

Technology Drivers for Deepwater: What is Coming Next

Jim Maher
Horton Wilson Deepwater

The majority of non-OPEC new oil production coming on-line over the last 10 years has been due to the emergence of the deepwater production frontier, primarily in the “Golden Triangle” of the Gulf of Mexico, Brazil, and West Africa. This progression into increasingly deeper waters, combined with the new reservoir horizons that have become accessible using improved seismic acquisition methods, has led to substantial evolution of the available drilling and production technologies.

Three major factors affect the market today that could reshape the standard methods for developing oilfields, which include:

- New Technical Drivers - Increasingly higher pressures and more complex production characteristics in the reservoirs that have been recently discovered.
- More Comprehensive Safety Standards – additional levels of redundancy may be required in light of the Macondo incident.
- Changes in Appraisal – Recent industry studies have demonstrated that the existing appraisal processes that are routinely followed have failed to capture the reservoir complexity, leading to poor performance on many of the reservoirs.

All three of these factors could lead to significant changes to the development methods and architectures that will be used in the deepwater. In my discussion, I will describe each of these and list the potential implications and technologies that may affect the next round of deepwater development.