

be aggregates of grains of augite not in close juxtaposition with an interstitial base, although that figured in Plate XII, Fig. 5, would seem to be a polysomatic augite, and if so is the only strictly parallel instance that I can find of this structure so common in this dyke and in others of the region.

The augite is generally altered to hornblende at its periphery and occasionally the latter mineral entirely replaces the former. The process of alteration does not appear to proceed along the almost or quite imperceptible lines of demarkation between the different individuals of the polysomatic augite, but extends from the periphery of the mass as a whole in towards its centre.

The plagioclase appears in two general forms a rather stout or tabular form which is the larger and usually the more cloudy with decomposition products, and a small long lath shaped feldspar which appears quite fresh and in which the polysynthetic lamellae are much more distinct than in the former.

Magnetite occurs in irregularly bounded masses or is disseminated, often quite thickly, through the augite as inclusions of dusty or finely granular aspect. Pyrite also occurs and is discernable macroscopically. Apatite is seen in occasionally colorless hexagonal sections and in slender prisms with rounded terminations. Water-clear quartz, with inclusions of apatite microlites and liquid inclusions with dancing bubbles, forms a considerable proportion of the mineral constituents of the rock and is characterised by having a common orientation for isolated sections over a wide area of the microscopic field, as in the micropegmatite structure. A few colorless garnets are also present. The rock, such being its characters, may be classed as a uraltic quartz diabase.

At 20 feet from the contact the rock is very similiar to that at 60 feet but is much less coarse in texture. It differs from the latter in mineralogical composition in the fact that there is present an abundance of white or colorless garnets, all perfectly isotropic. They have a well defined border indicative of a high index of refraction and a perceptibly rough surface. Their shape is for the most part rounded, or, when rectilinear outlines are observable, they are hexagonal sections of the rhombic dodecahedron. The larger grains have a curved parting which may be demarkation lines between different individuals. The treatment of the slide with