

3) Section C-C' Figure 5 (c)

The section is a dip line from west central Victoria to show a potentially prospective high in Upper Cretaceous and Paleocene rocks. The Eocene and Paleocene interval is anomalously thick at the north end of the line and this thick trend is probably part of a regional Lower Tertiary subsidence. Also of note is the regional downdip wedgeout of Eocene and Paleocene at the south end of the section.

4) Section D-D' Figure 5 (d)

The section is a dip line across central Victoria to demonstrate the faulted nature of the Top Otway seismic marker. Also shown on this section is the regional downdip wedgeout of the Eocene and Paleocene clastics.

5) Section E-E' Figure 5 (e)

The section is a dip line from the West King Island area to demonstrate the gross relief of Economic Basement anomalies in that area. The Pre-Tertiary section is probably largely Lower Cretaceous. Also shown on this line is a typical igneous intrusion.

6) Section F-F' Figure 5 (f)

The section crosses the Anglesea Sub-basin from Shell Nerita 1-A to the Mornington-King Island high that separates the Otway Basin from the Bass Basin. The Cretaceous section is heavily faulted. Shown are four igneous intrusions, which, since they do not pierce the underlying reflectors, must rise through very narrow chimneys. This section is representative of structural patterns seen in the Anglesea Sub-basin.

E. MAPPED HORIZONS

Structure contour maps of seismic markers are presented at the scale of 1/100,000 and 1/250,000 on plates 2 through 8. In addition a water depth map at 1/500,000 is shown on plates 9 (a, b). A discussion of the significant map features of plates 2 to 8 follows:-

1) Economic Basement: (plates 2 (a,b,c,d,e,f))

The reflection is mappable only at the basin margins. In the western margin (plates 2(a,b,c) and figure 5 (a)), the significant features are:

- (a) The Cape Jaffa Hinge line the top edge of which is roughly defined by the .900 second contour (plates 2(a,c)) which essentially defines the western limit of the Otway Basin. To the north and west, the Encounter Bay area is underlain by shallow basement.
- (b) The faulted tilt block, down to the north that trends from the south side of Cape Jaffa Hinge Line to the general high area marked by a fault at shot point 1750 on EP-40 (figure 5 (a)). This sets up a regionally thick area of Crayfish Sand which has been drilled at Esso Crayfish A-1.
- (c) The west plunging anticlinal nose that trends from the north end of EP-3 to S.P. 1940 of line EO-7. This is probably the southern extension of the Beachport High, that has been reported by Leslie (Petroleum Exploration in the Otway Basin, Commonwealth Mining and Metallurgical Congress 1965 Paper 34/109) and which appears to be a strongly expressed Basement. positive.

In the eastern margin of the basin (plates 2 (d,e,f)) the significant features on Economic Basement are: