

Quartz occurs in unstrained, clear angular to sub-rounded grains. Some grains show signs of corrosion and resorption by the matrix. In addition, there are fragments of turbid chert, of turbid 'quartzite' recrystallised from chert, and of complex compound quartzite fragments usually considered as of vein, pegmatite or metamorphic origin. Altered titanium minerals are present in some of the chert or recrystallised chert fragments.

The greater proportion of the lithic fragments are of siltstone. This material grades, with increasing size and abundance of quartz into an argillaceous sandstone, or with decreasing size of quartz into shale. A further gradational trend appears to be towards quartz-sericite (or mica) schist. The colour of these fragments varies from 'grey' to pale yellow-brown or pale green. Minerals identified in the various grains include quartz, green mica, chlorite, illite clay, titanium minerals ('leucoxene').

A further, not insignificant, component of the lithic fragments has been derived from igneous rocks. There are several grains varying from little altered andesite-basaltic material to grains which are very heavily altered. In most of these grains laths of feldspar or grains of biotite are set in a clay-rich, chloritic or turbid brown matrix. A few grains have been silicified but still retain lath-like shapes.

The detrital component also contains single equant grains of feldspar in various stages of alteration. The dominant feldspar is oligoclase, but there is subordinate microcline. Alteration usually consists of partial sericitisation.

Rare grains of colourless garnet and of aggregates of green ?glaucanite are present.

Opaque minerals are present in some of the lithic fragments; they include both iron oxides and altered titanium minerals. The opaque material, which may have replaced microfossils, occurs, infilling cracks, appears to be of late origin, and composed of carbonaceous matter.

Apart from some deposition of iron there are few indications of diagenetic change other than those due to compaction and the rock retains an abundance of primary voids. It is considered that the rock is a near-shore marine sediment with source material supplied variously by fossils and igneous, metamorphic and sedimentary rocks.