

Sample: S 430; TSC34427

Location:

LS 8 at 147.0 m

and Specimen:

A slightly greenish-grey rock containing phenocrysts of quartz and some other pale-coloured aggregates which may be altered feldspar in a much finer-grained groundmass or matrix. The rock has a weak foliation at a moderately small angle to the direction of the drill hole.

Staining with cobaltinitrite shows a small amount of potash feldspar, some of it as phenocrysts.

in Section:

A visual estimate of the minerals is as follows:

	<u>%</u>
Quartz	35-40
Sericite	30-35
Chlorite	15-20
Potash feldspar	5-10
Opaque oxide and leucoxene	1-2
Calcite	1-2
Apatite	trace
Zircon	trace

This is a deformed acid volcanic which originally contained probably about 20 to 25% of quartz phenocrysts and also numerous feldspar phenocrysts and a few dark phenocrysts, at least some of which were opaque oxide. The quartz phenocrysts vary in size from 0.5 mm to almost 4 mm and although many of them show some fractures they have not been as extensively deformed as in some of the previous samples. Some of the fractures in the quartz phenocrysts have been invaded by calcite. There were once at least a few potash feldspar phenocrysts 1 to 2 mm long which have been deformed and partly altered and there are a few phenocrysts of plagioclase which have been fractured, partly recrystallized and some which have been very extensively replaced by sericite. The original rock probably contained 50% of quartz and feldspar phenocrysts but the proportions may have varied. Grains now composed of opaque oxide and leucoxene are up to 0.5 mm in size and two of these have a few inclusions of apatite. There are also a few irregular aggregates of very fine-grained opaque oxide, leucoxene, chlorite and sericite which could represent completely altered mafic phenocrysts but these have been so extensively deformed and drawn out in the direction of foliation that they are unrecognizable.

At one end of the section there is an area at least 12 mm long which contains a few phenocrysts of partly altered and sericitized feldspar, mainly plagioclase in a groundmass or matrix which is coarser-grained than the remainder of the rock and, as this area has a fairly sharply defined boundary it possibly represents a lithic fragment included in the original rock.

The matrix of the rock consists mainly of very fine-grained sericite and chlorite showing preferred orientation intergrown with extremely fine-grained quartz and the proportions of these minerals vary. The recrystallized matrix has a streaky appearance but no definite evidence of original textures. There are thin streaks composed of very fine-grained opaque oxide and leucoxene and there is a trace of apatite including one relatively large crystal about