

SAMPLE: 562807

SUMMARY: This rock was a polymict glassy dacitic to andesitic lava breccia that has suffered strong quartz-pyrite-sericite alteration, especially in the matrix areas.

HAND SPECIMEN:

This rock is a very strongly altered polymict lava breccia with dacitic(?) to chloritic basalt lava fragments to at least 4cm long in a carbonated matrix that contains abundant disseminated and local concentrations of pyrite.

THIN SECTION DESCRIPTION:

This sample was probably originally a polymict lava breccia composed of plagioclase-phyric dacite and evolved andesite lava fragments that were quite glassy. Lava fragments are angular and show a diversity of devitrification-recrystallization textures that have, in turn, been overprinted by intense quartz-pyrite alteration and calcite alteration. Most fragments appear to have been evolved andesites with small tabular albitized plagioclase phenocrysts that are thoroughly sericitized. In fact many fragments are little different from the lava described above (562807). Mafic phenocrysts are rare in these fragments. A small percentage of the fragments are chloritized vesicular glass probably derived from basaltic glass. Curved fragments of vesicular glass entirely replaced by sericite may have been more felsic.

The matrix of this rock is exceptionally altered. It is now a relatively even-textured and very fine-grained quartz-feldspar mosaic, with dominant quartz, and is riddled by abundant and quite large pyrite crystals and sericite. Calcite probably post-dates the quartz-sericite-pyrite alteration and overprints quite large areas of the section. It is not associated with pyrite alteration.

This sample was probably a polymict lava breccia dominated by glass andesitic to dacitic lava fragments. Strong alteration, particularly of the matrix was associated with the passage of fluids through the rock that produced first strong quartz-sericite-pyrite alteration, and subsequently calcite alteration.