

GEOLOGICAL RESULTS OF PETROLEUM EXPLORATION IN BRITAIN 1945—1957

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SUMMARY

The main geological results of exploration by the British Petroleum Company Limited since 1945 are outlined, and the general basis of operations described.

In the south of England new data emphasize the progressive development of the Wealden area as a Jurassic depositional basin, on a surface of mainly Devonian and Carboniferous rocks.

In the East Midlands and West Yorkshire more information on the relation of Carboniferous basins is now available, and extensive occurrences of contemporary and intrusive basic igneous rocks are described.

In East Yorkshire a south-easterly extension of the Permian potash basin has been proved. Post-Permian formations tend to thicken eastwards from outcrop and also inland (westwards) from the coast.

The Permo-Triassic rocks of the Formby area (Lancashire) have been found to lie in a deep valley cut into Carboniferous rocks, and stratigraphic thickness variations demonstrate intra-Triassic fault movements.

Further oilfields have been developed at Plungar and Egmonton in the East Midlands, and three additional discoveries await evaluation.

I. INTRODUCTION

In 1937 the Geological Society received from G. M. Lees and P. T. Cox a description of the basis of the search for oil in Britain, and in 1945 this was followed by a report of the discovery of four oilfields, with geological information of great regional significance (Lees & Taitt 1946). The succeeding twelve years have seen the search continued by the British Petroleum Company Limited with the discovery of two more fields. The account which follows summarizes the more important information obtained in this third stage.

During the period in question the basis of exploration has been broadened to include search for natural gas on behalf of the Gas Council and in conjunction with Imperial Chemical Industries. These organizations have permitted the inclusion here of information from the joint operations.

The only significant changes in exploration techniques during the last twelve years have been an increasing use of modern reflection seismic work and of the various methods of electric logging. The