

. 0595

SAMPLE NUMBER: 563712 MAC-27, 415.45m

SUMMARY:

This sample is an autobrecciated andesitic lava with sparse albitized plagioclase and quartz phenocrysts in a matrix that has been strongly overprinted by albite alteration.

HAND SPECIMEN:

This is a strongly altered felsic or intermediate lava or lava breccia in which dark grey fragments of dacite(?) to at least 3cm long are set in a paler groundmass that has an almost cherty texture in places.

THIN SECTION:

This sample is a polymict andesitic lava breccia with a strongly recrystallized groundmass. The best preserved fragments are all identical texturally and mineralogically, and rather unusual in having albitized plagioclase (<5 modal%) and quartz phenocrysts in a groundmass charged with albite microlites set in abundant chlorite. The three or four quartz phenocrysts are strongly reacted and resorbed, but are definitely phenocrysts and not silica alteration. Albitized plagioclase phenocrysts are also rather rounded, rarely larger than 1mm, and show dirty brown clayey alteration in places. There is no clear evidence for the former presence of mafic phenocrysts.

The margins of most fragments merge imperceptibly into the matrix of this rock. The matrix is exceptionally heterogeneous texturally, although where best preserved it is little different texturally from the fragments. Most of the sample, however, is mainly fairly well-crystallized intergrowths of quartz and albite flecked with chlorite and dirty brownish calcite. Quite coarse-grained segregations of intergrown dusty brownish albite and calcite are abundant.

This sample is probably an autobrecciated andesitic lava that has been soaked with albite-forming hydrothermal solutions during regional alteration. It is unusual for Hellyer region lavas in having quartz phenocrysts (however uncommon).