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

ACCIDENT INVESTIGATION REPORT

1. OCCURRED
   DATE: **15-FEB-2010** TIME: **0625** HOURS

2. OPERATOR: **W & T Offshore, Inc.**
   REPRESENTATIVE: **Stong, Bea**
   TELEPHONE: **(713) 624-7338**
   CONTRACTOR:
   REPRESENTATIVE:
   TELEPHONE:

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

4. LEASE: **G12008**
   AREA: **SS** LATITUDE:
   BLOCK: **349** LONGITUDE:

5. PLATFORM: **A**
   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
- [X] 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:
- [X] PRODUCTION
- [ ] DRILLING
- [ ] WORKOVER
- [ ] COMPLETION
- [ ] HELICOPTER
- [ ] MOTOR VESSEL
- [ ] PIPELINE SEGMENT NO.
- [ ] OTHER

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

9. WATER DEPTH: **372** FT.

10. DISTANCE FROM SHORE: **81** MI.

11. WIND DIRECTION: **N**
    SPEED: **30** M.P.H.

12. CURRENT DIRECTION: **N**
    SPEED: **1** M.P.H.

13. SEA STATE: FT.

17. INVESTIGATION FINDINGS:

On 15 February 2010 at approximately 0620 hours, Operator "A" in the control room noticed PLC alarms indicating that the wet oil tank circulating pump 1072A had tripped. The pressure transmitter on the departing oil pipeline also increased to a default pressure of 1500 psi. Operator "A" left the control room and proceeded down the northeast stairs. At approximately 0625 hours, Operator "A" observed a fire on the cellar deck, hit the ESD and announced the fire over the PA system. No one was in the cellar deck area at the time of the incident. Operator "A" estimated the fire to be approximately 10-12 feet wide by 5 feet high, with pump 1072A completely engulfed by the flames and oil seeping out of the pump's electrical control box. Operator "A" utilized a 300 lb wheel unit fire extinguisher to initiate fire fighting duties, with Operator "B" assisting through the use of two 30 pound hand-held fire extinguishers. Operator "C", subsequent to making the capsule ready for evacuation, also assisted by utilizing a fire hose to wash down the hot spots on the pump and surrounding area. Due to strong northerly winds approximately 20 minutes was consumed to extinguish the fire, with the TSE never in direct contact with the flame. The three Operators continued to cool down the area and cleaned as much of the free oil as possible. There were no injuries sustained from the incident.

Approximately 30 minutes prior to the fire's detection, Operator "C" claimed to have conducted his walk around the pump area without observing any problems.

Offshore Cleaning Systems was called in at approximately 0730 hours to clean-up thick oil and to pressure wash the entire area, with production remaining shut-in until 1900 hours. The damaged pump was sent for diagnosis to Moores Pump & Services, Inc.

Pump Findings:

The pump's bottom shaft bearing failed, resulting in damage to the mechanical seal from the whipping shaft. Failure of the pump's silicone case gasket resulted in crude oil being released and ignited by a spark generated from the metal grinding of the failed pump parts.

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

Failure of the pump's bottom shaft bearing and silicone case gasket resulted in crude oil being ignited from a spark generated from the metal grinding of the failed pump parts.

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

Improper utilization of silicon for a case gasket, and the use of teflon tape to back-up an undersized O-ring.

20. LIST THE ADDITIONAL INFORMATION:

Upon arrival, Moores technicians disassembled the top of the motor and noted the plastic fan was completely destroyed. The top bearing housing was removed to check the upper bearing and windings. The pecker head cover was removed and no fire damage was observed to the wiring or inner areas. Crude oil was discovered inside the pecker head, with metal shavings found inside the pump case. There was no evidence to support the fire had initiated from within the motor.

21. PROPERTY DAMAGED:

Electric motor, pump, cables of the motor and transmitters.

NATURE OF DAMAGE:

Motor and pump are completely destroyed. Cable wiring was burned.

ESTIMATED AMOUNT (TOTAL): **$23,000**

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

Due to the specific nature of this incident, the Houma District has no recommendation to the Regional Office of Safety Management.

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

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

25. DATE OF ONSITE INVESTIGATION:

12-MAR-2010

26. ONSITE TEAM MEMBERS:

Terry Hollier / Ronald Washington /

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

OCS REPORT:

30. DISTRICT SUPERVISOR:

Bryan A. Domangue

APPROVED

DATE: **12-APR-2010**

FIRE/EXPLOSION ATTACHMENT

1. SOURCE OF IGNITION: **Spark from metal grinding.**

2. TYPE OF FUEL:
- [ ] GAS
- [x] OIL
- [ ] DIESEL
- [ ] CONDENSATE
- [ ] HYDRAULIC
- [ ] OTHER

3. FUEL SOURCE: **crude oil from wet oil tank**

4. WERE PRECAUTIONS OR ACTIONS TAKEN TO ISOLATE KNOWN SOURCES OF IGNITION PRIOR TO THE ACCIDENT ? **NO**

5. TYPE OF FIREFIGHTING EQUIPMENT UTILIZED:
- [x] HANDHELD
- [x] WHEELED UNIT
- [ ] FIXED CHEMICAL
- [x] FIXED WATER
- [ ] NONE
- [ ] OTHER