

# Deepwater Projects Abound in the Gulf of Mexico

By Louise Durham

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Today, it's increasingly common to see drill holes punched in water depths of several thousands of feet.

Onshore, the myriad and comparatively inexpensive shale-focused wells have many operators struggling for their financial lives as oil prices continue to fall.

Yet the pricey action in the many challenging GOM deepwater fields goes on unabated, for the most part.

The timeline for these usually huge finds can easily stretch out for almost a decade from prospect status to production. This means these efforts aren't based on the "high today/low tomorrow" commodity price cycles. Plus, the long-term projects ordinarily have the huge reserves base needed for years-long production, once they come online.

Ongoing advances in technology to increase efficiency while lowering costs also play a key role in this region's activity.

It's only fitting, then, that an entire day at the upcoming 2015 annual convention of the Gulf Coast Association of Geological Societies in Houston will focus on the deepwater Gulf action.

The morning and afternoon sessions together feature a stellar array of 11 deepwater projects, including such heavy hitters as Shell's Appomattox development, Chevron's Tahiti, BP's Mad Dog and Petrobras' activity in the Chinook and Cascade fields.

The All-Convention Luncheon presentation is a not-to-be-missed opportunity to get up to speed on the deepwater environment.

Dubbed "Chevron's Key Discoveries and Development in the Deepwater Gulf of Mexico, A Story of Steady Growth," it promises to provide an intriguing tale of the company's numerous successful efforts in this locale.

The presentation will be delivered by Ken Eisenmenger, deepwater general manager of Chevron North America Exploration and Production Company.

Among Chevron's other Gulf success stories, he will highlight the recent Jack/St. Malo development as an example of overcoming the challenges and delivering a world-class project in the subsalt Lower Tertiary Trend.

## **Worth Its Salt**

Sub-salt is essentially synonymous with deepwater GOM activity today.

It wasn't always this way.

"During the first 40 years of offshore GOM industry exploration, all petroleum reservoir objectives were suprasalt, or above all sheets or beds of salt," said AAPG member Clint Moore, vice president at GulfSlope Energy.

Moore conceived and developed the daylong event for GCAGS and will represent his company on the program, discussing potential oil and gas fields for deepwater slope sands and reservoirs.

As Gulf exploration and research evolved over time, the region's many massive horizontal, allochthonous salt sheets originating from Jurassic salt were determined to cover thick, untested sedimentary sections containing reservoir quality sand bodies and effective sealing shales, Moore explained.

Drilling through these salt sheets is sometimes a big challenge, particularly when it comes to subsalt pressures. Obtaining and interpreting clear seismic data is a story on its own.

The potential for tapping into huge reserves trapped in the underlying sediments makes these areas worth the risk and the price, though.

"Explorers have always known the Gulf of Mexico to be a world class exploration basin," Moore said, "with tremendous potential."

## **Dead Wrong About the 'Dead Sea'**

In times of industry downturns and well mishaps, the Gulf was often derided as the "dead sea."

Not so, Moore insists.

"In its latest report on future GOM petroleum potential, BOEM reported that the GOM has tremendous recoverable petroleum resources, with over 50 billion boe yet to be discovered," he said. "Much of it will be sub-salt and found in slope-basin floor sand reservoirs."

"The Gulf of Mexico has never been a 'dead sea,'" he exclaimed.

When queried as to why he would take on the huge task of assembling such a profound group of speakers and presentations scheduled for the GCAGS, his enthusiasm was palpable.

"My primary goal in proposing this GOM deepwater fields session in the first place was to create the biggest session ever attempted in GCAGS or AAPG history on what makes offshore GOM deepwater productive fields geologically successful," Moore said.

He emphasized that it's a unique opportunity to spend a day totally immersed in better understanding and comparing the premier deepwater GOM fields of today.

"This will likely be a historic session and benefit everyone that attends it with key geological understandings of how and why the GOM continues to be one of the world's premier oil and gas producing basins," Moore noted.

"By better understanding how and what's been discovered so far," he said, "we can then more successfully explore and discover new giant fields tomorrow."