

with success. Any group interested in exploring these areas would be advised to review all previous airborne electromagnetic surveys over the region to decide which system was most suitable and how effective the system has proved in the past.

The granitic intrusions, with the exception of the Murchison and a section of the South Darwin Peak Granites, are non-magnetic although they appear to be surrounded by highly metamorphosed magnetic skarns. The amplitude of the magnetic anomalies associated with these skarns is larger than normal and in places could be interpreted as ultrabasic bodies. This is most evident along the eastern contact of the Meredith Granite where it is difficult to decipher the end of the ultrabasics and the beginning of the skarns. Collins (1981) has proposed that the Meredith Granite is the source of the Mt. Bischoff and Cleveland tin mineralisation via a system of feeder dykes similar to the Pine Hill Porphyry dyke at Renison Bell. Due to the presence of the highly magnetic aureoles it has not been possible to identify any magnetic feature which could confirm this model.

The larger granitic bodies, with the exception of the Pieman, Murchison and South Darwin Peak Granites, all intruded a belt defined by the Renison Gravity Lineament to the south-east and the Cleveland and St. Dizier Gravity Lineaments to the north-west, with the major zones of tin mineralisation adjoining these gravity features. Airborne electromagnetic methods are being used in the exploration for tin skarns along the granite contacts. The results of these surveys are still confidential, however, it is understood that the method has been used with a good deal of success.

The use of radiometric methods in tin exploration has been recognised and applied only recently, but to date this technique has not been used on the west coast of Tasmania. Ground tests carried out by the Tasmania Department of Mines indicated that the tin granites could be described as 'hot granites' with elevated concentrations of uranium and thorium. The radiometric data currently available indicates that the Heemskirk Granite is the most favourable granite for potential tin mineralisation.

The magnetic results in the Renison Bell area are confused by the presence of a number of ultrabasic bodies. There is a large amplitude anomaly coincident with the mineralisation and a similar feature can be traced to the south-west of the mineralisation. The source of this anomaly warrants identification. The Pine Hill Porphyry body cannot be positively identified in the magnetic data. The Success Creek red chert horizon which hosts the mineralisation can be traced magnetically to the north-west of Renison Bell, with an increase in magnetic activity where it abuts the Meredith Granite near Mt. Lindsay. This is a high priority area for further investigation. Electromagnetic surveys in this area showed a number of conductors in the vicinity of the Stanley River.

The Renison Gravity and Magnetic Lineament passes through the