

type of exploration is rapid, economical and obtains excellent results. It is estimated that all of the offshore areas of Louisiana, out to the 10-fathom depth, and about half of those of Texas, along a similar belt, have been mapped to date.

The culmination of this marine exploration program began late in 1947 with the development of production on the first piercement-type salt dome at a comparatively shallow depth. To date, five additional discoveries have been made of either oil or gas fields, and tests on three other prospects are encouraging.

The great cost and risk of marine exploration work must be recognized as small in comparison with the expense and hazard of the later exploitation phase. The tremendous costs of this development, to say nothing of the losses incurred in the dry wildcat wells which have been drilled and will continue to be drilled, will only be justified if there are no restrictions to prevent reasonable profits on the successful operations. The results of offshore work to date tend to confirm the original anticipation that this risking of enormous quantities of private capital will eventually make a great addition to the oil and gas reserves of the Western Hemisphere.

8. Variations in History of Continental Shelves, Paul Weaver, president, American Association of Petroleum Geologists.

Some students think of shelves as hinge lines, with the land side uplifted and the sea side down-warped. The author discusses contrasting types of shelves which are more properly erosion features and not tectonic in origin, especially those in the region of the Gulf of Mexico.

9. Geology of Pacific Coast of Ecuador, Cecil Hagen, Hagen & Cantrell, consulting geologists.

The general geology of the Pacific Coast of Ecuador is described. The area is approximately 500 miles north and south, ranging from the Peruvian border on the south to the Colombian border on the north. The formations include Cretaceous, Tertiary, and Recent sediments. The coast is divided into three areas; Northern, Central, and Southern. An attempt is made to describe the structural and depositional conditions present in each area. The paper is illustrated by a general map, geologic maps, correlation charts, columnar sections, and cross sections.

POZA RICA OIL-FIELD TRIP

Leave at 7:30 A.M. from convention headquarters and drive in busses to the town of Tulancingo, stopping to see an outcrop of obsidian, then proceed to Huauchinango where lunch will be served, after observing some outcrops of Jurassic rocks on the road in the neighborhood of this town. From Huauchinango to Poza Rica, a fine section of outcrops ranging from Jurassic to Miocene age will be seen. After supper in Poza Rica, part of those on the trip will spend the night there and the rest will be accommodated in the neighboring town of Papantla.

On Friday, October 22, after breakfast in Poza Rica, the Poza Rica field and refinery will be observed and the trip will proceed to Tecolutla for lunch. After lunch, the trip will proceed to Nautla, and from there to Teziutlan, stopping on the way to see some outcrops of Tertiary and Jurassic formations. In Teziutlan dinner will be served, and hotel accommodations will be available.

On Saturday, October 23, after breakfast in Teziutlan, the trip will leave for Perote and Puebla, observing on the way some igneous and metamorphic phenomena.

At Puebla, the largest and most typical colonial city, lunch will be served and the afternoon will be spent visiting the main interesting points and the group will leave for Mexico City, where they will arrive at about 7:30 P.M.

We do not recommend that members drive their own automobiles on this field trip and, as proper accommodations are not easily available for a great number of persons in the Poza Rica-Papantla area, the number taking this trip will be limited to 40 persons.

PARICUTIN VOLCANO FIELD TRIP

Leave convention headquarters, Hotel del Prado, Thursday morning, October 21, visit Toluca, and stay overnight at San Jose Purua. The next night, October 22, will be at Uruapan which is the nearest town to the Volcano, returning to Mexico City the evening of October 23 after having lunch at Morelia.

The cost of this three day trip, which includes transportation, hotel, meals, etc., will be approximately \$46 per person.

Passenger cars available will accommodate a maximum of four persons and will be driven by a chauffeur-guide who will give necessary explanations to the passengers. Horses will be available so that anyone desiring to go close to Paricutin Volcano can make the trip on horseback.

Anyone having a personal car can make this trip over a good highway. But if you are arranging your own transportation, we suggest that hotel accommodations be obtained before leaving Mexico City. It would not be necessary to return to Mexico City as the return trip to the States can be made