

PETROLEUM GEOLOGY OF THE MEAD S.E. FIELD, JONES COUNTY, TEXAS

The Mead S.E. Field is a multi-zone field located north from the town of Merkel in southwest Jones County, Texas. The field has produced from the Gunsight Limestone, Swastika Sandstone and the Cook Sand.

The exploration method is unknown, but single-fold seismic may have been used. It appears the discovery well was the No. 1-A Dunagin, drilled in 1953 by Hodges & Hodges in Section 16 T&P RR Co Survey Block 17.

At least thirty-two (32) producing wells have been drilled in the field. Between December 1953 and July 2002 the Cook Sand, Swastika Sand and Gunsight Lime have combined to produce over 1.027 MMBO.

Most of the drilling in the field took place prior to the development of the density log. Resistivity logs and microlateral logs are the principle well logs available. The SP curve can be used to evaluate reservoir quality. The SP curve is qualitatively analyzed as being poor, fair, good or excellent depending on the deflection of the curve in the formation of interest. Little to no deflection is considered poor and is referred to as the baseline. As the SP curve deflects from the baseline the reservoir class will change from poor, to fair, to good and in extreme cases as excellent. The SP curve can be compared with the SP in other well logs, by normalizing the SP log grid scale. By using the same grid scale for all well logs, the SP can be directly compared. The magnitude of the grid units is immaterial, as long as the same unit is used for all well logs. For purposes of mapping, the deflection has been assigned a percentage between the zero baseline and the maximum deflection (0% to 100%).

The Mead S.E. Field can be used as an analog in exploring for Swastika Sand and Gunsight Lime in mature portions of the Eastern Shelf region.