

Sample: S 420; TSC34421

Location:

LS 8 at 14.6 m

and Specimen:

A pink and dull green, predominantly fine-grained rock with a weak but definite foliation (in some zones) which is steeply dipping. The rock also has a fragmental or brecciated structure and it was probably locally sheared. There is minor disseminated sulphide, most of which is probably pyrite.

Thin Section:

A visual estimate of the minerals is as follows:

	<u>%</u>
Potash feldspar	35-40
Quartz	25-30
Chlorite	20-25
Sericite	5-10
Sulphide	2-3
Leucoxene and iron oxide	1-2
Calcite	1-2
Zircon	trace.
Apatite	trace

This is an extensively fractured acid volcanic rock which, in many areas is similar to sample S 419 in that it has a matrix composed mainly of slightly turbid and orange-stained potash feldspar closely intergrown with very fine-grained quartz and minor chlorite. There are, however, some zones in this rock where a mosaic of coarser-grained quartz has crystallized across the earlier groundmass or matrix. The rock originally contained at least a few large grains or phenocrysts of quartz up to almost 2 mm in size and these have been extensively deformed, fractured and partly recrystallized. There were once a few fragments or small phenocrysts of potash feldspar but very few of these have survived deformation and recrystallization.

This rock has been very extensively fractured and some zones have probably been crushed almost to mylonite. Throughout much of the rock the numerous small fractures contain chlorite and sericite and interstices between the fragments also contain chlorite and some sericite. Many of the fractures in this rock are in the same direction and it is this which gives the rock an apparent foliation but there are small fractures in all directions.

Very small crystals and aggregates of sulphide are scattered through parts of the rock and although some of these occur within clasts, there are also concentrations of sulphide along fractures, in interstices between clasts and also in finer-grained, possibly granulated zones. There are small patches and crystals of calcite scattered through parts of the rock and these also occur within clasts and in some interstices. The calcite does not appear to be preferentially associated with the sulphide.

Conclusion:

Brecciated rhyolite containing minor sulphide and calcite. Because of the extensive deformation and fracturing it is uncertain whether this was a lava flow or pyroclastic but in some zones the textures are similar to those in sample S 419.