dips landwards in a counter direction. At the base of the slope there are some indications of small toe thrusts (e.g. N 403, sp 3350 Encl. 17). Below the continental rise the unit dips gently to the seaward and shows the effects of slight tilting and faulting, possibly due to compaction or intrusion. The sediments probably consist of clays or marls on the slope and turbidites on the continental rise (where a maximum thickness of 2000 m is developed). They are thought to have a seismic velocity in the range of 3-4 km/sec.

The uppermost unit probably represents deep water sediments, mainly limestones and marls, of Eocene to Miocene age. It is usually less than 500 m thick and thins gradually towards the south where it onlaps the volcanic basement. It is almost completely undeformed but is truncated by erosion, especially on the slope.

4. Great Australian Bight

In the Great Australian Bight the structural trends follow those of the continental margin, but are complicated by the presence of a thick wedge of sediments below the Ceduna Plateau.

Much of the shelf area is characterised by steep magnetic gradients and is occupied by very shallow Pre-Cambrian and Palaeozoic basement. The plateau and slope are formed on a foundation of landward-tilted basement that has been divided into linear blocks by normal faults with a vertical throw of up to 7 kms. Upon this foundation fluvio-marine sediments were deposited along a linear trend. To the seaward the basement gradually becomes shallower again and eventually, at the southernmost ends of the lines, lies just below the sea floor.

An irregular ridge of acoustic basement lies at the seaward limit of the Ceduna Plateau (e.g. N 407, sp 2000-3000, Encl. 17, also Encl. 8). Its composition is unknown, but it is thought that the following possibilities exist:

(i) It represents a ridge of downfaulted crystalline basement similar to those farther to the north.

(ii) It represents buried relief of older Mesozoic rocks.

(iii) It represents a slump-mass or toe thrust belt that came into existence before the deposition and deformation of the Upper Cretaceous cycle, under which it lies.

Of these possibilities, the last (iii) is preferred in view of the structural position, the fact that it is penetrated by younger synsedimentary faults, and from correlation with the area to the north (line N 407, Encl. 17). The ridge has no magnetic or gravity expression and possibly consists of slumped Lower Cretaceous lacustrine rocks.