

# REGIONAL MAGNETIC INTERPRETATION

The regional magnetic interpretation is based upon the aeromagnetic coverage carried out over the West Coast of Tasmania by the Department of Mines. The area surveyed, (Figure 1), extended from a line north of Mt. Bischoff to south of Macquarie Harbour and from the west coast to a north-south line 8 kilometres east of Queenstown. The survey specifications and data presentation requirements are outlined by Corbett et al (1982) and are set out in Appendix 1. The aeromagnetic results were photoreduced from the presentation scale of 1:50,000 to 1:250,000 to overlay the Burnie (Williams and Turner 1973) and Queenstown (Corbett and Brown 1975) Geological Map Sheets. The regional geology has been reviewed by a number of authors including a summary by Solomon (1981), and the structural geology as presented by Williams (1979).

From these summaries the regional geology has been divided into the following formations, (Figure 2).

- (1) Tyennan Nucleus
- (2) Siluro-Devonian Sediments
- (3) Mt. Read Volcanics
- (4) Dundas Trough, including the Ordovician, Cambrian and Precambrian Formations
- (5) Arthur Lineament
- (6) Rocky Cape Region
- (7) Basic and Ultrabasic Intrusives
- (8) Plutonic Intrusives
- (9) Tertiary Volcanics

Each category will be discussed separately to demonstrate how the aeromagnetic results may be used to outline formations and identify any anomalous magnetic features. The locations of all magnetic features are shown on the accompanying Geophysical Interpretation Maps, Plates 1 to 7.

## TYENNAN NUCLEUS

The aeromagnetic survey only covered a small section along the western boundary of the Tyennan Nucleus. The results show three dissimilar magnetic responses over the western section of this Precambrian formation, (Plates 5 & 7). Over the northern section, east of Rosebery, the results verify the older Precambrian metamorphic rocks to be non-magnetic. The western contact with