INTRODUCTION

The Esso Gippsland Seismic Survey contains 5,351 profiles for a total of 722 miles of subsurface coverage, of which 641 miles is 6-fold C.D.P. and 81 miles single-fold coverage. All recording equipment used during the survey was to Esso's specifications. Western Geophysical Co. was Esso's contractor for both the field recording and playback processing. Appendix I contains a summary of the field operations.

Shotpoints for the new seismic work and the previous Haematite shooting are indicated on each of the maps.

Primarily as a result of the C.D.P. shooting procedure, the reflection quality is excellent. This results in a network of reliable seismic structural and stratigraphic control. The earlier Haematite seismic work has been integrated into this network of C.D.P. data; thus the enclosed interpretations represent a study of all available seismic data.

Esso personnel closely supervised the recording and playback procedures. The interpretive portion of this final report was prepared by Esso, and the statistical portion by Western.

VELOCITY CONTROL

Uphole velocity surveys and sonic logs from Arco-Woodside's Merriman-1, Wellington Park-1, North Seaspray-1, and Carr's Creek-1 wells were used. Western, with Esso supervision, made a regional T $\triangle$ T analysis of selected Haematite seismic records. This study indicated a generally constant increase in velocity with depth to top of the horizon "C" over the basin area. The resulting moveout calculated from this study was very successful in C.D.P. stacking which indicates the validity of this velocity curve. For purposes of interpretation, we have plotted velocity as a function of time vs. depth to horizon "C". This velocity curve has been used to convert time to depth on all horizons mapped above and including horizon "C". The function is tabulated in Appendix I.

Velocity distribution below horizon "C" is another matter. Because deeper intervals change thickness so rapidly we presently feel incapable of reliably interpreting the regional average velocity distribution. This has led to structure mapping of the horizon below horizon "C" in time. The following chart indicates the mapping methods used.

Maps

Depth	Time
Horizon "A"	
Horizon "B"	
Horizon "C"	
	Horizon "D"
	Horizon "E"