

Ryder-Scott Company. The group had lunch at the Valley Hunt Club as guests of several local companies.

The buses returned to Pittsburgh about 7:00 P.M. At that point the geologists from 17 states pronounced the mid-year meeting a hugh success, bade farewell to acquaintances both new and old, and hurried off into the city's noisy darkness—homeward bound.

---

SOUTH TEXAS SECTION 15TH ANNUAL MEETING, MEXICO CITY  
OCTOBER 18-23, 1948

The Hotel del Prado, Mexico City, was the convention headquarters of the 15th A.A.P.G. South Texas Section annual meeting on October 18-23. The meeting, held in Mexico at the invitation of Petroleos Mexicanos, was attended by 150 geologists, their wives, and friends. The technical sessions were in the Palacio de Bellas Artes, where Senator Antonio J. Bermudez gave the address of welcome. President Miguel Aleman of Mexico gave a reception in his office at the Castle of Chapultepec in honor of the geologists and their wives. Petroleos Mexicanos entertained with a cocktail party and a dinner-dance, both at the Hotel del Prado. Each registrant at the meeting was presented with a copy of the book, *El Volcano Paricutin*, by honorary member Ezequiel Ordonez. Field trips were taken to the Poza Rica oil field and Paricutin Volcano.

OFFICERS OF SOUTH TEXAS SECTION

President: Marion J. Moore  
Vice-Pres: Paul B. Hinyard

Secy.-Treas.: Maurice E. Forney  
Past-Pres.: Guy E. Green

COMMITTEES

General: Douglas Weatherston, Jorge L. Cumming, Robert N. Kolm  
Technical Program: William H. Spice, Jr., Guillermo P. Salas  
Hotels: Alfonso Villasenor, W. L. Stapp  
Finance: George H. Coates, Maurice E. Forney  
Entertainment: Federico Mina, C. A. Daubert, James W. Thomas  
Field trips: Manuel Alvarez, J. B. Souther  
Public relations: Leland L. Palmer  
Exhibits: R. S. Mann, Alfonso Villasenor  
Reception and registration: Van A. Petty, Jr., Srita. Sarah Batiza, Ben Rummerfield  
Transportation: R. D. Mebane, Antonio Garcia Rojas

ABSTRACTS

1. Tectonics of Republic of Mexico, Manuel Alvarez, Jr., geologist, Petroleos Mexicanos.

It has been attempted to give in this paper, for the first time, an idea of the tectonics of the Republic of Mexico as a whole, based on the concepts developed, mainly by alpine geologists, for the study of orogenic processes.

With this object in view, the paper was divided in two parts; the first, in which was established the meaning of the concepts in order to fix the sense in which they will be used and to point out in a general way the orogenic processes to which the Republic of Mexico was subjected. The second part in which are described the major structural units, from a tectonic point of view, especially as to the character and orientation of their folds, since the character of the major units is mainly established from the character of the folds.

There have been established in the foreland of the Mexican geosyncline, three shelves, a large massif, two small ones, and four basins. There have been postulated for the hinterland a great massif or continent, two large massifs, two medium, and four small massifs as well as three basins. The foredeep of the geosynclinal folds has been indicated in three regions, as established by the "flysch" sediments deposited therein.

It is considered that the geosynclinal folds of the Mexican Cordillera begin west of Ciudad Juarez toward Torreon, where they turn toward Monterey, and from there, southeast down to the Coatzacoalcos River, then northwest up to the Chalchijapa River and on reaching the narrowest part of the Isthmus of Tehuantepec they turn east-southeast into Guatemala.

It is established that the orogeny which gave rise to this folding started at the end of the Cretaceous in the northern part of the Republic and at the beginning of the Eocene in the rest of the country, and ended at the end of the Eocene except in the southeast where it lasted until the begin-



3.—These men made the arrangements for the South Texas Section: front, Robert S. Mann, exhibits; Robert N. Kolm, general committee; Douglas Weatherston, general committee; Van A. Petty, Jr., reception and registration; back, R. D. Meban, transportation; Leland L. Palmer, public relations; William H. Spice, Jr., technical program; Charles A. Daubert, entertainment; and George H. Coates, finance. Not shown are Wilford L. Stapp, hotels and housing, and J. B. Souther, field trips.



4.—Officers of South Texas A.A.P.G. Section: right, Paul B. Hinyard, Shell Oil Company, Inc., vice-president; Marion J. Moore, Sunray Oil Company, president; and Maurice E. Forney, Atlantic Refining Company, secretary-treasurer.

ning of the Oligocene. Furthermore, there were previous and posthumous movements, the last of which is very important in the Isthmus and in the Macuspana and Pichucalco basins.

2. Short Discussion of Mexican Oil Fields, Antonio Garcia Rojas, chief geophysicist, *Petroleos Mexicanos*.

Mexico's oil production comes from three main provinces which according to their importance could be arranged as follows:

(1) Northern zone (Tampico-Tuxpan oil fields), (2) Southern zone (Isthmus, Saline Basin), and (3) Northeastern Mexico.

Most of the production of the Tampico-Tuxpan oil fields comes from the Tamaulipas limestone, Cretaceous in age, and which has a wide variation of facies. The total production from these fields has amounted to 2,160 million barrels, divided in three main producing areas: Faja de Oro (Golden Lane), Panuco-Ebano, and Poza Rica.

The Isthmus oil fields produce from Miocene sands and a very small production has been obtained from cap rocks. All producing structures in the Isthmus areas are related to salt domes. The total production obtained from these fields is about 140 million barrels.

No commercial production has been found until recently in northeastern Mexico, but some gas fields have been in production for several years.

Pemex has discovered recently the Reynosa field, which has two producing oil wells with a capacity of about 1,100 barrels per day for both wells.

3. Geology and Development of Poza Rica Field, State of Vera Cruz, Mexico, Ing. G. P. Salas, chief geologist, *Petroleos Mexicanos*.

The Poza Rica field is the most important and largest producing field in Mexico. It lies on the Gulf Coastal Plain approximately at 160 kms. south-southwest of Tampico and at 175 kms. northeast of Mexico City. The structure was found originally by geophysics through an almost simultaneous torsion balance and refraction shooting survey. Poza Rica No. 2 well, completed on May 2, 1930, as a gas producer, discovered a subsurface trap drilling in the gas cap in a porous Tamabra limestone at -2,047.3 meters (-6,715 feet).

Further deepening of the well brought it in as an oil producer. It was later shut in, because of high gas-oil ratio, in 1933.

Later reflection shooting revealed possible extensions and permitted development program. First exploration wells were located at distances between 600 and 1,000 meters (1,968 and 3,288 feet).

Completion of wells was first accomplished through 4 $\frac{1}{4}$ -inch liner. Later wells produced through 2 $\frac{1}{2}$ -inch tubing.

There are at present 93 wells of which only 4 were dry through lack of porosity in the limestone. Seventy-eight are producing at present. The structure at Poza Rica, as revealed from both seismos and subsurface geology, is a broad anticline in a Tamabra limestone which is open, as yet, toward the west northwest. The highest well, Poza Rica No. 65, found the limestone at -1,947 meters (6,386 feet). The lowest producing well, Escolin No. 2, found the limestone still porous at -2,178 meters (-7,144 feet). Apparently the porous producing zone is due to a reef facies deposited on the highest part of a Cretaceous limestone anticline. Later regional tilting, and subsequent folding apparently displaced the porous zone toward the northeast flank, so that at present no porosity has been found on the south flank. Poza Rica No. 8 and No. 46 are the southernmost wells drilled to the limestone without finding it porous.

This field has produced 50,380,902 M<sup>3</sup> (316,895,800 barrels) since 1930, and is considered to have a potential reserve of 143,169,000 M<sup>3</sup> (900,533,000 barrels).

4. New Petroleum Development by Pemex in Northeastern Mexico, Eduardo J. Guzman, geologist, *Petroleos Mexicanos*.

A brief outline is given of the geological, geophysical and drilling explorations done by *Petroleos Mexicanos* in northeastern Mexico. The area under consideration is stratigraphically and structurally part of the geologic province commonly designated as the Coastal Plain or Gulf Coast of Texas and Louisiana.

The subsurface stratigraphic sequence and descriptions as given are used for identification purposes by *Petroleos Mexicanos* without attempting any revision on age or correlation of these formations.

A summary is given of the criteria used in the correlation of the well sections with the corresponding sections in other wells. The writer describes briefly the structures drilled or being drilled by *Petroleos Mexicanos* near the border, presents their seismological maps and cross sections and gives tentative correlations with wells on the American side.

Production and completion data of such wells are also given.