

## **Descriptions of rocks collected by B. Gulline**

*by G. B. Everard*

The following are descriptions of rock collected by geologist B. Gulline.

### ***Summit of Mt Block***

The rock in hand specimen has an aphanitic groundmass stained reddish brown from weathering. The groundmass contains phenocrysts of feldspar up to 2 or 3 mm long, and strings and patches of chloritic material. This greenish material also forms the core of many phenocrysts.

In thin section there is a granular quartzo-feldspathic groundmass, the grains averaging about 0.03 mm, containing rather sparse phenocrysts of quartz and weathered feldspar. Irregular masses of chlorite with magnetite occur and may be associated with the phenocrysts. Much of the section is covered with a pattern of fine cracks which may include the phenocrysts particularly quartz.

The quartz crystals may show peripheral absorption into the groundmass and embayment.

The feldspar crystals show simple or no twinning and have a refractive index less than balsam and are therefore orthoclase.

The rock is quartz-orthoclase porphyry.

### ***Foothills of Mt Block***

The hand specimen is a pale coloured, fine grained, weathered rock with white phenocrysts up to 2 or 3 mm long. Alternation of pale and darker coloured bands about 5 mm thick shows on cut faces.

In thin section the rock consists of a fine grained quartzo feldspathic groundmass with some sericite and much opaque clay material. There are numerous minute centres of discoloration, possible due to weathering.

The rather sparse phenocrysts of quartz may be deeply corroded and embayed. Plagioclase phenocrysts may show much alteration and have irregular outlines. A little indefinite greenish ferromagnesium material is present in irregular patches.

The rock is a quartz feldspar porphyry.

### ***Creek west of Mt Romulus***

The hand specimen consists of a fine grained greyish matrix containing numerous phenocrysts of quartz and feldspar about 2–4 mm across.

In thin section the groundmass consists of quartz, feldspar and biotite to give a microgranitic texture.

Phenocrysts of quartz are corroded and embayed and phenocrysts of feldspar much altered. The remains of ferromagnesium crystals altered to biotite, chlorite and magnetite are fairly common.

The rock is a granite porphyry.

***A mile north of Mount Swallow***

The hand specimen is a fragmental rock made up of angular and sub-angular pieces and splinters in a grey matrix. Sharp grains and fragments of quartz and quartzite are common. The fragments are up to one centimetre long.

In thin section angular grains of quartz and pieces and splinters of various rock types can be seen. The quartz shows undulose extinction and minute inclusions; some pieces are long thin splinters, others may be fractured and some show slight embayment and corrosion. Perhaps the commonest rock type represented consists of a fine grained mosaic of quartz grains and feldspar with patches of sericite which are the remains of feldspar crystals, the whole being an altered and recrystallised feldspar porphyry. Other fragments consist of very fine grained quartz and sericite, with included quartz fragments, some of which show recrystallisation.

The interstitial material is very fine grained quartz, sericite and a brownish- yellow biotite besides much magnetite partly altered to haematite, which is also more sparsely disseminated through the whole rock. There are also a few grains of tourmaline.

The rock is a breccia possibly volcanic.

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