**Gulf of Mexico Shelf: Exploration in a Mature Province**

by Ken Butler, Shell E&P Division, Shell Offshore Inc.

The Gulf of Mexico Shelf is a mature province where the discovery of new, profitable hydrocarbon reserves is a difficult endeavor. However, through the aggressive application of technology and innovative tactics, industry has responded to the difficult environment, and the Shelf has reemerged as a viable, active exploratory arena. Some key components of the current Shelf exploratory environment are as follows:

- Use of multidisciplinary work teams and an emphasis on integrating exploration and development activity
- Work process examination and improvement
- Application of leading-edge technology (for example, 3-D seismic and horizontal drilling)

- Use of Information Technology and interpretive workstations to provide flexible, cross-disciplinary access to subsurface data
- Continued reduction in cycle time from discovery to first production
- Use of innovative structure designs for development in order to keep costs and cycle time low; emphasis on lowering field production costs
- Pursuit of new play concepts (for example, sub-salt)

The Shelf should continue to be an active, thriving arena for years to come. This will require a continued openness to learning, to the application of new technology and tactics, and to maintaining cost effectiveness and productivity.

**Biographical Sketch**

Ken Butler is currently Division Exploration Manager for Shell E&P, Shell Offshore Inc. He holds B.S. and M.S. degrees in geophysics from Texas A&M University. His assignments with Shell have covered seismic acquisition and processing operations, 3-D seismic research, exploration economics and planning, and exploration management in the Gulf Coast onshore, deepwater, and shelf.