Middle Ordovician Simpson equivalents are not present because of nondeposition or erosion.

The nearshore to supratidal El Paso Group section faunal zones have been correlated tentatively with the deeper water, miogeosynclinal, western standard section (Ibex and Garden City, Utah composite sections) of Hintze (1951, 1952) and Ross (1951).

Paleoecological studies of the sabkhas to nearshore sediments of the El Paso Group strata show excellent examples of digitate algae, stromatolithic algae, and cyclic reefoid mound structures. Recent sedimentation in the Khor al Bozam (Persian Gulf) and Shark's Bay (Australia) probably are modern analogues.

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BLOODWORTH NORTHEAST FIELD, COKE AND NOLAN COUNTIES, TEXAS

The Bloodworth Northeast field was discovered in February 1967. The discovery well was the Tucker Drilling Co., Inc., and Peter Henderson Oil Co. No. 1 Foster S. Price, 0.5 mi south of the Nolan County line in Coke County, Texas, and approximately 15 mi northwest of Robert Lee. The producing reservoir is a Canyon (Upper Pennsylvanian) sandstone having 44 ft of unbroken permeability and 18% porosity. A drill-stem test was run in the upper 14 ft of the sandstone section. Gas surfaced in 5 minutes and oil, flowing strongly, surfaced in 30 minutes. In December 1968 there were 28 producing wells and 6 dry holes; 9 of these are multiple completions.

This oil field was discovered as a result of drilling along a productive trend; isopach maps provided the principal lead to the discovery.

The writer had observed that all sandstones within a 350-ft-thick zone contain hydrocarbons regardless of structural position or any other geologic characteristic. Accordingly, cumulative sandstone isopach maps were prepared from spontaneous potential curves. The isopach map on which the discovery well was drilled indicated that 50 ft of sandstone would be present.

The writer believes that the sandstone was deposited originally by turbidity currents in compaction troughs adjacent to the Pennsylvanian reef mounds of the area.

The Texas Railroad Commission recognizes three separate sandstone zones in this field.

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BASEMENT ROCKS IN WEST TEXAS AND EASTERN NEW MEXICO

(No abstract submitted)

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PALEOMAGNETIC CORRELATION

There are two ways in which paleomagnetic results can be used to correlate rock formations with each other. The first is achieved by using an established paleomagnetic polar-wander curve and matching new results to this curve. The second is by determining a reversal sequence and using this to correlate sedimentary strata.

In the past, both methods have been successful, the first in correlating older rocks and the second in dealing with rocks of Pliocene and Pleistocene ages. The reversal method is discussed in respect to its recent successful application to marine sediments of Miocene or younger age. The possible extension of this technique to older rocks is investigated and a recent successful application of magnetic reversal stratigraphy in rocks of Triassic age is outlined. It is reasonable to predict that reversal sequences will be of most value in older rocks where independent faunal or mineralogical control is present. It should also be of value as a well-logging tool for correlations within individual sedimentary basins.

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TEXAS LINEAMENT: PLEISTOCENE-HOLOCENE MOVEMENT?

Post-Pliocene movement along the Texas lineament is indicated by analysis of regional joint-fracture-fault systems in northwestern Chihuahua, Mexico, and on the southern High Plains, Texas.

The southern High Plains, Texas, show evidence of a regional force couple created by stresses along the Texas lineament on the south and the Wichita lineament on the north. Pleistocene to Holocene stresses along the Texas lineament have been right-lateral, but the Llano Estacado of West Texas exhibits evidence of both right- and left-lateral stresses along the Wichita lineament.

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MOSSBAUER STUDIES ON A LARGE GRIPHITE CRYSTAL

The Mossbauer effect has been used to measure the ferric to ferrous iron ratio in two perpendicular profiles across a 5-ft griphite crystal. No ferric iron is observed in the center of the crystal. The amount of Fe^{+3} increases rather systematically toward the margins. This increase is interpreted to have been produced by a secondary alteration caused by hydrothermal solution or weathering. These observations are in agreement with strontium isotope studies reported earlier.

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DISHARMONIC FOLDING IN IRAN

Exploration for petroleum in the Iranian Zagros folded belt has revealed spectacular disharmony between surficial folds in the terrigenous clastic Fars-Bakhtiari sediments and deeper folds in and below the Asmari Limestone, the major producing formation. Anhydritic marl, and locally thick salt of the Lower Fars stage I mobile unit, separate the two disharmonic fold sets. Some geologists have interpreted the disharmonic folding to have developed essentially in place without significant differential movement between the two fold sets. An alternate interpretation more compatible with the structural details proposes differential movement of two uniquely folded litho-structural sequences. A time-lapse movie of a dynamic model illustrates how such disharmonic folds may develop.

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CHARACTERISTICS AND TECTONIC SETTING OF GROWTH FAULTS IN EASTERN VENEZUELAN BASIN

Subsurface faults were studied across an area of approximately 160 sq km of the Eastern Venezuelan