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Chemical News & Intelligence

March 31, 2014 Monday

AFPM 14: INSIGHT: Rest of world can't match US on shale

LENGTH: 636 words

By Nigel Davis

SAN ANTONIO, Texas (ICIS)--A unique set of circumstance has helped drive the exploitation of North Americans' shale gas and tight oil deposits. They are unlikely to be replicated elsewhere.

This means that the US and Canada are in a unique position as the shale revolution unfolds. Companies active in energy intensive industries and those that use methane or natural gas liquids as feedstocks are on a roll. Their energy costs are coming down rather than increasing in the way they are in other parts of the world.

And the good news for them is that shale gas and oil drilling in the US continues apace and is unlikely to slow unless (gas) prices push too low. Hydraulic fracturing technology and drilling techniques have improved to such an extent, in just a few years, to suggest that shale gas and oil supplies can be sustained for a lengthy period.

It is difficult to conceive of such rapid progress in other countries with significant shale deposits.

This was the key point made on Monday by Kenneth Medlock III of Rice University at the AFPM International Petrochemical Conference. A keynote speaker at the event, Medlock highlighted the critical factors that have come to play in concert over the past five or six years to help bring the abundance of shale. Simply having shale resources is not enough.

Shale is no longer a 'flash in the pan' in the US and Canada. It appears to be much a much more sustainable hydrocarbon resource. But it has taken the world's largest upstream services industry to bring about the revolution. Less than 20% of that sector exists outside North America.

Drilling activity has been intense. A Rice study with the **Bureau of Economic Geology** has shown that of 16,000 wells drilled in the Barnett Shale in the US, 14,000 were drilled after 2002. That rate of drilling, and the characterisation of geological shale deposits it brings, is nowhere near being replicated elsewhere.

Downstream from shale gas production too there is a degree of activity in the midstream - as well as legal access to the (growing) pipeline infrastructure - that works so well to get hydrocarbon resources to an eager market. Once again, conditions like this do not exist in other countries. The restrictions on the potential for shale gas and oil development are clear.

Australia, for instance, is the country that Medlock believes has the greatest potential for coming on-stream next with shale gas in a relatively big way. However, even the rules governing Australia's mineral work against more active drilling. And, currently, there are only two rigs in Australia capable of drilling horizontally.

Rice studies show that outside the US the costs of drilling have to come down if shale is to be commercial. There is the potential for great change in the world's energy markets over the next two decades, Medlock said. But that change will only come about if the environments supporting shale gas and oil drilling and the midstream change.

To drill an 8,000 ft well and a 4,000 ft horizontal section for fracking in the Hahnseville shale deposit in the US costs \$8m to \$8.5m, Medlock said. In Poland a similar well would be 2.5-3.0 times more costly.

Medlock ranks Argentina and China after Australia in the shale race. Europe's shale gas potential is put well down the list. In each region, however, the costs of drilling range between two and three times those in North America.

China's shale potential might be realised faster and over the longer term, however, driven by the pull of demand that will trigger change.

Global shale development

Read Paul Hodges' [1]Chemicals and the Economy blog Bookmark John Richardson and Malini Hariharan's [2]Asian Chemical Connections blog

References

1. <http://www.icis.com/blogs/chemicals-and-the-economy/> 2. <http://www.icis.com/blogs/asian-chemical-connections>

LOAD-DATE: April 1, 2014

LANGUAGE: ENGLISH

PUBLICATION-TYPE: Newspaper

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