GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES
and
GULF COAST SECTION SEPM

34th Annual Meeting
October 24-26, 1984
Shreveport, Louisiana

Host: Shreveport Geological Society

FIELD TRIPS

For information regarding these field trips, contact W. David Hart (GCAGS Field Trips), Caruthers Producing Co., 1200 FNB Tower, Shreveport, Louisiana 71101.

Field Trip 1.—Lignite Deposits in East Texas and North Louisiana

Departure: Monday, October 22, 1984, 12:30 p.m.
Return: Wednesday, October 24, 1984, 3:30 p.m.
Leaders: Ted Mayo (Texas Utilities Mine) and David Williamson (Swepco-Cleco)

By bus, participants will visit a working operation of Texas Utilities near Beckville, Texas, with a guided tour of one mine. By van, they will see the backwoods of Dolet Hills, south of Mansfield, Louisiana, with a stop at a new power plant under construction to be operated by Southwestern Electric and Cleco. While there they will inspect lignite outcrops. A visit to the sandstone deposits in the Kisatchie area is included as well as one night at the Toro Hills Golf Resort adjacent to Hodges Gardens (located near Florien, Louisiana), and one night at the Holiday Inn in Natchitoches, Louisiana. There will be a speaker each evening.

Limit: 40 people
Fee: $190 per person (includes a road log, transportation, housing based on double occupancy, refreshments, box lunches, and evening meals).

Field Trip 2.—Depositional Environments of Cretaceous Rocks of Southwest Arkansas and Southeast Oklahoma

Departure: Monday, October 22, 1984, 1:00 p.m.
Return: Wednesday, October 24, 1984, 3:30 p.m.
Leaders: Benjamin F. Clardy and Quinn Baber (Arkansas Geological Commission, Little Rock) and Brian Lock (University of Southwestern Louisiana, Department of Geology, Lafayette)

Participants on this trip will examine select outcrops and roadcuts in southwest Arkansas and southeast Oklahoma. The depositional environments of the Cretaceous section and the petroleum significance of each unit will be discussed.

Limit: 40 people
Fee: $190 per person (covers guidebook, transportation, housing based on double occupancy, refreshments, and most meals).

Field Trip 3.—Thrust Belts in Ouachita Mountains, Arkansas—Sedimentation and Tectonics

Departure: Friday, October 26, 1984, 1:30 p.m.
Return: Sunday, October 28, 1984, 5:30 p.m.
Leaders: Boyd R. Haley, Retired (U.S. Geological Survey), and Charles G. Stone (Arkansas Geological Survey)

Participants on this trip will examine the depositional environment, structural deformation, and hydrocarbon potential of the Paleozoic rocks in the Arkansas portion of the Ouachita Mountains.

Limit: 40 people
Fee: $190 per person (includes guidebook, transportation, housing based on double occupancy, refreshments and most meals).

Abstracts

APPLEGATE, ALBERT V., Bur. Geology, Florida Dept. Natural Resources, Tallahassee, FL

Brown Dolomite Zone of Lehigh Acres Formation (Aptian) in South Florida—a Potentially Prolific Offshore Producing Zone

The best onshore development of the brown dolomite zone of the Lehigh Acres formation (Aptian) is in Charlotte and surrounding counties in the northern part of the South Florida basin at a depth of approximately 12,000 ft (3,658 m). The brown dolomite zone attains a maximum thickness of 100 ft (30 m), of which one-half is usually porous and capable of high-volume fluid production. Offshore, the maximum thickness occurs near the Marquesas Keys, where approximately 400 ft (122 m) of mostly porous dolomite has been drilled.

To date, very little oil staining has been found in the Charlotte County area, but the two Marquesas wells have shown some oil staining.

The best possibility for finding oil in the brown dolomite appears to be in the offshore portion of the South Florida basin. Brown dolomite is present in at least three wells on the Sarasota arch and probably continues around the rim of the basin to the Marquesas Keys, where thick, porous, vugular dolomite is present. This dolomite is capped by dense limestone and anhydrite. Stratigraphic and structural traps associated with it could lead to the formation of giant oil fields.

AUBREY, JOHN, Highland Resources Inc., Houston, TX

Recent Jurassic Discoveries in Southeastern Cass County, Texas

Southeastern Cass County had lain virtually dormant as a prospective Jurassic oil and gas province since the mid-1960s, when East Linden field was discovered and developed. Then, in 1978, Hilliard Oil and Gas drilled the 1 Johnson and discovered Kildare field (Smackover). Subsequent development thru 1982 proved additional reserves in several Cotton Valley sandstones as well, reconfirming southeastern Cass County as territory for viable Jurassic drilling.

Additional drilling occurred when Marshall Exploration redrilled and expanded the old Bloomburg field and Heflin redrilled Queen City field. All of this drilling was successful in the Smackover reservoir, finding sour gas and condensate. Wildcat activity included the two Smackover completions finding South Atlanta field, as well as two completions in formations that are highly debated as to their nomenclature.

Cities Service reportedly completed their well in the Eagle Mills. This well brought national attention to southeastern Cass County, when it was reported on the CBS Saturday evening news. The well initially flowed at rates that were as high as 1,800 BOPD, 1,396 MCFGD, and 32 BWPD, with pressure of 3,250 psi. Just as the excitement was dying down, Primary Fuels, Inc. reentered and deepened the Highland Resources 1 Glass and completed that well in a zone correlative to the Cities Service 1-A Pruitt. The 1 Glass potentialed for 200 BOPD, 570 MCFGD, and 32 BWPD, at pressure of 2,900 psi. The producing zone was determined to be the Norphlet, which once again made wildcatters of all previous upper Smackover explorers.

The activity in this county has not slowed. At present, 30 wells are reported in various stages of drilling. This success has brought with it the advent of higher acreage cost, royalties, and shorter lease terms.