

has been won by mining. The deposition of gold in the slate and quartzite must have commenced before the Carboniferous. Thus the gold and the granite do not differ widely as regards the time of their introduction, although the limits of one of the older geological divisions, such as the Devonian, include a period of time so vast as to beggar the imagination of a chemist in his laboratory. Nor is it to be assumed that the deposition of the gold, much less its distribution and concentration in the quartz, so as to constitute orebodies, was confined to any single period. Once brought within reach of the agencies of solution and precipitation lurking in the waters that circulate near the earth's surface, the gold became forever subject to migration, tending to concentrate or to scatter the metal according to changing chemical and physical conditions.

The land now represented by Nova Scotia has passed through successive periods of pressure and uplift, the margin of the aboriginal American continent having been roughly parallel to the longer axis of the Province. The Algonkian beds have undergone tremendous folding. The Silurian and Devonian rocks overlying the gold-bearing series also exhibit plication, but the folds are not so conformable as to warrant the belief that one agency was responsible for all the disturbances recorded by these rocks of different geological ages. It is probable that the Algonkian sediments underwent lateral pressure throughout the Cambrian period and later, especially at the time of the granitic intrusion, for it is apparent that the basal strata from which the slate and quartzite were evolved have suffered long-continued deformation. Besides the main folds, with their axes running east and west, there are cross-folds, the net result of which has been to form domes and troughs. These constitute the characteristic geological feature of the region and largely determine the shape of the orebodies from which gold is extracted by mining and milling.

THE DOMES.

The gold is associated with quartz, which in the main follows the bedding of the country-rock; hence it forms sheeted bodies of ore that are sandwiched between the stratification, especially along the thin seams of slate. Since the quartz follows the structural lines of the country-rock, it forms 'saddles' where the slate and quartzite have been bent into anticlinal folds; but the most pronounced development of ore—for sometimes the quartz contains enough gold to constitute ore—is on the 'domes' formed where folds cross each other.