

---

**SPE 75681**

## A COMPARISON OF RESULTS OF THREE DIFFERENT CO<sub>2</sub> ENERGIZED FRAC FLUIDS: A CASE HISTORY

Michael G. Tulissi, SPE, Trican Well Service Ltd.; Richard E. May, SPE, Canadian Natural Resources Ltd.

Copyright 2002, Society of Petroleum Engineers Inc.

This paper was presented at the SPE Gas Technology Symposium, held in Calgary, Alberta, Canada, April 30 - May 2, 2002.

---

### **ABSTRACT**

Over the past several years shallow gas reservoirs in southern Alberta have often been fracture-treated utilizing a blanket design, with the primary objective of minimizing completion costs on these marginal wells. Strategies such as simplifying logistics to take advantage of economies of scale, and reducing fluid and gas requirements have been successful in achieving this objective.

This paper discusses a pilot project, which examined ways to enhance the economics of both the Medicine Hat and Milk River formations. The ultimate goal of the project was to improve overall economics by increasing production, rather than relying solely on reduced costs. Successful trials were to provide justification for future down spacing of the field. The impact of varying the ratio of liquid CO<sub>2</sub> relative to base fluid in twelve wells was observed.

Initial production results have proved exciting and strongly suggest the possibility of doubling production rates in the long-term.

To order the full paper, visit <https://doi.org/10.2118/75681-MS>