

TECHNOLOGY

FUTURE TECH

Voraxial Separator is fast and economical

Technology thought to be ideal for removing low gravity solids from crude oil during underbalanced drilling could also make a major environmental impact in other areas of oil and gas production, claims Harry Verkuil, a senior well engineer in the mature assets team.

Called the Voraxial Separator, it is a continuous flow turbo machine that creates a strong vortex so that heavier materials, such as cuttings, are drawn to the outside of the

vortex while the lighter materials remain in the centre. A simple flow divider then separates the two flows.

Nordland, the contractor that supplied much of the equipment for the underbalanced well operation suggested the technology to Harry for the AUK underbalanced well project.

"Voraxial Separation had some very obvious benefits for us at the time; the equipment is very compact and yet could easily handle

the flow rates we would have generated. It would also have been very effective, so that the crude we would have re-exported into the pipeline would have been as clean as the original crude we drew off before the drilling.

"And the icing on the cake was that the energy consumption of the Voraxial Separator is only 20% of any of the alternative options.

"I'm convinced that the Voraxial Separator technology could be very useful indeed for other applications," claims Harry.

"For example, in removing oil from produced water, it can achieve separation down to single parts per million values – well below the current legal requirement. However, those requirements will become more stringent as time goes on and, in any case, it would be more economical for us to grasp this

technology now direct from the manufacturers than to find that in two or three years time – when we really need it - we have to lease it expensively."

Any department that potentially might have a need for this

technology should contact Harry to help him develop a pan-Expro business case.

For further information regarding this job e-mail: harry.verkuil@expro.shell.co.uk



An 8 gallons per minute throughput Voraxial Separator in use at a North American oil refinery, showing very clearly the separation between oil and water in the vortex. Other models of the Separator can handle throughputs in excess of 5,000 gpm.