

REPORT OF PROGRESS FOR 1849-50.

To His Excellency the Right Honorable JAMES, Earl of Elgin and Kincardine, K. T., Baron Bruce of Kinross and of Torry, one of Her Majesty's Most Honorable Privy Council, Governor General of British North America, and Captain-General and Governor-in-Chief in and over the Provinces of Canada, Nova Scotia, New Brunswick, and the Island of Prince Edward, and Vice-Admiral of the same.

MONTREAL, 1st May, 1850.

MAY IT PLEASE YOUR EXCELLENCY:

I have the honor to submit to Your Excellency's consideration, the following Report of the progress made in the Geological Survey of the Province, during the year which has just elapsed.

A description of the soils of the country being one of the objects contemplated by the Legislative Act making provision for the Survey, Mr. Hunt was instructed to collect samples in different parts of both sections of the Province. The analyses of these have constituted the chief portion of his labors during the winter, in addition to the examination of various ores, minerals and mineral waters: and his Report on the result of his investigations, I have now the honor of transmitting to Your Excellency.

Agreeably to the design expressed in the Report of Progress of the 1st May last, my own attention has been principally devoted to the examination of the formations of the Eastern Townships, in their continuation beyond the Chaudière River to the Temiscouata Portage Road, in which I was aided by Mr. Murray during the whole, and by Mr. Hunt for part of the time it occupied: but having been given to understand that an unsuccessful application had been made to the Legislature, during the last Session of the Provincial Parliament, by the member for Saguenay County, for the means of prosecuting researches for coal by boring, in the vicinity of Bay St. Paul, where the discovery of supposed indications of the mineral had been proclaimed by some of the inhabitants, and that the Government were desirous that the geological character of the locality should be examined: for this purpose, when we arrived at E.-let, in the progress of our exploration on the south side, the opportunity was taken to cross the St. Lawrence to the locality in question, and two weeks were employed in investigating the rocks in the neighborhood of Bay St. Paul, and also those of Murray Bay, which present features of a similar kind. The time thus subtracted from the exploration of the south side, disabled us from effecting so complete an examination in some parts of the region as we could have wished: but indeed, in respect to the whole of that region, the very complicated contortions of its strata, their frequent metamorphosed condition, and the great extent of surface that still remains unreclaimed from the forest, and unrepresented on any map, are such as would require a much longer exploration than has been bestowed upon it, or than can perhaps be at present awarded to it: with due regard to other parts of the Province, to follow out the details of its physical structure. Many of the facts that have been ascertained appear isolated, and would require a knowledge of many more to bring into view their harmonious relation as parts of a whole, and it can only be a very general sketch of some of the main geological features of the district, that can at this moment be presented in connexion with and continuation of those exhibited in last year's Report.

In proceeding to place before Your Excellency some of the prominent facts ascertained during the

season, it will be convenient to give precedence to those derived from Bay St. Paul and Murray Bay, as the rocks there met with support those constituting the south side of the St. Lawrence, and by placing them first, an ascending order of sequence will be maintained in the formations that enter into the present description.

BAY ST. PAUL AND MURRAY BAY.

These two bays, about seven leagues apart, are the terminations of two valleys, scooped out of a mountainous country, and resemble one another in almost every respect, with the exception of their direction. The valley of Bay St. Paul, through which flows the River Gouffre, has a north and south bearing, while that of the Murray Bay River in the portion of its course at present included, runs about S. 55 E.; the former is the one further west, and it follows that the valleys approach one another in the interior: so that about ten or twelve miles up the Murray Bay River the distance between them is not over four or five miles, and there appears to be a depression from the one to the other along the foot of a range of high hills in which the Gouffre springs, but across which the Murray Bay River runs in a deep gorge, its sources being in the vicinity of those of the Montmorency River. From this vicinity it flows first to the north-east and then turns at nearly a right angle to this course, about eleven miles on the road from Bay St. Paul to Chicoutimi on the Saugenay. This road runs through the valley of the Gouffre, and another one joins it coming from the valley of the Murray Bay River, passing the Ruisseau des Frères, the Little Lake and Nairne's Lake, which are all tributary to this river. Both the valleys display a considerable amount of settlement for nine or ten miles up; the soil in both, to heights of 300 to 400 feet, is generally strong clay, with occasional patches of sand and gravel, and in the middle of the valleys these materials are found singularly distributed, not in even extensive layers, but in a multitude of small hills or hummocks, often of a perfectly conical form, thickly aggregated in many parts, and affording a marked characteristic. The soil of the uplands appears also in general argillaceous, but rising towards the mountains it becomes remarkably stony. The block of country between the valleys is mountainous, and so is the coast both above and below them, and the general elevation must be considerable, perhaps over a thousand feet above the level of the St. Lawrence. These elevated parts, however, often shew excellent farms, from the fields of which the stones have been removed with great labor, and the farms produce good crops of oats, barley, rye, pease and potatoes, in addition to which in the valleys, before the Hessian fly became so destructive in Lower Canada, abundant crops of wheat used to be obtained, and there can be little doubt, if due attention were paid to the application of manure, the mountainous character of the district would not deprive it of considerable agricultural value. A narrow strip of country on the margin of the St. Lawrence, occupying about fifteen miles of the distance between Bay St. Paul and Murray Bay, is marked by some