

In conclusion the plots of porosity verses permeability for different ages of sediments show that in general the younger aged sediments post-lower *M.diversus* give relatively good log normal straight line relationships. Older sediments including those in the more prospective *M.diversus* and *L.balmei* palynological zones show wide variation.

#### 7.4.5 Depositional Facies

A third suite of crossplots (Figure 7.1 and Appendix 4) were produced by sorting the porosity-permeability data into five facies associations:

- Overbank facies
- Shoreface facies
- Fluvial channel facies
- Lagoonal delta facies
- Shallow subaqueous sandsheets

The facies associations were assigned using the core facies logs documented in Suttill *et al* (1987).

##### Overbank facies

This association includes the following depositional facies; lacustrine fill, crevasse splays, levee deposits, and channel abandonment plugs. The porosity-permeability cross plot shows a relatively broad scatter of data for this association as would be expected from the relatively low energy environment poorly sorted sediments that are represented.

##### Shoreface facies

The following depositional facies are represented by the shoreface facies association; beach - backwash - swash zone. This association represents relatively high energy sedimentation in which the sediments are well sorted and