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DAVID L. AMSBURY
Biographical Review

David L. Amsbury graduated from Sul Ross College in 1952 with a B.S. in geology, and from The University of Texas at Austin in 1957 with a Ph. D. in geology. He was a Geologist and Research Geologist with Shell Development Company from 1956 to 1965, and a Senior Geologist with Shell Oil Company in 1965 and 1966. Since 1967 he has specialized in geological applications of remote sensing techniques in the Earth Resources Program at the Johnson Space Center, Houston, Texas.

Dr. Amsbury's co-author is Von R. Frierson who graduated from Sul Ross State College, Alpine, Texas with a Bachelor of Science Degree in Geology in 1952. He served with the Corps of Engineers in Tokyo, Japan from 1952-1954. He was employed by Sahara Petroleum in Alexandria, Egypt as a surface geologist from 1955-1957; Oasis Oil Company, Tripoli, Libya, as a photogeologist from 1957-1965; and was with Marathon Oil Company in Bogota, Colombia, from 1965-1971. He joined Lockheed Electronics Company in 1972.

Abstract

SPACE-ACQUIRED IMAGERY: A VERSATILE TOOL IN THE DEVELOPMENT OF ENERGY SOURCES

Imagery taken from altitudes of 150 to 500 km with high-resolution cameras offers the exploration geologist a reconnaissance tool at a new scale and at very reasonable costs. Most of the United States and much of the land area of the world have been imaged recently by NASA spacecraft.

A sample of this imagery is comprised of photographs and multispectral scanner data taken from Apollo, ERTS, and Skylab spacecraft over an area west of Houston, Texas. Large circular features and lineaments are readily mapped but do not correspond to published, mapped structures.

One of the circular features occurs in Fort Bend County, Texas and covers an area about 25 miles in diameter. Another circular feature lies to the north, immediately west of Houston, and is about 15 miles in diameter. The Katy Field occurs on the west side of this drainage, vegetation, and soil-tone anomaly.

A linear feature expressed in drainage and vegetation patterns extends from Matagorda on the Gulf Coast toward the north along the Colorado, Brazos, and Navasota Rivers. This lineament and others seem to be caused by zones of intense jointing and possibly mark surface traces of old, deep-seated fractures that would extend more or less at right angles to the coastline and to known growth faults.

Explorationists should look at space-acquired data over well-developed areas as well as frontier areas. It might be fruitful to re-interpret existing subsurface and geophysical data in the context of regional geological features that can be mapped using new synoptic imagery. In addition, this imagery is valuable for planning phases of exploitation, and will be useful in monitoring the environmental effects of man's exploitation of energy sources.