

FINAL WELL REPORTB.L. CULPI. SUMMARY(1) Drilling

Esso Prawn A-1 spudded December 29, 1967, in the Tasmanian portion of the offshore Otway Basin (Figure 1). There were two unsuccessful attempts made to begin drilling the well. After drilling the original hole to 599 feet both guide lines to the rig were broken while opening the 17½ inch hole to 36 inches. The well base became covered with cuttings and the hole could not be located. The rig was moved over and a second attempt made to commence drilling. The second hole was drilled to 1000 feet but had to be abandoned when the well head base became damaged beyond repair while attempting to install and test the blowout preventer equipment. The rig was again moved and a third hole begun. This third attempt was successful and Prawn A-1C actually spudded January 19, 1968. The well was drilled to a total depth of 10,477 feet and abandoned April 9, 1968. (Figure 5).

(2) Geologic (Figures 1, 2, 3 & 4)

The well was drilled on the crest of a north-south trending anticline approximately 37 miles long and 12 miles wide. Vertical closure mapped on pre-Tertiary strata exceeded 2000 feet.

The sedimentary section penetrated by Prawn A-1 conformed reasonably close to the pre-drill prognosis down through strata of Tertiary age. Below the base of the Tertiary section however, an unexpectedly thick sequence of Upper Cretaceous strata was encountered overlying the Otway Group of Lower Cretaceous age.

Strata from 367 feet to 3024 feet (-278 to -2935 feet subsea) ranged from Miocene to Upper Eocene in age. These beds consist primarily of grey to greenish grey, soft marl interbedded with thin beds of skeletal to sandy limestone.

Sediments of Pre-Upper Eocene and Paleocene age were penetrated from 3024 feet to 4150 feet (-2935 to -4061 feet subsea). This sequence consisted of predominantly quartz sandstones which were slightly pyritic and carbonaceous.

The Upper Cretaceous Sherbrook Group was encountered from 4150 feet to 9660 feet (-4061 to -9571 feet subsea). This interval consisted primarily of quartz sandstones with occasional thin interbedded silty carbonaceous shales. These sandstones were for the most part porous but were occasionally very calcareous and impermeable. A massive basal conglomerate of siliceous material was penetrated at the base of this section from 9372-9660 feet (-9283 to -9571 feet subsea).

The Otway Group of Lower Cretaceous age was penetrated from 9660 feet to a total depth of 10,477 feet (9571 to 10,388 feet subsea). The Otway beds consisted of impermeable greyish green lithic sandstones with an occasional thin interbed of shale.

The original structural picture of a closed pre-Tertiary anticline appears to be valid. The absence of hydrocarbons is believed to result from an insufficient amount of shale throughout the overall stratigraphic section which could have formed a seal over any of the porous pre-Tertiary sandstones. The area also appears to be complicated by faulting.