The result was the formation of the numerous lakes which are everywhere so characteristic a feature of the region. On the retreat of the glaciers, large temporary lakes were left in front of ice and in these clay and other fine stratified deposits accumulated forming what are known as clay belts.

Rocks are disrupted by faults in periods of folding or mountain building, in periods of settling following folding, in areas of volcanic activity, and near intrusive bodies. The Canadian Shield is consequently greatly broken by faults, some of which have offsets running several miles.

A geological map of the Canadian Shield based on present knowledge would show large and small bodies of various shapes but mostly long and narrow of sedimentary, volcanic and intrusive rocks set in a base of granite and granitoid gneiss.

The mineral resources of the Canadian Shield are of great variety and immense value. In 1939, the latest pre-war year, it produced 85 p.c. of the gold of Canada, 39 p.c. of the silver, 87 p.c. of the copper and all of the nickel, radium, platinum and cobalt. There are no deposits of coal or oil in the Precambrian rocks.

The large gold deposits of the Shield are gold-bearing quartz veins or are siliceous replacements in which gold is the only metal of considerable value. Such are the deposits of the Beattie, East Malartic, Lamaque, Siscoe and many other mines in Quebec; of the Hollinger, McIntyre, Dome, Lake Shore, Wright-Hargreaves, Kerr-Addison, Leitch, Pickle Crow and many other mines in Ontario; of the San Antonio, God's Lake and others in Manitoba and of the mines at Yellowknife, N.W.T. and at Athabaska Lake, Sask. Some of these mines are very big. In 1939 for example, the Hollinger produced 425,614 ounces of gold and the Lake Shore 368,320 ounces. Several of the mines are more than a mile deep.

Several of the large copper-producing mines of the Shield also produce gold, nickel and other valuable products. These are large sulphide deposits consisting in the main of the minerals pyrite, pyrrhotite and chalcopyrite with lesser amounts of arsenopyrite, galena, sphalerite and magnetite. The larger deposits of this type are those of the Horne Mine, Que.; the International Nickel Mines of Sudbury, Ont.; and the Sherritt Gordon and Flin Flon Mines of Manitoba. The Horne Mine in 1939 produced 274,574 ounces of gold as well as some 83,000,000 lb. of copper. The International Nickel Company Mines at Sudbury yielded more than 300,000,000 lb. of copper and more than 200,000,000 lb. of nickel. Flin Flon produced in addition to copper, zinc and gold considerable amounts of selenium and cadmium.

Small quantities of iron, molybdenite, titanium, arsenic, lead and other metals are also produced from the Shield. The Shield also supplies mica, feldspar, fluorspar, graphite, phosphate and other non-metallic minerals.

The great areas of granite and granitoid gneisses of the Shield are not host rocks for metallic mineral deposits and in remote districts such rocks at present have no commercial value. Near centres of population, however, they might have a value as building stone. Closely allied rocks, however, such as the anorthosites contain titaniferous iron ores. Nepheline syenites in Ontario have recently been used to a considerable extent in the glass industry. Economic minerals that are expected in the granitoid areas are such as occur in pegmatite dykes. These dykes are late products of igneous intrusion and may contain spodumene, beryl, mica, tin, feldspar and other minerals.

The bodies of other rocks that occur in the Shield surrounded by granitoid rocks are of exceptional economic interest. It is in these bodies that all the metallic ore deposits of the Shield occur, and any large body of such rocks anywhere in the