**Wednesday, February 27, 2008**

Petroleum Club • 800 Bell (downtown)
Social 11:15 a.m., Lunch 11:45 a.m.

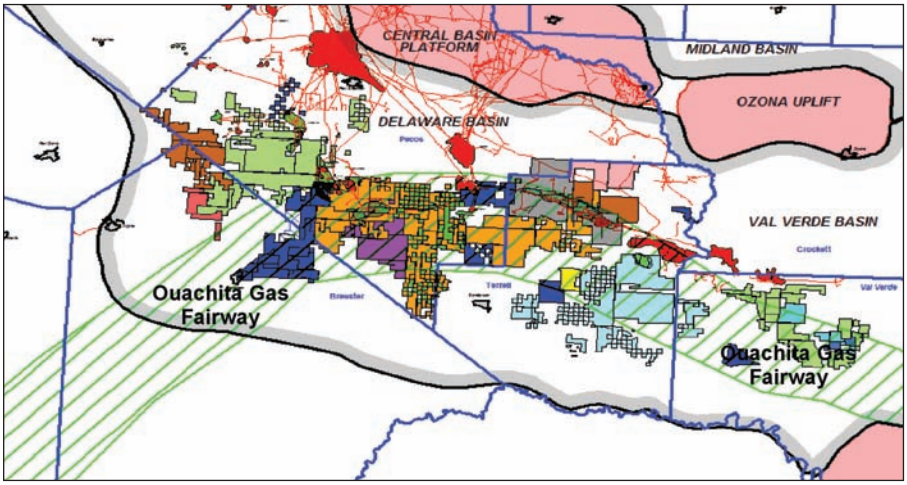
Cost: $30 with advance reservations, $35 for walk-ins, space available ($15 for Emeritus and Honorary).

**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#).

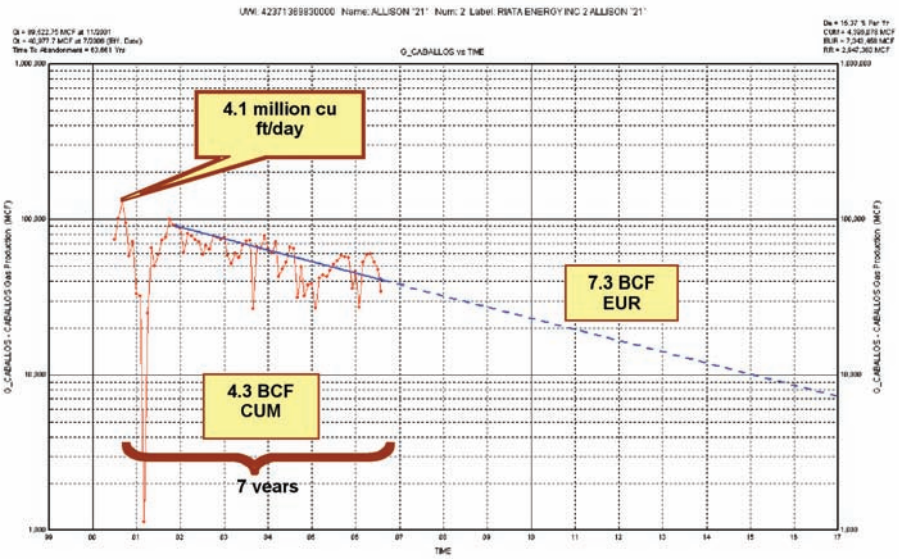
# HGS General Luncheon Meeting

*by* ***Richard G. (Dick) Boyce***
*dB, LLC Petroleum Advisors*

# Pinon Field Study with Implications for Texas Overthrust Natural Gas Exploration




*The Ouachita Gas Fairway is currently recognized over a 200-mile portion of the Delaware and Val Verde Basins of West Texas extending from Marathon on the west to Del Rio on the east and including portions of Brewster, Pecos, Terrell and Val Verde counties. The twenty-five mile-wide trend has experienced significant lease activity during the last 18 months, but vast areas on trend remain unleased.*




*The linear decline of a typical Caballos well producing from the microfractured novaculite indicates a larger drainage area than typically observed from the tighter Dimple Limestone—likely due to the mechanical fracturing resulting from tectonic transport on the Ouachita thrust system. Wells are drilled using air and mist to avoid formation damage from mud systems.*

Pinon Field, located approximately 30 miles due south of Fort Stockton in southern Pecos County, is one of three fields that produce from thrusted facies within the Texas Ouachita Overthrust. HNG discovered the Pinon Field in 1981 by drilling the #1 Allison-20 well to a total depth of 9,850 ft. A large interval was completed within the Ouachita facies containing the Dimple Limestone and the Caballos Novaculite (4,543–4,880 ft) at a rate of 2.37 mmcfpd. Tenneco Oil Company quickly followed that discovery in 1982 and 1983 by drilling three wells on the Green lease, the most prolific of which, the Tenneco #2 J.A. Green, has produced over 33 bcf of gas from the Caballos Novaculite (4,839–4,954 ft) since 1983.

Pinon Field currently comprises 331 wells, most of which have been drilled and completed since 2001 by Riata Energy. Reservoir pays include thrusted Dimple limestones, Caballos Novaculite, Tesnus sandstones and shales, and Wolfcamp sandstones and limestones. The field is currently producing 110 mmcfpd, with cumulative production to date of over 200 bcfg. Recent published industry reserve estimates for field-wide estimated ultimate recovery range as high as 1.0 tcf of gas to be produced from the multiple-repeated Ouachita reservoirs found within a 3,000–4,000-ft-thick structured interval.

Of over 330 wells drilled to date, only a few have resulted in dry holes. These wells

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can be classified as mechanical drilling failures. Analysis of Pinon Field suggests that virtually all fractured rocks within the 4,000-ft hydrocarbon column act as reservoirs, thrusted into the primary Permo/Penn source beds of the foreland Permian Basin, suggesting a play fairway within which industry may be defining the Lower 48's newest gas resource play.

Also in the Pinon Field area, exploration geologists are following a significant sub-thrust Paleozoic discovery that reportedly tested gas from the Fusselman at an unsubstantiated calculated absolute open flow of 140 mmcfpd. Little information has been publicly released regarding this sub-thrust discovery, but the well is rumored to have discovered an additional 1.0 tcf of gas in a large sub-thrust Paleozoic structure located beneath the Ouachita reservoirs in Pinon Field.

The success demonstrated in completing wells in the Caballos and Dimple intervals at Pinon Field is fueling industry activity on trend. In October 2006, Riata Energy was purchased by former Chesapeake COO Tom Ward and merged with National Energy Group to form SandRidge Energy, Inc. As a result of acquiring all the assets of Riata, including the production in Pinon Field, SandRidge is currently the largest acreage holder in the play, with approximately 500,000 acres under lease and a 30-rig drilling program underway on the play. ■

## Biographical Sketch

**Dick Boyce**, originally from Carlsbad, New Mexico, graduated from the Colorado School of Mines in 1979 with a BS in geophysical engineering. Mr. Boyce began his exploration career with The Superior Oil Company in Houston as a staff geophysicist, later working in Midland as an explorationist. In 1983 he began work with Conquest Exploration in Midland as a senior geophysicist and then joined Hunt Oil Company in 1986. He was transferred to Hunt's corporate office in Dallas in 1989, serving initially as Chief Geophysicist and later as Exploration Manager for Yemen Hunt Oil Company from 1992 to 1994. He began his independent career in Dallas as a geophysical consultant and petroleum advisor in 1996. Mr. Boyce is a principal of dB, LLC Petroleum Advisors, located in Dallas, Texas.

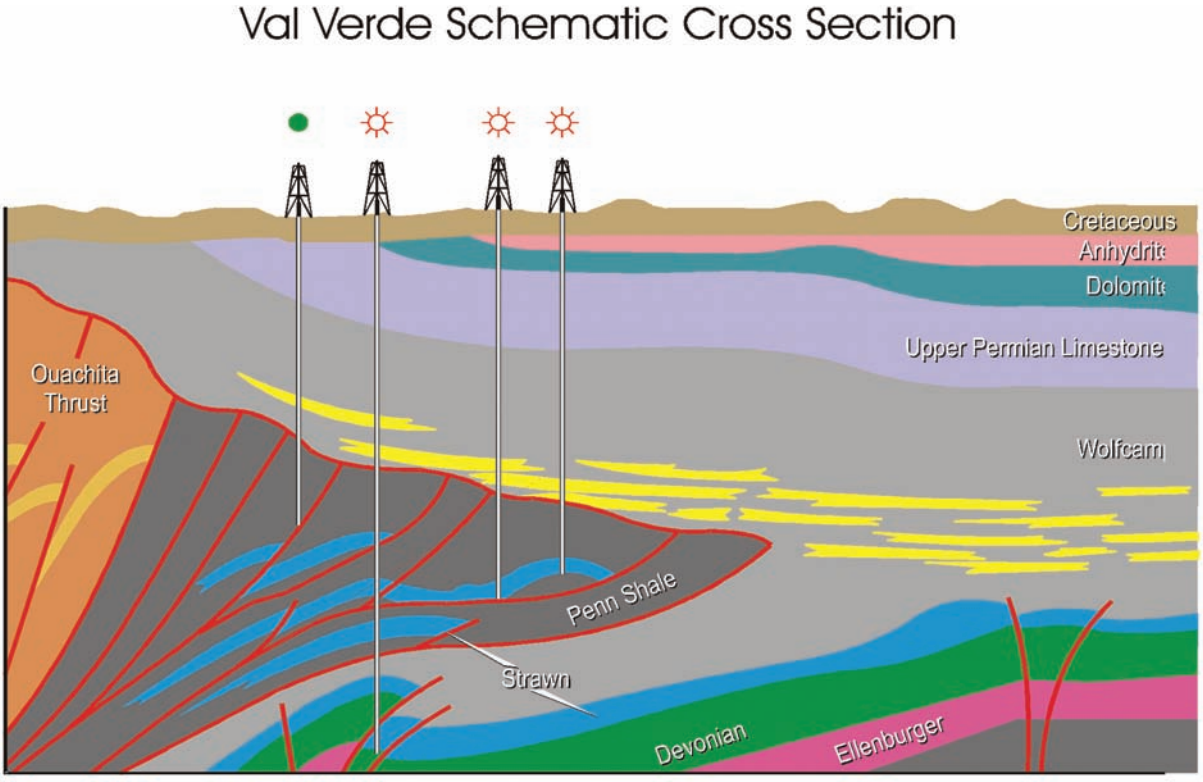


Diagram courtesy of Providence Technologies, Inc.

*A schematic dip cross section illustrates multiple play systems within the Ouachita Gas Fairway. Pinon Field comprises two main reservoirs, the Dimple Limestone and the Caballos Novaculite within the section labeled as Ouachita Thrust on this diagram. Additional production is found in thrust-involved Strawn Limestones at the leading edge of the system. Analog fields completed in thrusted Strawn include ACU, Pakenham and Poulter.*