

reprocess the data and to prepare second derivative maps similar to the recent work by Stewart and Boyd (1983).

#### Heemskirk Tin Field

There are two main tin prospects on the Heemskirk Granite, the Federation Mine to the south and the St. Dizier Prospect on the northern contact, (Figure 13). There are a number of smaller workings described by Blissett (1962), however it is unlikely that these would have a magnetic signature recognisable in the regional magnetics. The Federation Mine is located in an area typical of the "white granite", Collins et al (1981), with no magnetic response which could be correlated with the ore body however, there appears to be a minor magnetic aureole surrounding the granite. This could be equated to some of the tin granites in the New England Block N.S.W Slade (1982). The St. Dizier deposit is located on an intense magnetic linear striking south-east, (Figure 13 & Plate 4). This magnetic anomaly is on the contact between the Heemskirk Granite and the undifferentiated sediments in the Dundas Trough and has been interpreted as a skarn. The area has been flown by helicopter electromagnetics, Sise (1983), and there is a coincident magnetic and electromagnetic response over this zone. The northern contact of the Heemskirk Granite was the source of the Tasman River alluvial cassiterite which was a major producer in the area.

The regional magnetic coverage has shown that it is possible to identify a skarn associated with the northern contact of the Heemskirk Granite. This skarn is known to be sporadically mineralised. From discussions with companies working in the area it would appear that a variety of geophysical methods have been used to test the feature however, most of the data remains confidential. The magnetic data indicates the region to be less complex than the Renison or Cleveland areas. Magnetic methods may be one of the quickest approaches to exploring the contact in detail especially as the area is relatively flat along most of the contact.

#### Mt. Read Volcanic Sulphide Deposits

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Exploration for volcanic-hosted sulphide deposits in the Mt. Read Volcanics has been summarised by Reid & Meares (1981).

"The common occurrence of volcanic-hosted massive sulphide deposits on one or more key horizon or volcanic contact in a particular province suggests that a detail knowledge of the volcanic stratigraphy should form the basis for selection of favourable environments in exploration programs. However the lack of marker horizons in the Mt. Read Volcanics and the characteristically rapid variations in volcanic facies, both along and across strike, have resulted in an inadequate understanding of the volcanic stratigraphy