

### (1) Meredith Granite

The Meredith Granite is the largest granite body in north-western Tasmania. It is composed predominantly of fine to medium grained, equigranular biotite adamellite and medium grained porphyritic biotite granite/adamellite, (Collins et al 1981). Emanating from the northern margin of the granite are quartz-feldspar porphyry dykes similar to the dykes at Mt. Bischoff. The relationship between the Meredith Granite and the tin mineralisation at Mt. Bischoff, Cleveland and Renison will be discussed in the section "Detail Magnetics Over Known Mineralisation".

The magnetic data over the Meredith Granite indicates the igneous body to be non-magnetic, (Figure 7 & Plates 2 & 3). This is confirmed by the magnetic susceptibility results presented by Collins et al 1981. The general samples described as porphyritic biotite adamellite had a magnetic susceptibility of  $0 \times 10E-6$  S.I. units. Over the northern half of the massif the magnetics are dominated by a deep low associated with the serpentinite or skarns along the northern contact. The magnetic low, which corresponds to the mapped boundary of the Meredith Granite, may imply some aureole effect along this contact. The two small magnetic highs 8 kilometres north-west of Bulgobac correlate with Tertiary basalt and are of no interest.

### (2) Heemskirk Granite

The Heemskirk Granite outcrops as a large, stock-like, complex intrusion on the west coast of Tasmania. It consists of two main granite types: an older "red granite" which varies from coarse-grained biotite granite/adamellite to medium-grained, porphyritic biotite adamellite; and a younger, more alkaline, "white granite", which is predominantly a yellow to white, fine to medium-grained, equigranular biotite granite/adamellite, (Collins et al 1981). The boundary between the two rock types is a north-south line through South Gap Creek with the "white granite" to the west of this line and the "red granite" to the east (Plate 4).

The magnetic data over the western half of the Heemskirk Granite, (Figure 13), is similar to the Meredith Granite. This area is basically non-magnetic and correlates with the "white granite". The magnetic data over the "red granite" shows some magnetic relief. The anomalies are small in amplitude and strike length with a random strike direction. The contacts of both granite types can be traced due to the abutting magnetic formations or metamorphosed contacts. This magnetic differentiation between rock types was not evident in the magnetic susceptibilities which were all  $0 \times 10E-6$  S. I. units. This indicates that the source of the magnetic activity over the "red granite" is probably associated with an altered quartz-topaz-chlorite tourmaline rock as is the case near the Federation Prospect.

### (3) Pieman Granite

The Pieman Granite is located on the west coast, north of Pieman