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Mexico Wrestles with Declining Oil Reserves

Mexico may not be a major player on the global oil-export market for much longer because of dwindling crude-oil reserves. In February, the state-run oil company PEMEX confirmed a projected decline in output from its Cantarell field in Campeche Sound, and in March it acknowledged that the potential for its deep-water reserves off the coast of Veracruz was significantly overstated. This led President Felipe Calderon Hinojosa to announce emergency measures to address the situation, including increasing production from a cluster of oil fields known as Ku-Maloob-Zaap and initiating a plan to expedite offshore exploration efforts through an expanded technical-cooperation agreement with the Brazilian oil company Petrobras.

Decline at Cantarell oil field greater than anticipated The Mexican government and the global oil industry had already known of the dwindling reserves at Cantarell, which supplies about 60% of Mexico's crude oil. The bad news for PEMEX is that reserves are falling at a much greater pace than originally anticipated. In early February, PEMEX director Jesus Reyes Heroles announced that Cantarell's production would drop 15% in 2007 to 1.53 million barrels per day. This compares with 1.79 million bpd in 2006. Last year’s production was a decline of 12% from 2005. Reyes Heroles downplayed the trend. "It’s a decline we all anticipated," he said at a news conference in Mexico City. "We need to administer the decline." But reserves at Cantarell have dwindled to such a degree that experts at the International Energy Agency (IEA) have warned that Mexico could become a net importer of oil by 2030 (see SourceMex, 2002-12-11). "As production from the giant Cantarell oil field is dropping rapidly, many forecast that Mexico soon will be out of the oil-exporting business," columnist Tom Whipple said recently. And some analysts suspect that the situation at Cantarell is worse than PEMEX is willing to acknowledge. "[PEMEX executives] are feeling pressure from the market to say that things are fine...and that they are doing well in production," Mexico-City based energy analyst David Shields told the Los Angeles Times.

"But oil engineers will tell you that when a major field is in decline, it doesn't come back up again unless you do something very radical to change the dynamics...I don't see that happening." Other industry observers echoed Shields' concerns regarding statistics published by the oil company. "PEMEX's figures have been particularly murky lately," analyst Jaime Brito of PFC Energy in Washington, DC, said in an interview with The Houston Chronicle. Brito pointed out that PEMEX's initial estimate last year was that output at Cantarell would drop by 150,000 bpd. Later, the company amended that figure to report a decline of nearly 400,000 bpd. Deepwater reserves overstated To make matters worse, the Calderon administration acknowledged that deep-water reserves are not as large as estimated by former President Vicente Fox's government in the area known as Coatzacoalcos Profundo.

The reserves were originally estimated at about 10 billion barrels (See SourceMex, 2006-03-22). But specialists from PEMEX's Centro de Ingeniería y Geociencias Kaxan recently reduced the figure to about 40% of the original estimate. "The numbers are still fluid, but our best projections indicate that we could have the equivalent of 4 billion barrels," one of the members said. Some PEMEX officials said, however, that, regardless of the new data, they still hope to find 10 billion barrels of crude oil in the 50-sq km area. The conflicting data led the Mexican Senate
to propose creating a special commission to investigate the issue and prepare a report. The information is essential before the upper house can proceed on any legislative initiative to reform Mexico’s energy sector, said Sen. Carlos Navarrete, floor leader of the center-left Partido de la Revolucion Democratica (PRD). Regardless of the total amount of oil in the area, the Calderon administration is moving to expedite exploration and development, which by some estimates could take as long as 10 years.

In early March, Calderon announced an agreement with Petrobras, which has significant experience in deep-water exploration. "PEMEX and Petrobras have a scientific-technological collaboration agreement and today I can say these companies have agreed to extend its terms," said Calderon. "This [agreement] opens the possibility of obtaining technological knowledge in deep- and ultradeep-water drilling and development, as well as in the extraction of heavy crude," the president added. Petrobras officials said the agreement followed a series of conversations between Calderon and Brazilian President Luiz Inacio Lula da Silva. "The negotiations followed a visit of [then President-elect] Calderon to Brazil in October of last year and a later meeting with Lula at a summit in Davos," said Milton Costa Filho, general manager of Petrobras Mexico.

Government intensifies drilling at Ku-Maloob-Zaap
In addition to expanding deep-water exploration, the Calderon government has also intensified efforts to extract oil from the Ku-Maloob-Zaap complex, 104 km northeast of Ciudad del Carmen in Campeche state. The complex is estimated to contain reserves of about 4.9 billion barrels. As part of the project, the government inaugurated a new platform that will enable drilling on 28 new wells. PEMEX officials hope the additional oil extracted from Ku-Maloob-Zaap will increase production from the current 500,000 bpd to about 680,000 bpd by the end of 2007. That amount would partially compensate for the reduction from Cantarell. But even if PEMEX is able to recover volume, the quality of the oil is much lower at Ku-Maloob-Zaap than at Cantarell, some analysts noted.

"PEMEX has neglected oil exploration for years, and now it's going to pay a price," said Francisco Garaicochea, who worked as an engineer for PEMEX for many years. "You can be sure that their proven reserves will keep falling." The Calderon administration and PEMEX officials insist that the situation will not be as dire for the company if the government takes steps now to remedy the situation. "Exploratory studies by PEMEX indicated that the Gulf of Mexico basin contains a potential 29.5 billion barrels of oil, equivalent to 1.8 times the proven reserves," said Calderon. "If we invest in a timely manner...our country can count on a reliable supply of hydrocarbons." Reyes Heroles estimated that PEMEX’s investments would have to increase to about US$15 billion per year to cover the planned projects and to stabilize production at about 3 million bpd. For PEMEX to obtain the needed funds, said officials, the tax code would have to be changed to allow the oil company to keep a larger share of its oil-export revenues.

In 2005, the Congress approved legislation allowing PEMEX to keep a slightly larger share of its revenues (see SourceMex, 2005-07-20). But even with this reform, about 60% of PEMEX earnings go to the Mexican Treasury. In 2006, that amount totaled US$79 billion. Reyes Heroles said a change in PEMEX’s financial structure is preferable to constitutional changes that would allow foreign companies to invest directly in exploration and extraction of oil. "PEMEX has [money] in the cash register...but it doesn't stay here," Reyes said. "PEMEX needs more financial resources." For now, PEMEX is continuing with its third financing option, issuing debt on financial
markets. In early March, the company announced plans to raise between US$1 billion and US$2 billion of new debt in 2007 to cover drilling projects planned for this year. The debt amount is still lower than the US$4.4 billion issued in 2006. The company's accumulated debt totaled 569 billion pesos (US$51 billion) at the end of 2006. [Note: Peso-dollar conversions in this article are based on the Interbank rate in effect March 7, reported at 11.18 pesos per US$1.00]

(Sources: La Cronica de Hoy, 02/06/07; Los Angeles Times, 02/08/07; The Houston Chronicle, 03/03/07; El Universal, 02/28/07, 03/02/07, 03/05/07; Reforma, 02/08/07, 03/03/07, 03/05/07, 03/06/07; Excelsior, 02/06/07, 02/08/07, 03/05/07, 03/06/07; Reuters, 02/07/07, 03/02/07, 03/06/07; La Jornada, 02/12/07, 03/05/07, 03/06/07; El Economista, 02/14/07, 03/05/07, 03/06/07; Milenio Diario, 02/07/07, 03/05/07, 03/07/07; The Herald-Mexico City, 03/07/07)