

station on the Intercolonial Railway. According to Dr. Bailey, the geological relations here are similar to those of Markhamville; the ore is found in strata of Lower Carboniferous age near their contact with older metamorphic rocks. But instead of occurring as in the last named locality, in limestone, it is found in connection with shales and shaly conglomerate, the brecciated character of which is in contrast with the rocks at Markhamville. Work was begun on this deposit in 1882 and some good ore is said to have been extracted from an open cut. The ore is a mixture of pyrolusite and manganite occurring in lenticular interbedded masses. There are also small veins and stringers of manganese oxide penetrating the surrounding rocks.

*King's County, Hillsdale.*—Some fine surface indications of manganese ore are said to have been observed at Hillsdale about five miles southeast from Elgin corner. No particulars of this deposit are available.

*St. John County, Quaco Head mine.* This is situated on the north shore of the Bay of Fundy on a promontory which forms the southern boundary of Quaco Harbour. The mine is about one mile south of the village of St. Martins. The following description of the deposit is taken from the bulletin by Dr. Penrose who examined it in 1890 when it was being worked by the Brunswick Manganese Company. "The manganese is sometimes crystalline representing pyrolusite and possibly also manganite, while at other times it is hard and massive, possibly representing psilomelane, and still again a porous honeycombed form. These ores are found in Lower Carboniferous shales and limestones, associated with a large conglomerate bed.

"The rocks are greatly disturbed and have been much shattered and broken by igneous intrusions. They now stand at steep angles sometimes almost vertically, exposing in different parts of the headland areas of limestone, shale, and coarse conglomerate. Masses of igneous material protrude into these beds at different points and on either side of the headland are beds of Triassic sandstone and fine conglomerate lying unconformably on the upturned edges of the older rocks.

"The manganese occurs as nodules and irregular discontinuous veins, in both the shale and the limestone, though the larger quantities are in the former. The nodules vary from a fraction of an inch to several inches in diameter, and the thickness of the veins is equally variable. The disturbed character of the rocks renders it somewhat difficult to determine the thickness of the main ore bearing bed but it is probably not over thirty feet though smaller quantities of manganese are found in the rocks on either side. The ore is scattered through this thickness in very variable quantities.