

# Critique of environmental statement in the context of relevant geology and hydrogeology

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# Geology and hydrogeology

The Application is:

- Incomplete
- Incompetent
- Disingenuous

# Geology and hydrogeology

Incomplete:

- Insufficient seismic data
- Selection of locality remains unexplained:

*“Further clarification is sought with regard to how the primary and secondary search areas were defined, in particular, the extent and nature of geological data used”*

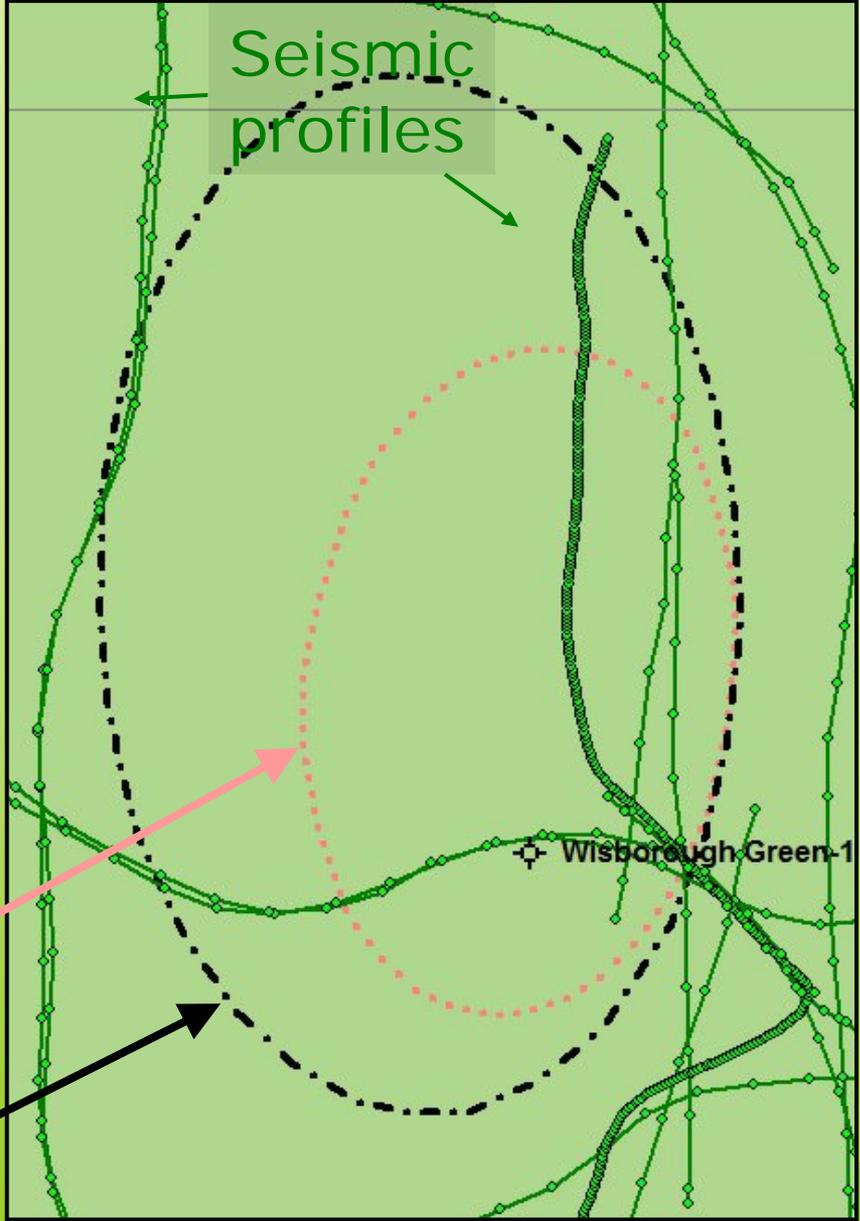
County Planning Department letter 3 December 2013

# Applicant's geological search area:

- Not explained
- No data
- No rational basis
- Non-geological criteria?

Primary search area  
2 km x 3 km

Secondary search area



**KEEP** Kirdford and Wisborough 'Green'

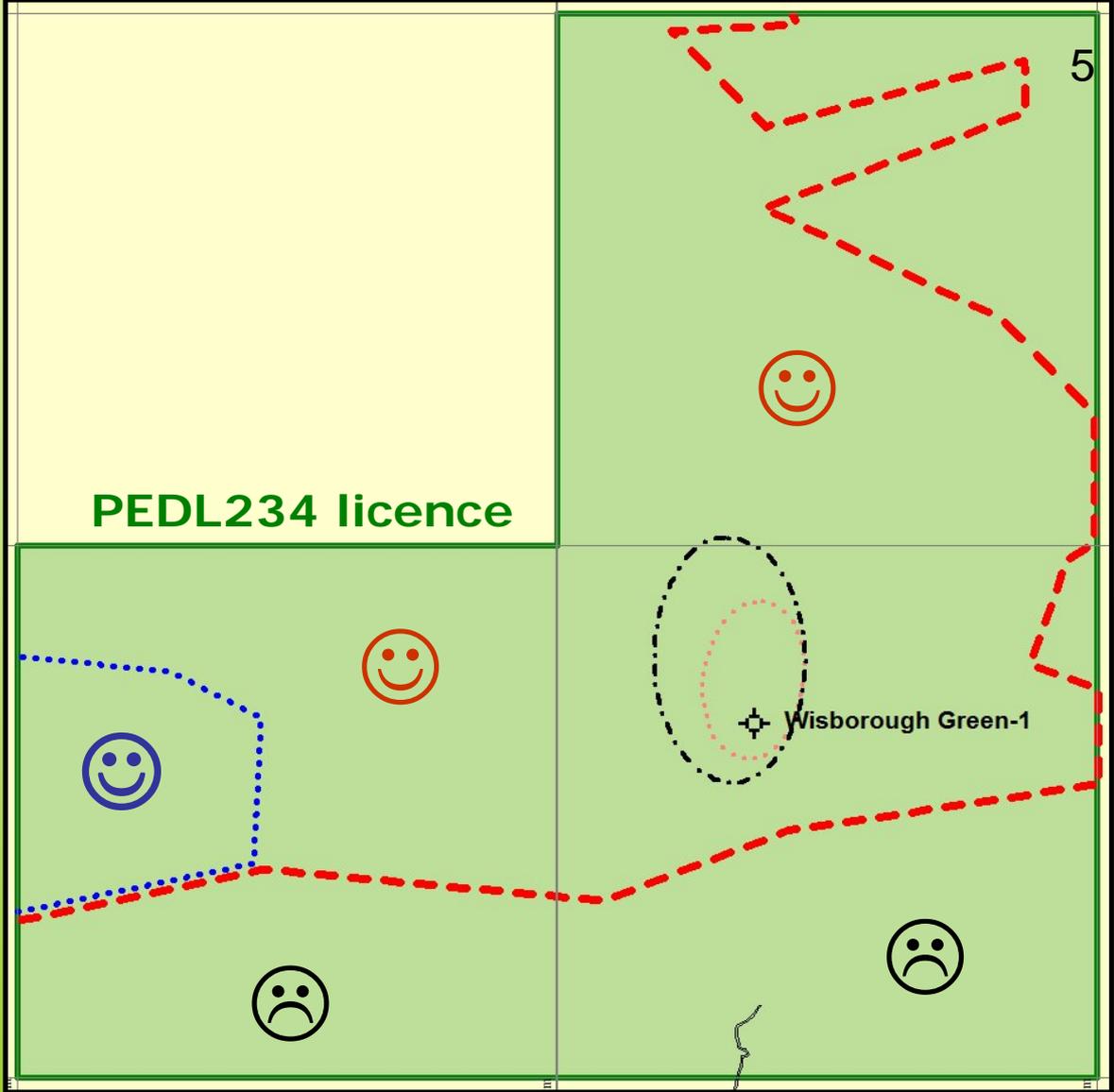
No DRILLING

# Kimmeridge Clay

Search area for unconventional oil - 63% of the licence area

Ellipses – Celtique’s search areas

Limit of maximum maturity coincident with 3000' (3500') minimum depth (to top). Data from BGS Weald report.



No DRILLING

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# Geology and hydrogeology

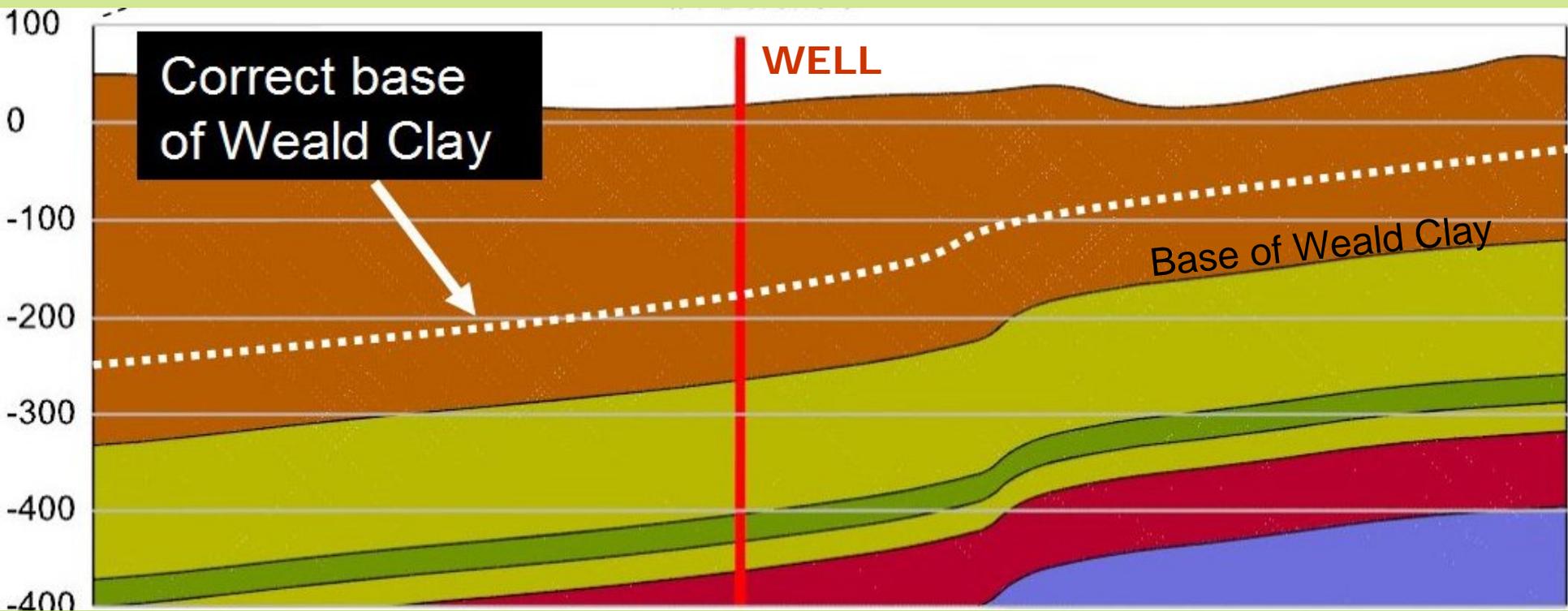
The Application is:

- Incompetent

[Original application full of errors  
- some corrected later]

# Geology and hydrogeology

- Incompetent - example



Celtique Environmental Statement fig. 11.4

Geological cross-section is 80 m too deep

No DRILLING

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# Geology and hydrogeology

Disingenuous:

Targets are **unconventional**

No DRILLING

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# Geology and hydrogeology

The Application is for *unconventional*:

“On our Central Weald Licences (*PEDLs* 231, 234 and 243) we currently have an *obligation to drill one well* on each licence... the ***unconventional prospectivity*** we have defined at ... levels are all laterally extensive. ...

Within our licence area we *will be forced to relinquish an **unconventional trend*** proven by drilling, under the 50% area relinquishment rule.”

[Celtique Energie letter to DECC, 15 December 2011]

# Geology and hydrogeology

UK shale basins – basic facts:

The Weald Basin:

- 400 times as many **faults** as US basins
- Different origin from US basins

Risky to groundwater and surface:

**Faults can be a fast track to the surface**

# Geology and hydrogeology

The Application has only two possible outcomes:

- Relinquishment of PEDL234

OR

- **Unconventional** development

No DRILLING

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# Geology and hydrogeology

Conclusion - the Application is:

- Incomplete
- Incompetent
- Disingenuous

Full details have been provided in my submission of June 2014 (53 pages + 19 figures)

Therefore I recommend **REJECTION**