The Eastern Bass Strait Marine Seismic Survey data quality is generally good, ranging from poor to very good. The six-fold C.D.P. technique produced superior data to the single-fold reconnaissance shooting due to multiple attenuation.

Data from all the previous Bass Basin seismic surveys have been integrated with the Eastern Bass Strait Marine Seismic Survey. These surveys are the Haematite "Bass Basin Marine Seismic Survey", Esso's "Bass Basin Marine Seismic Survey", and Esso's "King Island East Marine Seismic Survey". The Haematite data has not been processed with any attempt to attenuate the water bottom multiples and therefore the correlations are not as reliable as for the more recent surveys. FM recording used for the Eastern Bass Strait and the King Island East surveys gives better resolution than the earlier AM recording.

Velocity Data - Accurate velocity control within this basin is available from well velocity surveys and sonic logs obtained in Esso Bass Nos. 1 and 2. Additional velocity information was obtained from a study of the dynamic corrections necessary to make N.M.O. corrections.

These studies indicated that only slight variations in average velocity occurred throughout the basin.

Hence it was considered appropriate to determine a single mean time-depth curve applicable throughout the whole basin. The time-depth chart for the curve obtained as shown in Fig. 5.

INTERPRETATION

A) Gippsland Basin

This interpretation incorporates all of the seismic data recorded in PEP's 38 and 39 and the Gippsland Basin portion of EL 1/60 with the exception of the areas not eligible for subsidy. However, structural attitudes within the omitted areas are covered adequately by previous Gippsland Basin reports.

Four structure maps and two isopach maps have been constructed. Fig. 3 illustrates the extent to which the four mapped horizons can be carried over the basin.

The prospects which have been definitely established by previous surveys and to which further detail has been added in the Eastern Bass Strait Marine Seismic Survey are Barracouta, Snapper, Marlin, Kingfish, Gurnard and Bream. Features which previously could have been classed as structural leads and which are now definite prospects are Tuna, Dolphin and Halibut, complete new prospects which were found and detailed by this survey are Mackerel and Flounder. New leads are Flathead, Sole, Herring, and Cod South.

General Geologic History - From Ordovician through Permian times, the Tasman geosyncline occupied a large part of what is now eastern Australia. It extended south from northern Queensland through Victoria and Tasmania and probably continued on to the southeast for some distance. This trough was several hundred miles wide and included all the area now ascribed to the Gippsland Basin. During this time, 40,000 + feet of sediments were deposited in this geosyncline and it was folded by several major orogenic cycles. These orogenics were accompanied by intrusive and extrusive vulcanism and resulted in local metamorphism. It is this sequence of rocks that probably serve as the source for the major part of the clastics deposited during late Mesozoic and Tertiary time in the Gippsland Basin.