

owing to the necessity of obtaining topographical data, which has been laid upon the staff of the Geological Survey, over very large portions of Canada, the ground work for many of our best maps has been derived from their labours, and great areas in all the provinces from the Atlantic to the Pacific have been mapped in detail, first of all by the officers of that staff, as can be seen in the large published maps of eastern Nova Scotia and in New Brunswick, in each of which many thousands of miles of roads, streams and coast lines were carefully measured and platted before the map necessary for the depicting of the geology of these countries could be laid down with any attempt at accuracy. In the newer and western sections, the well executed map of the Sudbury district, the Lake of the Woods, large portions of the Northwest plains, and great areas in the Rocky Mountains and British Columbia, testify to the labours of the Geological survey in this capacity. In the province of Quebec even, the celebrated map of the Eastern Townships, which includes also a large portion of the province west of the St. Lawrence as well, has formed the foundation of all subsequent maps of that province since it was first carefully compiled in the Geological Survey office from materials drawn from Crown Land plans, supplemented and bound together with infinite pains and labour, by surveys made by the different officers of that department, a work the difficulty of which can only be properly understood by those who have attempted similar compilations.

Probably in no country under the sun do more complicated geological problems exist than in Canada, nor are such problems anywhere on a grander scale. A territory embracing three and a half millions of square miles, or very nearly the extent of the whole of Europe, and extending from the 49th parallel of latitude to far within the arctic circle, and embracing the extremes of heat and cold, in the northern part especially, where the fierce heat of the short summer is sufficient to ripen wheat almost to the 60th degree of latitude. Here we have the oldest known rocks of the globe, the solid backbone of the western hemisphere, extending from Labrador, in a great V shaped area, to near the mouth of the Mackenzie River, and including in its survey large portions of the provinces of Quebec and Ontario, and with great overlying areas of all the systems and formations of rock strata down to