

Key questions therefore are:

- Are the results from Pelican 5 representative for all Pelican Field wells and for all of T/25P?
- Why are the reservoirs at Yolla 1 different? and is there potential for similar reservoir development in T/25P?
- Which are the major controls on reservoir development, provenance, compaction, diagenesis, or depositional facies?

7.3 Previous Studies

There have been several significant studies of reservoir development in the Eastern View Coal Measures during the last decade, and key conclusions of these studies are outlined below:

Aqing (1980) observed that the Eastern View Coal measures consist mainly of shale in the lower part, but become increasingly rich in coal and sandstone in the upper part. It was also concluded that the main provenance areas were to the southwest and southeast on the Tasmanian Block and to the east on the Bassian Rise. The Australian mainland to the north was considered to have been a minor sediment source.

The first detailed petrographic study of reservoir development in the Bass Basin was conducted by Meszoly et al (1986) who examined the diagenesis of Eastern View Coal Measures sandstones. Meszoly et al (1986) recognised two diagenetic patterns which they referred to as Bass type and Pelican type patterns.

Bass Type

The Bass type diagenetic pattern primarily features carbonate authigenesis, a major cause of porosity occlusion, and is typical of sandstones with high sand-shale ratios in the upper part of the Eastern View Coal Measures above about 1950 metres. Dolomite cement is associated with coarse grained sandstones, whilst siderite cement is typical in finer grained sandstones containing carbonaceous laminae.