

Basement:

Three wells have so far drilled into basement. Fergusons Hill No. 1 found Ordovician (?) schist. Pretty Hill No. 1 went into Cambrian (?) diabase, probably on a basement topographic high, and Casterson No. 1 went into Ordovician (?) slates. (Fig. 26).

From seismic data, onshore and offshore, basement has been mapped over the entire basin. In a few places the basement is fairly well pinned down through the presence of distinctive reflections, while in others, especially where at shallow depth, it is recognized by the top of a "dead" zone. However, over the greater part of the region control is generally weak. (Top Basement, figs. 10 and 13)

The magnetic survey (Fig. 21) furnishes a good lead toward determining the areas of shallow basement, and suggests several areas of basin intrusions, the main one being Beachport.

Palaeozoic (?) - (Pre-Otway Reflections):

Seismic reflections, apparently from sediments older than those of the Otway, are seen in three areas on a north-south trend. Two of these are on-shore and the third extends from off Otway Peninsula southward beyond the original confines of the Mesozoic basin to the northwest tip of Tasmania. (Fig. 1). The reflections of this region are erratic, but strong and well developed and could be mistaken for Otway. However, it is seen that the Otway in its eastward course swings landward between OS-4 and OS-5 and the distinctive north-sloping reflections are no longer present in the deep water area. Furthermore, velocity determinations on lines OS-16, OS-10 and K-1 proved to be higher than on lines SS-4, SS-23, SS-25 and SS-26 within the Otway area. (Fig. 10).

Neither the lithologic character nor the stratigraphic position of these supposedly pre-Otway sediments are known. However, in view of their distribution as a north-south belt extending to near Tasmania, it would