

THE CURRENTS

ON THE SOUTH-EASTERN COASTS OF

NEWFOUNDLAND

AND THE AMOUNT OF INDRAUGHT INTO

THE LARGER BAYS ON THE SOUTH COAST.

OTTAWA, January 25, 1904.

During the season of 1903, from May to September, the currents were examined off the southeastern coasts of Newfoundland, along the European steamship route. This route passes as close as convenient to the shore for 160 miles, from St. Pierre to Cape Race, and then turns northeastward on a great circle for points in Great Britain and Europe. The examination had special reference to the question of indraught of the current into the large bays on the south coast. The largest of these, Placentia bay, is 75 miles deep and 40 miles wide. Eastward of Cape Race, the Polar current, which flows very constantly in a southward direction past the eastern side of Newfoundland, is met.

The steamer used in this examination was the D.G.S. *Gulnare*, of the Department of Marine and Fisheries. She is 137 feet, beam 20 feet 5 inches, draught 13 to 14 feet, gross tonnage 262. As the purpose in view was to ascertain what currents steamships might expect when passing this coast at a reasonable offing, no observations were taken closer than four or five miles to the shore. The in-shore currents of a merely local character were thus avoided.

The general method employed, was to anchor the steamer at carefully selected points or stations; and to make use of the steamer itself as a fixed point from which the direction and speed of the current could be taken or measured. This was the method already found most advantageous in my investigation of the currents in the Gulf of St. Lawrence in former years. It is not too much to say, that with adequate appliances, as much information can thus be obtained in 24 hours as in a week by running courses. This is the more emphasized in so foggy a region, where long sights to fix the ends of courses can rarely be had; but at anchor the fog did not interfere with the work.