

THE CURRENTS

AND TIME OF SLACK WATER IN THE

BAY OF FUNDY

AND ITS APPROACHES AS FAR AS CAPE SABLE

OTTAWA, March 31, 1908.

The tables herewith, which show the set of the current at every hour, are based on observations during four months, June to September, in the two years 1904 and 1907. The region examined extends from St. John to the entrance of the Bay of Fundy and as far as the offing of Cape Sable. The examination was made with special reference to the important steamship routes in the region, which include the lines of ocean steamships, international lines between the Maritime Provinces and the United States, as well as the various coasting routes.

A knowledge of the currents in these outer waters is of more importance to navigation than in the more restricted part of the Bay of Fundy proper, where the tidal streams run parallel to the shores and have less tendency to set a vessel out of its course.

This is the first time that the currents in these regions have been systematically investigated with modern appliances; and they result in the only tables of the state of the current, hour by hour, similar to those prepared for the coasts of Europe, which have yet been published for any North American waters of extended area.

Throughout the region now under consideration, the currents are strong, steady and deep; instead of weak and superficial and liable to disturbance by the wind, as they usually are in the approaches to the Gulf of St. Lawrence. The investigation was made by anchoring a steamer at carefully selected points or stations, in the vicinity of the various steamship routes, to obtain information of the most practical value to navigators. All accessory questions were also examined,—such as the under-current in the deep water, the water temperature, and wind disturbance by comparison with continuous meteorological observations taken on board. On these a special report has been published, and the results are briefly stated below, so far as they affect the surface current.