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THE FORMATION OF THE GIANT OIL FIELDS OF THE NORTHERN NORTH SEA.

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INTRODUCTION

The Northern North Sea Basin contains a Mesozoic rift system buried below thick Upper Cretaceous and Tertiary mudstones and sandstones. This rift system contains about 10 billion barrels of recoverable light oil and is thus one of the most prolific oil provinces in the world. It is now well explored, with excellent seismic definition of the key unconformity at the base of the Cretaceous section. There is good stratigraphic control from wells on the major structural highs and also in many of the more basinal areas between these highs. Geochemical data has been obtained from thick organic-rich mudstones of Upper Jurassic age which are the most important oil source rocks in the basin. Most of the oil discovered is trapped in Middle Jurassic shallow marine sandstones. The in-place oil volumes trapped in the major fields are fairly accurately defined from analysis of appraisal and development well results.

The Northern North Sea Basin is thus an excellent area in which to study the processes by which giant oil fields are formed. This paper is a summary of the author's research on this topic performed during the last ten years at British Petroleum and the United Kingdom Department of Energy. Two areas have been studied in detail: the East Shetland Basin and part of the East Shetland Platform and Viking Graben.

No formal abstract available for this paper. (Presidential address, 1986)

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GEOLOGICAL CONSERVATION IN BRITAIN

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INTRODUCTION

In spite of the increasingly sophisticated "black boxes" which are becoming widespread in geological studies, geology remains essentially a field science, and is likely to stay that way. Because of this, and due in no small part to the increased pressure of development and "environmental improvement", the conservation of geological and geomorphological sites is growing in importance. The fundamental aim of earth science conservation is to ensure that the key sites for research, education and training remain available in the future, and this has been recognised by Government since the 1940's. To act as a national agency for nature conservation, including geology and geomorphology, the Nature Conservancy was established by Royal Charter in 1949 and has grown in size and effectiveness since then. In 1973 it was reconstituted as the Nature Conservancy Council, and is now financed through grant-in-aid from the department of the Environment.

Geological conservation has come a long way since 1949 but still has far to go. In order to spread the message more widely it is vital that all geologists, amateur and professional, work together in an attempt to safeguard as much as possible of Britain's geological and geomorphological heritage. Inextricably linked with this is a need to bring geology more into prominence in society generally, so that the role of geology and the geologist is more widely appreciated. In this, the local geological society can play a fundamental role, and through its actions, so far the Geological Society of Norfolk has shown itself well able to accept and excel at this new challenge.

No formal abstract available for this paper. (Lecture summary by K.L. Duff, 1986)

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A NOTE ON THE MARCH GRAVELS AND FENLAND SEA LEVELS

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INTRODUCTION

Investigation of late Pleistocene sequences at Somersham (TL 373 784) and Block Fen (TL 428 837) in the southern Fenland have demonstrated the levels of Ipswichian brackish or marine horizons. Since these sites are near the mapped spread of the marine March Gravels (B.G.S. Ely Sheet 173), it became clear that it was advisable to re-evaluate the March Gravels and their relation to other known recently studied brackish or marine horizons of the Late Pleistocene of the Fenland.

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