is much greater than normally seen in dacites from this area, and suggests localized chloritization. A few small fractures and veinlets are filled by quartz-calcite, or quartz-chlorite-fuchsite(?) (the latter in a single fracture as a highly birefringent and well-crystallized very pale green mica rather unlike standard sericite).

**SAMPLE NUMBER: 431311**

**SUMMARY:**

This is a weakly chloritized, formerly perlitic, sparsely plagioclase-phyric dacitic lava or lava breccia with zones of silica-Kspar(sericite) alteration. The protolith was essentially identical to 431310.

**HAND SPECIMEN:**

This sample is a dacitic chloritized lava breccia with very poorly defined fragments, suggesting the possibility that the fragmental texture may be false, and due to alteration. Parts of the sample appear to be somewhat silica-altered.

**THIN SECTION:**

This sample is essentially identical to the previous sample in most respects. The main difference, hardly significant, is that, as noted in the hand specimen, discrete lava fragments are not nearly as obvious as in 431310. The rock was clearly a sparsely plagioclase-phyric perlitic dacitic lava. Between 'fragments' the rock is made up of extremely fine-grained granular quartz and sericite (after Kspar?), lacking chloritized perlitic cracks, that might represent zones of fluid passage through the cracked lava flow, along which alteration was more intense than within the lava fragments themselves.

Narrow veinlets, almost stylolitic in places, are filled by chlorite-quartz, with minor calcite, sericite and quite crystalline sphene grains in a few places. In a few spots, the sericite intergrown with quartz is quite coarse-grained, and again looks quite like fuchsite, although no fuchsite is obvious in either this, or the previous sample in hand specimen. This sample is notably less chloritized than the previous sample, yet still shows more chlorite alteration than most formerly glassy Mount Read Volcanics dacites. The relative tiiming of the silica- versus the chlorite alteration is impossible to determine.