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The results from this hole indicate the Que-Hellyer host horizon is much deeper than previously interpreted, and below effective UTEM penetration, in the area from DDH MAC-27 in the west to DDH MC-15 in the east. This coupled with the proximity of the Mount Charter fault, thought to have been active in the Cambrian acting as a source for the more primitive core type lavas and a potential conduit for hydrothermal fluids, makes further drilling in this area attractive.

8. SOUTHWEST MOUNT CHARTER

8.1 Introduction

A re-interpretation of petrological and geochemical data from drill holes in the Mount Charter area (McNeill, 1990) suggested a potential host horizon equivalent to Que River and Hellyer may occur at the lower contact of the dacite with footwall andesite. This new interpretation, coupled with strong Pb/Zn geochemistry in soils, and the intersection of syngenetic sulphides within a thin volcanoclastic unit DDH MC-9 (0.4m @ 1.14% Zn) led to the design of DDH MAC-25 to test the interpreted Que/Hellyer ore position.

DDH MAC-25 commenced in late January, 1990 and was completed in early March of the same year. A report on drill hole design, geology and results from the DHEM survey on DDH MAC-25 were included in McNeill (1990). At the time of reporting however, a number of geochemical results and petrological reports were unavailable. Some revision of the original geological drill logs has resulted from this new information.

8.2 Diamond Drilling

Geology

Petrological examination of representative lithologies coupled with Ti/Zr and Cr geochemistry from both petrology and core grind samples have led to minor re-interpretation of the geology of DDH MAC-25.

Minor units of andesitic lava and polymict andesitic volcanoclastic have been recognised in the upper basalt, specifically over the interval 29.8 - 61.7m. Ti/Zr ratios of 17.2 and 20.6 and Cr values of 181 and 175 ppm respectively characterise the two samples petrologically described as andesites from this interval. The basalts have considerably higher Ti/Zr ratios in the order of 20 to 35 and Cr values commonly greater than 1000 ppm.

A thin unit of vesicular basalt lava breccia has been identified from 249.9 - 253.2m. A Ti/Zr ratio of 22.5 and Cr value of 800 ppm in core grinds, along with visual examination of drill core confirms this interval was incorrectly logged as a dacite lava breccia.