

UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT  
PACIFIC OCS REGION

ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: 09-JUL-2006 TIME: 0145 HOURS

2. OPERATOR: Arguello Inc.

REPRESENTATIVE:  
TELEPHONE:

CONTRACTOR:

REPRESENTATIVE:  
TELEPHONE:

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

4. LEASE: P00315

AREA: SM LATITUDE:  
BLOCK: 6525 LONGITUDE:

5. PLATFORM: HARVEST

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  
 H2S/15MIN./20PPM  
 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 \_\_\_\_\_

9. WATER DEPTH: 675 FT.

10. DISTANCE FROM SHORE: 7 MI.

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

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

13. SEA STATE: FT.

14. PICTURES TAKEN: NO

15. STATEMENT TAKEN: NO

17. INVESTIGATION FINDINGS:

On 7/9/06 at 0145 a fire alarm was indicated in 332 CIU originating at LACT charge pump "C". The Optical Flame Detectors (OFD's) and fusible loops at the pump initiated deluge and an emergency platform shutdown. Fire was limited to the seal and motor area of pump "C". A portable fire extinguisher was used to extinguish residual flames although deluge coverage was adequate to contain the flames. Approximately 10 gallons of crude oil was released on the plus 60 deck. The oil was contained by the deck drain system.

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

LACT charge pump "C" motor bottom bearing failed catastrophically and was completely destroyed. The bearing had spun on the shaft and there was evidence that the rotor shoulder had spun against the inner race. The ball housing was cracked in several places. The top bearing and bottom bearings were noted to be 6300 series ball and cage bearings. The wear on the lower bearing indicated excessive pressure exerted towards the coupling end eventually leading to failure. During advanced stages of failure the bearing integrity was compromised allowing for axial movement of the rotor creating an excessive groove of the rotor shaft shoulder into the inner race resulting in metal to metal contact. These axial and radial forces were transmitted to the pump shaft and the mechanical seal through the rigid coupling.

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

6300 series ball and cage bearing are typically used in applications to provide radial support. Most vertical motors of this size have 7200 or 7300 series bearing at one end, usually the top side to provide axial load support. This motor should have been fitted with a 7200 or 7300 series upper bearing. The source of the excessive heat build up in the bearing could have been poor lubrication or excessive design load. This main seal was not catastrophically damaged, keeping most of the product (crude oil) from causing a larger fire.

During the bearing failure process it is likely the outer seal failed and the barrier fluid (Kerosene/Diesel) provided the fuel for ignition by the metal to metal bearing contact. Although it is possible the hydrocarbons in the process stream were the source, the seal failure analysis did not indicate excessive inner seal failure.

20. LIST THE ADDITIONAL INFORMATION:

Recommendations: Engineering will evaluate replacing at least one LACT charge pump with a different type of pump properly sized for the current rates. LACT charge pump "C" motor, if replaced in kind, will be replaced with a motor similar in design to pumps A and B that utilize 7200 or 7300 type thrust bearings. Royal Purple Barrier Fluid which has a high flash point (350 F vs 120 F for diesel) will be used on the existing LACT charge pumps until further notice pending successful testing and a compatibility review. Existing LACT charge pumps will be monitored by platform personnel and Reliability Technician on a more frequent basis.

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

None

N/A

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECCURANCE NARRATIVE:

None

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

None

25. DATE OF ONSITE INVESTIGATION:

11-JUL-2006

28. ACCIDENT CLASSIFICATION:

MINOR

26. ONSITE TEAM MEMBERS:

Louis Fernandez /

29. ACCIDENT INVESTIGATION  
PANEL FORMED: NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

Phillip R. Schroeder

27. OPERATOR REPORT ON FILE: YES

APPROVED

DATE:

26-DEC-2006

