of maximum hydrocarbon generation (TTI = 75).

(c)Cormorant 1 (See Figure 5.9)

As for Pelican 1 and Narimba 1 the Otway Group sediments are supermature.

The maturation plot of the lower EVCM is similar to the maturation plot of those sediments in Narimba 1 and Pelican 1 and fall in the zone of hydrocarbon generation-preservation.

Cormorant 1 was used as a model for examining the potential influence of intrusives on thermal maturation. The model assumes that the intrusive will decrease the rate of thermal cooling between the pre-breakup gradient and present day gradient. Cormorant 1 is the only well studied in which the source rock data (Nicholas and others, 1981) suggests that the lower EVCM are both oil and gas prone rather than gas prone only. The thermal effect of the thick intrusive may have marginally maturated the upper EVCM. These sediments are also oil and gas prone. The oil recovered from Cormorant 1, 22^{o} API gravity and probably derived from continental source material (Aquing 1980 p73), may have migrated vertically from an earlier mature source. However, this recovery of heavy oil could also be a characteristic of very early generation. As this oil recovery overlies a good oil prone source rock this latter explanation is favoured.

5.4.4 Discussion of Results

If the Otway Group had an early high thermal event, as proposed, then over most of the basin the lower Otway Group