**Monday, May 8, 2006**

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Social 5:30 p.m., Dinner 6:30 p.m.

Cost: $25 Preregistered members; $30 non-members & walk-ups

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*by* ***Adam M. Seitchik*** *(speaker)*
*and* ***Timothy Powell***
*Devon Energy*
*Houston*

# Lower Tertiary Deposition in Walker Ridge, Gulf of Mexico: An Example of Sedimentary Distribution in an Unrestricted Basin

Prior to the Cascade discovery, the presence of a thick, aerially extensive Wilcox sand interval extending into the Walker Ridge Area was not known. The Cascade No. 1 well, originally targeted as a Miocene test, penetrated a substantial section of hydrocarbon-bearing sands in the Wilcox section. Further drilling in Walker Ridge and Keathley Canyon areas confirmed a pervasive depositional system of amalgamated sheet sands and opened a new exploration trend in a mature basin.

*Deltas supplied sediments…from shelf margins located over 300 miles away.*

Provenance studies and regional geologic interpretation indicate multiple sediment sources from the north and northwest, specifically the Rockdale and Holly Springs deltas. These deltas supplied sediments to the Walker Ridge fold belt from shelf margins located over 300 miles away. Deepwater sedimentation may have occurred as a result of punctuated catastrophic events, continuously sourced sand systems, or a combination of the two. This sedimentation had minimal influence on underlying salt, with paleo-reconstructions supporting Lower and Middle Miocene structural growth.

Isopach maps of the Lower Tertiary section in the Walker Ridge fold belt show relatively minor thickness variations indicating subtle structures with low relief during Wilcox deposition. Thus the robust Walker Ridge fold belt of today caused little impediment to deposition at Wilcox time. In addition, mapping Lower Tertiary salt truncations in the Walker Ridge area identifies no significant barriers that could obstruct sedimentation. As a result, deposition during Wilcox time occurred in an unrestricted basin, facilitating thick sheet sand accumulations across the Walker Ridge area. ■

## Biographical Sketches

**Adam Seitchik** is a geophysicist with Devon Energy's Gulf Division in Houston, Texas, and has worked in the oil industry for 9 years. He earned his BA in geology from Denison University and MS from the University of Alabama, focusing on seismic sequence stratigraphy. Adam began his career with Mobil, working the Gulf of Mexico shelf, with projects ranging from exploration to AVO analysis, inversion and neural networks. Prior to the merger between Mobil and Exxon, Adam moved to Mobil's deepwater Gulf group where he learned salt tectonics. After the merger and a move to Houston, Adam continued his work in the deepwater GOM exploring in Walker Ridge and Mississippi Canyon. In 2001, Adam went to work at Devon Energy and is currently focusing his exploration efforts on the Lower Tertiary section in Walker Ridge and Keathley Canyon.

**Tim Powell** is exploration supervisor for Devon's Gulf Division Regional Team, located in Houston, Texas. He received his BS degree in geology from Texas A&M University in 1979 and has worked in the oil industry for 26 years. Tim specializes in sequence stratigraphic interpretation and has worked several regional projects as a geologist/geophysicist for Pennzoil/PennzEnergy (which merged into Devon) on numerous exploration and exploitation projects throughout the onshore United States and offshore Gulf of Mexico. He is an experienced project supervisor and is currently supervising Devon's regional efforts in the Gulf of Mexico. A major project involves interpretation of the entire Gulf Coast Basin, from Jurassic through Miocene, from deepwater to shelf areas. Unraveling the Wilcox depositional systems from updip production to the recent downdip deepwater discoveries is one of the primary focus areas of the regional team.