

PHYSICAL CHARACTERISTICS OF CANADA.

principal minerals of New Brunswick are gypsum, iron, coal, stone for building purposes and grindstones, clays, antimony, manganese, mineral water and oil-bearing shales. Natural gas is also an important product. The main asbestos mines of the world are situated in southeastern Quebec, and there are important deposits of chrome iron ore, copper and pyrite. Iron ores and gold also occur.

Lowlands of the St. Lawrence Valley.—The southern portion of Ontario and the valley of the St. Lawrence are very similar geologically to the State of New York, and consist mainly of flat-lying Palæozoic rocks. The mineral products are the same, viz., clay, cement and other building materials, petroleum, natural gas, salt, gypsum and other non-metallic minerals.

Laurentian Plateau.—North of the valley of the St. Lawrence, from Newfoundland to beyond the lake of the Woods, and enclosing Hudson Bay like a huge V, is an area of pre-Cambrian rocks, estimated to cover 2,000,000 square miles, or over one-half of Canada. Over the greater portion reconnaissance surveys only have been made, and the southern fringe of it alone may be said to be known, and of this fringe only a portion has been prospected. These rocks of the pre-Cambrian are remarkable for the variety of useful and valuable minerals they contain. Iron, copper, nickel, cobalt, silver, gold, platinum, lead, zinc, arsenic, pyrite, mica, apatite, graphite, feldspar, quartz, corundum, talc, actinolite, the rare earths, ornamental stones and gems, building materials, etc., are all found, and are, or have been profitably mined. Most of the other minerals, both common and rare, that are used in the arts have been found. Diamonds have not been located, but from their discovery in glacial drift from this area it is altogether probable that they occur.

A tongue of these pre-Cambrian rocks extends into New York State, which supports some large and varied mineral industries. Another extension crosses over from Canada into Michigan, Wisconsin, and Minnesota. In it are located the Michigan copper mines and the great Lake Superior iron ranges. Along the southern edge of the pre-Cambrian in Canada there are known the gold ranges of the lake of the Woods, the silver of Thunder Bay, a succession of iron ranges extending from Minnesota for hundreds of miles to Quebec, copper rocks of Michipicoten and Bruce mines, the Sudbury copper-nickel deposits (probably the largest high grade ore bodies in the world), the Montreal river and Cobalt silver areas, the Porcupine and other gold deposits, the corundum deposits of eastern Ontario, the magnetites of eastern Ontario and Quebec and their large apatite-mica deposits.

Interior Plain.—The greater portions of Manitoba and Saskatchewan, which lie outside of the pre-Cambrian, and the province of Alberta, are pre-eminently agricultural; but in addition to furnishing an important market for the product of the mines they will have a large output of non-metallic minerals. The Interior plain is underlain for the most part by sedimentary rocks, chiefly of Cretaceous age, and containing coal, building stones, clays, some of them high grade, and cement materials. Natural gas over wide areas and under great pressure has been tapped, and there is every indication of a large oil field in the northern portion at least of Alberta, and some oil has been encountered