

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

ACCIDENT INVESTIGATION REPORT

For Public Release

1. OCCURRED

DATE: 20-OCT-2014 TIME: 1000 HOURS

2. OPERATOR: Energy XXI GOM, LLC

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR: -

REPRESENTATIVE:

TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING DEVICE
- DAMAGED/DISABLED SAFETY SYS.
- INCIDENT >\$25K
- H2S/15MIN./20PPM
- REQUIRED MUSTER
- SHUTDOWN FROM GAS RELEASE
- OTHER

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

6. OPERATION:

4. LEASE: G01619

AREA: SP LATITUDE:

BLOCK: 93 LONGITUDE: -

- PRODUCTION
- DRILLING
- WORKOVER
- COMPLETION
- HELICOPTER
- MOTOR VESSEL
- PIPELINE SEGMENT NO.
- OTHER

5. PLATFORM: - A

RIG NAME:

6. ACTIVITY:  EXPLORATION (POE)  
 DEVELOPMENT/PRODUCTION  
(DOCD/POD)

8. CAUSE:

7. TYPE:

- HISTORIC INJURY -
  - REQUIRED EVACUATION
  - LTA (1-3 days)
  - LTA (>3 days)
  - RW/JT (1-3 days)
  - RW/JT (>3 days)
  - Other Injury -

- EQUIPMENT FAILURE
- HUMAN ERROR
- EXTERNAL DAMAGE -
- SLIP/TRIP/FALL
- WEATHER RELATED
- LEAK
- UPSET H2O TREATING
- OVERBOARD DRILLING FLUID
- OTHER \_\_\_\_\_

- FATALITY
- POLLUTION
- FIRE
- EXPLOSION

- LWC -  HISTORIC BLOWOUT
- UNDERGROUND
- SURFACE
- DEVERTER
- SURFACE EQUIPMENT FAILURE OR PROCEDURES

- 9. WATER DEPTH: 446 FT.
- 10. DISTANCE FROM SHORE: 17 MI.
- 11. WIND DIRECTION: -  
SPEED: M.P.H.
- 12. CURRENT DIRECTION:  
SPEED: M.P.H.
- 13. SEA STATE: FT.

COLLISION  HISTORIC  >\$25K  <=\$25K

On October 20, 2014 at 1000 hours, a fire occurred on an Energy XXI Facility, Lease OCS-G 1619, South Pass 93-A platform involving an Energy XXI contractor, Island Operating Company (IOC) Lead Operator (LO). The LO was loading the #4 Arial Compressors after a shutdown. The LO restarted the compressor using the Standard Operating Procedures (SOP). After the compressor went through its sequence, it then cranked up and went down again. The LO reset the panel for a second time and cranked the unit again. When the unit was loaded in manual mode all was working properly, but when switching the governor from manual mode to automatic mode, the LO heard a loud popping sound from the compressor turbine area. The compressor unit then shut down and a small flash fire about 6" long was seen by the LO around the turbine area. The LO called out on the radio a fire at the compressor then proceeded to station #102 to grab a 30 lb fire extinguisher. The fire was put out in seconds and no injuries were reported from this accident.

On October 21, 2014, BSEE Investigators arrived on location to investigate the fire on compressor #4. It was revealed that the compressor turbine had small fragments that went unnoticed from previous repairs, causing coolant to enter into the right bank (RB) cylinder from cracked heads causing a cascade affect. Once metal entered the combustion area, the failure became critical. The cylinder head was destroyed on (RB-6) and passed metal to (RB-5) which was scarred. The major internal breakdown included instant damages to the lube oil sealing systems/components that then allowed lube oil to communicate with the manifold, then a small flame developed causing the turbine side impeller to be destroyed along with the turbine housing internally. The vibration switch was changed out after numerous shutdowns before accident occurred. The vibration switch is a major component to warn of some type of damage to the compressor package.

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

- 1) Minor fragments from previous repairs of the right bank #6 cylinder went unnoticed during installation of the new cylinder.
- 2) The major internal breakdown included instant damages to the lube oil sealing systems/components that then allowed lube oil to communicate with the manifold, that developed a small flame causing the turbine side impeller to be destroyed along with the turbine housing internally.

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

## 20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

**The BSEE New Orleans District makes no recommendations to the Agency.**

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

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

25. DATE OF ONSITE INVESTIGATION:

**21-OCT-2014**

26. ONSITE TEAM MEMBERS:

**Alan Williams / Pierre Lanoix /**

29. ACCIDENT INVESTIGATION

PANEL FORMED: **NO**

OCS REPORT:

30. DISTRICT SUPERVISOR:

**David Trocquet**

APPROVED

DATE:

**04-MAR-2015**

# FIRE/EXPLOSION ATTACHMENT

**For Public Release**

1. SOURCE OF IGNITION: **Lube Oil Sealing Systems -**

2. TYPE OF FUEL:
- GAS
  - OIL
  - DIESEL
  - CONDENSATE
  - HYDRAULIC
  - OTHER **Lube Oil**

3. FUEL SOURCE: **Natural Gas**

4. WERE PRECAUTIONS OR ACTIONS TAKEN TO ISOLATE KNOWN SOURCES OF IGNITION PRIOR TO THE ACCIDENT ? **YES**

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

## INJURY/FATALITY/WITNESS ATTACHMENT

# INJURY/FATALITY/WITNESS ATTACHMENT

*For Public Release*

<input checked="" type="checkbox"/>	OPERATOR REPRESENTATIVE	<input type="checkbox"/>	INJURY
<input type="checkbox"/>	CONTRACTOR REPRESENTATIVE	<input type="checkbox"/>	FATALITY
<input type="checkbox"/>	OTHER _____	<input checked="" type="checkbox"/>	WITNESS

NAME :

HOME ADDRESS :

CITY :

STATE :

WORK PHONE :

TOTAL OFFSHORE EXPERIENCE: 17 YEARS

EMPLOYED BY :

BUSINESS ADDRESS :

CITY :

STATE :

ZIP CODE :