SUBSURFACE PENNSYLVANIAN GEOLOGY EASTERN COKE COUNTY, TEXAS

by

Jack H. Mayfield, Jr.
University of Texas, Master of Arts thesis, 98 p., appendix
with stratigraphic data from 212 wells, 12 maps, 11 secs . , 1965

ABSTRACT

Based on electric and sample logs, this study presents a three dimensional interpretation of the subsurface geology of eastern Coke County, Texas, along the Fort Chadbourne fault zone. The Drills have penetrated rocks of Permian, Pennsylvanian, Ordovician, Cambrian and Precambrian rocks to a maximum total thickness of 8,000 feet. Sharp folds and faults along the north-south Fort Chadbourne fault zone have created structural traps for oil accumulation in Cambrian, Ordovician, and Pennsylvanian reservoir rocks, and numerous stratigraphic traps exist in gently dipping Pennsylvanian strata. Extensive limestone masses generally called reefs exist at various levels and disappear laterally into nonreef rocks. The varied facies encountered in Pennsylvanianand Permian strata are related to the geological history of the Concho platform portion of the Texas peninsula. Movement along the complex faults began as early as Cambrian time and continued intermittently through the Wolfcamp Epoch o f the Permian period.