Oil Industry Sets a Brisk Pace of New Discoveries

By JAD MOUAWAD – The New York Times – 24 September 2009

The oil industry has been on a hot streak this year, thanks to a series of major discoveries that have rekindled a sense of excitement across the petroleum sector, despite falling prices and a tough economy.

These discoveries, spanning five continents, are the result of hefty investments that began earlier in the decade when oil prices rose, and of new technologies that allow explorers to drill at greater depths and break tougher rocks.

“That’s the wonderful thing about price signals in a free market — it puts people in a better position to take more exploration risk,” said James T. Hackett, chairman and chief executive of Anadarko Petroleum.

More than 200 discoveries have been reported so far this year in dozens of countries, including northern Iraq’s Kurdish region, Australia, Israel, Iran, Brazil, Norway, Ghana and Russia. They have been made by international giants, like Exxon Mobil, but also by industry minnows, like Tullow Oil.

Just this month, BP said that it found a giant deepwater field that might turn out to be the biggest oil discovery ever in the Gulf of Mexico, while Anadarko announced a large find in an “exciting and highly prospective” region off Sierra Leone.

It is normal for companies to discover billions of barrels of new oil every year, but this year’s pace is unusually brisk. New oil discoveries have totaled about 10 billion barrels in the first half of the year, according to IHS Cambridge Energy Research Associates. If discoveries continue at that pace through year-end, they are likely to reach the highest level since 2000.

While recent years have featured speculation about a coming peak and subsequent decline in oil production, people in the industry say there is still plenty of oil in the ground, especially beneath the ocean floor, even if finding and extracting it is becoming harder. They say that prices and the pace of technological improvement remain the principal factors governing oil production capacity.

While the industry is celebrating the recent discoveries, many executives are anxious about the immediate future, fearing that lower prices might jeopardize their exploration drive. The world economy is weak, oil prices have tumbled from last year’s records, corporate profits have shrunk, and global demand for oil remains low.

After falling to $34 in December, oil prices have doubled, stabilizing near $70 a barrel. But if the world economy does not pick up, some analysts believe the price could fall again.

Oil companies contend that is not a prospect they can afford. Despite reaping record profits in recent years, many executives have warned that they need prices above $60 a barrel to develop the world's more challenging reserves. In fact, some exploration activity has already slowed this year, as producers seek better terms from service companies and contractors.

It is not just oil that is benefiting from the exploration boom. Repsol, Spain's biggest oil company, said this month that it had discovered what could turn out to be Venezuela's biggest natural gas field. In recent years, companies have found substantial natural gas reserves in the United States, from shale rocks once believed to be impossible to drill.

"The No. 1 question that exploration teams have right now is, Where do we go next?" said Robert Fryklund, who ran the operations of ConocoPhillips in Libya and Brazil, and is a vice president in Houston at Cambridge Energy Research Associates.

Exploration spending swelled in recent years, partly to offset a doubling of costs throughout the industry — from steel prices to the cost of renting deepwater drilling rigs. A big issue confronting the industry now is how to drive down costs while maintaining a high level of exploration. On average, costs have fallen by 15 to 20 percent from their peak, according to petroleum executives.

Exploration remains a risky, and costly, business, where some deepwater wells can cost up to $100 million. From 30 to 50 percent of exploration wells find oil.

Some executives are also worried the world might face a shortfall in supplies in coming years if another decline in oil prices causes exploration to falter.

The chief executive of the French oil giant Total, Christophe de Margerie, has warned that such a supply crunch is possible by the middle of the next decade. "There could be a shortage of capacity," he said.

His concerns echoed those of Abdullah al-Badri, the secretary general of the Organization of the Petroleum Exporting Countries, who said that lower oil prices also threatened investments by OPEC nations.

Saudi Arabia is also unlikely to expand its production in coming years because of the uncertainty clouding future oil demand, Ali al-Naimi, the kingdom's oil minister, signaled earlier this month. Saudi Arabia is just completing a $100 billion program to increase its capacity to 12.5 million barrels a day, from around 9 million barrels a day just a few years ago.

Although they are substantial, the new finds do not match the giant fields discovered in the 1970s, like Alaska's Prudhoe Bay, Ekofisk in the North Sea, or Cantarell in Mexico. They are also dwarfed by the last enormous discovery, the Kashagan field in the Caspian Sea, discovered in 2000 and estimated to hold over 20 billion barrels of oil.

"We have not seen another Kashagan, but still these finds are very material," said Alan Murray, the exploration service manager at Wood Mackenzie, a consulting firm in Edinburgh.

Since the early 1980s, discoveries have failed to keep up with the global rate of oil consumption, which last year reached 31 billion barrels of oil. Instead, companies have managed to expand production by finding new ways of getting more oil out of existing fields, or producing oil through unconventional sources, like Canada's tar sands or heavy oil in Venezuela.

Reserve estimates typically rise over the life of a field, which can often be productive for decades, as companies find new ways of getting more oil out of the ground.

The industry's record has improved in recent years, thanks to high prices. According to Cambridge Energy Research Associates, oil companies have found more oil than they produced for the last two years through a combination of exploration and field expansions.

"The appetite for opening new frontiers when prices were low in the 1990s was very small," said Paolo Scaroni, the chief executive of Italy's oil giant Eni. "Today, the biggest discovery of all is technology."

One of the largest finds this year was made by a small producer, Heritage Oil, at the Miran West One field in the Kurdistan region of northern Iraq. It found nearly two billion barrels of oil and plans to drill a second well before the end of the year. While the central government of Iraq has had a hard time attracting investors to develop its huge fields, local authorities in Kurdistan have been successfully wooing foreign producers.

Meanwhile, in the Gulf of Mexico, BP's discovery proves that the area remains one of the most promising oil regions in the United States. BP has estimated that the Tiber field holds four billion to six billion barrels of oil and gas, which would be enough, in theory, to meet domestic consumption for more than a year.

"In 30 years I've been in the business, the Gulf of Mexico has been called the Dead Sea countless times," said Bobby Ryan, the vice president of global exploration at Chevron. "And yet it continues to revitalize itself."