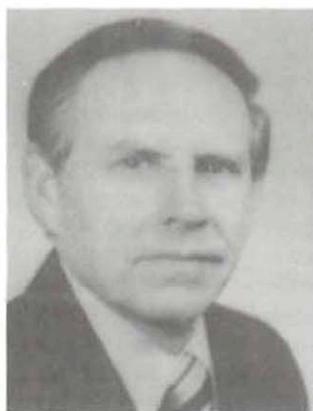


MEETINGS

DINNER MEETING—MAY 8, 1989

FRANK W. HARRISON—Biographical Sketch



Frank W. Harrison Jr. is a consulting geologist in Lafayette, La. He received his B.S. in Geology from Louisiana State University in 1950. After serving in the United States Army for two years, he was employed by Union Producing Co.

Mr. Harrison worked for Union Producing Co. for four years before moving to Seaboard Oil in New Orleans. In 1956, he was district geologist for Trans-Tex Drilling Co. He be-

came head geologist for American Natural Gas Prod. Co. in 1957. Since 1959, he has been a consulting geologist.

Harrison has been a member of AAPG since 1954. He served on numerous committees before becoming AAPG president in 1981. He has also been president of the Gulf Coast Association of Geological Societies, the Lafayette Geological Society, the Louisiana Association of Independent Producers and Royalty Owners, and vice president of the Society of Independent Professional Earth Scientists. Moreover, he is a member of AIPG, the Geological Society of America, the Houston Geological Society and the New Orleans Geological Society. Harrison has written several papers on south Louisiana geology.

THE TUSCALOOSA REJUVENATED: BEAVER DAM CREEK AND BAYWOOD FIELDS ST. HELENA PARISH, LOUISIANA

Recent discoveries in the Tuscaloosa formation (Lower-Upper Cretaceous) of Southeast Louisiana have opened a new trend, which has the potential of yielding large reserves of oil and gas. Beaver Dam field, located in St. Helena Parish and discovered in early 1987, is presently being developed, and has a potential reserve of 50 BCF gas and 5,000,000 barrels of condensate.

Beaver Dam Creek and Baywood fields are located along a paleoshoreline of Tuscaloosa age, which strikes northwest-southeast across the Florida Parishes of Louisiana. The old shoreline extends approximately 50 miles from central West Feliciana Parish to Lake Ponchartrain in Tangipahoa Parish. This trend is parallel to and immediately north of the Tuscaloosa shelf edge. North of this paleoshoreline lies a fluvial environment of Tuscaloosa age characterized by channel fills and point bars, many of which form hydrocarbon traps such as the Greensburg and Lake Rosemond Fields.

Both the Baywood and Beaver Dam Creek fields produce from the Tuscaloosa "A" member. The sand, at a depth of 14,500', does not require protective pipe to reach. The trapping mechanism for Baywood and Beaver Dam Creek appears to be structural-stratigraphic. Seismic data, geological mapping and cross sections suggest that many other potential traps, located along this interdeltic shore-

zone depositional system, have hydrocarbon potential similar to the Beaver Dam Creek and Baywood fields. Using Beaver Dam Creek and Baywood as an analog, it is almost certain that additional fields can be uncovered along the 50 mile paleoshoreline.

Subsurface and seismic data are the basic exploration techniques used to locate features along the trend. Synthetic seismograms, models and seismic inversion or "seislogs" are employed to augment the seismic stratigraphic interpretation. First, a network of synthetic seismograms are developed to identify the seismic signature of the Tuscaloosa "A" sand so it can be located on seismic sections. Models are used to define shoreline features and clearly identify prospective areas of good sand development and porosity. Sand pinchouts on seismic lines are clearly evident from an abrupt change in seismic character. In addition, prospective areas are usually associated with pronounced flattening and in some cases subtle arching along the Tuscaloosa paleoshoreline.