weakness were developed in the schist by shearing and into these quartz was injected under heavy pressure. While a certain amount of fracturing was present at the beginning of ore deposition, the deposits are the result of enlargement by metasomatic replacement, and the quartz, which was the avenue of mineralization, also silicified the surrounding schist.

Ellsworth Y. Dougherty[6], in a paper entitled "Mode of formation of the Porcupine quartz veins", states that the quartz veins were formed by the insinuating penetration of numerous tight or narrow fissures and replacement of the contiguous rock. He finds no evidence of forcible disruption of fissure walls, but holds the view that vein fluids sought the more penetrable portions of the rocks, exerting hydrostatic and vapour pressure and expanding force in penetration and chemical dissolution rather than in disruption of the invaded rock.

A revised edition of the report on Kirkland Lake gold area by A. G. Burrows and Percy E. Hopkins[3] has been published. Here the folding of sediments of Timiskaming age was followed by igneous activity during which basic and acid rocks, including lamprophyre, porphyry, syenite and granite, were intruded into the older rocks. It is likely that the granite, syenite and feldspar porphyry belong to the same period of intrusion and are different phases of a magma which underlies a large part of the area. Although the gold-bearing veins were formed subsequently to the intrusion of the porphyry, the solutions from which the gold was deposited represented in all probability the end product of the intrusion of acid rocks.

Reports by members of the staff of the Ontario Department of Mines on Larder Lake gold district, Night Hawk lake, Lightning river and several other areas, have also been published.

J. B. Tyrrell and R. E. Hore[4], in a paper on the geology of the Kirkland Lake mine, point out that a red greywacke with an overlying coarse grey conglomerate which had been deposited in horizontal layers on a pre-existing surface, had been intruded by a sill of lamprophyre, which in turn was intruded by a red syenite, and that before or after the intrusion of the syenite the rocks were tilted to about their present position and then intruded by nearly vertical dykes of feldspar-porphyry and mica-lamprophyre running in a general east-southeast direction. The rocks then suffered severe faulting. In the underground workings there are two strong fracture planes, 50 to 100 feet apart, and all the rock between these fractures, whether lamprophyre, syenite or feldspar-porphyry, is broken by a number of smaller parallel faults which, probably more than the main faults, served as channels for the passage of the mineral-bearing solutions that deposited their loads in the fractures of the brittle acid rocks.

Reference has been made in the paragraph on copper to articles by H. C. Cooke and A. O. Dufresne on the recently discovered mineral deposits of northern Quebec. Some of these are of value for their gold content, others are deposits of copper and zinc sulphides with a gold content. Notes have also been given by W. F. James and J. B. Mawdsley[4] on the geology of Clericy and adjacent townships.

An unusual occurrence of gold is described by E. S. Moore[4]. Boulders of quartzite of Precambrian age discovered near Goudreau lake, Ontario, for the most part angular and ranging in size up to two feet in diameter, were found to be auriferous, the gold being associated with pyrite. In the more highly-oxidized portion, gold could, with the aid of the microscope, be observed lining small cavities. It was probably introduced with the pyrite along cracks in the rock and between grains of silica. No evidences of a placer origin were observed. Some samples gave assays of several hundred dollars to the ton.