dance of these sands decreases from about 20 per cent in the Mississippi Delta area to less than 10 per cent on the Texas Coast. The westward decrease of the feldspar abundance in the direction of prevailing longshore current can be attributed mainly to dilution. The heavy-mineral suite of the Recent beach sands from Louisiana and east Texas contains abundant unstable minerals; among the resistant heavy minerals garnet predominates over staurolite and kyanite.

2. The relative abundance of unstable heavy mineral which can be easily decomposed during weathering or by post-depositional changes is not a reliable criterion for paleogeographic interpretations. Feldspar abundance and ratio of garnet to staurolite plus kyanite, on the other hand, may be

used to recognize ancient petrologic provinces.

28. Petrology of Anacacho Limestone of Southwest Texas, Lee L. Harvill, graduate student University of California, Los Angeles; formerly at University of Houston.

The Anacacho limestone, noted for its high asphalt content, is exposed in scattered outcrops west of San Antonio, from western Bexar County to eastern Kinney County. It occupies the stratigraphic position of the Taylor group in the Upper Cretaceous. The formation consists predominantly of

organic fragmental limestone, containing only traces of terrigenous material.

The Anacacho is locally abundant in asphalt. A previous investigator concluded that this was deposited with the limestone, and argued from this example that liquid petroleum generally originated in the reservoirs where it now is found. However, the present writer's petrographic study shows that the bituminous material invaded the limestone, then shrank by loss of volatile constituents. This is based especially on the following evidence.

1. The pore space in the limestone is overwhelmingly of secondary origin; no truly primary

porosity could be demonstrated.

 The contact of asphaltic with asphalt-free rock cuts across the bedding.
The asphalt does not completely fill the pore space of the rock but forms a coating on the limestone particles.

# PACIFIC SECTION ANNUAL MEETING LOS ANGELES, NOVEMBER 12-13, 1959. TECHNICAL PROGRAM

The 36th annual meeting of the A.A.P.G. Pacific Section will be held at the Biltmore Hotel, Los Angeles, California, November 12 and 13. A. J. MACMILLAN, JR., of Texaco Inc., is general chairman and ROBERT L. JOHNSTON, of Western Gulf Oil Company, is program chairman. The meeting will be in conjunction with the local sections of the S.E.P.M. and the S.E.G. The national S.E.G. meeting precedes the Section meeting and overlaps it on November 12.

### TECHNICAL PROGRAM

## THURSDAY A.M., NOVEMBER 12 (WITH S.E.P.M. AND S.E.G.)

1. Welcoming Address, John T. Isberg, president, Pacific Section.

2. COMMENTS ON OFFSHORE DRILLING ECONOMICS, Robert F. Bauer, Global Marine Exploration Company.

3. Marine Seismic Operations, Cook Inlet Alaska, M. C. MacMurrough, Standard Oil Company of California.

4. MARINE SEEP DETECTOR, NEW RECONNAISSANCE TOOL, H. F. Dunlap, Atlantic Refining

5. NEW MARINE SEISMIC SYSTEM, F. J. McDonal, Magnolia Petroleum Company.

### JOINT LUNCHEON

6. Geology of the Moon, Jack Greene, North American Aviation.

### THURSDAY P.M., NOVEMBER 12

7. REGIONAL GEOLOGICAL INTERPRETATION OF AEROMAGNETIC PROFILES IN YUKON, KANDICK, AND KOYUKUK AREAS, ALASKA, Isidore Zietz, U.S.G.S.

8. REGIONAL GRAVITY GRADIENT MAP OF LOS ANGELES BASIN, CALIFORNIA, T. H. McCulloh, University of California.

9. GEOLOGY AND GRAVITY DATA OF SAN FERNANDO VALLEY, CALIFORNIA, Charles Corbato, University of California.

10. Drilling to the Moho, George Shore, Scripps Institution of Oceanography.