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Mexico Confirms Discovery Of Vast Oil Field Deep In Gulf Of Mexico

by Carlos Navarro
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In early March, the state-run oil company PEMEX confirmed the discovery of a vast reserve of crude oil in the deep waters of the Gulf of Mexico. President Vicente Fox's administration was quick to promote the new discovery, given the name Noxal, as a possible substitute for the Cantarell oil field, whose production is projected to decline rapidly in the next several years.

"Noxal begins a new stage of petroleum exploration in our country," Fox said during a visit to the industrial port city of Coatzacoalcos in Veracruz state.

The new oil reserve would not be productive, however, for at least 10 years and possibly longer, depending on whether the Mexican government is able to obtain the financing and expertise necessary to begin developing the new reserve. The major problem is that the oil is located deep in the ocean, which would make extraction very costly. A test well was dug at 950 meters below sea level, with the oil reserves located another 3,000 m to 4,000 m under the surface of the sea bed.

PEMEX has no direct experience in deep-sea drilling. In its only venture into deep-water oil projects, PEMEX hired Diamond Offshore Drilling in 2004 to drill a well at a depth of 681 m in the Campeche Sound. The well has produced an initial flow of 1,200 barrels a day (bpd) of very heavy crude.

"We recognize that we should establish new mechanisms of collaboration with other petroleum companies with experience in deep waters," said PEMEX director general Luis Ramirez Corzo.

The newly discovered deep-sea reserve is believed to contain about 10 billion barrels of oil, although more tests are needed to determine its true capacity, said Ramirez Corzo.

Fox said the Noxal discovery is the result of his administration's commitment to finding new sources of crude oil. "We have been investing US$5 billion a year in exploration, and that work, that investment, is now bearing fruit," the president said.

Private analysts skeptical

Some analysts are taking the news of the discovery with caution. "Certainly it's going to be welcomed if, in fact, it turns out to be true," said an analyst at a Houston-based energy investment bank.

Others suggest the Mexican government is presenting an overly optimistic picture. "The reserves for future projects, presumably in areas that have never been drilled, are simply a geological map seen through the eyes of the imagination, looking at places where not one drop of oil has yet been found," said David Shields, an independent energy consultant in Mexico City.

There is also the possibility that the next presidential administration may scrap the Noxal project, particularly if front-runner Andres Manuel Lopez Obrador of the center-left Partido de
La Revolucion Democratica (PRD) wins the July 2 election. While rivals Felipe Calderon of the center-right Partido Accion Nacional (PAN) and Roberto Madrazo of the former governing Partido Revolucionario Institucional (PRI) are likely to support the project, Lopez Obrador has already ruled out deep-water drilling.

The PRD candidate plans to focus on developing shallow-water and land reserves. "Deep water is not within our reach, but we have about 20 billion barrels of possible reserves in non-deep areas," said Rogelio Ramirez de la O, the candidate's economic adviser.

**Reserves in Cantarell oil field expected to drop rapidly**

The declining productivity of Cantarell has raised concerns not only in Mexico but also within the international energy community. The oil field, which was discovered in 1976 and which began production in 1979, was at one time considered the world's second-largest oil reserve. Cantarell produced about 2 million bpd in 2005, accounting for about 60% of Mexico's total production of 3.3 million bpd that year.

Production at Cantarell peaked at 2.2 million bpd in 2004, but has begun a gradual decline. Some analysts project that output from the oil field could begin dropping by about 10% per year or even more.

The Fox administration has presented more conservative forecasts. In February, Energy Secretary Fernando Canales Clariond predicted that output from Cantarell in 2006 would decline by about 6% to 1.9 million bpd.

Critics say the government's own data presents a direr picture. In the February-March issue of his magazine Energia a Debate, Shields published excerpts from an internal Pemex study, which projected production in Cantarell could drop to 875,000 bpd at the end of 2007 and 520,000 bpd at the end of 2008, based on a 30% recovery rate. "The collapse of Cantarell will be worse than anyone anticipated," said Shields.

Along with plans for the Noxal project, PEMEX officials increased development of the Chicontepec reserve, which is in shallower waters, a solution to the pending decline in output from Cantarell.

"The future energy development of the country without a doubt is very clearly dependent on the Chicontepec reserves on one hand and deep water on the other," said PEMEX director Ramirez Corzo. He noted that the company needs to invest about 400 billion pesos (US$36.7 billion) in the next 20 years to develop Chicontepec.

Canales offered a similar picture in an interview in Houston. "Parallel to the decline of Cantarell, which is a fact, we are exploring and drilling new fields that will replace this capacity," the energy secretary said.

Some analysts said the Chicontepec field, which has about 40% of Mexico's reserves, could also be a difficult area to develop because of its topography. The field contains numerous pockets of crude amid fractured rock, making it costly and technically difficult to tap. By some estimates, PEMEX would require investments of US$40 billion to develop Chicontepec "It's a very difficult area to develop," Shields said. "You need sophisticated drilling techniques to develop it commercially."

PEMEX also plans to increase output at its Ku-Maloob-Zaap field in 2006, which the company says will boost its total production in 2006 by about 2% to 3.4 million bpd.
But some analysts note that PEMEX has discovered that the crude oil in the Ku-Maloob-Zaap field is heavier than anticipated, which could increase extraction costs. "The big question is, can they have that much production online from Ku-Maloob-Zaap," said John Padilla, an analyst with the energy consulting company IPD Latin America. "The problem is they don't have a Plan B."

The projected decline in Mexico's oil reserves could spell trouble for the Mexican economy, which depends heavily on oil-export revenues. Even with the projected increase in production this year, the volume of oil exports is expected to decline. PEMEX estimates show that exports will average 1.79 million bpd in 2006, compared with about 1.81 bpd in 2005.

Even with the decline in volume, PEMEX continues to reap the benefits of high global oil prices, which approached US$28.3 billion in 2005. Export revenues in January-February were reported at US$5.85 billion, 60% higher than during the same two-month period in 2005. The US remained the principal destination for Mexican crude oil, with revenues from exports to US refineries in January amounting to US$2.46 billion, said the US Department of Commerce.

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