

0417

**SAMPLE NUMBER: 431554**

**SUMMARY:**

This is a sparsely plagioclase+augite-phyric formerly glassy andesite lava with notably more apatite in the groundmass than in the foregoing andesites; it is much less altered than most of the samples described herein.

**HAND SPECIMEN:**

This is a mid-grey altered intermediate lava with a few narrow pyritic veinlets and spots of dark chlorite.

**THIN SECTION:**

In thin section, it is clear that this is an andesitic lava. It consists of approximately equal modal abundances (around 1-2 modal%) of very small plagioclase phenocrysts (<1mm long) that are totally replaced by aggregates of polycrystalline quartz, and small well-formed augite prisms that are completely chloritized.

The formerly glassy groundmass of this sample is texturally well-preserved and consists of a mosaic-textured intergrowth of quartz and minor albite riddled by fine-grained sericite and tiny Fe oxide granules, with quite common interstitial chlorite and a notable amount of small apatite microphenocrysts and needles throughout the groundmass. Whereas most other features of this sample are similar to the andesites from higher in this hole, such as 431549 and 431597, the absence of apatite in both the latter and its relative abundance in this sample clearly indicate differing magmatic groups, albeit andesitic, for these rocks. A small amount of disseminated pyrite occurs throughout this rock.