International Explorationists Meeting

Monday, February 16, • Westchase Hilton • Social Hour 5:30 p.m., Dinner 6:30 p.m.

Qarun and Beni Suef Oil Discoveries, Western Desert, Egypt

by Michael Nemec and Gerald Colley, Seagull Energy International

Exploration drilling since 1994 has resulted in six new Egyptian field discoveries, four of which are currently producing approximately 40,000 BOPD. Primary production is from the Cretaceous Bahariya and Kharita sandstone reservoirs, as is typical in the Western Desert. The area is fast becoming the newest and largest oil producing province. The Qarun Field is emerging as the largest and most prolific oil field in the Western Desert.

Qarun Field lies on the southeast flank of the Kattaniya uplift and the northwest flank of the Cenozoic Gindi Basin 80 km southwest of Cairo. The Kattaniya uplift is an inverted Mesozoic basin containing thick Middle Jurassic Khatatba oil-prone source rocks. The oil migrated southeastward to charge Qarun field along a NE-SW trending intrabasinal paleo arch, separating the Kattaniya inverted basin from the Gindi basin.

The Qarun and Beni Suef oil discoveries lie just south of Cairo, adjacent to the Nile River, within the Qarun and East Beni Suef concessions, in a readily accessible area. The region has been previously explored by Shell, Amoco, Esso, and Braspetro. Seagull Energy International and Apache Corporation are currently exploring in conjunction with the Egyptian General Petroleum Corporation (EGPC).

Qarun Field (A lobe) was discovered in October 1994 by Phoenix Resources Company with partners Apache Corporation and Global Natural Resources (now Seagull Energy). The drilling of the El-Sagha 1-A wildcat encountered oil pay in both Cenomanian Bahariya and Albian Kharita sandstones. The updip El-Sagha 3-X confirmation well encountered over 285 feet of net oil pay in the Bahariya and Kharita sands in a continuous gross oil column over 500 feet thick. The well tested at an aggregate rate of 11,957 BOPD of 42° gravity oil. Primary reservoirs are found at depths between 8700 and 9400 feet. The Qarun oil field complex (A, B, and C lobes) consists of two en echelon compressional folds trending northeast and southwest established along the upthrust sides of two faults.

During September 1996, the C-1X well opened up Qarun Southwest Field (C lobe), logging 275 feet of net oil sand in the Bahariya and Kharita formations. The well tested at a combined rate of 4600 BOPD. Also during that month, the Wadi Rayan 1-X wildcat, situated 55 km south of Qarun field on the south flank of the Gindi Basin, tested 950 BOPD of 25° gravity oil from Cenomanian Abu Roash "G" sandstones at 5500 feet. This discovery opens up a new exploration trend in the southern portion of the Qarun concession.

Farther south, 75 km from Qarun field, within the adjacent East Beni Suef concession, the Beni Suef-1-X wildcat tested 40° gravity oil from the Bahariya and Kharita formations at a depth of approximately 7000 feet at an rate of 6976 BOPD during September 1997. This well, operated by Seagull Energy International with partner Apache Corporation, confirms a new productive basin that seismic data indicate extends eastward across the Nile River.

Biographical Sketches

Michael Nemec received his B.S. in geology from the University of Houston in 1977. He joined Seagull in 1997 as Qarun Project coordinator. He has been involved in Western Desert exploration since 1984 when he was with Phoenix Resources Company.

Gerald Colley is senior vice president international exploration and production for Seagull Energy Corporation. From 1973 to October 1992 Mr. Colley held a variety of technical and management positions with several major and independent oil and gas exploration and production companies including Texaco and Kerr McGee. Colley earned a B.S. in geology from the University of Exeter, England, and a M.Sc. in geophysics from the University of Durham, England.

Please make reservations by Feb. 13th reservation code is 5-0-3

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