

MICHEL T. HALBOUTY—Biographical Sketch



Michel T. Halbouty is recognized in the oil industry as one of the outstanding geologists and petroleum engineers in the United States, and is internationally known for his scientific ability in petroleum exploration. He is considered an outstanding authority on the geological and engineering problems of the Gulf Coastal Province of North America, and he is rated as one of the top experts on the geology of

Gulf Coast Salt Domes. He is also most active as an operator and producer, producing and operating in many oil and gas fields in the United States and Alaska.

He is a graduate of Texas A&M University, having received his Bachelor of Science Degree in 1930 and his Master of Science Degree in Geology and Petroleum Engineering in 1931. In May, 1956, he received the Professional Degree in Geological Engineering from Texas A&M University (the first to be conferred by the University). In June, 1966, the Degree of Doctor of Engineering, *Honoris Causa*, was conferred upon him by the Montana College of Mineral Science and Technology.

Many honors have been bestowed upon Mr. Halbouty during his professional career. In October, 1965, Halbouty received the Texas Mid-Continent Oil and Gas Association's Distinguished Service Award for 1965, presented to an independent for outstanding services and contributions to his industry and profession. In February, 1968, he was named Engineer of the Year by the Texas Society of Professional Engineers and the Engineer's Council of Houston; and he was also awarded the Texas A&M University's Distinguished Alumni Award in May, 1968. In April, 1969, Halbouty was awarded Honorary Membership in the American Association of Petroleum Geologists. In May, 1969, the Wisdom Society for the Advancement of Knowledge, Learning and Research in Education presented Halbouty with the Wisdom Award of Honor and elected him to the Wisdom Hall of Fame. In June, 1970, he was conferred an Honorary Life Membership in the Houston Geological Society. In February, 1971, he received the DeGolyer Distinguished Service Medal of the Society of Petroleum Engineers of AIME. In October, 1972, he received Honorary Membership from the Spindletop Section of the Society of Petroleum Engineers of AIME. In February, 1973, the American Institute of Mining, Metallurgical and Petroleum Engineers (AIME) awarded Halbouty its highest honor, an Honorary Membership, and in February, 1975, AIME awarded Halbouty the Anthony F. Lucas Gold Medal. In April, 1975, Halbouty received the Human Needs Award from the American Association of Petroleum Geologists. AAPG's highest award, the Sidney Powers Medal, will be awarded to Halbouty at the June 1977 annual meeting.

In the Fall of 1964 and the Spring of 1965, he was a Distinguished Lecturer for the Society of Petroleum Engineers of AIME, and in the Fall of 1965 and Spring of 1966 he was a Distinguished Lecturer for the American Association of Petroleum Geologists.

Halbouty is a member of many worldwide scientific and engineering societies, and he has contributed over 200 papers and several books to the literature of geology and petroleum engineering. His latest book, "Salt Domes, Gulf Region, United States and Mexico" is the only such single volume on this subject in the world's scientific literature.

He has served in many official capacities in earth science and engineering organizations. He served on the Board of AIME from 1964 to 1967, and as Vice President in 1966-67. He also served as President of the world's largest organization of earth scientists, the American Association of Petroleum Geologists for the 1966-67 term.

APPLICATION OF LANDSAT
IMAGERY TO PETROLEUM
AND MINERAL EXPLORATION (Abstract)

by: Michel T. Halbouty

The LANDSAT (ERTS) project is the most significant mission ever flown by NASA. The use of LANDSAT imagery by the mineral and energy industries in the United States can improve the nation's domestic resource base in a shorter time and at a more reasonable cost than would have been possible otherwise.

Properly interpreted information from LANDSAT images can save corporations millions of dollars in unnecessary exploration and development efforts and at the same time provide geologic clues to the discovery of tremendous reserves. The more the LANDSAT data are used, the more innovations for their use will be established.

LANDSAT data have broad use in the minerals/fuel field, including the following general applications:

1. Detection of large-scale geologic structures that previously were unknown and which may be significant with respect to the localization of hydrocarbons. Such features commonly are not recognizable on aerial photographs.
2. The possible detection of very subtle tonal anomalies that may represent alteration of the soils resulting from miniseeps of gas from hydrocarbon reservoirs.
3. The potential for detecting natural marine oil seeps with consequent improvement in efficiency of offshore exploration.
4. Detection on outcrops of important minerals and metals, especially in hostile environments.
5. The monitoring in Arctic areas of ice distribution and movement that may affect transport of materials, the cost of seismic exploration in sea-ice areas, and the safety of exploration and production operations.
6. The monitoring of oil-field development and transport facilities, such as the Alaska pipeline, and an assessment of this development on the environment.
7. The potential for improved communication and decision making within petroleum companies.

LANDSAT imagery provides the explorationist a most rapid and inexpensive tool which could add immeasurably to his geologic knowledge.