



## 2005 Exploration Round-Up

Posted by [Bubba](#) on March 1, 2006 - 6:45am

Topic: [Geology/Exploration](#)

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Looking back on the plus or minus 15 billion dollars (my estimate from studying Wood MacKenzie and other data) that publicly-traded companies spent on exploration in 2005, what did they get for their investment, and what are the themes that emerge? Who were the winners and who were the losers? Where is the action and where have these companies given up on?

First of all, my reading of the data, plus my own personal experience leads me to discern the following themes: Deeper water, deeper reservoirs, smaller discoveries, more gas, less oil.

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### Deeper water, deeper reservoirs

Over a third of all discovered volumes from 2005 came from deepwater basins. Of the three most significant deepwater basins from an oil-production perspective - the Gulf of Mexico, the Gulf of Guinea off the coast of West Africa, and offshore Brazil - deeper water and deeper reservoirs are definite themes. Exploration wells in the GOM are commonly being drilled in water depths greater than 9000 ft with total well depths greater than 30,000 ft. Exploration well costs are running up to and over \$100 million per well (with daily deepwater rig rates running upwards of \$500,000 per day). Currently ExxonMobil is in the midst of drilling the renowned Blackbeard West well. This well is being drilled in shallow water off the coast of Louisiana with a prognosed TD of greater than 30,000 ft. Rumors have it that the well cost was already over \$100 million with 9,000 ft remaining to drill.

### Smaller discoveries

No truly significant discoveries were reported in 2005. There were no billion barrel (or barrel equivalent gas fields) announced in 2005. Even more ominous, IHS reports that potentially producible volumes from world discoveries in 2004 and 2005 were the lowest recorded since WWII. Overall they report 4.5 billion barrels of oil and 32 TCFG from 320 discoveries worldwide for 2005. As a comparison, 4.5 billion barrels of oil is a 53 day supply of the world's oil usage.

Some of the more notable discoveries include Knotty Head in the deepwater GOM (GC 512) which has had some speculation that it could contain 500 million barrels of recoverable oil.

Angola's Deepwater Block 31 had 5 discoveries that combined are estimated to contain over 600 MMBO of oil.

And not strictly in 2005, but in January of 2006 Lukoil reported a Caspian discovery (Y-Rakushechnaya) containing and estimated 600 million barrel equivalent of oil and gas.

### More gas, less oil

Shwe Phyu 2 in Myanmar is a gas discovery that has a reported 650 million barrel equivalent of recoverable gas. Elsewhere, some big gas discoveries in Australia (Pluto 1, Caldita 1), gas discovered off eastern India in the deepwater portion of the Krishna-Godavari basin, also sizeable finds were reported in Iran, China, and Peru

### **Emerging plays and other areas**

In Brazil a newly emerging play involves drilling through and below the Aptian-age salt in the Santos Basin to test potential oil or gas reservoirs below the salt. As usual in Brazil, Petrobras is leading the charge, but Exxon, Shell, Statoil, British Gas and others are involved as well. This is extreme wildcat exploration, no with reported discoveries to date. The companies involved in this play are spending hundreds of millions of dollars on something that may turn out to be a complete dud.

In the GOM most of the action continued to be in the eastern and western Paleogene play and the Miocene structure play below salt. The Paleogene has had a lot of action with billions of barrels of oil discovered in place, but the combination of extreme deepwater, deep reservoirs, low permeability, and undesirable fluids has left oil companies scratching their heads about what to do with all of these barrels in the ground.

In Europe I would characterize the 2005 results as more of the same - a couple of small (less than 100 MMBO) oil discoveries in the UK portion of the North Sea, with some sizeable gas finds in the Norway portion of the North Sea.

So to answer some of the questions above - who won and who lost in 2005. None of the IOC's appear to be big winners. Of the 9 discoveries reported to be greater than 100 million BOE, the operators include BP, Woodside, Daewoo, Shell, Lukoil, ONGC, ConocoPhillips, Unocal, and Gujarat SPC.

Overall I would say we are all losers. More money chasing smaller volumes in more and more difficult areas. The remaining unexplored areas of the world are fewer and fewer. Not a lot of smiley faces here.



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