SUMMARY

Pelican-5 was the fifth well drilled on the Pelican structure (Figure 1) and the eighth well drilled in Permit T/22P. Pelican-5 was the fourth well drilled by Amoco Australia Petroleum Company in the Bass Basin.

Pelican-5 (spudded on December 28, 1985) is located at S.P. 240 on line TNK4-87 in 77 meters of water. The primary objective of the well was to test the production potential of the Lower Eocene sandstones of the Eastern View Coal Measures. These sandstones were seen to have good shows of gas and condensate during the drilling of the Pelican-1, 2 and 4 wells but were not subjected to drillstem testing. Gas and condensate were recovered by F.I.T.'s from Pelican-1, 2 and 4. The secondary objective of the Pelican-5 well was to test the potential of the Paleocene through Upper Cretaceous section of the E.V.C.M. which was thought to be in a structurally favourable position at the Pelican-5 location. Gas and condensate were recovered during an F.I.T. of a Late Paleocene Sandstone in the Pelican-1 well. Gas and condensate were recovered by drillstem testing of sandstones of Late Paleocene age in the Yolla-1 well, and hydrocarbon shows were present through much of the Upper Cretaceous section in the Tilana-1 well.

The Pelican-5 well was drilled to a total depth of 4267 meters and was terminated in sediments of Campanian age (Late Cretaceous) on March 2nd 1986. Hydrocarbon shows were seen throughout the drilling of the E.V.C.M. (see enclosure 3). Wireline log evaluation indicated the presence of moveable hydrocarbons at various levels within the interval 2750-4050 meters (see Appendix 5, and Enclosure 4). Hydrocarbons were recovered on test (see Enclosure 6) by D.S.T. No 6 from the perforated interval 2786-2780 meters in Lower Eocene sandstones (middle M.diversus), and from D.S.T. No 4 (3143-3162 meters) in sandstones of Late Paleocene age (upper L.balmei).

Geochemical analyses of core and cuttings samples from Pelican-5 indicates that the section below 1900 meters is thermally mature enough to have generated liquid hydrocarbons from resinite rich organic matter and below 2800 meters from exinite rich organic matter. Thermal maturity is high enough to have caused the generation of significant gas from sediments rich in vitrinite below about 2200 meters depth. Vitrinite reflectance indicates that the sediments are overmature for liquid hydrocarbon generation (Ro >1.4%) below about 4000 meters.

The vitrinite content of the Pelican-5 D.O.M. is generally high (20-85%), indicating that a highly anoxic depositional environment was prevalent during EVCM time. Sediments deposited under these conditions could be expected to have generated mainly gas. The presence of exsudatinite in most of the Pelican-5 coals indicates that they have generated some liquid hydrocarbons. The majority of the samples examined contained free oil that is considered to have been generated in-situ rather than to have migrated into the section. (See Appendix 10 Part 2 Page 4).

After testing, the well was plugged and abandoned, and the rig was released on April 16, 1986.