

## INTRODUCTION.

### GENERAL STATEMENT, OBJECT AND METHODS OF WORK.

In June, 1911, Mr. W. B. McPherson was instructed by Mr. S. B. Clement, Chief Engineer of the Temiskaming and Northern Ontario Railway, to join Mr. W. R. Maher, Locating Engineer, at Gowganda and report on the geology of a territory along a trial line to be run from Gowganda to Poreupine. Nearly a month was spent in a reconnaissance south to the headwaters of the Sturgeon river, and on July 10th the party started the survey from Gowganda north. During the months of July and August the line was run through the townships of Van Hise, Rankin and Doon, and the lines which had to be abandoned were run into the south-east corner of Manitowish. The geological work was continued by the writer during the next three months, exclusive of the first half of October, which was spent in accompanying Mr. Maher in a reconnaissance of the valley of the Sturgeon. The line was run in a general north-west direction towards Wawaitan Falls on the Mattagami river; and this permitted of the mapping of a strip of country about a dozen miles in width between the Gowganda area, which was reported upon in 1908 by Mr. A. G. Burrows,<sup>1</sup> for the Bureau of Mines, and by Mr. W. H. Collins,<sup>2</sup> for the Geological Survey, and the Poreupine area mapped in 1910 by Messrs Burrows and Rogers,<sup>3</sup> for the Ontario Bureau of Mines.

Acknowledgment is due the Provincial Geologist and members of his staff for assistance in this report and the accompanying map.

The object of the survey was to obtain a knowledge of the topography of the region, particularly in relation to railway building, and of its resources in timber, mineral and agricultural land.

The method followed in the field was to travel along the townlines, the last of which were being run this year, and along the trial line and make note of the adjoining territory. Canoe routes which intersect the area in different directions were followed in so far as time permitted, and fairly accurate surveys of them made by compass and time allowance. The townships which are not served by canoe routes were traversed on foot and a paced compass survey of the route made, the mapping being done at once in conjunction with the notes in a cross section book.

### LOCATION AND AREA.

The quadrangle through which the line runs diagonally from Gowganda, N. Lat. 47 degrees 40 minutes and W. Long. 80 degrees 47 minutes, to Wawaitan Falls, N. Lat. 48 degrees 20 minutes, W. Long. 81 degrees 29 minutes, has a length north and south of 48 miles and a width of 33 miles. It lies partly in Nipissing and partly in Sudbary District, and forms part of the Temagami Forest Reserve. The

<sup>1</sup> Bureau of Mines., 18th Annual Report, Part II.

<sup>2</sup> Geol. Survey Can.: Preliminary Report of W. H. Collins, 1909.

<sup>3</sup> Bureau of Mines, 20th Annual Report, Part I.