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) [X] 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

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

9. 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 evidece that the rotor shoulder had spun against the inner race. The bell 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 bearings 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 compatibility review. Existing LACT charge pumps will be monitored by platform personnel and Reliability Technician on a more frequent basis.

21. PROPERTY DAMAGED:

MMS - FORM 2010
EV2010R

NATURE OF DAMAGE:

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ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE 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

26. ONSITE TEAM MEMBERS:
   Louis Fernandez /

28. ACCIDENT CLASSIFICATION: MINOR

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