

ABSTRACT

The results of the regional aeromagnetic survey carried out by the Tasmania Department of Mines in 1982 over the West Coast of Tasmania, have been interpreted and are presented in this Review.

The survey was flown with a flight line spacing of 500 metres which was sufficient in some areas to enable the identification of a magnetic signature associated with the known mineral deposits of the region. Where possible, detail geophysical survey results or open file data have been integrated into the Review to support the interpretation. The magnetic results show that most of the larger ore bodies have a regional magnetic signature and that similarities can be identified with areas elsewhere. The magnetically anomalous zones include the metamorphosed aureoles or skarns located on the granite contacts. The regional magnetic data over the Mt. Read Volcanics indicate that the Central and Western Sequences are only slightly magnetic in comparison to the Eastern Sequence which has a recognisable magnetic signature. It is possible that the Eastern Sequence magnetic activity may be associated with a rift zone into which the Murchison and South Darwin Peak granitic plutons have been intruded.

The West Coast of Tasmania is one of the few areas in Australia where airborne electromagnetic methods have been used with success to identify an ore body, namely the Que River Deposit. The airborne surveys which have been flown in this area have been summarised in a section of the Review.

The interpretation of the regional gravity data over the West Coast of Tasmania has demonstrated a number of major gravity lineaments with a magnetic expression. An attempt has been made to relate these lineaments to the presently known mineralisation and to indicate other areas with a similar gravity response. The detail gravity survey results have been presented, along with the results from a Tasmania Department of Mines survey recently carried out in the Renison Bell to Zeehan area.

Airborne radiometric methods have not been implemented in the area however, the results of a regional ground survey are presented. This demonstrated how effective radiometric methods can be in identification of potentially tin bearing granites.