

## **Unconventional Oil Potential in the Weald Basin, Southern England**

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### **ABSTRACT**

It is interesting to go back almost 100 years, when the precursors of British Petroleum fresh from their success in drilling large anticlines with carbonate reservoirs in the Zagros mountains of the Middle East, finally turned their attention closer to home and to the large surface anticlines in Southern England. It is easy to reflect on the obvious attraction and similarities. Large undrilled Jurassic anticlines and numerous surface seeps such as at Mupe Bay and Osmington Mills on the Dorset coast. Add this to historical evidence of gas production from Heathfield Station in the Weald from a well drilled in 1896 and the mining of the oil shales of the Kimmeridge Clay Formation in Dorset which had been retorted to provide gas for street lighting in the mid 19th century. All the planets were seemingly aligned for a successful exploration campaign or were they? In this paper, I will explore the exploration history of southern England from the largely unsuccessful BP campaign in the 1930s to the hugely successful Wytch Farm discovery in 1973 - the largest onshore oilfield in Northwest Europe with over 1 billion barrels of in-place resources. I will discuss the key success/failure factors for conventional petroleum particularly the part played by modern 2D seismic and petroleum systems analysis. Finally, I will examine the future potential for unconventional oil exploration & production in the Weald Basin.