

Sample: ISC47117; Location: Sidewall Core 48, 3900.5 m

Rock Name:

Lithic sandstone

Thin Section:

The sample consists of about 50% of quartz grains which range in size from 0.1 to 0.2 mm with the remainder of the rock being rather dark and indeterminate fine-grained material which forms a contiguous network around and between the quartz fragments. It seems likely that the rock has in fact been completely shattered by the sidewall coring bullet and that the texture as now seen is not a reflection of that of the original sandstone; however, it is likely that the original rock did contain the large proportion of fine-grained material seen in the thin section and the sandstone was presumably impervious and impermeable as a result of this.

Amongst the fine-grained material there is a small proportion of extremely fine-grained carbonate (about 10% of the rock as a whole) and in some places this appears almost certainly to have partly replaced some of the lithic fragments. Authigenic kaolinite is not present (it may have been broken up and removed during collection of the sidewall core).

There are traces of fresh feldspar and detrital muscovite and it seems likely that the sample is, in general terms, similar to many of those described above but more details cannot be given because of the nature of the sandstone preserved in the sidewall core.