Central Weald - further data

The Central Weald area is located in countryside south west of London, close to the large south east UK energy market and proximal to major gas trunk lines and refineries. The area of the licences PEDL 231, 234 and 243 amounts to a contiguous 1,000 sq.kms (247,000 acres).

The acreage is held by Celtique Energie Weald Ltd (50%, Operator) and Magellan Petroleum (UK) Ltd (50%). The licences are valid until July 2014, with the option of a five year second term, subject to completion of the work programme.

Several material size conventional prospects and major shale oil and shale gas unconventional resource potential have been established within the boundaries of the licences. The shale oil and gas resource position provides a low risk and very significant upside to the conventional prospects.

Total unrisked mean recoverable resource potential of the conventional prospects is estimated at ca. 2 tcf, while the mean recoverable shale oil and shale gas resources are estimated at c. 125 mmbbl of oil

Operations in the UK

Country map
Cheshire
Regional map
East Midlands
Regional map
Southern England
Central Weald data
Celtique Energie Petroleum Ltd
Celtique Energie
Login area

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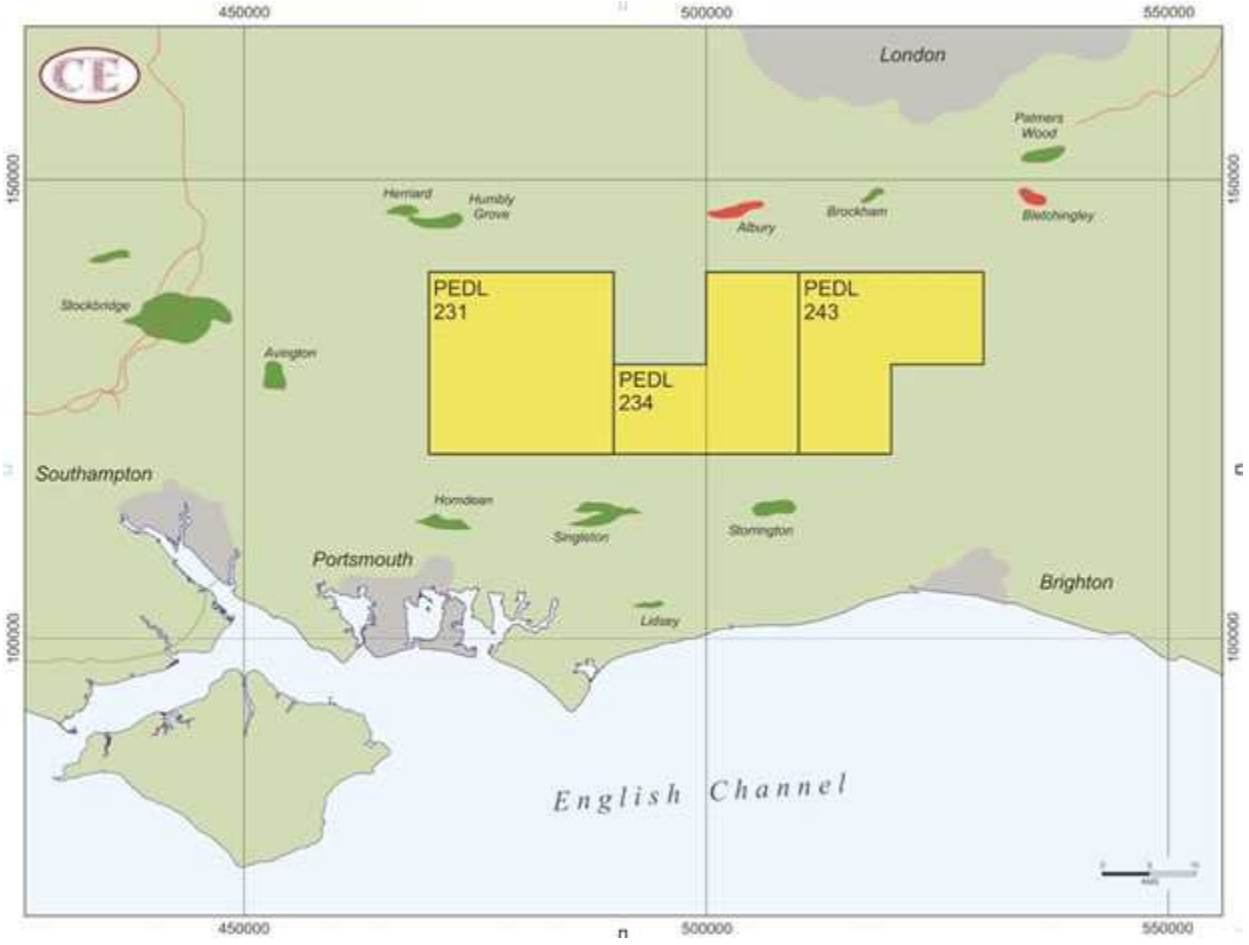
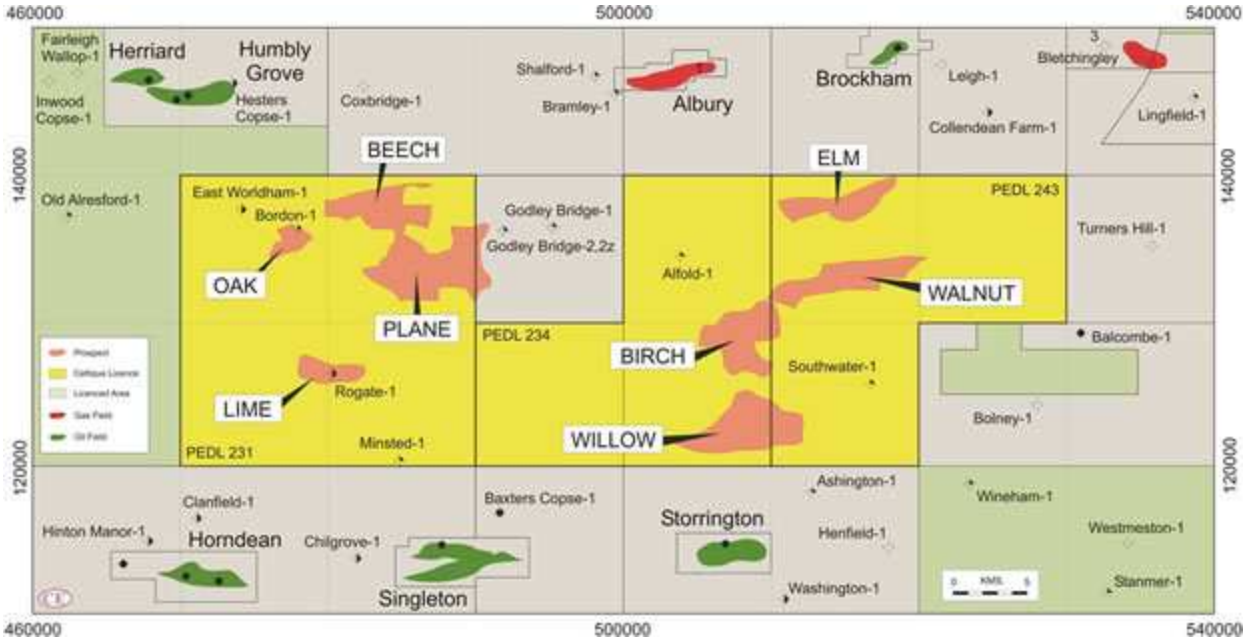
and c. 10 tcf of gas, respectively. The shale gas deposits are expected to yield wet gas, with significant quantities of condensate.

Location of Weald Basin licenses and Conventional Leads and Prospects





The Weald Basin has a proven petroleum system and contains numerous oil and gas fields with several fields producing. In the acreage several large conventional Triassic gas prospects and leads have been identified with significant unrisked resource potential of approximately 2 tcf. A conventional prospect and lead summary table is shown below.

Summary of Weald Basin conventional leads and prospects

Permit / Licence Prospect name	Depth to Closing Contour (Subsea) ft	Mean Recovery (Bcf)	Fluid Expected	Comments
Willow (234)	8,281	630	Gas	Prospect
Plane (231)	9,633	261	Gas	Prospect
Walnut (243)	8,465	240	Gas	Prospect
Birch (234)	9,698	366	Gas	Strong lead
Elm (243)	8,612	218	Gas	Strong lead
Beech (231)	8,579	155	Gas	Lead

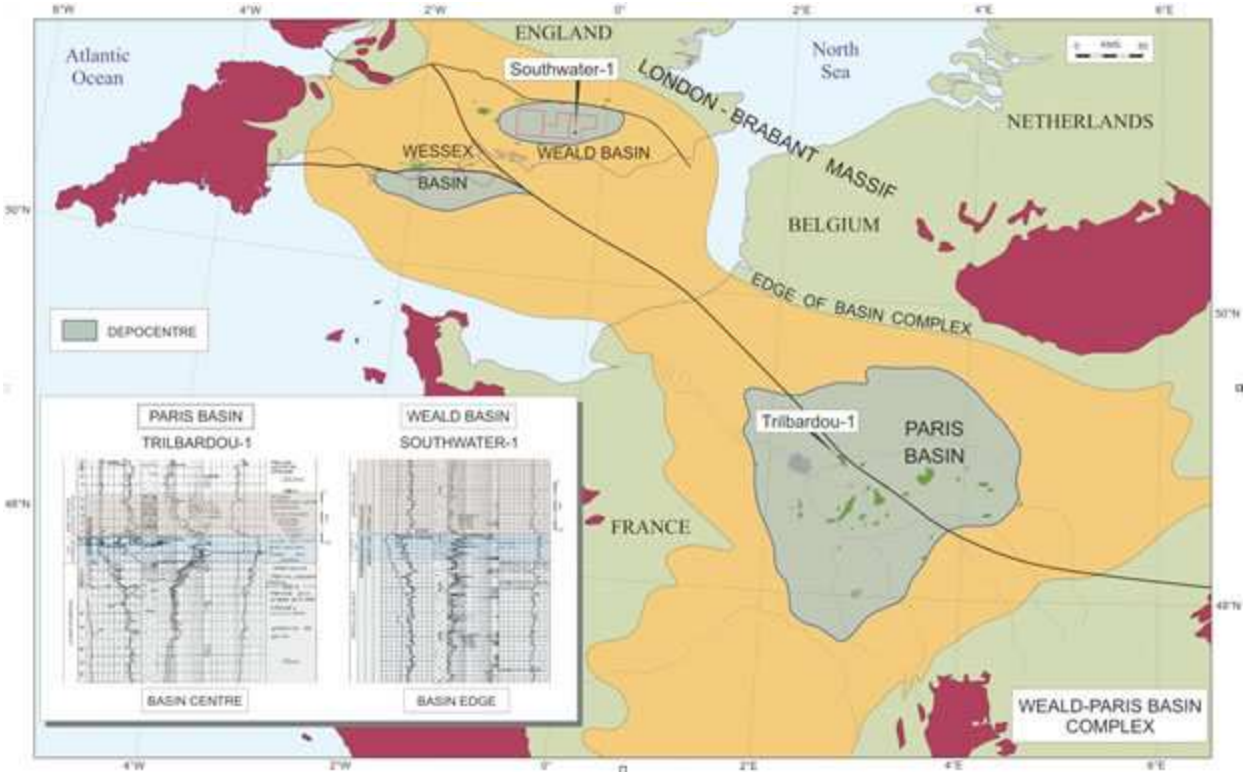
Lime (231)	10,085	102	Gas	Lead
Oak (231)	8,169	13	Gas	Lead
Total		**1,985**		

Source: Celtique Energie / Magellan
Note: mean estimate, excludes condensate

Shale oil potential

The shale oil play of the Upper and Middle Liassic in the Weald Basin is believed to be directly comparable to the Bakken and Paris Basin analogues. Both the Weald Basin and the Paris Basin are sub-basins of the Anglo-Paris Basin and the two basins have a common origin and geological history.

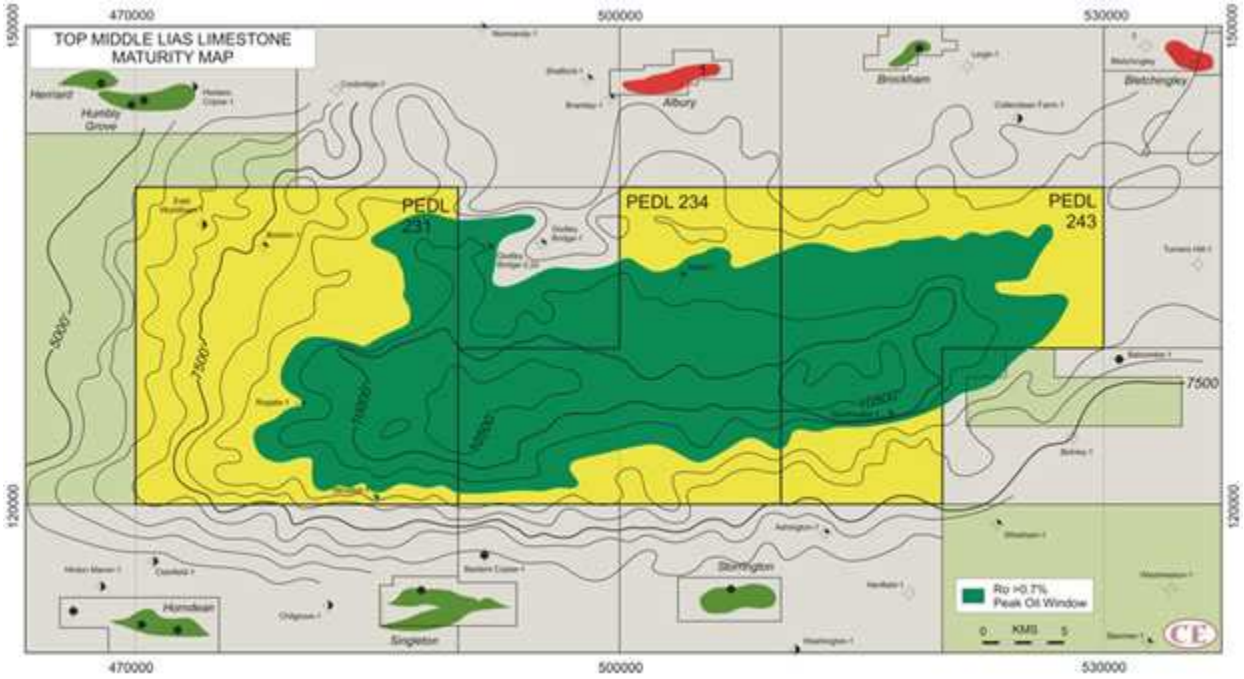
With the emergence of horizontal drilling and multi-stage hydraulic fracturing in the US, production from the limestone layers in the Bakken shale has become highly commercially viable, opening up a recoverable resource potential of up to 4.3 bn bbls of oil according to the US Geological Survey. Oil and gas companies have also started exploring the shale oil potential at similar prospects outside of the US, and a joint venture between Hess and Toreador is currently exploring and developing the vast oil resource potential of the Liassic shales in the Paris basin.



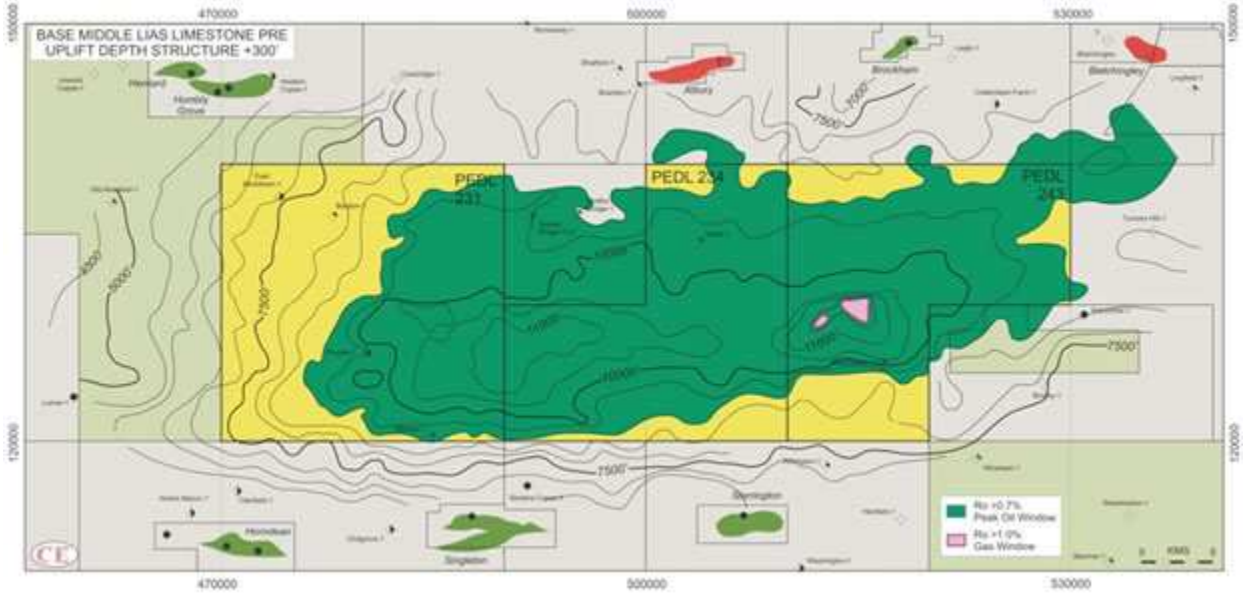
Similar to the Paris Basin, the shale oil play of the Upper and Middle Liassic in the Weald Basin is considered to be a close US Bakken analogy, where part of the oil generated in the shales is believed to have migrated into the adjacent limestone formations at exploitable drilling depths between 7,000 and 9,000 feet true vertical depth.

In the Weald Basin, it is believed that the oil shales in their acreage which cover an area of 1,000 sq.kms (123,000 acres) could hold up to 200 mmbbls of recoverable oil resources, with a mid-case estimate of 125 mmbbls.

Upper Lias shale maturity map showing Oil Window pre Teriary uplift



Middle Lias shale maturity map showing Oil Window pre Tertiary uplift



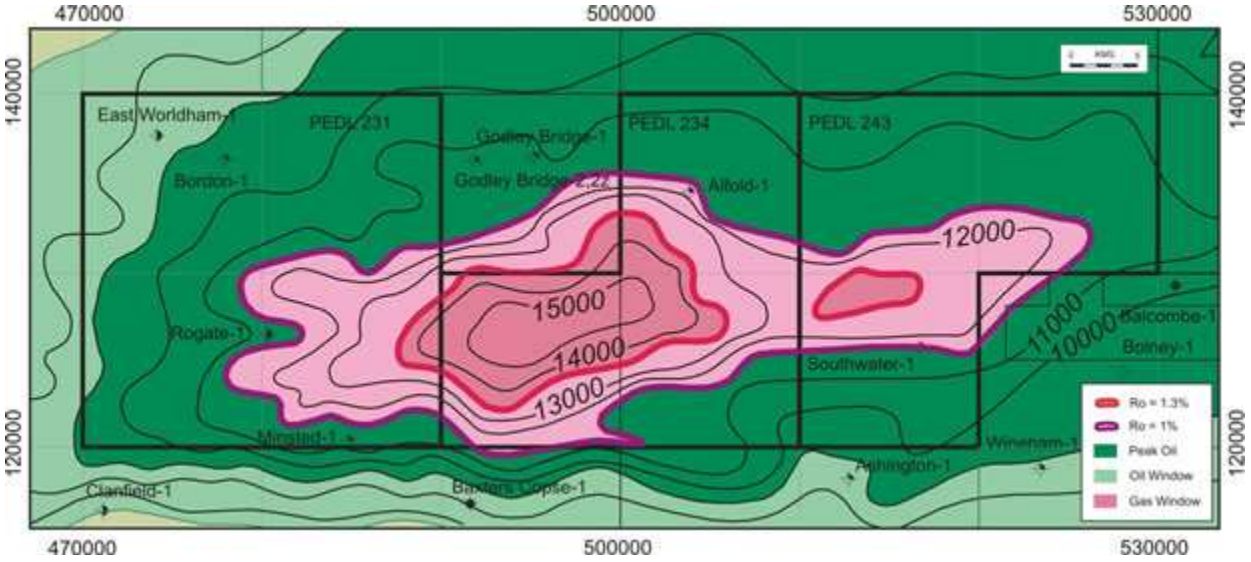
Shale gas potential

The seismic data and maturity modelling studies for the Weald basin also suggest that 2 shale gas resources may be located in the centre of the Weald Basin.

The area of Liassic source rock within the gas window is believed to be over 467 sq.kms (115,000 acres) at exploitable drilling depths between 9,000 and 13,000 feet true vertical depth .

Based on both volumetric analogy to typical US shale gas plays and by a pyrolysis method using S2 values, it is estimated that the recoverable shale gas potential of the acreage could be as high as 14 tcf, with a mid-case estimate of 10 tcf plus condensate.

Base Liassic End Cretaceous (pre Tertiary uplift) Maturity Map



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