

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

ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: 02-APR-2010 TIME: 1322 HOURS

2. OPERATOR: Northstar Offshore Energy Partner;  
REPRESENTATIVE: Chris Hildebrandt  
TELEPHONE: (713) 626-9696  
CONTRACTOR:  
REPRESENTATIVE: Dalvin Warren  
TELEPHONE: (318) 964-2567

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

4. LEASE: 00577  
AREA: EI LATITUDE: 28.399  
BLOCK: 208 LONGITUDE: -91.29967

5. PLATFORM:  
RIG NAME: SPARTAN 208

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 Generator Fire  
 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: 98 FT.

10. DISTANCE FROM SHORE: 48 MI.

11. WIND DIRECTION: SE  
SPEED: 8 M.P.H.

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

13. SEA STATE: 4 FT.

17. INVESTIGATION FINDINGS:

On 4/2/2010 at approximately 1322, the rig electrician called out a fire in the engine room. The outboard generator engine was on fire and the rig lost electrical power. The alarm was sounded and all hands reported to their assigned stations. The fire team reported to the scene and began extinguishing the fire in the outboard engine room with CO2 and Purple-K extinguishers. At approximately 1350, the fire was extinguished and the outboard engine room was ventilated and damage assessed. The stand-by generator was then put on line and electrical power was restored to the facility. At approximately 1445, the USCG and MMS were notified of the incident. There were no personnel injuries or environmental pollution.

The fire resulted in a cover from the air box (the engine's upper chamber) being blown off and flying into a nearby wall. Charring was present inside the air box near the blown-off air box cover. Outside of the blown-off air box cover, the nearby scavenging pump was burnt and the surrounding paint was heat blistered. Both pressure reliefs had been activated in the crankcase (the engine's lower chamber). The air filters on both of the engine's air blowers were fire damaged. Further inspection by an EMD Mechanic on 4/3/10 revealed that seals and gaskets were also damaged.

On 4/7/10, EMD Mechanics partially disassembled the engine and upon examining the left bank blower, found that the quill shaft was broken and that the blower was destroyed. Blower seizure caused the quill shaft to shear, allowing communication between the crankcase and air box. With no blower to force cool air in and hot exhaust air out of the air box, the temperature and pressure built until the crankcase pressure reliefs were activated to result in the air box cover being blown off. Air was able to enter the air box and mix with the hot fumes to create the fire. The blower's drive gear bushings were loose and damaged with no other damage found except that concentrated around the blower. The blower and air box cover on this 1977 model engine were prone to failure due to the engine's service life (approximately 33 years).

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

Seizure of the blower allowed temperature and pressure to build inside the crankcase and air box until the air box cover was blown off. Air was able to enter the air box and mix with the hot fumes to create the fire.

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

This 1977 model engine, blower and air box cover were prone to failure due to its service life (approximately 33 years).

20. LIST THE ADDITIONAL INFORMATION:

Corrective Action:

Increased maintenance or unit replacement may be advised due to the engine's service life. A compression type shutdown may be considered to expedite shutdown in order to

prevent future fires.

21. PROPERTY DAMAGED: NATURE OF DAMAGE:

Property damage includes the blower, an air box cover, gaskets and seals, various paint and charring damages. Mechanical, Fire

ESTIMATED AMOUNT (TOTAL): \$30,000

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

Due to the specific nature of this incident, the Lafayette District has no recommendations to report to the Regional Office

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

The operator was in possession of a maintenance record for the unit.

25. DATE OF ONSITE INVESTIGATION:

06-APR-2010

26. ONSITE TEAM MEMBERS:

Tom Basey / Wade Guillotte / Chris Adams / Johnny Serrette /

29. ACCIDENT INVESTIGATION

PANEL FORMED: NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

Elliott S. Smith

APPROVED

DATE: 08-JUN-2010

# FIRE/EXPLOSION ATTACHMENT

1. SOURCE OF IGNITION: **blower failure**

2. TYPE OF FUEL:  GAS  
 OIL  
 DIESEL  
 CONDENSATE  
 HYDRAULIC  
 OTHER **temperature and pressure**

3. FUEL SOURCE: **Failed blower allowed communication between crankcase and air box**

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

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

# INJURY/FATALITY/WITNESS ATTACHMENT

OPERATOR REPRESENTATIVE

INJURY

CONTRACTOR REPRESENTATIVE

FATALITY

OTHER \_\_\_\_\_

WITNESS

NAME:

HOME ADDRESS:

CITY

STATE:

WORK PHONE:

TOTAL OFFSHORE EXPERIENCE:

YEARS

EMPLOYED BY:

BUSINESS ADDRESS:

CITY:

STATE:

ZIP CODE: