

MEETINGS

HGS-GSH JOINT DINNER MEETING

MARCH 9, 1987

STANLEY M. LEVENTHAL—Biographical Sketch



Stanley M. Leventhal is President of Indexgeo & Associates, Inc. in Houston, Texas. He received his B.S. degree in Geology from Texas A&M University in 1946.

Mr. Leventhal worked for Geophysical Service, Inc. from 1946 to 1950 as a computer and party chief of field crews exploring the Texas and Louisiana Gulf Coast, Rocky Mountains and Mexico. After two years serving as a lieutenant

in the Corps of Engineers, United States Army in Germany, he rejoined Geophysical Service, Inc. in 1952 as a supervisor of field crews in the Gulf Coast Division. In 1954, he organized and directed the growth of Index Geophysical Surveys Corp., a worldwide geophysical contractor for the oil industry. In 1973, the company was repurchased from a mini-conglomerate and restructured into Indexgeo & Associates, Inc., an exploration and consulting firm.

Stanley Leventhal has been a member of the AAPG since 1954, the SEG since 1947, and is both a Certified Petroleum Geologist and a Certified Professional Geological Scientist. In addition, he is a member of the Houston Geological and Geophysical Societies. Mr. Leventhal has been involved in several publications on exploratory efforts for new field discoveries in World Oil.

GEOLOGY & GEOPHYSICS OF TEXAS STATE WATERS (GOM) A 2-1/2 MILLION ACRE OVERVIEW

The offshore waters extending seaward 10-1/2 miles from the Texas coastline have yielded 17.5 million barrels of oil and 2.4 trillion cubic feet of gas.

After October 1988, effectively all GOM acreage currently under lease will have expired, and will be available to lease from the State on a bi-annual basis. The exception is HBP acreage, representing 8-1/4% of the total 2-1/2 million acres.

Are more significant reserves to be found? Have we adequately mapped with available state-of-the-art seismic the definable expanded and unexpanded Miocene, and the Oligocene-Frio productive trends?

The unexpanded upper Lower Miocene consists of blanket sands with no significant expansion systems along the coast. The expanded Lower Miocene is primarily restricted to the Brazos and Matagorda areas where tremendous expansion occurs below *Robulus Chambersi*, downthrown to regional growth faults. The additional development of the Marginulina "A" section occurs with large expansion of the *Siphonina Davisi* and *Lenticulina* sequences. Lower Miocene expansion also occurs locally in the High Island and Galveston areas. Oligocene-Frio res-

ervoir sands are restricted to the Mustang Island area and locally in the Galveston area around Shipwreck Field.

A continuous set of detailed structural maps covering the entire coast at two different horizons has recently been completed. The mapping utilizes a seismic data bank of 15,500 miles of CDP coverage integrated with subsurface well control. Representative paleo, 24 stratigraphic sections, production and statistical data were also incorporated, representing 20 man-years of work and an approximate \$4.5MM investment. All maps are at a scale of 1" = 4000'. The shallow horizon map which depicts the unexpanded Miocene structure is constructed at the *Bigenerina Humblei*, *Amphistegina B*, or the *Cristellaria* levels and ranges in depth from 3,000' to 10,500'. The deep horizon map depicting the expanded Lower Miocene and Frio level structure is constructed at the *Marginulina "A"*, *Siphonina Davisi*, or the *Marginulina Texana* levels and ranges in depth from 7,500' to 18,000'.

The ability to view a composite picture of an area rather than in fragments is a geological and geophysical asset. The set of maps described above provide a regional structural and stratigraphic framework for the offshore Texas State Waters which will assist future explorationists in delineating additional reserves. Leasing, drilling, and producing these reserves, however, will continue to be dependent on stabilized product prices which offer justifiable risked returns.

Approximately 40 slides illustrating structural style, accompanying seismic control, and depositional stratigraphy are presented for the representative producing trend in each of the 7 geographical areas of the Texas State Waters.