Monday October 25, 2004

Westchase Hilton • 9999 Westheimer
Social 5:30 p.m., Dinner 6:30 p.m.

Cost: $25 Preregistered members; $30 Nonmembers & Walk-ups

The HGS prefers that you make your reservations on-line through the HGS website at www.hgs.org. If you have no Internet access, you can e-mail reservations@hgs.org, or call the office at 713-463-9476. (include your name, e-mail address, meeting you are attending, phone number and membership ID#).

*by **Steve Cumella***
Williams Production Company
Denver, Colorado

The North American Explorationists Group is excited to have Mr. Steve Cumella present some of his work in the Piceance Basin. This continues the Basin-Centered Gas theme we started last season. Come hear about exploration in one of the more active new areas in the United States.

Steve Earle
Chairman

Geology of the Basin-Centered Gas Accumulation, Piceance Basin, Colorado

A very large basin-centered gas accumulation in the Williams Fork Formation of the Mesa Verde Group is currently being actively developed at 10-acre density. Ten-acre density is necessary to develop a reasonable amount of the gas-in-place owing to the very low (microdarcy) permeability and the highly lenticular nature of the fluvial sandstone reservoirs. Within the area of commercial gas production, gas is produced from a continuously gas-saturated interval of 1,500–2,400 feet. A transition zone of mixed gas- and water-saturated sandstones overlies the continuously gas-saturated interval. Pressure gradients, which can be as high as 0.8 psi/ft in the lower part of the Williams Fork in the structurally deeper part of the basin, decrease upward to hydrostatic gradients near the top of the continuously gas-saturated interval. Pervasive natural fracturing provides sufficient reservoir permeability to allow commercial production over a 14-township area. This area is continually expanding as a result of current active exploration for this basin-centered resource. Overpressuring resulting from the generation of large volumes of gas from interbedded coals and carbonaceous shales may have been important in fracturing the sandstones. During maximum burial and peak gas generation, overpressuring may have been maintained beneath a regionally extensive top seal in the upper part of the Williams Fork Formation. ■

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Biographical Sketch

Steve Cumella got his bachelor's and master's in geology at University of Texas at Austin. Steve spent his first 9 years with Chevron working the Rockies, Mid-Continent and West Africa. Since leaving Chevron, Steve has worked the Rockies, California and South America. Steve has worked the Piceance Basin at Barrett/Williams for the last 4 years. Steve is past president of the Grand Junction Geological Society.