been significant in terms of both heat input and thermal blanketing. In these areas, in particular a 25 kilometre wide belt running N-S from Cormorant 1 to Pipipa 1, the temperature gradient is elevated above the basin average, possibly up to 43°C/km (see Figure 5.6).

d) Paleoheat flow (and hence geothermal gradient) is most likely to have been higher in the past, particularly immediately prior to Australia/Antarctica breakup at approximately 97.5 MMYBP.(Cande and Mutter,1982).

5.4 BURIAL HISTORY: LOPATIN TIME-TEMPERATURE MATURATION PLOTS

5.4.1 Introduction

The construction of Lopatin Time Temperature Maturation Plots (LTTMP), or geohistory analysis models, is discussed fully in Waples (1981, p. 95-106). Waples Table 8.3 (p. 102) is reproduced here (Table 5.3) to illustrate the range of Time-Temperature Index (T.T.I.) values versus hydrocarbon generation and preservation. Advanced techniques of generating Lopatin diagrams are described by Falvey and Deighton (1982).

Three wells were chosen for initial geohistory analysis: Pelican 1, Narimba 1 and Cormorant 1. Pelican 1 was chosen because of its association with a known gas field, Narimba 1 as an adjacent but dry well and Cormorant 1 because it has the