

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Safety and Environmental Enforcement
GULF OF MEXICO REGION

ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: 30-JUL-2011 TIME: 1500 HOURS

2. OPERATOR: Hall-Houston Exploration III, L.P.
REPRESENTATIVE: Camp, Kathy
TELEPHONE: (713) 201-9627
CONTRACTOR: ISLAND OPERATORS CO. INC.
REPRESENTATIVE: Kibodeaux, Mike
TELEPHONE: (337) 898-0171

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

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

6. OPERATION:

4. LEASE: G27036
AREA: EC LATITUDE:
BLOCK: 34 LONGITUDE:

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

5. PLATFORM: No.1
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

9. WATER DEPTH: 37 FT.

LWC HISTORIC BLOWOUT
 UNDERGROUND
 SURFACE
 DEVERTER
 SURFACE EQUIPMENT FAILURE OR PROCEDURES

10. DISTANCE FROM SHORE: 6 MI.

11. WIND DIRECTION: E
SPEED: 6 M.P.H.

12. CURRENT DIRECTION: W
SPEED: 3 M.P.H.

COLLISION HISTORIC >\$25K <=\$25K 13. SEA STATE: 1 FT.

17. INVESTIGATION FINDINGS:

On or about July 30, 2011, Hall Houston's EC-34#1 unmanned satellite platform experienced a pollution incident as a result of a parted 1-inch stainless steel ball valve. The BOEMRE investigation revealed a third party chemical company recommended that Hall Houston install a coupon element on the well's flowline for the purpose of evaluating the paraffin content of the oil. Thereafter, the coupon extractor/holder was received by the contract platform Operators and successfully installed on the flowline along with the 1-inch stainless steel ball valve. The ball valve served as an isolation valve for the coupon extractor on the Well FA 3 flowline segment, and aided in the removal of the coupon element without shutting in the well.

The BOEMRE investigation team discovered that the ball valve was rated for 2,000 psig; yet it was installed in a flowline section rated at 5,000 psig, with the well's shut-in tubing pressure (SITP) of 3,900 psig. If certain valves on EC-34#1, or the host platform (EC-24-A), were closed inadvertently or as a result of a safety system upset, the 1-inch ball valve could have been subjected to the shut-in tubing pressure of the well. Furthermore, the body of the valve was a screw type as opposed to a welded body and according to Hall Houston's 3rd party analysis of the incident by Excel Engineering Inc, it was estimated that between approximately 3 to 231 gallons of oil could have been discharged into the Gulf of Mexico when the valve parted.

Further investigation findings revealed that a Job Safety Analysis (JSA) dated July 12, 2011, was performed. The task identified on the JSA was for the purpose of "install Coupon Extractor on F/L". The JSA provided specific steps for installing the coupon extractor and listed potential incidents or hazards and recommendations to eliminate or reduce potential hazards, but did not identify the necessary tools and equipment (i.e. adequate pressure rating of the isolation valve) needed to install the coupon extractor/holder.

Hall Houston's notification of first production that was submitted to the Lake Charles District Office on May 18, 2011, indicated that Well EC-34#1 initially came online as a gas well. Production rates derived from the last well test indicate that Well 34#1 was producing 4,162 MCFPD of gas, 294 BOPD, and 392 BOWPD at the time of the incident. The Lessee also stated that since Well 34#1 began making more oil, it would produce in a slugging manner which caused process upsets associated with water handling equipment at EC-24-A.

Testimony gathered from the contract platform operators by the BOEMRE investigation team revealed that the Lead and "A" Operator's arrived at EC-24-A between 10:30 a.m. and 11:00 a.m. on July 30, 2011, and discovered that the facility was shut-in as a result of a level safety high (LSH) in the Water Skimmer. The LSH in the Skimmer is a total platform shut-in, resulting in the closure of Well's EC-34#1 boarding shut-down valve (BSDV) located on EC-24-A. The safety system at the EC-34#1 structure is designed such that when the BSDV at EC-24-A closes, pressure in the flowline/pipeline rises to the pressure safety high (PSH) pilot's set point which results in automatic closure of the surface safety valve (SSV) for Well 34#1. Further testimony gathered during the investigation revealed that the Lead Operator remained on EC-24 to bring its well on-line while the "A" Operator went to EC-34 and returned its well to service at approximately 1:00 p.m. prior to departing approximately 15 minutes later. The "A" Operator returned to EC-24, picked up the Lead Operator, then departed the field. At 3:00 p.m. the Operators were notified via their automated remote monitoring system that EC-24 had shut in again, but due to deteriorating weather conditions in the area the Operators could not return to the field.

On July 31, 2011, at approximately 2:30 p.m., the "A" Operator arrived at EC-34#1 and discovered oil throughout the entire platform including the heliport, the out-of-service line heater, and on the crane. The "A" Operator stated that there was no visible sheen on the water at the time of arrival; therefore, no report of the incident was made to the NRC, Coast Guard or the BOEMRE. Upon further investigation, the operator discovered that a 1-inch block valve on the well's flowline parted at the threads of the valve body. The remaining section of the 1-inch valve and nipple were removed from the flowline and replaced with a plug, and the well returned to

service. Since there are no pressure chart recorders at EC-34#1, it is impossible to determine the exact time Well 34#1 was shut-in.

On August 1, 2011, the BOEMRE Inspectors contacted the contract Compliance Technician responsible for EC-34#1 to announce the initial production inspection. During the conversation with the technician he did not mention anything about the incident, but indicated that the platform was flowing and personnel were in attendance. Upon landing at EC-34#1, the Inspectors discovered a significant amount of oil on the entire platform; including the heliport, and as seen in photos taken at the time of the inspection oil droplets were entering the Gulf waters. In addition, the platform was shut-in prior to the Inspectors arriving on location. While onboard, the BOEMRE Inspectors conducted the initial production inspection and instructed the contract Operators to clean the oil off the entire facility prior to returning the facility to production.

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

As a result of excessive pressure (>2,000 psig) in the flowline, the screw type 1-inch stainless steel ball valve's body could have expanded and slipped the threads in the body, resulting in the separation of the valve and the subsequent pollution incident. As a result of the valve separation, the coupon extractor/holder became a projectile. The coupon extractor/holder hit the underside of the heliport shearing off its bleed valve and then landing on the deck below. Once the pressure and fluids inside the flowline were released into the atmosphere, the fuel gas pressure became depleted causing the well to shut-in.

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

* As a result of not adequately analyzing the task at hand, all required equipment (e.g.; adequate pressure rating of the isolation ball valve) needed for proper installation of the coupon extractor was not secured and identified on the JSA form.

* Management of Change (MOC) procedures were not implemented when the decision was made to install the coupon extractor on the existing flowline. Therefore, the platform contract Operators installed a 2,000 psi ball valve in the FA3 flowline segment rated at 5,000 psi. As a result the ball valve could have been exposed to the well's SITP of 3,900 psi.

* Hall Houston did not provide the platform contract Operators with instructions for proper installation of the coupon extractor on the FA3 well's flowline segment.

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

Coupon extractor and 1-inch ball valve.

Coupon extractor and ball valve were destroyed.

ESTIMATED AMOUNT (TOTAL):

\$1,000

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

The Lake Charles District does not have any recommendations for the Regional Office of Safety Management.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: YES

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

E-100 (S) An uncontrolled release of produced oil and gas occurred as a result of a 1-inch stainless steel ball valve that parted on or about July 30, 2011. At the time of the inspection on August 1, 2011, a significant amount of oil was discovered on the entire platform including the heliport and oil droplets were entering the Gulf waters.

G-112 (S) An unsafe and unworkmanlike operation existed when the platform was brought online prior to taking the necessary action to remove oil accumulation on the platform.

G-110 (C) An unsafe and unworkmanlike operation existed as a result of the operator installing a 2,000 psi ball valve in a section of flowline rated for 5,000 psi. At the time of the incident the SITP of well 34#1 was approximately 3,900 psi.

25. DATE OF ONSITE INVESTIGATION:

01-AUG-2011

26. ONSITE TEAM MEMBERS:

Scott Mouton / Mitchell Klumpp /
Willard Smith /

29. ACCIDENT INVESTIGATION

PANEL FORMED: NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

Larry Williamson

APPROVED

DATE: 06-OCT-2011

