

**AAPG Annual Meeting
March 10-13, 2002
Houston, Texas**

Mark T. Sunwall¹, Robert J. Alexander¹ (1) Texaco Worldwide Exploration and New Ventures, Bellaire, TX

Garden Banks 625 - A Deepwater Gulf of Mexico Post-drill Review

The Garden Banks 625 prospect was drilled in September 1998 to test several bright spot associated Pleistocene objectives in a salt withdrawal mini-basin. This post-drill review will compare the results of this dry hole to the adjacent 200+ MMBOE Gunnison field discovery.

Pre-drill technical analyses for this well included 3D seismic interpretation, AVO and 3D acoustic impedance inversion calibrated to several wells within the basin. The integrated data suggested a strong likelihood of reservoir quality sands with a good chance for hydrocarbon saturation. AVO analysis indicated a strong class III response at both objective levels within the trap. A high GOR oil was predicted as the most likely hydrocarbon phase based on data collected from oil saturated seafloor piston cores. Top seal capacity and lateral stratigraphic pinch-out integrity were assessed to be the highest geologic risk attributes due to the shallow depth of burial below mud-line (5000-8000"), the apparent lack of reflector terminations and interval thinning at the limit of amplitude anomaly in the deepest objective level. The well results confirmed the presence of high quality Pleistocene sand reservoirs as predicted.

Post-drill log analysis, well-tie synthetic seismogram and mud log data showed that the sands had low gas saturation's of 10-20%. Well data confirmed the lack of adequate compaction to generate a top seal capable of trapping a commercial column of hydrocarbons. Seals that did form were subject to rupture due to frequent movement of allochthonous salt within the mini-basin. The well was plugged and abandoned on November 4, 1998.