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Big gas in the Rockies

Abstract

In the past fifteen years, technology has struggled in the battle to exploit more restricted and difficult-to-extract parts of the resource base. As graphically shown on a gas resource pyramid, in the past five years, technology has been winning the battle. The result has been the discovery and exploitation of at least five giant fields (one oil and four gas) in the Rocky Mountains.

The greater Rocky Mountain petroleum province contains a large number of high-potential, unconventional, Cretaceous and Tertiary oil and gas plays. Many thousands of feet of interbedded source rock and tight sand potential reservoir rocks are currently within the gas-generating window.

One gas field, with an estimated ultimate recovery of between 1 and 5 TCF, is a sweet spot in a basin-center gas deposit and will be discussed in detail. Recognizing similar sweet spots with geophysics will play a large role in future discoveries. Another field was discovered under a thrust fault. New hydraulic fracturing technology has been important to the success of both fields. Three other giant fields will be discussed along with another potential giant accumulation in a basin-center oil deposit.

Biographical sketch

Ray Thomasson received undergraduate and master's degrees from the University of Missouri and a Ph.D. in geology from the University of Wisconsin in 1959. During his 17-year tenure with Shell Oil Company, he was manager of various divisions including Geologic Research, the Texas, Louisiana and Atlantic Offshore Division, Forecasting, Planning and Economics (in the US), and Strategic Planning for Shell International in London. This gave him a broad socio-political-economic business perspective. His last position was as chief geologist for Shell Oil USA. He formed Thomasson Partner Associates, Inc., in 1990.

Dr. Thomasson is on the board of trustees of the American Geological Institute Foundation, gives lectures yearly at various universities in the US, and was a 1987–1988 distinguished lecturer for the AAPG on stratigraphic geophysics in carbonates. He received the Distinguished Service award from the AAPG in 1995, the Distinguished Alumnae award from the University of Wisconsin, and, this spring, will receive the Distinguished Alumnae award from the University of Missouri. He is currently president of AAPG. □

HGS Luncheon Meeting • Wednesday, February 23, 2000 • Hyatt Regency Downtown • Social 11:15 a.m., Lunch 11:45 a.m