

**SAMPLE NUMBER: 431549**

**SUMMARY:**

This is a formerly glassy sparsely plagioclase+augite-phyric andesitic lava with strong silica-sericite alteration of the groundmass

**HAND SPECIMEN:**

This is a massive dark apparently aphyric grey felsic to intermediate lava with a few chloritic veinlets and fracture fillings.

**THIN SECTION:**

This sample is a sparsely plagioclase+augite-phyric andesitic lava that originally had a glassy groundmass. The former plagioclase phenocrysts are totally sericitized small euhedra less than 1mm long, that make up less than 2 modal% of the sample. Only two or three former augite phenocrysts were noted, all less than 1mm long and all completely chloritized. Former FeTi oxide microphenocrysts are relatively common and all replaced by translucent brown leucoxenitic material and limonite(?).

The groundmass of this sample was originally glassy, but has devitrified than recrystallized to a medium-grained mosaic texture composed of quartz and sericite, quite strongly pervaded by wispy pale green chlorite and riddled with tiny equigranular Fe oxide grains. Dispersed commonly throughout the groundmass are small anhedral patches of angular secondary quartz, often polycrystalline, that are growing from the matrix. The rock is transected by a few diffuse and meandering chlorite veins, and disseminated small pyrite grains make up about 0.2 - 0.5 modal% of the sample.

With regard to your comment about dacitic versus andesitic affinities of this sample and 431548, I offer the following thoughts. Although nobody could have ever picked it from hand specimen alone, particularly if, as you say, the interval from 548 to 549 is gradational in hand specimen (chlorite content etc), these two samples are undoubtedly petrographically different. 548 is unambiguously a rhyolitic lava, while the present sample (549) is notably more mafic, as indicated by the few augite phenocrysts, the abundant chlorite, and the abundant Fe oxides in the recrystallized groundmass. As I noted earlier in this report, I have seen quite a few aphyric to sparsely plagioclase and augite-phyric formerly largely glassy andesitic lavas in the sections between the Hellyer basalts and the Animal Ck Greywacke. I draw your attention to the