

fresh, although in places it is slightly decomposed to chlorite. The magnetite is probably titaniferous, as occasionally it is altered to leucoxene. Another hand specimen of the same rock was found to contain, in addition to the minerals mentioned above, a little quartz and a little plagioclase, and the orthoclase contained the peculiar intergrowths characteristic of perthite. This specimen had a very obscure foliation, and the quartz and orthoclase showed evidence of having been submitted to pressure. It also contained a few forms of some mineral which had been entirely decomposed, but which may have been pyroxene.

The rock from the "Blessington Mine" is composed essentially of orthoclase, biotite, pyroxene and magnetite, with a little plagioclase, hornblende, pyrite, calcite and apatite. The orthoclase contains a multitude of minute, black, rod-like inclusions and fine dust. The pyroxene occurs in large amount, and is more plentiful than the biotite. It is pale green in colour, with scarcely noticeable pleochroism and large angle of extinction. It is generally without good crystalline form, but occasionally occurs in rude crystals. It is also occasionally twinned. The hornblende occurs in very small amount—intergrown with the pyroxene and biotite. The calcite is present in small amount, and results from the decomposition of the pyroxene and feldspar. The magnetite may be titaniferous. The apatite is uniaxial and negative, and occurs in irregular shaped grains, with high index of refraction and faint bluish colour, generally associated with the pyroxene.

The rock from the "Star Hill Mine" is therefore a *mica syenite*, and that from the "Blessington Mine" an *augite mica syenite*. It will be a matter of interest to ascertain whether these rocks occupy a similar relation to the apatite at the other mines. A monograph of the apatite district of the Province of Quebec, which is now being prepared by Mr. Ingall of the Geological Survey, will decide this and many other important points.

Among a series of specimens from the vicinity of the town of Arnprior, on the River Ottawa, which were some time