

The anomalous thresholds were calculated as $\bar{x} + 2s$, where \bar{x} is the logarithmic mean and s is the logarithmic standard deviation.

Anomalous "A" samples were scattered throughout the grid and showed no pattern correlating with the geology or geophysical anomalies. This suggests that, for the most part, high "A" sample assays are due to random concentration by organic material and are not indicative of underlying mineralisation.

Anomalous "B" samples, on the other hand, show a strong tendency to correlate with I.P. anomalies (Figure 45) which in turn correlate with mineralised alteration zones in felsic volcanics. Therefore, despite the poor development of the soil profile, B/C horizon samples have detected underlying mineralisation.

2. Rocks

Sixteen rock chip samples from old workings were assayed for Cu, Pb, Zn, Ag, Mn, Fe, Co and S (Appendix I). Significant assays are given in Table 7.

TABLE 7

Spicer Grid Rock Chips, Significant Assays 1980-81

Sample Number	Location	Type of Sample	Lithology	Cu %	Pb %	Zn %	Ag g/t
27324	148S/2020E	Random	Felsic lava	0.48	0.01	0.04	7
27342	148S/2020E	Picked	Felsic lava	0.93	0.03	0.05	7
27340	168S/2165E	Picked	Xl tuff	0.02	0.95	2.3	4
27329	189S/2340E	Random	Lith-xl tuff	0.09	0.25	0.13	13
27338	189S/2340E	Picked	Lith-xl tuff	0.20	4.0	5.7	160

2.4.5 Geophysics

1. Magnetics

The total magnetic field was recorded over the grid using Geometrics proton precession magnetometers. Station interval was usually 10 m but varied between 20 m stations in areas of "quiet" magnetics to 5 m stations in areas with a steep gradient in the magnetic field. Base station was at Rolleston Camp.

The magnetics data was corrected for drift and plotted in profile form, smoothed by hand and contoured (Figure 51). Line profiles are flat over the Lower Cambrian Sediments, in the east of the grid, and the Owen Conglomerate, in the west. Background values over these units are around 62 400 gammas and 62 600 gammas respectively. Over the volcanics the magnetic field usually fluctuates between 62 500 and 63 300 gammas.

Major magnetics anomalies occur in the north-eastern part of the grid (Figure 45) over altered lavas and quartz crystal tuffs containing magnetite-hematite veins. Several stations gave recordings over 65 000 gammas. The line profile shapes indicate that the major contribution to the magnetic anomalies was due to near-surface mineralisation.