

0554

SAMPLE NUMBER: 431310

SUMMARY:

This is a monomict sparsely plagioclase-phyric dacitic lava breccia dominated by formerly perlitic-cracked glassy lava fragments. It has suffered relatively strong chloritic alteration

HAND SPECIMEN:

This sample is a dark green massive ^{dacitic} ~~andesitic~~ lava breccia with diffuse-margined fragments to at least 1cm across and disseminated very fine-grained pyrite.

THIN SECTION:

This is a chloritized monomict dacitic lava breccia made up of fragments, mostly less than 5mm across, of sparsely plagioclase-phyric dacitic lava with originally perlitically cracked glassy groundmass. Albitized plagioclase phenocrysts are elongate to blocky prisms from 0.5-2mm long that mainly occur in small multi-crystal clots, and make up less than 5 modal% of the lava fragments. They are fairly thoroughly sericitized, and commonly contain small chloritized melt inclusions. No mafic silicate phenocrysts were present, but occasional small leucoxene-altered FeTi oxide microphenocrysts are preserved.

The groundmass of this sample is composed mainly of texturally distinctive lava fragments composed of devitrified glass that shows clear perlitic cracks still evident, due to their being picked out by chlorite. The remainder of the glass has altered to fine-grained variably textured mosaics composed of quartz-albite \pm minor sericite. This altered formerly glassy groundmass assemblage has been overprinted significantly by relatively abundant fine-grained and patchy chlorite alteration. The chlorite is pale to deep green and forms felted masses of quite fine-grained plates that are concentrated along former perlitic cracks, but that also permeate the remainder of the groundmass of many fragments.

Small opaque grains scattered sparsely through the groundmass, but lacking obvious secondary breakdown features, are probably pyrite. A few lava fragments were slightly less glassy, with groundmasses composed of masses of tiny aligned albite microlites. These probably represent slightly more slowly cooled fragments from the same flow.

The rock was probably a lava breccia, although it cannot be ruled out that it was the brecciated marginal phase of an emerging dacitic lava dome from which quenched, largely glassy fragments were crackling and spalling off into water. The extent of chlorite alteration