

### 5.3 THE PINCHOUT EDGE OF THE CENOMANIAN WITHIN THE BARK SUB-BASIN

The Cenomanian beds within the Bark Sub-Basin are derived from the erosion of Otway Group sediments. These beds will have a high sand-shale ratio. Their distribution has been mapped, as has their present structure (Enclosures 19 and 20). The updip areas of the pinchout of these beds presents a trap for migrating hydrocarbons.

However, the quality of the seismic data is poor, so that the exact position of the pinchout of the Cenomanian sediments probably occurs within a zone one kilometre wide. It is possible that the trap area could be considerably reduced if the pinchout edge moved eastwards by a kilometre in certain places.

Seismic data from the BB 85 survey form the grid upon which this prospect has been generated. A bandpass filter of 10-90 Hz has been used on all data. The resulting high frequency chatter overrides the signal and reprocessing of these data should be undertaken at an appropriate occasion.

### 5.4 EOCENE STRUCTURES WEST OF CHAT-1

The most prospective area for the Tertiary section in T/15P is to the west of Chat-1 where there is sufficient thickness of section and the interval dips gently towards the Pelican Trough. In this area, two Eocene structural leads have been mapped as shown on the Top of Palaeocene structure map (Enclosure 4). The leads are only seen on a few lines and further seismic will be required to upgrade them to prospect status. The larger lead offers some potential with an approximate area of closure of 50 km<sup>2</sup>.

### 6.0 CONCLUSIONS AND RECOMMENDATIONS

T/15P is a most prospective permit, not least within the Boobyalla Sub-Basin. The presence of roll-over structures and rotated fault blocks in a basin in which mature source rocks are overlain by reservoir rocks and interformational seals, is enough reason to recommend a program of further seismic to both detail the prospects that have been mapped and explore for more.

The structural complexity of the traps suggests considerable scope for the application of three-dimensional seismic methods. Seismic workstations can enhance the interpretation of fault patterns, with dip and azimuth displays for the delineation of them. Slices through three-dimensional seismic data parallel to faults to evaluate the juxtapositioning of beds and seals, will greatly assist in the interpretation.

First things first, however, and a two-dimensional seismic program should be planned so that these data can be integrated with a subsequent three-dimensional one, should more work be necessary.