

The matrix to these breccias consists primarily of mud with subordinate amounts of finely granulated material dominated by coarse angular volcanic fragments of probable quench origin. This matrix comprises up to 20% of the closed framework breccias and 40% of the open framework types. This gives the breccias a 'peperitic' type texture in places. The mud matrix immediately adjacent to some of the larger fragments is darker and appears 'baked'. Locally the matrix has fine to coarse bands of sediment which shows signs of disruption, possibly due to fluidisation or soft sediment deformation.

These breccias are generally massive with the occasional unit exhibiting grading of fragments away from the contact with the massive lava. Some of these breccias, especially the open framework 'peperitic' types may represent resedimented rather than insitu autoclastic debris.

*Dacitic Volcanics:* Lavas and autoclastic of true dacitic to rhyodacitic compositions within QR 1060 are restricted to between the 50 and 100 metre marks. Dacitic lavas at this locality are red brown to pale cream and quartz - feldspar phyric, with up to 15% phenocrysts generally dominated by quartz. These originally massive lavas are now altered to fuchsite bearing assemblages and are extensively fractured in places. The in core thickness of these lavas ranges up to 11 metres.

The margins of these lavas show a gradual transition to dacitic breccias of probable autoclastic origin. These breccias vary from closed to open framework and consist of angular to sub-angular splintery fragments of dacite which vary from 1 to 15 centimetres in size, generally with the larger fragments and closed framework closer to the coherent lava. These fragments in places appear to have fragmented insitu and some minor jig-saw fit. The matrix makes up to 30% of the breccia and consists of muds to coarse/very coarse sand sized material, most likely of hyaloclastite origin. Alteration of the fragments within the breccia varies from siliceous to sericitic with fuchsite 'spotting'. These breccias have a sharp, slightly irregular contact with surrounding lithologies.

The gradational nature of the contact between the coherent lava and the breccia combined with its angular fragments which show occasional jig-saw fit suggests that the breccia is autoclastic in origin. The abundance of material