

Tuesday, May 20, 2008

Crowne Plaza Hotel (former Sofitel Hotel) • 425 Sam Houston Pkwy. North
Social 11:15 a.m., Luncheon 11:30 a.m.

Cost: \$31 Preregistered members; \$35 non-members & 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#).

HGS Northsiders Luncheon Meeting

by *Thomas E. Ewing*
Frontera Exploration
Consultants, Inc.

Fairways in the Downdip and “Mid-dip” Yegua Trend —A Review of 25 Years of Exploration

The Yegua genetic unit of the Gulf Coast Basin (Bartonian, Upper Middle Eocene; includes the Cook Mountain Formation) contains multiple lowstand events that have generated significant “mid-dip” (updip of the shelf margin) and “downdip” (shelf margin and beyond) production trends. (Figure 1, page 27.)

The mid-dip trend has produced 1.04 tcfg and 68 mmbc (1.4 tcf) from 113 fields in two fairways. The Victoria–Fort Bend Fairway (545 bcfe) produces from incised-valley sandstones discovered using “bright spot” and AVO anomalies. The Evangeline Fairway (876 bcfe) produces from Cockfield incised-valley sandstones, in large part from salt structures in St. Landry Parish.

The downdip trend has produced 2.35 tcfg and 96 mmbc (2.9 tcf) from 221 fields in six fairways. Major production is from expanded shelf-edge and deepwater sandstones of the Liberty Delta System of southeast Texas and its flanks: the Fort Bend–Liberty Fairway in the delta core (1008 bcfe), the Jefferson–Orange Fairway on the eastern flank (703 bcfe) and the Victoria–Wharton Fairway on the western flank (651 bcfe). The first two are the least mature, as evidenced by recent, prolific wells drilled on 3D seismic data. Lesser fairways are the Calcasieu Fairway in southwestern Louisiana (180 bcfe) and the Duval–Jim Wells Fairway in South Texas (188 bcfe). The Camargo Fairway in northeastern Mexico and southernmost Texas is a complex of downdip and mid-dip environments (189 bcfe).

Four sparsely-drilled frontier areas are identified. The Brooks Frontier in deep South Texas has some production (21 bcfe), but its depositional systems are poorly known. The Goliad Frontier is an area of limited sand at the shelf edge. The Deep Frontier is a broad swath downdip of the Liberty delta system where wildcats discover substantial thicknesses of sandstone, but have so far failed to produce. Salt movement complicates the search for traps in this area. The Acadia Frontier represents the poorly tested Yegua/Cockfield shelf-margin in central Louisiana.

The Yegua shelf-margin trends contain seven major fields (>100 bcfe recovered) and 45 significant fields (20–100 bcfe). Perhaps 1.5 tcf will be added to the current production of 4.36 tcf—considerably more if the keys to trapping in the frontier areas can be found. ■

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Biographical Sketch

DR. THOMAS EWING is a geoscientist with over 25 years of experience in hydrocarbon exploration and research. He is a Registered Professional Geoscientist in the State of Texas (#1320) and an AAPG/DPA Certified Petroleum Geologist (#4538). He received a BA in geology from the Colorado College in 1975, an MS in geochemistry from New Mexico Institute of Mining and Technology in 1977 and a PhD in geological sciences from the University of British Columbia in 1981.

Dr. Ewing was a research geologist for four years at the Texas Bureau of Economic Geology working on Gulf Coast geopressedured reservoirs, serving as a co-author of the *Atlas of Texas Oil Reservoirs* and compiling the Tectonic Map of Texas. Since 1985 he has been co-owner of Frontera Exploration Consultants, Inc., a San Antonio–based geoscience consulting company. He has worked with Venus Oil and Venus Exploration since 1985 as staff consultant and Senior Explorationist, playing a main role in its successful exploration in the Yegua Trend of the Gulf Coast Basin, the Cotton Valley trend of Texas and Louisiana, and in West Texas and Kansas. He has also consulted to various clients in South Texas and New Mexico.



Dr. Ewing is a member of many regional and national professional societies. He has served as Treasurer, Vice-President and now President of the AAPG’s Division of Professional Affairs. He is an AAPG Delegate from the South Texas Geological Society and

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served as Vice-Chairman of the AAPG House of Delegates in 1992–93. He also served as President of the Energy Minerals Division of the AAPG (1999–2000). He served as President of the South Texas Geological Society in 1990–91 and was General Chairman of the 1996 GCAGS Convention in San Antonio. He has spoken extensively at local, regional and national geological meetings and published over 70 papers and abstracts. Among

other awards, he has twice received the Gulf Coast Section AAPG Levorsen Award (1982 and 1999), and has received both the GCAGS Distinguished Service Award and the AAPG Distinguished Service Award.

In his spare time, he leads field trips in South Texas and directs a 50-voice German men’s chorus, the San Antonio Liederkrantz.



Figure 1. Trend map of the Yegua genetic unit showing areal extent and depositional systems. The location of fairways and frontiers is shown.