

**SAMPLE NUMBER: 563716 MAC-27, 713.5m**

**SUMMARY:**

This sample is a strongly augite-phyric basaltic lava that also contains about 3 modal% of altered olivine phenocrysts.

**HAND SPECIMEN:**

This is a massive pale- to medium grey finely porphyritic and weakly vesicular basaltic lava in which the vesicles (to 1cm long) are filled by either calcite or chlorite or both.

**THIN SECTION:**

This is a distinctive basaltic lava that contains around 20 modal% of well-formed augite phenocrysts and about 3-5 modal% of totally carbonate-altered former olivine phenocrysts, set in a very fine-grained matrix that was originally largely glassy. The augite phenocrysts vary from 4mm long to groundmass microlites; most are euhedral to subhedral and are perfectly fresh, and show minimal optical zoning. A few small euhedral chromite inclusions were noted, but these are more abundant in the altered olivines. The augite crystals commonly occur in multi-crystal clots of 10-20 crystals, especially the smaller grainsize (micro)phenocrysts. Former olivine phenocrysts are mainly <1mm long and are replaced by calcite.

The groundmass of this sample is very murky and fine-grained and charged with tiny acicular albite and augite microlites. It was probably quite glassy. Calcite occurs as polygonal crystal aggregates filling vesicles, and as occasional veins and patches through the rock.

This is a distinctive augite-rich (ankaramitic) basaltic lava.