DESCRIPTION OF VOLCANIC AND ASSOCIATED ROCKS

Samle: S289; TSC33693

Hand Specimen:
A dark greenish-grey rock containing paler-coloured grains and/or fragments up to 4 mm in size, many of which are quartz.

Thin Section:
A visual estimate of the minerals is as follows:

	%
Quartz	40-45
Chlorite	25-30
Sericite	25-30
Iron oxide	1-2
Potash feldspar	1-2
Leucoxene	trace-1
Sulphide	trace-1
Apatite and zircon	trace

The rock contains numerous angular grains and fragments of quartz, fragments composed mainly of sericite or fine-grained muscovite with and without quartz, a few angular patches or fragments which are probably recrystallized volcanic rock and a few lithic fragments composed of quartz, fine-grained muscovite and opaque grains, probably iron oxide. These grains and fragments vary in size from less than 0.05 mm to about 5 mm and the largest clasts in the area sectioned appear to be of metasedimentary rock which could have been derived from a conglomerate as it has part of a large rounded quartz grain with a finer-grained matrix of quartz and sericite. The grains and fragments are cemented by a matrix composed partly of fine-grained, green chlorite and partly of sericite and this shows a weak foliation due to preferred orientation of sericite and some of the chlorite. Small grains and aggregates of partly recrystallized leucoxene are scattered through parts of the matrix and there are also crystals of iron oxide possibly magnetite which are present in parts of the matrix and also in some of the clasts. There are also a few crystals of pyrite up to about 0.5 mm in size. One zircon grain was found in the area sectioned.

The texture and general appearance of this rock in thin section is more suggestive of a cataclastic rock or breccia than a sediment and some of the larger grains show fractures. There are also a few relatively recent, very thin veins mainly of quartz and a few small quartz veins contain some opaque minerals.

The potash feldspar identified by staining the hand specimen with cobaltinitrite is difficult to locate in the thin section but at least some is present in a few lithic fragments and grains which are of uncertain origin.

Conclusion:
Brecciated and sheared rock containing grains and fragments mainly of quartz and sericite in a weakly foliated matrix of chlorite and sericite. At least some of the clasts were probably from metasedimentary rock and a few may have been from volcanic rock.