Because of the possible economic importance of the arched Ordovician beds, the identification of subdivisions by insoluble residues and general character of well cuttings has been attempted with encouraging results.

To facilitate correlation of the Pennsylvanian and Lower Permian strata, a classification by "subseries" as in the northern Mid-Continent and West Texas regions has been used in this paper. Such procedure places emphasis on unconformities and faunal changes of wide regional importance. Former group names are retained but boundaries redefined where needed.

The probable influence of the regional conditions in this area upon oil and gas migration and accumulation is discussed, such as the overlap of structurally high reservoirs by apparent source beds; differential pressures resulting from wedge-shaped overburden; progressive development of structural trends and local folds; and the character and distribution of sedimentary material, especially the development of local sandstone or limestone reservoirs and stratigraphic traps.

6. ELLIOT H. POWERS, geologist, Gulf Oil Corporation, Midland: Sand Hills Area, Western Crane County, Texas.

The Sand Hills area of western Crane County includes two pools, the Tubb and McKnight, in which production is obtained from Permian dolomite. In a third small area on the northwest side of the Tubb pool, three wells have encountered flush production of high-gravity oil in the upper portion of the Lower Ordovician dolomite, and two small wells produce from a sandstone member of the Simpson, having failed in the Lower Ordovician.

Lower Permian dolomite lies unconformably on the eroded surface of a seemingly complex structural system, which involves Lower and Middle Ordovician sediments. Intermediate beds of probably Upper Ordovician, Silurian, and Devonian ages, respectively, appear in a test which was drilled approximately eight miles southeast of the Ordovician producing area.

7. L. A. NELSON, associate professor of geology, College of Mines and Metallurgy, El Paso: Paleozoic Stratigraphy of the Franklin Mountains of West Texas.

The Franklin Mountains are located within a region that is bounded on the east by longitude 104°30′ W., on the west by longitude 109° W., on the south approximately by latitude 31° N., on the north approximately by latitude 34° N. From just north of El Paso the Franklin Range trends almost parallel with the 106°30′ meridian to a point about 4 miles north of the Texas-New Mexico boundary line.

The Franklin Mountains are eroded block mountains typical of the basin-and-range structure of the southwestern United States. The west side is a steep dip slope developed principally on beds of limestone. The east side is a fault scarp.

The Paleozoic stratigraphic section, which aggregates 5,600–7,000 feet in thickness, is as follows: Permian, Wolfcamp formation; Pennsylvanian, Magdalena formation; Mississippian, Helms formation; Devonian, Canutillo formation; Silurian, Fusselman limestone; Ordovician, Montoya and El Paso limestones; Cambrian, Bliss sandstone. The section is overlain by the Comanche and rests, in places, on pre-Cambrian granite and at other places on the Llanoria quartzite.

The exposed portion of the Magdalena formation consists primarily of thin-bedded, light gray to black limestone, and for convenience it is divided into the following three units: the La Tuna at the base, the Berino, and the Bishop's Cap at the top.

Comparatively few fossils have been reported from the near-by localities; hence it is difficult to use them to correlate the Magdalena of the Franklin Mountains with formations in these areas. A few closely allied genera and species of gastropods and brachiopods are reported from the Taos region of northern New Mexico and from the McCoy region and the Mosquito Range of Colorado. However, the most striking similarity is to a gastropod fauna described from the St. Louis outlier of Missouri and the equivalent St. David's limestone of Illinois.

The Permian is represented by about 650 feet of exposed sediments known as the Wolfcamp. These sediments occur as outliers some distance west of the Franklin Range and are separated from the exposed Magdalena sediments by alluvial deposits; hence the contact between the Magdalena and the Wolfcamp has not been seen.

8. C. E. NEEDHAM, associate professor of geology, School of Mines, Socorro, New Mexico: Correlation of the Pennsylvanian Rocks of New Mexico.

A typical section of Pennsylvanian rocks in central New Mexico is 1,500–1,800 feet thick. The lowest beds lie below the zone of *Triticites* and *Wedekindellina* and contain *Chaetetes milleporaceous*, *Spirifer rockymontanus*, *Spirifer occidentalis*, *Cleiothyridina orbicularis*, and *Mesolobus mesolobus*. These beds are considered to be younger than Bend, Morrow, or lower Pottsville, and are believed to correlate with the lower Cherokee, lower Atoka, upper Dornick Hills, lower Deese, lower Millsap Lake, lower Hartville, upper Pottsville, and lower Allegheny.

The zone above contains *Fusulina eurytcines*, *Wedekindellina euthysepta*, *Wedekindellina excentrica*, *Chaetetes milleporaceous*, *Cleiothyridina orbicularis*, and *Mesolobus mesolobus*. These beds are correlated with the upper Cherokee, McCoy, upper Hermosa, middle Hartville, upper Millsap Lake, middle Haymond, upper Atoka, middle Deese, Boggy, Wetumka, Carbondale, and upper Allegheny. The equivalent of the Marmaton and Wewoka has not been recognized but is believed to be present.

The succeeding zone is the equivalent of the Kansas City and Lansing, upper Hartville, middle Canyon, middle Gaptank, middle Hoxbar, and lower Conemaugh. It is characterized by *Triticites nebraskensis*, *Echinoconchus semipunctatus*, and *Neospirifer latus*.

Next above is a zone containing numerous advanced species of *Triticites*, *Enteletes hemiplicatus*, *Marginifera hystricula*, and *Chonetes transversalis*. This zone is the equivalent of the lower Virgil, lower Cisco, upper Gaptank, and Vamoosa. Finally, the highest Pennsylvanian beds in New Mexico contain *Triticites ventricosus* and are probably the equivalent of at least a part of the Wabaunsee and the upper part of the lower Cisco.

9. JOHN W. SKINNER, geologist, Humble Oil and Refining Company, Midland: The Upper Paleozoic Section of the Chinati Mountains, Presidio County, Texas.

Previous work in the Chinati Mountains is briefly reviewed and the various exposures of Paleozoic sediments are described. The stratigraphy is dis-