

## 3) Basement

The seismic event carried as Basement represents the top of the true basement complex in the area southeast of line EC-109, and the top of economic basement (Lower Cretaceous) northwest of line EC-109. In the case of true basement the reflection appears as a very strong low frequency reflection with an immediate decline in seismic energy below. Structure of the Basement complex is also complicated by a considerable amount of faulting.

Interpretation Parameters and quality of data over the area covered by this report are considered good and reliable.

B) Mapped Horizons

Horizons that have been mapped and included in this report are on a map scale of 1:100,000. The area is covered by Plate a (Northwest portion) and Plate b (Southeast portion).

Structure Contour maps enclosed are as follows:

- 1) Lakes Entrance Formation (Oligocene) Plates Ia and Ib
- 2) Latrobe Delta Topographic Surface (Eocene-Paleocene-Upper Cretaceous) Plates IIa and IIb.
- 3) Basement Complex Plates IIIa and IIIb.

Isopachous Contour maps enclosed are as follows:

- 1) Lakes Entrance to Latrobe Delta Plates IVa and IVb
- 2) Latrobe Delta to Basement Plates Va and Vb

In addition, a Water Depth map (Plate VII) at a scale of 1:250,000 covering the entire Basin, and Shotpoint Base maps, Plates VIa and VIb, are included.

Structure maps are contoured in depth with datum being sea level and static corrections applied for variations in water depth. The Time-Depth table used for depth conversions on structure maps is a composite of all velocity data available at this time. The following is a discussion of the significant features of each of the Mapped Horizons.

## 1) Lakes Entrance Formation (Oligocene)

Structure on the Top of the Lakes Entrance formation is primarily that of transgressive onlap sequence. The section is characterized by gradual thinning to the west and a rather constant dip of approximately between one and two degrees per mile basinward to the northeast. The most significant structural feature is the anticlinal closure on Plate Ib immediately adjacent to the area where Miocene channel sediments have cut into the Lakes Entrance formation. This structure is probably a result of the Miocene Channel activity. Another structural feature is noted on Plate Ia on line EC-108 and can be related to a positive Basement feature associated with up-to-the-basin faulting.

The total thickness of the Lakes Entrance formation as shown on the Isopach maps on Plates IVa and b exhibits a general thickening into the Basin. This isopach shows little or no structural growth in Lakes Entrance time. Thinning in the area of the Miocene Channel cut is probably a result of channel erosion.