Unpublished Report 1972/53

Descriptions of rock specimens collected in the Longford Quadrangle

by G. B. Everard

The following rock specimens were collected by geologist W. L. Matthews in the Longford Quadrangle.

East of Relbia

The hand specimen is a yellowish brown, medium to coarse-grained sandstone, with rounded grains up to about 1 mm across cemented with carbonate.

In thin section the grains are mainly lithic with a rather small minority of white opaque altered feldspar and clear quartz of about 5% of total grains. The lithic grains vary from dark brown to white in colour, but all are much altered and opaque so that the original rock types are not identifiable, but pyroxene and pyrite are both present.

The rock is a calcareous, lithic sandstone.

A second hand specimen is a very fine-grained argillaceous rock stained pink by iron oxides.

In thin section the rock consists of sparse angular crystals of quartz up to about 0.05 mm across in a dense opaque felted mass of clay minerals. Small angular holes of similar size outlined by concentrations of minute flakes of hematite indicate the former presence of iron ore minerals.

The rock is a somewhat ferruginous sandstone.

Evandale area

The hand specimen is a yellowish brown medium-grained sandstone with visible angular grains of quartz and rounded lithic grains, and patches of black iron oxides by which bedding is roughly indicated.

In thin section the quartz grains appear more angular and equi-dimensional than the lithic grains which are orientated to indicate the bedding. The lithic grains are much weathered so as to obscure the nature of the original rock types. All the grains are packed into a clay matrix so as to give few voids.

The rock is an argillaceous lithic sandstone.

East of Campbell Town

In hand specimen the rock is an aphanitic black rock with phenocrysts of olivine.

In thin section it consists of broken crystals and clastic fragments of olivine and augite in a trachytic groundmass of microlites of feldspar, tiny cubes of magnetite and glass. Some phenocrysts of olivine are surrounded by reaction rims of radial pyroxene and pyroxene also occurs in blebs of minute irregular crystals, the olivine having completely disappeared.

The rock is an olivine basalt.

A second hand specimen is an aphanitic chocolate-coloured rock with a few vesicles and phenocrysts of olivine and feldspar.

In thin section the rock shows intergranular and intersertal texture in a network of interlacing labradorite crystals about 0.2 mm long enclosing granules of augite, stained red by haematite, and a little yellowish glass. Occasional phenocrysts of olivine about 1 mm are partly altered to iddingsite.

The rock is a basalt.

Campbell Town

The hand specimen is a fine-grained grey rock with a few vesicles 3 to 4 mm across and numerous phenocrysts of olivine up to about 1 mm long. Varying distribution of black magnetite crystals in strings and patches gives the rock a somewhat blotchy or mottled appearance to which the distribution of plentiful brown iddingsite also contributes.

In thin section the rock consists of angular quartz grains, without any special matrix. Minute opaque crystals of magnetite are unevenly distributed in dark patches, with only occasional individually visible crystals. Rare grains of rutile average about 0.2 mm across.

The rock is a ferruginous orthoquartzite.

[1 September 1972]