

0500

groundmass. In the groundmass areas between the quartz blebs, tiny albite microlites are set in devitrified glass replaced by very fine-grained albite, quartz and chlorite, with minor sericite and tiny FeTi oxide granules. Patchy and abundant calcite overprints the groundmass. Calcite veins are mainly coarsely crystalline and composed of pure calcite, but almost foliated schistose sericite-rich margins are present on many veins. Tiny crystals of disseminated pyrite are scattered through the sample.

**SAMPLE NUMBER: 562245**

**SUMMARY:**

This is a strongly chlorite+calcite-altered formerly glassy pillow margin of an augite+olivine-phyric basalt typical of the upper basalts at Hellyer.

**HAND SPECIMEN:**

This sample is a dark green chloritized glassy basaltic or andesitic lava breccia with fragments and patches of interpillow(?) grey cherty or chalcedonic material; the brecciation may be alteration-induced rather than primary.

**THIN SECTION:**

This is clearly the highly altered formerly glassy margin of a pillow basalt. The glass was charged with phenocrysts of augite (possibly up to 20 modal%) and possibly olivine, and much smaller microphenocrysts of albitized plagioclase, and contains angular fragments and streaks of interpillow cherty sediment. Dirty brown calcite thoroughly replaces all former mafic phenocrysts, but shapes characteristic of augite predominate in those grains where former outlines are still visible. However, grains with olivine-like terminations are also present, although much less common, and several of these contain euhedral reddish to opaque chromite inclusions. The albite plagioclase microphenocrysts are unaltered.

The glassy bulk of this pillow lava margin has altered to straky pale green chlorite intergrown with patches of polycrystalline secondary quartz, with the boundaries between these domains often defined by narrow rims of dirty brownish opaque leucoxene.

The common interpillow sediment in this sample is probably composed mainly of extremely finely comminuted glass that has altered to quartz-albite-chlorite and been strongly overprinted by fine-grained calcite in places.