

THE WEST COLUMBIA SALT DOME AND OIL FIELD

BY DONALD C. BARTON

Abstract

Prospecting started at West Columbia shortly after the discovery of the Spindletop field. The early tests were shallow, but encountered small amounts of oil. The old or Southeast field was not brought in until 1918 and the late spring of 1920 was at the crest of its productivity. In the following July the new or North field was brought in by the Texas Co.'s Abram No. 1.

West Columbia lies in the belt of Peistocene coastal prairie bordering the Gulf Coast. The surface mound is a faint one of the central depression type, somewhat obscured by erosion.

West Columbia is a characteristic salt dome with a steep sided, flat topped core of salt, a cap of gypsum, and sedimentary beds dipping quaquerversally away from the salt core. Fossils from one well and a study of the well logs shows that the deepest wells probably reach to the lower part of the Corrigan formation.

The productive sands at West Columbia are found only in the deep lateral sands on the flanks of the dome, probably in the upper part of the Corrigan formation. The oil is of 22° 2 Baume and around 110° F. Although this temperature is above the average for the Gulf Coast fields, the temperature gradient is extremely low. West Columbia is a very productive field. The per acre production of the field is over 125,000 bbls. and for the leases of one company is over 943,500 bbls.

Illustrated by a topographic map, a generalized structure section, graphs of production, of field as a whole and of Sun Co.'s, and Crown O. & R. Co.'s, leases, characteristic graphic logs, and composite graphic logs.

A SHORT SKETCH OF THE PALEOGEOGRAPHY AND HISTORICAL GEOLOGY OF THE MID-CENTRIF OIL DISTRICT, AND ITS IMPORTANCE TO THE PETROLEUM GEOLOGIST

BY ALEX W. MCCOY

Abstract

The essential points in the stratigraphy of the Mid-Centrif region with maps of outcrops, correlation of formations and a review of previous work are presented in introduction. Paleogeographic maps based on detailed stratigraphic studies are presented and their significance in relation to the occurrence of oil at various horizons considered. The probable origin of the oil in shale, the most favorable basins from a paleogeographic standpoint, problems of accumulation of oil, production zones in relation to historical geology and the relation of production to structure are considered. The reasons for basin movement, the mechanics of mountain