

The present Great Lakes began with this final retreat of the ice. In front of the melting glacier stood lakes whose outlines can be traced to-day by their old beaches. The region of lakes Superior, Michigan and Huron was occupied by a great body of water to which the name lake Algonquin has been given, while the basin of lake Ontario was covered by glacial lake Iroquois. The history of the drainage changes of these lakes is complicated. The early drainage of lake Algonquin was by way of Niagara river. When, however, the ice had retreated north of Kirkfield, Ontario, the Trent valley channel was opened up and the flow was from the Georgian Bay region to lake Iroquois, robbing the Niagara of most of its waters. The region, however, was slowly rising, owing to the removal of the load of ice which had long weighed it down, and in time the drainage was once more swung around to the lake Erie and Niagara route. During this stage, part of the drainage of lake Algonquin found its way to the Mississippi waters. When the ice retreated still farther north, a new outlet was opened at North Bay and the drainage took place by way of the Ottawa river, Niagara once more being robbed of most of its water. Continued uplift of the land, however, raised the outlet at North Bay and eventually the old channel past Port Huron and lake Erie to the Niagara once again became the outlet channel, a course which has been maintained to the present day.

What changes will take place in the future? If uplift continues along the lines it has in the past, the next great change which may be expected to take place will be a change of the drainage of the upper lakes past Chicago into the Mississippi, thus again robbing Niagara of most of its waters. This possibility, however, is a matter of future centuries and is of no immediate concern. Much more important in this regard is the action of man in artificially diverting part of the flow of the upper lakes by means of the Chicago drainage canal into the Mississippi waters, thus lowering the level of the upper lakes and depriving Niagara of part of its volume.

2.—Economic Geology of Canada, 1925.¹

The purpose of this paper is to call attention to the most important reports and articles treating of the economic geology of Canada and published during 1925. The particular articles here referred to, although recently published, do not necessarily contain the best and most complete information on the subjects treated; for further information, therefore, it is advisable to consult the Dominion and provincial Departments of Mines. The reference numbers appearing through the text indicate the publishers as listed at the end of this paper.

China Clay.—A description is given by Sydney Hancock⁴ of a china clay deposit on the east bank of Mattagami river about 32 miles northwesterly from the present terminus of the Timiskaming and Northern Ontario railway. Between 30 and 40 acres have been thoroughly explored. The overburden ranges from 2 to 12 feet in depth. Some of the drill holes were carried to a depth of 150 to 200 feet in a mixture of china clay and silica sand. One 200-foot hole which was started very little above the water level indicates that the deposit has a thickness of at least 350 feet, measuring from the top of the bank. The china clay is overlain by fire clay. It is thought that the deposit was formed from an intrusive mass consisting mainly of quartz and feldspar.

Clays and Shales.—A report by the late Joseph Keele¹ on the clay and shale deposits of Ontario contains notes on the geological formations in which material

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