

# News Release



**BRITISH COLUMBIA  
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## **BC FERRIES REPORT SUBMITTED TO TRANSPORTATION SAFETY BOARD**

VICTORIA – BC Ferries has completed an internal investigation into the collision between the Spirit of Vancouver Island and the Star Ruby, a small U.S. pleasure craft, on Sept. 14 off Swartz Bay.

The purpose of the investigation was to determine the sequence of events and facts surrounding the accident and to forward those findings to the Canadian Transportation Safety Board.

The investigation panel analysed the bridge, engine room and radio logs, and interviewed crew members to determine the exact sequence of events.

The investigating panel found that the actions of the captain and crew of the Spirit of Vancouver Island were fully appropriate with respect to bridge manning, clearance procedure, communications, whistle signals and clarity of wheelhouse orders.

The findings indicate that the Star Ruby was reported to have made an abrupt port turn into the ferry when the vessels were within 30 to 45 metres of each other. The investigation also indicates that BC Ferries was in compliance with departure and routing policies and the actions of the crew in the rescue efforts following the collision were prompt and professional.

Because the corporation's report deals only with information derived from internal sources, it is not a complete picture of events. More exact details of the incident will only be known when the Canadian Transportation Safety Board investigation is completed and its safety recommendations issued. This may take several months.

In addition, Transport Canada will evaluate the findings in relation to all applicable regulations and may recommend follow-up action.

Copies of BC Ferries' report are available on BC Ferries website at [www.bcferries.bc.ca/corporate/SOVI\\_internal\\_inquiry\\_report.html](http://www.bcferries.bc.ca/corporate/SOVI_internal_inquiry_report.html)

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# Inquiry Report

Spirit of Vancouver Island  
and the Star Ruby

## **Collision**

September 14, 2000

Released: October 23, 2000



**SUBMISSION OF THE INCIDENT INVESTIGATION REPORT  
ON THE COLLISION BETWEEN THE  
SPIRIT OF VANCOUVER ISLAND AND THE STAR RUBY  
ON SEPTEMBER 14<sup>TH</sup>, 2000**

The investigating panel has completed its initial report into the collision, which is attached. The following points should be considered in reading the report.

1. BC Ferries' policy, as part of its commitment to the International Safety Management System (with which the Corporation complies through Lloyds Register), is to provide details of all significant incidents to the fleet as soon as possible. This enables other Masters and Officers to be aware of the sequence of events and the panel's general findings.
2. Because the Corporation's report only deals with information derived from internal sources, it is not a complete picture of events. More exact details of the incident will only be known when the Canadian Transportation Safety Board investigation is completed and its safety recommendations issued. This may take several months.
3. Times in logbooks are entered to the nearest minute. Some distances are estimated. Therefore, more exact information is required to construct a precise evaluation of speeds, positions, and relative movements.
4. A glossary is provided at the end of the report to clarify technical or marine terms for the general reader.



Captain Mike Carter  
Executive Vice President  
Operations and Customer Services

## **SYNOPSIS OF EVENTS**

At 1038 hours on September 14, 2000, the Spirit of Vancouver Island arrived at Swartz Bay inbound from Tsawwassen Terminal and commenced discharging traffic. Once all the traffic was discharged, traffic bound for Tsawwassen was loaded.

The following closures were noted in the bridge log:

1059 hours the foot passenger ramp was reported as clear  
1102 hours upper car deck clear  
1103 hours main car deck clear  
1104 hours the vessel was cleared to sail and the strobe lights were initiated  
1105 hours all checks were completed and the Spirit of Vancouver Island bridge log indicated "departed Swartz Bay". The engine log indicated ahead pitch building from 1106.

- The bridge log, under *Weather and Remarks*, noted "haze, airs and rippled."
- The bridge log noted Fulford tides as follows:

0530 hours at 9.2'  
1155 hours at 3.9'  
1855 hours at 9.8'

(which would indicate an ebb tide in Colburne Passage)

- The bridge log noted no apparent or reported deficiencies with machinery, safety equipment or navigational equipment.
- The radio log noted that at 1105 hours, a radio departure call was made on VHF Channel 11 to MCTS.
- Prior to departure, the Master sounded one prolonged blast on the whistle.

On departure, the Master was at the port bridge wing where he had control of steering, propeller pitch, and other equipment. The Second Officer was at the starboard centre console after reporting observed traffic in the bay, and the Quartermaster was at the helm. The Second Officer and the Quartermaster reported traffic to the Master. According to the Second Officer, a vessel, later identified as the Star Ruby, was approximately three cables broad on the starboard bow. The Second Officer also identified a second vessel, flying a Canadian Flag and ahead of the Star Ruby, travelling in the same direction toward Colburne Passage. Other testimony indicated that there was a steady stream (six or seven vessels) of traffic behind the Star Ruby proceeding in a similar direction. The Master and Second Officer confirmed bow thrusters would not be used upon departure.

Clearing the berth, the Master directed the Quartermaster to take the steering and bring the vessel to a heading of 325 (G). The Quartermaster confirmed the order. The Master moved to centre console where pitch control was transferred.

1107 hours the Spirit of Vancouver Island was approximately six cables off the dock at Swartz Bay course 325 (G). Testimony of the bridge officers indicated that the control handles were set at approximately #6 ahead and the engine room log shows a gradually increasing propeller pitch. The Master ordered the Quartermaster to apply "port 2 ½ °, steer 303" and he sounded two short blasts. According to the Second and Third Officers, after the two short blasts, the lead vessel (Canadian Flag) altered course to starboard 180 degrees and the Star Ruby maintained her course and speed. The Third Officer, using binoculars, attempted to locate the operator of the Star Ruby. There was no one on the flying bridge and he was unable to see anyone on the vessel.

1108 hours the Star Ruby was observed travelling on a roughly parallel course and was between the U18 buoy and the Spirit of Vancouver Island. The Star Ruby was estimated to be half a cable from buoy U18 and two cables from the Spirit of Vancouver Island. The Spirit of Vancouver Island was proceeding port of the centre line of the navigable channel of Colburne Passage, on course. While steering 303 (G), the Master commenced sounding the first set of seven short blasts on the whistle.

1109 hours, steering 303 (G), the Star Ruby was estimated to be ¾ cable off the starboard bow and between buoys U18 and U16. The Spirit of Vancouver Island was abeam U18. The Second and Third Officers reported that within seconds of the Spirit of Vancouver Island passing U18, they noticed the Star Ruby making a slight alteration to port. When the vessels were estimated to be within 100 – 150 feet (30.5 – 45.7 meters), the Star Ruby reportedly made an abrupt port turn. Between 1108 hours and 1110 hours the Master made two additional sets of seven short blasts.

1110 hours the Star Ruby reportedly disappeared from the bridge line of sight. At this time, the Third Officer was standing at the starboard bridge wing, the Second Officer was at the centre console starboard chair, and the Master was at the centre console port chair. According to testimony and the engine room control data print sheet, both handles (propeller pitch) were placed astern at 1110 hours; the Master placed the handles full astern and the Third Officer selected 'Emergency Manoeuvre' on the control panel. The Master was also holding down the whistle button. The Second Officer left his chair, ran to the starboard side and sighted wreckage. Three long blasts were sounded on the ship's whistle, and then three long rings on the general alarm directing crew to rescue boat stations. According to the ships log the collision occurred at 1111 hours, September 14, 2000.

The Chief Engineer was advised of the collision at 1113 hours and at 1115 hours, the Third Engineer was dispatched to assist with the rescue boats.

VHF radio calls were made as appropriate; at 1115 hours MCTS Channel 11 was advised of the collision and at 1119 hours the Canadian Coast Guard was advised on Channel 16.

Several deckhands, hearing repetitive blasts on the whistle, proceeded to the outside deck starboard side, observed the situation, donned safety equipment and readied #1 rescue boat. When the Public Announcement was made for rescue boat stations, the crew were already in the boat and awaiting the order to launch. There was a minor delay until the Spirit of Vancouver Island was stopped in the water. The #1 rescue boat was away 1114 hours and proceeded to the Star Ruby which was partly submerged in a bow up attitude in a position between U18 and U16, and approximately ENE 1 ½ cable from the beacon.

Several small boats were at the site of the wreckage. After some confusion about the number of persons on board, our crew was told that there had been two persons aboard and a male had been removed and transported ashore. A deckhand climbed aboard the wreckage and, with a hammer obtained from an attending boat, attempted to break a wheelhouse window in his search for the missing person. Deckhands in the #1 rescue boat called the Spirit of Vancouver Island for diving support.

At 1120 hours the #2 rescue boat was away from the Spirit of Vancouver Island and arrived at the wreckage approximately seven to eight minutes after the #1 rescue boat. The Chief Officer in the #2 boat took charge of the situation. The Chief Officer confirmed with the crew aboard the #1 rescue boat that a male passenger had been taken ashore from the Star Ruby and it was believed that one person was still aboard.

The Chief Officer and another deckhand joined the first deckhand aboard the wreckage and all three attempted to locate the missing person. The crew, unable to gain entry to the cabin, turned their attention to the forward hatch. However, the hatch was plugged with debris. The Star Ruby was getting lower in the water and there was a strong smell of gas. A decision to tow the Star Ruby into shallow water was made; lines were passed from the rescue boats and made fast to the Star Ruby. Propane bottles now visible were shut off. An off-duty RCMP Officer in a small boat followed the tow to observe anything floating free from the wreckage.

Because of difficulties involved in towing the Star Ruby, the #2 rescue boat was cast off and the #1 rescue boat towed until the Star Ruby grounded on the south side of the channel. As the Star Ruby bottomed out, more of the vessel appeared above the surface of the water. Peering through the pilothouse window, the Chief Officer and deckhand could see a foot. With much difficulty in removing debris and reaching their objective, the person was finally pulled from the wreckage at approximately 1148 hours. BCFC OFA's administered first aid and were joined shortly thereafter by paramedics who transferred the person to another boat, then to the shore. The #3 rescue boat was away with the Second Officer in charge and four volunteer divers who were passengers aboard the Spirit of Vancouver Island. The four divers were not required nor were they equipped with diving gear, and consequently, they were stood down.

The Chief Officer having determined that no one else was aboard the wreckage called Canadian Coast Guard, identified himself, advised that two persons had been taken ashore and that there was considerable debris in the water. He requested clarification of further actions required. The Canadian Coast Guard Radio directed the

Chief Officer to speak to the officer-in-charge of the Canadian Coast Guard vessel M.V. Skua as they were having difficulty communicating with him. Permission to leave the scene was granted by the officer in charge of the Skua. The Chief Officer then ordered his crew back to the Spirit of Vancouver Island, which was standing off near Arbutus Island. All three rescue boats were back aboard the Spirit of Vancouver Island at 1217 hours.

Under the direction of the Chief Engineer, the vessel was inspected for watertight integrity and the Spirit of Vancouver Island returned to Berth #1 Swartz Bay, bow-to at 1350 hours.

Critical Incident Stress Response was initiated for the crew. Some of the crew members were relieved upon the vessel's return to Swartz Bay and others by the arriving afternoon crew.

An inspection of the Spirit of Vancouver Island's outer hull by the Chief Engineer indicated the point of contact with the Star Ruby was apparently at the foremost starboard round of the main car deck. The scrape marks on the Freeboard hull on the starboard side are from the point of contact to frame 211 then from frame 208 to 191. These appear to indicate the Star Ruby striking a scupper pipe and the anchor. Further aft scrape marks appear below the rubbing strake at (approximately) frames 176 to 170; then a series of marks between frames 159 to 137, then between frames 65 to 53.

## ***ANALYSIS***

- 1) The investigating panel finds that the actions of the captain and crew of the SOVI were fully appropriate with respect to bridge manning, clearance procedure, communications, whistle signals and clarity of wheelhouse orders.
- 2) The panel only interviewed BC Ferries employees and therefore did not have detailed information on the actions of the Star Ruby. The panel can therefore only comment that the bridge crew reported the Star Ruby making an abrupt port turn toward the ferry.
- 3) The panel finds that the actions of the crew in the rescue efforts following the collision were exemplary and professional.

## ***RECOMMENDATION***

- 1) The panel recommends that all BC Ferries masters and officers be made familiar with the circumstances of the collision as presently known. More recommendations may follow the safety findings of the Canadian Transportation Safety Board.

## GLOSSARY

Bow Thrusters	A device in the front of the ship which can push the bow sideways if required when docking or departing.
Bridge Arrangement	The bridge has a large centre console with two conning positions (captain and Navigating Officer). Enclosed bridge wings protrude clear of the ships to give a view down the ship's sides.
Bridge Officers	The Spirit of Vancouver Island usually departs the dock with the Master, 2 <sup>nd</sup> Officer, and Quartermaster (deckhand steering the ship) on the Bridge. The 3 <sup>rd</sup> Officer makes his way to the Bridge once the upper car deck ramp is cleared. The Chief Officer remains on the car deck to carry out clearance and safety requirements on departure.
Cable	A measure of one-tenth of a nautical mile, or 608 feet (approximately 185.3 metres)
Colburne Passage	Colburne Passage is the name of the north-south channel at the top of the Saanich Peninsula. It includes Swartz Bay.
Engineering	The ship's engine room is staffed by the Chief Engineer and other qualified marine engineers whenever the ferry is manoeuvring. However, the actual engines setting on this ship are made from the bridge via control handles. These handles change the pitch of the propellers. The propeller shaft turns at constant revolutions at all times. The control handles are graduated from 1 to 10 ahead and astern. There are two propellers.
(G)	This notation following courses indicates course by gyroscopic compass (usually within one degree of "true" course).
Radio Procedures	Radio calls are made to MCTS (Coast Guard Traffic Control) on a designated public VHF frequency.
Speed	Speed at any particular point is difficult to ascertain accurately when the ship has been stopped and is manoeuvring. The ship takes some time to build up speed to the maximum of the handle setting.
Standing Off	Stopped and holding position close to the scene.
Tide	The ebb tide in Colburne Passage runs in a north to south direction. The tide would therefore have been slowing the progress of the vessels over the ground.
Whistle Signals	International Regulations stipulate the following whistle signals (among others): <ul style="list-style-type: none"> <li>➤ One prolonged blast – given prior to leaving dock</li> <li>➤ Two short blasts – indicate the ship is altering course to port (left)</li> <li>➤ At least five short blasts – to indicate that a vessel fails to understand the intentions or actions of another, or is in doubt whether the other is taking sufficient avoiding action</li> </ul> <p>B. C. Ferries uses a signal of three long blasts on the whistle to muster a rescue boat crew.</p>