

No. 16.—Ritchie Mine.—Lot 16, Concession VII., Township of S. Sherbrooke, Lanark County.

Macroscopically a pink-coloured gneissic granitoid rock. The foliation is chiefly marked by narrow bands of dark-greenish material. Under the microscope it is seen to be a scapolite-augite-syenite-gneiss. The minerals present are orthoclase, microperthite, plagioclase, scapolite and pyroxene, with small quantities of sphene, apatite, magnetite and occasional scales of biotite. The pyroxene is in irregular grains, is of a deep green colour, and shows a faint though decided pleochroism. In a few individuals incipient alteration to a deep-green hornblende was noticed. The scapolite may be plainly distinguished from the felspar by its brilliant chromatic polarization, high index of refraction and the presence of the cleavage cracks filled with a yellowish decomposition product. The sphene is in large rounded lumps and together with the rounded prisms of apatite is for the most part intimately associated with the pyroxene. Quartz seems to be entirely absent.

*The Microscope
Examinations
of rocks.*

No. 16a.—Ritchie Mine.—Lot 16, Concession VII., Township of Sherbrooke, Lanark County.

The hand specimen shows a dark-green, almost black, somewhat coarse massive crystalline rock. Under the microscope it is seen to be a diorite. The plagioclase, which is in very small amount, is largely altered to calcite, together with a little epidote and chlorite. The very abundant hornblende is of the usual compact dark-green variety. Magnetite is present, mostly associated with the decomposed plagioclase. Apatite is present in occasional large rounded individuals. Calcite may frequently be noticed embedded in the hornblende in sharp individuals.

No. 16b and 16c.—Ritchie Mine.—Lot 16, Concession VII., Township of S. Sherbrooke, Lanark County.

Are taken from the same hand specimen, which shows a pale flesh-red massive granitoid rock in contact with a dark-gray more basic schistose rock. The line of contact is quite sharp, and the acid portion appears to be the newer. Under the microscope the red granitoid rock is seen to be a syenite composed of orthoclase, microperthite, oligoclase, albite, with much smaller quantities of hornblende, biotite, sphene, and magnetite. The coloured constituents are in small irregu ar