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

ACCIDENT INVESTIGATION REPORT

1. OCCURRED
   DATE:
   05-AUG-2012 TIME: **0730** HOURS

2. OPERATOR: **Black Elk Energy Offshore Operation**
   REPRESENTATIVE:
   TELEPHONE:
   CONTRACTOR:
   REPRESENTATIVE:
   TELEPHONE:

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

4. LEASE: **00778**
   AREA: **SM** LATITUDE:
   BLOCK: **23** LONGITUDE:

5. PLATFORM: **G**
   RIG NAME:

6. ACTIVITY:
   - [ ] EXPLORATION(POE)
   - [X] DEVELOPMENT/PRODUCTION (DOCD/POD)

7. TYPE:
   - [ ] HISTORIC INJURY
   - [X] REQUIRED EVACUATION **2**
   - [ ] 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
   - [X] CRANE
   - [ ] OTHER LIFTING DEVICE
   - [ ] DAMAGED/DISABLED SAFETY SYS.
   - [X] INCIDENT >$25K **Crane Damage**
   - [ ] H2S/15MIN./20PPM
   - [ ] REQUIRED MUSTER
   - [ ] SHUTDOWN FROM GAS RELEASE
   - [X] OTHER **Boom Winch**

6. OPERATION:
   - [X] PRODUCTION
   - [ ] DRILLING
   - [ ] WORKOVER
   - [ ] COMPLETION
   - [ ] HELICOPTER
   - [ ] MOTOR VESSEL
   - [ ] PIPELINE SEGMENT NO.
   - [ ] OTHER

8. CAUSE:
   - [X] EQUIPMENT FAILURE
   - [X] HUMAN ERROR
   - [ ] EXTERNAL DAMAGE
   - [ ] SLIP/TRIP/FALL
   - [ ] WEATHER RELATED
   - [ ] LEAK
   - [ ] UPSET H2O TREATING
   - [ ] OVERBOARD DRILLING FLUID
   - [ ] OTHER _____

9. WATER DEPTH: **80** FT.

10. DISTANCE FROM SHORE: **41** MI.

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

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

13. SEA STATE: FT.

17. INVESTIGATION FINDINGS:

On 26 July 2012, contract crane mechanics (CCM) completed a Job Safety Analysis (JSA) to begin repair operations on the lessee's platform crane. Using a chain fall and a come-along, the CCM removed the boom winch and replaced it with a refurbished boom winch that was rebuilt by the CCM's technician. The parts that were refurbished are involved in a Quality Assurance Program that has the technician trace each specific part that is replaced as per the manufacturer's specification. As the inner parts of the winch are replaced, the technician confirms those parts by utilizing a checklist. The CCM conducted proper function test including a pull test on the boom winch and checked for leaks on the hydraulic hoses after the installation was complete.

On 5 August 2012, a crane operator (CO) was attempting to lower the personnel basket which contained two employees to the back of the boat. The boat captain maneuvered the boat away from the platform until the personnel basket arrived closer to the water. As the crane operator commenced lowering the boom, a loud noise was generated from the boom winch. The boom winch began to unwind at a rapid speed as the CO lost total control of the boom winch. As the boom approached the horizontal position, the lattice began to bend and the employees remained on to the basket until it entered the Gulf of Mexico. The employees descended approximately 60 feet before entering the water. The two employees were able to swim to the boat landing without injury. The two employees were sent in for treatment as a precaution and no injuries were discovered.

On 14 August 2012, the lessee sent the boom winch to a third party crane company (TPC) that has no association with the lessee. As the TPC disassembled the boom winch, it was discovered that a spacer that secured the brake/clutch assembly had not been installed as the winch was being refurbished. Due to the absence of the spacer, the brake/clutch assembly shifted until it disengaged causing the CO to lose control of the boom winch. As per the CCM, the spacer was considered a shelf item or a hard part of the winch and not part of the new assembly. This eliminated the spacer from the Quality Assurance Program checklist. There were other discrepancies found during the disassembling process such as the bolts that hold the brake cylinder to the side plate were too long which allowed damage to the drum bushing. The anchor cable was found to be incorrect. Also, the ratchet pawl cylinder hydraulic lines were connected incorrectly preventing the pawl from seating completely onto the drum teeth. Due to the incorrect connection, the ratchet pawl cylinder would not have stopped the boom winch upon failure.

Due to the findings of this investigation, the BSEE Lafayette District along with the lessee are taking preventive measures to insure this type of incident does not reoccur. The lessee has elected to inspect all winches that were refurbished by the technician involved in this incident. The lessee has also elected to only utilize contractors holding a monogram license from API that may apply the API monogram to the nameplate as a warranty to the purchaser that construction of the crane complies in all details to API Spec 2C, and was manufactured under a quality control system which conforms to API Spec Q1. The CCM employer has contacted all companies that could possibly experience the same winch failure due to the technician's oversight in installing the spacer. Any company having a winch refurbished by the technician within the same time span as the refurbishing of the failed winch was notified and given the information needed to prevent a reoccurrence.

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

A. Failing to install the spacer on the brake/clutch assembly allowed the gears to shift causing the CO to lose control of the boom winch containing personnel.
B. By not applying all the brake/clutch assembly parts to the Quality Assurance Program allowed the spacer to be overlooked while refurbishing the winch.
C. The incorrect hydraulic line connections on the ratchet pawl cylinder prevented its designed function in the event of a boom winch failure.

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

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED: **Crane Boom and Boom Winch**

NATURE OF DAMAGE: **Boom Winch Failure**

ESTIMATED AMOUNT (TOTAL): **$407,000**

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The BSEE Lafayette District office makes no recommendations to the Regional Office of Safety Management (OSM).

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: **NO**

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

None

25. DATE OF ONSITE INVESTIGATION:

06-AUG-2012

26. ONSITE TEAM MEMBERS:
Robert Ranney / Jason Abshire / Wade Guillotte / Gerald Gonzales /

29. ACCIDENT INVESTIGATION PANEL FORMED: **NO**

OCS REPORT:

30. DISTRICT SUPERVISOR:

Elliott S. Smith

APPROVED DATE: **10-SEP-2012**

INJURY/FATALITY/WITNESS ATTACHMENT

[ ] OPERATOR REPRESENTATIVE
[X] CONTRACTOR REPRESENTATIVE
[ ] OTHER _____

[ ] INJURY
[ ] FATALITY
[X] WITNESS

NAME:

HOME ADDRESS:

CITY: STATE:

WORK PHONE: TOTAL OFFSHORE EXPERIENCE: YEARS

EMPLOYED BY:

BUSINESS ADDRESS:

CITY: STATE:

ZIP CODE:

[ ] OPERATOR REPRESENTATIVE
[X] CONTRACTOR REPRESENTATIVE
[ ] OTHER _____

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