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HUNTER YARBOROUGH
Biographical Review

Hunter Yarborough, a consulting Geologist with Hunter Yarborough and Associates, attended the University of Texas, receiving a degree in Geology with honors and minors in physics and petroleum engineering. Two years were spent in graduate studies. During World War II, he served as an officer and aviator of the U.S. Navy in both the Atlantic and Pacific theatres. Following the War, Mr. Yarborough worked for Exxon conducting geological and geophysical studies in the exploration for oil and gas over much of the United States. He has been active in all phases of geological and geophysical research and has traveled over much of the surface of the earth working and consulting with active exploration groups.

He was involved in surface and subsurface geology in the southeastern United States and southeast New Mexico from 1940 to 1947. In 1947 he became Assistant to Exxon's Vice President and Exploration Manager, Houston. Later assignments included Area Geologist (California), Assistant Chief Geologist (Houston), Coordinator of the Basin Studies Project, and from 1963 to 1974 he was Senior Geologic Scientist.

Mr. Yarborough has served as Distinguished Lecturer of the American Association of Petroleum Geologists, and has given technical addresses on oil finding to many of the universities and most of the geological societies of the United States. He is a two-time recipient of the A.I. Levorsen Memorial Award, having received this honor in 1967 and 1971. He is a Certified Petroleum Geologist; a member of The American Association of Petroleum Geologists; a Fellow of The Geological Society of America, and is a member of numbeous other professional organizations.

See Abstract on next page

PLATE TECTONICS AND THE OCCURRENCE OF MAJOR HYDROCARBON ACCUMULATIONS

Most major hydrocarbon accumulations occur in basins formed during the Mesozoic and the Cenozoic. Many of these basins, their contained sediments, and their structural and stratigraphically trapped oil and gas fields appear to be genetically related to the hypotheses of Plate Tectonics.

Many are basins formed at plate boundaries. Three fundamental methods of basin development according to type of plate margin deformation are reviewed: tensional, compressional, and shear-zone. Basin types, structural styles, and sedimentary histories are reviewed for different plate margins.

Significant intracratonic basins have developed as a result of embryonic and/or aborted "pull-apart" zones; shear-zones "cracking" the cratons; and "sinks" (and their associated uplifts) due to viscosity inhomogeneities within the asthenosphere.

Many major world wide eustatic changes in sea level appear to be due to the episodic nature of sea floor spreading. Accordingly, much of the paleogeographic history of our continents appears to be related to the hypotheses of Plate Tectonics.