

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

# ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **22-JUL-2016** TIME: **1725** HOURS

2. OPERATOR: **Anadarko Petroleum Corporation**

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR:

REPRESENTATIVE:

TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING DEVICE
- DAMAGED/DISABLED SAFETY SYS.
- INCIDENT >\$25K <\$100,000
- H2S/15MIN./20PPM
- REQUIRED MUSTER
- SHUTDOWN FROM GAS RELEASE
- OTHER **Gas release**

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

6. OPERATION:

4. LEASE: **G18402**

AREA: **GC** LATITUDE:

BLOCK: **608** LONGITUDE:

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

5. PLATFORM: **A(TLP MARCO POL**

RIG NAME:

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

8. CAUSE:

7. TYPE:

- HISTORIC INJURY
- REQUIRED EVACUATION **2**
- LTA (1-3 days)
- LTA (>3 days) **2**
- 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

9. WATER DEPTH: **4300** FT.

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

10. DISTANCE FROM SHORE: **144** MI.

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

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

COLLISION  HISTORIC  >\$25K  <=\$25K 13. SEA STATE: FT.

17. INVESTIGATION FINDINGS:

At approximately 1715 hours on July 22, 2016, an incident occurred on the Marco Polo Tension Leg Platform (TLP) at Green Canyon 608-A (GC 608A), lease number OCS-G 18402. The operator on record is Anadarko Petroleum Corporation.

Prior to bringing on the subsea gas well GC 562 #4, mechanics completed the process of re-configuring the Flash Gas Compressor (FGC) CBA-5020-C. After loading the FGC-C compressor, FGC CBA-5020-A shut-in on the Level Safety High (LSH) in the 2nd stage suction scrubber (MBF-1190A). The mechanics decided to re-configure FGC-A at that time. The re-configuring process includes opening Kinney valves, which are bleed valves, to de-pressurize the cylinders for maintenance. It was during this bleeding process that a large volume of natural gas was in the area surrounding the compressor, and a fire ignited. The likely ignition source was the turbocharger of the CAT engine that services the FGC-A.

Note: Normal operating temperature of the turbocharger is approximately 1000° F. After several Temperature Safety Elements (TSE) in the area activated, the fire alarm sounded, the platform shut-in, personnel mustered to their station, and the fire teams were deployed. The fire was extinguished at approximately 1735 hours. Two mechanics in the area of the fire were injured with 1st and 2nd degree burns to the face, neck, and hands. The facility medic attended to and evaluated the injured personnel. A Search and Rescue Service (SARS) helicopter arrived at the facility at approximately 1915 hours and transported the injured personnel to the Baton Rouge General Burn Unit.

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

Personnel began bleeding down the compressor cylinders within 1 minute after the compressor shut-in for LSH on the 2nd stage suction scrubber. This did not give the compressor nor the turbocharger (which then had approximately 1000° F on it) ample time to cool down. Also, at least one of the Kinney valves was blowing gas almost directly on the area surrounding the turbocharger.

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

Personnel did not follow company policy by performing a Permit to Work (PTW) nor a Job Safety Analysis (JSA). The time period to perform these two functions might have given the compressor and equipment ample time to cool down.

20. LIST THE ADDITIONAL INFORMATION:

Daily Production at the time of incident: 23,000 bopd (barrel oil per day) and 16 mmcf/d (million cubic feet per day). POB (personnel on board) at time of incident was 42.

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

Walkway adjacent to compressor, wiring, scorched piping, insulation.(See pictures taken of the damage.)

Walkway adjacent to compressor was damaged by the fire. Wiring on and around compressor was burnt. and piping was scorched.

Less than \$100,000

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The Houma District has no recommendations for the Office of Incident Investigations.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: YES

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

G-110: Does the lessee perform all operations in a safe and workmanlike manner and provide for the preservation and conservation of property and the environment? Fire and injuries occurred to two operators following the bleeding down of flash gas compressor CBA-5020A #5 cylinder on 1st stage suction.

Note- No JSA was performed prior to operations.

25. DATE OF ONSITE INVESTIGATION:

23-JUL-2016

26. ONSITE TEAM MEMBERS:

Terry Hollier / Keith Barrios /

29. ACCIDENT INVESTIGATION

PANEL FORMED: NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

Bryan A. Domangue

27. OPERATOR REPORT ON FILE: NO

APPROVED

DATE: 21-DEC-2016

# FIRE/EXPLOSION ATTACHMENT

1. SOURCE OF IGNITION: **Turbochargers on the Compressor Engine**

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

3. FUEL SOURCE: **Gas from Compressor Cylinder**

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

# INJURY/FATALITY/WITNESS ATTACHMENT

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

NAME:

HOME ADDRESS:

CITY:

STATE:

WORK PHONE:

TOTAL OFFSHORE EXPERIENCE:

YEARS

EMPLOYED BY: **Anadarko Petroleum Corporation / 00981**

BUSINESS ADDRESS:

CITY:

**TX**

ZIP CODE:

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

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