

Three generalized geologic sections (plates 1, 2 & 3) are presented to illustrate the stratigraphic and structural concepts as presently envisaged in the more prospective part of the permit. The locations of these sections are shown in Plate 4.

Plate 1. represents an interpreted geologic depth section which includes known stratigraphic information from the Bluebone 1 and Sailfish 1 wells. Bluebone was drilled to test a possible stratigraphic pinchout play. The well encountered a sandy Lakes Entrance section below the Gippsland limestone and the Latrobe Coal Measures reservoir section. The well may have been dry because of lack of seal. Pockets of Eocene L.C.M. are shown eastward on the section as derived from study of relevant seismic sections near this traverse.

Near the Sailfish well the basement sub-structure shows the effects of the breakup tectonics near the continental margin. A postulated thickening of L.C.M. occurs over these basement fault blocks affording numerous opportunities for hydrocarbon traps. These include draped horst blocks, stratigraphic pinchouts, fault traps and combination stratigraphic-structural traps controlled by permeability barriers. The most likely type of permeability barrier would be due to channel cut and fill of Eocene to Miocene age as found in the central Gippsland Basin.

Sailfish 1 bottomed in volcanic material of Oligocene to Miocene age after penetrating the Gippsland Formation. The Lakes Entrance Formation (Oligocene shale) and L.C.M. were not reached.

Plate 2 shows an interpreted geologic section in depth derived from line 80-F-1. This section traverses the Northern 1:25000 map sheet of this report in a SSW-NNE direction. The prospective L.C.M. reservoir section is shown to be thin (or absent) over large basement highs with rapidly thickening wedges in the down dropped areas. Plate 4a is an interpreted version of Line 80F-1 and shows the tectonic style and stratigraphy of the area. Note the appearance of a typical volcanic feature at SP 1280 near 1.0 second.