

## A Legend in the Making: Nansen Field, East Breaks, Deepwater Gulf of Mexico

Nansen Field was discovered in May 1999 by Kerr-McGee Corporation and Ocean Energy and fast-tracked to first production in January 2002. Named after the great Norwegian explorer, zoologist and humanitarian Nobel peace prize winner of 1922 Fridtjof Nansen, the field is located in the western Gulf of Mexico in East Breaks Block 602, approximately 160 miles southwest of Houston.

The field was initially characterized as a “bright spot” with a Class 3 AVO anomaly-supported gas field; but after the first several wells were drilled, numerous gas/oil contacts were discovered with significant downdip oil potential in sands thickening to the south. The amplitude anomalies turned out to be large gas caps on top of considerable oil legs. The reservoirs are associated with structural traps consisting of three stair-stepping NNE–SSW trending normal fault compartments containing Pliocene/Pleistocene turbidite sand reservoirs with very good sand quality. Despite the drilling of approximately 30 dry-tree and subsea wells in the initial exploitation phase, no downdip oil/water contacts have yet been penetrated.

The pre-drill reserve estimate was about 117 MMBOE; the current estimate for both the NW Nansen and Navajo subsea tie-backs is about 225 MMBOE. The field, at a water depth of 3650 ft, produces from a Truss SPAR design facility with a capacity of 40 MBOPD and 250 MMCFD. Currently, 9 dry-tree wells and 6 subsea wells produce oil and gas at 19 MBOPD and 105 MMCFD. Recently identified prospects to the south could add an additional 55 MMBOE to the Nansen total estimated ultimate recovery. The Pliocene/Pleistocene deepwater reservoirs still have great potential with ever expanding opportunities resulting from using new and advanced high-quality seismic data and 3D visualization techniques. ■

### Biographical Sketch

RAMAZAN YILMAZ works for the Gulf of Mexico Deepwater Development business unit of Anadarko Petroleum, where he is assigned to the Nansen Field as a development and production geophysicist. He earned a BSc in geological engineering from the Technical University of Istanbul (ITU) and an MSc in structural geology from the Center for Tectonophysics, Texas A&M University.



Ramazan has 10 years of industry experience in development, production and exploration geoscience.

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His BSc involved field mapping turbidite facies in the northern fold and thrust belt of the Black Sea foreland basin. His MS thesis focused on deformation, faulting, fault structures and shale smear effects on fault sealing capacity in outcrops of interbedded sands and shales of the Eocene Carrizo Formation. He has worked for the National Oil and Gas Company of Turkey mapping carbonate facies in the Miocene passive margin platform of the Taurus Mountains in southern Turkey. He worked as a geoscientist for Schlumberger from 1998 to 2004. Ramazan joined Kerr-McGee Oil and Gas Corp. in 2004 and now works as a Senior Development Geophysicist for Anadarko Petroleum. His responsibilities include interpretation, mapping and characterization of reservoir sands in Nansen Field as well as looking for infill and nearby exploration and/or development opportunities to extend Nansen Field's life beyond 2021.