

analysis of normal moveout. The times are corrected for water travel.

The location of the representative basin cross sections is shown on each of the structure contour maps.

A discussion of significant features on these maps follows:

1. Pre-Tertiary Unconformity, Plates VIa, VIb and VIc.

This horizon can be correlated in all parts of the Otway Basin. Two characteristics were useful in recognizing this reflection. One is the frequent angular truncation of underlying beds and the other is the lower termination of prograding beds as they covered over the old erosional surface.

Structural movement has been generally slight on the Pre-Tertiary Unconformity surface. The most attractive closures are in the south east portion of South Australia and in western Victoria. Most of the highs shown on the unconformity are the results of gentle local uplift and are not topographic features.

The subcrop pattern of the Upper and Lower Cretaceous rocks is shown on this map. In much of the King Island area, basement is directly underneath the Tertiary.

2. Pre-Cretaceous Unconformity, Plate VII

This horizon could be mapped only in South Australia. It is characterized by a discontinuous strong reflection that terminates underlying steeper dipping events. The underlying beds are believed to be Jurassic. Large faults were developed on this erosional surface at the start of Lower Cretaceous deposition. For the most part, this structural movement died out before the end of Lower Cretaceous times. The closed anticline which is the proposed site of the Crayfish No. 1 well was largely formed in early Cretaceous times, although there was probably some topographic relief on the unconformity surface.

3. Pre-Upper Cretaceous Unconformity, Plates VIIIa, VIIIb, VIIIc.

This unconformity cannot always be recognized by truncation. In most of South Australia the bedding in the Upper and Lower Cretaceous is parallel. A band of reflections related to basal Upper Cretaceous sands serves as a rather poor correlative tool for mapping. In Victoria a strong angular unconformity was observed in the vicinity of Pecten No. 1 at the base of the Upper Cretaceous. Unfortunately reflection quality was too poor to allow the unconformity to be carried with confidence. Strong angular unconformities in other parts of Victoria and Tasmania have been correlated with the base of the Upper Cretaceous but this identification is not very reliable.

In general, the pre-Upper Cretaceous Unconformity is sub-parallel to the Pre-Tertiary Unconformity. Very few bedding reflections were observed within the Upper Cretaceous in Victoria and Tasmania.

4. Top of Lower Eocene-Paleocene, Plates IXa, IXb, IXc.

This map does not show the structural attitude of a given bed in Victoria and Tasmania but instead shows the structural