

## INTRODUCTION

The Otway basin extends from the Mornington-King Island basement ridge westward for at least 300 miles to Cape Jaffa near Kingston, where it passes out to sea. Over this distance the basin has an average width of about 80 miles. The southern half (some 12,000 sq. miles) lies offshore, with the southernmost portion in water deeper than 500 feet.

Both magnetic and seismic surveys were made in offshore Victoria and South Australia for the account of Haematite. In 1961, Aero Service Limited completed an extensive airborne magnetometer survey, 8,032 miles of which relates to the Otway basin. The survey furnished data concerning the western seaward continuation of the basin and a general outline of the areas of thick and thin sediments used for planning the subsequent seismic survey.

Two seismic surveys were made by Western Geophysical Company. In 1963 a total of 742.6 miles was surveyed, 657.2 miles in South Australia and 85.4 miles in the Anglesea area of Victoria. The results of this work indicated that the basin extended beyond the limits of the survey, wherefore an additional, more comprehensive survey was undertaken between 16th December, 1964, and 8th April, 1965, covering a total of 1,874.12 miles. Of this amount 320.62 miles was a broad reconnaissance of the area west of King Island to the northwest tip of Tasmania. (Index, Seismic Surveys).

The present study commenced in mid-October, 1964, with a review of available onshore data while the seismic survey of the offshore portion of the basin was in progress.

Upon completion of the seismic survey, some unexpected and interesting geological conditions offshore were revealed, and several points of earlier speculation became clearer. Five areas with favourable indications for accumulation of hydrocarbons could be isolated within