

World Crude-Oil Reserves, by G. M. KNEBEL, Standard Oil Company (New Jersey).

Crude-oil reserves show exploration people the fruits of their efforts. Since Drake's well in 1859, we periodically have witnessed over-production or we have worried over early depletion. Present world reserves are more than ample to care for our expanding economy and this condition will probably continue for years. Reserve estimates for the United States and Canada are now being ably handled by Frederic H. Lahee's A.P.I. Committee and by the Canadian Petroleum Association. No group performs a similar service for the rest of the world. To initiate a move in this direction, an estimate of crude reserves by countries is included. World reserves as of the first of 1954 are estimated at 162 billion barrels which is a 47-billion-barrel increase over figures published by *World Oil*, for the end of 1952. World reserves slowly but steadily increased from 1900 to the middle 1920's. Since that time, reserves have increased at an ever-growing rate. Western hemisphere reserves as of January 1, 1954, are estimated at 45 billion barrels, with those for the Eastern hemisphere 117 billion barrels. Reserves for the Eastern hemisphere passed the Western hemisphere in 1946. A plea is made that the A.A.P.G. group handling the annual review of world developments undertake the compilation by countries of liquid hydrocarbon reserves.

Yolo County Gas Fields, by SARGENT M. REYNOLDS, Consultant, Woodland.

The geology of the six Yolo County gas fields is discussed. Several types of reservoir traps occur. Production is controlled by structural closure in two of the fields. In the remaining four fields there are seven producing zones, four zones controlled by truncation, and three by lenticularity. Faulting plays an important part in one field.

Castaic Hills Field, by HOWARD STARK, Richfield Oil Company, Ojai.

The Castaic Hills field is located about 40 miles north of Los Angeles, adjacent to U. S. Highway 99.

The Ted Sterling-Rynne Fisher No. 1, drilled in September, 1951, was the discovery well. As the field was developed, the Standard and Richfield-Golden wells were mediocre and appeared to indicate the western edge of production. However, the Standard Oil moved three locations west and drilled Villa 45 which produced more than 800 barrels a day. This led to the extension of the field a mile west.

The accumulation is due to a combination pinch-out fault trap on the flank of a plunging nose. The faults and abrupt stratigraphic changes make electric-log correlations difficult for the most part.

The producing sands are upper Mohnian in age, and approximately equivalent to the Wayside zone of the Honor Rancho field. The upper Sterling sand varies from zero to about 85 feet in thickness; the lower zone varies from zero to more than 140 feet. The sand distribution is lenticular and irregular. The recent completion of the Standard's Villa No. 26 probably indicates the presence of two different water tables in the producing zones.

At present there are 55 producing wells in the field, which have produced more than 3 million barrels of oil. Currently, negotiations are under way for unitization and repressuring.



FIG. 3.—At the Pacific Section luncheon, Biltmore Hotel, November 11, 1954. Left to right: ROBERT H. DOTT, executive director, A.A.P.G., Tulsa, Oklahoma; G. M. KNEBEL, Standard Oil Company (N. J.), New York; PAUL L. LYONS, Anchor Petroleum Company, Tulsa; JOE B. HUDSON, Humble Oil and Refining Company, Los Angeles.