

INTERNACIONAL

Oil and Disorder in Venezuela

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The disorder spreading through Venezuelan government and society is undermining the oil industry, the main pillar of support for the political system and the main hope for recovery from decades of encroaching poverty.

The impact of the decline of Venezuela's petroleum industry has been masked by today's high oil prices and by political gestures by President Hugo Chávez, who now is the unquestioned boss of *Petroleos de Venezuela* (PDVSA), the state oil company. PDVSA has gone through six chief executives in the seven years since Chávez first was elected in 1998, after which production has fallen by 22%.



The pivotal event in the decline of PDVSA was a two-month general strike in December 2002-January 2003, joined by oil workers and executives in a desperate effort to force Chavez's resignation or, at least, early presidential elections. Instead, Chávez outlasted the strikers, despite deep damage to the Venezuelan economy, and the strike became a lockout. Chávez fired 18,000 PDVSA employees, including most of its technical staff of geologists, geophysicists and reservoir engineers. PDVSA's training and research centers were dismantled. "Chávez thought he could use the strike to destroy the opposition," a veteran observer said.

"Chávez is politically astute but economically stupid," a leftist former associate of his told me. "He gives orders that are not fulfilled. He thinks corrupt officials are faithful to him. There is much unrest over corruption among the mid-level military. It was a big mistake to fire all those PDVSA geologists and engineers. PDVSA thus lost much of its knowledge base and human capital. It would have been smarter to fire the strike leaders and keep all those technicians." Not only did Chávez fire PDVSA's critical mass of technicians, but he forbid other oil companies working in Venezuela and their contractors from hiring them, forcing them to leave the country to find work, creating a Diaspora of Venezuelan oilmen as far away as Canada, Iraq and Central Asia.

Before oil, a century ago, Venezuela's population of only 2.4 million was 85% rural, working as *conuqueros* on subsistence plots or as laborers on *latifundia*. Venezuela lost nearly 40% of its population in South America's Wars of Independence (1811-24) and then was exhausted and demoralized by a century of regional uprisings, civil wars and dictatorships.¹ The president of the

United States, Theodore Roosevelt, called the president of Venezuela, Cipriano Castro, an “unspeakably villainous little monkey” as British and German warships were preparing to blockade Venezuelan ports to collect unpaid debts.ⁱⁱ All that changed on December 14, 1922, when Shell drilled Los Barrosos No. 2 beneath the Lake Maracaibo basin, a blowout spouting wildly at the rate of 100,000 barrels a day.ⁱⁱⁱ

By 1929 Venezuela became the world’s leading oil exporter, remaining so for four decades.^{iv} But this leadership had its ups and downs. After the Eisenhower Administration decreed oil import quotas to protect U.S. domestic producers from cheap Middle East oil, a world glut quickly developed that forced Venezuela to sell its oil at \$1.40 a barrel in 1959, when a similar volume of mineral water was selling for \$5. The oil glut led Juan Pablo Pérez Alfonzo, Venezuela’s wise and austere petroleum minister, to travel among the producing countries of the Middle East and North Africa to form OPEC. However, two decades later Pérez Alfonzo was denouncing the festival of waste and corruption bred by the oil bonanza of the 1970s, publishing a book entitled “We are sinking in the Devil’s excrement.”^v

In contrast to the rural life of a century ago, 90% of today’s 26 million Venezuelans live in towns and cities, heavily dependent on a declining oil industry that produces most of its exports and government revenues while employing few people. “Without new investment oil production will fall by about 20% a year,” said a senior oil economist who has held key positions at Venezuela’s Petroleum Ministry and at OPEC in Vienna. “To keep production at its present level Venezuela must invest \$2 billion efficiently every year. To increase production it must invest \$4 billion a year. But PDVSA is falling short of investment targets as it spends \$4 billion a year on social projects. It recently published a five-year investment plan that is just wishful thinking.”

Under political pressure from Chávez, PDVSA is spending more to finance the social programs of the “Bolivarian Revolution” than on its own investment needs. Nevertheless, PDVSA announced a new strategic *Plan Siembra Petrolera* to increase Venezuela’s production from roughly 2.5 million barrels daily (MBD) today, according to independent estimates, to 5.8 MBD by 2012, involving investments totaling \$56 billion. The plan has been criticized as a rehash of a previous PDVSA plan, using roughly the same numbers, with the \$56 billion in planned investments far below the money needed for a much smaller increase in capacity during the 1990s. Moreover, 30% of this money is supposed to come from foreign oil companies operating in Venezuela.^{vi} These companies have stopped investing after being billed last year for billions of dollars in back taxes and being forced to “migrate” into joint ventures with PDVSA, the terms of which have yet to be announced.

“PDVSA has become politicized and now lacks the management skills and know-how needed to draft a credible business plan,” said Diego González, a retired PDVSA engineer who now heads IPEMIN, the Instituto de Petróleo y Minería. “Contracts are awarded capriciously, without bidding. Because most of its reservoir engineers were fired after the strike, PDVSA lacks the technicians to repair wells. If the wells are not repaired periodically, mechanical problems multiply. A well normally produces oil, gas, water and sand. Repairs are needed when a well produces too much water and sand. This is an expensive and delicate job, with a team of 30 workers using drilling and workover equipment costing \$20,000 a day. You have to remove the pumps, production tubes and the Christmas tree (the cluster of well-head valves that prevent blowouts). Cleaning the reservoir means shooting pebbles or steel bullets into the well to fracture the sand. Today 21,000 PDVSA wells are shut in for lack of repair, a number steadily increasing, while 14,000 are in production.”

Overlooking the financial, manpower and technical problems of Venezuela’s petroleum industry, Chávez has made a bold proposal for a \$20 billion gas pipeline, known as GASUR, that would extend 8,000 kms. from Venezuela to Argentina, which is expected to urgently need to import gas supplies within 10 years. GASUR would cross the whole length of Brazilian territory, with spurs to supply cities of Amazônia and the Brazilian Northeast. The Brazilian and Argentine governments

formally endorsed Chavez's proposal, an old dream of engineers long-considered impractical, for which feasibility studies still are lacking. A Venezuelan consultant noted that engineers would have to contend with an eight-month rainy season in parts of Amazônia, with the pipeline route crossing many rivers, streams and swamps. With seasonal flooding up to 12 meters deep, he said, it would be difficult to keep open penetration roads for pipeline maintenance. The landed cost of GASUR gas in Argentina, including transportation, would be \$134 per barrel of oil equivalent, much more than the cost of other alternatives, such as importing more Bolivian gas or building specialized ships and industrial facilities for importing liquefied natural gas (LNG) from Venezuela to Argentina.^{vii}

Chavez's proposal for GASUR is based on Venezuela's 151 trillion cubic feet (Tcf) of proven natural gas reserves, the largest in South America and ninth-largest in the world.^{viii} However, 90% of its gas reserves are associated with oil deposits. Of current gas production, 70% is reinjected in operations to maintain pressure in producing reservoirs. In the past, Venezuela has done little exploration for non-associated gas and currently is so short of usable gas that oil production in the old fields around Lake Maracaibo is falling fast for lack of available gas to inject in the reservoirs. Also, Pequiven, PDVSA's petrochemical affiliate, announced its own \$26 billion expansion plan, even though it lacks enough gas feedstock for its current production.^{ix} If current offshore exploration by Chevron and Norway's Statoil is successful, Venezuela may have from 1,700 to 2,500 cubic feet per day of additional gas available, barely enough to cover the present shortage for its internal market.^x Bilateral talks are underway to build a pipeline for importing gas from Colombia.

On December 17, 2005, Chávez and President Luiz Inácio Lula da Silva of Brazil laid the first stone for a 200,000 BD refinery in Pernambuco to be built and financed jointly by PDVSA and Petrobrás. The new refinery is being built over the protests of Petrobrás engineers. "This is being done for political reasons," said a veteran Petrobrás refinery engineer. "Our refinery in Bahia was expanded to serve the Northeast market. Upgrading an existing refinery costs \$5,000 to \$8,000 for each barrel of daily capacity added, while a new refinery costs \$15,000-\$18,000 a barrel. Venezuela produces a lot of extra heavy crudes. Brazil doesn't need to import heavy crudes because Brazil already exports from 250,000 to 300,000 BD of heavy crude at a loss from the Campos Basin so we can import light products and oils. Each 100,000 BD of Venezuelan crude that we import for the Pernambuco refinery means that we'll have to export 100,000 BD more at a loss. Fortunately, the final decision whether or not to build the Pernambuco refinery will be taken by the next Brazilian government."

Venezuela has several prospects for increasing its output of oil and gas. Its most spectacular resource is the estimated 700 billion barrels of extra heavy oil, one of the world's largest concentrations of hydrocarbons, found beneath a broad swath of savannah north of the Orinoco River. Once known as the Orinoco Tar Belt but since renamed the Orinoco Petroleum Belt, the region produced 570,000 BD of upgraded crude in 2004, thanks to recent technological innovations under a \$13 billion investment effort in the 1990s by PDVSA and foreign operators such as Conoco-Phillips, Exxon-Mobil and Statoil.^{xi} These operators were able to make medium-to-light synthetic crude by stripping atoms from the bitumen molecules and, in some cases, adding hydrogen.

In pre-Colombian times, aborigines used surface seepages of tar in the Orinoco region for lining their canoes and huts and for medicinal purposes. The first exploration well in the *Faja* was drilled by Exxon in 1936, quickly abandoned because the petroleum discovered contained metals such as vanadium and nickel, making it too heavy for natural flowing to the surface.^{xii} As described recently by *VenEconomy Monthly*: "The Orinoco Belt (*Faja*) contains an estimated 1.2 trillion barrels of gunk – what used to be called 'bitumen,' but which now are called extra-heavy crudes. Of this, some 22% are believed to be recoverable using today's technology. New technologies (diluent, fire-based extraction systems, etc.) are expected to lead to significantly higher recovery rates later on. Even so, at 22%, that's some 264 billion barrels of the stuff – enough to support 10 million BD of production for over 70 years."^{xiii}

Instead of investing heavily in the Orinoco to guarantee production for future decades, PDVSA contracted with foreign state oil companies –Petrobrás, Iran’s Pterosaur, India’s ONOC, Russia’s Gasport and the China National Petroleum Corporation (CNPC) to measure and increase the *Faja’s* proven reserves. None of these companies have prior experience with extra-heavy crudes. How much financial and technical resources will be invested in Venezuela’s future production remains to be seen.

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World oil production today is barely able to keep pace with world demand. The North Sea is exhausting its recoverable reserves. Mexican output may have passed its peak. Political disruptions are reducing exports from Nigeria and Iraq as other OPEC countries pump at near capacity while demand surges in China, India and the United States. New producing regions in Russia and Central Asia are exposed to political risks. “Extreme uncertainty has been a constant theme for the past few years,” the International Energy Agency (IEA) reported recently.^{xiv}

Amid this uncertainty, the decline and disorganization of Venezuela’s oil industry may be as important to the world economy as Venezuela was a half-century ago, when global output was expanding fast and Venezuela was the world’s leading oil exporter.^{xv} In today’s tight oil market, with world production and consumption hovering around 85 MBD, a further loss in Venezuela of 1 MBD would generate more price spikes and increased anxiety.

One of the favorite books of Hugo Chávez, who worships the Liberator Simón Bolívar, is Gabriel García Márquez’s *The General in his Labyrinth*, telling the story of Bolívar’s slow, melancholy journey down the valley of the Magdalena River in 1830 to die in Santa Marta, on Colombia’s Atlantic Coast. García Márquez cites the Liberator’s famous last words: “America is ungovernable. Those who served the revolution plowed the sea.”^{xvi} These days Hugo Chávez and many of his followers are trying hard to prove Bolívar right.

Sooner or later, Venezuelans will have to ask themselves how much longer the country can sustain Chávez’s expensive mistakes, his polarizing rhetoric and his neglect of Venezuela’s basic problems. Chávez conforms to archaic Latin American stereotypes, speaking in the jargon of a student leader and acting like a military dictator with the kind of populist trappings that we often have seen in the past. His long speeches are repetitive and thin in content, lacking the density and originality that his mentor Fidel Castro displayed in the early years of the Cuban Revolution. However, Chávez has demonstrated an instinct for survival and an opportunism lacking in famous Marxist martyrs like Che Guevara and Salvador Allende. The big question for the near future is: How much longer will Chávez’s capacity for maneuver survive the disorder surrounding him?

ⁱ Terry Lynn Karl, *The Paradox of Plenty: Oil Booms and Petro-States*. California, 1997/p74.

ⁱⁱ Harry Pringle, *Theodore Roosevelt*. New York: Harcourt, Brace, 1956/p198.

ⁱⁱⁱ Anibal R. Martínez, *Chronology of Venezuelan Oil*. London, Allen & Unwin, 1969/p50.

^{iv} Norman Gall, “The Challenge of Venezuelan Oil,” *Foreign Policy*. Spring 1975/p47.

^v Quoted in Fernando Coronil, *The Magical State: Nature, Money and Modernity in Venezuela*. Chicago, 1997/p353 and in Eduardo Mayobre, *Pérez Alfonzo*. Caracas: El Nacional, 2005/p129.

^{vi} Robert Bottome, “The ‘new’ PDVSA plan: Castles in the sky and other fantasies,” *VenEconomy Monthly*. September 2005.

^{vii} Nelson Hernández, *Gasoducto del Sur (GASUR)*. Unpublished paper, January 21, 2006.

^{viii} Energy Information Administration, *Country Analysis Briefs: Venezuela*. Washington, September 2005/p8.

^{ix} John Sweeney, “Pequiven: Small company, outsized plans,” *VenEconomy Monthly*. January 2006.

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- x “Los beneficiarios del gasoducto,” *VenEconomía Opina*. January 30, 2006.
- xi Energy Information Administration, *Country Análisis Briefs: Venezuela*. Washington, September 2005/p6.
- xii Anibal R. Martinez, *La Faja: 65 años de su descubrimiento*. Caracas: SINCOR, 2000.
- xiii Robert Bottome, “The ‘new’ PDVSA plan: Castles in the sky and other fantasies,” *VenEconomy Monthly*. September 2005/p3.
- xiv IEA, *Oil Market Report*. Paris, December 13, 2005/p3.
- xv Norman Gall, “The Challenge of Venezuelan Oil,” *Foreign Policy*. Spring 1975.
- xvi Also quoted in Frank Tannenbaum, *Ten Keys to Latin America*. New York: Knopf, 1962/p71.