43. W. J. HILSEWECK, Gulf Oil Corporation, Fort Worth, Texas
Walnut Bend Pool of Cooke County, Texas

The Walnut Bend pool is the first major deep discovery in the Marietta-Sherman syncline, a northwest-southeast trending feature which extends from southwestern Carter County, Oklahoma, to southeastern Grayson County, Texas, parallel to the Criner Hills axis and the Muenster Arch. In this pool 1,000 feet of Comanche rocks overlie the 4,200 feet of Upper and Middle Pennsylvanian (Canyon and Strawn) sediments, and beds of lower Simpson (Oil Creek) age underlie the Pennsylvanian rocks. Pre-Pennsylvanian rocks show the Walnut Bend structure as an elongate anticline. This structure was formed on an arch folded in early Pennsylvanian (pre-Bostwick) time and the Marietta-Sherman syncline was formed in late Deese time by the downwarping of the middle part of this arch. Over one and one-half million barrels of oil have been produced from 6 sandstone zones between the depths of 4,100 and 5,100 feet, and from 2 dolomite beds in the Simpson group. Occurrence of oil in the sandstone zones at 4,900 and 5,100 feet is controlled by anticlinal structure over the closely folded Ordovician beds, Electrical log cross sections are presented to indicate that oil in the 4,100-, 4,600- and 4,700-foot zones occurs in a stratigraphic trap formed by gradation of standstone into shale.

44. H. N. FISK, Louisiana State University, University, Louisiana
Midway-Wilcox Deltaic Mass

The lithologic unit previously considered to be of Sabine (Wilcox) age in the Sabine uplift area of Louisiana is divisible on the outcrop into conformable beds carrying Wilcox fossils and upper Midway fossils. The Midway fauna occurs throughout several hundred feet of section above the typical Midway shale reflection on electrical logs. Isopach maps and cross sections developed from electrical logs and paleontological reports of deep test wells from east Texas to southern Alabama show that during the time of deposition of the marine Midway and Wilcox of Texas and Alabama, a great deltaic mass, reaching a thickness in excess of 3,000 feet, was accumulating in the Mississippi Embayment of eastern Louisiana and central Mississippi. The presence of interpretable fossil assemblages appearing in beds which interfinger with the deltaic mass along its northwestern margin is important in determining the age of the mass and in field mapping in the Sabine uplift area.

45. J. O. BARRY, Louisiana Geological Survey, University, Louisiana
Correlation of Wilcox Faunal Units of Louisiana

The discovery of forty new fossil localities permits a better definition of the three faunal units of the Louisiana Sabine (Wilcox): the Sabinetown (youngest), Pendleton, and Marthaville beds (oldest). Fossils were collected from three Sabinetown outcrops, twenty localities of Pendleton age, and from seventeen localities which carried a Marthaville fauna. The study of these fossils substantiates the long-standing correlation of the Louisiana section with the marine Wilcox of Alabama. The presence of *Ostrea multilirata* Conrad, a guide fossil of the basal Wilcox Seguin formation of Texas, associated with *Ostrea thirsae* (Gabb) in the Marthaville beds is of importance because it establishes a connecting link between the basal Wilcox faunas of Alabama and Texas.

46. R. J. LE BLANC, Louisiana Geological Survey, University, Louisiana
Correlation of Upper Midway Fauna of Louisiana

The lower Eocene sediments below the basal Sabine (Wilcox) *Ostrea thirsae* zone have a surface thickness of approximately 800 feet in the Sabine Uplift region of northwestern Louisiana. The upper 300 feet of the sediments contain a very limited fauna. The lower 500 feet of sediments carry a varied fauna which is older than the Solomon Creek fauna of Texas (basal Wilcox or upper Midway in age) and correlated with the upper Midway faunas of the Alabama Naheola formation and the Kerens member of of the Wills Point formation of Texas. This correlation is based on the results of a detail study of over ninety species from fifteen previously undescribed localities in Sabine, Natchitoches, and DeSoto parishes.

47. GROVER MURRAY, JR., Louisiana Geological Survey, University, Louisiana
Midway Stratigraphy of Sabine Uplift

The Midway sediments which cropout in northwestern Louisiana outline the highest structural portion of the Sabine uplift. They are divisible on the surface into three formations, the Naborton (oldest), the Logansport, and the Hall Summit (young-