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: **26-JAN-2018** TIME: **0600** HOURS

2. OPERATOR: **GOM Shelf LLC**
REPRESENTATIVE:
TELEPHONE:

CONTRACTOR: **ISLAND OPERATORS CO. INC.**
REPRESENTATIVE:
TELEPHONE:

- [ ] STRUCTURAL DAMAGE
- [ ] CRANE
- [ ] OTHER LIFTING
- [ ] 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:

4. LEASE: **00175**
AREA: **GI** LATITUDE: **29.00124**
BLOCK: **43** LONGITUDE: **-89.85892**

5. PLATFORM: **AP-QRT**
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
- [X] POLLUTION
- [ ] FIRE
- [ ] EXPLOSION

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

COLLISION [ ] HISTORIC [ ] >$25K [ ] <=$25K

8. OPERATION:

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

9. CAUSE:

- [X] EQUIPMENT FAILURE
- [X] HUMAN ERROR
- [ ] EXTERNAL DAMAGE
- [ ] SLIP/TRIP/FALL
- [ ] WEATHER RELATED
- [X] LEAK
- [X] UPSET H2O TREATING
- [ ] OVERBOARD DRILLING FLUID
- [X] OTHER **Unsafe Culture**

10. WATER DEPTH: **110** FT.

11. DISTANCE FROM SHORE: **20** MI.

12. WIND DIRECTION: **W**
SPEED: **15** M.P.H.

13. CURRENT DIRECTION: **SW**
SPEED: M.P.H.

14. SEA STATE: **2** FT.

15. PICTURES TAKEN:

16. STATEMENT TAKEN:

17. INVESTIGATION FINDINGS:

On January 26, 2018, on the GI 43 AP (Pump Platform) Lease OCS-G00175, a loss of containment of hydrocarbons and gas releases occurred. The platform operators responded to the loss of containment ultimately shutting in the field several hours later once a sheen was observed coming from the platform. The sheen was reported to the National Response Center (NRC). No injuries occurred from this incident.

On January 26, 2018, at 12:32 am, Control Room Operators (CRO) and night operators, consisting of Fieldwood, Island, and Woodgroup personnel reported "experiencing abnormal operating conditions." Operators stated that sand and sludge buildup, chemical flocking, a loss of liquid level control, and liquid carry over in production vessels and equipment among the causes for the abnormal conditions. The CRO placed process alarms and safety system devices in "by-pass function" in the Programmable Logic Controller (PLC) to prevent equipment from shutting-in while operators flushed level bridles on process vessels. The operators thought that the abnormal conditions were due to false level reading from the process guided radar level sensors due to chemical flocking becoming stuck on the guided radar tube since they had experienced this issue before. While operators were in the process of assessing these abnormal conditions, at 1:18 am they found a hole in the Gas Vent Header Piping leaking hydrocarbons through the grating and into the Gulf of Mexico (GOM). The leak was stopped and secured by wrapping the pipe with an absorbent pad and gray duct tape. Night operators then woke up the daytime CRO to help regain control of the production process. The facility Person-in-Charge (PIC) was then awakened by operators to help assess the hole in the GAS Vent Header Piping at the request of the daytime CRO. The PIC then woke the and the Fieldwood Field Foreman. The Field Foreman fell back asleep and therefore the platform remained flowing until the following morning. At approximately 6:45 am, a field wide shut-in of all production was initiated by the Area Foreman after he noticed the sheen (after daylight) coming from the GI-43 AP structure. At 9:59 am Fieldwood reported the sheen to the NRC. (NRC #1208920).

The BSEE New Orleans District Office (NOD) in collaboration with the GOM Regional Office of Incident Investigations (OII), and the Environmental Inspection and Enforcement Unit (EIE), set up a GI 43 AP Investigation Team that made several onsite investigations. The investigation consisted of gathering pertinent documents, taking photos, and conducting interviews with personnel. On January 26th at approximately 12:00 pm, BSEE Inspectors arrived on the facility and observed a sheen extending 10 miles and originating from the GI 43 AA facility. The inspectors then verified that the GI 43 AP Platform was shut-in and all production halted. BSEE requested that Fieldwood ensure the sources of the pollution had been identified and stopped. The BSEE investigation determined through visual inspection and based on information obtained through interviews and alarm logs that there were 5 pollution discharge points located on the GI 43 AP Platform: 2 from Atmospheric Flame Arrestors, 1 from a hole in the Gas Vent Piping Header, 1 from the Open Drain Sump (ZBH-30341), and 1 from the Produced Water Disposal Pile (ZAH-30341/30343.) An E-100 Incident of Non Compliance (INC) was issued to Fieldwood on January 26th and 12 additional INCs were issued as the investigation concluded.

BSEE and Fieldwood performed independent investigations to determine the sequence of events. Fieldwood's investigation found a buildup of internal debris and chemical flocking affecting the separation process. It was also discovered that the internal packing inside the Skim Tank had collapsed and plugged flow. This sludge and packing buildup affected the process of the Skim Tank and other downstream equipment. The investigation also revealed the Open Drain Sump (ZBH-30341) could not maintain a set oil level due to the Sump Pump (PBH-30341) failing, allowing oil in the Sump bucket to overflow and discharge into the GOM. BSEE investigators obtained the facility's alarm log and discovered several safety devices were placed in bypass before and during the process upsets which allowed the process to continue without stopping production

during the abnormal conditions. With the safety devices in bypass, the safety system did not shut-in the vessels or facility which lead to hydrocarbons being discharged from the five locations listed above.

The BSEE investigation concluded several contributing causes lead to this event. Interviews with platform personnel revealed that sludge buildup in the vessels had been a recurring problem which was relayed to upper management. BSEE determined that the company failed to remediate production issues in a timely matter. Investigators were also told by platform personnel they felt pressure from the company to not shut in production. BSEE concludes Fieldwood failed to instill a culture conducive for use of "Stop Work Authority."

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

- Buildup of sludge and chemical flocking causing process level sensors to give incorrect reading leading to abnormal conditions.
- Collapsed internal packing clogging and preventing liquid outlet valves of the Skim Tank from fully closing.
- Failure of Sump Pumps
- Placing several safety devices in by-pass during abnormal conditions.
- A failure to use "Stop Work Authority" by operators.

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

- A failure to maintain production equipment through cleaning and maintenance.
- Failure to remediate production issues in a timely manner.
- Platform personnel felt pressure from the company to not shut in production.
- Fieldwood failed to instill a culture conducive for use of "Stop Work Authority"

20. LIST THE ADDITIONAL INFORMATION:

Property Damage Details (Item 21)

1. Failed section of Vent Header Piping – replacement: $3,000. Includes the materials to replace the small section of vent piping where the hole (corrosion) developed.
2. Skimmer water outlet 18" SDV – replacement: $15,000. Valve was found to be operable. However, it was not holding sufficiently, so it was replaced.
3. Skimmer poly pack – replacement: $36,500. Cost to replace with stainless steel packing (on order and to be installed at a later date).

21. PROPERTY DAMAGED:	NATURE OF DAMAGE:
1. Failed section of Vent Header Piping replacement: $3,000 **2. Skimmer water outlet 18" SDV replacement: $15,000** **3. Skimmer poly pack - replacement: $36,500.**	**Equipment failure.**

ESTIMATED AMOUNT (TOTAL): **$54,500**

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

1.Fieldwood submitted an Incident Investigation Report with a Corrective Action Plan-#19115.
2.Fieldwood announced a new safety culture initiative identified as "Safe and Sound" which emphasizes Stop Work Authority.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: **YES**

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

This investigation resulted in the issuance of eleven (11) Notification of Incident(s) of Noncompliance to GI 43 AQ-QRT/AP-QRT/AC-CMP/AR-RSR/AS-SEP as follows:

On 2-1-2018 - One (1) INC was issued:
1 E-100 - Unauthorized discharge of pollutants into offshore waters.

On 4-10-2018 - Ten (10) INCs were issued:
7 P-103's - Safety devices in bypass.
2 G110's - Operations not conducted in a safe and workmanlike manner.
1 E103 - Sump system did not automatically maintain the oil level to prevent discharge into offshore waters.

25. DATE OF ONSITE INVESTIGATION:

26-JAN-2018

26. INVESTIGATION TEAM MEMBERS:

Gerald Taylor / Jacob Tullos / Dennis Cutcher / Stephen Harris /

28. ACCIDENT CLASSIFICATION:

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

OCS REPORT:

30. DISTRICT SUPERVISOR:

David Trocquet

27. OPERATOR REPORT ON FILE:

APPROVED DATE: **22-FEB-2018**