

**SAMPLE NUMBER: 431487**

**SUMMARY:**

This is a basaltic lava breccia composed of formerly glassy to less rapidly cooled lava fragments of olivine-phyric, vesicular lava that has suffered strong chlorite-quartz alteration with associated weak disseminated pyrite mineralization. Later calcite and sericite alteration has overprinted the original alteration assemblage.

**HAND SPECIMEN:**

This is a strongly altered mafic tuff or lava that has suffered strong chlorite-calcite alteration. It has almost a fragmental appearance, but this may be due to the alteration.

**THIN SECTION:**

This sample is texturally better-preserved than the previous sample. It was clearly a strongly vesicular basaltic lava or lava breccia with common large totally chloritized former olivine phenocrysts. The olivine phenocrysts probably constituted around 10-15 modal% of the rock, and are replaced by pale green chlorite and also by secondary quartz intergrown with the chlorite in some former crystal sites. Some were at least 2-3mm long and quite well-formed, and small chromite inclusions are present in many crystals.

The groundmass of this sample shows enough primary textural variation to suggest that the rock was originally a basaltic lava breccia. Some domains of the thin section are clearly originally glassy, with glass replaced by quartz and chlorite in a mottled texture typical of recrystallization of devitrified glass. In other areas, the groundmass was more slowly cooled, with small albite microlites randomly orientated in chlorite after interstitial glass. The abundant vesicles in this rock are filled by rather coarse-grained polygonal secondary quartz with less abundant chlorite and calcite, and common idiomorphic crystals of pyrite, usually two or three per vesicle. The sample is cut by a weak web of sericite, and calcite occurs in clots overprinting large areas of the section.