

Appendix
(Z.)

12th October.

No. 30.

EXTRACT from Col. Phillpotts's Report, dated 24th of October, 1838.

After Col. Phillpotts states his objections to the south side, in a military point of view, he continues—

"To this it may be answered, that the communication now under consideration is chiefly, if not altogether, intended for commercial purposes, and that the whole line of the St. Lawrence would be so much exposed, in the event of a war, as to preclude its use to any great extent. This important question, however, requires full consideration, and it will, of course, be decided by higher authority than the report of any individual. I have here provided for placing the Canal on the north side of the St. Lawrence, according to Mr. Mills' plan, and if Mr. Baird and Mr. Stevenson are correct, the sum I have mentioned will be more than sufficient for placing it on the south side, if that route shall be finally determined on.

"I think it probable that by putting one or two dams across from the south shore to Grand Isle, the River itself may be made navigable nearly all the way to St. Timothy; but I have not yet had an opportunity of examining the ground sufficiently to enable me to speak positively on the subject; I am, however, induced to believe, that in any case it may be found possible to construct a Canal on the south shore, cheaper than on the north."

No. 31.

REPORT on a Survey of the River St. Lawrence, between Cote à Colonge and Coteau du Lac, by Henry G. Thompson, Surveyor and Civil Engineer.

To JOHN JONES, Esq.
Chairman, &c.

SIR,

I have the honour to submit the following report of the survey executed by me, in compliance with the instructions communicated in your letter of the 12th August. The words of which are here set down, viz:

"The Commissioners appointed to survey Lake St. Louis and other places, under the Act 6th. Will. 4, cap. 23, having engaged your services for a portion of the survey and planning of the River St. Lawrence, from Cote à Colonge to the mill at the Cedars, and from the village of the Cedars to Coteau du Lac,—

"The object of the survey, you will find by the Act—a copy of which is now handed you,—is "to obtain such information as may serve to guide the Legislature with regard to the work which it is proper to undertake, for establishing, within the limits of Lower Canada, a water communication corresponding, if possible, with that which the Legislature of Upper Canada has undertaken to establish on the River St. Lawrence, near Cornwall, in the said Province of Upper Canada."

"As the waters of the St. Lawrence are liable to vary in depth at different times, it will be expedient that you ascertain, from persons living on its shores, the lowest level of the water at any past time, upon which to reduce all your soundings as the true depth of the water. It will also be necessary that you set up some permanent mark graduated in feet and inches, in order to rectify your soundings to the same level, during the progress of your work. In order that the Commissioners be informed of the

"progress of your survey, you are desired to make weekly reports, in abstract, of your work, by letter addressed to the Chairman of the Commission, at Quebec."

Appendix
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12th October.

At a meeting, held in Montreal, of the Commissioners, on the 12th August, I was further instructed to use as my guide, in the proposed survey, the map of that part of the River St. Lawrence which lies between the Coteau du Lac and the Cascades, executed by Alexander Stevenson, Esq. and also to limit my survey to the taking of soundings, and the ascertaining of the velocity of the current at different points.

The details of the survey with which I was thus entrusted are laid down in the plan hereunto annexed, and to which I beg leave to refer you. On the 15th August my operations were commenced at Pointe au Moulin, and continued thence in the first instance to Pointe au Chenette. The soundings laid down on the plan shew great irregularity in the depth of the water of the bay extending between the two points. On the plan are laid down six lines of soundings taken in the bay,—the first at 20 yards from the shore, the second at 40 yards, the third at 100 yards, the fourth at 180 yards, the fifth at 280 yards, and the sixth at 400 yards; the average interval between the soundings on each line is about 60 yards. I ascertained from persons living on the shore, that the water was generally a foot and a half lower than at the time of my survey. I erected a graduated water-mark, but derived no assistance from it, as the waters neither increased nor abated during my stay. The soundings are reduced one foot and a half, agreeably to the information I received. At Pointe au Moulin I ascertained, by one experiment, the velocity of the current to be 7 knots an hour;—an accident which occurred to the log line prevented me from repeating the experiment, but I have reason to believe that the result which I have marked is correct, within a few yards. From Pointe au Moulin the current diminishes gradually, and at Pointe au Chenette, I ascertained its velocity to be $3\frac{1}{2}$ knots an hour, being the mean of 7 experiments. There are a number of shoals of stone running out from the shore from 80 to 90 yards; they will be found on the plan indicated by dots. For three fourths of the distance from the extremity of the Canal to the west of Pointe au Moulin, there is a continuous channel of 5 feet reduced in depth, and for the remaining fourth I found a channel of fifteen feet. From Pointe au Chenette to Point Coulonge are laid down on the plan three lines of soundings at the distances from the shore, and with the average interval, above mentioned. I found that the current continued to increase gradually, and that at Pointe Coulonge its velocity was $4\frac{1}{2}$ knots an hour,—being the mean of 7 experiments. At the distance of 100 yards from the shore, and between the two points, as by the plan, there is a continuous channel of at least 16 feet in depth. Between Points au Moulin and au Chenette the current is strong, and may be pronounced unnavigable by ordinary craft, beyond the lines of soundings.

From the Steam-boat wharf, to Pointe Boudette, the lines of soundings laid down on the plan are irregular in number; those along the shore are generally at the respective distances above mentioned. As in the previous survey, I erected a graduated water-mark, but again found no variation; the information regarding the general depth of the water corresponded with what I had previously received. At McDonald's Point I found the velocity of the current to be $2\frac{1}{2}$ knots an hour,—lower down, $2\frac{1}{4}$, $2\frac{1}{2}$, and $1\frac{1}{2}$ knots, being, in each case, the mean of 4 experiments. At French's Reef I found it to be $4\frac{1}{2}$ knots an hour, and at Evat's Point $3\frac{1}{2}$ knots, being in each case the mean of 4 experiments. The current at Pointe Boudette is weak, and easily surmounted; the water in the small bays between the Steam-boat wharf and the latter