

## **The Search for Onshore Oil in the United Kingdom**

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### **ABSTRACT**

Theme 12: History of Petroleum Exploration Although the UK onshore discoveries were a prelude to the great discoveries of the North Sea, they also provide a fascinating account of oil exploration in the face of great obstacles. Starting with the Scottish shale oil industry, which reached its peak in the 19th-century, the presentation sets the scene by describing the various pressures which led to the wider exploration of the British mainland. In particular, the decision of the British government to convert its naval ships from coal to oil and the vulnerability of shipping routes in time of war made onshore exploration a top priority during the First World War. The government's Petroleum Executive identified 15 sites to be investigated and, although none of these provided any large discoveries, the initiative did provide the impetus for a country-wide exploration programme. A few modest discoveries were made, including one at Hardstoft in Derbyshire. The search for oil continued after the war, led by such prominent figures as chairman of the Anglo-Persian Oil Company (the forerunner of BP) Sir John Cadman and geologist George Martin Lees. The Petroleum Production Act of 1934 nationalised the country's oil resources and triggered a fresh search for onshore oil. In 1937 Lees and his colleague, Percy Cox, delivered a ground-breaking paper to the Geological Society entitled "The Geological Basis of the Present Search for Oil by the D'Arcy Exploration Co. Ltd." Using their knowledge of whaleback anticlines in Iran, they identified the Jurassic and Lower Cretaceous in southern England for exploration. The outbreak of the Second World War highlighted the same problems that had bedevilled British oil supplies during the first conflict, and efforts to find substantial oilfields were renewed. A production target of 100,000 tons per year was set, a massive increase on the 25,000 tons a year then being achieved. The target was reached in September 1942, primarily from the East Midlands oilfield based around Eakring. In the 1950s, building on the earlier work of Lees and Cox, the focus turned to southern England. The real breakthrough came when further drilling led to the discovery of oil in the Triassic Sherwood Sands formation at 5200 feet, which was producing an additional 65,000 barrels per day by 1992. This oilfield is the largest onshore oilfield in Europe, and provided 84 percent of UK onshore production (as at the end of 2010).