ABSTRACTS

1. "Geosynclinal Sedimentation in Central Gulf Region of United States," Grover E. Murray, Louisiana State University, Baton Rouge, Louisiana.

More than 30,000 feet of Mesozoic and Cenozoic sediments are present in the central Gulf region of southern United States. They constitute a great sedimentary complex (Gulf Coast geosyncline) composed of marine and deltaic deposits. The deltaic sediments occur as overlapping ladle-shaped and irregularly lenticular masses with areas of maximum accumulation (depocenters) in general parallel with the coast line. Individual deltaic masses coalesce to form elongate, geosynclinal deltaic complexes. Thin marine strata are present between the deltaic depocenters; thick marine sediments occur on the seaward edges of the deltaic masses. Landward, currently updip, both the marine and deltaic units are replaced by marginal and fluviatile deposits; seaward, the marine facies are deeper-water and the deltaic facies are more marine.

Three major depositional stages are represented: a lower, marginal-deltaic stage; a middle, marine stage; and an upper, marginal deltaic stage. These primary stages coincide with major fluctuations of sea-level. Minor depositional stages and sea-level fluctuations complicate the sedimentary history of the area.

Axes of maximum deposition shifted from time to time in position and alignment and progressed generally in a seaward direction. Major interruptions of the seaward progression occurred in the Cretaceous and Tertiary. The geographic positions and stratigraphic thicknesses of these depositional axes are shown on maps and cross sections.

The stratigraphic and sedimentary history of the area, along with Recent geologic events, indicate that subsidence has been a major factor in creating a linear, arcuate geosyncline in the Gulf Coastal Plain of the United States.

2. "Control of Petroleum Accumulation by Sedimentary Facies in South Louisiana," Max Bornhauser, Continental Oil Company, Houston, Texas.

This paper, with the aid of electric logs and cross sections, presents some new ideas concerning the effects of sedimentary facies upon the accumulation of oil in south-central Louisiana. It covers the section from the Wilcox to the Cockfield.

3. "Structure of South Louisiana Deep-Seated Domes," W. E. Wallace, Sohio Petroleum Company, Lafayette, Louisiana.

This paper is a continuation and re-examination of a paper of the same title published in the *Bulletin* in September, 1944. Structure maps and cross sections of several heretofore unpublished fields are included, with a discussion of later trends of thought about the nature of deep-seated domes.

4. "New Method of Local and Regional Correlation, Using Resistivity Value from Electrical Logs," A. Claudet, Schlumberger Well Surveying Corporation, New Orleans, Louisiana.

A method is presented of correlating electrical logs of specific sub-strata penetrated by the drill over very short or very long distances by the use of exact resistivity values of the shales.

Cross sections showing the subsurface correlation derived from electrical logs recorded on wells spaced over large distances in Mississippi and Louisiana illustrate the resistivity changes in shales which occur with changes in locations or geological age.

These clay or shale resistivity gradients may be extrapolated for distances of about 50 miles so that correlations may be anticipated at the new locations. This method of using the exact values of the shale resistivities provides an important tool for subsurface correlation by means of the electrical log. The silhouette of the curves of the electrical logs opposite sand sections has been used for many years for correlation.

The method discussed gives invaluable added factors which will help in eliminating uncertainties in subsurface correlation. It will also help in a general study of sedimentary cycles and local structures.

5. "Interior Salt Domes of East Texas," G. C. Clark, Stanolind Oil and Gas Company, Tyler, Texas.

(From report prepared by L. S. Melzer and G. C. Clark)

In the East Texas district, 27 salt domes have been definitely identified. Of this number, 10 are classed as deep-seated and 17 as piercement. Two of the piercement domes, Boggy Creek and Kittrell, are found to be productive from the Woodbine and the lower Claiborne respectively. Seven deep-seated domes are found to be productive from formations varying in age from Comanche to Nacatoch. All domes, both deep-seated and piercement, are reflected as gravity minima, with the exception of Marquez and Kittrell which are shown by gravity surveys as maxima.

All piercement domes in the East Texas district grew from the deepest part of local synclines and all are situated within the regional province known as the Tyler basin. The Upper Cretaceous