

maps indicate the extent of sands, their depositional position, and the development of the shale wedge.

In Orange and Jefferson counties the Frio (Oligocene) formation is divisible into three lithologic units: an upper unit consisting primarily of sands; a middle unit of marine shale; and a lower unit consisting of sands and shale. Isopach maps reveal the location of ancient offshore bars and re-entrant basins and also show local thinning of beds in areas of structural uplift. The variation in stratigraphic position of certain foraminiferal associations is believed to be due to ecological changes and to the marine progressive overlap.

3. Salt-Dome Configuration, Marcus A. Hanna, Gulf Oil Corporation, Houston.

Factors which cause modification of a symmetrical plug to the configuration of the various salt stocks found in the Gulf Coastal area are evaluated. This configuration includes the limestone, gypsum, and anhydrite cap rock, as well as the spines, overhangs, and leaning plugs. Considered also are certain salt-stock rim-synclinal effects, as well as some resulting structural changes in the surrounding sediments.

The character of the salt as a metamorphic rock, the orientated fabric of certain of the anhydrites, and the modifications caused by density differences in the salt and surrounding sediments, and the effect of circulating waters are cited. Several of the theories of salt-plug origin and growth are considered in light of present information.

4. Sedimentary Facies of Upper Cenozoic and Recent in Gulf Coast Geosyncline, Shephard W. Lowman, Shell Oil Company, Inc., Houston.

Production of oil in the Tertiary formations of the Texas and Louisiana Gulf Coast is distributed in elongate trends that parallel the present coast. These trends coincide with the distribution of shallow marine and brackish sedimentary facies in the producing zones. There are also three prominent crosstrends along which the majority of the production is concentrated. These coincide with the three transverse embayments that cut perpendicularly across the elongate producing trends. These crosstrends indicate the intersection of another set of sedimentary conditions which are related to the embayments.

Sedimentary facies is defined as the present aspect of the rock, including its fossil content. Fossil assemblages in the Recent characterize environments, such as brackish, continental shelf, and continental slope. These relationships seem to be readily applicable to the Tertiary, but the various methods of applying them, all require a broad empirical base of stratigraphic correlation. The network method of stratal correlation is described and the facies nature of formation and of fossil zones is discussed against the combined background of faunal control in the Recent and network of correlations in the Tertiary.

Sedimentary facies and stratigraphy in the Gulf Coast Upper Tertiary are applied to two general problems. First, the presence and probable character of the Gulf Coast geosyncline are considered; second, the stratigraphic and facies data are applied to the problem of subsidence under load.

5. Tertiary History of Gulf Coast Geosyncline, M. M. Sheets, Production Maintenance Company, Houston.

The Gulf Coast geosyncline was first described by Barton and Ritz in 1933 as a long, narrow trough-shaped depression located parallel with and just inland from the shore of the Gulf of Mexico in Jefferson County, Texas. Since that time well data have made it impossible for such a trough to be present at drillable depths under the land. Geophysical data completed within the last few years seems to eliminate the possibility of such a trough under the continental shelf. In light of the new data, the former idea of the Gulf Coast geosyncline in the form of a long, narrow trough must be changed to a new concept of a bowl-shaped depression corresponding more or less with the form of the present Gulf of Mexico. Many additional data on sedimentation and structure, particularly faulting, supports this change in views.

This change in ideas may necessitate radical revision in the Tertiary history of the Gulf Coast, and doing so may cause radical revision of ideas of the thickness and character of the Tertiary and post-Tertiary sediments near shore and under the continental shelf.

In general it now seems that the Tertiary history of the Gulf Coast involves the following fundamental principles.

1. A large semiround bowl-shaped depression at the close of the Cretaceous and remaining relatively stable through the Tertiary.

2. Sedimentary filling of this depression during the Tertiary from the sides toward the middle.
3. Subsequent minor elevation of the north and west shores perhaps due to isostatic adjustment.

6. Photogeology in Gulf Coast Exploration, Charles W. De Bliex, Louisiana Land and Exploration Company, New Orleans.

The Gulf Coast has long been noted for the absence of surface deformation and topographic expression of subsurface structure. However, with application of geomorphology as a basic principle, aerial photographic interpretative techniques have been developed for this province. The deltaic plain of the Mississippi River and adjacent coastal marsh are selected for demonstration; approach to the problem is outlined, and photogeologic criteria are described and illustrated.

7. Exploration in Gulf of Mexico with Airborne Magnetometer, Eugene Frowe, Robert H. Ray Company, Houston.

Experimental flights with the airborne magnetometer have been made over numerous structures in the Gulf Coast area to determine the correlation between magnetic profile and known geologic structures. The results of these flights are given to show this correlation and to compare the magnetic anomalies of offshore structures with inland structures. The magnetic effect of derricks and well casings is discussed.

JOINT ANNUAL MEETING, ST. LOUIS, MARCH 14-17, 1949¹

The 34th annual meeting of the Association will be held at the Jefferson Hotel, St. Louis, Missouri, March 14-17, 1949. Concurrent meetings will be held by the Society of Economic Paleontologists and Mineralogists and the Society of Exploration Geophysicists. Hotel room reservation request forms have been mailed to all members, and these forms should be used without delay.

Technical program.—President Weaver has appointed W. B. WILSON, Gulf Oil Corporation, Tulsa, Oklahoma, to be chairman of the technical program committee for the A.A.P.G. NORMAN S. HINCHEY, Washington University, St. Louis, Missouri, is vice-chairman in charge of technical service.

Members planning to submit papers should send, *in duplicate*, in double-spaced type-written form, their name, company or professional connection, subject of paper, and a 200-word abstract, to chairman WILSON, by January 1, certainly not later than February 1. Papers will be selected for the program to conform with the planned subject matter acceptable for oral presentation and to conform with the time available. Papers not acceptable for oral delivery may be included in the printed program by title and abstract.

Tentatively, the A.A.P.G. program will include a half day of presidential addresses and awards; a half day of papers of common interest for the joint session; a half day of oil-field descriptions; a half day of papers on the theme of "Reefs"; a half day devoted to foreign papers; and a half day of important miscellaneous papers.

Papers for the S.E.P.M. program should be submitted to Maynard P. White, S.E.P.M. chairman, Gulf Oil Corporation, Box 30, Ardmore, Oklahoma.

A.A.P.G. TECHNICAL PROGRAM COMMITTEE

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¹ Previous announcements about this meeting have appeared in the *Bulletin* of July, pp. 1376-77, November, pp. 2166-67, and December, p. 2332.