Recent Exploration Activity, Kerr Basin (Central Texas); Bandera Ellengurger Field Gas Discovery

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Kerr Basin lies immediately south of the Llano Uplift in Texas “Hill Country”. Though exploration work has remained essentially dormant during recent years, twprevious decades: Mountain Home (1982; 80,000 BO cumulative) and Manzanas (1995; 30,000 BO cumulative). These fields produce from o small, light-gravity oilfields were found in Cambro-Ordovician Ellenburger reservoirs. The Kerr Basin is postulated to be the eastward continuation of the new Ellenburger gas production along the Edwards Arch to the west at fields like Geronimo Creek (2005), Four Mills (2004) and Snakebite (1995).

In 2003 frontier-oriented First Place Energy, Ltd. re-worked existing data and initiated a leasing campaign. Higher oil prices and new technology offered opportunity to revisit a lightly drilled underexplored basin believed to possess such favorable fundamentals as: seal, large undrilled structures, and source rocks yielding 40 degree API gravity oil. An initial farmout in 2005 failed to reach basement or establish commercial production. Nonetheless FPE proceeded to find a new operator, Gunn Oil Company (GOCO), who expanded exploration to include a proprietary seismic campaign and additional leasing. This effort focused on four-way dip structural closures and fault trap horst blocks along a regional structural nose extending southwest into Bandera County from the Blanco Arch shown on the Tectonic Map of Texas (Ewing, et al, 1990). It should also be noted that both source rock and (karsted) reservoir rock are exposed at the surface on the aforementioned, nearby Llano Uplift.

This talk will focus on regional geology and the results of two exploration basement tests drilled by GOCO in 2007-8. GOCO discovered the Bandera Ellenburger Field late 2007. The field was shut in until gas prices improved and pipeline was completed 12/2009. Currently the GOCO Carter #1 well produces about 0.750 MMCFG/D with future offset wells planned. The field is on the leading edge of a regional autochthonous buttress overthrusted by allochthonous Pennsylvanian strata, the latter being highly distorted and incipiently metamorphosed. Although the Barnett Shale source rock surrounding the field is in the oil window, the Carter well produces dry gas. Tight gas sandstones in Pennsylvanian thrust sheets have yielded non-commercial shows to date in the GOCO Stevens #1 well, in a setting analogous to the West Texas Overthrust play.