

The augite, colourless and much decomposed, occurs in less amount than hornblende. In some places scattered fragments extinguish simultaneously, and appear to be remnants of a larger original crystal. A few rather large grains of sphene are found, and calcite appears amongst the secondary constituents.

The rock is, therefore, intermediate between hornblende granite and quartz-mica-diorite and belongs to the tonalite or grano-diorite type.

IV is a coarsely crystalline rock of a greenish, sometimes almost black colour. In the microscopic section it is found to be holocrystalline, and to have a granitic structure with a tendency towards idiomorphism on the part of the chief mineral constituents. These are essentially plagioclase, augite, biotite, olivine, hornblende and quartz. The accessory minerals are iron and apatite, with secondary calcite and serpentine.

The plagioclase was observed in several instances to extinguish asymmetrically on the albite twinning lamellae, at an angle of 35° . Hence it is probably labradorite.

Augite occurs in well formed crystals which are flesh-coloured, or nearly colourless. It is often intergrown with brown hornblende, the latter sometimes forming a border or fringe around an augite crystal. The hornblende is brown and extinguishes at an angle of 14° with the longer axis. The scheme of absorption is $c > b > a$.

Olivine forms the largest individual crystals in the section. They show characteristic high single and double refraction and lines of parting. Along the latter, the mineral has altered to a yellowish green serpentinous decomposition product. In natural light a section is made quite dark by the presence of a vast number of minute, opaque, trichite-like inclusions which appear unchanged in completely serpentinized portions of the olivine and are probably some ore of iron. Alteration to serpentine is observed to have taken place in the centre of an otherwise fresh looking crystal of olivine. In others, the change begins along the lines of parting or around the margin. A little interstitial quartz is to be seen.

The rock is an olivine gabbro, and is essentially similar to the olivine gabbro of Mount Washington river, New Hampshire, contained in a series of typical rocks prepared by Dr. F. D. Adams, of which descriptions were published by the Geological Department of McGill University in 1896.

A comparison of these dikes with what is known of the Mount Orford series on the one hand, and with the rocks of the Monteregian