



UNITED STATES COAST GUARD

REPORT OF INVESTIGATION INTO THE CIRCUMSTANCES SURROUNDING THE GROUNDING OF THE M/V MONTROSE ON FEBRUARY 28, 2007



MISLE ACTIVITY NUMBER: 2879209
ORIGINATING UNIT: SECTOR BALTIMORE
MISLE CASE NUMBER: 339349

INCIDENT BRIEF

At 0600 Eastern Standard Time (EST) on February 28, 2007 the Liberian flagged bulk cargo vessel *M/V MONTROSE* (IMO #9231004) grounded bow first in the mud in the Chesapeake Bay at the mouth of the Choptank River in Maryland state waters. The vessel departed the Consol Energy Coal Pier in Baltimore, MD, at 0055 en route south bound out of the Chesapeake Bay with two Maryland State Pilots onboard to take shifts during the long (10 plus hour) transit out of the bay. The Maryland State Pilot on the first shift navigated the outbound Chesapeake Bay transit using buoy markers and radar as primary reference. The *MONTROSE* ran aground at the approximate location of 38⁰ 37.45N latitude and 076⁰ 24.23W longitude with 27 persons onboard. There was no damage to the vessel, no injuries to the crew and no resulting pollution. The vessel was outside of the navigable channel and did not pose a hazard to navigation. U. S. Coast Guard Sector Baltimore responded to the grounding.

A Response Team from Sector Baltimore consisting of a Marine Inspector and Marine Investigator conducted an initial damage survey, inspection and casualty investigation. The vessel ordered tugs to the scene for assistance and potential salvage if damage occurred. A subsequently issued Captain of the Port Order required the vessel to undergo a damage assessment once it was refloated prior to departing.



Figure 1: Coal Lightering Operations on the *Montrose*

Efforts to pull the *MONTROSE* off were unsuccessful at high tide on February 28, 2007. Likewise efforts to pull the vessel off on March 1, 2007 during the next high tide were unsuccessful. Later on March 1, 2007, inclement weather and sea state caused the vessel stern to swing resulting in the addition of the starboard side of the vessel grounding. No pollution was reported from the starboard side grounding.

A formalized vessel salvage plan was developed by the operating company's salvor which Sector Baltimore approved.

Approximately 7,000 metric tons of coal were lightered and replaced in ballast. The *MONTROSE* floated free on March 7, 2007. A completed dive survey showed no damage and the vessel was deemed fit for transit. The *MONTROSE* reloaded cargo and departed Sector Baltimore's Area of Responsibility on March 9, 2007, 10 days after the initial grounding.

A joint investigation was requested by the *M/V MONTROSE*'s flag state of Liberia. This report of investigation reflects the results of that joint investigation and the Coast Guard's concurrence as to the primary and secondary failures that led to the grounding.

TABLE OF CONTENTS

	Page
SECTION I – FINDINGS OF FACT	
1.1 - Particulars of <i>M/V MONTROSE</i>	4
1.2 - Subjects of Investigation	4
1.3 - Weather and Waterway Information	5
1.4 - Incident Information	5
1.4.1-Sequence of Events: Pre-Grounding	5
1.4.2-Sequence of Events: Grounding	6
1.4.3-Sequence of Events: Post-Grounding	7
1.5 – Drug and Alcohol Testing	7
1.6 – Voyage Data Recorder	8
SECTION II - ANALYSIS	
2.1 – Fatigue	9
2.2 - Bridge Resource Management	10
SECTION III – CONCLUSIONS	11
SECTION IV – RECOMMENDATIONS	13

Appendix 1 96 Hour Work/Rest Schedule for Pilot
Figure 1 Ship’s Officer Chart

I. FINDINGS OF FACT

Undertaken pursuant to the Coast Guard’s investigative authorities under Title 46, United States Code part 6301, this investigation documents the Coast Guard’s findings about the grounding of the *M/V MONTROSE* on February 28, 2007.

1.1 *M/V MONTROSE* Vessel Details:

Vessel Name:	MONTROSE
Flag:	LIBERIA
Vessel Identification Number:	9231004
Call Sign:	ELZQ5
Status:	Undamaged
Role:	Involved in a Marine Casualty
Vessel Class, Type, Sub-Type:	Bulk Carrier, General, General
Gross Tonnage(GRT):	38731
Net Tonnage(NRT):	25019
Deadweight Tons:	72296
Length:	711.9
Keel Laid Date:	06/21/2001
Delivery Date:	01/16/2002
Place of Construction:	JAPAN
Classification Society:	American Bureau of Shipping
Owner:	Bentonwood B.V. 80 Broad St. Monrovia, LR
Operator:	Motia Compagnia Navigazione Spa

1.2 The following individuals were subjects of this investigation:

The senior pilot on board the MONTROSE at the time of the grounding is a licensed merchant mariner. He was the pilot on the bridge of the vessel at the time of the grounding and has been with the Maryland Pilot’s Association since December 21, 1976. He received his first Federal Master’s license was issued on February 17, 1983 and his current license was issued on December 19, 2002. The text of his license states that the pilot is a “Master of steam or motor vessel any gross tons upon inland waters; First Class Pilot of steam or motor vessel of any gross tons upon Chesapeake and Delaware Canal from Courthouse Point, MD to Chesapeake City, MD; Chesapeake bay and its tributaries from Courthouse Point, MD to Cape Henry.” While the pilot had never piloted the *MONTROSE* before, he estimated that he has conducted over 2500 transits on similar vessels. The last time the pilot conducted a southbound transit of the bay was on February 20, 2007 on the *M/V SAUDI DURIA*, 8 days prior to the *MONTROSE* grounding.

The Bridge Crew of the MONTROSE at the time of the grounding: On the bridge watch was an acting navigation officer at the time of the grounding who has been sailing since 1974, and received his Mate’s License in 1982. The acting navigation officer at the time holds a Certificate of Competency issued by India with an expiration date of October 12, 2010. He joined the

MONTROSE crew on February 20, 2007 and had not done a southbound transit of the Chesapeake Bay previously.

The Master on the *MONTROSE* and was in his cabin showering at the time of the grounding. The vessel Master has been sailing since 1994; however, he was sailing as master for the first time.

1.3 Weather and Waterway Information

The weather for the outbound transit on February 28, 2007 was clear with good visibility. According to the National Oceanic and Atmospheric Administration (NOAA), winds were light and from the northeast. Sunrise was at 0639 and daylight was just beginning to show when the *MONTROSE* ran aground. The high temperature recorded was 46⁰ Fahrenheit, with the low being 29⁰. There was no precipitation. High tide occurred at 0102, with low tide at 0651.

The Chesapeake Bay nautical chart for the Choptank River and Herring Bay,¹ describes the area where the Choptank River feeds into the Chesapeake Bay from the east as extending from Black Walnut Point at the southern tip of Tilghman Island to the southern point of Trippe Bay at Mills Point. Water depth at the ‘CR’ Buoy in the Chesapeake Bay is at 95 feet, but rapidly shallows to 21 feet towards the east by the Sharps Island buoy at the mouth of the Choptank.

1.4 Incident Information

1.4.1 Sequence of Events: Pre-Grounding

The lead Maryland Pilot, operating under a one hour recall, received orders at 2300 local time on February 27, 2007 from the pilot dispatch to take the *M/V MONTROSE* outbound starting at 0055 February 28, 2007. The pilot boarded the *MONTROSE* at 0018 in conjunction with three docking pilots and a second bay pilot. The vessel sailed at 0055 and the lead Maryland Pilot took the first shift for the estimated 10 hour total outbound transit. Both pilots informally decided that the second pilot would relieve the first on the bridge at 0700.

Upon boarding the *MONTROSE*, the pilot did not conduct or receive a navigation brief. The vessel Master and the pilot did discuss the handling characteristics of the vessel; however, when asked to sign the pilot exchange card by the Master, the pilot declined stating that he would sign it “later” and that he had over 30 years experience² as a Chesapeake Bay pilot. The *MONTROSE* got underway from Sparrow’s Point Marine Terminal on the Patapsco River at 0055. The docking pilots departed the vessel at 0115.

According to the American Pilots Association, of which the Maryland Pilots under the Maryland Pilots Association are members, the role of the pilot is *to direct the navigation of the ship, subject to the master’s overall command of the ship and the ultimate responsibility for its safety. Navigation of a ship in United States pilotage waters is a shared responsibility between the pilot*

¹ NOAA Chart #12266

² ECN 2879209 #009

and the master/bridge crew³. Once the docking pilots departed, the pilot took the responsibility of directing the navigation of the *MONTROSE*.

All Maryland State Pilots are provided a laptop with Differential GPS to use in pilotage. The pilot brought his laptop onboard, but piloted the vessel using the radar as his primary means of navigation, and local buoys as waypoints. There is no evidence explaining why the pilot did not use the equipment provided by the Maryland Pilots Association. Prior to receiving pilot orders, he attended to personal matters during the day and only had three hours of sleep; however, in interviews he stated he felt well rested to take the first leg of the transit. The pilot's 96 hour work/rest schedule is captured in Appendix 1 of this report. The second pilot went below decks to rest.

The vessel Mate on watch at the time, reported to the bridge about 0150 once his other duties were complete. The vessel master had assigned the 0000-0600 watch. The Master had the con prior to the arrival of the officer and remained on the bridge until about 0515 when he went below to shower prior to the next expected shift change. There is no evidence that a navigation brief or informal discussion was held regarding the transit between the pilot and the Master or the Mate on watch. The only known conversation regarding vessel handling was the initial instructions the pilot gave to the *MONTROSE* bridge crew on watch to use "as little rudder as possible." There is no evidence a passage plan was established based on navigation information and knowledge of area, and there are no formal relief procedures between pilots upon assuming the pilot duties.

At about 0520 the south bound *MONTROSE* met the *M/V SOPHIE* traveling north. The pilot of the *MONTROSE* and pilot of the *SOPHIE* had a conversation and the pilot of the *MONTROSE* agreed not to change course until the *SOPHIE* made her course correction at Buoy 82. The vessels passed port-to-port and afterwards, once the *MONTROSE* was clear of the *SOPHIE* and abeam of Buoy 82, the pilot of the *MONTROSE* gave order to to set course heading for 165 degrees true. Prior to this course change the pilot of the *MONTROSE* moved about the bridge frequently; however, once the *MONTROSE* established a heading of 165 degrees true, the pilot moved his chair forward to the window to sit and watch for the next anticipated turn that was to occur just prior to being abeam of the 'CR' Buoy.

1.4.2 Sequence of Events: Grounding

At roughly 0600, the *MONTROSE* ran aground at Latitude 38⁰ 37.45 N, Longitude 076⁰ 24.23 W. At the time of the grounding, the mate was plotting his fix and the pilot was sitting starboard of the radar near the window. The vessel heading was 165 degrees true which was the last course heading given by the pilot. The *MONTROSE* ran aground at an estimated speed of 11.6 knots in clear weather. According to witnesses, the pilot had been sitting very still in his chair prior to the grounding, and it is our conclusion that the initial vibrations were what roused him from his sedentary state. Initially believing the vessel may have been experiencing bank suction, the pilot ordered the mate to reduce speed and ordered the rudder hard to starboard in an effort to pilot the *MONTROSE* back into deeper water.

³ <http://www.americanpilots.org/>

The Master reported to the bridge upon feeling the vibrations caused as the vessel went aground. When efforts to free the vessel were unsuccessful, the pilot told the Master that they were aground. At 0645 the pilot contacted the President of the Maryland Pilot's Association, to inform him that the *MONTROSE* was aground. The President of the Maryland Pilot's Association notified Coast Guard Sector Baltimore at 0715 that the *MONTROSE* was aground but efforts were underway to free the vessel. At 0815 it was confirmed that the *MONTROSE* was aground and could not be freed.

1.4.3 Sequence of Events: Post-Grounding

At 1025 on February 28, 2007, a Response Team from Sector Baltimore consisting of a Marine Inspector and Marine Investigator went to the *MONTROSE* to conduct an initial damage survey, inspection and casualty investigation. The agent for the *MONTROSE* ordered tugs to the scene for assistance and potential salvage if damage occurred. Sector Baltimore issued a Captain of the Port Order requiring the *MONTROSE* to undergo a damage assessment once it was refloated and prior to departure of Baltimore's Area of Responsibility. The initial assessment indicated no damage had been sustained by the vessel, there were no injuries to the crew and no pollution or pollution hazard existed. The *MONTROSE* grounded outside of the navigable channel and did not pose a hazard to navigation.

A formalized vessel salvage plan was approved and approximately 7,000 metric tons of coal had to be lightered and replaced in ballast in order for the vessel to free itself with the assistance of tugs. The *MONTROSE* floated free on March 7, 2007. A completed dive survey showed no damage and the vessel was deemed fit for transit. The *MONTROSE* reloaded cargo and departed Sector Baltimore's Area of Responsibility on March 9, 2007, 10 days after the initial grounding.

1.5 Drug and Alcohol Testing

Pursuant to 46 CFR Part 4.06, mandatory post casualty drug and alcohol testing was conducted. The results for the tests were [REDACTED]. There is no evidence that drugs or alcohol played a role in this casualty.

1.6 Voyage Data Recorder (VDR)

The *MONTROSE* is equipped with a Furuno brand Voyage Data Recorder (VDR). The VDR was taken by Coast Guard personnel as evidence in the investigation. Data entered from the VDR runs from 0515 through 0721, after the grounding. The quality of the audio recording is very poor, and both Coast Guard investigators and Liberian investigators reviewed the recording. The Coast Guard concurs with and uses the Liberian interpretation of the recordings made.

At 0555 incoming VHF radio traffic is heard followed by a vibration at 0600. Immediately after the initial vibration the pilot is heard giving the order “starboard twenty.” The order is followed by the sound of a loud vibration and alarms. The *MONTROSE*’s rudder is put hard to starboard. It is at this time, 0602, that the vessel Master calls up and the bridge phone rings. At 0615 the words “aground” and “stern floating” are heard. There were no verbal exchanges recorded between the pilot and second officer up until the grounding.

II. ANALYSIS

The purpose of the analysis is to determine the contributory causes and circumstances of the accident as a basis for making recommendations to prevent similar accidents from occurring in the future.

2.1 Pilot Fatigue

When the *MONTROSE* grounded at the mouth of the Choptank River, the pilot was either asleep or had, as written in his statement to investigators, “lost attention,” and did not see the expected waypoint of the ‘CR’ Buoy pass down the starboard side of the vessel. There are several factors that may have caused the pilot to be fatigued for the transit, thus missing his turn.

The pilot awoke at 0600 the day before the incident and expended considerable energy in taking care of personal and family affairs. He did not go to sleep until 2000 on February 27th and was awoken at 2300 to report for the *MONTROSE* transit. His typical rest period is 6 plus hours of sleep; however, he had only had 3 hours of sleep prior to commencing transit.

Maryland Pilots are considered independent contractors. While the pilot of the *MONTROSE* had been given adequate time off by the Maryland Pilot Association between vessel piloting jobs, he failed to exercise good judgment in adhering to a work/rest schedule that would leave him well rested for his duties. There is no secondary check on the part of the Maryland Pilots Association to ensure the pilots, as independent contractors, take the adequate rest afforded to them in their duty schedule. By his own admission, he states that he should have been sleeping as opposed to staying awake with his girlfriend’s children.⁴ This inadequate amount of rest contributed to the attention failures on the part of the pilot. We conclude that this lack of attentiveness caused him to miss the prescribed turn.

The two bay pilots did not work out a watch relief schedule prior to their arrival onboard the *MONTROSE*. The Maryland Pilots do not have defined work watch schedules for relief while in transit, and the two pilots made an informal decision that the lead Maryland pilot would take the first watch and would awaken the second pilot at 0700. With no written watch policy for transits that can last as long as 16 hours in the Chesapeake Bay, fatigued pilots may try to stretch out their portion of the watch in an attempt to provide some additional relief to the resting pilot if their anticipated shift is more strenuous due to weather, time or other environmental factors.

There is no evidence to suggest any of the bridge crew were also fatigued. We conclude that the mate’s lack of awareness about the location of the *MONTROSE* within an accurate fix is a result of complacency brought about by the belief that the pilot “had the conn,” exacerbated by the strong personality of the pilot.

2.2 Bridge Resource Management

⁴ Investigating Officer Interview with Captain . ECN 2879209 #004

According to the American Pilot's Association, of which the Maryland Pilots Association is a member, while a pilot *is not a member of the bridge "team" ...a pilot is expected to develop and maintain a cooperative, mutually supportive working relationship with the master and the bridge crew in recognition of the respective responsibility of each for safe navigation.* The Master of the *MONTROSE* requested the pilot sign the Pilot Exchange Card when the pilots first boarded the vessel at the pier. The Docking Pilots signed the card; however, the bay pilot did not, stating he had "over 30 years" as a pilot. This first interaction did not create or foster a relationship or dialogue between the bridge crew and the pilot. The Master was sailing as a vessel master for the first time, and may have been intimidated by the declaration of experience and the force of the pilot's personality.

While the pilot and the vessel Master had an initial conversation about the transit, at no time did the pilot ever communicate with any member of the bridge crew. All witness accounts state that the only bridge team communications prior to the grounding was when the pilot called out course changes and, when the vessel was transiting the Fort McHenry Channel, the pilot gave the standing order of "as little rudder as possible."

The Standing Orders of the Captain of the *MONTROSE* to his bridge crew when a pilot was on board are as follows:

Night Order Book Item 32. While Pilot on board, officer on watch must cooperate with Pilot and maintain an accurate check on ship's position and movement. If in doubt as to the Pilot's action, shall seek clarification from Pilot, if doubt still exists, inform the Master and take whatever action is necessary before he arrives.

By his own admittance in a statement to the Liberian investigating officer, the mate suspected that the pilot was not changing course yet he failed to communicate with the pilot or attempt to seek clarification regarding the transit or upcoming turn at the CR Buoy.

The pilot's demeanor and mannerism were such as to command authority and the mate failed to assert himself. The mate became complacent in allowing the pilot to take full responsibility and control of the vessel. The pilot, though his actions of asserting his time on the water in a forceful interaction with the vessel Master, encouraged that complacency by failing to discuss what was expected between the pilot and the vessel crew. This created a breakdown in bridge communications.

III. CONCLUSIONS

1. **Failure on the part of the pilot to order the turn.** The grounding of the *MONTROSE* occurred because the pilot failed to order-execute the appropriate turn from heading 165 degrees true at the “CR” buoy. This failure was based on several underlying factors, including:

- a. Inattention by the pilot causing him to miss seeing the ‘CR’ buoy where he would make his turn;
- b. Cultural mismatches between the pilot and the bridge crew;
- c. Lack of good Bridge Resource Management and use of countermeasures to overcome communications breakdown; and
- d. The mate’s abdication of navigational “conning” responsibility resulting from complacency with regard to vessel conning.

2. **Inattention and fatigue on the part of the pilot.** Fatigue played a primary precondition role as a cause of this casualty. The pilot’s inattention caused him to lose situational awareness of the *MONTROSE*’s location in the bay and order the required course change necessary to prevent the grounding. The pilot fatigue resulted from:

- a. Poor decision making on the part of the pilot by failing to follow an adequate work/rest schedule while on call by only getting 3 hours of sleep prior to reporting to the *MONTROSE* for duty;
- b. Deciding on taking the first piloting shift and stretching it for 7 hours despite lack of proper rest; and
- c. The pilot went from actively walking around on the bridge to sitting in his chair and looking out the starboard window; and

In an interview with Coast Guard investigators, the pilot admitted it was not outside the realm of possibility that he fell asleep.

3. **Failure to follow good Bridge Resource Management.** Poor Bridge Resource Management played a primary preconditioned role as a cause of this casualty. The bridge crew and the pilot did not work as a ‘team’ and discouraged the bridge crew from maintaining an awareness of pilot actions and questioning the vessel’s course. The Bridge Resource Management failure occurred because:

- a. The pilot did not conduct a navigation brief with the bridge crew or conduct an informal discussion regarding the transit with Master or mate on watch;
- b. The pilot refused to sign the pilot exchange card when requested to do so by the Master of the *MONTROSE*, thereby establishing a position of authority and disregard for the vessel’s navigational crew;
- c. Neither the pilot, nor the bridge crew of the *MONTROSE* communicated during the transit;
- d. The mate on watch and the pilot did not cooperate with each other by maintaining and communicating ship’s position and movement; and
- e. A passage plan was not established based on navigation information and knowledge of area.

4. **Cultural and personality mismatches between the pilot and the bridge crew.** The pilot’s authoritative presence on the bridge created an atmosphere wherein the mate did not feel he could “speak up” or “challenge” the decision on the pilot. Specifically:

- a. The pilot quickly asserted his authority on the bridge by refusing to honor the vessel Master’s request to sign the pilot exchange card.
- b. The vessel Master was sailing for the first time as a vessel master and may have been reluctant to force the pilot to participate in a navigation brief or sign the pilot exchange card; and
- c. The mate on watch did not closely monitor the vessel’s position and became complacent in the belief that the pilot was in charge of the vessel, due to the pilot’s command presence, disinterest in the bridge crew’s role, and assertion of professional experience/competence.

5. **Failure of the mate on watch to follow standing orders.** The Master of the *MONTROSE* had standing orders for the watch standing officers regarding their responsibilities while a pilot was on board. These orders were violated:

- a. The mate on watch failed to follow the Master’s standing orders to “seek clarification from the Pilot, if doubt still exists, inform the Master” regarding the course and position of the vessel;
- b. The mate on watch, in his statement, expressed that he had doubts about the course and position and was rechecking the vessel position when the grounding occurred, but took no action; and
- c. The mate did not attempt to “seek clarification from the pilot” nor did he attempt to contact the Master when he began to have doubts.

6. **There is no evidence that drugs or alcohol played a role in this casualty.**

7. **Evidence of Potential Violation of Federal Law or Regulation.** There is evidence to suggest that the following laws or regulations may have been violated:

- a. **Piloting the *MONTROSE* in a negligent manner.** There is evidence to suggest that, while piloting the *MONTROSE*, the pilot failed to provide necessary navigational information to ensure the safe transit of the vessel. Several mitigating factors also exist, including the pilot’s fatigued status, his loss of situational awareness, and his overconfidence in his experience. This matter has been referred for appropriate remedial enforcement action.
- b. **Conning the *MONTROSE* in a negligent manner.** There is evidence to suggest that, while conning the *MONTROSE*, the mate on watch abdicated his navigational duties and failed to follow standing orders. Refer to Liberia for review and action as appropriate per recommendation 4.1.

IV. RECOMMENDATIONS

4.1 To the Commandant of the Coast Guard

1. The Commandant of the Coast Guard should provide a copy of this report to the Flag State of Liberia with recommendation for remedial action against the license of the *M/V MONTROSE* mate on watch.

4.2 To the Commander, U. S. Coast Guard Sector Baltimore

1. The Commander, U. S. Coast Guard Sector Baltimore should provide a copy of this report to the Maryland Pilot Board with recommendation for remedial action against the license of the attending pilot.

2. To address the unsafe condition wherein pilots are fatigued, The Officer in Charge of Marine Inspection (OCMI) should request the Maryland Pilots Association examine the feasibility in adopting written 96-hour work/rest requirements and “time on bridge” watch standards to ensure pilots are not fatigued during their transit.

3. To address the unsafe condition wherein foreign crews are abdicating watch standing, vessel navigation and awareness, the OCMI should request the Maryland Pilots Association: 1) review and revise their Bridge Resource Management training program to ensure pilots can create a “team” atmosphere on the bridge; 2) require a formalized navigation brief for every watch change to prevent miscommunication on the bridge; and 3) develop formalized procedures for pilots to halt transit of a vessel if the pilot suspects the Master, or Officers in Charge, are abdicating complete navigational control to the pilot and not maintaining adequate awareness of vessel position. This procedure would fall under notifying the Coast Guard of a hazardous condition. Hazardous conditions must be reported to the Coast Guard immediately under Title 33 Code of Federal Regulations part 160.215.

APPENDIX 1

The pilot's 96 Hour Work/Rest Schedule

<u>Action</u>	<u>Start Date/Time</u>	<u>End Date/Time</u>	<u>Days</u>	<u>Hours</u>
Watch	02/25/2007 00:00	02/25/2007 03:00	0	3
Sleep	02/25/2007 04:00	02/25/2007 10:00	0	6
Recreation Including Time Ashore	02/25/2007 10:00	02/25/2007 11:00	0	1
Meal	02/25/2007 11:00	02/25/2007 13:00	0	2
Recreation Including Time Ashore	02/25/2007 13:00	02/25/2007 19:00	0	6
Meal	02/25/2007 19:00	02/25/2007 20:00	0	1
Recreation Including Time Ashore	02/25/2007 20:00	02/25/2007 21:00	0	1
Sleep	02/25/2007 21:00	02/26/2007 07:00	0	10
Meal	02/26/2007 07:00	02/26/2007 08:00	0	1
Recreation Including Time Ashore	02/26/2007 08:00	02/26/2007 12:00	0	4
Meal	02/26/2007 12:00	02/26/2007 13:00	0	1
Recreation Including Time Ashore	02/26/2007 13:00	02/26/2007 16:00	0	3
Sleep	02/26/2007 16:00	02/26/2007 19:00	0	3
Meal	02/26/2007 19:00	02/26/2007 20:00	0	1
Recreation Including Time Ashore	02/26/2007 20:00	02/26/2007 23:00	0	3
Sleep	02/26/2007 23:00	02/27/2007 06:00	0	7
Meal	02/27/2007 06:00	02/27/2007 07:00	0	1
Recreation Including Time Ashore	02/27/2007 07:00	02/27/2007 12:00	0	5
Meal	02/27/2007 12:00	02/27/2007 13:00	0	1
Recreation Including Time Ashore	02/27/2007 13:00	02/27/2007 19:00	0	6
Meal	02/27/2007 19:00	02/27/2007 20:00	0	1
Sleep	02/27/2007 20:00	02/27/2007 23:00	0	3
Recreation Including Time Ashore	02/27/2007 23:00	02/28/2007 00:01	0	1.02
Watch	02/28/2007 00:01	02/28/2007 06:00	0	5.98
Time Of Accident	02/28/2007 06:00	02/28/2007 06:01	0	0.02

