

North American Unconventional Gas Resources: a U.S. major's perspective

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ABSTRACT

With production from conventional resources decreasing in the continental U.S., gas producers are progressively more concerned with future gas supplies. Increasingly, reserve and production additions are from domestic unconventional gas plays.

These plays constitute a large proportion of the natural gas yet to be extracted in North America. The 1995 USGS Unconventional Gas Resource Assessment for the continental U.S. stood at 358 TCF. The 2002 National Oil and Gas Assessment reports a mean resource for the U.S. Rocky Mountain region of about 183 TCF undiscovered gas, of which 92% is unconventional.

Unconventional or continuous accumulations are regional in extent with diffuse boundaries. Sealing and trapping mechanisms are not obvious and the gas column is not buoyant upon a water column. Unconventional gas accumulations have a high probability of geologic success; there is a range of deliverability potential and they are sensitive to pricing and technology changes.

Burlington Resources is active throughout the U.S. and Canada in exploring and exploiting unconventional gas.

In the San Juan Basin, Burlington is producing from a number of tight clastic formations in addition to the Fruitland Coal and the fractured Lewis Shale. The company has built an enviable expertise in unconventional reservoirs, applying advanced technologies in stimulation and completion techniques, in addition to extensive use of infill drilling. The San Juan Basin is the source of 27% of Burlington's total production and has the potential for long-term development opportunities.

In the United States unconventional resources account for 26% of daily production. While Canadian unconventional resource estimates range from 290 TCF to greater than 1800 TCF there is no appreciable contribution to Western Canadian Sedimentary Basin production.

With its 2001 entry into the Western Canada Sedimentary Basin, Burlington is continuing to apply unconventional reservoir technologies learned through experience both in Canada's Deep Basin and in basins such as the San Juan.