

## Letter from Blackpool by William Shepherd

On Sunday 30<sup>th</sup> October 2011 I added a footnote to my [Wind Failures](http://climate.blog.co.uk/2011/08/06/wind-failures-11619681/)<sup>1</sup> climate blog about the discovery of the largest gas field in Western Europe off the Lancashire coast. Here is what I had to say as footnote twelve: 'The *Wind Power Lobbyists* will be alarmed by the recent reports of a gigantic gas field in Lancashire. *Cuadrilla*, a gas exploration company has been drilling for shale gas and discovered 200 trillion cubic feet of gas. If only a tenth of this were to be produced (and the company are predicting double this) it would make it far larger than any gas field discovered in the *Scottish North Sea*, with the added benefit of being accessible from dry land...a potential lottery win not just for *Cuadrilla* but for UK plc as a whole.



In one of the many ironies of British history, the discovery might make possible the break-down of the United Kingdom into manageable ten million-sized national and regional chunks...provided the *European Union* doesn't meddle in the UK's internal affairs. Left to their own devices, the clever boys in London, Edinburgh, Cardiff and Belfast will have no problem sorting out what would have been well-nigh impossible before: the allocation of residual (past and future) energy assets between the nations of the United Kingdom of Great Britain and Northern Ireland'. Here is the

full text of a report in *Private Eye* Number 1299 on 15<sup>th</sup> September 2011:

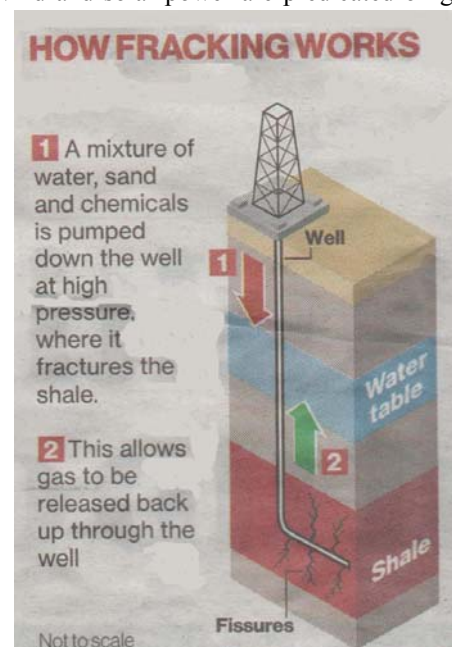
*Cuadrilla*, the gas exploration company drilling for shale gas in Lancashire, has announced its discovery of 200 trillion cubic feet of gas - a seriously big find. If only a tenth of that were to be produced, it would still make it far larger than any gas field discovered in the *UK North Sea*, with the added benefit of being accessible from dry land. It represents a potential lottery win: not just for *Cuadrilla* but for *UK plc* as a whole.

The significance for energy secretary Chris Huhne's 'electricity market reforms' is also potentially profound. His plans for massive and expensive 'renewable' energy sources such as wind and solar power are predicated on gas becoming too expensive to replace coal in the UK's power plants. His own department's calculations show that if gas were in fact to be relatively cheap in future, the reforms will needlessly cost us all dearly. If, additionally, it is available on our own doorstep, this overcomes the objection that our gas has to come from 'unreliable' exporters like Russia.

Recent shale gas discoveries in the US have already transformed the North American gas market, changing it from a net importer to a net exporter in just two years, and significantly lowering gas prices there. If the Lancashire discovery turns out to be even remotely as big as has been announced, the UK will be in a position to keep the lights on cheaply - and cleanly - for a very long time to come.

The technology for shale gas production is controversial; in particular the amount of water required in the 'hydraulic fracturing' process. Lancashire is of course close to the most plentiful water supplies in the UK, and the amount of gas being talked about would readily finance the construction of new pipelines. More alarming is the alleged - but disputed - potential contamination of groundwater. Again, if the amounts of gas are as large as stated, the highest environmental standards could be imposed on its production and it would still be profitable.

Because abundant shale gas undermines the case for subsidizing nuclear and renewable power generation, it faces a well-funded hostile lobby, keen to play up any negative aspects it can find. Lurid films of gas-flames shooting out of bath-taps in America have comprehensively been shown to have nothing to do with shale gas production (it is naturally-occurring phenomenon in part of the US) but they capture the public imagination. We can therefore expect large-scale anti-shale gas protests from a range of vested 'green' interests.

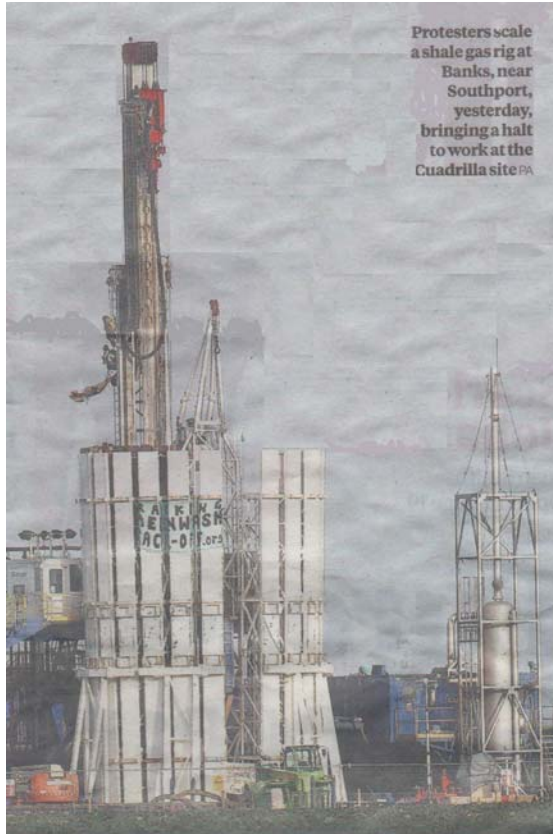


<sup>1</sup> URL: <http://climate.blog.co.uk/2011/08/06/wind-failures-11619681/>.

**COMMENT** from Michael McCarthy, Environment Editor  
*The Independent* on Thursday 3<sup>rd</sup> November 2011

New energy bonanza or new energy nightmare? That's the swing in extreme opinions about shale gas, the 'unconventional' fuel which has boomed in the United States and now could be taking off in Britain.

Although mainly methane, and chemically similar to natural gas, it is termed unconventional from the way it is extracted: the gas is contained not in underground reservoirs but in shale rock formations.



As the shale has low permeability, it has to be blown apart to release the gas by hydrological fracturing, or 'fracking', which involves pumping a mixture of water, sand and chemicals into the rock at high pressure which caused the Lancashire earth tremors).

The rapid development of the technique, along with horizontal drilling, has allowed a massive expansion of US shale-gas production, especially in the Barnett Shale in Texas, under Fort Worth.

But there are substantial downsides, principally related to contamination of groundwater by the fracking chemicals, highlighted in the 2010 American document-ary film *Gasland* by Josh Fox.

In Britain, a senior official of the *Environment Agency*, Tony Grayling, told a conference yesterday that 'there are significant environmental risks associated with the exploration and exploitation of shale gas' although he said the risks could be managed.

Months ago the *Commons Energy and Climate Change Committee* gave shale gas a cautious welcome, but the Co-op which had commissioned a report from the *Tyndall Centre for Climate Change Research* called for a moratorium on development.

The *Coop* believes investing in shale gas will take away funds which could have been invested in renewable energy.

### **Gas Drilling Not a Threat Says Energy Company**

Source: *The Independent Exclusive* by Tom Bawden Industrial Correspondent on Thursday 3<sup>rd</sup> November 2011

A report commissioned by the energy firm *Cuadrilla Resources*, has concluded that *Cuadrilla's* operations were responsible for two tremors which hit Lancashire. The first, of magnitude 2.3 on the Richter scale, hit the Fylde Coast on 1 April followed by a second of magnitude 1.4 on 27 May. The company sought to play down the impact of the 'minor seismic events' but admitted that there were about fifty.

*Cuadrilla* is at the forefront of shale gas exploration in the UK and raised strong hopes for the future of the industry in September when it revealed that its field in Lancashire contained up to 5,660 billion cubic metres, about a fifth of which is expected to be recoverable.

*Cuadrilla* stopped fracking at the site in Weeton and commissioned the report into whether the practice caused seismic activity on 31 May, after concerns were raised about the tremors. Mark Miller, *Cuadrilla's* chief executive, said that seismic activity occurs with a truck going past a house, but that if the public were concerned then it was not good for the production of gas. Mr Miller said that the report's findings of fifty tremors over eight months were not sufficient to stop the company from using hydraulic fracturing but they were working with the authorities to implement the report's recommendations in order to resume operations.

David Loveday, a shale gas expert at the *Inenco* energy consultancy, said the report demonstrated a 'pressing need to understand the mechanism which potentially caused these earth tremors to prevent a re-occurrence.' A spokesman for the *Department of Energy and Climate Change (DECC)* said: 'The implications of this report will be reviewed very carefully before any decision on the resumption of these hydraulic fracturing operations is made'.

The findings coincided with a day of environmental opposition to the practice, as protesters from the *Frack Off* campaign group occupied another *Cuadrilla* site near Southport, shutting it for the day. *Frack Off* also staged a rally in London. According to the company the seismic events were due to an unusual and extremely rare combination of geology at the well site coupled with the pressure exerted by water inject that was unlikely to occur together again.



*Cuadrilla's* maximum allowable level was 2.6 on the Richter scale and, although a worst case scenario could result in a magnitude 3 event in the Blackpool area this would be unlikely and would be no threat to people or property.

Dr Brian Baptie, a seismologist at the British Geological Survey, which is advising the Government on whether to allow the resumption of fracking in the UK said: 'Fifty seismic events does seem a lot, but most were very, very small.' He added that a magnitude 2.6 earthquake at this depth would not cause any structural damage but 'might cause strong shaking that would be widely felt by people indoors and out'.

## CORRESPONDENCE

*Private Eye* No. 1300 on 28th October 2011

Sir, Your surprisingly uncritical coverage of shale gas exploration, reading rather like a *Cuadrilla* press release, misses two important points. Firstly, the 'water' used for the hydraulic fracturing process is, in reality, a witches'



brew of unpleasant chemicals formulated to assist the process, the recipe for which the companies involved have been remarkably reticent about releasing.

This makes groundwater con-tamination a much bigger issue than you imply, along with surface contamination from storage facilities for new and used fluid. Secondly, and most importantly, you seem to have completely avoided the issue of the carbon dioxide emission from the burning of the gas. Can we assume from this, along with your imperious dismissal of other renewable sources of energy, that you have decided to

insert your organ firmly into the 'climate change deniers' camp?

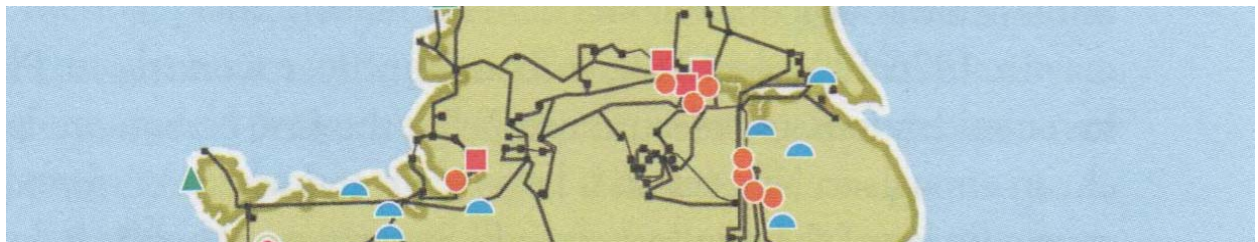
*Regards Ian Ralls via e-mail*

Sir, At last a sensible account of the potential of 'shale gas' (although the volumes have yet to be proven. The groundwater in these wells is isolated from the producing reservoir, thou-sands of feet below, by several con-centric, cemented strings of (steel) casing. Groundwater contamination by methane gas ('gas flames shooting out of bath taps' in Pennsylvania) is due to the proximity of groundwater to coal seams and not to any communication with the reservoir.

*Yours faithfully David Koch via e-mail*

Sir, The potential (disputed or otherwise) for contamination of groundwater is only one of several reasons why many people in Lancashire are suspicious of the price associated with the 'benefits' which *Cuadrilla* and similar companies are seeking to visit upon us. For example, there is good evidence for considerable air pollution associated with the technology involved, and I am already receiving reports of effects on asthma sufferers and other people with breathing difficulties who are resident in the area where exploratory drilling has taken place.

Furthermore, to claim that this is a 'clean' energy source is arrant nonsense - there is a massive carbon footprint associated with getting this gas out of the ground. And if it is so wonderful, why on earth have France and New York State - hardly celebrated as bastions of deep green environmentalism - banned the technology?



As for a 'well-funded hostile lobby' - well, as far as I am aware the only sign of this has been some financial support offered by the *Co-op* to the *Ribble Estuary Against Fracking (REAF)* campaign group, as part of their public campaign for a moratorium on shale gas extraction. Meanwhile, the *Green Party* councillors on *Lancashire County Council* have not been offered so much as a butter pie (well-known local delicacy, on sale for around 85p) in return for voicing our opposition. The recent *Camp Frack* protests had no sponsorship that I am aware of, indeed they were asking for contributions from activists attending the event to help defray costs.

I do hope you continue your coverage of Shale Gas, but please come and visit us before rushing to judgement. Be aware, though, that you will risk the earth moving beneath your feet - although of course some would claim that the earth tremors which coincided with the last phase of drilling were entirely unrelated to *Cuadrilla's* activities and were not the reason that fracking was stopped.

*Councillor Sam Riches (Green), Lancashire East Division via e-mail*

## Lords of the Shale Gas Gold Rush

Source: *The Daily Telegraph* by Louise Gray Environment Correspondent on Saturday 5<sup>th</sup> November 2011

Lords of the manor are planning to cash in on the growing demand for shale gas by registering mineral rights so that 'fracking' can take place despite protests from local communities. Under laws that go back to the *Norman Conquest*, 'lordships of the manor' have the right to exploit minerals under common land around towns and villages. However unless the mineral rights are registered with the *Land Registry* before October 2013 they will be lost.



Accountants and estate agents are advising landowners to register their land as soon as possible to cash in on minerals such as gravel, limestone and shale gas. This will ensure that landowners will be able to profit from shale gas reserves, as long as they gain planning permission, even if the local community is against drilling. There are thousands of 'lordships of the manor' that own the rights to common land such as fields or woodland.

There is estimated to be 150 billion cubic metres of shale gas available, 50 percent more than conventional gas



reserves and enough to power the country for decades. Fracking is already widespread in America. Environmentalists are concerned that the process of extracting the gas causes earthquakes and can contaminate groundwater. Fracking involves the blasting of water, chemicals and sand at high velocity into a shaft to crack rock and release gas. The only fracking to have been done in Britain so far caused earthquakes in Lancashire.

The most accessible gas is in the north of England under the Pennines in a band from Lancashire to Humberside. There is also shale gas under part of the South East including Hampshire, Sussex and Kent, South Wales, the central belt of Scotland and Northern Ireland.

Andrew Arnott, a partner of the accountants *Saffery Champness* said: 'Those estates holding a lordship of the manor should register their title at the *Land Registry* in order to secure their interests which might include the mineral rights and other rights.' The *Department for Energy and Climate Change* has insisted that no 'fracking' will take place until safety checks have been completed.