

Otway Group: Upper Jurassic-Lower Cretaceous:

In the onshore portion of the basin the Otway is for the most part made up of thick sequence of f²alspathic sandstones, arkoses, subgreywackes, siltstones and mudstones along with the carbonized plant remains and a little coal. The main detrital components are andesitic rock fragments, felspar and about 10% quartz. The matrix is generally made up of chloritic matter.

The chloritic matter which resulted from diagenesis of the chemically unstable felspar is mostly responsible for the general lack of porosity of the sandstones. In this connection, it is seen from cores that quiet waters formed the depositional environment, which precluded sorting such as caused by wave action and coastal currents. Nevertheless, sandstones with effective porosity do exist as observed at Pretty Hill No. 1 and wells of the Heathfield-Casterton area. (Text Fig. 26).

The lack of marine fossils in spite of the presence of saline waters within the Otway Group of both Gippsland and the Otway basins would seem to suggest that the low energy type of deposition, with little sorting of the accompanying turbid waters, was unfavourable for marine life.

Upper Mesozoic:

The formational divisions of Upper Mesozoic, Paaratte, Belfast, Flaxman (in descending order), result from onshore drilling in the Port Campbell area and are dated Upper Cretaceous. (The underlying sand facies called Waarre is of very limited distribution and is considered to be Middle Cretaceous and closely related to the Otway). Distribution of the Upper Mesozoic is shown on the map Thickness Upper Mesozoic (Fig. 15).

This group of mudstones, siltstones and sandstones continued to be formed by the same general type of constituents - greywacke, felspathic sandstone, kaolinite matrix and chlorite fragments - as the Otway.