MEETINGS

HGS DINNER MEETING—
SEPTEMBER 14, 1992
Social Period, 5:30 p.m.,
Dinner and Meeting, 6:30 p.m.
Post Oak Doubletree Inn

JOHN A. LOPEZ—Biographical Sketch

A New Orleans native, John completed his B.S. degree at LSU in 1976. He received his M.S. degree at the University of Southern California in 1980, specializing in structural geology and geophysics.

John initiated his career in the oil patch as a roustabout in the Gulf of Mexico with Shell in 1975. In the following summer he went on to work for Getty where he was assigned exploration mapping in the Mississippi salt basin. While in California, he worked part-time as a consultant for Great Basin Petroleum Company, and in Denver he worked as summer geologist for Amoco exploring for oil and gas in the Williston basin and the Rocky Mountains.

Since starting full-time with Amoco in New Orleans in 1978, he has worked as both a geologist and geophysicist on a variety of production and exploration projects, including thrust mechanics in the southern Appalachian Mtns. and the stratigraphy of the Gulf Coast Tertiary Basin. Several articles have been published describing these regional studies. John is still with Amoco in New Orleans and is currently mapping with 3D-seismic surveys covering fields in the High Island area in the Gulf of Mexico. Aside from the regular professional duties of Amoco, John has been very active in studies of Lake Pontchartrain and now chairs the Pontchartrain Research Committee which recently held the "Basics of the Basin" research symposium on Lake Pontchartrain Basin.

EMPLACEMENT OF THE SIGSBEE ALLOCHTHON AND ITS INFLUENCE ON SLOPE DEPOSITION, U.S. GULF OF MEXICO

The active Sigsbee allochthon is a wedge-shaped mass of Jurassic salt displaced basinward 50-100 miles over Miocene to Holocene sediments. The allochthon thickens upslope from the base of the slope to a midslope position, where it may exceed 20,000 ft. in thickness. Recent drilling of wells through allochthonous salt on the shelf suggests a regional relationship of this salt to the active Sigsbee allochthon. The model suggested by this relationship predicts a continuous evolution and progradation of a salt allochthon from the late Miocene to the present, with three stages of development: (1) active inflation and thrusting of the salt wedge; (2) active deflation and extension of the salt wedge (diapiric cannibalization of allochthon); and (3) deflation of the salt wedge (buoyancy-driven diapirism). Because the entire salt allochthon has continuously prograded into the basin, these three stages also correspond, respectively, to the general stages of development of the salt allochthon of the present lower slope, upper slope, and other shelf. The evolution of the salt allochthon has been the major control on the paleobathymetric and accommodation history of the shelf edge and slope.

The overall geometry of sediments deformed by the allochthon is a regional syndepositional slump. To a large degree, the modern Sigsbee allochthon and its predecessors controlled the spatial distribution of facies across the shelf edge and slope from the late Miocene to the Holocene. The sediments associated with the evolving allochthon can be divided into gross tectonostratigraphic units, which aids prediction of paleoenvironments and facies of sediment deposited across the slope and basin floor.