

MEETINGS

HGS DINNER MEETING— NOVEMBER 12, 1990

DR. JORY A. PACT—Biographical Sketch



Dr. Pacht received his B.S. in geology from Ohio University in 1973. He worked as a well-site geologist with Sentry Engineering for a year and a half, then completed his M.S. degree in 1976 at University of Wyoming. Dr. Pacht received his Ph.D. in geology in 1980 from Ohio State University. During his final year of study he served as

Assistant Professor at Kent State University. In 1980 he joined the staff of the Exploration Research Group of ARCO Oil and Gas Company, where he served as a Senior Research Geologist. He joined Calibre in 1990 as an International Project Coordinator.

DR. BRUCE E. BOWEN—Biographical Sketch



Dr. Bowen received his B.S. and Ph.D. degrees in geology from Iowa State University in 1967 and 1974, respectively. As a Ph.D. candidate he spent most of his time in Africa, where he helped to develop the time-stratigraphic framework for early-man sites in the East African Rift. He joined Texaco's Research Group in 1974

and was assigned the task of developing techniques to locate stratigraphic traps using seismic data. Dr. Bowen joined Gulf Oil Company in 1977, where he headed a task force assigned to: determine petroleum potential of the Atlantic margin, devise a bidding strategy for area-wide lease sales, and develop exploration models for deep-water plays in the Gulf of Mexico. Dr. Bowen left Gulf in 1984 to help found Everest Geotech, where he supervised over 20 proprietary seismic stratigraphic and sedimentologic studies. He joined Calibre Consulting Services as Vice President of Operations in 1989.

DR. BERNARD L. SHAFFER—Biographical Sketch



Dr. Shaffer received his B.S. degree in Geology from Wichita State University in 1958, his M.S. degree from University of Missouri in 1962, and his Ph.D. from Michigan State University in 1969. Dr. Shaffer then joined Gulf Oil, where he worked as a research biostratigrapher for 16 years. In 1984 he became Director of Bio-

stratigraphic Applications at Everest GeoTech. Dr. Shaffer worked as a consultant during 1989, then joined Calibre in 1990 as Director of Biostratigraphic Applications.

Figure 1: Depositional sequence and associated systems tracts in Plio-Pleistocene strata of the offshore Louisiana South Additions. HST = highstand systems tract, TST = transgressive systems tract, PW = lowstand prograding wedge, SF = lowstand slope fan, BFF = lowstand basin floor fan. Interpretation by TGS/GECO.

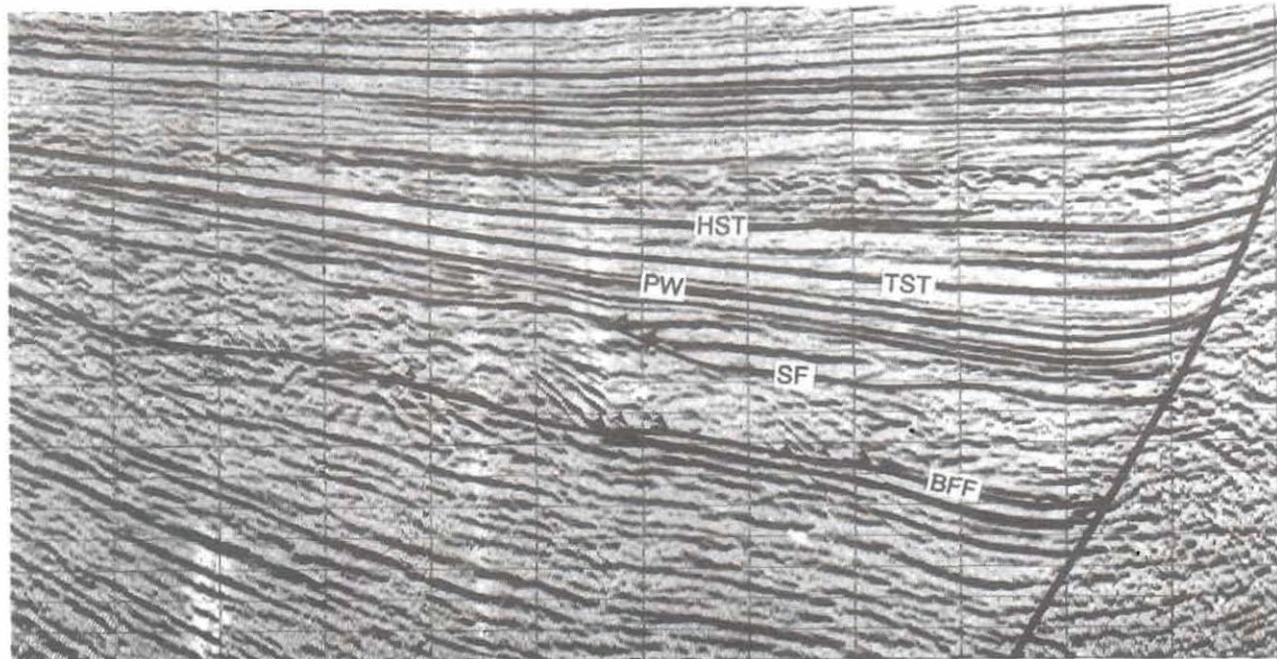


Figure 1

SEQUENCE STRATIGRAPHY OF
PLIO-PLEISTOCENE STRATA IN THE
OFFSHORE LOUISIANA GULF COAST:
APPLICATIONS TO
HYDROCARBON EXPLORATION

Plio-Pleistocene strata in offshore Louisiana were deposited along an unstable progradational continental margin. Systems tracts differ greatly from those described for stable progradational continental margins.

Basin-floor fans commonly show a single reflector which downlaps onto the sequence boundary. They contain well-defined blocky sandstones which exhibit good reservoir characteristics. Lowstand slope-fans exhibit concave-upward reflections associated with reflections which downlap away from them (channel-overbank facies), chaotic reflections and thin parallel units. Good reservoirs are present in channel and nearby overbank deposits.

Reflections in lowstand prograding wedges exhibit divergence toward downthrown sides of growth faults. Progradational patterns are usually not observed. Good reservoir sands occur in sand-rich coarsening-upward sequences. Both transgressive and highstand systems tracts generally exhibit concordant reflections. Reservoir quality is generally poor in these systems tracts.

Condensed intervals, identified by major increases in abundance and diversity of planktonic microfossils, occur at the maximum flooding surface and top of the slope fan systems tract. Since biostratigraphic resolution is finer than the time interval over which the sequences are deposited, systems tracts can be accurately correlated throughout the basin. They can then be effectively used to date geologic events and predict location of reservoir and seal strata.