

Monday, April 26, 2010

Westchase Hilton • 9999 Westheimer

Social Hour 5:30–6:30 p.m.

Dinner 6:30–7:30 p.m.

**Cost: \$28 Preregistered members; \$35 non-members & walk-ups**

**To guarantee a seat, you must pre-register on the HGS website and pre-pay with a credit card.**

**Pre-registration without payment will not be accepted.**

**You may still walk up and pay at the door, if extra seats are available.**

## HGS North American Dinner Meeting

**Walter Moody**

*Hess Corporation, Houston*

# Reservoir Characterization of the Smackover Formation in Little Cedar Creek Field, Alabama

In 1994, Hunt Oil Company opened up the Little Cedar Creek Field with the completion of the Cedar Creek Land and Timber Company #30-1. The well came on at 108 BOPD and 49 MCFD, producing from the Upper Jurassic Smackover Formation.

Studies of cores from the Little Cedar Creek Field have identified seven different facies within the Smackover Formation. The descriptions from top to base are as follows:

At the top, Facies 1, wackestone, shale, siltstone; Facies 2, peloid-oid grainstone; Facies 3, bioturbated peloidal packstone; Facies 4, laminated peloidal wackestone-packstone; Facies 5, microbial boundstone; Facies 6, bioturbated peloidal packstone; and at the base, Facies 7, laminated peloidal wackestone.

Of these, facies 2 and 5 contain the best reservoirs. They are separated by non-permeable, non-porous rock. The two producing facies have average porosities ranging from 10% to 25% and are very permeable. Porosity is vuggy, intergranular, moldic, and intercrystalline. Although dolomites are the predominant reservoirs of Smackover fields in southwestern Alabama, the reservoirs at The Little Cedar Creek Field are composed mostly of limestone.

It has been determined that the microbial mats in regional fields were developed on paleohighs, but those in the Little Cedar Creek

Field were deposited in shallow marine to subtidal environments within five miles of the paleoshoreline. These conditions created stratigraphic rather than structural traps.

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In the past five years, Little Cedar Creek Field has become the number one producing field in Alabama. Cumulative production is in excess of 8 million barrels of oil. Not bad for a stratigraphic play. ■

### Biographical Sketch

WALTER MOODY is currently working as a Data Analyst for Hess Corporation in Houston. He has a Master's degree in Earth, Environmental, and Physical Sciences and a

Bachelor's degree in Geology, both from Wichita State University in Wichita, KS. Mr. Moody began his career in the oil and gas industry at the Kansas Corporation Commission as an intern in the Geological library. Upon completion of his Bachelor's degree, he stayed with the Commission as a State Geologist. While working on his Master's degree, Walter worked as an exploration geologist for Mull Drilling Company in Wichita. In the Spring of 2009, he began working as a consulting geologist for clients located in the Denver area. This role included work in log analysis, prospect evaluation, and subsurface map creation and interpretation.

