

MARINE OCCURRENCE REPORT

SWAMPING AND SINKING

OF THE FISHING VESSEL "MISS SHANNON"

OFF GLACE BAY, CAPE BRETON

27 SEPTEMBER 1996

REPORT NUMBER M96M0132

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

While en route to crab-harvesting grounds northeast of Glace Bay, the "MISS SHANNON" was swamped when she shipped a heavy sea. The vessel lost reserve buoyancy, quickly turned upside down and settled by the stern. There was no time for the crew to don life jackets or to call for assistance. Two of the crew of three lost their lives.

*Ce rapport est également disponible en français.*

## OTHER FACTUAL INFORMATION

### Particulars of the vessel

Name	"MISS SHANNON"
Official Number	810429
Flag	Canada
Port of Registry	Sydney
Gross Tonnage	11.0
Length	8.5 m
Type	Fishing Vessel
Propulsion	250 Detroit Diesel, 186kW
Built	1988 Bear Pt., Nova Scotia
Owner/Operator	Mr. Donald L. Caldwell Sydney Mines, Nova Scotia

The "MISS SHANNON" was of Cape Island design, open boat construction. She was equipped with a Very High Frequency Radio Telephone (VHF R/T), a cellular telephone and the regulation- required life jacket for each crewmember, lifebuoy and hand flares. The "MISS SHANNON" did not carry a liferaft or any other type of small boat and she was not fitted with an Emergency Position Indicating Radio Beacon (EPIRB). As it was less than 15 gross tons, the "MISS SHANNON" was not required to be inspected by the Marine Safety Branch of Transport Canada, nor was it.

On 27 September 1996, the "MISS SHANNON" was outward bound for the crab-harvesting grounds with a load of 20 traps stowed on the well-deck. The weight of the traps was approximately 907 kg, excluding lines and marker buoys. At the beginning of the crab-fishing season for the past five or six years, the vessel had reportedly carried a similar load in similar weather conditions.

The vessel was deeply laden and the well-deck scuppers had been closed. The vessel was of fibreglass construction and the well-deck was watertight. To allow shipped water to drain to the bilge, one hatch had been left open. With the wind and sea on the port beam, the vessel was swamped by a larger than usual sea, filling the well-deck to gunwale height. As the well-deck scuppers had been closed, the water was retained on board.

Within seconds of being swamped, the vessel turned upside down, settled by the stern and assumed a nearly vertical position, bow up.

The owner/operator and his two sons were in the wheel-house at the time of the swamping, which, according to the crewmember who survived, occurred at approximately 1320. Prior to this, although the sea was rough, the crew did not express anxiety regarding their safety.

To escape from the wheel-house, the survivor kicked out one of the wheel-house windows. This action caused

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All times are Atlantic Summer Time (UTC plus 3 hours)

a further loss of buoyancy but allowed the three men to abandon the vessel, which they now believed would quickly sink.

The survivor and the owner/operator, a non-swimmer, used the lifebuoy for support while in the water. The other crewmember held on to a polythene marker buoy. The three stayed together a short distance from the vessel as they were fearful of becoming entangled in the large amounts of polypropylene line that had floated free on the surface of the water.

"MISS SHANNON" had been rigged and fitted out for sword fishing and this included a pulpit extending approximately three metres forward of the stem. The pulpit was now almost vertical and protruded above the 0.6 m of stem still above the water.

When the three men realized that the vessel was remaining afloat, though in a vertical position, it was decided to re-board her. The survivor climbed onto the pulpit, the owner/operator rested on the fore part of the cuddy while the other son held on to a starboard stay wire, where he became entangled in some of the polypropylene line.

The "MISS SHANNON" did not sink until about 2½ hours after she had overturned but the owner/operator and one of his sons succumbed approximately one hour after reboarding the vessel (the survivor was unable to record exact times).

At approximately 1652, the survivor was rescued by another fishing vessel, the crew of which had sighted the survivor at approximately 1644 and advised Sydney Coast Guard Radio Station (CGRS). CGRS Sydney in turn notified the Rescue Coordination Centre (RCC) Halifax resulting in a Canadian Forces Hercules aircraft, airborne in the vicinity, being tasked and diverted to the area. Labrador helicopters and the Canadian Coast Guard vessel "LOUISBOURG" were also tasked but not utilized.

By 1725 the body of the owner/operator had been retrieved from the water by another fishing vessel, and at 1810 the second body was picked up by a third vessel.

The survivor was examined at a local hospital and released. A local physician confirmed that the cause of death of the owner/operator and his son had been drowning.

### **Weather and Sea Conditions**

The weather during the afternoon of 27 September was poor with NE winds of 20 knots and wave heights three or four metres with visibility approximately four miles. Surface water temperature was approximately 13°C, allowing for a possible survival time of approximately 3½ hours.

## Crew Experience

The owner/operator had been fishing that area since 1979 and had approximately 50 years of experience in fishing, assisted by one son for approximately 28 years. The survivor has had approximately 16 years experience in the fishing industry.

## ANALYSIS

The load of traps carried by the vessel was sufficient to submerge the well-deck scuppers. The well-deck, therefore, would have flooded had the scuppers not been plugged.

When scupper holes in small open vessels are secured with plugs, water shipped over the gunwale is retained in the watertight well-deck and this endangers the vessel. On the day on which "MISS SHANNON" sank, one hatch to the bilge had been left open to allow shipped water to drain to the bilge.

This hazardous situation is one to which all similarly outfitted vessels of open construction are subjected when employed offshore. All small vessels of open construction are inherently susceptible to the dangers of swamping and it is apparent from the conditions described in this occurrence that they are very weather dependent and require prudent operation.

As a vessel of open construction, the reserve buoyancy and range of positive stability of "MISS SHANNON" were dependent upon the vessel's sides being intact up to the gunwale level.

Although a hatch had been left open to drain the quantity of water which could normally be expected to be shipped, to the bilge and be pumped overboard, the shipped water did not drain quickly enough to avoid the loss of stability caused by sudden flooding of the well-deck.

Although there were life jackets and flares on board none were used in the hasty abandonment. These items were stowed in the cuddy rather than the wheel-house where they would have been more accessible.

Although operating in an area more than 20 miles from land, "MISS SHANNON" carried no boat or liferaft and was not fitted with an EPIRB. This situation is not uncommon.

With a water temperature of approximately 13°C, a person in the water may survive for approximately 3½ hours, but the two men who drowned were unable to stay afloat for this length of time. It is not known to what extent the floating lines reduced the ability of the victim entangled in them to survive.

## FINDINGS

1. The well-deck scuppers were closed because they were underwater when the vessel was loaded with crab traps.
2. Although a hatch to the bilge had been left open, this was insufficient to drain the large amount of water when the well-deck was swamped.

3. With the well-deck filled to gunwale level, "MISS SHANNON" quickly lost stability, overturned and settled stern first.
4. The sudden overturning and partial sinking initially trapped the owner/operator and his two sons in the wheel-house.
5. The vessel assumed a 'bow-up' position in the water and remained thus for approximately 2½ hours before sinking.
6. The speed at which the vessel assumed a 'bow-up' position prevented the crew from either sending a distress signal by any of the available means or accessing the life jackets stowed in the cuddy.
7. One crewmember probably survived because he was able to cling to the bow pulpit protruding from the water.
8. The floating lines were a hazard when the crewmembers were in the water.
9. Although engaged in offshore activities, "MISS SHANNON" carried neither a liferaft nor a boat.

### **CAUSES AND CONTRIBUTING FACTORS**

The "MISS SHANNON" overturned and sank because she lost reserve buoyancy when her well-deck was swamped and filled to gunwale height with entrapped water. There was no time to send a distress call or don life jackets, and no liferaft or boat was carried on board.

*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 16 December 1998.*