

The report of progress of this survey for 1870-71, the last published, contains much important information on the resources of the country.

Beginning with Southern New Brunswick the officers of the survey there examined the greater portion of the counties of St. John and Charlotte with portions of the adjoining counties.

Westward of St. John river, the tract of country along the coast is of very unequal character, in some parts capable of cultivation, in others it is hopelessly barren, and as a whole, is for agricultural purposes the least promising in the Province. North of this extends a range of hills on the northern side sustaining several settlements, and northward of this there is a level or gently undulating plateau, containing extensive peat bogs and swamps. Where not too thin, the soil is good, and many settlements are included in its limits.

Eastward of the St. John River, the country is more hilly and the coast is frequently bold and high. The highlands have mostly a meagre soil with an occasional vigorous forest growth, but in the valleys of the rivers are found very rich agricultural districts, the fertility being much increased by the limestone and gypsum beds abundant in this region. Iron, copper and manganese, and probably antimony, are found in quantities which promise to be economically available. Lead occurs at a number of points but in small quantities. Small seams of anthracite are not uncommon, but as yet have not been discovered in an extent to be of commercial value. Bituminous shale is found yielding 63 gallons of oil to the ton, or 7,500 cubic feet of gas. There are extensive deposits of peat. Plumbago is found in beds available for economic purposes. Beds of limestone and gypsum are met with at various points. Sandstones of superior quality may be obtained. Granite, sandstone, limestones, marbles, flag stones and roofing slate for building purposes are abundant. There are also a number of ornamental stones.

A careful survey of the Gold Fields was made by Mr. Selwyn the Director of the Geological survey. He estimates the extent of the Gold Bearing region on the Nova Scotian Atlantic Coast exclusive of Cape Breton, as 3,500 square miles. Comparing the physical features of the Australian and Nova Scotian gold districts, the latter presents long narrow lakes, pools and swamps in place of the grassy "flats," and flat-bottomed "gulleys," of the Australian districts. The alluvial gold is found by sinking through the alluvions to the bed-rock. It becomes a question whether rich deposits may not underlie many of the lakes and swamps of Nova Scotia, and whether they could not be profitably mined. The great quantity of water which would be probably encountered in all the deep low-lying drift deposits constitutes a serious hindrance to individual enterprise, but they offer a very promising field for combined labor and capital.

At the Chaudière Mines, Quebec, "with requisite appliances for draining the ground there seems every reason to hope that a very extended and valuable field of gold mining will be opened up, especially when considered in connection with the known wide distribution of gold in the region." If, instead of extending explorations as has commonly been done lately, in the direction of the river, they were to be pushed in every

part of the banks where no rocky edges are seen in place, as is done in Australia, the Director is of opinion that the enterprise of the explorer would often be richly rewarded. He is also of opinion that the quartz veins might be profitably worked. The mining operations, especially in Nova Scotia, have been conducted in a very wasteful improvident manner. The yield of gold is greater than the average yield of Australia and the price of labour not so high. The natural capabilities of the gold bearing districts are favorable, but they have not been worked with sufficient intelligence and enterprise.

LAKE ST. JOHN AND SAGUENAY DISTRICT.

An expedition under Mr. Richardson visited the unexplored country on the Saguenay district north of Lake St. John. Penetrating beyond the water shed forming the northern boundary of the Province of Quebec, as far as Lake Mistassimi, in Rupert's Land, crossing to the head waters of the St. Maurice, thence to those of the Gatineau and crossing by land 100 miles to Ottawa.

From Lake St. John they ascended the Ashuapmouchouan as the river is there called, a general N. W. course for 92 miles. Here the river divides into two branches, the larger from the N. E. called by the Indians Chief River. For the first 36 miles the soil was excellent; then the country becomes rocky with but little soil. The forest has been burned. The trees were principally spruce, balsam fir, white birch, poplar and mountain ash. The spruce was from 12 to 18 inches in diameter, and 40 to 80 feet high. Nineteen miles from the junction of the Chief River they entered Lake Ashuapmouchouan. For this distance, the country is comparatively level, part of it sandy, but as the neighbourhood of the Lake is reached, the soil becomes a sandy loam, the trees attain a good size, the coarse grass in open places near the lake and river was from 3 to 4 feet high, and timothy grass on the 9th July 2 feet high. Blueberries were ripe on the 5th and raspberries on the 7th July. The thermometer on the 9th of July at half past ten in the evening was at 60°, and at 7 P.M. the water in the lake was of the same temperature. Lake Ashuapmouchouan, is 1184 feet above the level of the sea, and 147 miles north of Montreal, yet at half past three on the 11th July there was only a difference of 3 degrees in the heat. Still pursuing a general N. W. course, they ascended the Nikoubau river and lakes till 170 miles from Lake St. John they reached the height of land, 1359 feet above the sea level, 53 above the head waters of the Nikoubau and 20 above the water that runs to James Bay. Between these two head waters the portage is not quite half a mile. The land for the first 7 miles up the Nikoubau continues to be of good quality, after that the country becomes rocky and hilly. Much of the forest appears to have been burned and the ground is covered with a second growth of small white birch, cypress and blueberries.

At Lake Nikoubau the spruce, balsam fir, &c., attain a good size. The soil, as far as observed, is sandy over the whole distance. Continuing to the N. W. they reached Lake Abatogomaw, which took them 10 miles further in the same direction. The country between the Height of Land and this lake, was more uneven but still sandy and barren;