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in the Appendix. A crude depth interpretation has been carried out which assumes the conductor is a single line current source. A 'quality factor' is also listed for each anomaly: this depends on the conductivity and on the size of the source. Both parameters should be treated with some caution, since wide surficial conductors such as swamps may give rise to high quality, deep anomalies. Histograms of the depth and quality (not presented) show an even scatter of depths between 3m and 110m and a grouping of the quality indices between 4 and 30 with five anomalies above 50 (to 95). Some of the more interesting anomalies are briefly discussed below (not in order of merit).

Eleven anomalies have been listed on the Black Hill grid. Anomaly no. 2 is a strong response on three lines at the north-eastern edge of the grid (1000W/1225S, 1200W/1275S & 1400W/1300S). The anomalies are incompletely defined and thus the interpreted depths and quality parameters are uncertain (but are probably minimum figures). A large, (relatively) deep-seated body is indicated (unless a wide, surficial source is likely). Extension of these three lines to the north is suggested.

Anomaly no. 4 (1200W/2400S, 1400W/2350S & 1600W/2350S) coincides with Black Hill itself and it is possible (?probable) that the responses are due to a topographic effect (however a buried conductor within the hill might be expected to give the same result). The greatest depths and highest qualities of the survey, are associated with this anomaly.

Since pyrrhotite is the geophysical target, VLF responses with associated magnetic anomalies are of particular interest (see the anomaly compilation map, Figure 64). Anomaly no. 5 (1800W/1875S & 2000W/2025S) is one such response (see Figure A6); it has a near-coincident magnetic anomaly of 200nt (further discussed below). The anomaly also has high quality factors & significant depths (54 & 77m and 24 & 52m -the latter figures are roughly doubled if a smoothed profile of line 2000W is interpreted).

The Grand Prize mineralised zone gave a good VLF response only on one line (2400W/2475S -anomaly no. 9 with interpreted parameters Q=18, D=54m), however very strong responses were recorded on parallel structures, particularly on the adjacent 'Grand Reward' zone (anomaly no. 8, 2600W/2025S). The others, are anomalies nos 7 (2400W/1975S) and 11 (2800W/2175S). All three anomalies are open to the north and they trend towards the Grand Prize -NW Extn aeromagnetic anomaly mentioned above.

Anomalies on the Carbine Hill grid are numbered 12 to 22 for NWC responses (ie, a continuation of the Black Hill anomalies), while

* Although the VLF-EM technique is commonly thought to have minimal penetration, note that in ground with a resistivity of 1000ohm-m, the skin depth (ie, the depth at which the field strength is reduced to about 1/3 the surface value) is more than 110m.