

Sample: S 429; TSC34426

Location: 181.2 m  
LS 8 at ~~180~~-2 m

and Specimen:

A greenish-grey, fine-grained schist which is darker in colour than the previous three samples and differs from them in that it lacks the abundant quartz phenocrysts. There are a few irregular gashes or discontinuous veins containing carbonate found in thin section to be partly calcite, partly ?dolomite.

Staining with cobaltinitrite shows a trace of potash feldspar.

Thin Section:

A visual estimate of the minerals is as follows:

	<u>%</u>
Sericite	30-35
Chlorite	30-35
Quartz	30-35
Calcite	1-2
?Dolomite	trace
Potash feldspar	trace
Sulphide	trace
Opaque oxide and leucoxene	1-2
Zircon and apatite	trace

This is a deformed volcanic rock which differs from the previous three samples (S 424, 425 and 427) in the following features.

It has only a few quartz phenocrysts and these have been so extensively fractured and deformed that it is difficult to determine their original size but at least a few were probably less than 1 mm in size and a few may have been up to 2 to 3 mm in size. Some of the extensively fractured phenocrysts have been invaded by calcite as in the previous three samples but in others the fragments are now separated by zones containing chlorite and some sericite.

No definite evidence of phenocrysts of biotite or other mafic mineral was found but there are some lenticular patches of very fine-grained leucoxene and iron oxide which probably represent completely altered crystals of iron-titanium oxide minerals. A little apatite and a minute trace of zircon are associated with some of these.

The matrix contains a higher proportion of chlorite than in samples S 424, 425 and 427 and probably a lower proportion of quartz suggesting that the rock originally had a more basic composition. It is very fine-grained and most of the sericite and chlorite show a preferred orientation parallel to the foliation. The matrix varies in composition in that some lenticular patches are predominantly sericite, some are predominantly chlorite and some are intergrown, very fine-grained quartz, sericite and chlorite. Although these variations in composition suggest an original fragmental rock, original textures have not been clearly preserved.

Accessory minerals are similar to those in the previous samples and include a few small grains of apatite and one or two of zircon and there are also thin streaks containing extremely fine-grained iron oxide and leucoxene.

There are a few groups of sulphide crystals very probably pyrite varying in