

Sample: <sup>5</sup>9105' : TS C7869

Rock Name:

Argillaceous sandstone

Thin Section:

An optical estimate of the constituents gives the following:

	<u>%</u>
Quartz	75
Feldspar	1
Carbonate	1
Matrix	7-10
Mica	2
Tourmaline	Trace
Kaolinite/dickite	1
Limonite	3
Voids	7-10

The mean grain size of the single quartz crystals which constitute the bulk of the rock, is 0.15-0.2 mm. Grains are moderately well-sorted but have low sphericities and are commonly angular. Much of the quartz is deformed and/or recrystallised and shows undulose extinction. Quartzite grains with granulated, mortar textures are probably part of the detrital fraction.

Other components of the detritus are lithic fragments and micas-both of which are generally deformed to such a condition that they almost appear to be part of the matrix. Plagioclase feldspar grains are commonly equant, angular crystals.

The intergranular material consists of a heterogeneous mass of quartz, carbonate and clay some of which is probably derived from the detritus but much being genuine muddy matrix. During compaction some recrystallisation and coarsening have probably taken place.

Some parts of the matrix are a bright red-brown colour, the result of staining by limonitic material deposited from interstitial waters. The stain is particularly well-developed around voids.

**BASIC**