can be established that Permian beds of Kansas above the Cedar Hills sandstone are represented by the Lykins formation of the southern Front Range; the Cedar Hills, Salt Plain, and Harper formations are represented by the Lyons sandstone; and beds of Sumner and Wolfcamp age probably are included in the upper part of the Fountain formation. (The author's interpretation of the correlation and age designation of formations in Colorado and western Kansas is not necessarily accepted by the U. S Geological Survey.)

Maps showing the thickness and distribution of coarse clastics of the Pennsylvanian and Permian rocks suggest that the Apishapa-Sierra Grande uplift, the Wet Mountains, and the Front Range were relatively low-lying land masses at the beginning of Pennsylvanian time. The Morrow seas advanced upon the flanks of these low-lying land masses, bringing clastic material from the southeast. Near the end of Morrow time major uplifting and faulting elevated the Apishapa-Sierra Grande uplift, the Wet Mountains, and the Front Range, which supplied clastic material to transgressing seas during the remainder of Pennsylvanian time. A cross flexure marking the beginning of the Las Animas arch seems to have occurred near the end of Missouri time. During early Permian time the seas gradually covered the Apishapa-Sierra Grande land mass; during late Permian time the shore line remained fairly stable until the seas receded at the close of the period.

The possibilities for production of oil and gas from the porous limestones of both Missouri and Des Moines age in Colorado appear to be good, particularly if reef-like developments can be found fringing the more positive elements in the basins. In addition there is always present the chance of oil and gas accumulations in the basal sandstones of Des Moines, Atoka, and Morrow age and in the coarse arkosic sandstones that are overlapped along the positive elements.

STRATIGRAPHIC COMMITTEE, Panhandle Geological Society, presented by Graydon L. Meholin, chairman. North-South Stratigraphic Section Through Panhandle Region of Texas.

This talk consists of a discussion of the stratigraphy of the Oklahoma and Texas Panhandle district as revealed by a north-south cross section prepared by the Stratigraphic Committee of the Panhandle Geological Society. This cross section includes 19 wells and extends from Liberal, Kansas, to the south line of Floyd County, Texas. Both the electric and lithic logs are shown for each well.

TOMLINSON, KATHOL, and EMMERICH, Wichita, Kansas, presented by Gerald J. Kathol. Regional Setting of Pennsylvanian and Mississippian Production in Southwestern Kansas.

Exploration for oil and gas in southwestern Kansas is being accelerated. Production is being obtained chiefly from sands of lower Pennsylvanian age and from limestones of upper and middle Mississippian age.

This region is an arm or embayment of the Anadarko Basin, sometimes called the Hugoton embayment or Dodge City basin.

Slides showing the structure on the top of the Arbuckle, Mississippian, and Lansing, and one of the interval, Lansing to Arbuckle, are presented to show the regional geology of the area. Some of the more important characteristics of the producing fields are briefly discussed.

## REPORT OF A.A.P.G. REPRESENTATIVE ON DIVISION OF GEOLOGY AND GEOGRAPHY OF NATIONAL RESEARCH COUNCIL FOR 1951–1952<sup>1</sup>

WALTER B. LANG<sup>2</sup>

Washington, D. C.

The Division of Geology and Geography, smallest division of the National Research Council, met on May 2 and 3, 1952, to conduct the business of the year. Out of 29 committees operating within the Division during the year, only 9 were devoted to geological research, 14 to geographical investigations and the remainder to a variety of division and administrative projects. The Division membership consists of 14 representatives from constituent societies, 4 members at large, the chairman, and one representative from the Federal Government, making 20 in all.

Those committees which have or are about to complete their work on geologic problems are—

<sup>1</sup> Manuscript received, June 7, 1952.

<sup>2</sup> United States Geological Survey.