

because it was no doubt from a magna of this composition that the soda-pyroxenes of the crystal-tuffs were derived. The data accompanying the specimen do not state whether it occurs as a flow or as rock fragments in the breccia.

*Andesite.* One thin section of a crystal-tuff contains large quantities of the plagioclase felspar andesine. From this it may be inferred that parts of the magna from which these clastic rocks were derived, had the composition of andesite. This type is quite insignificant, the series as a whole being characteristically trachytic.

*Analcite-trachyte.* The presence of analcite in crystal-tuffs whose other dominant mineral is orthoclase, has resulted in a tuff having the chemical and mineralogical composition of an analcite-trachyte. In proposing a new name for this type it is to be understood, however, that no igneous flows have been found, so that the name *Blairmorite*, as suggested at the beginning of this paper, must at present be applied to the crystal tuff having the chemical and mineralogical composition of analcite-trachyte, in other words, a *blairmorite*-tuff. But a volcanic rock of such composition will no doubt be found in place in some part of the world: the analcite will occur in well developed phenocrysts (icositetrahedrons), as is shown by the crystal forms found in the tuffs described in this paper. Such a statement does not seem unreasonable since in the series of tuffs and breccias here studied, one small *rock-fragment* of this type was found. It consists of phenocrysts of orthoclase and analcite less than 1 mm. in diameter set in a ground mass of felspar laths (a few of which have the twinning lamellae of the plagioclases) and a few smaller analcites. Some titanite is also present. The fragment was certainly derived from a magna having the composition of an analcite-trachyte, and it is possible that further field work in this district may reveal the presence of such a volcanic flow.

#### Chemical Composition of Blairmorite.

In order to study the chemical composition of *blairmorite-tuff*, a typical specimen was selected for analysis. The writer is greatly indebted to Dr. Dickson of Queen's University, Kingston, Canada, for his kindness in preparing this