

- Orthoclase. The first shows no striation and in ordinary light is quite turbid. It is presumably all orthoclase. Of that which fell at 2.62, the clear grains are finely striated by polysynthetic twinning, to the plane of which the extinction is nearly parallel. They are oligoclase or andesine. The turbid grains of this weight are mostly composite, being made up of orthoclase and a heavier constituent, but a few are found to show albite twinning and an extinction angle of at least 30°.
- Oligoclase-andesine.
- Labradorite. These are doubtless altered labradorite. The grains having a specific gravity between 2.651 and 2.689 showed the same differences in diaphaneity as those taken at 2.62, but the clear grains are here labradorite since the extinction angle on the twinning lamellae rises to 36°.

These three feldspars may also be distinguished in the thin section, where the oligoclase-andesine, which is in the greatest amount, is seen to differ from orthoclase by twinning structure and from labradorite by its small angle of extinction, finer twinning lamellae and more allotriomorphous outline. The labradorite constitutes the largest and best formed of the feldspar crystals.

Microscopic features. In thin sections from typical parts of the rock (specimens 179, 177, 174, 147, 146, 142, 141 *et al*) the minerals were found as follows in order of relative amount.

Essential constituents: Plagioclase, orthoclase, augite, biotite, hornblende.

Accessory constituents: Magnetite, sphene, apatite, quartz (rare); with leucoxene as a secondary constituent.

The structure is hypidiomorphic, and the order of crystallization, the normal one for plutonic rocks, that of decreasing basicity. The ferro-magnesian constituents enclose the usual basic accessories, apatite, sphene and magnetite, and are themselves generally of an earlier crystallization than the feldspars. Of the latter, the more basic plagioclase shows the strongest tendency to assume idiomorphic forms, while both it and the more acidic varieties of plagioclase are cemented together by orthoclase.

Augite.

The *Augite* is colourless, or of a light greenish-gray colour, and is without perceptible pleochroism. In polarized light, extinction takes place when the plane of either nicol bisects the angle of cleavage, which is nearly a right angle, in sections approximately parallel to OP, while