

the Otway Group has a source rock which is considered to be gas prone, requiring slightly higher temperatures for rock peak generation, actual peak generation may have occurred slightly later than noted values. Maturation was complete, or well advanced, prior to the M. diversus unconformity. The Otway Group appears to be supermature. Any hydrocarbons generated within the Otway Group sediments require migration, either laterally into the basins cooler flanks or vertically into the overlying sediments, to be preserved.

The entire lowermost EVCM, (pre-Lower M. diversus) is presently within the generative-preservation TTI zone. It is worth noting that the Pelican field gas-condensate accumulation occurs immediately above the mature section. Pelican wells reached total depth prior to entering this zone.

(b) Narimba 1 (See Figure 5.8)

In this model the upper Otway Group was buried to 5500' with a higher geothermal gradient prior to uplift and erosion. Compared to the Pelican 1 model it can be seen that this has two effects. The time interval of generation is expanded and onset of maturation is earlier. However, the TTI values on both sides of the break-up unconformity are comparable to those calculated in the Pelican 1 model. The present day upper Otway Group is in the dry gas preservation zone.

The maturation plot of the EVCM at Narimba 1 is similar to the maturation plot of these sediments in Pelican 1. Note, Narimba 1 also reached total depth prior to reaching the zone