subsurface sedimentary layers.

Seismic mapping indicates much greater variation of near-surface horizons than mapping with well data. Axial planes of Acadian folds appear to be vertical. Fold amplitude diminishes between the Tully formation and the Lockport Group in some areas, while in other areas amplitude remains constant through the Devonian and Silurian section. In Chautauqua County, an anomalously thick Onondaga to Lockport interval parallel to regional fold axes has been interpreted as an anticline with a salt core, suggesting decollement tectonics.

BENNERT, BRUCE A., Desert Gas Exploration Co., Inc., Frederonia, NY

An Exploration Model for Medina Group Sandstones of Western New York and Northern Pennsylvania

Hydrocarbon accumulations in the Medina Group of western New York and northern Pennsylvania are controlled by stratigraphic traps. The discontinuous productive sand lenses were previously considered to be unmappable due to the erratic fluviatile deposition and marine reworking of the deltaic sediments. Wells were subsequently drilled only on the basis of pipeline availability, government space regulations, and general geology. Many of the completed wells proved to be marginal or noncommercial. Using core analysis, log data, and well production histories on several thousand wells, an exploration model has been developed to improve Medina well success ratios and performance. Specific sedimentary structures can be identified using characteristic gamma-ray patterns and they can be mapped in the subsurface. Highly productive coarsening-upward channel and bar-sand sequences can be projected into undrilled acreage, thereby reducing the percentage of non-economic wells drilled into the Medina sands.

RIGGS, THOMAS H., and CHARLES S. BARTLETT, JR., Bartlett Energy Exploration, Inc., Abingdon, VA

Oil and Gas Exploration in Appalachian Overthrust Belt of Southwestern Virginia

Hydrocarbon exploration is on the upswing in the southwestern Virginia portion of the “Eastern Overthrust belt.” Several potential reservoir horizons have been identified on surface exposures, but remain untested. Major faults, including the Saltville and Pulaski reservoir horizons have been identified on surface exposures, but Oil and Gas Exploration in Appalachian Overthrust Belt of Southwestern Virginia structuring and indicating potential deep targets. An ARCO test now being drilled will help to evaluate the deeper possibilities.

BIGGS, THOMAS H., and CHARLES S. BARTLETT, JR., Bartlett Energy Exploration, Inc., Frederonia, NY

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Bennett, Bruce A., Desert Gas Exploration Co., Inc., Frederonia, NY

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Oil and Gas Exploration in Appalachian Overthrust Belt of Southwestern Virginia

Hydrocarbon exploration is on the upswing in the southwestern Virginia portion of the “Eastern Overthrust belt.” Several potential reservoir horizons have been identified on surface exposures, but remain untested. Major faults, including the Saltville and Pulaski thrusts, have as much as 16,000 ft (4,877 m) of displacement, remain untested. Major faults, including the Saltville and Pulaski reservoir horizons have been identified on surface exposures, but Oil and Gas Exploration in Appalachian Overthrust Belt of Southwestern Virginia structuring and indicating potential deep targets. An ARCO test now being drilled will help to evaluate the deeper possibilities.