

HYDRAULIC FRACTURING AND RELATED CHALLENGES

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The unconventional shale oil and gas production is booming in North America, and the industry continues expanding into new gas and oil or liquids-rich shale plays. Because of the increased production from unconventional shale formation, cheap natural gas has led to falling coal demand in US while the International Energy Agency (IEA) has projected that the US could become the world's largest oil producer by 2020. The success of the unconventional resources development is the result of technological advancement of combining horizontal drilling and multi-stage hydraulic fracturing. Hydraulic fracturing is not new and it has been widely used by the industry for over 60 years. The new advancement in horizontal multi-stage fracturing application in unconventional shale formation has brought public attentions and concerns and industry is responding with new technologies and improved field practices. This presentation will discuss unconventional hydrocarbon development and technologies involved as well as associated challenges and opportunities.