"In this case, we'd rather find the smallest prospect"

How to keep on attracting business in a basin where remaining prospects are getting smaller and smaller?

WHAT THE UKCS needs is a technical solution that would enable the production of the smaller pockets of oil and gas that remain. There was one presentation at the recent BEOS Conference in London that addressed this very thing. At the end of the talk, despite being aware of some of the limitations of the approach presented, I had a positive vibe about the future of the basin. And it is some positivity that is so desperately needed in an industry that is facing pressure from so many sides.

The presentation was from Stephen Molyneux from Australia-based Harvester Energy and Pivotree. He talked about a new solution that enables the economic production of smaller oil and gas pockets that are currently stranded on the UKCS and elsewhere. The idea is not new; Stephen referred to the BP Swops initiative that was launched in the late 1980s that also included a solution to enable production from small fields using a slim operational footprint. However, this never materialised, possibly because there were so many bigger prospects to chase first.

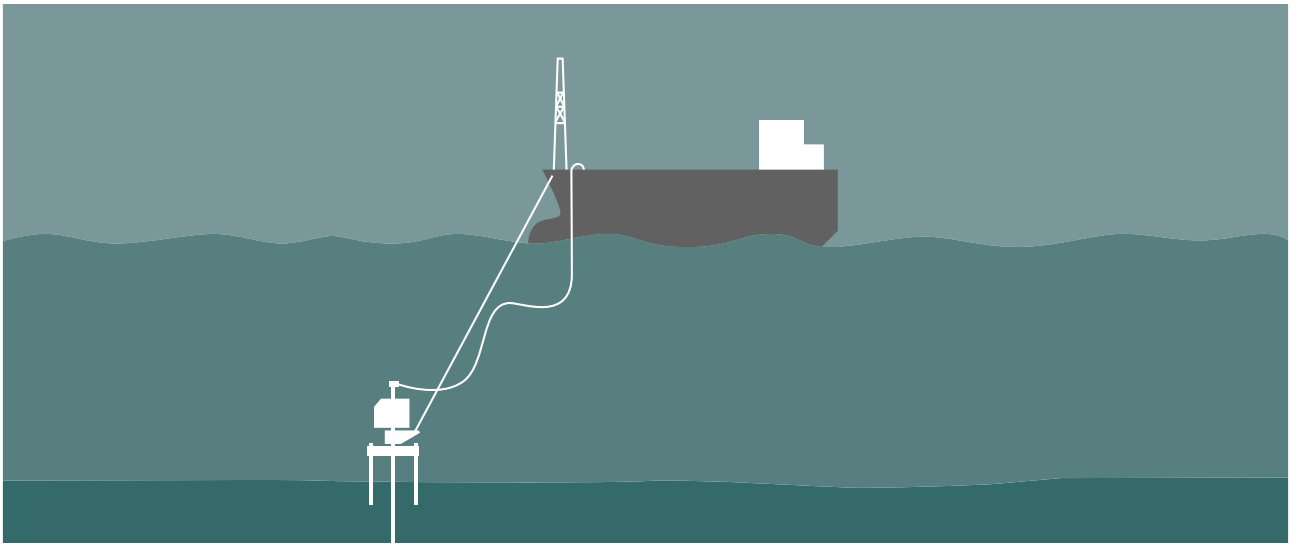
A SLIMMED-DOWN FPSO

But now, with the inventory of undeveloped discoveries and prospects being heavily skewed towards the smaller volume spectrum, the timing is probably much better for a solution to arrive that enables tapping into these. The Pivotree concept, as developed by Stephen's colleague Chris Merrick, relies on a simple self-supporting hydrocarbon production system that consists of a single production tree at the seabed that provides both well and flow control. At the same time, it is also the structural mooring of a slimmed-down FPSO unit that does not require a turret and therefore eliminates the need for costly upgrades of the vessel's hull.

Partner company Harvester Energy has recently been awarded two licences in the latest UKCS licensing round where the Pivotree concept is planned to be trialled. The licences are situated in blocks 29/7b and 22/12b, and cover the Curlew A and Phoenix discoveries respectively. Both discoveries are characterised by Cenozoic reservoirs with good reservoir properties. That is surely what is required when the Pivotree concept is going to be applied, as workovers or water injection are aspects that are harder to realise.

The company is looking at discoveries in the volume range between 2.5 and 50 MMboe, which often do not warrant standalone development using the more traditional concepts. Let's see if Pivotree can make these projects fly. And maybe this is blue-sky thinking on my behalf, but what if this concept could also work for a small scale redevelopment of the already abandoned giants? To me, this technology seems a good fit given the current state of the UK North Sea. ■

Henk Kombrink



Simplified sketch showing the Pivotree concept. Adapted from Pivotree.