

Howard Plains grid. Gradient array IP and magnetic surveys of this grid outlined six weak anomalies which were soil-sampled but gave insignificant geochemical responses. No further work was recommended on these anomalies.

17.2 DISCUSSION OF GEOLOGICAL POTENTIAL

Previous exploration has indicated that the Henty-Yolande area has little potential for economic base metal mineralization. The main emphasis of the Review was to evaluate the geological setting and to assess the largely untested gold potential.

Geologically the area is considered to have been unfavourable for the development of massive sulphides. Intrusive, unaltered and unmineralized quartz-feldspar porphyries and andesitic lava flows, occur within predominantly subaqueous volcanics and sediments. Sulphides are rare. These rocks appear to have formed in open-basin deep marine conditions outside any caldera margins and off the flanks of the central belt of Mt. Read volcanics.

Of the small gold workings within the area, the Madam Howard's (Airport), Diamond Hill and Princess Creek workings were examined and sampled. It appears that all workings were centred on quartz veins which trend east-west, parallel to the major Pearl Creek Fault. (The Madam Howard Plains barite-quartz vein has the same trend). The workings occur in rocks varying from Cambrian acid-intermediate porphyries to Siluro-Devonian sandstones, the unifying feature being the ability of the host lithology to form open fractures. Alteration of the host rocks around the veins is generally absent, apart from moderate sericitization at Diamond Hill.