The Central San Joaquin Valley section has been tied with the Salinas Valley section for reference and general comparison; although the stratigraphy across the structurally complex San Andreas fault and Diablo Range area is fragmentary. Here the Basement Complex is the Jurassic Franciscan series. East of Curry Mountain, the basal Pliocene unconformity overlaps the Miocene, Eocene and the top of the Upper Cretaceous. This marine series thickens basinward and changes to a continental series. Along this line of section, all the marine formations of the westside change to a continental facies on the eastside. The upper Miocene has maximum thickness of 2,100 feet and consists of marine shales and sands on the westside and central area. The middle and most of the lower Miocene, however, are dominantly continental in character. The lowermost Miocene or Zemorrian stage is represented by a thin marine wedge in the Guijarral Hills area. Along the central San Joaquin Valley section, in addition to the upper Eocene, the middle and lower Eocene, Paleocene, and Upper Cretaceous are present.

GEORGE H. ROTH AND HAROLD H. SULLWOLD, JR., consulting geologists, North Hollywood, California

Cascade Oil Field, Los Angeles County, California

The Cascade oil field is a typical new California oil field—highly complex geologically and economically insignificant to date, but with a glorious future.

The field, discovered in 1954, lies in the Santa Susana Mountains and is the most southeastern field in the Ventura basin. Production is from fluviatile and near-shore marine conglomerate and sandstone of the Sunshine Ranch member of probable latest Pliocene age. The oil is trapped in a plunging anticline with updip closure provided by a large cross-fault. The entire pool lies beneath the Santa Susana thrust fault which is here expressed as two branches separated by 1,000 feet of strata whose structure and stratigraphic relationships are obscure.

Six wells are producing a total of 360 B/D of 17°–24° gravity oil from 200–600 feet of oil sand at total depths of about 2,900 feet. Only thirty-five acres are proved to date. However, the limits have not been established and the deeper possibilities have not been fully investigated.

PAUL H. DUDLEY, JR., Humble Oil and Refining Company, Los Angeles, California

Castaic Junction Field, Los Angeles County, California

The Castaic Junction oil field, discovered in 1950, is one of the four or five major producing structures in the easternmost Ventura basin. Development has been continuous since discovery, and at present there are 58 wells in the field which have been drilled to an average depth of 11,000 feet. At the surface, the Castaic Junction structure appears as a southeast-plunging nose but the deeper beds are folded into an east-trending closed anticline. The three producing zones in the field, all in the Mohnian stage of the upper Miocene, are designated Zones 10, 15, and 21. Closure in Zone 10 is afforded by a pinch-out across the crest of the structure, but accumulation in the two lower zones is controlled primarily by the closed structure. Subsurface work in the field has resulted in a better understanding of the abrupt stratigraphic variations common in this part of the Ventura basin.

JAMES C. BENZLEY, Western Gulf Oil Company, Los Angeles County, California

Yorba Linda Oil Field, Orange County, California

The Yorba Linda field was discovered in 1930 but received its greatest development after 1937. The originally developed area is a faulted homocline producing from lenticular Repetto sands. The "Shallow" and "Repetto" pools were discovered in 1954.

The "Shallow" pool is structurally similar to the original area, but produces 12°–13° oil from beds of Pleistocene or uppermost Pliocene age. The trap is a combination of faulting and overlap. A rather unique condition exists in the presence of top water in the structurally higher wells of the "Shallow" pool. This water is theorized to be of possible meteoric origin and may have retarded discovery of this fairly considerable reserve.

The "Repetto" pool is on a gentle east-west-trending arch. Correlations are commonly difficult in a short distance and great variations occur in well potentials due to faulting and erratic stratigraphy. Some of the production faults in the Repetto area seem to have little or no displacement in the shallow beds. The main producing zone is near the upper-middle Repetto contact. Two other producing zones are present a little higher in the section—the "Third Intermediate" and the "Hall" sand. Both are lenticular and are probably channel sands.

The Carlton area was discovered in 1956 and has been very spotty and disappointing. Production is from the Repetto with faulting and pinch-outs both important. It is possible that this area is structurally related to the East Coyote field.

JOHN C. CROWELL, University of California, Los Angeles

Geology of Orocopia Mountains, Southeastern California

The Orocopia Mountains border the Salton Sea northeast of the San Andreas fault in Riverside County, California. The range core, composed of Orocopia schist, is separated on the southwest from