quartz ore magma took place in a manner exactly similar to the intrusion of pegmatite veindykes elsewhere, crystallization began, and the bulk of the magma crystallized as quartz with some contemporaneous pyrite and gold. A part of the remaining more highly metalliferous portion of the magma escaped into the wall rocks or penetrated and replaced isolated inclusions of country rock in the veindykes, and a part ascended and entered cracks that had developed in the higher parts of the veindykes through cooling and contraction. At Kirkland lake there was the same sequence of lode history as at Porcupine, but with different factors present in different proportions. Here the more mobile, richer portion of the gold-quartz ore magma is well represented and but little of the white quartz veindyke portion. It is inferred that the more mobile portion rose from the ore magma from which quartz crystallized in veindykes at greater depth.

The results of an examination of the ore deposits of the Argonaut gold mine of Ontario is presented by H. C. Cooke.[1] In this area Keewatin lavas, most of which are basic in character, were intruded by dykes of quartz diorite. The intrusions were followed by compressive stresses producing joints into which dykes of syenite porphyry were afterwards intruded. The ore was deposited from heated solutions that ascended mainly through the zone of rocks heated by the quartz diorite dyke and effected alteration in the heated country rock. There is no evidence to indicate the source of the vein-forming solutions. They were introduced after the intrusion of the syenite porphyry, and since the quartz diorite was still hot when the vein-forming solutions entered, the intrusion of the porphyry must have followed that of the diorite very closely. The Crown Reserve property has also been described by H. C. Cooke.[1] The ore-bodies are replacement veins or lenses developed in Keewatin lavas and tuffs by solutions that entered through the fissures of a distributive fault. It seems probable that these solutions were derived from a mass of diorite porphyry in the vicinity.

Considerable attention has been directed during the last two or three years to the economic possibilities of the geological formations in northwestern Quebec similar to those in which the important gold deposits of Ontario occur. A number of promising discoveries have been made. Field investigations have been carried on by H. C. Cooke[1], W. F. James[1], Robert Harvie[1] and others[4,5]. The areas that have attracted greatest attention are those underlain by Keewatin lavas and tuffs and Timiskaming sediments. These have suffered intrusion by porphyry, gabbro, etc. Through experience gained in the gold fields of Ontario, prospectors have shown a tendency to restrict their intensive work to the vicinity of syenite porphyry intrusives, to the exclusion of other bodies of igneous rock. Field work has, however, shown that ore-bodies may be derived from other rocks as well as from the syenite porphyry.

The gold-quartz deposits of Rice Lake area, Manitoba, are described by J. F. Wright.[1] They outcrop as a series of lenses which partly replace the country rock and fill fracture planes in volcanic and interbedded sedimentary rocks of pre-Cambrian age and in granitic intrusives. It is thought that in their final stages of intrusion the wide sill-shaped masses of granitic magma thrust aside the intruded rock, producing openings or easily replaceable zones by intense fracturing both in the intruded rock and in the nearly consolidated intruding rocks. The residual solutions, carrying quartz, pyrite, arsenopyrite, chalcopyrite and gold from the granitic magma, were concentrated along these zones. The gold-quartz deposits of Beresford lake, Manitoba, are described by J. F. Wright[1] as outcropping along fracture and shear zones in a massive coarse-grained granodioritic phase of a granitic intrusive