ABSTRACTS

Sea Floor off Southern California, by K. O. EMERY, University of Southern California, Los Angeles.

The sea floor off southern California is unlike that adjoining most other coasts of the world in its great topographic irregularity. The area of about 30,000 square miles consists of a checkerboard-like pattern of basins and ranges which are believed to be grabens and horsts that were formed in late and post-Miocene time. A general southward decrease in elevation of the tops of the ranges and the bottoms and sills of basins suggests that regional tilting followed or accompanied the local faulting. Basins far from shore are only slightly filled with sediments, those near shore have been nearly completely filled, and the Los Angeles and Ventura basins have been filled to overflowing so that they now are land areas rather than part of the sea floor. Grain-size, calcium carbonate, and organic content of the sediments present a smooth graduation from the Los Angeles basin through the near-shore basins to the offshore basins.

Matching Land and Sea Floor Topography and Structures off California, by HENRY W. MENARD, Navy Electronics Laboratory, San Diego.

Recently discovered seascarps, and mountain ranges on the deep sea floor off California have a pattern which is closely related to the pattern of topography and structure on land, and may help to fill in missing elements in the land pattern. The sea floor for more than a thousand miles west of California is fractured along two narrow parallel zones which intersect the coastline near Cape Mendocino and Point Conception with an easterly trend. The zones of fracturing can be interpreted as shear zones complementary to the San Andreas fault. The southern band of fracturing has the same trend and position as the Channel Islands and the Transverse Ranges. The band of earthquakes which trends out to sea northwest from Cape Mendocino lies along a submerged continuation of the Coast Ranges separated from the continental slope by a vast trough. The topography of the sea floor off the northwestern United States, therefore, is roughly a mirror image of the Baja California Peninsula and the Gulf of California.

Review of Pacific Coast Off-Shore Seismic Methods, by CARL H. SAVIT, Western Geophysical Company.

Discussion of instruments, techniques, and equipment currently in use for Pacific Coast offshore operations. Many phases of the operation illustrated by color slides.

Recent Developments in Submarine Coring, by W. W. RAND, Submarex.

The taking of submarine oriented cores for use in oil exploration has progressed steadily since 1947, and there are now six vessels engaged in this work on the Pacific Coast. Early coring methods employed divers to assist with the handling of the equipment, but since 1948 a great many oriented cores have been taken without the help of divers in an area extending from Eureka to the Mexican border. Some of the equipment used in this work is briefly described, and some of the operations are shown in colored slides.

National Affairs of the Association, by EDWARD A. KOESTER, President of A.A.P.G., Consultant, Wichita, Kansas.

Single-Boat Marine Seismic Surveying, by NEIL W. MANN, Geophysical Service Inc.

Because of its unique operational problems, offshore exploration during the past few years has

FIG. 1.—Left to right: EDWARD A. KOESTER, A.A.P.G. president, Wichita, Kansas; PAUL L. LYONS, president, Society of Exploration Geophysicists, Tulsa, Oklahoma; G. M. KNEBEL, general chairman, A.A.P.G.-S.E.P.M.-S.E.G. annual meeting, New York City, March 28–31.