

SEARCH FOR THE SUBTLE TRAP HYDROCARBON EXPLORATION IN MATURE BASINS

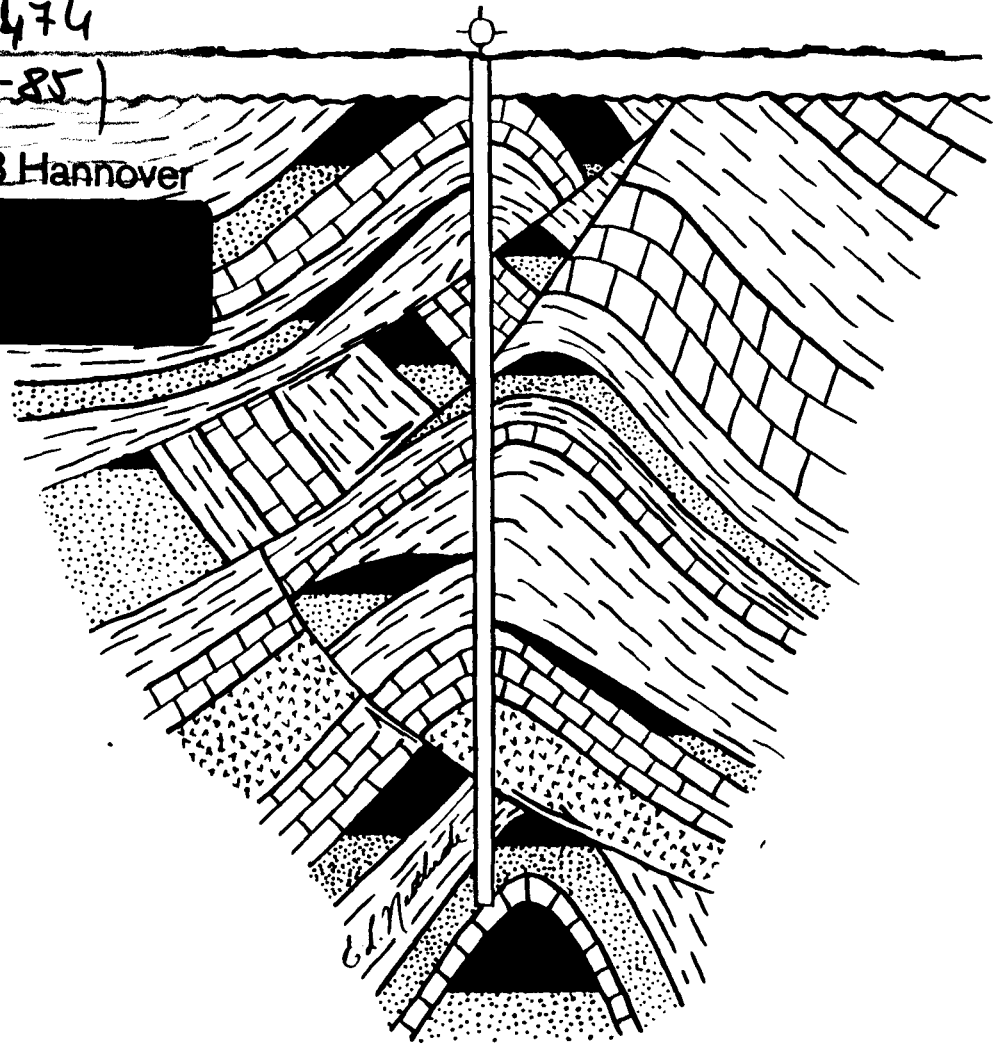


WEST TEXAS GEOLOGICAL SOCIETY
SYMPOSIUM
OCTOBER 19-20, 1989

RR 474

(89-85)

UB/TIB Hannover



J.E. FLIS, R.C. PRICE, & J.F. SARG, EDITORS

PUBLICATION NO. 89-85

TABLE OF CONTENTS

In Search of the Subtle Trap—Exploration Philosophy, Methodology and Considerations with Selected Examples Robert G. Font	1
Selecting Exploration Targets Henry W. Dejong	11
Development of an Exploration Strategy Lee G. Gerhard	13
Paleo Structure: Treasure Map to the Subtle Trap Wayne M. Ahr	39
Finding Hydrocarbons in Fault Traps Marlan W. Downey	51
Peterson and South Peterson Fields, Roosevelt Positive, Roosevelt County, New Mexico W. R. Green and J. C. Schlueter	53
Mescalero Escarpe Field, Oil from Carbonate Slope Detritus, Southeastern New Mexico A. H. Saller, J. W. Barton and R. E. Barton	59
New Exploration Targets in Northern Midland Basin: Depositional and Diagenetic History of the West Smyer Field, Hockley County, Texas A. F. Griffin and J. A. Breyer	75
Lower Middle Pennsylvanian Gobbler Formation: Using Cyclicity in Shelf Carbonate to Unravel Basin History Thomas Algeo	87
High Resolution Seismic and the Search for the Subtle Trap James A. Wells	89
Seismic Recognition Criteria of Submarine Fans R. D. Erskine and H. W. Posamentier	117
Seismic Modeling of a Mixed Carbonate-Siliciclastic Prograded System, Middle Permian, Permian Basin D. G. Harris and J. F. Sarg	119
Radiometric, Magnetic and Hydrocarbon Anomalies: Alabama Ferry Field, Leon and Houston Counties, Texas Donald F. Saunders, K. Ray Burson, J. F. Branch and C. Keith Thompson	139
Application of Satellite Imagery Analysis to Exploration of Oil > Gas Reservoirs - USA J. H. Bartley	149
Correlation and Facies Analysis in Exploration for the Subtle Trap with the Siluro-Devonian of the Anadarko, Arkoma and Permian Basins James Lee Wilson, Zuhair Al-Shaieb and Richard D. Fritz	151
Subtle Traps in Ordovician to Permian Carbonate Petroleum Reservoirs, Permian Basin: An Overview S. J. Mazzullo	155
Seismic and Landsat in a Wrench Faulting System G. Pat Bolden	181
Hidden Structures in the Permian Basin Jack G. Elam	191
Paleozoic Framework of the Gulf of Mexico M. L. Feldman	199

The California-Tamaulipas Geosuture: A Review of Some Facts, Interpretations and Speculations Grover E. Murray	211
East Taft Field, San Patricio County, Texas: A Subtle Stratigraphic Trap-Implications for Exploration in a Supermature Province R. R. Railsback	223
Environment of Deposition and Reservoir Morphology of Lower Pennsylvanian Morrowan Sandstones, South Empire Field, Eddy County, New Mexico Rebecca B. Lambert	235
The Occurrence of Uranium as Related to the Diagenesis of Morrow Sandstones, Empire South Field, Eddy County, New Mexico Miles Denham, M. H. Niemann and T. T. Tieh	243
Upper Morrowan "B" Sandstone Reservoir, Flank Field, Baca County, Colorado Dudley W. Bolyard	255
Porosity Development in Sandstones Beneath Erosional Unconformities G. Shanmugam	269
The Lower Morrow Sands and their Seismic Expression, Western Anadarko Basin Jens Halverson and Don Robinson	283
Depositional History and Performance of a Bell Canyon Sandstone Reservoir, Ford-Geraldine Field, West Texas Robert W. Ruggiero	289
Delineation of Oil and Gas Fields Using CSAMT: A New Tool for Exploratory and Developmental Drilling A. Ostrander	299
Reservoir Heterogeneity: A Cause of Pessimistic Well Log Evaluations of Subtle Traps R. D. Nurmi	303