

SURVEY OF TIDES AND CURRENTS

IN

CANADIAN WATERS

OTTAWA, 6th November, 1897.

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SIR,—I have the honour to submit the following Report on the progress of this Survey. A general examination of the currents in the Gulf of St. Lawrence has been carried on by this Survey in the three seasons of 1894, 1895 and 1896, by which the currents in the interior of the Gulf, and in the straits connecting it with the Ocean, have been examined with special reference to the leading steamship routes which pass through it in various directions. The investigation has included the currents found at the three angles of the Gulf, namely, (1) in Cabot Strait which forms the main entrance to the Gulf, between Cape Breton and Newfoundland; (2) in the Strait of Belle Isle; and (3) at the entrance to the St. Lawrence and around the Island of Anticosti. The currents met with in the open Gulf have also been examined and their direction traced; and much information has been collected from seamen and fishermen as to the currents, and with reference to the drift of the ice in winter and spring. The character of these currents as ascertained, and the nature of the general circulation in the Gulf in relation to the St. Lawrence River and to the Ocean, are described in my last Report of Progress dated 26th January, 1897. (See annual report, Department of Marine for 1896; pages 70 to 105.) The behaviour of the current in the Strait of Belle Isle is more fully given in the previous Reports of Progress dated 31st October, 1895, and 13th April, 1896. (See annual report, Department of Marine for 1895; pages 80 to 87, and Plate I.)

The United States Hydrographic Office have drawn attention to the results obtained by this survey, by re-publishing a diagram and explanation of the nature of the current in the Strait of Belle Isle, in their "Pilot Chart for the North Atlantic" for the month of March, 1897; and also a summary on the "Current circulation