lying Sespe sands differ markedly in the dominance of epidote over titanite. The sparse megafossils found in this area were of little value in restricting the age of the Vaqueros. Foraminifera of the *Uvigerinella sparsicostata* fauna were collected from the base of the superjacent Rincon formation.

10:15 (4) GEOLOGY OF NORTHERN SANTA ROSA ISLAND
Robert E. Anderson, Signal Oil and Gas Company, Los Angeles, Lowell Redwine and Paul McGovney, Honolulu Oil Corporation, Santa Barbara and Bakersfield.

The stratigraphy of the northern part of Santa Rosa Island is somewhat similar to that of the Santa Barbara Coastal district. These two areas represent, respectively, the southern and northern margins of the Ventura Basin. The Island area mapped offered a section from Pleistocene to Eocene, with Pliocene evidently absent. Formations recognized include marine terraces, Santa Margarita sandstone, Monterey shale, Rincon shale, Vaqueros sandstone, Sespe, Cozy Dell(?) shale, and Matilija(?) sandstone. An interesting time equivalence between the Vaqueros and upper Sespe formations is indicated.

The Santa Rosa fault is the dominant structural feature of the Island. It trends east-west and divides the Island in half. A horizontal displacement of nearly five miles is indicated. Other significant but smaller faults are the Sandy Point, Garanon, and Arlington. Important folds are the Garanon, Tecolote, and Soledad anticlines and the West End and Becher's Bay synclines.

Five wells have been drilled and abandoned on the Island and a sixth is now being drilled.

10:45 (5) OCEAN FLOOR INVESTIGATIONS ALONG SANTA BARBARA COUNTY COAST
Warren C. Thompson, Scripps Institute of Oceanography, La Jolla.

For the increasing number of oil geologists who are studying the submerged shelves of Southern California in order to unravel the bedrock structure, a knowledge of where to look on the sea floor to find bedrock outcrops is highly desirable in saving exploration time and expense. Knowledge of the topography of the shelves is thus required.

The submerged shelf between Point Conception and Santa Barbara is considered. Cross sections of the shelf show that the Recent marine sediment or "overburden" which rests on the bedrock commonly forms a lens-shaped deposit. Within the surf zone, this sediment lens varies from zero to a few feet thick. It thickens offshore to an average of about 40 feet, but in places to more than 100 feet, then usually tapers off to a few feet or less in thickness near the outer edge of the submerged shelf. Isopach charts of overburden aid in conveying the nature of the sediment lens.

The bedrock of the shelf is traversed by numerous canyons and gullies probably Late Pleistocene in age. These have subsequently been alluviated by continental sediment and later by marine sediment so that no topographic expression of them is evident on the ocean floor. These features are illustrated on the submarine bedrock contour charts.

The common giant kelp which forms the extensive kelp beds along this coast (*Macrocystis pyrifera* Linnaeus) is commonly considered to be a good criterion for the presence of bedrock outcrops. This is now known to be partly erroneous, and it is shown that the kelp grows equally well in thick overburden of mud and fine sand. However, by observing the plant density from aerial photography, it can be determined whether the algae is growing on bedrock or in thick sediments.

11:05 (6) RECENT DEVELOPMENT AT GUIJARRAL HILLS
John S. Loofbourow, Jr., Barnsdall Oil Company, Los Angeles.

The Guijarral Hills oil field, located on the Coalinga anticline midway between Pleasant Valley and Kettleman Hills, was discovered by the Barnsdall Oil Company on September 19, 1948. The discovery well produced from the Leda sand. Since then there have been 36 Leda sand wells completed in the field on a 20-acre spacing program. The development has demonstrated that the accumulation is stratigraphic and only the updip or northwest limit of the field has been located. At present, approximately 800 acres of Leda sand production have been proved.

On April 28, 1949, a new zone was discovered by the Barnsdall Oil Company with the completion of Allison A73-34-2 in a sand in the Basal Temblor which was logged approximately 500 feet above the Leda sand. To date, 11 wells have been completed in this zone on a 20-acre spacing program. Indications are that the accumulation is stratigraphic. Approximate limits of production have been defined only on the southeast and at present about 360 acres may be considered as proved.

11:20 (7) REPORT OF PACIFIC COAST SUB-COMMITTEE ON CENOZOIC OF GEOLOGIC NAMES AND CORRELATIONS COMMITTEE
Robert T. White, State Exploration Company, Los Angeles.

11:35 (8) RECENT EXPLORATORY RESULTS IN CALIFORNIA
Graham B. Moody, Standard Oil Company of California, San Francisco.

Analysis of recent exploratory achievements in California indicates that those who have been prone to "view with alarm" the potentialities of California's oil resources have been overly pessimistic. This conclusion is supported by graphs, figures, quotations, and arguments.