

749167

Sample: S 448; TSC34439

## Location:

LS 8 at 343.6 m

## Hand Specimen:

A brownish-grey, predominantly fine-grained rock with a streaky appearance and a weak foliation at a moderate angle to the direction of the drill hole. There are small, pale-coloured quartz grains and aggregates scattered through most of the rock and there are a few very thin, pale-coloured, intersecting and discontinuous veins.

## Thin Section:

A visual estimate of the minerals is as follows:

	<u>%</u>
Quartz	60-65
Sericite	30-35
Opaque oxide mainly magnetite	3-5
Chlorite	2-3
Calcite	1-2
Epidote	trace

This rock has also been extensively deformed and sheared but sufficient evidence of original texture remains to show that it once contained numerous quartz phenocrysts probably mainly between 1 and 2 mm in size but there are a few larger aggregates of recrystallized quartz which are of uncertain origin. Some of them may have been large phenocrysts or aggregates of quartz phenocrysts but the suggestion is unconfirmed. If the rock ever contained phenocrysts of feldspar or any other mineral, all evidence of them has been completely obliterated and even though there are elongate patches of sericite there is no definite evidence to suggest that these were derived from feldspar phenocrysts. There are a few deformed and altered crystals of opaque iron-titanium oxide which were probably up to 0.5 mm in size but these have been fractured and drawn out in the direction of foliation. The matrix is composed mainly of quartz and sericite with varying concentrations of opaque iron oxide and small patches containing chlorite or calcite and/or epidote. The quartz is of very variable grain size and some of it may have resulted from granulation of coarser-grained quartz or even from quartz phenocrysts but it does not show relict textures. It is intergrown with patches of sericite and very fine-grained chlorite and most of these patches of phyllosilicate contain small crystals of magnetite which vary in concentration possibly up to 20%. Many of the magnetite crystals are between 0.01 and 0.03 mm in size and they are therefore slightly coarser-grained than in the few previous samples. A few very small grains of zircon were found and some patches of phyllosilicate show small areas of orange to brown staining of uncertain origin. Some of this staining appears to surround very small grains of an altered or a metamict mineral. There are streaks and irregular to elongate aggregates of very fine-grained, brownish epidote scattered through parts of the rock and although some of this appears to have invaded extensively fractured and recrystallized quartz, most of it is associated with sericite and chlorite and some with calcite. One elongate patch composed mainly of epidote, calcite and sericite has a roughly rectangular shape and it could be interpreted as having been a phenocryst but the suggestion is very tentative.

The deformed and locally granulated rock is cut by numerous small shearing planes and along many of these there are concentrations of sericite. Calcite