

tial knowledge of the boundaries of those formations for some distance on each side of the line of exploration: but their general geographical distribution throughout the district, though vaguely known, is still to be followed out and determined with precision. In the eastern division the sequence of the rocks, as displayed in the Gaspé District—where the coast section affords the fullest and best exhibition of them,—and their general relation to the Coal deposit of New Brunswick, have been ascertained and pointed out. Their range has been partially traced, but the disturbed condition of the strata will naturally render the complete examination of the district difficult and tedious. In continuation of the previous season's labors in this division, the time of my assistant, Mr. Murray, has been engaged during the past summer, and I have now the honor of transmitting to Your Excellency, his Report of the Progress effected.

A section having thus been made across the western division, and another across the eastern, shewing the nature of the deposits that are to be sought for in each; it appeared to me expedient that one should be made across the northern country, for the purpose of ascertaining some of the prominent features which might characterise it. This great northern area is drained by many considerable rivers. Of these the Ottawa, and the Saguenay are the largest. The Saguenay is placed more nearly in the middle, between the extremes of the area, but several considerations induced me to select the Ottawa for the line of exploration. The Ottawa is the larger river of the two, yielding in magnitude only to the St. Lawrence itself, and it therefore promised greater facilities of navigation in remote parts. It is more extensively connected with the commerce of the country, and while its greater proximity to my starting point, and the steamers plying on the lower part of it, would save time, a supply of provisions and Indians could be more readily procured and more easily transported. I was influenced also by the feeling that should it become necessary for me, as seemed probable, with a view to geological results, to delineate topographically any part beyond the point to which the river had been previously surveyed, either for the purpose of Township settlements or of Timber allocations, the map that might result would prove of greater utility to the interests of the Province than the produce of a similar measurement on the Saguenay.

Persuaded that the topographical part of the investigation might be made available for the purposes of the Crown Land Department, I was induced to propose to the Hon. D. B. Papineau, the Commissioner at the head of it, to unite with me, as an Assistant, at the joint expense of his Department and the Geological Survey, a Provincial Surveyor, familiar with those parts of the river already mapped, who might have paid some attention to the rocks of the district, and whose acquaintance with localities would enable him to save much time in the geological branch of the investigation, by pointing out facts known to him that it might otherwise require much search to discover; and a communication made by Mr. J. McNaughtan of Bytown, in 1842, through the Surveyor General's Office, in reply to various questions circulated on behalf of the Geological Survey, and subsequent conversations with him, having made me aware that he could be of essential service on the Ottawa, with the consent of the Commissioner of Crown Lands, it was arranged that he should accompany me.

Supplying ourselves with provisions we were enabled to forward them up the Ottawa, first by steam-propellers to Bytown, and thence by steamboats plying on the Lakes Chaudière and Chats, with the assistance of waggon conveyance established at the portages, as far

as the Falls of the Calumet, a distance of about 175 miles. Four Indians were hired at Caughnawaga, and with the aid of the gentlemen in charge of the Hudson Bay Company's Posts, at Lachine and the Lake of the Two Mountains, we obtained a couple of excellent birch-bark canoes. I have to express my obligations to Mr. McTavish, in charge of the latter Post, who, in addition to the trouble he took with respect to our craft, materially assisted the objects of my research by presenting me with a collection of specimens obtained from the interior of the country on the higher part of the river in the vicinity of the Grand Lac, which are of value as shewing the nature of the rocks over a very considerable area, not easily visited; and to the Governor, Sir George Simpson, I was indebted for a general and very serviceable letter of recommendation to all the Agents in charge of the Company's Posts.

Visiting several parts on both sides of the Ottawa for the examination of the strata, and making an excursion up the Rivière à la Grasse, and another a short distance up the Rivière du Nord, we proceeded in our canoes as far as Grenville; from this we took advantage of the steamer to Bytown, having on a previous occasion examined the interval. Spending a few days there it was my good fortune to enlist in my favour the aid of Mr. McDermott, Provincial Surveyor, who most obligingly undertook to keep a register of barometrical observations at stated periods of the day, until my return, with a view to a more exact determination of such heights as it might be expedient to measure in the interior of the country; and for this purpose one of my instruments was left in his possession. In investigating the vicinity, Mr. McNaughtan guided me to several points of geological interest in Nepean, and the assistance of Mr. Blasdell and Mr. Hayworth enabled me to see others in Hull.

Again taking to our canoes, we coasted along the north shore of the Chaudière Lake to the Chats, where a few days were spent in examining different spots in Fitzroy, Torbolton and Bristol Townships; and having had the misfortune to lose one of my thermometers, and break another, I was accommodated at the Chats with the loan of an excellent pocket instrument, through the kindness of Dr. Dubord, without which much inconvenience would have been experienced in barometrical measurements. Ascending the Chats Lake, we made an excursion up the Mississippi River to Packenham, where Mr. Dickson, the founder of this thriving village, who takes an interest in geological phenomena, was so obliging as to accompany me to several spots in the vicinity, and to supply me with a small collection of specimens illustrative of the rocks of the Township; another excursion was made up the Madawaska River to the High Falls, a distance of about thirty miles from the mouth; a third up the Bonnechère to Jessop's Rapids, about the same distance; and having examined both shores of the Chats Lake, we proceeded by the Cheniaux to Portage du Fort, the highest point on the Ottawa to which steam navigation at present reaches; thence we ascended by various rapids and portages to the Falls of the Calumet, where we were very kindly received by Mr. Gerrard Nagle, in charge of the Timber Slide constructed there by the Board of Works, who obligingly pointed out the locality of several minerals met with in blasting the limestone rocks occupying the river, for the seat of the slide. Having made a complete circuit of the Calumet Island by the Roche-fendue Channel, the Muskrat Rapids and Moore's Slide, we loaded our canoes with our provisions, which had arrived in safety at the head of the Calumet Portage, and continued our expedition, examining the shores of the Coulonges Lake, including the vicinity of the Fort, where we touched, to the mouth of the Black River; whence we proceeded by