

EAST END OF ISLAND.*
(Average of a number of Analyses.)

	Per cent.	Per cent.
Metallic iron.....	54.000 to	59.000
Silica	5.000 to	12.000
Alumina	2.000 to	4.000
Phosphorus	0.500 to	0.700
Sulphur	trace to	0.012
Carbonate of lime	3.000 to	5.000
Oxide of manganese	trace to	0.400

WEST END OF ISLAND.

	Per cent.
Metallic iron..	56.020
Oxygen with the iron .	23.400
Silica	9.100
Aluminum.....	4.690
Lime ..	1.600
Magnesia	0.501
Oxide of manganese	260
Sulphur	trace
Phosphorus	0.514
Titanic acid	none
Water and organic matter ..	2.820
Undetermined matter and loss	1.092

100.000

Besides these Bell Island deposits, there are enormous masses of various kinds of iron throughout Newfoundland, notably along the north-east coast, the west coast and the northern shores of Conception Bay. Amongst the more common are: magnetite, hematite of different varieties, specular iron and arsenical pyrites, whilst associated with the carboniferous series, to which I will refer shortly, are a number of beds of clay band ironstone whose extent and value are yet to be determined. During a recent visit to the colony I was shown some samples of bog iron ore of very good quality which had at that time been brought into St. John's for analysis.

CHROMITE.

Another economic mineral, which is now in the hands of the Canada-American Company, and which promises well, is an extensive deposit of chromite on the west coast. Some exploratory and development work has been done there during the past summer, and about fifty tons were shipped as a test quantity.

COAL.

Regarding the coal deposits of the island, it is impossible at present to say much. They have long been known to exist, but the country has been entirely devoid of means of internal communication until the railroad from St. John's to Port aux Basque, which is now nearing completion, opened up what was pretty nearly unexplored land. R. G. Reid, of Montreal, the builder of the road, has paid a great deal of attention to the mineral deposits along the line, and, amongst other things, he has exposed several seams of coal. I have examined some samples of these, and while I have not yet made any analysis, I am fairly well satisfied as to their quality. One seam, in particular, is of a hard, clean, bright nature and very free from dirt bands. The coal fields are confined, so far as is at present known, to the western side of the island, in the neighborhood of Grand Lake and Bay St. George. The new railroad passes through or very close to the two main areas, so that there should be no difficulty about their development. The knowledge of these seams is as yet scant, and it will require the services of an expert economic geologist to determine their extent, quality and commercial value.

GOLD.

For the last fourteen or fifteen years there have been periodic rumors of the discovery of gold in New-

foundland. The first real find, specimens of which may be seen in the Museum at St. John's, was at Brigus, on the western shore of Conception Bay. There are several sights of free gold in the specimens; the metal is secreted in cavities in the quartz, but unattached to it, being merely kept in place by a felspathic matrix, and when this rotten felspar is picked out the gold may be shaken from the specimen. The quartz at Brigus is pockety, however, and, to quote the Government geologist, "was rarely of any extent, and a few blasts not infrequently resulted in the disappearance of the lode rock." At Ming's Bight, on the north-east coast of the island, close to the copper deposits of Notre Dame Bay, some very fine specimens of dolomite crystals have been found. These are plated with gold as if electroplated, and the metal can be seen penetrating and plating the cleavages of the crystals. Gold has been detected in all the copper ores of Notre Dame Bay, and that it is in appreciable percentages seems evident from the fact, as stated to me by the Government Geologist, that the owners of the Union Mine, at Tilt Cove, had received as much as \$50,000 of gold from the copper in the process of refining during twelve months. The refuse slag heap of former years has also been carefully picked over with considerable profit. Recently some excitement has prevailed in regard to reputed finds of gold-bearing quartz at Cape Broyle, on the Peninsula of Avalon, about 40 miles from St. John's. Several veins of quartz, some of them of considerable thickness, have been discovered running through beds of diorite in the Huronian rocks, of which the peninsula is chiefly formed. The quartz is white, carrying quantities of galena and pyrites. Assays have been made by reputable English firms, and as much as 2 ounces 19 dwts. 12 grs. of gold, and 1 ounce 11 dwts. of silver per ton have been obtained. Shafts have been sunk in several places and work will be resumed in the spring. Perhaps the most promising feature of the prospect lies in the fact that the diorite in which the quartz occurs has been found to yield 8 dwts. 12 grs. per ton, and if this is obtainable in any quantity it should be worthy the attention of capitalists as a profitable low grade investment.

SILVER AND LEAD.

The various ores of lead are liberally disseminated over the entire island, but the richest deposits have been found near Placentia, on the southern extremity of the Peninsula of Avalon. Mining operations have been carried on in a desultory manner since 1857, and up to 1892 over 2,500 tons of galena were mined. The ore is found in the quartz veins of the Huronian system, and the percentage of silver is variable. During my recent visit I obtained specimens of lead ore from a new find, picked samples of which yielded a really large percentage of silver to the ton.

PETROLEUM.

A local company has been doing considerable boring on the west coast, and strong indications of the presence of oil are said to have been found. The shares of the company are above par, and the excitement is very great in St. John's at present, but no reliable information could be obtained as to the exact results. There is no doubt, however, of the existence of oil, but whether it may be found in paying quantities or not, I am unable to say. From the position of the field I expect the oil would require to be piped a considerable distance to reach either a seaport or railroad.