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#### 4. GEOLOGY OF EL20/80 LAUNCESTON

##### 4.1 Introduction

The geology of EL20/80 Launceston is outlined in previous exploration reports, (Osborne, 1981; Ellis, 1982).

Up to four brown coal seams generally occurring at depths of less than 60m have been intersected in the Loatta, Pipers Lagoons and Selbourne sub-basins. The brown coal deposits are delineated by 1.5m brown coal isopachs, (Figure 4.). The outline of further areas containing ligneous facies, that is, carbonaceous or ligneous clays interbedded with thin brown coal seams, is also shown in Figure 4.

On-going exploratory drilling and evaluation of geological and geophysical data during the quarter has resulted in the re-appraisal of seam correlations and conceptual depositional models.

The conceptual depositional models of brown coal formation are discussed in section 4.2, and the re-appraisal of seam correlations and seam nomenclature is discussed in section 4.3.

Cross sections, including amended seam correlations, and detailed descriptions of seam splits, will be submitted in the next six monthly report.

##### 4.1.1 Conceptual Depositional Models of Brown Coal in the Launceston Basin

Development of ligneous facies within the Launceston Basin is envisaged to have occurred in:-

- i) narrow linear belts immediately adjacent to basement highs,
- ii) restricted embayments of pre-Tertiary basement occurring along the Basin margins, and
- iii) narrow linear troughs formed in response to syndepositional isostatic subsidence along basement faults.

Ligneous or any combination of these three facies show two trends of development in response to basin infilling. These trends are a reflection of the environment of deposition and nature of the sub-basin.