **NE**
SPEED: **12** M.P.H.

12. CURRENT DIRECTION: **S**
SPEED: **3** M.P.H.

COLLISION HISTORIC >\$25K <=\$25K 13. SEA STATE: **3** FT.

17. INVESTIGATION FINDINGS:

On 26 August 2009 an uncontrolled release of condensate and gas occurred from Stone Energy's (Stone) VR 267, OCS-G 2082, Well C-9 in a water depth of 160'. The entire C platform had been toppled during hurricane Ike and during Stone's response efforts the wells were found to be bent over or "kinked" at approximately 30' above the seafloor. The wells' conductors bend downward from horizontal at an angle of about 20 degrees and the well heads were found in an accessible location about 10' - 15' above the seafloor. The wellheads of both C-9 and C-3 were found to be sheared off in the bodies of their master valves immediately above their respective tubing head flanges. The actual release of condensate and gas occurred from the broken master valve body of well C-9, with the tree and upper portion of the wellhead unable to be located. Unrestricted communication between casing and tubing was found to exist in the kinked region of the well. Well C-9's SCSSV is a 3.5" Baker T-Select set at 525'RKB that was successfully tested with a report of zero leakage in May 2008.

The loss of well control (LWC) resulted from the observed damage to the master valve and either a failure of well C-9's SCSSV to properly close or other failure of the well's mechanical integrity. A diver found the control line needle valve in the closed position and when the needle valve was opened, hydraulic fluid was observed by the diver to be released under pressure with the rate of escaping gas not changing. During Stone's response to the LWC, no direct evidence was uncovered that would pinpoint exactly what failures occurred beyond the broken master valve.

According to Stone, a total condensate discharge of 2.44 bbl occurred from the following daily condensate discharge volumes:

8/26/2009: 18 gallons
8/27/2009: 9 gallons
8/28/2009: 28 gallons
8/29/2009: 7 gallons
8/30/2009: 14 gallons
8/31/2009: 18 gallons
9/01/2009: 8.5 gallons

Stone dispatched the 110' M/V International Quest equipped with oil skimming equipment to the scene due to initial reports of pockets of recoverable condensate. On 28 August 2009 M/V Quest reported that they were unable to conduct skimming operations due to the condensate being too thin and absorbents would be a more effective method of recovery. On 29 August 2009 Oil Spill Response (OSR) personnel reported that only approximately 5 gallons of condensate were recovered using sorbent boom, so condensate recovery operations were discontinued.

The exact or measured volume of natural gas released is unknown, but an estimated total volume of 67 MCF can be calculated based on the yield (derived from the production report) of the gas from well C-9. However, this estimate seems far too low compared to the volume required to produce the 50' diameter plume of bubbling gas that was observed at the surface of the water above the toppled platform.

On 1 September 2009 Stone secured the leaking well by removing the sheared off master valve and then replacing the broken valve with a new valve assembly. After securing the well with a new valve, Stone successfully squeezed the C-9 perforations with cement and pressure on the well was bled to 0 psig with no increase in pressure observed.

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

Damage to the master valve alone would not have resulted in a LWC, as the MMS requires additional barriers to flow. Such failures of mechanical integrity could include: a failure of the production tubing below the SCSSV, a failure of the production casing, or a failure of the packer integrity.

Stone has developed a theory that a 2' section of 1/4" SS control line to the SCSSV was flattened as the platform was toppled during the hurricane. It is believed that as the control line tubing was flattened, it expelled 11 cc of hydraulic fluid into the SCSSV which caused the SCSSV to open. The flattened section of tubing also sealed the hydraulic pressure in the valve, allowing it to remain in the open position even after the hydraulic pressure was bled off at the needle valve by a diver. The theory is supported by the diver opening the closed needle valve and observing the release of hydraulic fluid when the valve was opened. Since last production of this well was in July of 2005, and the SCSSV was being used as a tubing plug (with surface control rendered inoperative), the diver should have found the needle valve in the closed position with zero hydraulic pressure on the control line. The subject well has a history of sand production, and Stone feels that the LWC may have occurred though the open or partially open SCSSV (due to the flattened control line) when a sand bridge broke loose in the tubing allowing the well to flow uncontrollably.

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

Human error may be a possible cause of the loss of well control. There is a possibility that the control line needle valve may have been closed with hydraulic pressure remaining on the control line. This would have resulted in the SCSSV remaining in the open position.

20. LIST THE ADDITIONAL INFORMATION:

No other additional information at this time.

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

N/A. Damages occurred during Hurricane Ike.

Hurricane destruction.

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The Lake Charles District Office has no recommendations at this time.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

The evidence available at this time does not support issuing an Incident of Non-compliance.

25. DATE OF ONSITE INVESTIGATION:

NO

26. ONSITE TEAM MEMBERS:

**Meaux, Wayne / Mouton, Scott /
Osterman, Mark /**

29. ACCIDENT INVESTIGATION

PANEL FORMED:

30. DISTRICT SUPERVISOR:

OCS REPORT:

Larry Williamson

APPROVED

DATE: 19-OCT-2009