

0437

SAMPLE NUMBER: 431479

SUMMARY:

This is a felsic polymict lava breccia or coarse-grained lithic tuff that has an intensely altered and recrystallized formerly ash (?) matrix now composed of polygonal quartz-barite-muscovite-sphalerite-opaque sulphides.

HAND SPECIMEN:

This is a pale grey felsic polymict lava breccia with fragments of sparsely plagioclase-phyric dacite to several cm long, in a recrystallized matrix that contains abundant fine-grained pyrite and some white barite spots.

THIN SECTION:

Four of five distinct lava fragments are preserved in this section, and are obviously derived from at least three different original lithologies. Several fragments are of a distinctive flow-textured dacite with sparse albitized small plagioclase phenocrysts, that, unlike most of the dacitic rocks seen in this set, was originally more crystalline than glassy. The groundmass of these fragments is composed of orientated narrow laths of albite speckled with sericite and fine Fe-oxide dust. Others fragments were more typical of devitrified glassy felsic lava, with fine-grained quartz-albite-sericite mosaics recrystallized from the devitrified glass. These contain small angular and ragged patches of secondary quartz crystallizing from the matrix mosaic. The third fragment variety is also after glassy felsic lava that has recrystallized to fine-grained quartz and albite, but this type is cut by anastomosing sericite bands that produce a snake-skin pattern in the fragment.

The matrix between the various lava fragments in this sample is intensely altered and strongly recrystallized, suggesting that it was probably a porous vitric ash (although the extensive alteration and recrystallization has destroyed any original texture). It consists dominantly of relatively coarsely crystalline polygonal quartz with abundant opaque sulphides and intergrown pale yellow to colourless sphalerite. Less abundant components of the recrystallized strongly altered matrix are well-formed muscovite or phengite crystals commonly intergrown with sulphides, and polygonal anhedral crystals of barite.