

CONCLUSIONS

1. The expansion within the *M. diversus* and *P. asperopolus* palynologic intervals is greater than earlier interpreted.
2. Three major deformational events impact the Tertiary section. These are a late Paleocene event, a Miocene event, and a Recent event.
3. Paleocene volcanic extrusives throughout the basin inhibited oil migration into the younger section.
4. Good quality oil and gas prone source rocks exist within the basin in the *N. asperus* through Otway sections. Present day oil expulsion maturation levels are seen in rocks as young as *M. diversus* age. No evidence exists which demonstrates a firm correlation between Bass Basin oil and their possible source section.
5. The primary facies within the Eastern View Coal Measures are coastal, deltaic, estuarine and lacustrine. There is evidence of marine incursions from *L. balmei* through *N. asperus* time. The shoreface and fluvial sands appear to be the best reservoirs.
6. A single geothermal gradient of 1.75°F/100 feet has been in place since Otway deposition. This geothermal gradient is based on a comparison of theoretical vitrinite values calculated using the Lopatin algorithm to measured vitrinite values of Bass Basin wells.
7. Computer rock zonation analysis establishes that the Eastern View Coal Measures Section consists of interfingering multiple sand and shale types. The analysis supports the interpretation that the section contains individual sandstones and shales developing and terminating erratically which are not individually correlable basinwide. Because of this complex, unresolvable interbedding, this section has been considered, for the purposes of this study, as a single package of interbedded clastic rocks throughout the basin. The computer analysis does not aid basinwide sand correlations. The presence of this package reduces the value of additional seismic stratigraphic study.
8. The maturation history modeling of the Bass Basin suggests that primary oil and gas expulsion of the pre-Eocene section occurred before the Miocene deformational event. The present day oil window is within the Pliocene outside of the grabens and within *M. diversus* inside of the grabens. It is thought that as the pre-Eocene section went through the oil and gas expulsion stages, the trend of hydrocarbon migration was vertical to the Paleocene volcanic seals and then lateral toward the basin margin. The exception to this migration trend is along the edge of graben faults where vertical migration above the Paleocene volcanics could be accomplished. In these areas the presence of older structures was critical to develop entrapment, e.g., Yolla.