

**AAPG Annual Convention
Salt Lake City, Utah
May 11-14, 2003**

Steven M. Goolsby¹, Mark H. Franklin², Edward B. Coalson³, Micheal L. Hendricks⁴ (1) Goolsby Brothers and Associates, Inc, Centennial, CO (2) Rocky Mountain Petrophysics, LLC, Aurora, CO (3) Cabot Oil & Gas Company, Denver, CO (4) Hendricks and Associates, Inc, Englewood,

Contrasting Hydrodynamic and Capillary Pore-Throat Trapping Mechanisms to Explain the Weyburn Field Accumulation in Saskatchewan, Canada

Weyburn Field is a giant oil accumulation found in the Mississippian Midale Formation in the Saskatchewan portion of the Williston Basin. It has ultimate cumulative reserves of more than 300 million barrels (47,700,000 m³) of oil. Despite the field's status as a giant oil accumulation, contrasting opinions have arisen as to what forms the trap for the field. The field and related fields in this Mississippian producing complex have been depicted both as capillary pore-throat traps and as hydrodynamically controlled accumulations. Different and independent physical constraints are necessary to explain oil accumulations under these contrasting trapping mechanisms. An examination of the rocks in and around the field is important in determining what the trapping mechanism for the accumulation actually is. Resolving which mechanism is responsible for production at the Weyburn Field complex has important implications for exploration and development in similar accumulations worldwide.