

## Anadarko's Experience in Algeria: A Case History

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In 1986 Anadarko began a regional evaluation of the Algerian Saharan basins at a time when most of industry was exiting and new petroleum legislation was being written. Senior management promoted a vision for a long term exploration commitment commensurate with the opportunity for finding significant petroleum reserves.

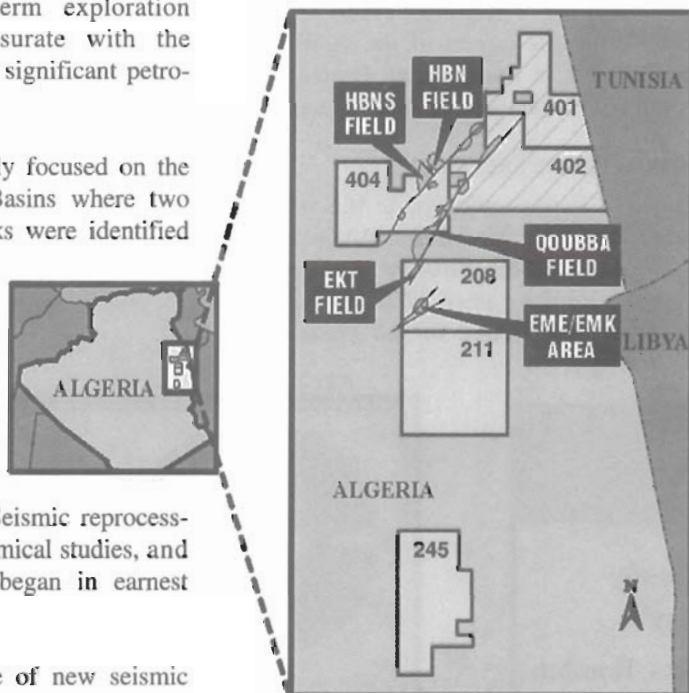
Technical efforts quickly focused on the Ghadames and Illizi Basins where two world-class source rocks were identified and multi-pay potential existed. A contract with Sonatrach was signed in 1989, committing Anadarko to a ten-well exploration program on four blocks totaling 5.2 million acres. Seismic reprocessing, acquisition, geochemical studies, and stratigraphic studies began in earnest in 1990.

During the early phase of new seismic acquisition, the lure of the "big trap" led to the initial wildcat drilled in 1991, resulting in a dry hole. Many companies might have sought an exit strategy at this point. With the unwavering support of management, Anadarko continued technical evaluation with increased emphasis on migration pathways, regional reservoir studies, and new seismic acquisition. As work continued, the second well was successful in 1993. Data from the drilling and ongoing seismic acquisition programs continued to be integrated into a more coherent picture.

New emphasis was given to seismic imaging, hydrocarbon charging, and the depositional setting of the Triassic sandstone reservoirs. With a better understanding of the overall petroleum system, Anadarko drilled five more new field discoveries

in the period 1994 through 1996. Recoverable reserves for the discoveries total 1.5 billion barrels of oil.

Key elements in achieving this success include: management vision and support; A strong relationship with Sonatrach based on mutual respect which fostered their making significant contributions, including



the benefit of ideas, experience and access to their extensive database; Initial block selection; improved seismic imaging; teamwork, tenacity and technical excellence on the part of the staff; and flexibility to learn from both our successes and failures to improve exploration models and drilling techniques.

### Biographical Sketch

**Richard Hook** received his B.S. in Geology from University of Oregon in 1977 and his MS from Oregon state in 1981. He joined Anadarko in 1980 in Oklahoma City and worked on the Algeria project from 1989 to 1994. He is currently exploration manager for Africa and the Middle East for Anadarko, based in

Houston.

**Robert Daniels** received his B.A. in economics from the Colorado College in 1981 and his M.S. in geology from Colorado School of Mines in 1985. He joined Anadarko in 1985 in Denver. He has worked on the Algeria project since 1992. Daniels is manager of geology for Anadarko Algeria, based in Uxbridge, England.

**James Emme** received his B.S. in geology from the University of California at Davis in 1978 and his M.S. in geology from Colorado School of Mines in 1981. He joined Anadarko in 1981 in Denver. He has been involved with the Algeria project from 1986 to 1992. Currently Emme is Anadarko's onshore exploration manager for North America, based in Houston.

**Francois Gauthier**, exploration manager for Anadarko Algeria Corporation in Uxbridge, U.K., joined Anadarko in 1982 in the Calgary office as Division Geologist. Mr. Gauthier received both his diploma in engineering and science in 1973, and his B.Sc. with honors in geology in 1976 from McGill University.

**Brian Sunderland** received his B.Sc. in physics from Reading University in 1968. Presently, he is manager of geophysics for Anadarko Algeria Corporation, based in Uxbridge, U.K. He joined Anadarko in Houston in 1981. He has worked in various areas, including Asia, Europe, Africa, and North America.

**Robert Lunn** joined Anadarko in Houston in 1985 after five years with Gulf Oil in New Orleans. He earned his B.S. from the University of Texas at El Paso in 1980. Mr. Lunn is currently exploration manager for South America and the North Atlantic.

*Note: The reservation code for this meeting is 5-0-3.*