

## INTRODUCTION

The available well data in the Bass Basin has been studied in order to gain a prespective of the broad sedimentation and geochemical patterns prevailing in the basin during the Paleocene Eocene. Isopachs and net sand/gross section maps were prepared for three periods of time during the Paleocene-Eocene and were incorporated in interpreting the present day heat flow distribution. Regional cross-sections encompassing the wells in the basin have been combined with vitrinite reflectance and total organic carbon measurement in order to define the prospective regions within the basin. The features mapped in T14 and T18P are considered well located in the mature oil generating parts of the basin.

### Reservoir Distribution

#### L. balmei Isopach and Net Sand/Gross Section (Fig.3).

Partridge (1976) defined two spore pollen assemblage zones which almost entirely span the Paleocene. These zones were the Upper and Lower Lygistepollenites balmei zones. The zones were combined in this study in order to establish a net sand/gross section map (Fig.3). Net sand was considered to be any sandy interval with sonic log or donductivity response indicating porosity greater than 10%.

Even though the L. balmei section was not reached in Bass -1, Cormorant -1, and Toolka -1 and only 480 metres was penetrated in Pelican -3 to the southwest, there is sufficient evidence to postulate a major south-westerly trending depositional trough in the eastern part of the basin. Interpretation of the BCS81 seismic survey suggests there could be greater than 3000 metres of L. balmei age sediments near Dondu -1 which is near this depocentre.