

Sample: TSC47104; Location: Sidewall Core 16, 3447 m

Rock Name:

Compact lithic sandstone

Thin Section:

This sample is similar to many other lithic sandstones in this collection but this one contains probably 15 to 25% of carbonate and only less than 2% of authigenic kaolinite. Fine-grained material thought to have been derived from lithic fragments comprises perhaps about 20 to 25% of the volume of the rock. The fine-grained clay material both forms irregular patches between the quartz grains and also in intergranular films so that there is limited evidence of the pressure solution effects on the quartz grains. These are confined to a few small patches where the clays are relatively less abundant. The carbonate forms many irregular porous patches in which it appears to have partially replaced some of the lithic fragments. As well, the carbonate occurs as small crystals, particularly along quartz grain boundaries. Overall the abundance of clay and of the carbonate means that the sample has an apparently impervious and impermeable nature.

Authigenic kaolinite is a minor constituent of the rock and there are traces of detrital mica and slightly turbid feldspar.