

MARINE OCCURRENCE REPORT

GROUNDING

**OF THE TANKER " FIFI"
ON THE BATTURES DE MANICOUAGAN
QUEBEC
21 JANUARY 1995**

REPORT NUMBER M95L0001

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 21 January 1995, the "FIFI" was drifting in the bay Comeau, Quebec, waiting for pilots before proceeding up the St. Lawrence. Radar and a small-scale chart were being used to monitor the vessel's position. The current drove the vessel on to the Battures de Manicouagan, Quebec.

FACTUAL INFORMATION

Particulars of the Vessel

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| Name | "FIFI" |
| Port of Registry | Grimstad, Norway |
| Flag | Norwegian |
| Official Number | 8920361 |
| Type | Tanker |
| Gross Tonnage | 21,142 |
| Length | 164.71 m |
| Draught | Forward: 10.95 m Aft: 11.10 m |
| Built | 1993, Kherson, Ukraine |
| Propulsion | Diesel B&W, 7,943 kW, driving a single fixed-pitch propeller. |
| Owners | Fram Tankers VII Ltd Monrovia, Liberia |

On 21 January 1995, the tanker "FIFI" was transiting on the St. Lawrence River after a transatlantic voyage, bound for Montreal, Quebec, with a load of 25,000 metric tonnes of naphtha. At about 1000, the vessel was instructed to go to bay Comeau to take two St. Lawrence pilots on board. The pilots normally board vessels at Les Escoumins, Quebec, but because of the severe ice conditions at the pilot station, the pilot boats could not be used. The vessel had only British Admiralty chart No. 307, to a scale of 1:225,000, on board. At 1338, the wind was from the north-east at about 20 knots, and the current was south-westerly. The vessel was put on a heading of 090°(T) and the main engine was stopped in approximate position 49°13.1'N, 068°04.3'W, to await the arrival of the pilots, who were expected at 1500. Before leaving the wheel-house, the master instructed the officer of the watch to keep the vessel on a heading of 090°(T) and to use the engine if the vessel drifted toward the shoal. The vessel's position was checked a few times by radar, but it was not indicated on the chart. The automatic radar plotting aid (ARPA) was not used.

At 1411, the vessel suddenly swung to starboard. The engine was used in order to bring the vessel back on the right heading and move her away from the shoal. The manoeuvre failed, since the "FIFI" had already run aground in position 49°12.6'N, 068°05.5'W. The vessel was refloated the next day at about 1825 using two tugs and taking advantage of high tide. The "FIFI" was undamaged, and no injuries or pollution were reported as a result of this occurrence.

ANALYSIS

All times are EST (Coordinated Universal Time (UTC) minus five hours) unless otherwise stated.

Upon reaching the bay Comeau, the vessel was put on a heading of 090° so that she could be moved away from the shoal to the west simply by starting the engine in the "ahead" mode if the vessel moved too close to the shoal. Although the master had not specifically warned the officer of the watch that a south-westerly current was driving the vessel toward the Battures de Manicouagan, the officer reported that he was aware that there was such a current in the bay. The *Sailing Directions* published by the Canadian Hydrographic Service indicate that this tidal current moves at an average speed of two knots along the Battures de Manicouagan.

Studies have shown that assessment of a situation takes place on three different levels:

- First, the operator must perceive the elements of the situation. That information can come from various sources, including charts.
- Second, the operator must assimilate this information, in other words, he must form a coherent picture of the situation in his short-term memory.
- Finally, the operator must project this information into the future, by going beyond the situation; in the area of safety, this is the ultimate objective.

The three levels involve various information-processing steps which may present deficiencies and may result in an incomplete or inaccurate assessment of the situation. Even if the operator succeeds in remedying those deficiencies, his assessment of the immediate situation will simply constitute a snapshot of the situation at a given point in time.

When the "FIFI" left port, she was not expecting to put in at the bay Comeau, and, consequently, she did not have on board a large-scale chart appropriate for navigating along that shoreline. On the chart used while waiting for the pilots, one nautical mile is represented by a distance of about 8 mm, it was therefore not possible to effectively visualize the movement of the vessel over short distances. The "FIFI" was about one nautical mile east of the shoal when the engine was stopped. She ran aground about 33 minutes later.

During that time, the officer of the watch did not succeed in fully assessing the situation, and he did not realize that the vessel was about to run aground. Using the ARPA would have increased the chances of effectively assessing the vessel's drift speed.

FINDINGS

1. The navigating personnel was aware that there was a current in the bay.
2. The small-scale chart used was not appropriate for coastal navigation.
3. The officer of the watch did not succeed in fully assessing the situation.
4. The vessel drifted toward the shoal without the drift speed being correctly assessed.
5. The radar's automatic radar plotting aid (ARPA) was not used.

CAUSES AND CONTRIBUTING FACTORS

The tanker "FIFI" was driven aground by the current around the Battures de Manicouagan because the drift was not correctly assessed.

The small-scale chart used made it difficult to assess the drift, and the radar's automatic radar plotting aid (ARPA) was not used.

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 Hugh MacNeil, authorized the release of this report on 10 May 1995.