

THIN SECTION:

Despite thorough recrystallization of this originally highly glassy lava, its original identity is still obvious. It was a very sparsely plagioclase-phyric dacitic lava with less than 1 modal% of small (<0.7mm long) totally sericitized plagioclase microphenocrysts in a groundmass that has recrystallized to an even-textured fine-grained granular intergrowth of secondary quartz and sericite, pervaded by wispy meshworks of sericite. Clusters of disseminated pyrite grains mainly less than 0.5mm across are quite common, while a narrow veinlet composed entirely of fibrous quartz and idiomorphic pyrite also cuts the sample. A vein almost 1cm wide composed of coarse-grained quartz with calcite in the vein core is also present. This dacitic lava is very similar in most respects to the other felsic lavas described earlier on, except that this sample lacks quartz phenocrysts; the alteration is identical to 431552, 556 and 548.

SAMPLE NUMBER: 431562**SUMMARY:**

This is a formerly augite+hornblende(?) + plagioclase-phyric andesitic lava breccia with intense quartz-chlorite-dominated alteration of the formerly glassy groundmass.

HAND SPECIMEN:

This is a dark green strongly altered basaltic or andesitic lava breccia.

THIN SECTION:

This sample is clearly an andesitic lava breccia that has extensively recrystallized and altered. The least altered lava fragments were composed of quite abundant large well-formed former augite(?) or hornblende phenocrysts in a formerly glassy chloritic matrix in which perlitic cracks are preserved. The former mafic phenocrysts are euhedral, up to 2mm long and entirely replaced by polycrystalline granular quartz. Many crystal shapes are more like hornblende than augite. Some phenocrysts may also have been plagioclase, but are similarly altered. Most other fragments and their boundaries are rather indistinct and were probably like that just described, but with notably fewer phenocrysts and much stronger alteration. This alteration is broadly defined by two major types, chlorite-sericite-quartz and chalcedonic quartz. The latter is dominated by extremely fine-grained secondary quartz that is clearly interstitial between angular lava fragments in which primary glass has altered to chlorite-quartz-sericite mixtures.