



AVIATION



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MIR-23-01

# Contact of Offshore Supply Vessel *Elliot Cheramie* with Oil and Gas Production Platform EI-259A

On June 25, 2021, about 0245 local time, the offshore supply vessel *Elliot Cheramie* was transiting in the Gulf of Mexico with four crew and five offshore workers aboard when it struck the uncrewed/shut-in oil and gas production platform EI-259A (Eugene Island Block 259 'A' platform) 77 miles southwest of Port Fourchon, Louisiana.<sup>1</sup> Four minor injuries were reported. Damage to the vessel, platform, and pipelines was \$362,814.



**Figure 1.** *Elliot Cheramie* underway before the casualty (*left*); EI-259A before the casualty (*right*). (Sources: Cheramie Marine [*left*]; Cox Operating [*right*])

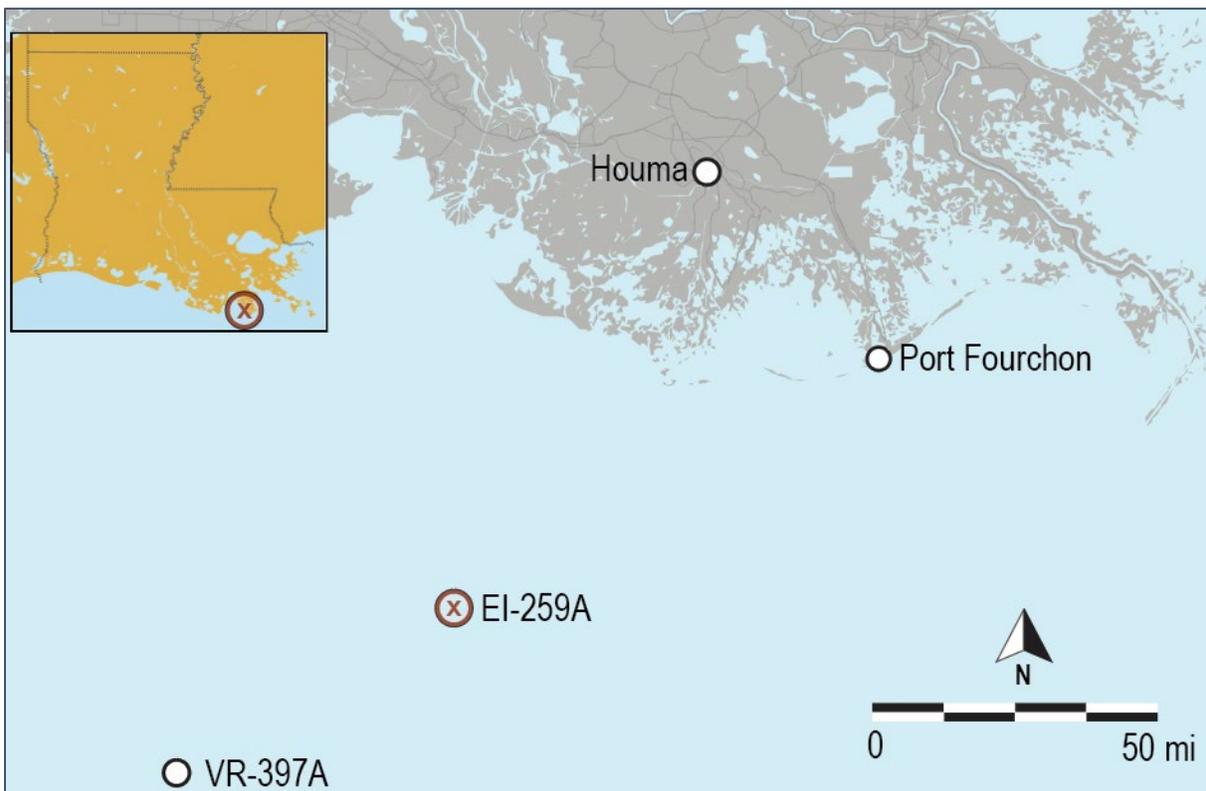
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<sup>1</sup> (a) In this report, all times are central daylight time, and all miles are nautical miles (1.15 statute miles).  
(b) Visit [nts.gov](https://www.nts.gov) to find additional information in the [public docket](#) for this NTSB investigation (case no. DCA21FM031). Use the [CAROL Query](#) to search investigations.

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<b>Casualty type</b>	Contact
<b>Location</b>	Gulf of Mexico, 77 miles southwest of Port Fourchon, Louisiana 28°27.21' N, 091°27.34' W
<b>Date</b>	June 25, 2021
<b>Time</b>	0245 central daylight time (coordinated universal time -5 hrs)
<b>Persons on board</b>	9 (4 crew and 5 offshore workers)
<b>Injuries</b>	4 minor
<b>Property damage</b>	\$362,814
<b>Environmental damage</b>	None reported
<b>Weather</b>	Visibility 8 nm, scattered clouds, winds southerly 12 kts, seas 3 ft, swells 1.6 ft, air temperature 82°F, water temperature 83°F
<b>Waterway information</b>	Gulf, depth 170 ft, 48 miles offshore

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**Figure 2.** Area where the *Elliot Cheramie* contacted platform EI-259A, as indicated by a red X. (Background source: Google Maps)

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## 1. Factual Information

### 1.1 Background

The *Elliot Cheramie* was a 150-foot-long, 90-gross-registered-tons offshore supply vessel (OSV) constructed of welded steel, built by Bollinger Shipyards of Lockport, Louisiana, in 1998 as the *Sea Horse V* for Seacor Marine. In 2009, the vessel was acquired by Cheramie Dive Support and renamed. The vessel's certificate of inspection stated the vessel required 4 crewmembers (1 captain, 1 licensed mate, and 2 deckhands) and could transport up to 16 offshore workers. Crewmembers were scheduled for 12-hour watches (from noon to midnight [12-24], and from midnight to noon [00-12]). The crew's work/home rotation was 28 days on/14 days off.

The *Elliot Cheramie* provided regular service between Port Fourchon, Louisiana, and the oil and gas production platform VR-397A (Vermilion Block 397 'A' platform), which was located about 127 miles southwest and owned and operated by Kinetica Energy (the charterer of the vessel). The vessel transported offshore workers, material (equipment, supplies, and provisions), potable water, and fuel between the platform and the shore.

EI-259A was an 8-pile steel oil and gas production platform measuring 170 feet long by 80 feet wide. The platform had been installed in 1964 and was located in 170 feet of water 49 miles offshore and 77 miles southwest of Port Fourchon. The platform was acquired by Cox Operating in 2018; the platform's ancillary pipelines were owned and operated by different companies.

### 1.2 Event Sequence

At 0630 on June 24, the *Elliot Cheramie* moored at its regular fuel facility in Port Fourchon after completion of a 12-hour transit from VR-397A with four crew, three offshore workers, and equipment on board. From 0630 to 0800, the engineer/deckhand (on the 12-24 watch) and the deckhand (on the 00-12 watch) refueled and loaded potable water.

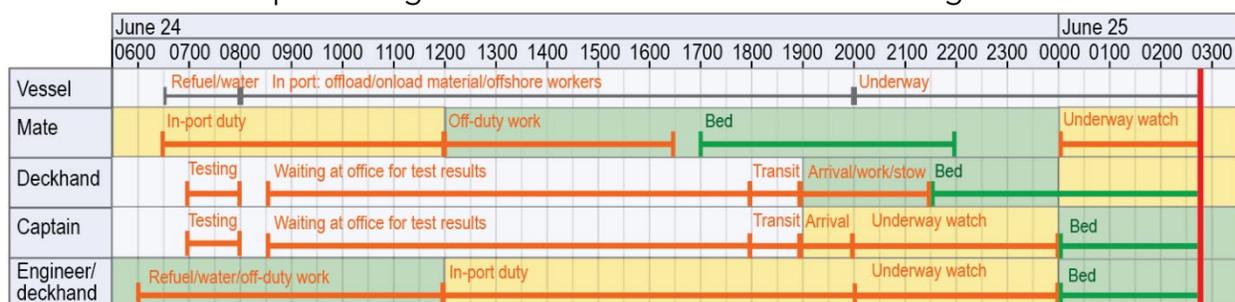
A crew change for the captain and the deckhand positions was scheduled to occur later in the day, so at 0700, the relief deckhand and relief captain reported to a medical office in Houma, Louisiana, for client-mandated COVID-19 tests. The relief deckhand went to the company office at 0830 and was provided an apartment while he waited for his results. He told investigators that he tried to rest in the apartment but could not fall asleep.

On the *Elliot Cheramie*, the offshore workers departed at 0800, and the vessel moved under a shore crane to offload equipment and load material for the next trip to VR-397A. The engineer/deckhand continued off-watch maintenance work during the cargo operations. He and all hands unloaded provisions from a delivery truck on the dock, carried the boxes of groceries and supplies aboard, and stowed the items.

At noon, the captain (scheduled to depart that day) and the engineer/deckhand took the watch from the mate and the departing deckhand. All hands continued loading and stowing provision boxes. At 1330, five offshore workers boarded the vessel. At 1630, the engineer/deckhand saw the mate leave to go to bed. The engineer/deckhand continued with vessel operations and maintenance jobs and checked vessel machinery to get underway.

At 1900, the relief captain and the relief deckhand arrived aboard the *Elliot Cheramie*. The deckhand told investigators that he learned he had the 00-12 watch when he boarded. At 1930, the crew change was logged completed. The deckhand said he spent less than an hour “picking up, putting away groceries and other supplies,” then he stowed his personal gear and got in his bed at 2130 to sleep before his watch.

The engineer/deckhand started the propulsion engines, brought in the mooring lines, and, at 2000, with the captain at the helm, the *Elliot Cheramie* was underway outbound for the transit to VR-397A. The engineer/deckhand stood watch, which consisted of hourly rounds of the engine room and helping the mate or captain on watch as necessary. When not making security rounds, most of the deckhand’s underway watch was spent in the common areas. The mate told investigators that he woke up at his usual time of 2200 in preparation for his watch. About 2345, the mate arrived in the wheelhouse to relieve the captain. Although the deckhand had set an alarm for 2344, it did not wake him up. The engineer/deckhand went to bed at midnight.



**Figure 3.** Timeline of crewmember watches and activities. Yellow shaded times are watches, and green shaded times are off duty, while orange text indicates work activities and green text indicates rest.

In the early morning hours on June 25, the mate was in the wheelhouse navigating the vessel, and the 00-12 deckhand was still asleep in the Hands Room. The OSV was making about 10 knots on a course over ground (COG) about 242°, and

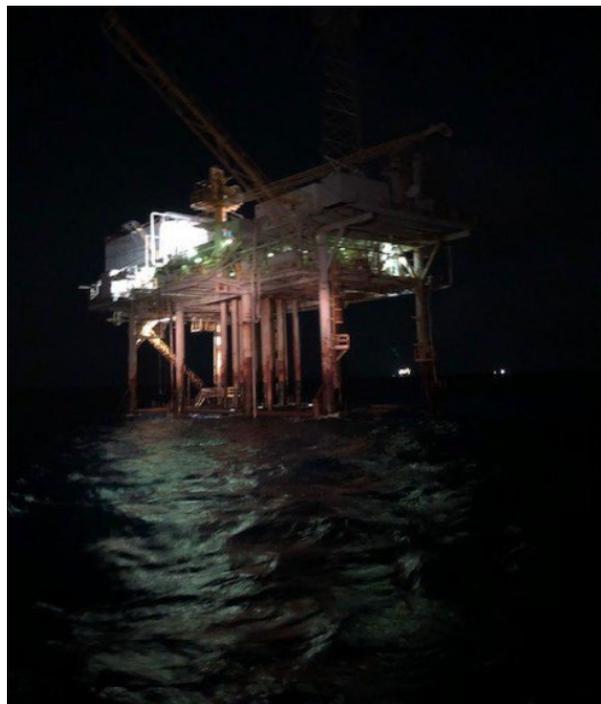
visibility was 8 miles with a full moon. The mate was steering the vessel in autopilot mode following the GPS track to VR-397A. A company official said the vessel's radar and electronic navigation chart (ENC) console did not have audible alarms, and the wheelhouse was not fitted with a bridge navigational watch alarm system.<sup>2</sup>

The mate stated that, due to the long day, he was "more tired than usual." He felt "groggy," so he walked around the wheelhouse and the bridgewings several times to stay awake. He stated that, after sitting in the wheelhouse chair, he must have fallen asleep. He woke up with the platform "dead ahead." He pulled back on both engine throttles, but "it was too late."

Per his statement in the CG-2692 Report of Marine Casualty, the vessel struck a platform in block EI-259, with the latitude and longitude corresponding to oil and gas production platform EI-259A, at 0245. After the collision, the mate stopped the engines.

Everyone else on board the *Elliot Cheramie* reported waking up when the vessel struck the platform. The mate helped the captain check on the safety of the offshore workers; four of the offshore workers reported minor injuries. The captain and engineer/deckhand met in the engine room, where they did not find evidence of damage or flooding. Next, the crew checked for other damage to the vessel and the platform. The vessel's bow sustained damage, and in the darkness, the crew could not determine the extent of damage to the platform.

At 0400, the captain directed the vessel's return to Port Fourchon. The captain called the US Coast Guard by cell phone at 0435 and reported the casualty. He reported no damage to the platform but stated that the vessel sustained a hole above the waterline and there were minor injuries to personnel on board. At 1130, the



**Figure 4.** Photo of EI-259A, taken by an employee around 0500, a few hours after the casualty. (Source: Cox Operating)

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<sup>2</sup> A bridge navigational watch alarm system is an automatic system that monitors bridge activity to detect operator disability or absence, which could lead to marine casualties. Systems vary in complexity, but a simple bridge watch alarm requires the navigation watchstander to reset the alarm at preset time intervals to prevent the watchstander from falling asleep. If the watchstander does not reset the alarm, visual and then audible alarms activate.

vessel was moored at its regular fuel facility berth in Port Fourchon, and the offshore workers departed. At 1158, the four crewmembers were tested for drugs and alcohol; all results were negative. The company stated that samples for alcohol tests were taken over 9 hours after the casualty because the vessel was out of alcohol testing strips.<sup>3</sup> At 1500, the mate resigned and departed the vessel.

## 1.3 Additional Information

### 1.3.1 Damages

At the time of the casualty, the EI-259A platform was “shut in” (no production) with no crew on board. On the morning of June 25, the owner-operator of platform EI-259A, Cox Operating, took a boat out and noted damages to the northeast corner of the platform’s boat landing level and two vertical pipelines: the departing gas pipeline (owned by Kinetica Energy) and the crude oil pipeline riser (owned and operated by Crescent Midstream). No pollution was reported.<sup>4</sup> Cox Operating completed repairs to the platform and the gas pipeline on July 4. Total damage to the platform and gas pipeline was \$41,956. On August 24, Crescent Midstream completed repairs to the crude oil pipeline riser. Damage was \$125,648.



**Figure 5.** Photo of the damages to EI-259A, taken by a Cox employee around 0500. (Source: Cox Operating)

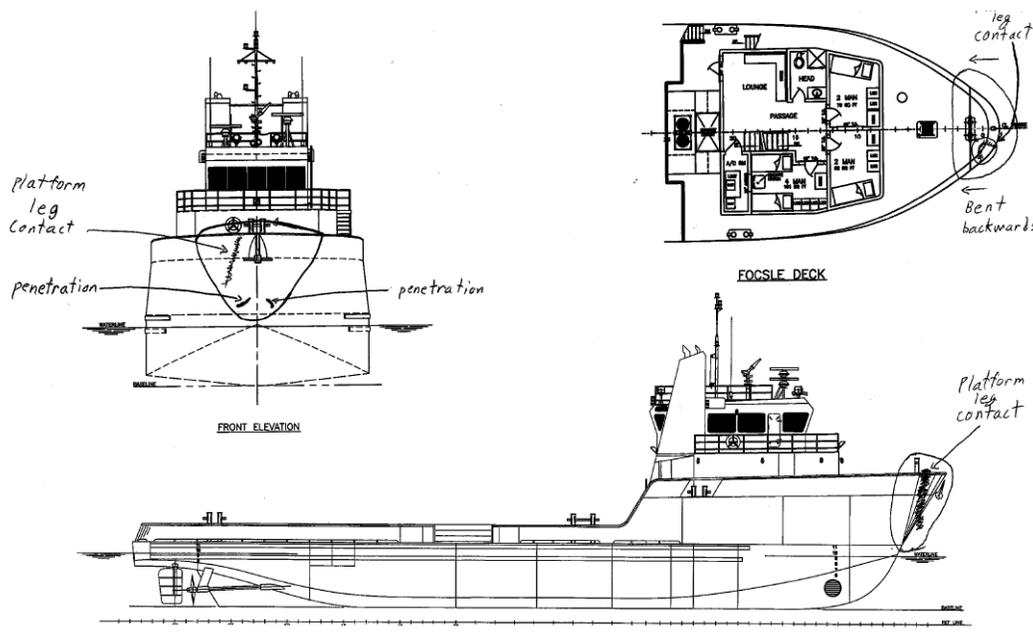
The *Elliot Cheramie* was repaired at a shipyard in Larose, Louisiana, from July 5 to August 10. The bow, focsle deck, and forepeak compartment were caved in; bow shell

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<sup>3</sup> According to Title 46 *Code of Federal Regulations* 4.06 3(a)(1), alcohol testing of each individual must be conducted within 2 hours of when a Serious Marine Incident occurs, unless precluded by safety concerns directly related to the incident. Additionally, alcohol testing is not required to be conducted more than 8 hours after the occurrence of the Incident.

<sup>4</sup> A third pipeline, the Talos Energy (owner-operator) crude oil pipeline riser (segment 0913) was initially reported as damaged. Investigators confirmed on September 20, 2022, that the pipeline was mistakenly reported, and was not damaged by the contact.

plating was torn; bulwarks were buckled; and the starboard engine was knocked out of alignment. Vessel damage was \$195,210. Total damage to the platform, pipelines, and vessel was \$362,814.



**Figure 6.** Diagram of vessel damages as provided to the NTSB. (Source: Cheramie Marine)

## 1.3.2 Crewmembers

### 1.3.2.1 Mate (00-12 watch)

The mate held valid medical certificate and merchant mariner's credential endorsed as master of self-propelled vessels of less than 1,600 gross register tons upon near coastal waters. He had worked for 41 years in the maritime industry and a month for Cheramie Dive Support. The mate gave investigators notes on his work/rest history for the 4 days leading up to the casualty. He also stated that, although he usually went to sleep at 1300 before watch, the in-port activity prevented him from going to bed until 1700.

**Table 1.** Mate’s work/rest schedule, as reported to investigators, leading up to the casualty. Work/rest totals are based on each 24-hour period from midnight to midnight.

	Work/Awake	Rest/Sleep	Total work	Total rest
June 21	0001-1300 2230-2400	1300-2230	14.5 hrs.	9.5 hrs.
June 22	0001-1330 2300-2400	1330-2300	14.5 hrs.	9.5 hrs.
June 23	0001-1400 2200-2400	1400-2200	16 hrs.	8 hrs.
June 24	0001-1700 2200-2400	1700-2200	19 hrs.	5 hrs.
June 25	0001-0245	-	2.75 hrs.	N/A

### 1.3.2.2 Deckhand (00-12 watch)

The other member of the 00-12 watch was the uncredentialed deckhand who had reported aboard the evening before the casualty. He had worked for Cheramie Dive Support and in the maritime industry for 2 months. He had been off work during the 14 days before the casualty (home rotation). During his off time at home, the deckhand kept “normal” hours—he was awake during the day and slept at night.

The deckhand said that normally deckhands have a face-to-face watch turnover, and he did not know why the off going engineer/deckhand did not wake him up, as they both had berths in the Hands Room.

### 1.3.3 Safety Management System

Cheramie Dive Support’s *Vessel Operating Procedures* (revision 2.1) said that a licensed individual “may not work for more than 12 hours in a consecutive 24-hour period.” The document also laid out change-of-watch procedures, including the information the on-duty crewmember must exchange with the relief person. Additional Cheramie Dive Support safety management system (SMS) documents specified that crewmembers were responsible for reporting to work physically and mentally fit to safely do their jobs. Crewmembers were required to notify their supervisor if they were

fatigued to the point of not being able to perform their duties safely, and the captain was responsible for investigating reports of fatigue and taking appropriate action. The captain was also responsible for monitoring employees to determine if they were fit for duty.

The *Fatigue Management* component of the company's SMS noted that "Seven to eight hours uninterrupted sleep is adequate" to avoid fatigue, and offered fatigue mitigation measures "that can be used," including limiting shifts to 12 hours (including off-duty work); developing a working-hours policy on (maximum) daily and weekly average work hours; eliminating or reducing the need for off-duty work; ensuring there are adequate workers to do the job without placing excessive demands on the staff; and giving employees at least 24 hours' notice before night work begins.

The company said there was no need for the off-watch crew to work because the two crewmembers on watch could handle all normal vessel operations and maintenance. The company also said that crewmembers are not supposed to work more than 12 hours a day (off-watch work is at the crewmember's discretion), and no overtime could be scheduled or paid.

## 2. Analysis

The *Elliot Cheramie's* mate on the 00-12 watch (when the casualty occurred) was likely fatigued. In the 4 days leading up to the casualty, he had consistently worked for periods longer than the 12 hours recommended by the owner/operator's *Fatigue Management* document. The day before the casualty, the mate reported being awake for 19 hours straight and working for the last 17 hours, with most of the work in port requiring high levels of physical exertion such as offloading and loading material and provisions. The extended work hours outside of the mate's normal schedule reduced the opportunity to receive sufficient sleep before assuming the 00-12 watch. The mate reported receiving only 5 hours of sleep in his 7 off-work hours before the casualty watch—less than the SMS-recommended 7-8 hours—using the remaining 2 hours to prepare for his scheduled 00-12 watch. Acute fatigue can occur when individuals receive less than the recommended 7-8 hours of sleep during a 24-hour period. Performance effects of fatigue include diminished alertness and decision-making, and a reduction in operator vigilance. Having received only 5 hours of sleep in the previous 24 hours, and, given the physical nature of work performed the previous afternoon, the mate was likely experiencing the effects of acute fatigue. He reported that he felt groggy on his watch and fell asleep when he sat in the wheelhouse chair.

The deckhand assigned to the 00-12 watch received his watch assignment upon arriving at the vessel, which gave him only 5 hours of off-duty time before his watch. He spent his first 2 hours working off duty and stowing his personal gear. The deckhand was

in his bed at 2130, giving him at most 2.5 hours of rest before his watch. Although he set an alarm to wake himself for the 00-12 watch, he slept through it and was not present in the wheelhouse at the time of contact. The deckhand's duties would have included assisting the mate on the bridge navigation watch; however, other duties would have taken him away from the wheelhouse for extended periods of time. Therefore, even if the deckhand had been on watch, the mate may have fallen asleep when the deckhand was off the bridge, and his presence would not have necessarily prevented the contact.

During his 2 weeks off, the deckhand kept a normal schedule of being awake during the day and asleep at night. He changed his schedule to working at night (00-12 watch) on the same day as his return to the vessel, without an adjustment period. A disruption to an individual's circadian rhythm can occur when a work schedule conflicts with an individual's typical work/rest cycle. Without a sufficient adjustment period, this disruption can lead to increased levels of fatigue while the body acclimates to the new schedule. Additionally, individuals have a more difficult time switching from a day shift (or in this case, off-duty) to a night shift when compared with switching from a night shift to a day shift. This is due to the body's natural circadian tendencies for increased alertness during daytime hours and an increased desire for sleep during nighttime hours. These circadian factors, combined with his awake hours during the day and only having 2.5 hours of sleep before the 00-12 watch, increased the risk of fatigue and likely contributed to the deckhand sleeping through his alarm for his scheduled watch. The deckhand's change to night shifts without sufficient time for adjustment disrupted his circadian rhythm. Had the company followed its SMS recommendation to give crewmembers at least 24 hours of notice before beginning night work, he would have had more time to acclimate to his schedule.

According to the company's SMS, the mate should have notified the captain when he felt groggy on his navigational watch. The captain was responsible for implementing company SMS guidance (including the *Fatigue Mitigation* document) and monitoring the mate to determine if he was fit for duty. However, the captain on the casualty voyage had come aboard only an hour before departure. The captain who was departing the vessel was in a better position to monitor the mate's work hours, and it would have been prudent for him to communicate that to the oncoming captain.

Based on the work/rest history of the casualty mate, the requirement that licensed personnel "may not work for more than 12 hours in a consecutive 24-hour period," stated in the company's *Vessel Operating Procedures*, was not followed. Although part of the SMS, the company's *Fatigue Mitigation* document was separate from the company operating procedures. The document was written as guidance, presenting fatigue mitigation measures that "can be used." None of the document's suggested policies (such as such as limiting shifts to 12 hours including off duty work, developing a working-hours policy on [maximum] daily and weekly average work hours, eliminating or

reducing the need for off-duty work, and ensuring there were adequate workers to do the job without placing excessive demands on the staff) were required per the company operating procedures, and the work/rest histories of the mate, deckhand, and engineer/deckhand show that the guidance was not followed. Further, the in-port unloading and loading took all hands several hours to complete, indicating that there was not enough crewmembers or workers to complete the necessary tasks while ensuring that crewmembers had adequate rest time. Had the fatigue mitigation measures in the SMS been required, the crew still would not have had the resources to adhere to such policies. A company SMS should be constructed such that companies and crews have clear policies and procedures to follow, and companies should provide sufficient resources to ensure safe operations and be compliant with those policies.

## 3. Conclusions

### 3.1 Probable Cause

The National Transportation Safety Board determines that the probable cause of the contact of the OSV *Elliot Cheramie* with Oil and Gas Production Platform EI-259A was the owner/operator not adhering to their 12-hour work hour limit policy, which led to the fatigued mate falling asleep while on watch.

### 3.2 Lessons Learned

#### Fatigue Management

In this casualty, and as the NTSB has previously noted in numerous commercial vessel casualties, crew fatigue was a significant causal and contributing factor. Company operational policies and requirements should incorporate and follow fatigue management best practices to ensure that crewmembers receive enough rest to adequately perform navigational, lookout, engineering, and other watch stander duties. Such policies should include the maximum hours (both duty hours and off-watch work) crewmembers are allowed to work in a consecutive 24-hour period, except in an emergency. Additionally, companies should ensure that vessels are crewed with the appropriate number of trained personnel to safely perform operations without compromising the work/rest schedules of off-duty watchstanders. Companies and vessel captains should also actively monitor the watch schedules and any off-watch work performed by their crews to ensure that fatigue mitigation policies are adhered to, adjusting watch schedules accordingly for crewmembers at risk for fatigue.

Vessel	<i>Elliot Cheramie</i>
Type	Offshore (Offshore supply vessel)
Owner/Operator	Cheramie Dive Support
Owner/Operator Type	Commercial
Flag	United States
Port of registry	New Orleans, Louisiana
Year built	1998
Official number (US)	1064603
IMO number	9202326
Classification society	N/A
Length (overall)	150.0 ft (45.7 m)
Beam	36.0 ft (11.0 m)
Draft (casualty)	8.5 ft (2.6 m)
Tonnage	90 GRT (443 GT ITC)
Engine power; manufacturer	2 x 740 hp (552 kW); Cummins K38-38-M0 diesel engines

NTSB investigators worked closely with our counterparts from **Coast Guard Marine Safety Unit Houma** throughout this investigation.

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For more detailed background information on this report, visit the NTSB investigations website and search for NTSB accident ID DCA21FM031. Recent publications are available in their entirety on the NTSB website. Other information about available publications also may be obtained from the website or by contacting—

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