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MEMORANDUM

The following are descriptions of rock specimens collected by geologist, M. Stefanski, at Port Davey.

No. 5 East Melaleuca Peninsula, Bathurst Harbour:

Greenish-grey leucocratic or mesocratic rock. White euhedral phenocrysts of felspar up to 3 mm. long are plentiful, also anhedral dark green crystals and aggregates of ferromagnesian mineral. The texture is porphyritic, and the rock is somewhat sheared.

In thin section texture has been almost obliterated by alteration. The groundmass is a fine grained quartzo-felspathic mosaic in which the felspar has been completely altered to sericitic aggregates.

The felspar of the phenocrysts has been altered in the same way, so that only the outline of the original crystals is preserved.

The dark green aggregates consist of chlorite, but here alteration is incomplete, and occasional stronger birefringence and pleochroism indicate uralite. The acicular habit of many of these aggregates suggests that the original mineral was hornblende, and there is some evidence of ophitic texture in the unaltered rock.

The rock is a sheared felspar porphyry.

No. 9 Elphistone Point:

Dark greenish schistose rock with porphyroblasts.

In thin section the schistose texture is very marked, the oriented minerals being white mica, biotite and a black opaque substance that may be graphite. Lenticular aggreagtes of minute magnetite crystals are aligned with the platy minerals.

Porphyroblasts consist of quartz and garnet. The garnet is pale pink and typically cracked and shattered. It may be surrounded by quartz to form a lenticular aggregate.

Quartz also occurs in lenses that may be cracked, but the whole lens extinguishes simultaneously. Dark inclusions in the quartz are lineally arranged, and these lineations may be at an angle to the direction orientation of the platy minerals in the rock, thus showing that the quartz crystals have been rotated. The garnet crystals also show signs of rotation.

Plications occur in the laminations of the rock, which may be foci of development of porphyroblasts.

The rock was a carbonaceous shale with has undergone intense thermo-dynamic metamorphism to a garnetiferous graphitic mica schist.

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