FIG. 5.—A table at the dinner-dance, St. Louis mid-year meeting.

INDIANA-KENTUCKY GEOLOGICAL SOCIETY

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C. E. BREHM: entertainment
CHARLES A. DOH: finance
G. O. RAASCH: exhibits
HARRY H. NOWLAN: reception
THEODORE G. GLASS: hotels

ABSTRACTS

1. DORSEY HAGER, consulting geologist, Centralia, Illinois, "Tectonics of North-Central States."

The large Interior Coal basin is divided into three parts: the Indiana basin, the Illinois basin, and the small Kentucky basin. In the Indiana basin, both northeast and northwest trends are important. North- and northeast-striking folds produce most of the oil in the Illinois basin, although several marked northwest-striking folds and faults are productive, particularly on the La Salle anticline—a very important feature. Northwest-striking folds and faults predominate in the Michigan basin.

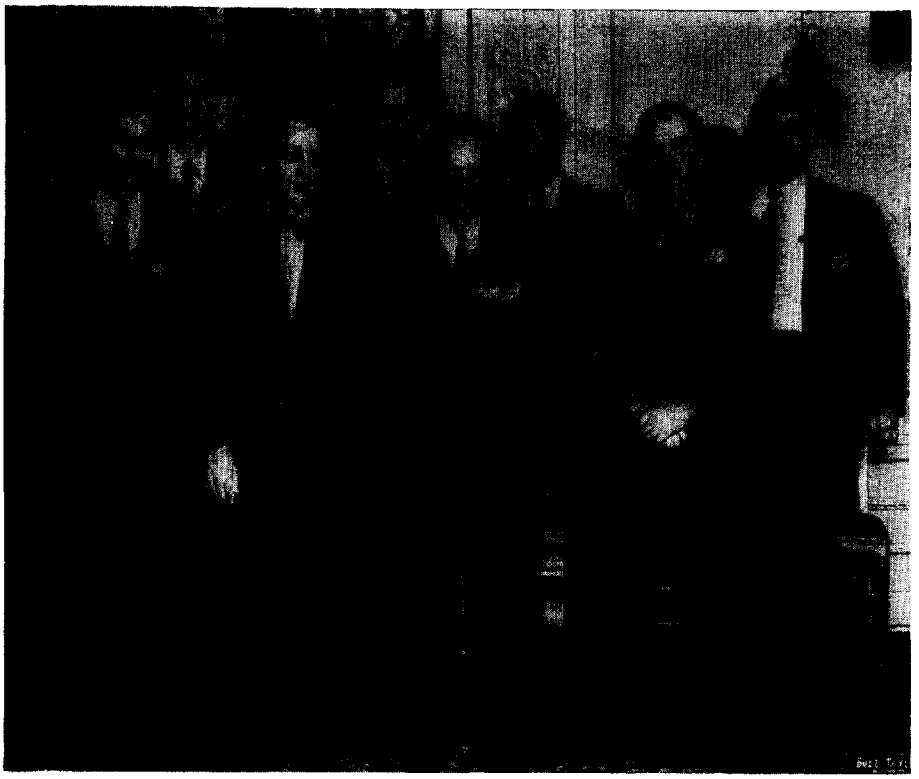

FIG. 6.—Eastern Interior regional meeting, St. Louis, January 14–15. Arrangements committee chairmen. Front row, left to right: G. O. Raasch, Illinois Geological Survey, exhibits; Gene Gaddess, Pure Oil Company, publicity; E. E. Rehn, Sohio Petroleum Company, general chairman; C. Doh, Schlumberger Well Surveying Corporation, finance. Back row, left to right: Stanley G. Elder, Sun Oil Company, program; Harry H. Nowlan, consultant, reception; T. G. Glass, Eason Oil Company, hotels and housing; Carl Bays, Illinois Geological Survey, technical equipment. Not present: T. E. Wall, registration; C. E. Brehm, entertainment.

In Kentucky, north- and east-trending folds and faults are the important features governing oil production. In Missouri, northwest- and north-trending folds govern the gas and oil production. In Iowa, as yet non-productive of gas or oil, northwest folding predominates, although the Redfield anticline which strikes northeast is a marked feature.

All the prominent uplifts, anticlines, domes, and faults in this area were largely in their present forms not later than the end of the Appalachian revolution—late Permian.

Minor folding which largely controls the gas and oil accumulations between and around the main uplifts has been influenced by stresses developed by the huge uplifts, and by stresses set up in the great basins. Most of the folding tends to follow earlier movements.

No comprehensive analysis of the tectonics of the area can be made until the detailed historical geology has been determined. It is essential to know the earlier local deformations; the old shore lines; which formations are competent and which are incompetent; and to have a definite idea of the relative stresses developed by the different uplifts. The stresses from Laurentia, Appalachia, Llanoria, and Cascadia have generally been taken for granted as causing the folds and faults, but local stresses have undoubtedly been developed by the Ozark, Sioux, Wisconsin, and the Ontario uplifts, and by action in the basins between them.

The Shawneetown-Rough Creek fault mosaic is an exceptional feature. Hicks dome and the Welles Creek disturbance, both probably crypto-volcanoes, are probably related to the volcanic action which was earlier than the first faulting. The important mineralization of the faulted area came after the first faulting, and prior to the second faulting. Earthquakes within historical time are evidence of continued slipping along some of the faults in the Mississippi embayment.