SUMMARY

The East Mereenie No. 2 well was drilled to a total depth of 5,175 feet on the Mereenie Anticline, a large surface structure approximately 154 miles west south-west of Alice Springs in the Northern Territory. The well was located six and a half miles in the south south-east direction from East Mereenie No. 1 well (plate 1). It was the first well drilled by the oil exploration industry in Australia using air as the drilling medium.

The well spudded in Pertnjara sediments of probable Devonian age and terminated in the upper part of the Goyder Formation of Upper Cambrian Age. An open hole test of Lower Stairway Sandstone flowed gas at an initial rate of 310 m.c.f.d., which dropped to a steady flow of 139 m.c.f.d. The Pacoota Sandstone flowed, from drill stem tests, a total of 4,532 m.c.f.d. over the interval 4,084 feet to 4,386 feet. Below 4,450 feet, an oil column was encountered for the first time in the Mereenie field. This oil column was tested but the interval proved too tight for economic production. Results of tests, core analysis, and logs established the existence of approximately 366 feet of gas column and 355 feet of oil column in this well. An oil-water contact occurs over an interval of less than 30 feet. Below 4,805 feet (base of the oil column) water was encountered. Continuous coring over 410 feet was carried out in the Upper Pacoota. Below 4,565 feet, coring was carried out selectively. Results of core analysis and microlog interpretations show a partial shaling out of some productive sands (in Upper Pacoota) encountered in East Mereenie No. 1. A total of 196 feet of microlog permeability is indicated in the Pacoota Sandstone, but the quality of the permeability cannot be determined from the microlog.

The significant contribution by East Mereenie No. 2 to future exploration in the Amadeus Basin was the proving of an oil column in the very large Mereenie Anticline.