

NOON MEETING—OCTOBER 28, 1981

PATRICK T. GORDON—Biographical Sketch



Pat Gordon received a bachelor's degree in geology from Texas A&M University in 1966 and a master's degree in geology from A&M in 1968. He spent the next two years as a lieutenant in the U. S. Army doing quantitative landform analyses at an army lab in Massachusetts and terrain intelligence estimates in Vietnam.

In 1970, Mr. Gordon became a geologist for Gulf Oil Corporation in Houston,

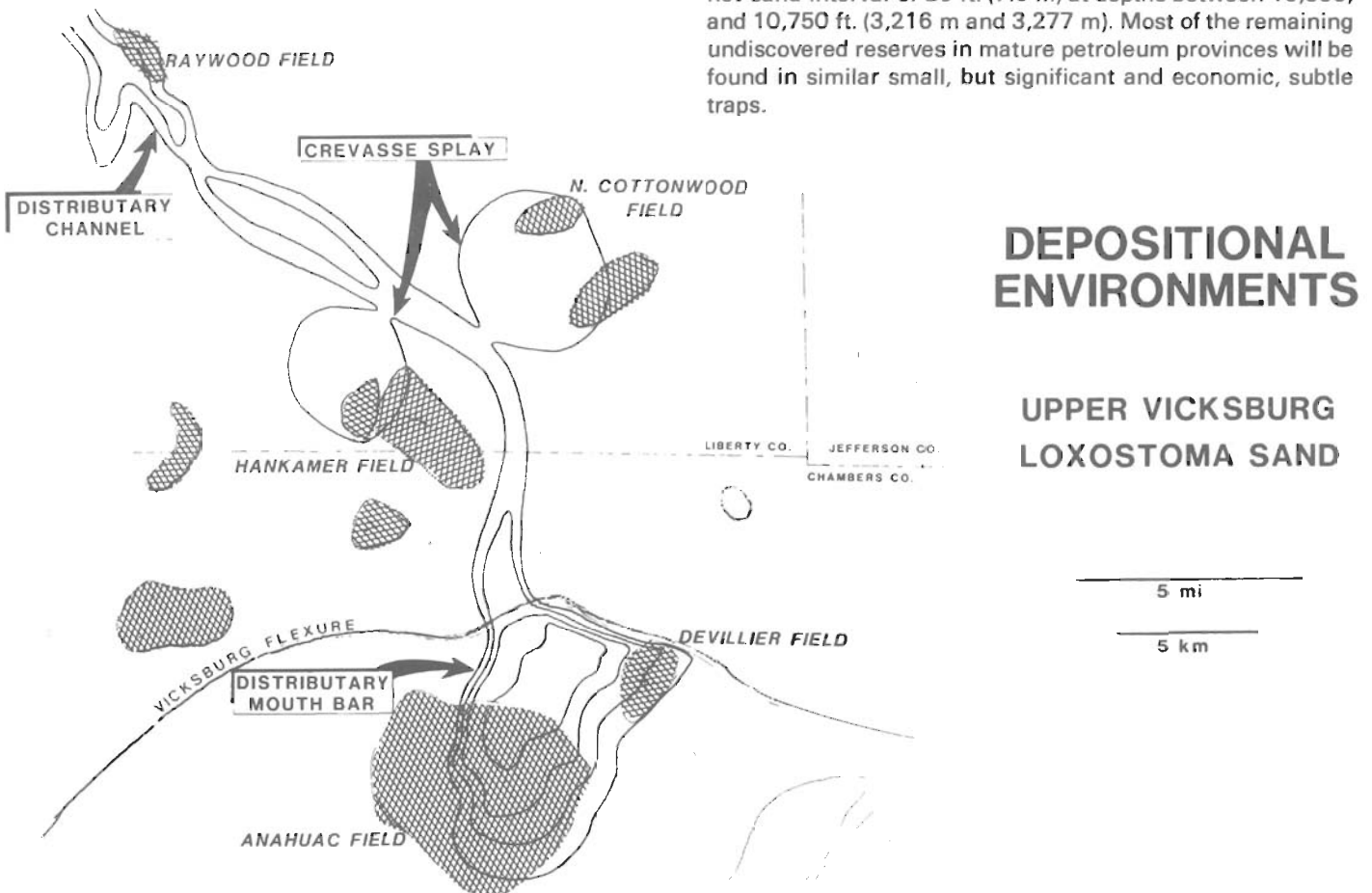
exploring for oil and gas along the Upper Texas Gulf Coast. In 1975, he became Senior Geologist in charge of exploration in the Federal and State waters offshore Texas for Gulf. In 1976, he was promoted to Regional Geologist, supervising exploration in the Tertiary trends, both onshore and offshore, in Texas. Since 1979 he has been a Senior Regional Geologist with Gulf in Midland, Texas where he supervises exploration activities in southeast New Mexico.

DEVILLIER FIELD, CHAMBERS COUNTY, TEXAS - EFFECTS OF GROWTH FAULTS AND DELTAIC SEDIMENTATION ON HYDROCARBON ACCUMULATION IN A STRATIGRAPHIC TRAP.

Devillier Field is an overpressured gas reservoir producing from upper Vicksburg (lower Oligocene) *Loxostoma* "B" delicate - age sands. These sands pinch-out near the crest of the structure, which is on the downthrown side of the Vicksburg Flexure. The field is 50 mi 80 km east of Houston in northeastern Chambers County, Texas.

The structure map of the lower Frio (upper Oligocene) shows south-southwest regional dip over the field. The isopach map of the upper Vicksburg shows north-northwest dip, and thickening of sands and shales into the Vicksburg flexure northwest of the field. Correlation of stratigraphic units indicate maximum growth across the flexure during upper Vicksburg time. Based on the regional stratigraphic framework, paleontologic data, and analysis of conventional core and sidewall core data, the upper Vicksburg sediments apparently were deposited in a shallow marine environment. Based on analysis of composition, sorting, and grain size of cores and cuttings the field pay, the *Loxostoma* Sand, is interpreted to be a delta distributary mouth bar sand (Fig. 1). Pinchout of this sand facies against a prodelta shale facies has created a true stratigraphic trap.

The first year's production per well has averaged 1.0 Bcf gas and 13,000 bbl condensate; for the seven wells completed since the field discovery in 1975. Calculated open flows have ranged as high as 600,000 Mcf of gas per day from an average net-sand interval of 25 ft. (7.6 m) at depths between 10,550, and 10,750 ft. (3,216 m and 3,277 m). Most of the remaining undiscovered reserves in mature petroleum provinces will be found in similar small, but significant and economic, subtle traps.



DEPOSITIONAL ENVIRONMENTS

UPPER VICKSBURG LOXOSTOMA SAND

Fig. 1 Depositional environments of *Loxostoma* sand.