

Bass no. 2, 5515'.

Specimen M. 1709.

Altered volcanic flow.

Hand specimen: A greenish grey rock, spotted and veined with brown secondary carbonate. A well-developed flow structure inclined at an angle of about 20° to the horizontal, is paralleled by secondary carbonate and blue-grey prehnite veins. Small whiteish pods parallel to the flow structure are phenocrysts of ?pyroxene, pseudomorphed by clay.

Thin section: Most of the rock has been replaced by finely crystalline clay minerals. Relic textures show a glassy flow texture in the groundmass, with large broken and euhedral phenocrysts.

The phenocrysts appear to have been zoned in some cases; they were probably a pyroxene or feldspathoid. They have been entirely replaced by a mosaic of finely crystalline kaolinite, with a little fibrous prehnite.

Later alteration involved the introduction of veins and patches of brown siderite in both phenocrysts and groundmass. The siderite is commonly radiating and spherulitic in form. Some patches are conspicuously zoned with a series of four closely spaced dark rings.

The groundmass consists of devitrified glass and streaky opaque material, with a strongly developed flow structure, particularly around the phenocrysts. (see photos). Minute rare hexagonal crystals of kaolinite are developed in the glass, with a little prehnite, but in general alteration has been minor. The greater part of the groundmass is a very weakly birefringent streaky mass, with a refractive index of

Conclusion: Volcanic flow, with heavy deuteric alteration.