The relations of electrical values to formation fluids, lithology, porosity and permeability, drilling fluids, and hole diameter are discussed.

Electrical logs have furnished valuable records of the wells drilled. They have formed the basis for much of the stratigraphic and structural work in the territory. Recognition of commercial saturation in wells and prediction of reservoir behavior have been successful in some cases by integration of electrical log data with core and production information. The electrical log has been a valuable tool in guiding completions.

The available electrical-log information on the wells of the Illinois basin promises additional future value in further exploration and secondary-recovery operations.

14. HOMER C. MOORE, Oil Exploration, Inc., Tulsa, Oklahoma, "Seismic Comments, Illinois Basin."

This is a short generalized discussion of some improvements in seismograph instruments and their use in shooting in the Illinois basin. Mention is made of the importance of weathering interpretations, the need of sufficient control in localizing small structures, and the necessity for cooperation of geologist and geophysicist.

15. JAMES B. MACELWANE, St. Louis University, St. Louis, Missouri, "Seismicity of Mississippi Valley."

Seismicity and the factors which govern it are not readily susceptible to quantitative definition and determination even under the best conditions. The seismicity of the Mississippi Valley in particular has been under observation too short a time in general, and in particular by means of seismographs it has been studied at too few points even in recent years to allow more than a qualitative and sketchy assessment. The area may be divided in general into several provinces such as the upper, middle, and lower Mississippi Valley, the Gulf Coast, and the larger tributary valleys.

16. DONALD G. SUTTON, Sun Oil Company, Evansville, Indiana, "Geology of Uniontown Pool, Union County, Kentucky."

The Uniontown pool in northern Union County, Kentucky, discovered in September, 1942, produces mainly from the Waltersburg, Tar Springs, and Cypress sandstones of the Chester series, Upper Mississippian system. It produces in a minor way from a sandstone of Pennsylvanian age and from the Palestine and Hardinsburg sandstones and the Menard limestone of the Chester series.

The structure consists of an elongate dome, the western side of which is closed against the upthrown side of a normal fault.

There are 229 producing wells in the field, which had produced 8,600,000 barrels of oil to October 1, 1947. The producing area covers approximately 2,000 acres.

17. H. H. BYBEE, Carter Oil Company, Mattoon, Illinois, "Hitesville Consolidated Pool, Union County, Kentucky."

The Hitesville Consolidated pool is on a broad elongate anticline trending north and south, 4½ miles north of the Shawneetown-Rough Creek fault system in Union County, Kentucky, at the southern extremity of the Illinois basin. The pool was discovered in February, 1943, and has expanded to include approximately 3,500 productive acres. The Chester produces from the Waltersburg, Tar Springs, upper and lower Cypress, and Aux Vases sands. The Ste. Genevieve produces from seven separate porous McClosky zones. Sixty-one per cent of the wells in the pool produce from the McClosky and 20 per cent from the Cypress. The multiple zones of McClosky production constitute the outstanding feature of the pool.

18. ILEY B. BROWNING, Consulting, Ashland, Kentucky, "Slaughters Oil Pool, Webster County, Kentucky."

This description of the Slaughters oil pool includes: (1) extent of the development; (2) the geology of the field in detail, with emphasis on the faults, their structure, and relation, and effect on the accumulation of oil and gas, and (3) the producing formations with production figures to date.

In conclusion the relation of this structure to the general structure of the area and the probability of its extent and bearing on other development south of the Shawneetown-Rough Creek fault are discussed. Slides and maps illustrate the principal features.

19. W. L. EFFINGER, The California Company, New Orleans, Louisiana, "Geology of Two Recent Deep Tests in Kentucky and Tennessee."

In 1946–1947 two deep tests, one on the Cincinnati arch in Kentucky, and one on the Nashville dome in Tennessee, were the first wells to penetrate the entire sedimentary section in this geologic province.

The California Company's A. R. Spears No. 1, located 1.7 miles northwest of McKinney, Lincoln County, Kentucky, reached the total depth of 6,117 feet, stopping in rhyolite porphyry, probably pre-Cambrian in age. This test was drilled on a local anticline on the south plunge of the Cincinnati