

an inconsistent response is over the Nevada Creek granites, Brown (1982) 366000E & 365400N. These are outside the major gravity low. Further field surveys and data processing are warranted in this area to explain the source of the low.

(2) The second major gravity low correlates with the Heemskirk Granite, west of 355000E, and is roughly defined by the -10 milligal contour which is a response typical of a granitic mass. Over the Heemskirk Granite the elevation and terrain corrections are substantial. Further detail gravity surveys in this area are unwarranted.

(3) North-east of Zeehan and correlating with the Silurian and Ordovician synclinal structure is a gravity low which gives a -6 milligal response over a width of 3 kilometres. Model tests using a program developed by Ogilvy (1979) showed that it was necessary to assume a density difference of -0.20 gm/cc and a depth of sediments of 1000 metres to explain the -6.00 milligal low in this region. The density data presented by Loh (1950) indicates that the Crotty Quartzite has a density of 2.50 gm/cc compared to the 2.70 gm/cc for the Gordon Limestones and country rocks. The depth of the sediments as described by Blissett (1962) shows the maximum thickness of the Crotty Quartzites to be 480 metres (1600 feet). To explain the gravity low it would be necessary to add a second sedimentary sequence with a similar density and thickness. Further density data should be collected from core samples taken from this area to enable a more accurate model to be prepared. At present, although there is some discrepancy between the data and the model, there is probably not a non-sedimentary feature contributing to the gravity low. The regional magnetic data over the Zeehan synclinal structure is extremely flat indicating a deep sedimentary sequence.

(4) There is a gravity low west of Misery Hill at 366000E and 361000N. The geological mapping of the area locates the anomaly on the eastern side of the Zeehan synclinal structure where there would be a minimum thickness of lower density sediments. The gravity data indicates the low to be similar to the response over the Zeehan syncline. The magnetic data does not imply a possible source for the anomaly.

(5) There is a gravity high south-west of Zeehan correlating with the Mt. Zeehan and Trial Harbour ultrabasic rocks. The gravity data in this area is typical of ultrabasic sources.

(6) The remainder of the survey area between the Heemskirk Gravity Low and the Zeehan Synclinal Low is relatively flat with a number of small gravity closures. Although this area contains the majority of small prospects, the magnetic data does not show any magnetic anomaly which could be correlated with the mineralisation. The gravity data is too widely spaced to indicate any response corresponding to the smaller prospects. Detail gravity surveys have been carried out by Langron (1966) and Loh (1950) which proved closely spaced surveys to be most effective in outlining mineralisation. The combination of gravity and