

0124

The hangingwall lithologies pass through a 1.1m (836.3-837.4m) breccia unit, in which the proportion of basalt lava fragments decreases until they disappear and dacite clasts appear at 837.3m, into variably pyritic plagioclase-phyric dacite lava and lava breccia. This is in faulted contact with basalt lavas that are petrographically very similar (563717, Appendix) to the hangingwall lithologies and are interpreted to be a block down thrown on a structure related to the Mount Charter fault system.

Alteration of hangingwall lithologies is dominated by albite + carbonate + silica assemblages that are most intense in lava breccia where it pervasively smaller clasts and forms pink rims, often with finely disseminated sphalerite, on the margin of larger clasts. Light green silica-sericite (?fuchsite) occurs in more massive units or is associated with zones of hydraulic brecciation. The dacitic lavas are silica-sericite + chlorite altered with pervasive disseminated pyrite.

Mineralisation is concentrated in the interval 249.8m-400m and is rich in sphalerite which occurs as:

- i) fine patches in vesicles and the groundmass of lavas.
- ii) fine quartz-sphalerite veins.
- iii) coarse red-brown grains in devonian carbonate + quartz veins.

The sphalerite is generally accompanied by pyrite, although in two intervals (334.1-388m and 656-710.3m) the iron sulphide phase is pyrrhotite. Galena and chalcopyrite are minor phases that are often intergrown with pyrrhotite. Elsewhere in the basalt-andesite sequence mineralisation is restricted to traces of sphalerite and pyrite.

The andesitic-dacitic lava from 759.5-767 is moderately silica-sericite altered with disseminated and vein sphalerite-pyrite and chalcopyrite while the dacite from 837.4-870m hosts pyrite-sphalerite and chalcopyrite that are concentrated in brecciated zones as veinlets and disseminations but also occur disseminated in the groundmass of more massive lava.

Geochemistry

The interval from 217m, close to the base of the Que River shale, to the end of the hole was core ground on nominal 10m intervals and samples analysed for Cu, Pb, Zn, As, Ag, Au, Cr, Ti and Zr. Results and sample intervals are included in Appendix 18.

Base metal values in the basal part of the Que River shale with a maximum of 0.13% Pb, 0.38% Zn from 245.3-249.8m are anomalous and are associated with weakly elevated Ag and Au (to 40 ppb). The basalt hosted by the QRS is anomalous in Au to 0.1 g/t (in sample 563711) but has very low Ba (45 ppm).