Curtin leads research into finding 'tight gas'

Curtin University researchers are part of a key group of scientists set to investigate and make recommendations for future successful tight gas exploration in Western Australia.

The group, consisting of researchers from Curtin, UWA and CSIRO and led by Curtin’s Associate Professor Reza Rezaee from the Department of Petroleum Engineering, will work with Whicher Energy to study tight gas sands of the South Perth Basin.

"Although historically it has been too difficult and uneconomical to produce, as energy prices rise and a shift from coal to gas energy sources is experienced, tight gas is now being viewed as a resource with great potential," Associate Professor Rezaee said.

Tight gas is known as an 'unconventional gas resource', along with coal seam gas, shale gas, and basin-centred gas.

"It is a natural gas which is difficult to produce in commercial scale due to the nature of the sandstone reservoir," he said.

"The lack of permeability in this rock locks the tight gas underground, making it difficult to drill a profitable well.

"In order to get at the tight gas, we need to find a 'sweet spot', a place where a large amount of gas is accessible. We can then use various means to create a pressure change in the well which sucks gas out of the surrounding rock and into production pipelines."

Curtin scientists will review the geology, wire-line logs, geomechanics and drilling issues of the Whicher Range field with Whicher Energy, and map the tight gas sweet spots working alongside the UWA team. CSIRO will perform the petrophysical lab work associated with tight core.

The project is funded by the State Government's Exploration Incentive Scheme (EIS) while the Western Australian Energy Research Alliance (WA:ERA) will administer the funds over the one-year contract.

"Research into innovative solutions for the extraction and production of tight gas is of high priority for the State," Head of the Curtin Department of Petroleum Engineering Professor Brian Evans said.

"At Curtin, we are committed to working with industry to see if tight gas deposits can be accessed and still be profitable.

"This area of 'unconventional gas' is of high priority for Curtin research, which has been highlighted by the more than four-fold increase in our research staff dedicated to gas developments in petroleum engineering over the past two years."

Curtin University was a major sponsor of the Good Oil Conference, held at the Esplanade Hotel in Fremantle from 7-8 September 2010. Curtin researchers hosted a technical session at the conference on Gas Coal Seam, Tight and Unconventional Gas Issues where tight gas, shale gas and low temperature separation methods were among the topics discussed.
The RIU Good Oil Conference 2010 is Australia’s pre-eminent oil and gas investment forum for junior and emerging oil and gas explorers and producers. It provides oil and gas producers and explorers with a forum to discuss how Australia will cope with this rapid expansion and what the future holds for the industry.

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