

A reddish zeolite, which is almost certainly heulandite, forms druses on some of the joint planes, and occurs in veinlets in some of the tuffs.

Trachytes—Ægirite-augite trachyte.

This specimen was taken from a boulder about three feet in diameter, which was not found in place. Other rocks of similar appearance are of frequent occurrence in the volcanic district, so it may be that the trachyte occurs as a flow in this part of the district. However, microscopic study shows the specimens that were collected to be pyroclastics, but of a type strikingly similar in appearance to this primary type that they are not distinguished as secondary in the field. There is no doubt that a magma of this nature furnished material for a considerable portion of the volcanics.

The hand specimen (field number 35), shows deep red, rectangular, and quadratic phenocrysts of feldspar up to a half inch long, averaging about half an inch, forming about 20 per cent of the rock, somewhat irregularly distributed in a greenish finely crystalline groundmass which is speckled with black phenocrysts of pyroxene up to 2 or 3 mm. long.

In thin section the feldspar phenocrysts resemble orthoclase, except that inclined extinctions on 010 up to 14 degrees have been observed. This, in connexion with the absence of twinning and the low index of refraction, indicates that the mineral is soda orthoclase. They are slightly altered, and show kaolinization in cloudy reticulate bands, often obscuring most of the section.

The phenocrysts of pyroxene are idiomorphic or tabular, pointed individuals from 0.3 mm. to 1.0 mm. long, showing combinations of the prism and pinacoids in cross section. The extinction angles of $C \wedge c = 74$ degrees, the grass green color and the green to yellow pleochroism determine the mineral as ægirite-augite. Zonal banding is occasionally seen, the color of some crystals giving a higher extinction than the others. Twinning parallel to the elongation has been noted. The mineral is remarkably fresh, and the outlines are sharp.