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## **The Deep Natural Gas Potential of the Eastern Midcontinent, USA**

If domestic production is to play a role in the projected 30 TCF natural gas market of the United States, several changes in exploration strategies will have to occur. One important change will be the drilling of deeper prospects. In most areas of the eastern Midcontinent, the vast majority of oil and gas tests have penetrated only a few thousand feet. Not only has this limited amount of data obscured our vision of the deep economic potential, but it has also provided us with a poor understanding of the early geologic history of the region. Reflection seismic data acquired over the past 10 years, together with a few key deep wells, have provided new insights into deep structure and stratigraphy of the eastern Midcontinent. Probably one of the most striking changes in our understanding has been the discovery of geographically extensive sedimentary rocks below the Precambrian unconformity, shifting economic basement substantially deeper. Some of these sedimentary rocks are tectonically complex, being part of both rift-basin settings and fold and thrust belts that were previously unknown or only poorly understood. The deep Cambrian basins in the area are similarly becoming better understood as a result of these data. In addition, mapping of the deep structures is providing a better understanding of the control they exert on the development and distribution of important shallower prospects. The deep structures of the eastern Midcontinent have the potential for containing reserves of natural gas, and future exploration strategies will need to consider them.