

SAMPLE NUMBER: MAC-10: 431.2m: 396712

SUMMARY:

This is a formerly glassy plagioclase-phyric low-Si dacite to silicic andesite lava with a banding of calcite-chlorite-rich darker bands and chlorite-calcite-poor light bands that may be inherited and enhanced from devitrification banding.

THIN SECTION DESCRIPTION:

This rock is a banded formerly glassy dacite to andesite with quite common albitized plagioclase phenocrysts set in former glass that has reacted variably to devitrification-recrystallization and subsequent alteration. The albitized plagioclase phenocrysts are mainly 0.5-2mm across blocky prisms, often occurring as anhedral intergrown crystals in multi-crystal clots. They make up about 10 modal% of this sample, and are partially altered by calcite and sericite flecking. Only a few small euhedral chlorite pseudomorphs after augiet were noted, but altered FeTi oxide microphenocrysts are not uncommon.

The distinctive banding of this sample is clearly seen to be due to variable concentrations of chlorite and calcite. Darker bands are composed almost entirely of dirty, patchy green brown chlorite and intergrown calcite in which albite phenocrysts are distributed in no manner different from the lighter coloured bands. The latter are more informative with regards the former nature of the groundmass, They are now composed of a relatively coarse mosaic intergrowth of albite and quartz after glass, in which tiny acicular quench crystals of albite are set. These lighter coloured bands are much more lightly sprinkled with calcite and chlorite than the dark bands.

This sample was probably a glassy plagioclase-phyric low-Si dacite or high-Si andesite lava. The banding is clearly secondary, but whether it is replacing a former devitrification banding (common on this scale in glassy arc rocks) or entirely secondary is impossible to tell.