

moveout correction, deconvolution and time variant filter. The cable geometry was 600 meter split spreads, and amplitude control in the early part of the record by analog "Automatic Volume Control" was adequate for such a short spread. A static correction for travel time through the water was applied. Results of the single-fold digital processing were a considerable improvement over analog due to more precise deconvolution of water bottom and intrabed multiples. However, improvement of deep reflection data was marginal to non-existent, due probably to lack of energy and dynamic range on the original analog recording.

Plate 1 shows the location and type of digitally processed sections.

### C) INTERPRETATION PARAMETERS

Six wells have been used to identify reflecting horizons. These include Esso Crayfish A-1, Geltwood Beach-1, Shell Voluta 1-A, Shell Pecten 1-A, Esso Prawn A-1 and Shell Nerita 1-A. From these wells, the following horizons have been identified and mapped.

#### 1) Oligocene -

ties to a limestone marker at -1831 in Esso Prawn A-1 in the Lower Gellibrand Marl. The reflector does not persist as far north as Shell Pecten, but by projection it would tie within the Lower Gellibrand. At Shell Nerita, the marker ties approximately to the Top of Jan Juc at -505 feet. This horizon probably represents a time-rock unit deposited in a transgressing Oligocene sea.

#### 2) Eocene -

ties to the base of Narrawa~~urk~~ Marl, Top of Mepunga in two wells - Esso Prawn A-1 at -2932 and Shell Pecten 1-A at -2038. At Shell Nerita 1-A it ties to the Top of Demons Bluff at -1070 feet. The horizon is probably a slight unconformity, but is approximately representative of an Eocene time line. Its significance in the Otway Basin, as excluded from the Anglesea Sub-Basin at Shell Nerita 1-A, is that it is the bottom of marl, the sealing mechanics to underlying Tertiary and Cretaceous sandstones.

#### 3) Paleocene -

ties by projection to the bottom of a shale within the Knight Group at -1240 feet in Geltwood Beach-1. The reflection is a time-rock unit that typifies Paleocene-Eocene deposition within the Gambier Sub-Basin. The reflection was chosen as a mapping horizon because it may represent the top of porous, sandy Tertiary rocks.

#### 4) Base of Tertiary -

has been tied approximately to the Base of Tertiary at all wells except Shell Nerita 1-A. The Top of Cretaceous is often an indefinite mechanical log and paleontological marker. As a seismic reflection, the Base of Tertiary is overlapped on to by overlying reflections and truncates underlying reflections. Therefore, it is thought to be representative of the Pre-Tertiary unconformity.

In the Anglesea Sub-Basin, Base of Tertiary reflection cannot be followed. Top of Boonah sand has been correlated in its place. In areas where Tertiary rocks onlap Basement, the Basement surface has been mapped as Base of Tertiary.

#### 5) Senonian Marker -

This horizon has been tied by projection to -3340 feet at Geltwood Beach-1, and it is thought to be the marker at -7363 feet in Shell Voluta 1-A. The reflection is called Senonian because it probably is a time-rock unit, perhaps a persistent shale marker with the Upper Cretaceous. It is thought that sand wedges within the regressive Upper Cretaceous sea will occur above