



FIG. 2.—Left to right: RUSSELL R. SIMONSON, Ohio Oil Company, Los Angeles; EDWARD A. KOESTER, A.A.P.G. president; E. HAROLD RADER, outgoing president, Pacific Section, A.A.P.G.; GRAHAM B. MOODY, vice-president, A.A.P.G., Berkeley, California.

been the object of much publicity and interest. This paper describes the "single-boat" method of marine seismic surveying as it is conducted by GSI. The single-boat method of marine seismic surveying has been used successfully to explore in many areas where it would be difficult to explore with conventional methods. The application of this method to the California offshore area would require certain changes in the present system and the addition of another boat. However, such changes appear to be entirely feasible within present economic considerations.

Geological Diving, by ROBERT F. DILL, Geological Diving Consultants, San Diego.

Geological diving, one of the newest forms of offshore exploration, is being used successfully in the search for offshore oil. It is now possible for properly trained geologists to map the sea floor to depths of 150 feet, thereby opening approximately 1,000 square miles of ocean bottom for inspection off southern California alone. At present more than 1,500 dives have been made for the specific purpose of obtaining geological data.

Geological diving is particularly suited for, but by no means limited to, that zone which extends from the shore line to approximately $\frac{1}{2}$ mile offshore. It is here that the land geologist is stopped by surf, and seismic operations by law.

To explain better the problems and techniques used by the underwater geologist a short motion picture of a typical diving day is presented.

Gravity-Meter Exploration in Marine Seas, by EUGENE FROWE, Robert H. Ray Company.

This paper describes methods of conducting gravity-meter surveys in water-covered areas such as bays, lakes, and oceans. Types of boats, gravity meters, surveying techniques, cost per station, reliability of results, and problems are discussed. Typical gravity-meter anomalies encountered in Gulf of Mexico are shown.

Drilling Platforms and Islands, by D. S. HARE, Monterey Oil Company.

Experience in the construction of various types of drilling platforms and islands used in offshore drilling on the Gulf Coast is discussed and compared with the recent experience of the Monterey Oil Company in construction of a permanent island for the drilling of its discovery well, State No. 3. The cost of these two techniques is compared and the effect of these expensive operations on marine exploration is discussed. Films of island construction are presented.

California's Submerged Lands, Past, Present, and Future, by FRANK HORTIG, Mineral Resources Engineer, California State Lands Commission.

A general historical review is presented of coastal tide and submerged land development, including first tideland well in 1896 and first offshore drilling platform in 1932.

Past production, locations, and techniques have resulted in 248,000,000 barrels production and \$85,000,000 lease royalty to the State through 1953. Current production and royalty, January through June, 1954, are described.

Present problems are summarized. The magnitude of future operations is estimated. Possible techniques for development are suggested.

Wildcat Round Table, by J. F. CURRAN, Honolulu Oil Corporation, J. D. FRICK, Humble Oil and Refining Company, R. L. HESTER, Signal Oil and Gas Company, and J. M. SAUNDERS, Tide Water Associated Oil Company.