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

ACCIDENT INVESTIGATION REPORT

1. OCCURRED
DATE: **30-DEC-2007** TIME: **0844** HOURS

2. OPERATOR: **Bois d'Arc Offshore Ltd.**
REPRESENTATIVE: **Toby Trosclair**
TELEPHONE: **(985) 631-3278**
CONTRACTOR: **EAGLE CONSULTANTS**
REPRESENTATIVE:
TELEPHONE:

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

4. LEASE: **00068**
AREA: **SS** LATITUDE:
BLOCK: **118** LONGITUDE:

5. PLATFORM: **R**
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.
- [X] INCIDENT >$25K **Production equip. &**
- [ ] H2S/15MIN./20PPM **meter run.**
- [ ]
- [ ] REQUIRED MUSTER
- [X] SHUTDOWN FROM GAS RELEASE
- OTHER **Fire from gas/condensate leak**

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
- [X] LEAK
- [ ] UPSET H2O TREATING
- [ ] OVERBOARD DRILLING FLUID
- [ ] OTHER _____

9. WATER DEPTH: **50** FT.

10. DISTANCE FROM SHORE: **22** MI.

11. WIND DIRECTION: **NW**
SPEED: **10** M.P.H.

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

13. SEA STATE: **1** FT.

17. INVESTIGATION FINDINGS:

On 30 December 2007 at approximately 0845 hours, a fire occurred on the SS 118-R, while two operators were repairing a leak on the test separator oil meter. The two operators went to launch a pig and take a dew point, while another operator was investigating why the oil production was coming up short. At 0830 hours, two operators were returning from launching a pig and noticed the third operator working on the test separator. The two operators stopped and asked him what he was doing, while the third operator explained that he was two phasing the test separator since oil production was coming up short. During this time a leak from the test separator oil meter was observed.

The two operators began to isolate the oil dump line and bled the pressure off, while the third operator went to retrieve additional tools. Within a minute the operator returned with additional tools and exited to the living quarters, leaving the other two operators repairing leak at the oil meter. The two operators closed off the first block valve on the test separator oil line, closed the gate valve next to the dump valve and closed the valve downstream from the choke. The two operators then proceeded to bleed off the pressure on the oil dump line, and loosened the hammer unions connecting the oil meter. One operator then began to tighten the union on the upstream side of the oil meter while the other operator held backup on the nipple side. The two operators then tightened the downstream side of the oil meter to make sure both sides were tight so that it would not leak. The operators closed the bleed off valve, opened the gate valve next to the dump valve, opened the block valve downstream of the choke and opened the first block valve upstream the oil meter that was repressuring the line. Both operators indicated that there were no apparent leaks at that time and there were no audible or visual indications of a leak detected.

The operators then proceeded to manually lower the oil level in the test separator to make the dump valve dump (operate). At that time a slight leak was observed coming from the same area on the oil meter that was leaking minutes earlier. Within seconds the line parted at the downstream side of the oil meter between the nipple and the union allowing a large amount of gas and condensate to be discharged into the atmosphere. Within seconds the released gas migrated into the vicinity of the heater treater and was ignited by the heater treater burner.

Seconds later there were two loud booms that shook the living quarters. An operator activated the ESD system and started the fire water pump. The fire pump ran for 30 seconds and stopped due to being damaged by the fire. All personnel were then ordered to evacuate the platform. The helicopter pilot and helicopter mechanic evacuated the platform by helicopter. The other personnel went to the boat landing to evacuate by boat. At the boat landing all personnel were accounted for and plans were discussed to reboard the platform and fight the fire. However, there was a third loud explosion and the plans for fighting the fire at this time were cancelled.

The M\V Captain Cody then took the crew to the field central complex located at Ship Shoal 114-A. When the crew arrived at Ship Shoal 114-A plans were then made to reboard the platform and fight the fire. A total of 5 personnel went back to Ship Shoal 118-R to fight the fire. The platform was reboarded and it took about 30 minutes to extinguish the fire. At 0944 hours, the fire was extinguished with dry chemical.

There were no injuries or pollution as a result of this accident.

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

*** A union connecting the oil meter for the Test Seperator failed to result in the line to part, allowing gas and condensate to be released into the atmosphere. The escaping gas and condensate contacted the Heater Treater burner and ignited.**

*** Subsequent investigation revealed the union end that failed showed evidence of insufficient thread contact prior to failure. Preliminary measurements of the meter showed a thread length of 1 1\16" and the length of thread engagement of the meter at the good end was 9/16" while at the failed end it was slightly less than 3/16". This indicates insufficient thread contact. Where the piping came apart, there was only 3 threads of the meter into the union. On a 2" screwed fitting the make-up should be a minimum of 5/8"(about 6 threads).**

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

*** It should be noted that this meter is changed or swapped out every month. Changing the meter monthly in all likelihood caused the threads on the union to become worn out over a period of time. Also, depending on the amount of times the union was removed and reapplied to the meter, and how tight it was reapplied, the throat of the union could have been flared causing the meter to fit improperly. When 1100 psi was applied to the line, the pressure caused the meter to pull from the union and the line to seperate causing the gas to be released into the atmosphere.**

*** The piping at the flanges seemed to be off center which would have put extra stress on the piping.**

*** Investigation revealed a lack of support bracing near the meter.**

20. LIST THE ADDITIONAL INFORMATION:

On 18 January 2008, an isometric of the piping configuration from the Test Seperator oil outlet to the point where the line parted was analyzed by a third party engineering firm. Also, the above piping was removed from the platform and send in to a laboratory for metallurgical testing.

21. PROPERTY DAMAGED:	NATURE OF DAMAGE:
Firewater Pump, Test Seperator, Heater Treater, Gas Meter Run, production piping, electrical wiring, Filter Separators, Oil Meter, Low Pressure Bulk Separator	**Burned but not destroyed; severely scorched from intense heat. The Gas Meter run had to be replaced.**

ESTIMATED AMOUNT (TOTAL): **$800,000**

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The Houma District office has no recommendations for the Regional Office of Safety Management.

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

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

None

25. DATE OF ONSITE INVESTIGATION:

31-DEC-2007

26. ONSITE TEAM MEMBERS:

Bryan Domangue / Freddie L. Mosely /

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

OCS REPORT:

30. DISTRICT SUPERVISOR:

Bryan Domangue

APPROVED DATE: **07-MAR-2008**

FIRE/EXPLOSION ATTACHMENT

1. SOURCE OF IGNITION: **Heater Treater burner**

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

3. FUEL SOURCE: **Test Separator**

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