

Sample: S365; TSC33695

**Hand Specimen:**

This is a medium-grained rock containing patches of dull pink feldspar possibly with some quartz and it has a darker-coloured matrix which, in places, appears to have been formed by numerous intersecting fractures.

Staining with cobaltinitrite shows moderately abundant potash feldspar.

**Thin Section:**

A visual estimate of the minerals is as follows:

	<u>Z</u>
Potash feldspar	30-35
Quartz	25-30
Chlorite	25-30
Sericite	3-5
Opaque iron oxide	1-2
Pyrite	trace-1
Zircon	trace

This is similar to the two previous samples in that it shows evidence of extensive fracturing and shearing and these have obliterated much of the original texture. The remaining larger clasts are composed mainly of moderately coarse-grained quartz and potash feldspar intergrown with slightly irregular to smooth grain boundaries. Feldspar crystals vary in size and there is one large crystal about 4 mm long which has been extensively strained and partly recrystallized but most of the quartz and feldspar grains are between 0.5 and 1 mm in size. In a few of the clasts there are small amounts of opaque iron oxide and there are also a few crystals of pyrite but these could have crystallized in fractures. In some areas patches of chlorite are intergrown with the medium-grained feldspar and quartz and some of these, which contain leucoxene and show coarse-grained micaceous textures, could represent chloritized biotite but the evidence is not absolutely conclusive. Two small zircon grains were found in the section and one of these which is about 0.05 mm in size appears rounded but this is probably of little significance.

The rock has been extensively fractured and sheared and most of the quartz is now strained and shows patches of incipient granulation. Potash feldspar crystals also show evidence of strain and many have been fractured. The remnants of the coarse-grained rock are now separated by patches, streaks, and veins containing chlorite and there are some shearing planes which contain white mica. There are also a few patches of finely granulated quartz and feldspar intergrown with some of the chlorite and the rock now has a cataclastic texture. There are a few crystals of pyrite about 0.5 mm in size mainly in fractures and patches of interstitial chlorite and sericite and against a few of these there are elongate patches of pressure shadow quartz.

**Conclusion:**

An extensively fractured and sheared or cataclastic rock composed mainly of moderately coarse-grained potash feldspar and quartz with lesser chlorite some of which may have replaced earlier biotite. Because of the extensive deformation the former texture has not been sufficiently well preserved to show whether this was a granitic rock or a coarse-grained metamorphic rock.