



SUMMARY

The Black Hill and Carbine Hill grids cover much of the prospective ground south of the Renison mine lease, within E.L. 42/71. The rocks are mostly Cambrian sediments of the Dundas Group with some serpentinites and other ultramafics near the edges of the grids. The area has potential for a Renison style replacement body within the sediments and for Razorback type mineralisation along the contacts of the ultramafics. In the 1983-84 field season, ground magnetic and VLF surveys were carried out over both grids.

The Tasmanian Mines Dept's (1981) semi-regional aeromagnetic survey had defined two anomalies of interest in the area: one, to the north west of the Grand Prize mine (called the Grand Prize - NW Extn anomaly in this report) and another on the south eastern side of the Carbine Hill grid (the Great Northern anomaly). These two anomalies lie close to the E.L. boundaries and have been only partially defined by the ground magnetic surveys. Further work is needed over both areas to enable quantitative interpretations to be made.

On both grids, magnetic responses were recorded over unprospective sources such as mafic tuffs, serpentinites, etc (on the Carbine Hill grid, a dolerite dyke was mapped for nearly 3kms and the response from the nearby Razorback ultramafic complex dominated the Black Hill grid survey). But since the geophysical target was for pyrrhotite, the more interesting magnetic anomalies were expected to have associated VLF responses (from fault-bound mineralisation which has reached to the near-surface). (A completely sealed deposit was not overlooked -such a body would have no VLF response and possibly no geochemical signature.)

'Good' magnetic anomalies with associated VLF responses were recorded at 1800W/1875S on the Black Hill grid and at 2000N/900E on the Carbine Hill grid; however neither site had any geochemical responses. VLF anomalies with 'poorer' magnetic anomalies were recorded at 400N/700E and 2200N/1400E and resurveying of these two anomalies with the magnetic sensors at a height of ~3m is recommended to reduce the effects of near-surface noise (the former area is geochemically uninteresting, but the latter falls within a zone of Fb/As anomalism and has been mapped as an area of hornfelsing by the project geologist (P. Komysan).

Further investigation of (shallow) magnetic anomalies, without associated VLF responses, but within geochemically active areas, is recommended at: 2800N/1425E and between lines 3400N and 3600N. Similarly, further investigation of VLF anomalies with no associated magnetic responses is recommended at 1000W/1200S-1400W/1300S, 2600W/2000S, and 2400W/2000S; these have some associated geochemical responses (not necessarily tin).

Drilling of the Grand Prize workings has shown the mineralised fault zone to be deeply weathered (in excess of 200m) -thus