



**Congressional
Research
Service**

Memorandum

January 31, 2008

TO:

FROM: Robert Pirog
Specialist in Energy Economics
Resources, Science, and Industry Division

SUBJECT: Cuban Oil Exploration

This memorandum is written in response to your request concerning a survey of the companies involved in oil exploration in Cuba.

Background

Cuba consumed about 200 thousand barrels per day (b/d) of petroleum in 2006. Domestic production accounted for about 75 thousand b/d. The difference was imported, largely from Venezuela. Most of the existing Cuban oil production is either onshore, or in shallow waters offshore, east of Havana. Existing Cuban oil production is of relatively low quality; heavy, with a high sulfur content. Cuba has nominal refining capacity of about 300 thousand b/d, although its viability is open to question. These refineries largely date from pre-Castro times. They were operated by Exxon, Texaco, and Shell and were nationalized when Castro came to power.

The Soviet Union played a large role in the Cuban oil industry. The Soviets and Cubans discovered the first commercially viable oil deposits in 1971, the Varadero field, east of Havana. The Soviets also contributed to the development of refineries in Cuba. After the collapse of the Soviet Union, Cuba, lacking expertise and investment funding, opened its oil industry to foreign investors in 1993. Two companies from Canada, Sherritt International and Pebercan, operate in Cuba in onshore joint-venture agreements with Cubapetroleo (Cupet).¹

More recently, there has been substantial interest in exploration and possible development of energy deposits in the Cuban section of the Gulf of Mexico. However, early results were not encouraging. In 2001, the Brazilian national oil company, Petrobras, curtailed exploration activity in the Gulf after disappointing results. In 2004, the Spanish oil

¹Energy Information Administration, *Country Analysis Briefs*, available at [<http://www.eia.doe.gov>].

company, Repsol-YPF, found higher quality oil deposits in the Cuban area of the Gulf, 95 miles southwest of Key West, but not in commercially viable amounts.² In 2006, Cupet and the Indian national oil and natural gas company, ONGC, entered into a joint exploration agreement. Cupet also entered a 2005 agreement with Vietnam's state oil company, Petrovietnam, for joint exploration activities.

Recent Offshore Activity

High international oil prices and tight supply conditions, coupled with increasing demand, have encouraged oil exploration and development activity worldwide. Interest in exploration in Cuban areas of the Gulf of Mexico has increased. Estimates of the potential oil reserves in Cuban areas of the Gulf vary. The Energy Information Administration reports likely reserves of 1.6 billion barrels in its Country Analysis Briefs, while other reports range from that value to 4.5 billion barrels, up to high end estimates of 9 billion barrels.³ Any of these estimates is likely to lead to production levels that would make Cuba self-sufficient in oil, and an exporter.

Repsol-YPF continues exploration in the Gulf, now in conjunction with Norsk Hydro, a firm from Norway with expertise in deep water drilling, and reportedly, ONGC. In 2007, Cuba entered an agreement with PdVSA, the Venezuelan national oil company, already working on an agreement to update and enhance Cuban refineries, to explore for oil offshore. In addition, Malaysia's national oil company Petronas, and an Indian company OVL, a subsidiary of ONGC, have conducted seismic, and other preliminary exploration. China also has an exploration agreement with Cupet, dating back to 2005, and Sinopec, a Chinese government affiliated company, has leased offshore drilling equipment to other companies including Sherritt International, as well as reportedly having plans for its own exploration.

In January 2008, Petroleo Brasileiro SA (Petrobras) and Cupet entered into a joint exploration agreement for areas in the Gulf of Mexico. Petrobras also agreed to participate in the development of a lubricant factory in Havana.⁴ Petrobras has gained increased recognition for expertise in deep water drilling with the announcement of the discovery of the Tupi field, with reported reserves of 8 billion barrels, in the deep waters of offshore Brazil, in 2007.

Conclusion

Potential Cuban oil deposits have drawn interest from a growing number of partners. Cupet appears to prefer to work with other national oil companies in exploration and in possible production activities. National oil companies are thought to have constraints in terms of their ability to carry out oil development projects along normal commercial lines

² Ibid.

³ Department of the Interior, U.S. Geological Survey, Fact Sheet 2005-3009, "Assessment of Undiscovered Oil and Gas Resources of the North Cuban Basin, 2004," (February 2005); at [http://walrus.wr.usgs.gov/infobank/programs/html/factsheets/pdfs/2005_3009.pdf].

⁴ Caribbean Net News, *Cuba and Brazil Sign Oil Exploration and Production Agreements*, January 16, 2008, available at [<http://www.caribbeanetnews.com>].

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because of inadequate access to financial capital as well as social responsibilities to their governments.⁵

Please call me a 7-6847 if you have additional questions.

⁵ See CRS Report RL34137, *The Role of National Oil Companies in the International Oil Market*, by Robert Pirog