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16th December, 1958

MEMORANDUM

The following petrographic descriptions apply to rocks located on aerial photograph Mersey Run 6 T304-89.

These specimens are of rocks that seem to belong, on lithological grounds, to the pyroclastic section of the Dundas Group. They have been sheared and altered, but retain sufficient of their original constitution to indicate their origin.

1. Pale green to grey very fine grained rock. There are some fine veins of calcite.

In thin section the texture is not uniform. Some parts show glassy structures and consist of cryptocrystalline material, others are sericitic and have flow structure. There are also parts of coarser grained quartzo-felspathic mosaic. Much of the rocks consists of secondary calcite.

The rock is an altered acidic lava, possibly a keratophyre.

2. Fine grained black and cream banded or mottled rock.

In thin section the specimen consists of breccia-like fragments of dark and light coloured rock firmly consolidated together. Some of the lighter fragments consist of calcite stained brown with limonite, and some of sericite, but most are quartzo-felspathic mosaic. The darker fragments contain feldspar and sericite and the dark colour is due to a dark glass. Pyrite is freely disseminated as minute grains throughout the rock and larger particles up to .1mm occur usually in small groups.

The rock is a tuff.

3. Greenish gray, very fine grained, sheared rock. Rectangular systems of fine cracks have been filled with quartz, pyrite or magnetite.

In thin section the rock is an extremely fine grained aggregate of sericite, quartz and feldspar and cryptocrystalline material.

The rock is possibly an acid or intermediate lava which has been subjected to shearing and hydrothermal alteration.

4. Pale green and white mottled, sheared, very fine grained rock. The greenish patches consist of soft micaceous mineral.

In thin section the rock shows a felsitic texture, with microcrystalline quartzo-felspathic and cryptocrystalline material, between minute wisps of sericite. There are occasional irregular phenocrysts of quartz and feldspar. Pale brownish glassy material is common in ragged wisps and patches. There is a little disseminated pyrite and secondary minerals include calcite which is distributed

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throughout the rock in small irregular clumps.

Although the felspar has not been identified optically the rock is probably a sheared, hydrothermally altered keratophyre.

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The Director of Mines,
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