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: | STRUCTURAL DAMAGE |
| | 07-AUG-2016 TIME: 2225 HOURS | X CRANE |
| | | OTHER LIFTING DEVICE |
| 2. | OPERATOR: Chevron U.S.A. Inc. | DAMAGED/DISABLED SAFETY SYS. |
| | REPRESENTATIVE: | INCIDENT >\$25K |
| | TELEPHONE: | |
| | CONTRACTOR: Transocean Offshore | H2S/15MIN./20PPM |
| | REPRESENTATIVE: | REQUIRED MUSTER |
| | | SHUTDOWN FROM GAS RELEASE |
| | TELEPHONE: | OTHER |
| ~ | | |
| 3. | OPERATOR/CONTRACTOR REPRESENTATIVE/SUPERVISOR | 6. OPERATION: |
| | ON SITE AT TIME OF INCIDENT: | |
| | | PRODUCTION |
| | | x DRILLING |
| 4. | LEASE: G20082 | WORKOVER |
| | AREA: GC LATITUDE: | COMPLETION |
| | BLOCK: 640 LONGITUDE: | HELICOPTER |
| | | MOTOR VESSEL |
| F | PLATFORM: | PIPELINE SEGMENT NO. |
| 5. | RIG NAME: T.O. DISCOVERER INSPIRATION | OTHER |
| | RIG NAME: T.O. DISCOVERER INSPIRATION | |
| 6 | ACTIVITY: C EXPLORATION (POE) | 8. CAUSE: |
| 0. | | |
| | | EQUIPMENT FAILURE |
| 7 | (DOCD/POD) TYPE: | X HUMAN ERROR |
| | | EXTERNAL DAMAGE |
| | HISTORIC INJURY | SLIP/TRIP/FALL |
| | X REQUIRED EVACUATION 1 | WEATHER RELATED |
| | x LTA (1-3 days) 1 | LEAK |
| | LTA (>3 days | UPSET H20 TREATING |
| | RW/JT (1-3 days) | OVERBOARD DRILLING FLUID |
| | RW/JT (>3 days) | OTHER |
| | Other Injury | |
| | T FATALITY | 9. WATER DEPTH: 4294 FT. |
| | POLLUTION | |
| | H FIRE | 10. DISTANCE FROM SHORE: 106 MI. |
| | EXPLOSION | |
| | | 11. WIND DIRECTION: E |
| | LWC 🗌 HISTORIC BLOWOUT | SPEED: 1 M.P.H. |
| | UNDERGROUND | |
| | SURFACE | 12. CURRENT DIRECTION: ENE |
| | DEVERTER | |
| | SURFACE EQUIPMENT FAILURE OR PROCEDURES | SPEED: 1 M.P.H. |
| | COLLISION \square HISTORIC $\square > $25K \square < = $25K$ | |
| | COTTI TOW CUT ON CONTRACT CONTRACTOR CONTRAC | 13. SEA STATE: 1 FT. |

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17. INVESTIGATION FINDINGS:

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On August 07, 2016, while running casing on Chevron's PN010 well in Green Canyon 640, an incident occurred onboard the Transocean Discoverer Inspiration in which an employee was struck with a joint of 16" casing. The incident occurred while the rig crew was positioning a double joint of casing on the rig's forward conveyor system in preparation for it to be trolleyed to the rig floor. The Injured Person (IP) was sent onshore for further evaluation.

On the day of the incident, the rig was in the process of running roughly 5,000 feet of 16" casing. The involved crew, consisting of two Roustabouts, a Banksman and a Crane Operator, were lifting casing joints from the starboard side pipe deck onto the rigs forward pipe conveyer system. The joints were placed onto a dunnage (casing spacer), located on the conveyer systems belt, to elevate the casing in order to release the rigging slings used for the lift. At around 22:30, after placing the tenth (10th) double joint of casing onto the conveyer belt system, the top piece of dunnage was knocked off by the casing joint being set down. The Banksman signaled the Crane Operator to pick up on the load in order to reposition the dunnage. The Crane Operator proceeded to lift the casing from the conveyer belt as directed from the Banksman. Once Roustabout #1 correctly repositioned the dunnage, the load was again lowered onto the conveyer belt. When the casing joint contacted the aft dunnage, the casing joint began to shift. This caused the load to swing into the direction of both Roustabout #1 and the Banksman. Roustabout #2, standing forward of the conveyer track, noticed the load shifting and proceeded to duck. The Banksman also recognized the casing's movement and also ducked down. Roustabout #1 was struck in the torso by the casing and forced over a 42" handrail, finally landing on the rig's riser yoke spreader bar stored directly beside the forward conveyer walkway. The Banksman immediately pulled Roustabout #1 (IP) back to safety onto the conveyer walkway. All rig crane operations were stopped and a rig wide safety stand down was performed. The IP was evaluated by the rig medic and later sent onshore to a hospital for further evaluation.

A Bureau of Safety and Environmental Enforcement (BSEE) onsite visit was performed on August 15, 2016. Onsite interviews were conducted with the employee's involved in the incident including the Tool Pusher, the Crane Operator, and the Banksman. Roustabout #1 and # 2 were not available when the interviews were conducted. While on location, BSEE inspectors collected paperwork provided by Transocean and took pictures of the area where the incident occurred.

An investigation by Transocean Offshore was conducted in the days following the incident. It was determined that the crew preforming the task failed to recognize the hazards involved when repositioning the dunnage's in such close proximity to a suspended load. Normally, rig personnel are not allowed within the area that the incident took place once lifting operations have begun. It was also noted that the Work Risk Assessment (WRA) performed by the crew prior to the casing lifting operation failed to cover the repositioning of the dunnage on the conveyer system.

Since the incident, Transocean has redesigned the dunnage used on their conveyer belt system for casing lifting operations. The new dunnage design consists of four pieces of conveyer belt bolted together which prevents them from separating. Chevron and Transocean have begun the process of reviewing all WRA's involving tubular handling operations. Transocean has also implemented new lifting requirements as stated in their new Health and Safety Manual requiring additional control measures for tubular lifting operations. With these changes, Transocean hopes to prevent further incidents like this from occurring in the future.

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

- Failure to recognize that the dunnage design used was inadequate for the application.

- Failure to remove all personnel from the conveyer system area before proceeding with casing lifting operations.

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

- Lack of Knowledge: The rig crew's failure to follow and understand current company polices involving tubular lifting operations.

- Lack of Awareness: The rig crew's failure to notice warning signs as well as identify possible hazards associated with lifting operations.

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

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

- 23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO
- 24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:
- 25. DATE OF ONSITE INVESTIGATION:

15-AUG-2016

- 26. ONSITE TEAM MEMBERS:
 - / Clinton Campo /

29. ACCIDENT INVESTIGATION PANEL FORMED: NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

Bryan Domangue

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APPROVED DATE: 14-OCT-2016 For Public Release