

MARINE OCCURRENCE REPORT

Sinking

of the Fishing Vessel "NORTHERN VOYAGER"  
Approximately 47 Miles East of  
St. Anthony, Newfoundland  
27 June 1996

REPORT NUMBER M96N0061

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.

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### **Summary**

On 27 June 1996, while on a voyage to the fishing grounds in the Davis Strait, the gillnetter "NORTHERN VOYAGER" developed a large list to port, downflooded, and sank stern first at approximately 0709. The crew of 13 and one officer from the Department of Fisheries and Oceans (DFO) abandoned the vessel and boarded two inflatable liferafts, from which they were rescued, unhurt, by another fishing vessel. No pollution was reported as a result of this occurrence.

*Ce rapport est également disponible en français.*

**Other Factual Information**

**Particulars of the Vessel**

Name	"NORTHERN VOYAGER"
Port of Registry	St. John's, Nfld.
Flag	Canadian
Official Number	811361
Type	Gillnetter/Longliner
Gross Tonnage	105
Length	20 m
Crew	13, plus one supernumerary
Built	1989, St. Albans, Nfld.
Propulsion	Cummins VTA 28 M, 261 kW
Owner	Mr. M. Leyte Fogo, Nfld.

The vessel had a fish-hold capacity of 96 m<sup>3</sup>; fuel oil capacity of 15,899 litres; and fresh water capacity of 3,785 litres. It was reported that the vessel's fuel and fresh water tanks were full before she left Seldom, Nfld., at approximately 1430 on 26 June. Stores of an unknown weight were on board for a voyage of up to an estimated one month.

Other known weights on board included approximately 18 tonnes (t) of permanent ballast at or near the keelson.

The forward section, approximately one third, of the fish hold, contained 400 70-litre, plastic, semi-nested, boxes of ice, while the after end was partly filled with 350 nets weighing 35.9 t. The temperature in the insulated fish hold was not known nor recorded.

The lazaret contained 1.6 t of line, consisting of 8,000 fathoms in 40 coils each weighing 41 kg.

On the main deck were 300 nets weighing 9.5 t, stowed to the full width of the deck and full height to the deckhead abaft the bridge.

Eight coils of rope, total weight 327 kg, were stowed in the fish-holding tank on the main deck.

On the upper deck, stowed in two 1.8 m-high bins, were 200 nets weighing a total of 6.4 t. Also on the upper deck, were 18 coils of rope weighing a total of 735 kg.

The vessel, since new, had been fitted with a steel A-frame on the upper deck abaft the wheel-house to which stabilizer poles with

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<sup>1</sup> All times are NDT (Coordinated Universal Time (UTC) minus 2.5 hours) unless otherwise stated.

paravanes were attached. This equipment is used to minimize rolling in heavy weather. It was customary on this vessel to deploy the paravanes from the stabilizer poles each time the vessel departed a berth, regardless of the weather. This equipment was deployed on this occasion after departing Seldom.

There was also a hydraulic crane, of unknown weight, fitted to the upper deck.

The vessel was equipped with three separate hydraulic pumps, mechanically driven either from the main propulsion unit or the auxiliary generator. In non-freezing conditions, to pump out water from the fish hold, it is necessary to prime the pump by opening a valve to the sea and to open a check valve at the manifold.

In the wheel-house were mounted three bilge alarms, one serving the compartments under the fish hold (ditches), one in the engine compartment and one in the lazaret.

The skipper of the "NORTHERN VOYAGER" reported that the bilge in the fish hold had been pumped dry at Seldom prior to loading the ice and nets and that the system had not been operated after departure.

On the night of 26/27 June, visibility was poor and estimated to be 0.5 to 1 mile. The wind was south-easterly at 15 to 20 knots with 1 m seas. The course initially was north-east but latterly changed to north-westerly, that is, the vessel mainly had the wind and seas astern and was not shipping water on deck. The speed was approximately seven to eight knots.

Before retiring for the night at 2230 on 26 June, the skipper had inspected the decks, securing devices, engine compartment and cuddy. There was apparently nothing amiss at that time.

Some time between 0630 and 0700 on 27 June, from his room at the after end of the wheel-house, the skipper became aware of a port list. At about the same time, the list also became apparent to the two deck-hands on watch in the wheel-house. Reportedly, neither man had heard a bilge or other alarm sound before the list developed. The skipper made his way to the steering/control position on the starboard side of the wheel-house. The steering had been on automatic. He tried unsuccessfully to bring the vessel "head to wind". As the list was increasing, he put the engine in idle and ordered the crew to don immersion suits and lifejackets and to deploy the inflatable liferafts.

With the list increasing to approximately 60 degrees, the crew boarded the liferafts. There were 12 of them in one raft and 2 in the other. The skipper, being the last to leave, walked down the starboard side of the vessel to a liferaft. Before he and the crew abandoned, he noted that the engine compartment and the cuddy of the fishing vessel

were dry, but the surface of the sea was half covering the top of the fish hold hatch.

The "NORTHERN VOYAGER" remained in that position for approximately 30 minutes. She then sank stern first at 0851 in position 51°21'54"N, 054°22'22"W, in a water depth of at least 120 fathoms. Salvage is not envisaged.

The "ASHLEY AND BROTHERS", belonging to the same owner, had departed Seldom at approximately the same time as the "NORTHERN VOYAGER". Although not sister ships, the two vessels were of similar design, size and layout.

The "ASHLEY AND BROTHERS", similarly loaded, was approximately 6.5 miles away following roughly parallel courses to the "NORTHERN VOYAGER", when at 0709, a radio call was received on 2,182 kHz requesting assistance. The "NORTHERN VOYAGER" had a list to port of approximately 25 degrees which was increasing. This information was immediately relayed by the "ASHLEY AND BROTHERS" to the Marine Communications and Traffic Centre at St. Anthony. That call was intercepted by the CCGS "SIR WILFRED GRENFELL" and a nearby Canadian Forces aircraft. The "SIR WILFRED GRENFELL" was approximately 50 miles distant while the aircraft was about 28 minutes flying time away.

Subsequently, the "ASHLEY AND BROTHERS" picked up the crew of the "NORTHERN VOYAGER" from two inflatable liferafts. No other vessel or aircraft was utilised.

The previous owner of the "NORTHERN VOYAGER" affirmed that the vessel had experienced considerably worse weather conditions than those encountered after leaving Seldom without giving him cause for anxiety. There is no record of any previous flooding, and the vessel was considered to be in good condition prior to the sinking.

In October 1995 at the Glovertown Shipyard, all the through-hull fittings and associated pumps had been opened up and inspected by TC Marine Safety, from Lewisporte. The stern tube had also been drawn and inspected to the satisfaction of the inspector. Reportedly, the hull was in good condition and the gaskets on the watertight fittings to the lazaret, the fish hold hatch, and the main deck door giving access to the accommodation were also in good condition.

As the vessel was not engaged in fishing for herring or capelin, TC Marine Safety does not require that an inclining experiment be conducted. The previous owner stated that he had paid for such a test; however, no evidence of such a test or of other stability information has been found.

Vessels of the size and type of the "NORTHERN VOYAGER" are not required by regulation to demonstrate stability in a damaged or partly flooded

condition. Additionally, the Fisheries Loan Board does not, before granting a loan, require a vessel to demonstrate intact stability characteristics, if a similar vessel has demonstrated that her intact stability characteristics are satisfactory to TC Marine Safety.

The "NORTHERN VOYAGER" had a valid Safety Inspection Certificate (SIC 29) at the time of her loss. This certificate, dated 28 April 1996, lists the life-saving equipment as follows:

- 1 boat capable of accommodating 6 persons
- 2 inflatable liferafts capable of accommodating 22 persons
- 2 lifebuoys
- 10 immersion suits (the DFO Officer had his own immersion suit), and
- 13 lifejackets.

### **Analysis**

Because the "NORTHERN VOYAGER" had, in the past, carried as many as 500 to 600 nets on deck with none in the fish hold, it is unlikely that the stowage of the vessel's gear contributed to the sinking. Previous experience would also indicate that the weather was not a factor.

As the lazaret contained 40 coils of line, it is considered that the remaining unoccupied space could not hold a volume of water large enough to interfere with the vessel's stability.

The cuddy and the engine compartment were seen not to be flooded before the vessel was abandoned and the effect of flooding in the lazaret would have been minimal. Therefore, it appears that the "NORTHERN VOYAGER" sank as a result of an ingress of water from below the waterline in way of the fish hold.

Although the forward section of the fish hold was partly filled with boxes of ice, the after two-thirds of this compartment contained nets which were considerably more permeable. The effects of an ingress of water to the fish hold would, at first, enhance the vessel's stability by the increase of weight. However, the free surface effect of the water would soon overcome such a condition and cause the vessel to list.

Once the vessel had listed to approximately 60 degrees, downflooding would result. The fact that the vessel lay over on her side for approximately 30 minutes before sinking stern first would support this hypothesis.

It is not known if a paravane was lost which would have caused the vessel to list toward the remaining or unencumbered paravane which, in turn, would tend to point or be directed deeper in the water. However, as soon as power was taken off the main engine, the vessel

would normally assume an upright position which, in this case, she did not do.

From the information available, it was not possible to determine if this initial internal flooding was caused by back-flooding of the bilge system due to human error when it was last operated in Seldom, by the operational failure of defective or jammed valves, or by another unassociated cause.

### **Findings**

1. The previous owner of the "NORTHERN VOYAGER" affirmed that the vessel had experienced considerably worse weather conditions than those encountered after leaving Seldom without giving him cause for anxiety.
2. On previous occasions, the vessel had been loaded with a greater weight of nets on the main and upper decks with none in the fish hold.
3. The unoccupied space in the lazaret could not hold a volume of water large enough to interfere with the stability of the vessel.
4. It is probable that the "NORTHERN VOYAGER" sank as a result of an ingress of water from below the waterline in way of the fish hold.
5. Vessels of the size and type of the "NORTHERN VOYAGER" are not required by regulation to demonstrate stability in a damaged condition.
6. The primary purpose of the fish hold pumps is not damage-control but the evacuation of "ice-melt", residual water from fish and of wash-down water from hold cleaning.

### **Causes and Contributing Factors**

The vessel apparently suffered an ingress of water from an unknown source below the waterline in way of the fish hold, listed heavily to port, downflooded, and sank stern first.

*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 09 June 1997.*