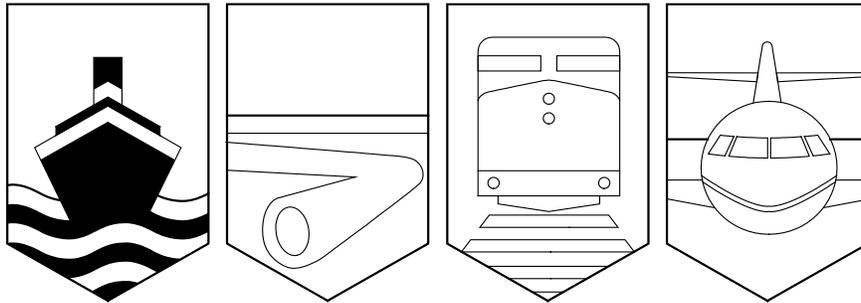




Transportation Safety Board
of Canada



MARINE OCCURRENCE REPORT

GROUNDING

OF THE LOADED BULK CARRIER “YPAPADI”

GASPÉ, QUEBEC

06 DECEMBER 1996

REPORT NUMBER M96L0146

Canada

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The TSB has a mandate to advance safety in the marine, pipeline, rail, and aviation modes of transportation by:

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- reporting publicly on its investigations and public inquiries and on the related findings;
- identifying safety deficiencies as evidenced by transportation occurrences;
- making recommendations designed to eliminate or reduce any such safety deficiencies; and
- conducting special studies and special investigations on transportation safety matters.

It is not the function of the Board to assign fault or determine civil or criminal liability.

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Transportation Safety Board
of Canada

Bureau de la sécurité des transports
du Canada

The Transportation Safety Board of Canada (TSB) investigated this occurrence for the purpose of advancing transportation safety. It is not the function of the Board to assign fault or determine civil or criminal liability.

Marine Occurrence Report

Grounding

of the Loaded Bulk Carrier “Ypapadi”

Gaspé, Quebec

06 December 1996

Report Number M96L0146

Synopsis

On the afternoon of 06 December 1996, the “YPAPADI” arrived off the port of Gaspé, Quebec. Although pilotage is not compulsory in the port, the vessel owners had instructed the agents in Montreal to provide the vessel with a pilot upon arrival at the harbour entrance. The sub-agent in Gaspé was not successful in securing the services of an individual with previous pilotage experience, and a representative of the sub-agent boarded the “YPAPADI” to assist the master in his approach to the berth. A lack of communication between this person and the master led each to believe that the other had the conduct of the vessel. In the approach to the berth, at a position where a large course alteration was required, neither gave the appropriate order to the quartermaster, and the vessel grounded on the north side of the harbour. The “YPAPADI” was refloated one week later. There was no damage to the vessel and no pollution.

The Board determined that the “YPAPADI” grounded because a misunderstanding over who had conduct of the vessel led to a critical course alteration not being made. The master thought he had delegated the conduct of the vessel to the representative of the sub-agent, who had boarded at the pilot station and whom he had reason to believe was a competent pilot. This person did not make it clear that he was not a competent pilot. Contributing factors were: the vessel’s agents did not advise the master they had not secured the services of a pilot, the conduct of the vessel was handed over in an informal manner, neither the master nor the officer of the watch closely monitored the vessel’s progress, and the master did not take

over the conduct when the critical course alteration was not executed.

Ce rapport est également disponible en français.

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1.0 Factual Information

1.1 Particulars of the Vessel

| | "YPAPADI" |
|-------------------------|---|
| Official Number | 12256-82F |
| Port of Registry | Panama |
| Flag | Panama |
| Type | Bulk carrier |
| Gross Tons ¹ | 15,953 |
| Length | 175.01 m |
| Draught | F ² : 8.97 m A: 9.22 m |
| Cargo | 24,000 tonnes of copper phosphate |
| Crew | 27 |
| Built | 1982, Shimizu, Japan |
| Propulsion | Sulzer diesel, 7,264 kW, driving a single, fixed-pitch right-handed propeller |
| Owners | Ypapadi Maritime Inc., Monrovia, Liberia |
| Agents | Kerr Norton Marine, Montreal, Quebec |
| Sub-Agent | LeBoutillier Agencies Reg'd., Gaspé, Quebec |

1.1.1 Description of the Vessel

The "YPAPADI" is a geared bulk carrier with accommodation and engine-room located aft. The vessel has five holds which are strengthened for the carriage of heavy cargoes. Fuel oil is carried in four centre and two wing double-bottom tanks.

¹ Units of measurement in this report conform to International Maritime Organization (IMO) standards or, where there is no such standard, are expressed in the International System (SI) of units.

² See Glossary for all abbreviations and acronyms.

1.2 *History of the Voyage*

On 17 November 1996, the “YPAPADI” departed Caleta Caluso, Chile, with a cargo of copper phosphate, bound for Gaspé. Although Gaspé is a non-compulsory pilotage port, the vessel owners requested the agents in Montreal to arrange for a pilot to meet the vessel and conduct her to the berth. One week before the arrival of the vessel, the master was advised by the vessel agency in Montreal that a pilot would board at the entrance to Gaspé harbour. The master was also provided with the latitude and longitude where he should rendezvous with the pilot boat.

The sub-agent at Gaspé endeavoured to secure the services of an individual with previous experience piloting vessels into that port; he was unsuccessful. The Montreal agents were advised of the negative response, but they were assured that someone would guide the vessel into the harbour. This information was not passed along to the owners or the master. In effect, a representative of the sub-agent (his son) was to board the “YPAPADI” at the pilot boarding station and assist the master into Gaspé harbour.

Through the Marine Communications and Traffic Services (MCTS) Centre at Rivière-au-Renard, the master of the “YPAPADI” established communications with a vessel that was apparently the pilot boat, during the forenoon of 06 December. The master spoke with a person he believed to be the pilot and requested the position of the pilot boat. The master then gave an estimated time of arrival and asked whether the pilot boarding ladder was to be rigged on the port or on the starboard side. Once this exchange was completed, the MCTS Centre requested that the pilot advise the Eastern Canada Traffic System (ECAREG) when the vessel was secured alongside.

At 1400³, a person boarded the “YPAPADI” from a vessel at the pilot station. The officer of the watch (OOW) took him to the bridge. In the wheel-house, this person was greeted by the master and addressed as “Mr. Pilot”. The OOW asked the “pilot” for his name, for entry into the bridge logbook. The reply was only a first name. The master advised the “pilot” that the vessel was on full manoeuvring speed and heading on the range lights on a course of 310°. As the vessel proceeded inbound at approximately 9.5 knots, the master and the “pilot” engaged in “small talk,” each believing that the other had the conduct of the vessel. The “pilot” did not confirm or deny his status as a pilot in response to the form of address used by the master.

In the wheel-house at this time, in addition to the master, the OOW and the “pilot”, were the quartermaster, the chief engineer and the radio officer.

As the vessel was passing port-hand buoy HD9, both the master and the “pilot” expected the other to order a course alteration to port. In the ensuing doubt and confusing exchange, the vessel grounded in sand, 6.5 cables east of Pointe de Penouille, Quebec. At the time of the

³times are EST (coordinated universal time (UTC) minus five hours) unless otherwise stated.

grounding, the quartermaster was applying starboard helm to counteract a tendency of the vessel's head to swing to port.

Following the grounding, it became evident to the master that the "pilot" was not a pilot but a representative of the vessel's sub-agency.

After many unsuccessful attempts to refloat the vessel under her own power, she was finally refloated with the aid of three tugs at 1308, 13 December 1996.

1.3 Injuries to Persons

No one was injured as a result of the grounding.

1.4 Damage

A subsequent underwater inspection of the vessel revealed that there was no damage to the hull.

1.5 Certification

1.5.1 Vessel

The vessel was certificated, crewed and equipped in accordance with existing regulations.

1.5.2 Shipboard Personnel

Both the master and the OOW held qualifications appropriate for the tonnage of the vessel on which they were serving and for the voyage being undertaken.

1.5.3 Shore Personnel

The person who boarded the "YPAPADI" at the pilot station had no marine qualifications, no professional training and no seagoing experience.

1.6 Personnel History

1.6.1 Ship's Navigation Personnel

The master had served in this capacity for 28 years, and the current voyage was to be his last prior to retirement. He had been in command of the "YPAPADI" for 5½ months. This was his first visit to Gaspé, although he had been a frequent visitor to other East Coast ports.

The second officer, who was the OOW, had been at sea for over 30 years and had served in this capacity for 10 years.

1.6.2 Sub-agency Employee

The person who boarded the “YPAPADI” at the pilot station is a general insurance broker by profession, but he has assisted the shipping agency with various aspects of its business. He had “guided” the Russian vessel “ADMIRAL PADORIN” into Gasp  harbour on 04 September 1996. At the request of the vessel’s agent, the sub-agent had previously made such a substitution when no pilot was available. The usual procedure was for the substitute “pilot” to take aboard a local chart and a photograph of the berthing facilities and to advise the master that the person’s function was simply to assist and to answer questions.

1.7 Environmental Information

1.7.1 Weather

Prior to, and at the time of the grounding, skies were clear, there was no wind and the seas were calm. Visibility was in excess of 10 miles.

1.7.2 Tidal Information

Mariners with local knowledge advise that in the approach to the berth, an appreciable current originating at the confluence of the York and Dartmouth rivers may be felt during an ebb tide. The grounding occurred approximately two hours before low water; the predicted height above chart datum was 0.82 metre. The tidal conditions were not considered to have contributed to the grounding.

1.8 Navigation of the Vessel

1.8.1 Navigation Equipment

There was a full range of navigation equipment on board, adequate for the safe operation of the vessel. At the time of the occurrence, the relevant instruments in use included two radar display units, but neither of these was being monitored. In the opinion of the master, visual observation is preferable when a vessel is entering port in clear weather conditions.

The vessel was equipped with a Satellite Navigation System (SatNav) but this was inoperable. There was also a course recorder but it had not been switched on.

1.8.2 Chart

The chart in use at the time was British Admiralty No. 1163, which included Baie de Gasp  and a plan of Gasp  harbour. This particular chart was adequate for the intended vessel movement.

When the sub-agency representative boarded the vessel from the pilot boat, he took with him a section of Canadian Hydrographic Service (CHS) chart No. 4485, which includes the approaches to Gasp . Two positions had been marked on it: the "Pilot Station" at 48°46'N, 064°15'W and an "Anchorage Station" at 48°52'N, 064°28'W. (The latitude of the "Anchorage Station" was marked incorrectly, and should have read 48°50'N.) It would have been more appropriate to have taken CHS chart No. 4416, "Havre de Gasp ".

1.8.3 Shore Aids to Navigation

Both port and starboard channel-marking buoys, HD8 and HD9, had been replaced by winter spar buoys, but these were readily observed by those on the bridge of the "YPAPADI". The range lights on  le de Penouille are very high intensity and were clearly visible, even in daylight.

1.9 Radio Communications

Before the "YPAPADI" arrived at the pilot station, the master was in communication, through the MCTS Centre at Riviere-au-Renard, with a vessel he believed to be the pilot boat. When he asked the pilot boat for her position, the reply was given in whole degrees of latitude and longitude rather than in degrees and minutes or by geographical bearing and distance. The position stated would have positioned the pilot boat 45 miles south-southeast of the pilot station. During the radio exchange, the MCTS Centre addressed the other vessel as "pilot boat" and requested the "Gasp  pilot" to advise ECAREG when the vessel had berthed. At Gasp  harbour, there is no vessel specifically designated as the "pilot boat". The term is used in this context, when a pilot is employed, to describe any boat conveying that pilot to a ship.

The MCTS Centre at Riviere-au-Renard was advised of the grounding at 1509, 06 December. Thereafter, there were frequent exchanges between the MCTS Centre and the "YPAPADI"; at first, these were primarily with the sub-agency representative and then with the Transport Canada Ship Safety Officer from Gasp , who boarded the vessel early the following morning. When the Ship Safety Officer was not on board, communication between the MCTS Centre and the ship became difficult. It was discovered during the investigation that no continuous bridge watch had been maintained while the vessel was aground.

1.10 Voyage Planning and Bridge Resource Management (BRM)

There was no document that indicated voyage planning for the trip from Chile to Gasp , and there had been no pre-planning for the entry into the harbour.

The master and the vessel's navigation officers were not familiar with the concept of BRM.

There was no exchange of information between the master and the person who boarded at the pilot station when the master believed he was passing the conduct of the vessel over to a pilot.

1.11 Gaspé Harbour

1.11.1 Approaches to the Berth

Gaspé is a non-compulsory pilotage port. From a master's point of view, it is relatively straightforward to navigate. The approach is made from a position off Cap du Petit Gaspé, Quebec, with the vessel heading on the range lights, on a course of 307°/308°, to pass between channel-marking buoys HD8 and HD9. The distance to cover is 6.2 miles. A bold course alteration to port is made to round buoy HD9, after which the vessel is settled on a course of approximately 203° to head for the berth some 1.3 miles distant. Despite the straightforward approach, if unfamiliar with the area and entering without a pilot, a judicious master would exercise caution and proceed at a moderate speed, continuously monitoring the vessel's progress and position.

1.11.2 Pilots in the Area

There are four people with knowledge of the Gaspé harbour area who have, in the past, piloted vessels in and out of the port. Two of them were away, but the sub-agent in Gaspé had been able to contact the other two. One was scheduled to be on duty at his own place of work at the time that his services would have been required to pilot the "YPAPADI"; the other one was prepared to carry out the pilotage duties, but could not reach agreement with the sub-agency on terms and conditions.

1.12 Refloating the Vessel

The vessel grounded in an upright position in sand and clay, 300 metres from a provincial wildlife park, in position 48°50'54"N, 064°25'05"W. Officers from Environment Canada were alerted and stood by, ready for remedial action should pollution have occurred.

Efforts to refloat the "YPAPADI" were made at all conditions of the tide, but none was successful. On 10 December, tugs were summoned to assist. Overnight on 11 December, the ballast tanks were used to trim the vessel. The tugs "MAGDALEN SEA" and "CHEBUCTO SEA" arrived overnight 11-12 December, and with these two tugs assisting, an unsuccessful attempt to refloat was made at 1300, 12 December. At 1400, the tug "CABOT SEA" arrived. During the night of 12-13 December, compressed air was used to loosen the sand around the vessel and, at 1308, 13 December, the vessel was refloated with all three tugs assisting.

The "YPAPADI" was secured alongside the Sandy Beach public wharf at 1400, 13 December. After discharging her cargo, the vessel was cleared by Transport Canada Marine Safety and by the classification

society to continue her voyage.

2.0 Analysis

2.1 Breakdown in Communication

There was a breakdown in communication between the vessel's agents and the master of the "YPAPADI". While en route, the master was advised by the agent that a pilot would board on arrival in Gasp  and he was given the position of the pilot station. This information was never rescinded. When the sub-agency representative boarded at the pilot station, the master believed that he was the pilot he was expecting. To add to the complexity of the situation, the newcomer responded to the appellation "Mr. Pilot" without advising the master that he was not, indeed, a pilot. It is not customary for a ship master to ask a pilot for his credentials. The course and speed, a proxy for the vessel, were handed over to the "pilot" and the master was confident that the "pilot" knew the port and knew how to conduct the vessel to her berth. A perfunctory hand-over from master to pilot can lead to a breakdown in communication, but such hand-overs are not uncommon. A more professional hand-over would involve, inter alia, the master giving the pilot information on the vessel's handling characteristics, and the pilot outlining the proposed harbour passage. A more thorough hand-over would have alerted the master to the actual status of the person who had boarded at the pilot station.

2.2 Lack of Pre-planning

None of the vessel's navigation officers was familiar with the concept of BRM, and there had been no pre-planning of the vessel's entry into the harbour. Even when the services of a pilot are anticipated, pre-planning of the inward passage tends to focus the navigator's attention on the complexities of the passage, and facilitates monitoring of the vessel's progress.

The master did not monitor the vessel's progress adequately, and the OOW did not take the responsibility of advising the master of the danger of overrunning the alter-course position. Without the back-up, monitoring and support of the entire bridge team, the chances of a successful operation are reduced.

2.3 Reliance on Pilot

The master confidently handed over the conduct of the vessel to the person who boarded at the pilot station. It was only when the vessel grounded that he realized he was not receiving the services of an experienced pilot. Before the chaotic situation that developed prior to the grounding, there were subtle clues that could have raised questions in the mind of the master as to the competence, if not the qualifications, of the "pilot". There was the unprofessional response to his request for the pilot boat's position, and the "pilot's" first-name-only reply when he was asked for his name. However, any doubts created by the former would have been allayed to some extent when the master heard the MCTS Centre using the terms "pilot" and "pilot boat" during that morning's radio communications.

In the event, the possibility of the master preventing the grounding was significantly reduced when he did not adequately monitor the vessel's progress. Being aware of the speed of the vessel in relation to the

upcoming alter-course position (and the required 100° change of heading), would have put the master in a position to assume the conduct of the vessel when it was apparent that the “pilot” was not taking the appropriate action.

3.0 Conclusions

3.1 Findings

1. Although pilotage is not compulsory in Gaspé harbour, the master was advised that a pilot would board the vessel upon arrival at the approaches to the port.
2. The vessel's agents did not advise the master that they had not secured the services of an experienced pilot.
3. The master was in radio communication with a vessel that was apparently the pilot boat, through the Marine Communications and Traffic Services (MCTS) Centre.
4. The person who boarded at the pilot station did not advise the master that he was not a pilot.
5. The master handed over the conduct of the vessel in a manner that did not require the other person to contribute to an exchange of information.
6. The master believed that the person who had boarded was a pilot, and so he relied on this person to conduct the vessel to the berth.
7. There was no pre-planning of the passage nor Bridge Resource Management (BRM) for the harbour transit.
8. With no BRM, there was no support from the officer of the watch (OOW) at a critical course-alteration point.
9. The progress of the vessel was not adequately monitored.
10. The vessel was moving at an excessive speed in an area unfamiliar to the master.
11. The master did not assume the conduct of the vessel when he realized that no course alteration had been ordered.

3.2 Causes

The "YPAPADI" grounded because a misunderstanding over who had conduct of the vessel led to a critical course alteration not being made. The master thought he had delegated the conduct of the vessel to the representative of the sub-agent, who had boarded at the pilot station and whom he had reason to believe was a competent pilot. This person did not make it clear that he was not a competent pilot. Contributing factors were: the vessel's agents did not advise the master they had not secured the services of a pilot, the conduct of the vessel was handed over in an informal manner, neither the master nor the

officer of the watch closely monitored the vessel's progress, and the master did not take over the conduct when the critical course alteration was not executed.

4.0 Safety Action

4.1 Action Taken

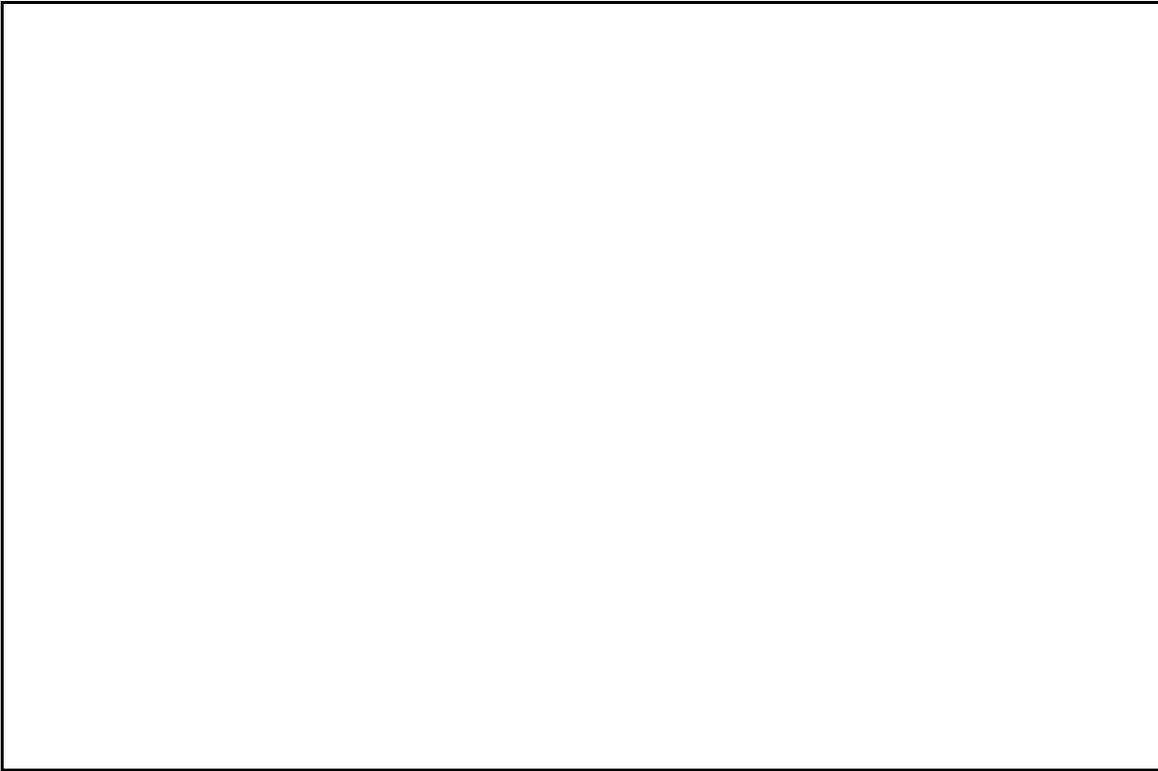
4.1.1 Non-compulsory Pilotage

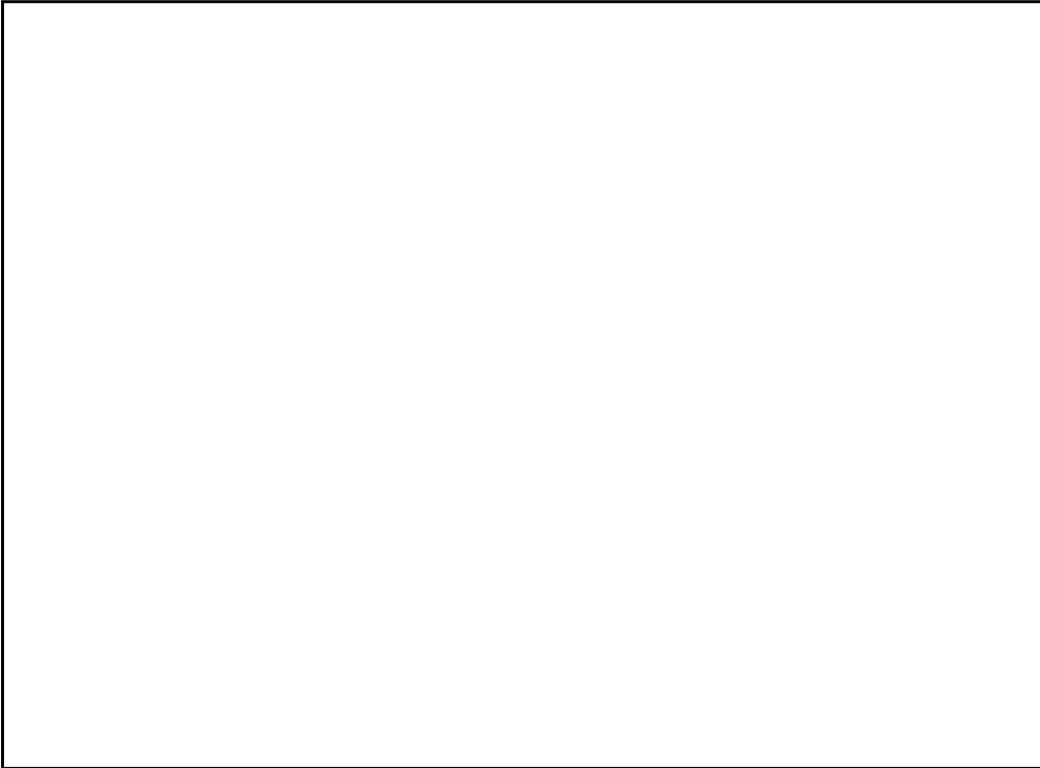
As a result of this investigation, a TSB Marine Safety Advisory No. 07/98 was forwarded apprising Transport Canada that the present pilotage system does not ensure that only qualified and competent mariners are used for pilotage services in non-compulsory ports.

This report concludes the Transportation Safety Board's investigation into this occurrence. Consequently, the Board, consisting of Chairperson Benoît Bouchard, and members Maurice Harquail, Charles Simpson and W.A. Tadros, authorized the release of this report on 04 June 1998.

Appendix A - Sketch of the Occurrence Area

Appendix B - Photographs





Appendix C - Glossary

| | |
|---------|---|
| A | aft |
| BRM | Bridge Resource Management |
| CHS | Canadian Hydrographic Service |
| conduct | control of the navigation |
| ECAREG | Eastern Canada Traffic System |
| EST | eastern standard time |
| F | forward |
| IMO | International Maritime Organization |
| kW | kilowatt |
| m | metre |
| MCTS | Marine Communications and Traffic Services |
| N | North |
| OOW | officer of the watch |
| ranges | lights or markers (ashore) placed in line to indicate course to steer |
| SatNav | Satellite Navigation System |
| SI | International System (of units) |
| TSB | Transportation Safety Board of Canada |
| UTC | coordinated universal time |
| W | West |
| ° | degree |
| ' | minute |
| " | second |