

ABNORMAL HIGH PRESSURE
AND ENVIRONMENT OF DEPOSITION

Noon Meeting

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ABSTRACT

An apparent relationship of the environment of deposition to the occurrence of abnormal high fluid pressures in a sand-shale sequence of the subsurface South Texas Oligocene is established. The abnormal high pressures are generally encountered in the "downdip" facies which consists of deltaic sediments of alternating inner neritic (includes brackish and near-shore marine) and middle neritic (shallow marine) depositional environments.

There is an abrupt change in the environment of deposition that seems to coincide with the top of the abnormal high pressure zone.

This new approach to predicting abnormal high pressured formations can be used at the well-site.

The key to a better understanding of the problems and the solution to these problems associated with abnormal high fluid pressures may be found in an understanding of the depositional environments and history of the sedimentary basin. In order to accomplish this, there may be a need for more workers to examine surface and subsurface rock samples.

BIOGRAPHICAL DATA - Gene B. Martin

Membership and Activity:

American Association of Petroleum Geologists, Member.

Society of Economic Paleontologists and Mineralogists, Member.

Corpus Christi Geological Society, Member.

Gulf Coast Section - Society of Economic Paleontologists and Mineralogists,
Member.

American Geological Institute, Member.

Served as Treasurer and as Business Representative for Gulf Coast Section - SEPM.

Education:

1953 - B.S., Petroleum Geology; 1954 - M.S., General Geology, Mississippi College.

Personal:

Born - Amarillo, Texas. Married and have two children, boy 14 years, girl 9 years. Resides at 4729 Donegal Drive, Corpus Christi, Texas.

Experience:

Summer, 1953 and 1954, Geologist, DAPSCO, Inc., Laurel Mississippi.
School year 1954-1955, Instructor of Geology, Mississippi State College.
1955-1957, U. S. Army
1957-1966, Paleontologist, Gulf Oil Corporation.
1966-1969, Paleontologist, Atlantic Richfield Company.
Since 1969 - Senior Paleontologist, Atlantic Richfield Company, Corpus Christi, Texas.

Publications:

- 1960 - "Preliminary Investigations of Ordovician Bryozoa, Northwestern Alabama"; G.C.A.G.S., Trans., Vol. X.
- 1966 - "Formaminiferal Ecological zones of the Gulf Coast" with C. C. Alberts, Chairman, et al; G.C.A.G.S., Trans., Vol. XVI.
- 1969 - "The Subsurface Frio of South Texas: Stratigraphy and Depositional Environments as Related to the Occurrence of Hydrocarbons", G.C.A.G.S., Trans., Vol. XIX.
- 1970 - "Depositional History: Key to Frio Exploration"; Oil and Gas Journal, January 12, 1970.

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