

Sample: S 427; TSC34425

Location:

LS 8 at 75.2 m

and Specimen:

A slightly yellowish-grey rock containing abundant quartz phenocrysts up to about 3 mm in size in a much finer-grained matrix or groundmass. This is very similar to sample S 425 and the rock has a weak foliation which is at a low angle to the direction of the drill hole.

Staining with cobaltinitrite shows no potash feldspar.

Thin Section:

A visual estimate of the minerals is as follows:

	<u>%</u>
Quartz	45-50
Sericite	40-45
Chlorite	5-10
Calcite	1-2
Opaque oxide and leucoxene	1-2
Epidote	trace
Apatite and zircon	trace

This is very similar to sample S 425 and therefore only the special features rather than a full description will be given.

Quartz phenocrysts vary in size from about 0.5 mm to a maximum of 4 mm and although some have been extensively fractured and the fragments drawn apart as in the previous two samples, there are some quartz phenocrysts which have not been fractured and show very little evidence of deformation although generally there are at least a few faint deformation lamellae and some evidence of undulose extinction. There are a few elongate aggregates of chlorite associated with leucoxene and iron oxide and in some of these original textures are better preserved than in the two previous samples and at least one is clearly an altered biotite flake. There may be fewer and smaller opaque oxide crystals than in the two previous samples but this could be fortuitous and a result of sectioning only a very small area of rock.

The matrix is very similar to that in the two previous samples and although it consists mainly of sericite and quartz, these minerals vary in concentration and there are also variations in staining and texture which is more suggestive of a fragmental rock or pyroclastic than a lava flow. It must be emphasised, however, that original textures are not well preserved and there are no clear boundaries between original fragments if they existed. Some zones contain minor chlorite and there are varying concentrations of very fine-grained iron oxide. There is one elongate zone or band which contains a little fine-grained, brownish epidote. Calcite is distributed sporadically through the rock and, as there are fewer fractures in quartz phenocrysts than in the previous two samples, some of this calcite is present in pressure shadows adjacent to quartz phenocrysts and also in a few other irregular patches in the matrix.

Conclusion:

Deformed rhyolite similar to, and probably related to, S 424 and 425.