
INTERNATIONAL EXPLORATIONISTS

INTERNATIONAL EXPLORATIONISTS DINNER MEETING—MAY 17, 1989

ROBERT BRUCE CLINE—Biographical Sketch



Robert Bruce Cline, chief geologist, Pecten International, joined Pecten in May, 1988 after 20 years in domestic exploration. He received a B.S. in Geology from Lamar University in 1965, and an M.S. in Geology from the University of Nevada in 1967.

Mr. Cline joined Shell in 1967 as an exploitation engineer in Midland, Texas. He has served as geologist, district manager, manager of geology and chief geologist

within the Shell Oil companies. He authored the Kerr Basin chapter of the Geological Society of America DNAG volume on North American Craton.

THAYYEM FIELD DISCOVERY: SYRIA'S EUPHRATES GRABEN

A Pecten International-led exploration group (Pecten, Shell, Deminex, Syria Petroleum) established the first commercial oil discovery in the Euphrates Graben area of Syria in 1984 with the discovery of the Thayyem field. The discovery well, the Thayyem No. 1, located 15 km south of the town of Deir Ez Zor in eastern Syria, tested 5,885 BOPD, 36.4°API, low sulphur crude from the Lower Cretaceous Rutbah sandstone at approximately 9,800 feet.

The Thayyem discovery was the culmination of an exploration effort that included basin analysis and hydrocarbon habitat studies over much of Syria. The study team consisted of explorers from Pecten, Shell and Syria Petroleum Co.

The Euphrates Graben consists of pre-Early to Middle Cretaceous sedimentary sequences, which are rifted into rotated fault blocks, covered and infilled by Upper Cretaceous and Tertiary strata. A marine incursion into the rift setting resulted in the deposition of rich source rocks which may provide a charge, if mature, and seal to the rotated and eroded fault blocks. These blocks may contain the Lower Cretaceous Rutbah and/or Triassic Mulussa reservoir units. Minor post-rift adjustments caused limited structural inversion and reverse movement along fault zones.

Local geological factors at Thayyem include an up-thrown fault block of Lower Cretaceous Rutbah bounded by a down-to-the-graben fault of varying throw and slight lateral movement, an across-fault charge and a gently folded sealing section. Estimated ultimate recovery for Thayyem field is 150 MMBO.

Continued exploration by Al Furat Petroleum Co. (Pecten, Syrian Shell Petroleum Development, Deminex, Syria Petroleum Co.) led to substantial additional discoveries in Deir Ez Zor block, and an ongoing exploration and development program in the adjacent Ash Sham block.