

0560

**SAMPLE NUMBER: 562249****SUMMARY:**

This is a strongly and variably altered formerly glassy sparsely plagioclase-phyric dacite lava or lava breccia. The most notable alteration is patchy silicification.

**HAND SPECIMEN:**

This sample is a strongly altered dacite with an alteration-induced 'autobrecciated' texture, with dark grey chlorite-rich domains and pink-brown strongly silicified domains or 'fragments'.

**THIN SECTION:**

The least altered areas of this sample show that it was a sparsely plagioclase-phyric, glassy dacitic lava before being strongly altered. The strong heterogeneity of groundmass textures makes it very difficult to determine whether this rock was originally a lava breccia, or whether the sample has a false pyroclastic texture due to intense and variable alteration. Former plagioclase phenocrysts are albitized blocky prisms, mainly less than 1mm across, that have been extensively replaced by calcite and sericite. Although plenty of fresh albite can still be found, it is rather pinkish, due to abundant submicroscopic Fe oxide grains. No former mafic silicate phenocrysts were apparently present in this sample, although small leucoxenized FeTi oxide grains are not uncommon.

The groundmass of this sample was essentially glassy. The glass has devitrified to intergrown albite and secondary quartz of variable grain size, and the various devitrification assemblages and textures have themselves been overprinted by several styles of alteration. Most distinctive is simple silicification, where sugary fine-grained secondary silica and reddish albite replaces irregular patchy areas of the groundmass. In other areas of groundmass, texturally better preserved, relic perlitic cracks are still obvious, being picked out by chlorite and an unusual brownish sericite or similar layer silicate. A fine meshwork of pale sericite traverses much of the sample, but this rock is considerably less chloritized than texturally (initially) similar dacites higher in the hole. Sparsely disseminated euhedral pyrite grains are not obviously associated with any particular style of alteration. A notable vein composed of calcite and coarse-grained quartz, charged with tiny vermiform pale green chlorite crystals, cuts the rock.