

Westchase Hilton • 9999 Westheimer

Social Hour 5:30-6:30 p.m. • Dinner 6:30-7:30 p.m.

Cost: \$28 pre-registered members; \$35 for non-members & walk-ups; Emeritus/Life/Honorary: \$14; Students: FREE

To guarantee a seat, you must pre-register on the HGS website and pre-pay with a credit card.

Pre-registration without payment will not be accepted.

You may still walk up and pay at the door, if extra seats are available.

Carol Law

*Exploration Manager East Africa
Anadarko Petroleum*

Northern Mozambique—True Wildcat Exploration in 2009

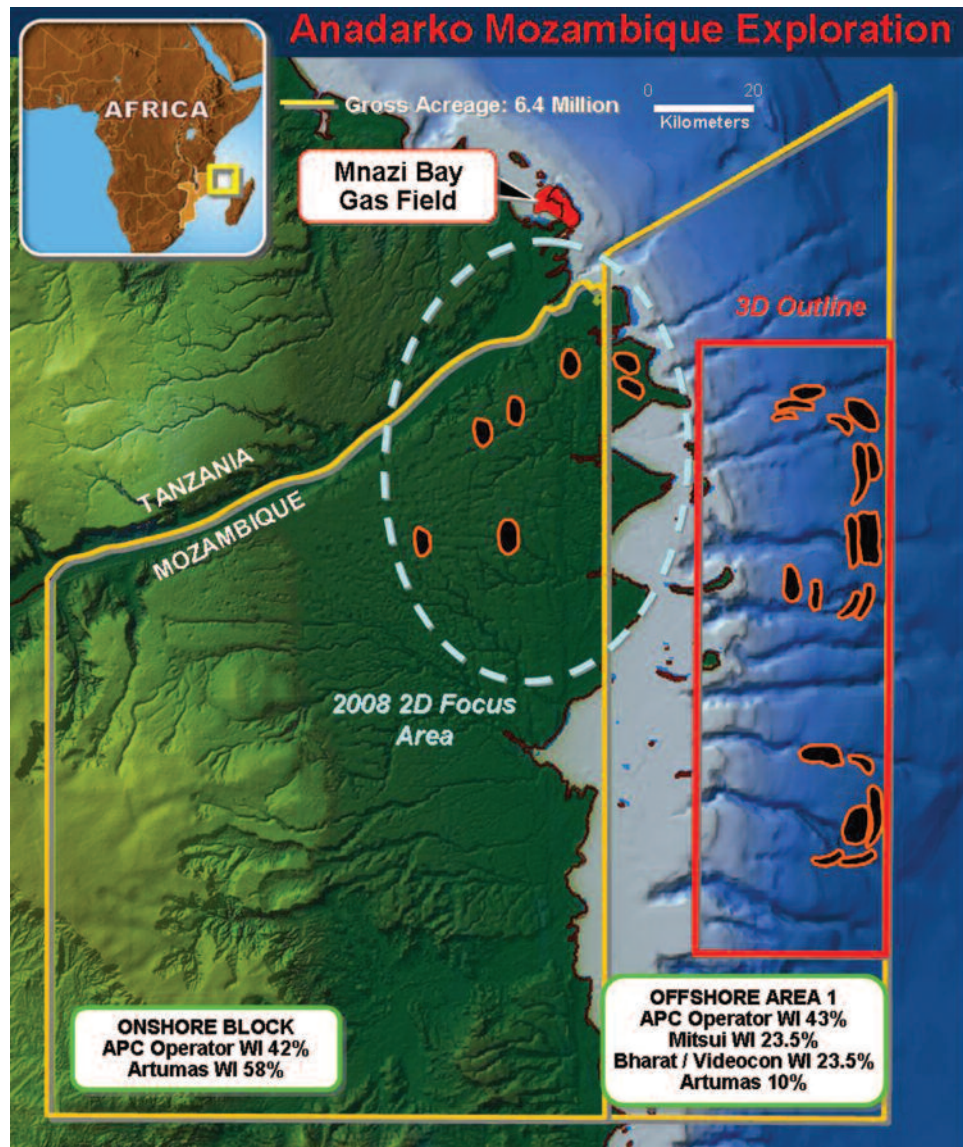
The petroleum systems of East Africa have gained a lot of attention in the last few years with most of the offshore area from the Mozambique Rovuma Basin north into Kenya being under contract by both large and small companies in hopes of finding the next big petroleum frontier. Hints of active petroleum systems can be seen in numerous hydrocarbon seeps along the coastal region. Recent exploration successes by Tullow Oil in the modern grabens of the East Africa Rift system of Uganda as well as the 2006 Mnazi Bay discoveries in southern Tanzania by the Artumas Group have given hope to those of the rest of us who are brave enough to venture there.

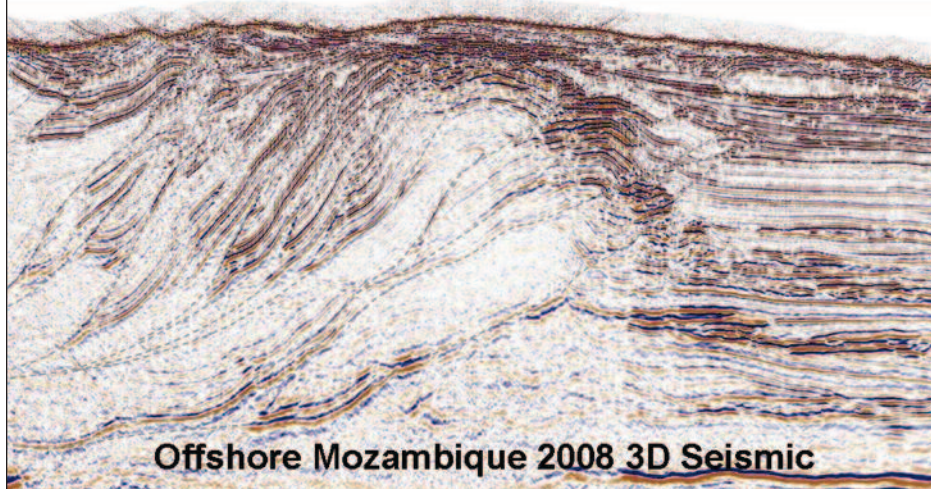
Anadarko Petroleum operates two concessions in the remote reaches of northern Mozambique: the Rovuma Offshore Area 1 and the Onshore Block. The Rovuma Basin contains one of the few largely unexplored Tertiary deltas in the world. The two concessions cover a combined area of approximately 25,822 square kilometers (about 6.38 million acres) along the border with Tanzania (Figure 1). Anadarko Petroleum is committed to an eight-well drilling campaign over the next three years: one onshore well, three shallow water wells, and four deepwater wells.

The stratigraphic section is composed of Permo-Triassic to Plio-Pleistocene-aged sediments in a variety of structural settings. Play

types include Tertiary extensional regimes, complex fold and thrust belts, deep-water basin floor-fan stratigraphic traps, and Karoo horst blocks. Data in the concession areas are very limited. Available data are from one exploration well, approximately

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survey area in coalescing strike-slip collapse systems. The northern and southern extents of the 3-D survey area are relatively undeformed. This permits an interpretation of sequence-stratigraphic depositional systems that can be carried into the structurally-complex portions of the concession block.

The remoteness of the area adds a level of complexity rarely found in today's exploration concessions. Environmental concerns and lack of existing infrastructure have made this much more challenging than a conventional exploration opportunity. Some of the world's most pristine eco-tourism resorts are found on islands in the offshore area. The northernmost regions of Mozambique have been completely untouched by modern technology and conveniences that all of us are accustomed to.

Anadarko Petroleum and its partners are excited to be leading the hunt for "elephants" in remote northern Mozambique and are preparing to drill the first wells a wildcat program in late 2009 with our sights set on opening up a new frontier. ■

4,200 kilometers of vintage and recent 2-D seismic, and a 2008 proprietary 3,300 square-kilometer deep water 3-D seismic survey.

The Rovuma Basin is dominated by a Tertiary delta deposited on relatively undeformed Cretaceous and older sediments. It is a classic example of a linked extensional-contractional system. Early Tertiary to present-day deformation is interpreted to be in response to up-dip sediment loading and regional tilting above a master detachment in strata of late-Cretaceous to early Tertiary-age.

The recently acquired 3-D seismic data from offshore Area 1 reveal an area dominated by the complex interplay of two east-west trending fold and thrust belts that converge near the center of the 3-D

Biographical Sketch

CAROL LAW is currently the Exploration Manager for East Africa and the Caribbean at

Anadarko Petroleum in The Woodlands, Texas. She has worked on international and Gulf of Mexico exploration projects for the past 25 years



with several major and independent oil and gas companies. Her primary areas of technical expertise are petroleum systems modeling and geochemistry. She authored the "Evaluating Source Rocks" chapter of the American Association of Petroleum

Play types include Tertiary extensional regimes, complex fold and thrust belts, deep-water basin floor-fan stratigraphic traps, and Karoo horst blocks.

Geologists' treatise entitled *Handbook of Petroleum Geology – Exploring for Oil and Gas Traps*.