

SESSIONAL PAPER No. 19a

NIPISSING DISTRICT.

This district covered that part of the Ottawa river that lies between Des Joachims rapids (which are about 40 miles above Pembroke) and the Town of Mattawa; then the Mattawa river, the Summit lakes (Talon, Turtle and Trout), Lake Nipissing and the French river to Georgian Bay on Lake Huron, a distance of 171 miles, which was increased to about 260 miles with the alternative routes surveyed.

The district was placed under the able direction of Mr. S. J. Chapleau, Mem. Can. and Am. Soc. C.E.

The country lying between Des Joachims rapids and Lake Nipissing was divided into three sections, numbered 3, 2, 1, a lake party being afterwards formed to investigate that part of Lake Nipissing which lies between North Bay and Rivière des Vases, on the northeast shore of the lake, across to Frank's bay or the upper entrance of the French river.

Section No. 3.—Engineer Wm. Cross, Mem. Can. Soc. C.E., in charge.

From Johnson's rapids to Des Joachims rapids on the Ottawa river, a distance of 56 miles.

This section includes the Deux Rivières and Rocher Capitaine rapids.

The entire river valley was triangulated, closely traversed and topography taken in detail.

Soundings were taken everywhere except in the rapids, where it was impossible to ascertain the depth of water otherwise than by approximation.

Water level gauges were established throughout the section and their records maintained. Preliminary reconnaissances of the different swift currents of the Klock, Deux Rivières and Rocher Capitaine rapids showed that one continuous location was possible, and the topography was confined to the valley of the river.

The country in this section was exceptionally rough and very thickly wooded, in consequence of which the necessary topography for the project and estimate was difficult to obtain.

All contours, soundings, levels, &c., were, however, completed at the end of December, 1905, and the engineers recalled for office work or for further field work elsewhere, and the balance of the party paid off.

Section No. 2.—Engineer, H. P. Bell, Mem. Can. & Am. Soc. C.E., in charge.

This section extended from Lake Talon, following the course of the Mattawa river to its junction with the Ottawa river, thence to the foot of Johnson's rapids, a distance of about 24 miles.

Three possible routes between the Talon lake level and Lake Plain Chant on the Mattawa river were investigated. One from Sand Bay on Talon lake to the Paresseux falls on the Mattawa, one following the natural valley of the Mattawa from Talon chute, and the third, passing from Talon chute also, to the lower end of Pimisi lake, thence across to Johnson's lake, Smith's lake, Crook's lake, Moore lake, and running into the Mattawa again through a blind arm at the western end of an expansion of the river Mattawa, called Lake Plain Chant.

The investigation and close survey of other routes than the Mattawa itself, at its upper end, were necessitated on account of its narrow width and irregular course, two changes of direction being nearly of 90° each within a short distance, and occurring in close proximity to possible lock structures.

The Pimisi and Johnson lakes location necessitated a survey for the diversion of the Canadian Pacific railway main line in order to prevent two crossings.

In all over 50 miles of possible routes were surveyed on this section, and all necessary information collected for development and selection of best location. Gauges