

Sample: S 447; TSC34438;

Location:

LS 8 at 338.8 m

and Specimen:

A gray and orange-pink, fine-grained rock with a foliation at a moderate angle to the direction of the drill hole. Variations in colour suggest that it was originally a fragmental rock probably a pyroclastic and the fragments have been flattened and/or drawn out in the direction of weak foliation.

The colour of some zones and also appearance in thin section suggest that some potash feldspar is present but repeated staining with cobaltinitrite after etching with hydrofluoric acid failed to show any evidence of potash feldspar in the pink-stained zones.

Thin Section:

A visual estimate of the constituents is as follows:

	<u>%</u>
Quartz phenocrysts	5-10
Altered feldspar phenocrysts	?10-15 (possibly more)
Opaque oxide and leucoxene	2-3
Epidote	2-3
Matrix of quartz and sericite with lesser feldspar, chlorite and iron oxide	>70

The volcanic rock has been deformed but there is sufficient evidence to show that it was originally a pyroclastic which was probably composed mainly of fragments of volcanic glass of very variable size including some which were probably several millimetres in size. These are now composed mainly of very fine-grained sericite, quartz and chlorite but there are patches of coarser-grained quartz and they contain differing concentrations of very fine-grained iron oxide, much of which may be magnetite. Original textures are best preserved where there are higher concentrations of a fine-grained iron oxide and most of the fragments are now elongated in the direction of foliation.

Quartz phenocrysts mainly between 0.5 and 1 mm in size are scattered through the rock and although some of these may have been separate crystals or fragments others were probably included in the vitric fragments. Most of the quartz phenocrysts show evidence of strain between crossed nicols and a few have been fractured and the fragments displaced. There were at least a few feldspar phenocrysts 0.5 to 2 mm in size and although most of these have been replaced by sericite there are a few remnants of ?potash feldspar. (This could not be confirmed by staining.)

Some bands in the rock contains scattered aggregates of very fine-grained, turbid epidote and there are also zones where the rock has been invaded by porous patches of similar, turbid fine-grained epidote. These are cut by later veins containing quartz and calcite which are at a high angle to the foliation. Some of the quartz veins contain a pale orange-stained mineral which has a lower refractive index than the quartz and which is thought to be potash feldspar but, as staining with cobaltinitrite showed no evidence of potash feldspar it is possible that it is an albitic plagioclase