

V.3 RIFT RELATED DURROON SUB-BASIN

Lower Cretaceous sediments in the Durroon area are time equivalent to rift-related sediments in the "main" Bass Basin. The former were deposited in a low-energy volcanoclastic environment and comprise tight, lithic sandstones, siltstones, shales and coals. The top Lower Cretaceous is recognised as a regional unconformity.

Durroon -1 well and stratigraphic interpretation of seismic data suggest that the rifting episode in the Durroon Sub-Basin began with widespread basalt volcanism signalling the beginning of the Late Cretaceous depositional regime, which continued until *T. lilliei* Palynological time in several repeated cycles. The deposition was confined to a narrow depression between north-northwest trending rift-related normal faults. These faults formed southward-plunging half grabens which were filled with sediments largely derived from the erosive Lower Cretaceous strata.

The depositional model of rift-related Late Cretaceous Durroon Sub-Basin could be described as follows:-

The first stage was uplift followed by erosion, which can be recognized on seismic as an angular unconformity. It was followed by rotational normal faulting down to the east with original throw of approx. several thousand feet. Thus a half graben was formed, which was also tilted to the south and terminated in the north by a high area. This time is also characterized by extensive volcanism. During all of the Late Cretaceous rifting episode, the northern extension of the