

The hard part lies ahead of us: Thoughts on the future of resource technologies

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Abstract:

The dramatic changes in the industry since the commercialization of the first major shale resource play have resulted in a nearly complete turnaround in industry thinking. From precipitous declines and plans to import massive amounts of natural gas, North America has the capacity to be a net energy exporter, in spite of natural gas prices far below their energy value. At least a dozen large, nearly commercial plays exist to complement the many tens of thousands of identified wells to be drilled. The whole world is watching and efforts to replicate this success are everywhere. The major impediments to exporting this technology are discussed and the author expresses skepticism that the North American experience will be replicated quickly, if at all.

The economics of a 100 and 300 million barrel shale play are compared and contrasted with those of similarly sized deep-water fields. The production profiles, risks and economics are contrasted. The challenges that lie ahead for the domestic industry are addressed and include elimination of non-commercial wells, the misleading concept of sweet spot identification and the risks and opportunities of optimizing completions along the wellbore and eliminating nonproductive intervals.