

SAMPLE NUMBER: MAC-10: 407.4m: 396711

SUMMARY:

This is a plagioclase+sparingly augite-phyric high-Si andesite lava with flattened vesicles and perlitic cracks preserved in the formerly glassy groundmass.

THIN SECTION DESCRIPTION:

This is a vesicular formerly glassy plagioclase+sparingly augite-phyric andesitic to dacitic lava. The once-glassy groundmass shows well-preserved perlitic cracks in several parts of the slide. The albitized plagioclase phenocrysts are quite large, to almost 2mm long, and occur as blocky to elongate prisms often grouped in multi-crystal clots, sometimes with altered augite; they are partially sericitized, and sometimes overprinted by calcite, and often contain long apatite needles. Plagioclase phenocrysts make up close to 15-20 modal% of this sample. Former augite phenocrysts are probably less abundant than in the previous sample, and are replaced by chlorite and calcite. Equigranular FeTi oxide microphenocrysts partially altered to leucoxene are quite common.

The groundmass of this sample is quite vesicular, with characteristically aligned and (primary, not deformation-produced) flattened elongate vesicles filled by chlorite and polycrystalline secondary quartz. The perlitic cracks in the devitrified glass are picked out by chlorite concentrations, with 'cells' within the curved chlorite cracks being composed of very fine-grained quartz and albite, with minor sericite and chlorite.

This sample is essentially a better preserved and vesicular version of the previous sample, with the same implications for the original composition. I suggest that it is an andesite at the high-Si end of the andesite spectrum, transitional to dacite.