

the Latrobe Group sediments in this permit is uncertain. There are indications that although most of the sediments in the Central Basin were derived from the highlands to the north and west, some sediments were eroded from the Bassian Rise and the Southern Platform. The Bluebone and Mullet Wells, in the northwest corner of the permit, encountered silty sands (with poor permeability) of fluvial origin in the Latrobe Group. It seems likely that most of the Latrobe sediments in the western part of T13P were derived locally and are of relatively low energy, non-marine facies. However, a thick sequence of probably Latrobe equivalent sediments is postulated on the continental slope (Figure 2), and may be derived from the north; it could be quite different from those encountered by previous drilling in the permit. Rather poor quality seismic data indicates a thick, lower, acoustically transparent sequence overlain by a relatively thin high amplitude, variable continuity section, becoming less continuous eastward. The section is tentatively interpreted as fine clastics overlain by marginal marine sands, rather than a pro-delta/delta plain sequence.

The Lakes Entrance Formation is present over all or most of the shelf area of T13P, except when eroded by channels at the top of the overlying sequence and, as in the Gippsland Basin, can be expected to provide a vertical seal on Latrobe reservoirs. However, it appears to thin by downlap over the continental slope, and may be absent in places in the extreme east of the permit. In this case, seal would be dependent on the presence of impermeable carbonates in the overlying Gippsland Limestone, which prograded over the continental margin in late Miocene time.