

have probably attained good mineralogical maturity (are more quartzose). Consequently, it is not surprising that a good log normal relationship between permeability and porosity is observed.

Fluvial channel facies

The fluvial channel facies association includes; inchannel deposits, barforms and point bar deposits. This association also represents relatively high energy deposition in a predominantly unidirectional flow pattern. A moderate to good log normal relationship between permeability and porosity is observed, with the observed scatter being probably due to depth of burial and diagenetic processes. The gradient of the best fit porosity-permeability curve is observed to be steeper than that of the shoreface facies samples. The shoreface facies exhibit higher maximum measured porosities than the fluvial sediments, although both have similarly highest maximum measured permeabilities of approximately 1000md. However as porosity reduces to approximately 12-13% both the shoreface and fluvial sediments have permeabilities of only 0.1md.

Lagoonal delta facies

The lagoonal delta facies association is represented by typically upward coarsening sequences of sediments deposited in progradational lacustrine deltas, examples occur at Pelican 5, core 1 and Cormorant 1, core 13. Many of the sediments are wave-rippled indicating near shore deposition. A very good log normal relationship between permeability and porosity is observed despite a small number of measurements. The slope of the curve is very similar to that observed for the shoreface facies association.

Shallow subaqueous sandsheets

Shallow water subaqueous sandsheets were deposited in a transgressive pro-delta setting at the top of the Eastern View Coal Measures and examples are represented in core from Cormorant 1, cores 3 and 4, Bass 3, core 6 and