



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

Sight-seeing Boat "TAN 1"
Grande Batture, East of the Wharf at
Les Escoumins, Quebec
11 August 1993

Report Number M93L0003

TRANSPORTATION SAFETY BOARD
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Synopsis

The "TAN 1" departed the pontoons of the pilot station at Les Escoumins, Quebec, at approximately 1715 on 11 August 1993 on a whale-watching cruise in fog and restricted visibility with the owner/operator and 12 passengers on board. Shortly thereafter, the operator became disoriented, and the boat ran aground on a large rock of the Grande Batture near Les Escoumins.

The Board determined that the "TAN 1" departed on a cruise to watch sea mammals in restricted visibility with inadequate safety equipment and without having on board the navigational instruments necessary for a safe cruise.

Ce rapport est également disponible en français.

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1.0 Factual Information

1.1 Particulars of the Vessel

"TAN 1"	
Licence Number	13D9752
Flag	Canadian
Type	Open boat
Gross Tons ¹	5
Length	7.62 m
Built	1990, Quebec
Propulsion	Two Mercury outboard motors each capable of 150 HP ²
Owners	Touriste, Aventure Nordique Inc.

1.1.1 Description of the Vessel

The "TAN 1" is an open boat constructed of a sandwich of fibreglass over a balsa wood core. The steering position and the control console are located aft. This boat, which does not carry more than 12 passengers, is used mainly in the summer for whale-watching cruises in the vicinity of Les Escoumins.

1.2 History of the Voyage

The "TAN 1" departed Anse aux Basques at approximately 1715³ on 11 August 1993 on a whale-watching cruise. The owner/operator and 12 passengers were on board. Another Zodiac-type boat, the "TAN 2", also departed on a whale-watching cruise at the same time. The two boats headed a few miles off Anse aux Basques in fog and then made for the Îlets

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.

³ All times are EDT (Coordinated Universal Time (UTC) minus four hours) unless otherwise stated.

Boisés lying to the east of Les Escoumins. This area is known to be a good place for whale-watching. However, the visibility reportedly deteriorated in the ever-thickening fog.

At 2008, the operator of the radarless "TAN 2" reported to the Vessel Traffic Centre (VTC) Les Escoumins that he was no longer able to find his bearings because of the fog. The "TAN 2" was not equipped with any navigational instruments that could have been used to determine her position.

At about 2045, the ferry "HERITAGE NO. 1", which was in the approaches to Les Escoumins, was able to pick up the "TAN 2" on her radar screen and guide her to the landing stage at the Les Escoumins wharf.

At almost the same time, the "TAN 1" reported to VTC Les Escoumins that she was grounded on a rock of the Grande Batture with 12 passengers on board and required assistance.

Communication between the VTC and the "TAN 1" was cut off at 2052 because of a failure of the radio set on the "TAN 1".

At 2056, the VTC informed the Marine Rescue Subcentre (MRSC) Quebec that a boat belonging to the TAN company was grounded east of Pointe de la Croix, and that radio contact with that vessel had been lost. Visibility in the vicinity of Les Escoumins was reported to be zero at the time.

The MRSC dispatched the CCGS "ÎLE ROUGE", moored at Tadoussac, Quebec, at 2203, and the pilot boat "ABRAHAM MARTIN", which was at Anse aux Basques, was dispatched at 2215 to begin searching for the "TAN 1" grounded with 13 persons on board.

At 2309, the "ABRAHAM MARTIN" was able with some difficulty to pick up the "TAN 1" on her radar screen. Meanwhile, the "TAN 1", which had managed to free herself on the rising tide, lay at anchor waiting for assistance. When the "ABRAHAM MARTIN" arrived on the scene, she took the "TAN 1" in charge and escorted her to Anse aux Basques where the passengers landed safe and sound at about 2335. One of the propeller blades of the "ABRAHAM MARTIN" was damaged during the rescue operations.

1.3 Injuries

No one was injured.

1.4 *Vessel Certification and Equipment*

Marine surveyors of the Canadian Coast Guard (CCG) had boarded and inspected the "TAN 1" on 23 July 1993, and the owner had been issued a list of equipment that did not comply with the regulations or was missing altogether.

The list included the following equipment and certificates:

- radio station licence;
- radiotelephone operator's certificate;
- radio inspection certificate;
- standard lifejackets;
- radar reflector; and
- an extinguisher of adequate capacity.

1.4.1 *Operator's Certification and History*

The operator of the "TAN 1" is a retired architect who holds a licence to drive motorized pleasure craft at sea issued at Nîmes, France, in 1966. He has been the owner/operator of the "TAN 1" since 1991 and has organized whale-watching cruises in the vicinity of Les Escoumins since 1988.

1.5 *Radio Communications*

The sequence of events started with the operator of the "TAN 2" calling VTC Les Escoumins on channel 9 of his very high frequency (VHF) radio at about 2008 to ask whether the station could detect the "TAN 2" on its radars because the operator was disoriented; the station could not. While the ferry "HERITAGE NO. 1" was heading for Les Escoumins, she made radio contact with the "TAN 2"; the operator of the boat informed the ferry that he could hear her fog whistle. At approximately 2025, when the ferry was some two miles from the wharf, she detected a weak target on her radar screen, 0.75 mile distant, ahead of her. The target was subsequently identified as the "TAN 2". After making visual contact with the "TAN 2", the ferry escorted the boat to the Les Escoumins wharf.

While the "TAN 2" was being rescued by the ferry, a waterfront resident on the Îles Penchées was able to make out, in the fog, the shape of a boat heading west along the shore. As he thought that this was the boat being sought, he reported the particulars to the VTC. At the time, VTC Les Escoumins was unaware of the presence of another boat in the area.

It was not realized until approximately 2045 that there was another boat which had grounded on a rock of the Grande Batture off the municipality of Les Escoumins with 12 passengers on board.

1.5.1 Vessel Traffic Centre (VTC) in Canadian Waters

The regulations pertaining to Vessel Traffic Services Zones apply to any vessel 20 m or more in length. As the "TAN 1" and the "TAN 2" are less than 20 m long, they did not have to receive departure clearance from VTC Les Escoumins. Furthermore, the regulations do not require vessels of 20 m or less to report to VTC the number of persons or passengers on board; however, some small cruise vessels do so on a voluntary basis. When the two boats encountered difficulties, the VTC was unaware of their presence in the area and of their activities.

1.5.2 Radio Failure

The "TAN 1" only carried one portable 5 W VHF radio, and the radio failure is attributed to depleted batteries.

1.6 Grounding of the "TAN 1"

While the "TAN 1" was in the vicinity of the Îlets Boisés, the fog became thicker. The operator therefore decided to return to his place of departure by following the shoreline closely at reduced speed. A resident of the Îles Penchées who was listening to the VTC Les Escoumins frequency and was following the search for a vessel lost in fog noticed a boat heading west. He immediately reported his observations to the VTC, which confirmed the presence of the "TAN 1".

Meanwhile, the "TAN 1" was approaching the Grande Batture at Les Escoumins at reduced speed while it was almost night. The lights of a motel were seen from the boat, and, to reassure the passengers, the operator sailed close to shore. The boat suddenly came to a complete stop on a rock of the Grande Batture. At 2045, the passengers insisted that the operator report the grounding of his boat to the VTC.

As the tide was rising, the boat refloated by herself, and the operator dropped anchor to wait for assistance.

1.7 The Grande Batture at Les Escoumins

The Grande Batture, lying between Pointe de la Croix and the Îles Penchées, dries off completely at low tide. The bottom consists of sand and mud studded with large rocks that are covered and uncovered with the tides.

1.8 Tides

When the "TAN 1" grounded on a rock of the Grande Batture, the tide was rising, and high tide was predicted for 2120 on 11 August 1993.

1.9 *Search and Rescue*

The "TAN 1" reported being grounded to VTC Les Escoumins at 2045 and, at 2056, MRSC Quebec was informed that a boat was grounded east of Pointe de la Croix, and that visibility was almost zero.

The assistant coordinator at the MRSC received the call and initiated preliminary emergency measures during the first 30 minutes. His primary function is to determine the level of emergency and to confirm the information received to ensure effective implementation of emergency measures.

In this occurrence, there was uncertainty as to the geographic location concerned, because there are two places called Pointe de la Croix; one in the vicinity of Baie-Comeau, Quebec, and the other in the approaches to Les Escoumins. When the MRSC was informed of the incident, the position of the boat was given as east of Pointe de la Croix, without any further details. Furthermore, it was not clear if the boat involved was the "TAN 1" or the "TAN 2" and exactly how many persons were in danger.

As a result, the rescue operations were delayed and about one hour passed before the CCGS "ÎLE ROUGE" based at Tadoussac and the "ABRAHAM MARTIN" based at Les Escoumins could be dispatched to the scene.

2.0 *Analysis*

2.1 *Weather*

The weather conditions prevailing in the area throughout the day warranted postponing the cruise to a more suitable time. Foggy periods occur frequently along the coast during the summer and vessels must therefore be equipped with accurate navigational instruments to avoid disorientation.

2.2 *Inspection*

A vessel not over five gross tons that carries not more than 12 passengers is not required to undergo regulatory inspections by the CCG Ship Safety Branch. The vessel must, however, comply with the requirements of the Small Vessel Regulations. In July 1993, during a CCG Ship Safety Branch inspection of such vessels carrying not more than 12 passengers, 10 companies were found operating 18 boats that did not comply with the Small Vessel Regulations.

The "TAN 1" and the "TAN 2" were among the boats that did not comply with the Small Vessel Regulations, and the owner was issued a notice to comply with the requirements within three weeks. At the time of the occurrence, on 11 August 1993, both boats still did not comply with the requirements. On 13 August 1993, as a result of this occurrence, a detaining order was issued by the CCG Ship Safety Branch against both boats until they complied with the regulations.

2.3 *Passenger Safety*

Whale-watching cruises are usually conducted during the summer months, because these sea mammals are not in the area for very long. The owners of these boats therefore carry on their operations on a seasonal basis.

The regulations covering passenger vessels of more than five gross tons do not apply to passenger-carrying vessels not over five gross tons that carry not more than 12 passengers.

Passenger vessels of more than five gross tons are required to be inspected by the CCG Ship Safety Branch and to have duly certificated officers, which is not the case for small passenger-carrying vessels not over five gross tons that carry not more than 12 passengers. No training or certification is required to operate such a vessel.

2.4 *Small Vessel Regulations, Ship Station Radio Regulations and Radio Operators' Certificate Regulations*

Enforcement of the Small Vessel Regulations falls under the jurisdiction of the Sûreté du Québec (SQ), the Royal Canadian Mounted Police (RCMP), the Ports Canada police and municipal police forces. Inspections of pleasure craft only are carried out from time to time for prevention purposes, and the MRSC courtesy inspections are carried out on these craft as well. As a result, vessels not over five gross tons that carry not more than 12 passengers are not regularly inspected and there is less follow-up of such vessels. However, Ship Safety Branch surveyors make sporadic visits to these vessels.

Although the Radio Operators' Certificate Regulations require that VHF radiotelephone operators hold a certificate, neither of the two operators held such a certificate at the time of the occurrence.

Although a radio was fitted, Ship Safety Branch surveyors found that the radio and its installation did not comply with the Ship Station Radio Regulations.

2.5 *Reporting of the Number of Passengers on Sight-seeing Boats*

The regulations pertaining to Vessel Traffic Services Zones apply to all vessels 20 m or more in length, but they contain no provisions about reporting the number of passengers on board.

VTC Les Escoumins has counted six sight-seeing boats over 20 m in length in the area of the occurrence that require a departure clearance and 26 others under 20 m that do not. Some do report the number of passengers on board, and others do not.

In the event of a marine occurrence, the number of passengers on board a vessel is an important consideration for Search and Rescue services and the Canadian Armed Forces. Indeed, the number of persons on board a vessel involved in an occurrence determines the marine and air resources required to effect a rescue.

There was some delay in dispatching the CCGS "ÎLE ROUGE" and the "ABRAHAM MARTIN" to the scene because the number of persons on board the "TAN 1" was unknown. Furthermore, the boat had not reported her departure to the VTC, and she was not required to do so by regulation.

2.6 *Certificate of Competency*

The *Canada Shipping Act* exempts vessels not over five tons gross that carry not more than 12 passengers, from the requirement to have a certificated officer. In addition, there is no requirement for the operator of such a vessel to attend a navigation course.

There is reason to believe that a lack of training was involved in this occurrence. The cruises were undertaken even though the weather was foggy and the safety equipment was inadequate. Disoriented because of the fog, the operator was unable to follow the compass because it was out of adjustment or because the operator did not know how to use it.

3.0 *Conclusions*

3.1 *Findings*

1. The two boats undertook the cruises, in the foggy conditions, although they were not equipped for instrument navigation.
2. Communication between the Vessel Traffic Centre (VTC) and the "TAN 1" was cut off when the very high frequency (VHF) radio on the "TAN 1" failed due to depleted batteries.
3. The absence of a radar reflector and the failure of the VHF radio hampered the search and rescue operations in the prevailing restricted visibility.
4. The "TAN 1" steered by dead reckoning toward the Grande Batture at Les Escoumins and grounded on a large rock. The operator of the boat became disoriented in the fog and was unable to follow the compass.
5. The operators of both boats did not hold a radio operator's certificate nor a certificate of competency and they had not been trained for instrument navigation.
6. Vessels not over five gross tons that carry not more than 12 passengers are not required to be inspected by the Canadian Coast Guard (CCG) Ship Safety Branch.
7. The operator of the boat did not report to the VTC upon departure, nor was he required to do so by regulation. The VTC had not been informed of the number of persons on board the "TAN 1".

3.2 *Causes*

The "TAN 1" departed on a cruise to watch sea mammals in restricted visibility with inadequate safety equipment and without having on board the navigational instruments necessary for a safe cruise.

4.0 *Safety Action*

4.1 *Action Taken*

4.1.1 *Navigation Equipment*

As a result of this occurrence and of the detaining order issued by the Canadian Coast Guard (CCG) Ship Safety Branch, the owner made the required improvements to the navigation equipment including the fitting of a commercial radar reflector, the installation of a watertight very high frequency (VHF) radio set equipped for a radio watch on the distress channel and with a battery charger connected to the motor, and he also added more visible navigation lights.

4.1.2 *Radio Certificates*

The owner now keeps the radio inspection certificates of his boats and the restricted radio operator's certificates of his operators up to date.

4.1.3 *Sail Plans and Safety Briefings*

In 1994, following several marine occurrences involving charter vessels, the Board recommended that:

The Department of Transport encourage charter boat operators to establish sailing plans and to conduct passenger safety briefings before getting under way.

(M94-04, issued February 1994)

The CCG subsequently published Ship Safety Bulletin No. 4/95, entitled *Recommended Safety Communication Measures for Small Craft*. This bulletin directed to operators of all small craft explains the benefits of sail plans and the procedures to file a sail plan with the CCG. It also encourages boat operators to give safety briefings and to demonstrate what measures to take in an emergency.

4.2 *Action Required*

4.2.1 *Operator Certification and Training*

The *Canada Shipping Act* (CSA) does not require the operators of vessels not over five gross tons that carry not more than 12 passengers to hold a certificate of competency.

In order to meet the ever-increasing demand for sight-seeing tours on the St. Lawrence River, numerous operators with no formal marine training operate inflatable boats and small home-built craft not over five gross tons without their boats being inspected or having to demonstrate their own navigational skills. The majority of small boat operators have very limited training in navigation and marine emergency duties, and this lack of training and knowledge of safety measures can have serious consequences in an emergency situation. Furthermore, given the large number of tourists and the short summer season, owners of small boats sometimes depart on a voyage in spite of adverse weather conditions. Such a practice is potentially hazardous given the conditions encountered in the vicinity of Les Escoumins and at the mouth of the Saguenay River: strong currents, reduced visibility, and numerous ocean-going and coastal vessels converging on the pilot station which increases the risk of collisions. In this occurrence, the whale-watching cruise was undertaken in spite of the fog.

These small boats occasionally do get lost in fog or experience a mechanical failure which requires CCG assistance. For example, on 09 August 1994, the "CROISIÈRE EXPRESS I" ran aground with 13 persons on board because of a navigational error. On 25 June 1994, the "TAN 2" had to be towed after she experienced a mechanical failure while carrying 15 persons. On 12 September 1993, one month after this occurrence, the "TAN 1" experienced a mechanical failure and lost power. Waves broke over the stern, and the boat capsized. All 12 passengers and the operator were thrown into the icy waters of the river, but they were rescued by other sight-seeing boats in the area (TSB occurrence No. M93L0004).

Well aware of the shortcomings in their training, some owners' associations have approached the CCG and asked that training courses be developed to meet the specific needs of small sight-seeing boat operators.

As sight-seeing boats are increasingly carrying fare-paying passengers, the Board believes that it is important for small boat operators to have formal marine training. The Board is concerned that there is currently no training required to operate small passenger-carrying sight-seeing boats. Therefore, the Board recommends that:

The Department of Transport develop training standards and certification requirements for the operators of small sight-seeing boats that carry fare-paying passengers.

M96-01

4.2.2 *Communications*

The Radio Operators' Certificate Regulations require radio operators to hold a Restricted Radiotelephone Operator's Certificate, but neither the operator of the "TAN 1" nor the operator of the "TAN 2" held such a certificate. Furthermore, as the Ship Station Radio Regulations do not apply to vessels less than 20 m in length, neither boat was required to report to the Vessel Traffic Centre (VTC) the number of persons on board.

Each year during the summer months, an average of 800 passengers daily take sight-seeing cruises of one hour or more on small boats like the "TAN 1". In this occurrence, because the portable VHF radio on the "TAN 1" failed due to depleted batteries, the VTC was unable to monitor the situation and did not know exactly how many persons were in danger.

However, to carry out a timely and successful search and rescue operation, it is critical that shore staff and/or Search and Rescue (SAR) personnel have accurate information as to the number of lives at risk aboard vessels involved in an occurrence.

Further, the Board is concerned that passengers on these small sight-seeing boats may unnecessarily be exposed to risks in that such boats are not required to be fitted with the radio equipment necessary for effective communication in distress or emergency situations. Therefore, the Board recommends that:

The Department of Transport amend the regulations to require sight-seeing boats that carry fare-paying passengers to be fitted with adequate radio equipment and to report to the VTC, before departure, the number of persons on board.

M96-02

4.2.3 *Inspection and Monitoring*

In July 1993, the CCG carried out courtesy inspections, and 18 sight-seeing boats were found that did not comply with the Small Vessel Regulations. The most common deficiencies noted were radio station licences; radiotelephone operator's certificates; lifejackets; navigation lights; radar reflectors; distress signals; lifebuoys; fire extinguishers; anchors; and bilge pumps. At that time, the owners of the boats involved were issued a notice to comply with the regulatory requirements. Following this occurrence, the CCG issued detaining orders for the "TAN 1" and the "TAN 2".

The Board is concerned for the safety of passengers carried on such sight-seeing vessels without adequate safety equipment on board. The Board notes that the CCG does not have an inspection and prevention program in place for small commercial vessels not over five gross tons that carry not more than 12 passengers, but that SAR personnel currently carry out

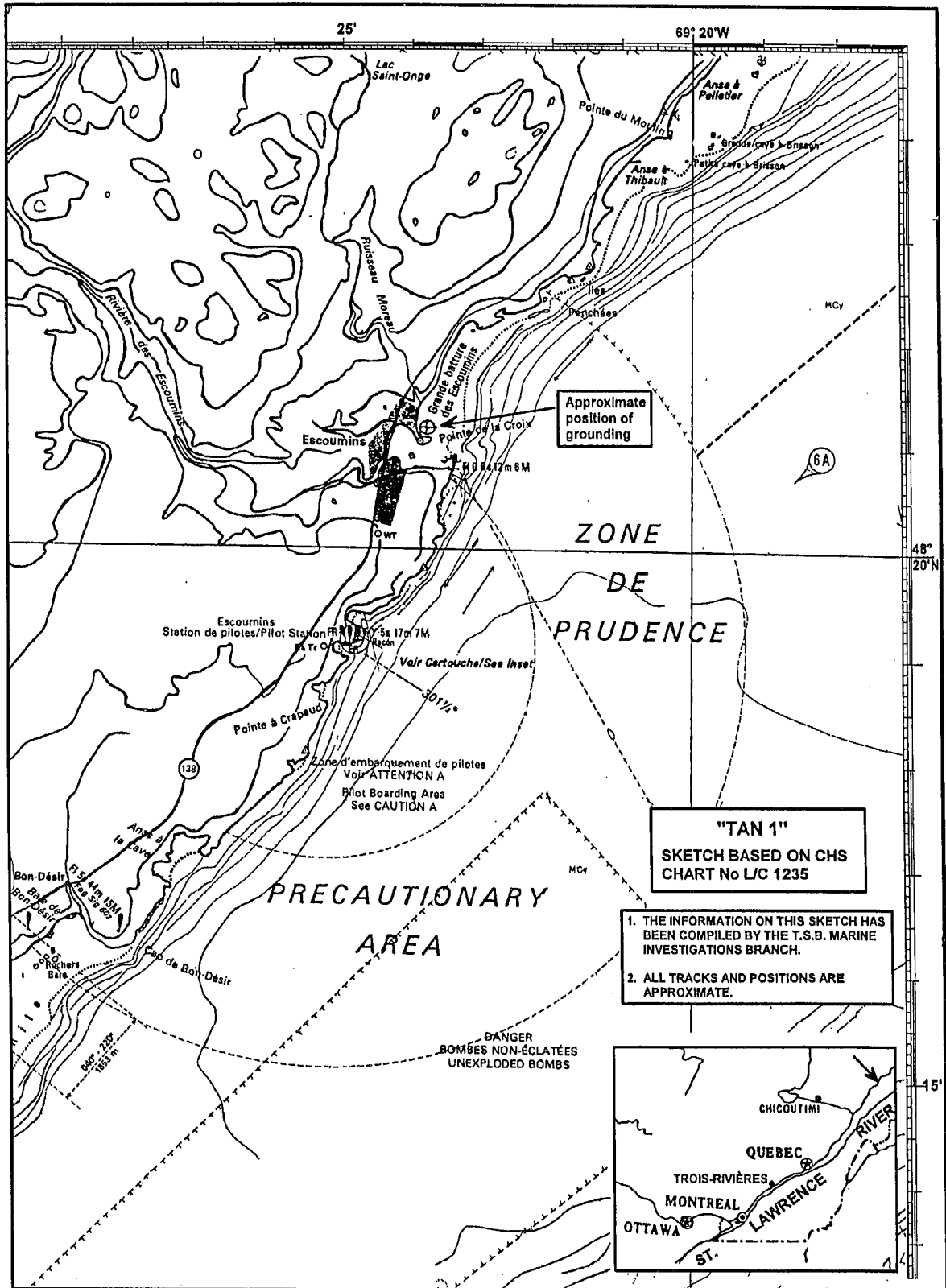
courtesy inspections of pleasure craft. The Board is also concerned that, although it is their mandate to do so according to the Small Vessel Regulations, police forces are unable to adequately monitor these boats because of limited resources. Therefore, the Board recommends that:

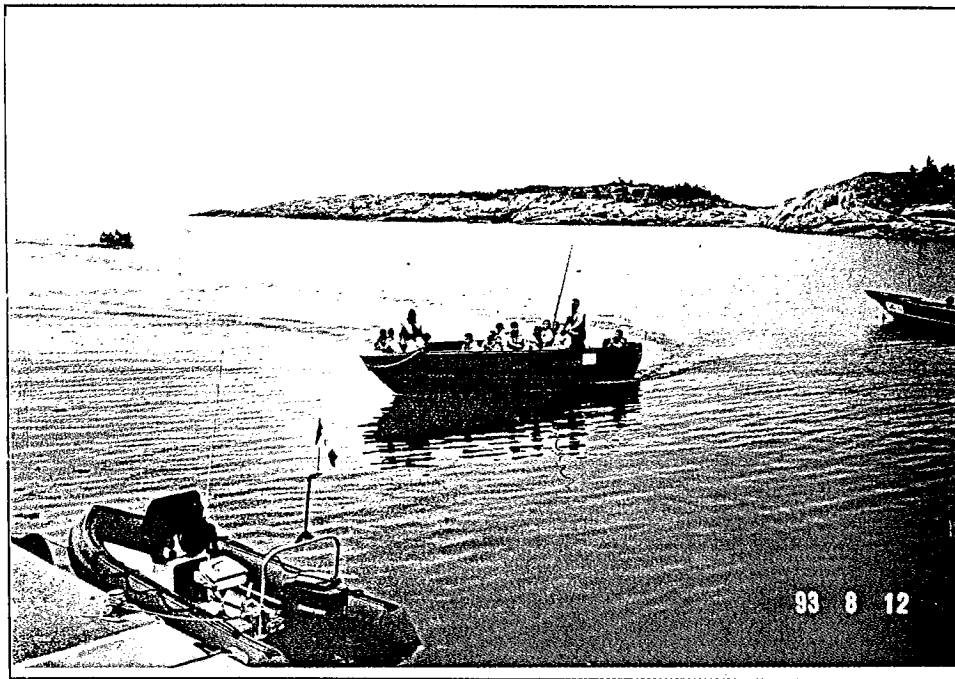
The Department of Transport and the Department of Fisheries and Oceans, in cooperation with police forces and SAR personnel, explore means of improving the monitoring and inspection of small passenger-carrying commercial vessels.

M96-03

This report concludes the Transportation Safety Board's investigation into this occurrence. Consequently, the Board, consisting of Chairperson, John W. Stants, and members Zita Brunet and Maurice Harquail, authorized the release of this report on 28 February 1996.

Appendix A - Sketch of the Area of the Occurrence

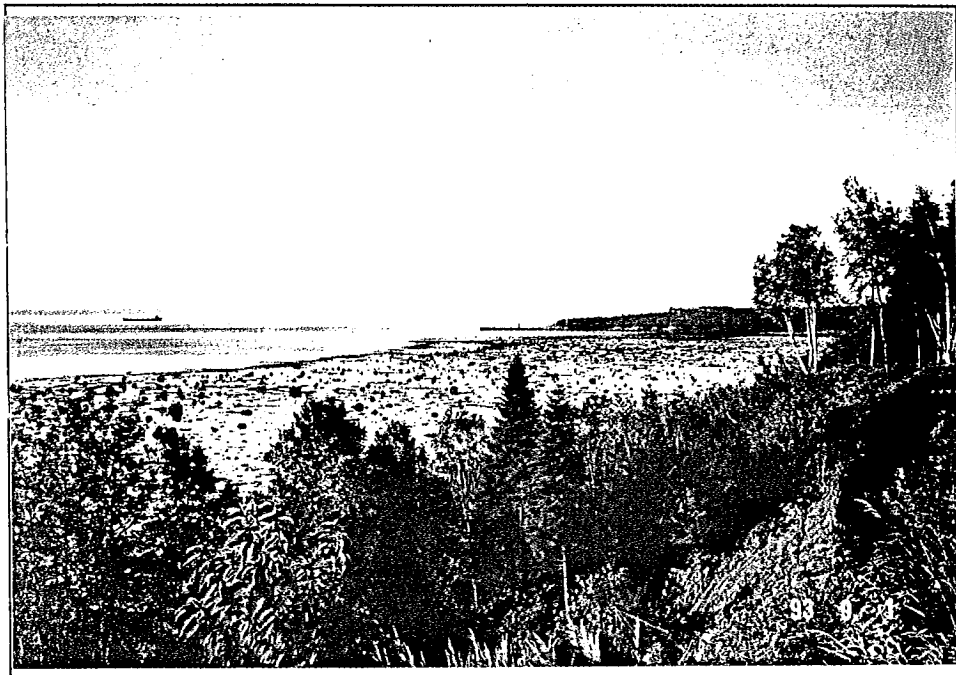


Appendix B - Photographs

The "TAN 1" arriving at about 1600 on 12 August 1993, the day after the occurrence.



The Grande Batture near Les Escoumins completely dried off at low tide.



Appendix C - Glossary

CCG	Canadian Coast Guard
CCGS	Canadian Coast Guard Ship
CSA	<i>Canada Shipping Act</i>
EDT	eastern daylight time
HP	horsepower
IMO	International Maritime Organization
m	metre(s)
MRSC	Marine Rescue Subcentre
RCMP	Royal Canadian Mounted Police
SAR	Search and Rescue
SI	International System (of units)
SQ	Sûreté du Québec (Quebec Provincial Police)
TSB	Transportation Safety Board of Canada
UTC	Coordinated Universal Time
VHF	very high frequency
VTC	Vessel Traffic Centre
W	watt(s)