

## STRATIGRAPHY

The stratigraphy of the Bass Basin has been described most recently by Williamson, et al, 1987. Other detailed descriptions can be found in Williamson, 1985 and Aquino, 1980.

The oldest sedimentary section penetrated in the basin is the Early Cretaceous Otway Group thought to rest unconformably on Mesozoic and Paleozoic basements. The Otway group is composed of nonmarine clastics, which are poorly-sorted and lithically-immature, and are interbedded with thin coal seams. Vesicular olivine basalt is seen overlying the Otway section in the Durroon well.

The Otway section is overlain by the Late Cretaceous to Eocene nonmarine Eastern View Coal Measures. The contact between the Otway and Eastern View Coal Measures has not been penetrated in the central basin but is represented by a lower and middle Late Cretaceous unconformity to the northwest of the central basin and by a middle Late Cretaceous unconformity to the southeast of the central basin.

The Eastern View Coal Measures are composed of interbedded sandstone, siltstone, shales, volcanics, and coals. The sand-rich section shows no lithologic change within the shallower *N. asperus*, *P. asperopolus*, *M. diversus* and *L. balmei* palynologic intervals with the exception that coal beds are more common and individual coal bed thickness is much greater within *P. asperopolus* interval. This repetitious character of the Eastern View Coal Measures makes correlations in the basin difficult.

The Late Cretaceous *T. longus* and *T. lilliei* palynologic intervals have seen fewer penetrations within the basin but appear to be a continuation of the younger section.

Extrusive volcanics are also found throughout the Eastern View Coal Measures section. The extrusive volcanics are often seen interbedded with clastics. The thickest interbedded volcanic section is seen within the Paleocene and Late Cretaceous sections.

The study of cores from the Eastern View Coal Measures suggests that the environment of deposition during that interval is primarily lower and upper delta plain, lacustrine, and estuarine with intermittent marine incursions.

Overlying the Eastern View Coal Measures is the Demon's Bluff carbonate rich, shaley siltstone and the Torquay Group marine shales and marls. Extrusive volcanics are interpreted on seismic lines within this shallower section in the basin although most often concentrated along the graben faults.