Microscopic Examinations of rocks.

Another closely related rock and one which may have been derived from the alteration of a pyroxenite, if such be present in any appreciable quantity at this locality, shows in the hand specimen an almost black glistening basic schistose rock which in thin section under the microscope is seen to be composed almost wholly of green trichroic hornblende. There is little or no felspar present. Magnetite is rather abundant in irregular grains together with a small proportion of pyrite.

The most decomposed portion of the whole rock mass is represented by two thin sections (No. 14). It evidently represents the extreme alteration of a rock which was originally a pyroxenite or an extremely basic amphibolite.

The hand specimen is very fine-grained, compact and only very slightly greasy to the touch. Under the microscope it is seen to be mainly composed of a greenish serpentinous product, noticed in the other sections as resulting from the alteration of pyroxene ; small cores of the latter still remain and the mesh-like structure is very similar to the serpentine resulting from the decomposition of olivine. Calcite is abundant, as is also magnetite, the latter mineral filling what appears to be irregular fissures and interspaces in the rock.

No. 15.—Martel Mine.— Lot 13, Concession X., Township of Bagot, Renfrew County.

Macroscopically a dark-green almost black, fine-grained rock with irregular streaks, patches and spots of magnetite and pyrite disseminated throughout.

Examination of the thin section shows the rock to be a typical diorite, composed chiefly of hornblende and plagioclase. Some of the plagioclases exhibit the twinning striae, but the larger proportion of the felspar consists of untwinned grains and most of this, at least from its association is probably plagioclase. As a rule it is quite fresh, but some of it decomposed into a saussurite aggregate of which calcite is the prominent constituent. The hornblende is the compact green pleochroic variety, some of it altered into a green chlorite. Apatite in comparatively large prisms is abundant as is also sphene. Most of the opaque mineral is magnetite although pyrite is also rather plentiful.