



# National Transportation Safety Board

## Marine Accident Brief

### Allision of Offshore Supply Vessel *Connor Bordelon* with Unmanned Platform South Timbalier 271A

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<b>Accident no.</b>	DCA15LM012
<b>Vessel name</b>	Offshore supply vessel <i>Connor Bordelon</i>
<b>Accident type</b>	Allision
<b>Location</b>	About 5.25 miles* south of Port Fourchon, Louisiana, jetty channel entrance 28°59.9' N, 90°13.75' W
<b>Date</b>	January 23, 2015
<b>Time</b>	0432 central standard time (coordinated universal time – 6 hours)
<b>Injuries</b>	None
<b>Property damage</b>	Between \$350,000 and \$500,000 to the <i>Connor Bordelon</i> , \$4.1 million to the platform and pipelines
<b>Environmental damage</b>	None
<b>Weather</b>	Cloudy skies with passing rain showers, winds from the northeast at 15 to 20 knots, visibility 3 to 5 miles, seas 3 to 5 feet
<b>Waterway information</b>	Gulf of Mexico

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On January 23, 2015, at 0432 central standard time, the offshore supply vessel *Connor Bordelon* struck the unmanned natural gas platform South Timbalier 271A, which was located about 5.25 miles south of the jetty channel entrance at the vessel's home port of Port Fourchon, Louisiana. The allision caused the pipelines attached to the platform to rupture and the natural gas and oil inside the pipelines to ignite. After the allision, the pipelines were shut down, and three good Samaritan vessels in the area applied water to put out the fire. The allision also caused a breach in the *Connor Bordelon*'s hull below the waterline, and the vessel began taking on water. The captain contacted the US Coast Guard to report the accident, and the Coast Guard released the *Connor Bordelon* from the accident area and allowed it to continue to Port Fourchon while the crew addressed the flooding. None of the 24 persons aboard the vessel were injured.



Offshore supply vessel *Connor Bordelon* under way. (Photo from [www.bordelonmarine.com](http://www.bordelonmarine.com))

\* Unless otherwise noted, all miles in this report are nautical miles (1.15 statute miles).

Note: This report was reissued April 3, 2017, with corrections to page 8.

NTSB/MAB-16/03

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About 1800 on January 18, 2015, the *Connor Bordelon* departed Port Fourchon to assist with fracking operations alongside or near the ultra-deepwater, dual-activity drill ship *Discoverer Inspiration*, located at Green Canyon Block 641 in the Gulf of Mexico. The distance from Port Fourchon to the drill ship was about 110 miles. The *Connor Bordelon* arrived on scene about 0600 on January 19. Of the 24 persons aboard the *Connor Bordelon*, 14 were crewmembers (including a captain and three mates), and 10 were employees from Baker Hughes involved in the fracking operations, which were accomplished using the *Connor Bordelon*'s dynamic positioning system.

The *Connor Bordelon*'s four deck officers split the bridge/navigation watch. The captain and a new mate stood the noon-to-midnight watch, and the two other mates stood the midnight-to-noon watch. The captain stated that he assigned the new mate to his watch so that he could observe the new mate and ensure that he became familiar with the routine and the bridge equipment. After completing work with the drill ship, the *Connor Bordelon* departed about 1800 on January 22, 2015, for the 12-hour transit back to Port Fourchon. The captain and the new mate were on watch for the first 6 hours, switching out the conn (navigational control) at irregular intervals, with the new mate having the conn most of the time. The captain was below deck at midnight on January 23, when the two other mates relieved the new mate and began the midnight-to-noon watch.

The bridge team on the accident watch consisted of the two mates, an able-bodied (AB) unlicensed sailor qualified to perform routine duties aboard the vessel, and an ordinary seaman (OS) who had less experience than the AB. The AB and the OS performed various duties as directed by the mates, including safety checks of the vessel and, when instructed, lookout duties. The two mates switched out the conn as they deemed appropriate. The mate on watch at the time of the accident took over the conn about 0340, about 50 minutes before the accident. The mate he relieved then went to rest but remained awake on a settee (small couch) located on the starboard side of the bridge below the bridge windows. At that time, the AB was below deck in the galley (with permission from the mate on watch). The OS was on the port side of the bridge in the captain's office, which had a small desk with a privacy wall that would not have allowed a view forward out the windows if he was seated at the desk. According to the AB and the OS, the mate on the settee could perform the lookout duties when called to do so. However, the mate on watch did not ensure that a designated lookout was on the bridge.



The left photo shows the captain's office on the port side of bridge, where the OS was located just before the allision. The right photo shows the settee on the starboard side of the bridge, where a mate was resting just before the allision. (Photos by the Coast Guard)

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The mate on watch stated that he was using the autopilot to operate the vessel. He had adjusted the heading from 011 to 017 degrees to account for the northeast winds, which were setting to the west, and to aim for the “hole in the wall,” an area in the Gulf of Mexico with wide separation between the charted platforms. He was independently controlling propulsion engine rpm and was maintaining a speed of about 8 knots.



**Conning station, where the mate on watch was located. The autopilot is located in the center, and radars are located on both sides of the autopilot. Manual controls are located on the center console. (Photo by the Coast Guard)**

A video from the navigation bridge (provided to investigators after the accident) showed a flashing light reflecting off the bridge windows shortly before the allision. The video showed the mate on watch rising from the starboard-side conning chair at 0428:02 and glancing up and down from the windows to the navigation console. At 0429:12, he left the conning station and disappeared from view until he returned to the chair 28 seconds later. The video also showed the mate on watch leaving the conning station at 0430:06 to go to the aft bridge, returning to the chair with binoculars at 0430:40, and continuing to look out the windows using the binoculars and look down at the navigation console. He did not notify another member of the bridge team of his intention to temporarily leave the forward bridge.

The navigation bridge video showed the mate on watch pointing forward out the window at 0431:35 and appearing to alert the other mate and the OS, who were then seen on the video moving toward and arriving at the conning station. They were looking forward as the mate at the conn manipulated the autopilot screen. The mate at the conn stated that he was able to reduce the

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engine rpm but was not able to disengage the autopilot fast enough to maneuver away from the platform. At 0432:00, the video showed the crew on the bridge bracing for an impact and some articles falling off shelves, indicating the point at which the vessel allided with the unmanned platform South Timbalier 271A. The allision occurred at a speed of about 8.7 knots. The allision caused the platform's pipelines to rupture and the released gases to ignite.

The mate on watch stated that he did not see the accident platform on his radar and thought that the platform might have been obscured by clutter depicting the rain in the area. He could not recall how the radar scale was set at the time of the accident. According to the video, the mate on watch appeared to first notice the platform when it was about 0.5 mile away from the vessel.

The captain (who was asleep in his cabin) arrived on the bridge less than 1 minute after the allision, took over the conn, and called the Coast Guard. All of the crew and additional personnel were accounted for. After the gas and pipelines were shut down, three nearby good Samaritan vessels approached the platform and applied water until the fire was extinguished. The crew of the *Connor Bordelon* quickly assessed the state of the vessel and found that it was taking on water forward where the hull was penetrated below the waterline after striking the platform. The captain notified the Coast Guard of the situation, and the Coast Guard released the vessel from the scene so that it could travel back to Port Fourchon (about 5 miles away), where the flooding and damage would be further assessed.



The left photo shows the unmanned platform South Timbalier 271A before the accident, and the right photo shows the remains of the platform after the allision and fire. (Photos provided by the Coast Guard)

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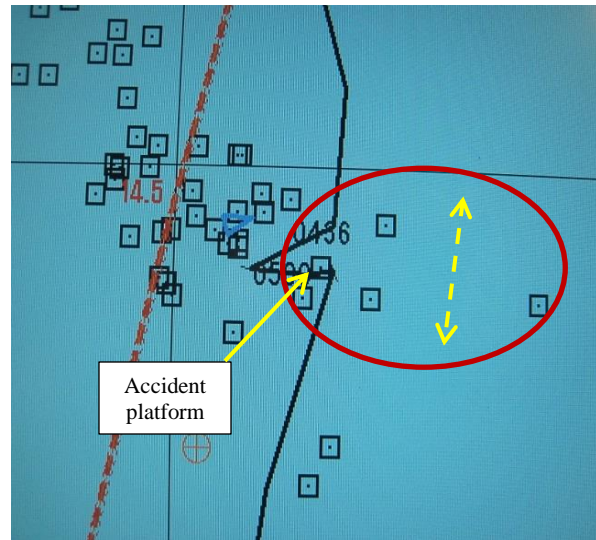


**The damage to the *Connor Bordelon* resulting from its allision with the unmanned platform. The damage included hull scrape marks and a ripped bulwark near the vessel's name. The vessel also sustained damage below the waterline resulting in flooding. (Photo by the Coast Guard)**

The *Connor Bordelon* was newly constructed in 2013. The navigation bridge had a state-of-the-art integrated bridge system with all of the controls and monitors within arm's reach of the conning chair. The mate on watch, who was 60 years old at the time of the accident and had a medical waiver on his license for glasses, had been working on this vessel for more than 1 year but stated that he felt challenged by the automated equipment. He also stated that he was "old school" and that "all this technology is not my cup of tea." The conning station center console had an emergency transfer button directly below the autopilot's touch screen. This button would have immediately reverted all automation (engine and steering) to manual control and allowed the mate to manipulate the steering more quickly to maneuver the vessel away from the platform. The mate remarked that he did not know about the emergency transfer button, but the captain stated that the mate was familiar with the emergency button.

The vessel had a voyage plan before departing Port Fourchon and a plan for the return transit. The purpose of a voyage plan is to lay out a course line that notes and avoids all nearby obstructions and obstacles. In addition, the deck officers had a paper chart and an electronic chart display and information system (ECDIS) chart with a single red dashed course line generated for the transit to and from the drill ship.

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The left photo shows an overall view of the *Connor Bordelon's* ECDIS screen with the transit course to and from the drill ship. The right photo shows a close-up view of the planned transit course (red dashed line) to and from the drill ship, the actual return course (black line), and the accident platform (with a solid yellow arrow pointing to the platform). The red oval and dashed yellow arrow (both inserted by the NTSB) denote the local transit area known as the “hole in the wall.” (Photos by the Coast Guard)

The captain and the mates told investigators that the red dashed course line was used only as a reference because they could not precisely follow the line due to marked obstructions in an area of rig congestion. The captain and the mates also stated that navigating around the entire area would be too much of a diversion for a normal transit, so they would plot one course only through the area, steer near it, and use radar and visual sightings to maneuver through the rigs and other obstructions. The ECDIS had specific programmable features to aid crewmembers in maneuvering the vessel. For example, minimum clearances from the charted rigs could be programmed into the system, and warnings could be programmed to alert the watchstanders if the vessel drifted off the plotted course line by a set amount of feet or meters or was too close to a charted obstruction, including the unmanned platform South Timbalier 271A. Although the watchstanders were familiar with the day-to-day operation of the ECDIS, they were not certified in the use of the system. As a result, the watchstanders did not take advantage of some of the ECDIS features that could have made the transit safer. The watchstanders had been scheduled (before the accident) to take mandatory ECDIS certification courses during the months following the accident. As part of the certification process, the watchstanders would have had to show proficiency with the equipment. Thus, if the watchstanders had been certified in the use of the ECDIS before the accident, they would likely have had a better understanding of the system.

The mate on watch told investigators that he intended to steer the vessel through the “hole in the wall” (dashed yellow arrow in the right ECDIS photo above); however, the course line in the ECDIS was not consistent with the mate’s intention. If the course line had been drawn through the “hole in the wall” and the vessel had been navigated along this intended track, the vessel would have had greater separation from the charted platforms. Instead, the mate on watch picked a point ahead of the vessel and steered toward an opening between the rigs, where less separation existed. Regarding voyage planning, the company’s *Safe Operations Manual* instructed watchstanders to “check the planned route for proximity to hazards.” It is challenging to draw a course line that avoids all of the charted obstructions in and around the oil fields in the Gulf of Mexico.

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However, failing to plot and follow a trackline that is clear of most charted obstructions is an inherently poor practice for marine operations.

In addition, the *Connor Bordelon*'s bridge team needed to remain vigilant regardless of the benefits that the vessel's automated equipment afforded them. The captain told investigators that he informed all members of the bridge team, before getting under way for the drill ship, about his expectations for the trip. These expectations included that, when one mate was at the conn, the other mate would perform lookout duties if the AB or the OS were not available. This expectation was corroborated by the captain's night orders and standing orders. The captain stated that it was unacceptable that one of the mates was resting during the watch period. The company's *Safe Operations Manual*, section 5, "Operating Procedures," instructed the bridge team to maintain a proper lookout; plot frequent fixes to avoid allisions, groundings, or collisions; and be thoroughly familiar with the proper operation of all bridge equipment, which did not occur before the accident.

By not following a plotted trackline, the mate on watch allowed the vessel to drift to the left due to the prevailing winds and currents. By leaving the navigation bridge to get his binoculars after seeing an object of concern, he allowed the vessel to continue to close in on the platform's position. His delay in switching from the autopilot to manual control prevented him from taking action to avoid the platform by steering around it.

## Probable Cause

The National Transportation Safety Board determines that the probable cause of the allision of the offshore supply vessel *Connor Bordelon* with the unmanned natural gas platform South Timbalier 271A was the failure of the mate on watch to ensure that the bridge team maintained a proper lookout, and his delay in changing from the autopilot to manual steering, which precluded him from taking the necessary action to prevent the allision with the platform.

### Safety Issues

- **Voyage planning:** The company's safety manual provided instructions on how to execute a voyage plan that would mitigate the risks of navigating through the congested waters of the Gulf of Mexico. It is important for vessel owners and operators to verify that the safety procedures in their manuals, including those for drawing course lines that avoid chartered obstructions and other hazards to navigation, are being followed.
- **Watchstanding practices:** The officer of the watch needs to ensure that a proper lookout is posted during navigation. In this case, the officer did not designate one of the available watchstanders as the lookout, resulting in a missed opportunity to detect the platform earlier.
- **Use of electronic chart display and information system:** The *Connor Bordelon* was equipped with state-of-the-art technology, including an ECDIS. The vessel had been operated for more than 1 year before the accident, but crewmembers had not yet taken certification courses in the use of the ECDIS. It is important for vessel owners and operators to ensure that their crews are proficient in the use of all electronic bridge equipment in a timely manner.

## Vessel Particulars

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<b>Vessel</b>	<b><i>Connor Bordelon</i></b>
<b>Owner/operator</b>	Bordelon Marine
<b>Port of registry</b>	New Orleans, Louisiana
<b>Flag</b>	United States
<b>Type</b>	Offshore supply vessel
<b>Year built</b>	2013
<b>Official number (US)</b>	1247230
<b>IMO number</b>	9670626
<b>Construction</b>	Steel
<b>Length</b>	257 ft (78.3 m)
<b>Draft</b>	15 ft (4.6 m)
<b>Beam/width</b>	52 ft (15.8 m)
<b>Gross tonnage</b>	2,122 gross tons
<b>Engine power; manufacturer</b>	Two 2,200-hp (1,641 kW) Schottel azimuthing thrusters powered by two Cummins diesel engines
<b>Persons on board</b>	24

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For more details about this accident, visit [www.nts.gov](http://www.nts.gov) and search for NTSB accident ID DCA15LM012.

**Issued: February 12, 2016**

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**NTSB investigators worked closely with our counterparts from Coast Guard Marine Safety Unit Morgan City, Louisiana, throughout this investigation.**

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The NTSB has authority to investigate and establish the probable cause of any major marine casualty or any marine casualty involving both public and nonpublic vessels under Title 49 *United States Code* 1131. This report is based on factual information either gathered by NTSB investigators or provided by the Coast Guard from its informal investigation of the accident.

The NTSB does not assign fault or blame for a marine casualty; rather, as specified by NTSB regulation, “[NTSB] investigations are fact-finding proceedings with no formal issues and no adverse parties . . . and are not conducted for the purpose of determining the rights or liabilities of any person.” Title 49 *Code of Federal Regulations*, Section 831.4.

Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by conducting investigations and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report. Title 49 *United States Code*, Section 1154(b).

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