

correlation." Dr. Girty pointed out that the lower part of the Bend Series of the Bend shale proper belonged to the Mississippian, and the upper part of the Bend, including the Marble Falls limestone and the Smithwick shale, belonged in the Pennsylvanian, with an unconformity between the Bend shale and the Marble Falls limestone.

At 8:15 in the evening a popular meeting was held in the auditorium of Municipal Building, Dr. I. C. White presiding. A large contingent of townspeople were in attendance. The session was addressed by Dr. David White, who made a plea for the accumulation of petroleum reserves in foreign countries by the American companies so that the future of the American oil industry would be assured. Dr. J. A. Udden read a paper on oil-bearing formations in Texas, and Mr. M. L. Fuller, chief geologist of the Sun Company, delivered an illustrated lecture on China.

On Friday morning papers were read by Dr. J. W. Beede, of the bureau of economic geology of the University of Texas, on "Notes on the structures and oil showings in the Red Rocks of Coke County, Texas," by J. A. Udden, on "Observations on two deep borings on the Balcones Faults," and by M. L. Fuller, "On the water problems of the Bend series, and its effect on the future production and flooding of oil sands." T. W. Gregory, of the U. S. Fuel Administration, read a paper on "Gas conservation and distribution under the U. S. Fuel Administration."

On Friday afternoon papers were read by W. L. Matteson, giving "A review of developments in the central Texas oil fields," one by Walter R. Berger, of the Empire Gas & Fuel Company, on the "Extent and interpretation of the Hogshooter Gas Sand," a paper by Dr. Raymond B. Moore, state geologist of Kansas, on the "Correlation of the Bend." Dr. Moore's conclusions were different from those of Dr. Girty's, the collections made by Dr. Moore, for the Roxana Petroleum Company, indicating that the lower Bend, or the Bend shale proper, belongs to the Pennsylvania instead of the Mississippian. Sidney Powers read a paper on the "Geologic work of the American Expeditionary Forces." The afternoon session was concluded by a paper by Dr. Ed. Bloesch, on "Unconformities in Oklahoma."

Friday evening a banquet was tendered the association and the oil producers by the Dallas Chamber of Commerce & Manufacturer's Association in the junior ball room of the Adolphus Hotel. The meeting was addressed by Ralph Arnold, who out-

lined the policy of the federal government in the matter of valuation and taxation of oil properties. Mr. Arnold's address was followed by two minute talks by F. W. Shaw, David White, Chester Washburne, Judge Greer, attorney for the Magnolia Company, J. Edgar Pew, vice-president of the Sun Company, and others.

Saturday morning was devoted to a symposium on valuation methods, Dr. I. C. White presiding. Papers were read by Ralph Arnold on "Problems of oil lease valuation," by Carl H. Beall on "Factors in the valuation of oil lands," by Professor Roswell H. Johnson on "Decline curve methods," and by E. W. Shaw, of the U. S. Geological Survey, on "Valuation of gas properties."

Saturday afternoon a paper was read by Mr. E. H. Sellards, of the bureau of economic geology, University of Texas, on "Structural conditions in the oil fields of Bexar County, Texas." Dr. Schuchert gave an illustrated lecture on contacts, and Professor Roswell H. Johnson presented a "Statistical investigation of the influence of structure on oil and gas production in the Osage Nations."

The following papers were read by title:

D. F. MacDonald, "Notes on the stratigraphy of Panama and Costa Rica."

Geo. E. Burton, "Design for a log meter."

G. Sherburne Rogers, "Oil field waters."

J. W. Bostick, "The Saratoga, Texas, oil field."

Earl A. Trager, "Laboratory methods for the examination of well cuttings."

Robert T. Hill, "History of geologic exploration in the southwest."

After the reading of these papers, the business meeting of the association was held, and the following officers were elected for the coming year:

Dr. I. C. White, *President*.

Irving Perrine, of Hutchinson, Kansas, *Vice-president*.

Professor C. E. Decker, University of Oklahoma, *Secretary-Treasurer*.

Chas. H. Taylor, *Editor*.

## SCIENCE

A Weekly Journal devoted to the Advancement of Science, publishing the official notices and proceedings of the American Association for the Advancement of Science

Published every Friday by

### THE SCIENCE PRESS

LANCASTER, PA.

GARRISON, N. Y.

NEW YORK, N. Y.

Entered in the post-office at Lancaster, Pa., as second class matter