Father Point and Quebec.—(Father Point earlier than Quebec.) Average difference in time of High Water:—

From observations of 17th December, 1894, to 31st January, 1896....4h 21m
" " 1st February, 1896, to 31st January, 1897.....4 19

Mean value 4h 20m

Average difference in time of Low Water:—

From observations of 1st Feb., 1896 to 31st Jan., 1897.....5m 30m

Tide tables were again computed for Ste. Croix bar, in the St. Lawrence River above Quebec, which is still the shallowest point in the ship channel, until the present dredging operations are completed. These tables are based upon differences in the time of the tide from Quebec; the difference varying with the height of the water in the river according to the season, from spring to autumn. Revised values of the differences used, were obtained from the record of the semaphore signals which are given at Cap Santé, opposite this bar. The rise of the tide there, is from 12 to 15½ feet, and every half-foot of rise and fall is noted to the nearest five minutes. From such a record however, the time of high water and low water can be found pretty closely. The extent of the record was only from August 14th to November 22nd, 1897; and being for the day tides only, it gave the time of high water at 84 tides, and low water at 93 tides, for comparison with the simultaneous record of the tide gauge in Quebec harbour. An improvement in the accuracy of these tables was thus secured. They are of much service in enabling steamships to know in advance the time when high water on the bar may be expected; and the amount of the rise there makes an important difference in the available draught. With these tables, the difference in the time of the tide for the next shoal at St. Augustin, is also given.

The Gulf of St. Lawrence and Northumberland Strait.—From the observations of the tides obtained in 1896 in the south-western portion of the Gulf of St. Lawrence and Northumberland Strait, it has been ascertained that the tides in this region can best be derived from St. Paul Island, which is one of the principal tidal stations, situated in the main entrance through which the tides enter the Gulf from the Atlantic. One complete year of the tidal record at that station was accordingly prepared for analysis in the spring of 1897, from which tide tables are now calculated for St. Paul Island itself; and from these in turn, tide tables for Pictou and Charlottetown are successively computed. In this way, correct results are obtained; whereas tide tables for places within the Gulf, when based upon a *constant* difference from some Atlantic port, as given in local almanacs, are liable to be in error by as much as one and a half hours, early or late. This is well illustrated by the following comparison of simultaneous observations in standard time at Pictou and Halifax, which shows the manner in which the difference in the time of high water varies:—

Date.	Time of High Water.		Difference.	Remarks.
	Pictou.	Halifax.		
	H. M.	H. M.	H. M.	
1896, July 8	7 10	6 15	0 55	Moon's declination maximum north.
" " 8	21 11	18 02	3 09	
" " 9	8 02	6 50	1 12	
" " 9	22 07	18 55	3 12	
" " 10	9 00	7 50	1 10	
" " 10	23 15	19 30	3 45	New moon.
" " 11	9 45	8 35	1 10	
" " 11	23 57	20 22	3 35	
" " 12	10 35	9 15	1 20	