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A Core Activity Preserving a Unique Record of the North Sea

Since the onset of drilling for hydrocarbons in the UKCS, core has been cut in many wells to better understand the geology. In this way, an incredibly valuable archive has been built. As long as core represents a certain economic value, it tends to be retained. However, when a field is being abandoned, as is happening more and more frequently, the retention and storage of core material doesn't represent great value for the operator. Following consultation with the Oil and Gas Authority and a possible donation to the British Geological Survey, companies are therefore often disposing of unwanted core.

It was in October last year that I heard for the first time that core was marked for disposal, in this case from the Dunlin cluster owned by Fairfield Energy. From that moment onwards, I have been on a mission to preserve this vital geological record. It seemed a huge shame that these rocks were being used for landfill in view of all of the things that could be accomplished with it. Since then, Fairfield Energy has been kindly donating a lot of boxes of core. I was not

the only one; many people and universities have had the opportunity to acquire core from the Dunlin cluster. Since then, Conoco Phillips and Spirit Energy have also donated a significant amount of core.

As a result of acquiring core from various wells and fields, I am starting to put together a cross section of core from the most important reservoirs, source rocks and seals in the UKCS. My aim is not to build up an archive, as this is the role for the BGS, but to use and transform these cores for outreach, education and also to introduce some geology in various homes and offices.

The PESGB fully underlines the importance of core as being part of our geological legacy from the North Sea and recognises the value it has in terms of outreach and education. With this in mind, pieces of half cut core are handed out as speaker gifts at the monthly evening lectures in Aberdeen and London. In addition, all presenters at this year's PETEX conference will also receive a fraction of the North Sea legacy. Mainly for teaching purposes, I have put together a so-called Exploration Box, which consists of a piece of Rotliegend from the Southern North Sea, oil-stained and water-wet Brent from the Northern North Sea and Kimmeridge Clay source rock from the Central North Sea. Taken together, these rocks tell so much about the fascinating geological history of the North Sea.

More recently, the Petroleum Group (a Specialist Group of the Geological Society of London) has also become involved in this initiative, following a display of core at their "Communicating Geoscience Conference" in September. Kirstie Wright, a post-doc from Heriot-Watt and a member of the Petroleum Group committee, was a key convener of the conference, and has a great network in academia. A recent tweet by Kirstie publicising my efforts to find homes for un-wanted core attracted huge interest, resulting in core being donated to various universities. This is testament to the demand from academia and supports the concept of having a central place from which material can be further distributed.

In an attempt to minimise the volume of core being disposed of in future, the PESGB and the Petroleum Group hope to set up a dialogue with the Oil and Gas Authority to find out whether it is possible to be notified when core is being made redundant after all other regulatory processes have been exhausted. This enables us to make our members aware and hopefully result in fewer cores being destroyed. PESGB and PG are also collaborating to produce more Exploration Boxes to distribute to academic institutions from primary school through to universities. With this we hope to extend the lasting legacy of the geological wonders contained within.

We have a duty to protect the heritage of North Sea exploration and field development, by preserving the component parts of an economically transformational petroleum system. This is one step in that direction.



Speaker gifts

