SOUTH TEXAS SECTION, ELEVENTH ANNUAL MEETING OCTOBER 20–22, 1939. ABSTRACTS

JOSEPH M. DAWSON
Corpus Christi, Texas

Approximately 125 geologists composed the field party of the pre-convention trip of the South Texas Geological Society from Laredo to Brownsville, October 20, and 75 were on the post-convention trip east and north of Brownsville, October 22. The technical program was presented in the Ballroom of the El Jardin Hotel at Brownsville, October 21.

Officers of the South Texas Section are: president, Willis Storm; vice-president, Dale L. Benson; secretary-treasurer, Robert N. Kolm. Chairmen of the convention committees were: field trips, W. Armstrong Price, and vice-chairman, J. M. Patterson; entertainment, Leavitt Corning, Jr., and Dunbar A. Fisher; technical program, Joseph M. Dawson, and L. W. Storm, vice-chairman; hotel, Charles Daubert and Harvey Whitaker.

The technical program follows.

1. HENRY A. LEY, president A.A.P.G., vice-president, Southern Cross Oil Company, San Antonio: Mutual Responsibilities.

2. ED. W. OWEN, secretary-treasurer, A.A.P.G., geologist, L. H. Wentz Oil Division, San Antonio: Association Affairs.

3. JOSEPH M. PATTERSON, geologist, The Texas Company, San Antonio: Surface Stratigraphy of the Eocene between Laredo and Rio Grande City, Starr, Zapata, and Webb Counties, Texas (abstract).

A cross section of the stratigraphic succession on the American side of the Rio Grande conforms to Kane and Gierhart's[1] formational divisions which were established for the most part from Trowbridge's original work. The Cook Mountain has been subdivided into three members. The subsurface top of Cook Mountain (uppermost occurrence of *Ceratobulimina eximia*) is about 500 feet below the top of the Cook Mountain as mapped at the surface.

Cycles of deposition in the Yegua and Fayette are found to be very similar. The Mier and Alamo sandstones of the Yegua and the Salineno, Roma, and Sanchez sandstones of the Fayette have a marine facies where they cross the Rio Grande into Starr and Zapata counties. Northward these marine sandstones wedge out and the shale members between become increasingly non-marine. It is suggested that each sandstone wedge and its associated shales represent a cycle of transgression and regression of the sea.

4. LEROY FISH, geologist, The Texas Company, San Antonio: Distribution and Subdivision of the Frio, Catahoula, and Oakville Formations, Starr County, Texas (abstract).

The purpose of this discussion is to carry the section from the top of the Jackson (where Patterson's paper stopped) through the Frio, Catahoula, and Oakville formations; to make a subdivision of the Catahoula; and to point out the occurrence of the Oakville formation in this area. The distribution of the formations is shown on the aerial map.

For convenience of mapping, an oyster bed at or near the top of the Jackson (Fayette) is accepted as the base of the Frio. There are 550–600 feet of

[1] W. G. Kane and G. B. Gierhart, "Areal Geology of Eocene in Northeastern Mexico," *Bull. Amer. Assoc. Petrol. Geol.*, Vol. 19, No. 9 (September, 1935), pp. 1357–88.

red and green clays with thinly bedded sands, assigned to the Frio formation. Two prominent sandstone beds occur in the upper 200 feet of the formation.

The Catahoula is subdivided into three members: Fant, 75 feet; Soledad, 200 feet, and La Chusa, 1,000 feet thick (Thomas L. Bailey, *Univ. Texas Bull. 2645*).

Approximately 200 feet of pinkish chocolate-colored clays with globules of soft limestone overlies the La Chusa tuffs. These clays are distinctly different from Catahoula deposits, and are referred to the Oakville formation, due to their lithologic character and position in section.

The Catahoula and Oakville are overlapped by Lissie or post-Pleistocene conglomerate throughout north and northeastern Starr County.

5. LEE C. SMITH, geologist, Sun Oil Company, Dallas: Oil and Gas Fields of the Rio Grande Valley.

6. EUGENE L. EARL, geologist, Fohs Oil Company, Houston, and F. W. MUELLER, geologist, Skelly Oil Company: The Sam Fordyce Field, Hidalgo and Starr Counties (abstract).

The Sam Fordyce oil and gas field is located in southwest Hidalgo and southeast Starr counties, Texas.

Magnetometer work in 1929 first indicated structure in the area; however, the first well drilled on the anomaly in 1932 was completed as a dry hole.

The discovery well of the field, which was drilled in September, 1923, by the King-Woods Oil Company, was completed in a sand in the basal Frio formation of middle Oligocene age. Subsequent development has proved the accumulation of oil and gas in other sands of the same formation.

The reservoir is a faulted anticline whose major axis trends northwest and southeast along the regional strike. Closure against a major fault on the updip side of the structure accounts for the oil and gas accumulation. The fault has a maximum throw of 880 feet on top of the Sam Fordyce sand, and this sand has 260 feet of producing closure.

Geologically the Sam Fordyce structure is an outstanding example of differential sedimentation during the time of fault movement. A gradual downwarping movement northeast into the Rio Grande embayment caused the thicker sediments which are found on the downthrown side of the major fault.

The productive area of the field embraces 2,000 acres, 900 acres of which are within the oil zone of the Sam Fordyce sand zone. There are 260 acres of oil production in the Wheeler sand zone, and 215 acres in the Barlow.

7. L. B. HERRING, consulting geologist, Corpus Christi: Economics and Evaluation of the Oil and Gas Fields of South Texas.

8. HAROLD M. SMITH, chemist, United States Bureau of Mines, Bartlesville, Oklahoma: Commercial Production of Synthetic Products from Natural Gas.

Presentation of 9 charts showing composition of natural gas and the products obtainable from natural gas production.

9. EUGENE MCDERMOTT, president, Geophysical Service Incorporated, Dallas: Soil Surveys (abstract).

Attention was called to the important rôle that visual oil and gas seeps and mineralization phenomena have played in the location of oil and gas fields throughout the world. A. Beeby Thompson was quoted in part from his