Petroleum Exports from Latin America to the United States

Cody Miller
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I. INTRODUCTION

Oil is extremely important to the U.S. economy. It accounts for over 40 percent of the energy consumed by the United States. The United States accounts for approximately 24 percent of the total energy used in the world, while possessing approximately 5 percent of the world’s population. With this energy, the United States produces approximately 30 percent of the world’s gross product.

Dwindling petroleum reserves in the United States and ever-increasing instability in the Middle East have increased America’s need for more varied sources of oil and gas. South America may provide the answer. In order to evaluate this possibility, it is important to understand the political landscape and laws in each of these countries, as well as how they differ from those of the United States.

II. HISTORY OF THE UNITED STATES PETROLEUM INDUSTRY

A. PRODUCTION OF OIL

To understand the need to import oil and gas to the United States, we must first look at the history of the U.S. petroleum industry. An examination of oil and gas law is also necessary to understand more accurately the differences in law and philosophies between the United States and the oil exporting countries of South America.

The first oil well in the United States was the Drake well in Penn-

* Cody Lee Miller is a 2005 J.D. Candidate at the Dedman School of Law, Southern Methodist University. Prior to attending law school, the author obtained a B.S. in Agricultural Development and a M.S. in Agricultural Education, both from Texas A&M University.


sylvania.\footnote{John S. Lowe et al., Cases and Materials on Oil and Gas Law 1-8 (West Group 4th ed. 1986).} Drilled in 1859, this well marked the first successful use of a drilling rig.\footnote{Id.; Wikipedia Online Encyclopedia, History of the Petroleum Industry, at http://en.wikipedia.org/wiki/History_of_the_Petroleum_Industry (last modified Nov. 14, 2004) [hereinafter Wikipedia].} The main purpose of this well was to derive kerosene.\footnote{Wikipedia, supra note 5.} The field played out nearly as fast as it sprang up; within a year, it was almost totally deserted.\footnote{Lowe, supra note 4, at 8.} A parcel of land that sold for $2 million in 1865 was sold for $4.37 in 1878.\footnote{Id.} The biggest contribution of the Drake well to the modern oil industry is the measurement that was used to measure the volume of oil produced—the barrel.

Perhaps the most famous petroleum discovery was made at Spindletop, near Beaumont, Texas, in 1901.\footnote{Spindletop-Gladys City Boomtown Museum, Spindletop History, available at http://www.spindletop.org/history/index.html (last visited Nov. 20, 2004) [hereinafter Spindletop].} The well delivered a gusher over 100 feet high.\footnote{Id.} At the time, the Spindletop well was producing over 100,000 barrels per day; this was more than all other wells in the United States combined.\footnote{Id.} The discovery of oil led to great overproduction and a sharp decline in oil prices.\footnote{Id.} The Spindletop field produced 3.59 million barrels of oil in the first year and 17.4 million barrels in the second year.\footnote{Id.} World oil prices dropped to twenty-five cents per barrel.\footnote{Wikipedia, supra note 5.} The discovery of this Texas well also helped to end Standard Oil's monopoly on the oil industry.\footnote{Spindletop, supra note 9.} The court-ordered breakup of Standard Oil led to the creation of several different oil companies.\footnote{Id.} Many still exist today including ExxonMobil, ChevronTexaco, Shell, and British Petroleum.\footnote{Id.}

Demand for oil in the United States began to increase each year, and by 1920, there were over 9 million automobiles in the United States.\footnote{U.S. Energy Information Administration, Petroleum Timeline, available at http://www.eia.doe.gov/kids/history/timelines/petroleum.html (last visited December 1, 2004).} As demand increased, so did production. Oil production in the United States continued to increase, until it peaked in 1970.\footnote{Id.} Over time, the United States has continued to increase the amount of crude oil imported

\begin{itemize}
  \item[4.] John S. Lowe et al., Cases and Materials on Oil and Gas Law 1-8 (West Group 4th ed. 1986).
  \item[6.] Wikipedia, supra note 5.
  \item[7.] Lowe, supra note 4, at 8.
  \item[8.] Id.
  \item[10.] Id.
  \item[11.] Wikipedia, supra note 5.
  \item[12.] Spindletop, supra note 9.
  \item[13.] Id.
  \item[14.] Id.
  \item[16.] Id.
  \item[17.] Id.
\end{itemize}
B. Current Situation

In 2002, the United States produced approximately 8.1 million barrels of oil per day (MMBD), while using approximately 19.7 MMBD.\(^\text{21}\) Since 1991, oil production has declined 24 percent. The United States operates over 500,000 producing oil wells, in addition to 4,731 new wells drilled in 2000.\(^\text{22}\) In contrast, Saudi Arabia produced 8.5 MMBD with only 1430 wells.\(^\text{23}\) Seventy-six percent of all oil wells in the United States produce less than 10 MMBD, accounting for 14 percent of all U.S. oil production.\(^\text{24}\) The top areas for production in the United States are, in order from greatest to least, the Gulf of Mexico, Texas, Alaska, California, Louisiana, Oklahoma, and Wyoming.\(^\text{25}\)

The United States maintains 22.4 billion barrels of proven oil reserves, which ranks eleventh in the world.\(^\text{26}\) Saudi Arabia leads the world with 261 billion barrels of proven reserves.\(^\text{27}\) In 2002, the United States imported 11.4 MMBD,\(^\text{28}\) which accounted for 58 percent of consumption.\(^\text{29}\) The top four exporters to the United States include Saudi Arabia, Canada, Mexico, and Venezuela.\(^\text{30}\) Notice that two of the top exporters come from South America.

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25. Id.


29. Id.

C. PRODUCTION OF NATURAL GAS

Natural gas was originally used almost exclusively for light. Most of the natural gas consumed during the nineteenth century was derived from coal. Until World War II, little of the natural gas produced at the well was used and most was vented off. After the war, pipelines were built to transport natural gas. As a result, many new uses for natural gas were discovered.

Experts predict natural gas will constitute the fastest growing energy source over the next twenty-five years. In 2003, the United States consumed approximately 23.3 trillion cubic feet (tcf) of natural gas in 2003, which consisted of 19.3 tcf by way of production and 3.8 tcf by way of importation. Of these imports, over 90 percent originated in Canada. The United States possesses over 183 tcf, or 3.3 percent of world reserves (sixth in the world). Natural gas is significantly more difficult to transport than crude oil. The pipeline system serves as the primary means for importing natural gas. For the foreseeable future, most of the natural gas imported by the United States will come from Canada.

32. Id.
33. Id.
34. Id.
35. International Energy Outlook, supra note 2, at 12.
37. Id.
38. Id.
39. Id.
40. Id.
41. Id.
III. SYSTEM OF OWNERSHIP IN UNITED STATES

A. PRIVATE OWNERSHIP

In order to understand how the ownership of minerals differs in other countries, we must first examine the system of ownership in the United States. In the United States, the majority of mineral rights are privately owned. The sovereign owns all mineral rights in most other countries around the world.

The U.S. government does, however, own land containing 30 percent of the nation’s mineral rights. Approximately 25 percent of all oil and gas production comes from federally owned land. Federal and state governments also own many of the offshore wells.

A major consequence of private mineral ownership is fractionated mineral interests. When mineral interests are transferred, more interests develop and result in many owners with minute interests.

B. OWNERSHIP THEORIES

Ownership of mineral rights varies from state to state within the United States. The rule of capture stands as the general rule of ownership. It allows a mineral owner to drain oil from under his land without incurring liability. The rule of capture is limited by various other theories and state requirements. The common law doctrine of correlative rights limits the rule of capture by allowing each mineral owner to take only their fair share. Conservation laws, well-spacing rules, and well permit requirements also limit the rule of capture.

States have varying theories of mineral ownership. Some states subscribe to the corporeal theory of ownership where the owner of the mineral rights actually owns the minerals under the land. Other states follow the incorporeal doctrine where the mineral owner only possesses the right to use the minerals. The most notable component of mineral ownership in the United States is the private ownership of the mineral rights. Canada is the only other notable producer of oil and gas where private citizens own the minerals beneath their lands.

In most Latin American countries, the sovereign owns all of the mineral rights. The Mexican government passed legislation in the late nine-

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42. ERNEST E. SMITH ET AL., INTERNATIONAL PETROLEUM TRANSACTIONS 249 (Rocky Mountain Mineral Law Foundation 2d ed. 2000).
43. Id.
44. JOHN S. LOWE, OIL AND GAS LAW 8 (Thomson West 1983).
45. Id.
46. Id. at 10.
47. Id. at 15.
49. Id. at 31.
50. Id.
51. SMITH, supra note 42, at 39.
52. Id.
teenth century that gave mineral ownership to the owner of the soil, but
the government returned to sovereign ownership with the Constitution of
1917. 53 Mexico nationalized its oil industry in 1938. 54 The sovereign also
owns the minerals in the other two major Latin American oil and gas
producers—Venezuela and Brazil. 55 Although the sovereign owns the
minerals, these countries have been opening up their mineral deposits to
foreign investment on an increasing basis. 56 This topic will be discussed
in much greater detail.

C. The Need for Latin America

As has already been stated, the United States has a growing depen-
dence on foreign oil. As our reserves continue to decrease, this need will
become even greater. With the recent events in Iraq and Afghanistan,
the instability in the Middle East and Central Asia has risen to the atten-
tion of most oil-importing countries. The United States must develop
more diversified sources of oil. The oil embargo in the mid-1970s demon-
strated the effects on the United States when deprived of oil from the
Middle East. Currently, Venezuela is the only Latin American member
of the Organization of Petroleum Exporting Countries (OPEC). 57 More
non-OPEC sources of oil would represent a substantial step towards di-
versifying our oil supplies.

IV. VENEZUELA

A. Overview

Venezuela has a federal system of government. 58 The country consists
of twenty-three states that are divided into self-governing municipali-
ties. 59 Venezuela was a founding member of OPEC. 60 Venezuela re-
 mains one of the top four suppliers of oil to the United States, and is the
world’s number five oil exporter. 61 Venezuela’s 77.8 billion barrels per
day constitutes three times the amount of petroleum reserves possessed
by the United States. 62 These represent the largest conventionally

53. Id.; Energy and International Law: Development, Litigation, and Regulation, 36
Tex. Int’l. L.J. 1, 58 (2001) (statement by Luis M. Labardini) [hereinafter Devel-
opment, Litigation, and Regulation].
54. Smith, supra note 42, at 39.
55. Id.
56. Id. at 40.
57. U.S. Energy Information Administration, Country Analysis Brief: Venezuela, avail-
able at http://www.eia.doe.gov/emeu/cabs/venez.html (last modified May 21, 2003)
(on file with author) (for an updated version of this article, please see website)
[hereinafter Country Analysis Brief: Venezuela].
58. Usdeean R. Vass & Adriana Lezcano, The New Venezuelan Legal Regime for Natu-
59. Id.
60. Id.
61. Id.; Venezuela El Palito Unit Back, Oil Daily, Feb. 10, 2004, at 7 [hereinafter
Venezuela El Palito].
proven reserves in the Western Hemisphere. Venezuela’s oil production in 2002 reached 2.9 MMBD.

About 1.4 MMBD of Venezuela’s oil made its way to the United States. Oil exports from Venezuela to the United States peaked in 1997, at 1.8 MMBD, 19 percent of U.S. oil imports. Oil can be shipped to the United States from Venezuela relatively quickly, as it only takes approximately five days to ship by tanker. In addition to the United States, Venezuela is a major supplier of oil to many other Latin American countries, including Cuba. Venezuela also has an abundance of natural gas reserves. Venezuela ranks seventh in the world with 146 tcf of proven reserves.

B. OWNERSHIP OF MINERALS

Article 12 of the Venezuelan constitution states that minerals in the national territory and the seas surrounding it belong to the Republic. Article 302 of the Constitution provides that the state shall manage all petroleum activity. This article has been construed to extend only to liquid hydrocarbons and not hydrocarbon gases.

Several Latin American countries recognize public ownership of mineral rights. Prior to the 1990s, there was little foreign investment in Venezuelan oil due to the country’s restrictive laws. The laws limited private investment making it unprofitable to invest in Venezuelan oil. In 1989, Venezuela began developing a policy known as Apertura Petroera (Petroleum Opening). This policy played an instrumental role in opening the country’s oil fields to foreign investment as discussed below.

In 1999, a law was passed that gave the President the power to create a new legal framework for the gas industry. President Hugo Chavez used

64. Id.
65. Id.
66. Id.
70. Vass & Lezcano, supra note 58, at 105.
71. Id. at 106.
72. Id.
73. Id. at 107.
75. Id.
77. Vass & Lezcano, supra note 58, at 111.
this newfound power to enact Decree 310. Article 1 of Decree 310 affirms that all reservoirs of hydrocarbon gases belong to the state. Article 2 makes clear that Decree 310 covers all processing, transportation, and other activities relating to the development of gases. Decree 310 creates a permit system with sanctions for not complying with the conditions under which the permit is granted. Decree 310 created a new National Gas Agency. Thus far, the powers of the National Gas Agency are weaker than some had hoped, but future regulations are expected to increase the Agency's power. A system of tariffs and price fixing resulted from the new law.

Decree 310 also controls almost every aspect of the gas industry. Article 9 of Decree 310 prevents the vertical integration of the gas industry. Article 10 provides that all "companies involved in the storage, transportation and distribution of hydrocarbon gases are obligated to offer available space in their facilities only to other companies involved in the same storage, transportation and distribution businesses." The infrastructure used to carry out gas activities is a public utility and is subject to government expropriation. Decree 310 also contains unitization provisions when reservoirs overlap two license areas or even two countries. Decree 310 also creates mechanisms for arbitration and gas royalties.

C. PETROLEOS DE VENEZUELA

Petroleos de Venezuela S.A. (PDVSA) was created in 1975 as the state owned and operated oil and gas company. PDVSA constitutes one of the largest oil companies in the world and exists as the largest employer in Venezuela. It consists of three operating agreements. The Venezuelan Constitution bans the privatization of PDVSA. PDVSA is critical to the Venezuelan economy and the livelihood of many of its citizens. By law, PDVSA must hold a 61 percent stake in any new exploration and production agreement. The State oil company also plays a major role in

78. Id. at 112.
79. Id.
80. Id.
81. Id.
83. Vass & Lezcano, supra note 58, at 115.
84. Id. at 117.
85. Id.
86. Id. at 119.
87. Id. at 120.
88. Id.
89. Id. at 121.
90. Id. at 124, 127.
92. Id.
94. Id.
95. Id.
Venezuelan politics. Its board consists of presidential appointees. PDVSA also operates one of the world’s largest refining operations. It owns refineries in both the United States and Europe, as well as in Venezuela. PDVSA holds the distinction of being one of the most important entities in Venezuela. It affects all of the economic and political decisions made in the country.

PDVSA has recently released a plan to increase the country’s production capacity to over 5 MMBD. Under the plan, PDVSA will shoulder most of the burden in increasing production. The official plan has yet to be released as the government continues to work out the details. The ambitious plan calls for an increase of 1.1 MMBD above what Venezuela is currently producing. The increase may be even greater because few actually believe in the accuracy of Venezuela’s current production statistics.

Venezuela has also embarked on an impressive natural gas plan that will make the country an exporter of natural gas. One project cost an estimated $2 billion, of which $125 million had to be borrowed. PDVSA never defaulted on any of its loans, even at the height of the strike. However, overproduction could threaten to reduce profitability in the future. Some estimate that Venezuela will need “an average annual investment of $2 billion just to compensate for well decline rates of 25%.”

The PDVSA’s 2004 budget contained projected expenditures of $15.2 billion. Some analysts predict that the investment needed will be difficult to raise due to mounting internal debt and the 2001 Hydrocarbons Law, which makes foreign investment more difficult. Energy and Mines Minister Rafael Ramirez has stated that Venezuela can carry out its plans without increasing its current $8 billion debt. Venezuela has recently secured a $40.1 million loan from the Japan Bank for International Cooperation to upgrade one of its refineries. The loan has an

96. Id.
97. Id.
99. Id.
100. Lucy Hornby, PDV to Shoulder Burden of Five-Year Plan to Boost Output, Oil Daily, Jan. 12, 2004, at 5.
101. Id.
102. Id.
103. Id.
104. Id.
105. Id.
106. Id.
107. Id.
108. Id.
110. Id.
111. Id.
112. Id.
interest rate of 1.1875 percent.114

D. POLITICAL REGIME

As stated earlier, Venezuela has a federal system of government.115 In 1998, the country elected Hugo Chavez, a former paratrooper, as president.116 He ascended to the presidency riding an extremely popular platform of reform and a continued renunciation of the elitist.117 Chavez enacted some major political changes in Venezuela.118 He presided over a change in the Constitution that transformed the government from a two-chamber Congress to a one-chamber National Assembly.119

This significantly reduced the seats controlled by the two parties in power, the Accion Democratica and the Copei, over the decades.120 Their power was further eroded by the elections in 2000, where Chavez’s party, the MVR, won an overwhelming victory.121 Since that time, Chavez’s popularity has dropped dramatically leading to an unsuccessful coup and a current attempt at a recall election.122

E. ECONOMY

The Venezuelan economy slid into a recession in 2002, due to an uprising against President Chavez.123 After showing modest growth in the two previous years, Venezuela’s Gross Domestic Product (GDP) fell by 8.9 percent.124 Petroleum occupies a vast part of the Venezuelan economy. It accounts for almost three quarters of the country’s exports, about half of the total government revenues, and one-third of the country’s GDP.125

Recently Venezuela devalued its currency to 1,920 Bolivars to the dollar from the previous rate of 1,600 Bolivars to the dollar.126 The devaluation has been expected since last year’s budget used the 1,920 Bolivar figure.127 These controls sought to shore up the foreign reserves and to improve the country’s sovereign rating.128 Under Chavez’s stewardship, much of Venezuela’s non-oil economic sectors have suffered.129 Until recently, the oil industry has always remained strong, but this seems to be

114. Id.
118. Id.
119. Id.
120. Id.
121. Id.
123. Id.
124. Id.
127. Id.
128. Id.
changing with the continued political unrest. Chavez recently halted all shipments of oil to the Dominican Republic because he claims the country is harboring his opponents. Officials in the Dominican Republic continue to deny the allegations and have worked frantically to fill their country’s oil needs. These types of personal vendettas are what continue to put off foreign investors and prevent Venezuela’s economy from growing.

F. 2002 Uprising

The administration of President Chavez has faced growing discontent stemming from the way it has handled the economy. President Chavez attempted to replace PDVSA executives with his political allies in 2002, which resulted in an unsuccessful coup attempt. Chavez actually lost authority for forty-eight hours, but regained power in April 2002. Chavez has declared his intention to fulfill his term that expires in 2007. A nationwide strike lead to a shut down of PDVSA and the subsequent recession.

"The strike crippled Venezuela’s oil industry." Many of the fields and refineries were left unmanned, forcing the National Guard to handle gasoline distribution. The country had to import oil products for domestic use. OPEC was forced to increase production in order to offset the loss caused by the strike. President Chavez fired over 17,000 workers in response to the strike.

Chavez’s opposition has initiated a referendum to force a recall election. Whether this referendum will be effective is still in question, and the national election council is currently verifying the 3.4 million signatures on the referendum. Although the opposition seems great, Chavez retains abundant support in Venezuela, especially with the poor. Most analysts predict that Chavez will do everything in his power to en-

130. Id.
134. Id.
137. Id.
139. Id.
140. Id.
141. Id.
142. Id.
145. Williams, supra note 135, at 23.
sure that the referendum fails. The most likely scenario is that Chavez will prevail. Recent reports have rumored another possible union strike following the dismissal of eighty-three local labor leaders. The Union has denied these reports and claims that there are no plans to call a strike.

PDVSA has been struggling to return to normal since the strike. It contends that its plans have been curtailed from what they were prior to the Chavez administration, but it claims its priorities are more in line with those of a state oil company. Recently, PDVSA executives have been campaigning to reassure the world's business and financial communities that they have regained a level of normalcy. Ali Rodriguez has been running PDVSA since April 2002. Many critics contend that he has been detrimental to the company. Ali and Chavez continue to claim that PDVSA is as strong and powerful as ever. PDVSA claims that production has returned to 3.1 MMBD. Opposition leaders insist that figure is closer to 2.6 MMBD. The United States and Brazil have recently formed an alliance to help negotiate a result to the confrontation between Chavez and his opponents.

G. FOREIGN INVESTMENT

There are four major congressionally approved joint projects between PDVSA and foreign investors. The first involves Conoco on the North Coast. Two pipelines are used to transport oil to an upgrading facility. ExxonMobil has a joint venture with PDVSA on a field at Cerro Negro, which produces extra-heavy crude oil. Exxon has announced that it would like to increase production in this field. TotalFinaElf and Statoil are partners with PDVSA in a project, which began production in February 2002. ConocoPhillips and ChevronTexaco also have a joint venture with PDVSA, which began in November 2001.

146. Id.
149. Id.
150. Williams, supra note 135, at 22.
151. Id.
152. Id.
154. Id.
155. Id.
156. Williams, supra note 135, at 24.
157. Id.
160. Id.; Martin, supra note 74, at 332.
162. Id.; Martin, supra note 74, at 332.
164. Id.
165. Id.
The idea behind the Apertura Petroera in 1989 focused on opening the Venezuelan fields to foreign investment.\textsuperscript{166} The fields were opened to private investment in three rounds.\textsuperscript{167} In each round, the rights to develop certain fields were auctioned off to private investors.\textsuperscript{168} The original idea behind Apertura sought to expand production without regard to OPEC limitations while allowing Venezuela to remain an OPEC member.\textsuperscript{169} The current administration has strayed from this policy and believes in stricter adherence to OPEC standards.\textsuperscript{170}

The first project was estimated to have the capacity to produce 125,000 barrels per day, but by 1997, they were only producing 26,000 barrels per day.\textsuperscript{171} Some estimate that these fields could produce up to 500,000 barrels per day.\textsuperscript{172} In order to stimulate foreign investment, the Venezuelan Congress authorized profit sharing agreements in 1996.\textsuperscript{173} Under these agreements, the foreign companies bear all the costs of exploration and have a predetermined minimum investment.\textsuperscript{174} If the company discovers a field, then a joint venture with PDVSA is formed. Under these agreements, the tax burden varies between 85 and 94 percent.\textsuperscript{175}

A major obstacle to foreign investment remains the taxing power of the municipalities within the country.\textsuperscript{176} Foreign oil contractors are subject to transient rates, which are higher than resident countries pay.\textsuperscript{177} It is difficult to be granted resident status and each municipality must be dealt with separately.\textsuperscript{178} All disputes are settled in the local courts.\textsuperscript{179} In 1999, the Venezuelan Supreme Court ruled that none of the investors that won bids in the 1996 exploratory round of Apertura had to pay municipal tax.\textsuperscript{180} This proved to be a favorable decision to foreign oil investors. This decision both reduced uncertainty about the tax rate and reduced the expenses of operating in Venezuela.

Recent uncertainty about the future of Venezuela’s political regime has been supplanted by uncertainty regarding changes to existing oil contracts and pricing formulas.\textsuperscript{181} On January 12, 2004, Energy and Mines Minister Rafael Ramirez made statements about the potential changes to existing contractual arrangements.\textsuperscript{182} In a speech unveiling PDVSA’s

\textsuperscript{166} Vass & Lezcano, supra note 58, at 103.
\textsuperscript{167} Martin, supra note 75, at 329.
\textsuperscript{168} Id.
\textsuperscript{169} Vass & Lezcano, supra note 58, at 104.
\textsuperscript{170} Id.
\textsuperscript{171} Spancake, supra note 76.
\textsuperscript{172} Id.
\textsuperscript{173} Id.
\textsuperscript{174} Id.
\textsuperscript{175} Id.
\textsuperscript{176} Vass & Lezcano, supra note 58, at 107.
\textsuperscript{177} Id.
\textsuperscript{178} Id.
\textsuperscript{179} Id. at 108.
\textsuperscript{180} Id. at 109.
\textsuperscript{181} Vasquez & Hornby, supra note 144, at 4.
\textsuperscript{182} Ellsworth, supra note 109, at 2.
$15.2 billion budget for 2004, Ramirez alluded to plans that would freeze the growth of third-party operating agreements and turn them into join ventures. These claims have yet to be clarified.

V. MEXICO

A. Overview

Mexico maintains the fourth-largest oil reserve in the Western Hemisphere. Mexico is not a member of OPEC, but is a signatory of NAFTA, along with the United States and Canada. Mexico does seem to have more contact with OPEC than any other non-member country. It often follows the production increases or decreases that OPEC proposes. Mexico produced approximately 3.2 MMBD of oil in 2002. Of that, 1.9 MMBD were used in the domestic setting and 1.7 MMBD were exported. Of those exports, the United States received 1.5 MMBD or about 90 percent.

Mexico finished 2003 with a 75,000 barrel per day rise in December crude production. It was also a net exporter of crude oil for the second month in a row. Gas exports for the year climbed nearly 18 percent. Mexico stands as the third-largest supplier of petroleum to the United States. However, the increase in production from 2003 did not go to the United States, but rather to the Far East. The majority of Mexico's oil is produced in the Mexican Gulf. Despite declining oil reserves, it is expected that Mexico will increase its production in the coming years.

Mexico lacks a sufficient refining capacity to utilize adequately its reserves. In addition, Mexico must import petroleum products to support its population. Some have blamed Mexico's tendencies to acquire

183. Id.
185. Id.
186. Id.
187. Id.
188. Id.
189. Id.
190. Id.
192. Id.
193. Id.
197. Id.
198. Id.
199. Id.
old technology as a reason for its lagging behind the times. Mexico has some of the highest retail fuel prices in the region. Recently, the government started a pilot program that reduced the price of gasoline at a number of government-owned stations on the U.S. border.

B. OWNERSHIP OF MINERALS

The Mexican oil industry is nationalized. The national oil company, Petroleos Mexicanos (Pemex) has the "exclusive rights to oil exploration and production in Mexico." Pemex is the fifth-largest oil company in the world. Moreover, Pemex supplies the Mexican government with approximately 60 percent of its revenues, accounting for about one-third of the country's total revenues. This responsibility has left Pemex with little additional capital to invest in development.

President Fox has worked with the Mexican Congress to increase Pemex's budget. Thus far, it has resulted in a small increase in oil production. President Fox has also moved to modernize Pemex. New investment is sought under the Pidiregas program. The program seeks to attract foreign capital to Pemex. Pemex executives have blamed a fear of involving others in the international market as a reason for the slow development of domestic oil.

In 2004, other upstream companies will operate in Mexico for the first time since 1938 (upstream activities are production type activities rather than refining type activities, which are referred to as downstream). This is a direct result of the new Multiple Service Contracts (MSCs) Mexico has entered into, which are designed to attract foreign investment. These are discussed in more detail below.

Pemex has been under the control of the Institutional Revolutionary Party (PRI) for years. President Fox has been championing an anti-corruption campaign since his election. His cause was bolstered by the recent ruling that the PRI illegally siphoned $160 million dollars from

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202. Id.
203. Id.
204. Id.
205. Id.
206. Id.
207. Id.
208. Id.
209. Id.
210. Id.
211. Id.
214. Id.
Pemex during the 2000 election campaign. Fox had hoped this revelation would benefit his party in the most recent election. In 2002, Fox tried to strip three Pemex union leaders, who are also PRI representatives, from their parliamentary immunity for actions stemming from the embezzlement of funds. These attempts were followed by a threatened strike by Pemex workers who demanded a wage increase. The PRI has been trying to “distance itself from the Pemex union” in light of recent scandals.

C. Economy

The Mexican economy grew slightly in 2002, with growth in 2004 expected to reach 3 to 3.5 percent. This follows nearly three years of stagnant economic activity. It benefited from a rise in oil prices and an economic recovery by the United States. Mexico exports over 80 percent of its products to the United States. Additionally, Mexico has experienced a growth in the employment rate.

Failed tax reforms continue to keep government spending down. President Fox has continued to push for tax reforms that have been blocked by the PRI. The non-oil sector of the economy has continued to lag behind the petroleum sector. Some stability has been added by the recent reappointment of Central Bank governor Guillermo Ortiz. Ortiz’s leadership has produced a reduction in inflation and a more stable peso. Ortiz’s reappointment seemed to be far from guaranteed, as many politicians in President Fox’s party were unhappy with Ortiz. “Fox coaxed and prodded the disgruntled legislators” into the

216. Id.
217. Id.
219. Id.
220. Id.
222. Id.
223. Id.
224. Id.
227. Id.
229. Id.
232. Id.
233. Id.
appointment.\textsuperscript{234}

Pemex’s budget allocates just under $400 million for operating expenditures while setting aside $1.5 billion for debt payments.\textsuperscript{235} This is compared to a 2003 budget that totaled $2.4 billion with $1.1 billion for debt payments.\textsuperscript{236} Mexico’s Congress considered tax legislation that would restructure Pemex’s taxes, but it failed to approve the reforms.\textsuperscript{237} Pemex maintains the largest budget of the state-owned companies.\textsuperscript{238} Other countries’ state-owned subsidiaries, such as Venezuela’s PDVSA, are increasing at a much faster rate.\textsuperscript{239} PDVSA plans to increase spending by 129 percent in 2004.\textsuperscript{240}

Mexico faces a natural gas crisis in the future.\textsuperscript{241} The demand is expected to reach nine billion cubic feet per day in 2010.\textsuperscript{242} The demand was four billion cubic feet in 2001.\textsuperscript{243} Demands for electricity are expected to grow at the same time.\textsuperscript{244} It is estimated that by 2005, Mexico will only be able to meet 75 percent of its natural gas demand.\textsuperscript{245} Foreign investment and exploration are needed.\textsuperscript{246} This is one of the major reasons for the development of the new MSCs, which are attracting foreign investment.\textsuperscript{247}

D. Government

Vicente Fox was elected President of Mexico in December of 2001.\textsuperscript{248} His election ended seventy-one consecutive years of PRI rule.\textsuperscript{249} He has since clashed with the PRI on issues of reform.\textsuperscript{250} In 2003, President Fox’s National Action Party (PAN) hoped to gain control of the Congress.\textsuperscript{251} The low voter turn out, around 41 percent, allowed the PRI to maintain its position as the dominant party in the Congress.\textsuperscript{252} The PRI holds 35 percent of the seats.\textsuperscript{253} A further blow to the PAN occurred when Mexico’s other party, the PRD, fared well in many local elec-
tions. The PRD favors economic nationalism, a stark contrast to the view adhered to by Fox and the PAN. The PRI's views fall somewhere between those of the PAN and PRD.

Fox's relationship with the Mexican Congress became strained in 2002, as the Congress failed to approve many of his proposals. The PRI continues to hold the largest number of seats in the Mexican Congress. Fights within the opposition PRI have led to the failure of President Fox's tax proposals. Elba Esther Gordillo, the PRI leader in the lower house, attempted to push through a bill that included some of Fox's reforms. Her efforts angered many party leaders who ousted her from her position. This removal dealt a serious blow to Fox's reform agenda.

E. FOREIGN INVESTMENT

Mexico has historically been slow to bring in foreign investment, but change may be on the horizon. Mexico's MSCs allow participation of operating companies in Mexico's hydrocarbon exploration and development for the first time since the 1938 nationalization. As a result, these MSCs have been the subject of much political controversy within the Mexican government. The purpose of the MSCs is to reduce Mexico's growing dependence on gas imports. While the Mexican Constitution prohibits private ownership of oil and gas resources, the MSCs ensure that foreign companies will receive a return on their investment without giving them ownership of the reserves. Many observers feel that even though the MSCs may not be perfect, they are a good first step into a country with great potential that had been previously off-limits.

While the first round of MSCs focuses on natural gas, they may eventually lead to development of oil-related projects, according to Jose Cesar Nava Vasquez, general counsel for Pemex. At a Houston seminar on energy investment opportunities in Mexico, he stated, "This model could be taken even to oil projects." Interest in these projects has been

254. Id.
255. Id.
256. Id.
258. The Lady Vanishes, supra note 228, at 33.
259. Id.
260. Id.
261. Id.
263. Williams, supra note 242, at 34.
264. Id.
266. Williams, supra note 242, at 34.
267. Id.
268. Id.
269. Id.
strong, but it remains to be seen how successful the actual bids will be.\textsuperscript{270} The requirements for bidders on large projects are substantial, but Pemex plans to create smaller blocks with reduced bidder thresholds.\textsuperscript{271} The fields that have been targeted by this program are substantial with an enormous potential for development.\textsuperscript{272}

However, the project has hit a few snags. The bid response to the early offering was described as lackluster.\textsuperscript{273} Some of the early tenders did not have bidders, even though there were companies that bought bid packages.\textsuperscript{274} Three different reasons have been offered as to why a company would buy a bid package and then not submit a bid.\textsuperscript{275} One is the company might get the bid package in order to get information and build a relationship with people in Pemex without intending to make a bid.\textsuperscript{276} Another possibility is that the company intended to bid, but decided that the data was not favorable.\textsuperscript{277} Finally, a company could have intended to bid, but later decided that the political situation was not conducive due to the increasing hostility between President Fox and the Mexican Congress.\textsuperscript{278}

Analysts predict that the bids awarded thus far have little impact on the country’s dependence on imports.\textsuperscript{279} Argentina’s Repsol-YPF and Brazil’s Petrobras were both awarded bids on the MSCs that were offered.\textsuperscript{280} Other companies that were included in the awarded bids were Houston-based Amistad Energy, a subsidiary of China National Petroleum, Teikoku Oil of Japan, and Diaviez Group.\textsuperscript{281} Projections indicate that Mexico possesses enough gas reserves to both meet its own supply and export to the United States,\textsuperscript{282} but meeting that potential will require substantially more investment in the MSCs.

London-based BP has recently announced plans to join the deepwater production in the Alaminos Canyon area of the Gulf of Mexico’s deepwater, where Royal Dutch/Shell made a major discovery last year.\textsuperscript{283} BP’s blocks are located fifteen miles southeast of Baha.\textsuperscript{284} Shell has not released much information about its discoveries in the Alaminos Canyon, but they are believed to be substantial.\textsuperscript{285} Chevron and Exxon Mobile

\begin{enumerate}
\item \textit{Id.} at 35.
\item \textit{Id.}
\item \textit{Id.}
\item \textit{Id.}
\item \textit{Mexico’s Gas Independence, supra note 266, at 26.}
\item MEI: Three Scenarios Exist for Mexico’s MSC Tender Buyers, OIL \& GAS J., Dec. 8, 2003, at 26.
\item \textit{Id.}
\item \textit{Id.}
\item \textit{Id.}
\item \textit{Id.}
\item \textit{Mexico’s Gas Independence, supra note 265, at 26.}
\item \textit{Id.}
\item \textit{Id.}
\item \textit{Id.}
\item \textit{Id.}
\item Andrew Kelly, BP Joins Push to Explore Gulf of Mexico’s Aliminos Canyon, OIL DAILY, Jan. 5, 2004, at 5.
\item \textit{Id.}
\item \textit{Id.}
\end{enumerate}
have also initiated development activity in this growing region. There has also been interest in the southern Alimos Canyon area, but its remote location means that it will be some time before significant development. Currently, there are no pipelines in the vicinity.

Pemex also plans to build a new natural gas storage facility near Reynosa, Mexico, in a partnership with Tidelands Oil and Gas Corporation. A contract is expected to be signed soon. The new facilities will give Mexico more flexibility in timing its natural gas imports, as it will now have a capacity of one tcf of gas. More storage allows Mexico to acquire gas when the prices are lower and avoid the price spikes associated with natural gas sales.

Mexico has also recently entered into an agreement with Houston-based Chroma energy to provide seismic interpretation services. These services will be used to help explore offshore drilling prospects using high-tech seismic methods. Chroma is a relative newcomer to the seismic industry with roots in the biotechnology field. Pemex is hoping to increase both oil and natural gas output, and it believes this new technology can help accomplish that goal.

VI. BRAZIL

A. OVERVIEW

Brazil has approximately 8.3 billion barrels of oil reserves. Brazil has been working to increase production. They have succeeded in this goal, as oil production has risen steadily since the early 1990s. Brazil hopes to produce 1.9 MMBD by 2005, but is currently only producing around 1.6 MMBD. Brazil uses approximately 2.2 MMBD, so it is forced to import oil to support its own use.

Brazil hopes to be self-sufficient by the year 2006, but some reports have oil production declining by 2007. Petrobrás recently reported

286. Id.
287. Id.
288. Id.
290. Id.
291. Id.
292. Id.
294. Id.
295. Id.
296. Id.
298. Id.
299. Id.
300. Id.
301. Id.
302. Id.
that its oil and natural gas reserves climbed to 2.2 billion barrels of oil equivalent. This amount constitutes a 14 percent increase over the amount reported in 2003. The increase comes from new discoveries. New offshore finds and the increased volume evaluations of current fields also contributed to the increased estimates. These new discoveries may show a shift in Petrobrás's reserves from heavy crude to more light crude and natural gas.

In 2003, Brazil signed an agreement with the United States to initiate cooperation on the development of fuel cell vehicles. This agreement makes Brazil the first country to join the United States in this project. Because Brazil, like the United States, has to import more oil to meet its supply, the importance of fuel cell cars will drastically increase in the future. The development of more fuel-efficient vehicles will help reduce demand in Brazil, which will help the country attain its goal of self-sufficiency.

B. OWNERSHIP OF MINERALS

Brazil also has a state-owned oil company, known as Petrobrás, created by Law 2004 in 1953. In 1995, the ninth amendment to the Federal Constitution of Brazil gave constitutional protection to the monopoly enjoyed by Petrobrás. Law 9478 governs the Brazilian petroleum industry. Law 9478 has allowed Petrobrás to be more involved internationally “through the execution of concession contracts for the upstream activities or through authorization for the downstream.”

Petrobrás recently celebrated its fiftieth anniversary. Petrobrás has enjoyed significant importance within the Brazilian economy. For many years, each dollar invested in Petrobrás lead to the generation of more than five dollars in the Brazilian economy. Petrobrás conquered its lofty status in the world oil market with little outside help. It has achieved the position as the world’s largest oil company, despite the fact that most of its oil is difficult to find and produce in addition to its close proximity.
Petrobrás has made strides towards reaching the goal of self-sufficiency by 2006. Production is on the rise after a few lean years. They have invested $34 billion in development over the next four years. The company also hopes to increase production by bringing new fields on-line. Petrobrás is the only company to have made commercially viable discoveries in Brazil in recent years.

Petrobrás is also seeking to expand its holdings outside of Brazil. Its legal mechanism for international expansion rests in Article 41 of Law 2004. Petrobrás may expand its activities internationally, directly or through subsidiaries. Petrobrás first created a subsidiary called Petrobrás Internacional S.A. (Braspetro), and later created a commercial subsidiary called Intrebras. In the early 1990s, the Collar administration extinguished Intrebras. The move toward internationalization helped to develop fields in Iraq along with deepwater offshore wells. By the late 1980s, Braspetro had subsidiaries in nations such as Norway, Great Britain, and the United States. Petrobrás has also recently entered into a contract with Pemex to develop a natural gas block in Mexico.

Petrobrás has recently moved to increase natural gas demand by offering natural gas at a discount to diesel prices. The plan calls for natural gas prices at 55 percent of the price of diesel. This discounted price will remain in effect for the next ten years. The company hopes that the discounted price will encourage many urban bus fleets to convert to natural gas powered buses. Petrobrás’s goal is for 60 percent of the fleets to convert to gas, which would increase gas consumption by two million cubic meters per day.

Domestic gas consumption in Brazil needs to increase so that Petrobrás can meet the natural gas purchase commitments it has made with Bo-
The Brazil-Bolivia pipeline is underdeveloped. Petrobrás has invested over $500 million into the project, but only 70 percent of the pipeline's capacity is being utilized. To make matters worse, the contract includes a “take or pay” provision that demands Petrobrás pay a minimum import quota even when it does not use the fuel. Brazil has recently negotiated a change to the clause, but has had very little success. A recent discovery of a considerable natural gas reserves has lessened the need for gas imports. Natural gas from Brazil remains cheaper by almost a dollar per Million btu (MMbtu).

Petrobrás is also moving to increase its downstream activities. It is currently the world's eighth-largest oil refiner. Most of Petrobrás's capital investment is still committed to upstream activities, but it remains committed to downstream operations. Until recently, Petrobrás has encouraged investment in existing refineries. It now has plans for a new refinery, but details have yet to be worked out. Some states in Brazil have signaled they would be willing to give subsidies in order to get the new plant in their state.

C. Economy

The Brazilian economy has shown some growth in 2002. The GDP actually rose 1.5 percent. In 2003, the industrial output grew just 0.3 percent, posting its worst performance since 1999. The output received a boost from agribusiness, machinery, metalworking, and mining. The Brazilian economy actually shrank by 0.1 percent in the first three quarters of 2003. Brazil is planning to introduce a public-private partnership in order to improve the infrastructure such as highways, rails, and energy.
D. Government

Luiz Inacio Lula da Silva was elected president in 2002. He garnered the support of many of Brazil’s political parties in winning the election. His platforms of fighting hunger and improving social spending were popular. Lula’s election initially weakened the Brazilian currency in the world market, but since it has risen in value.

Recently Brazil has had some friction between Petrobrás and the state of Rio de Janeiro (the country’s main oil producing state). Rio de Janeiro has passed a law that nearly doubles the taxable income from pipelines of more than thirty inches. Petrobrás has hoped to build a major pipeline in the area, but the governor of Rio de Janeiro is obstructing the path of the state-controlled agency unless it agrees to construct a new refinery in her state.

Petrobrás has been planning to increase the country’s refining capacity and Rio de Janeiro hopes to receive one of the refineries. Government officials contend that the refinery that is currently in Rio satisfies the demand for that area. Another refinery in that area would just lead to additional oil being shipped from the area. These political battles between the state and central governments are detrimental to foreign investment. Some fear that foreign companies may be wary of investing in Brazil for fear that these types of taxes could be applied to them.

E. Foreign Investment

Neither Total, BP, nor ConocoPhillips, have been able to find a commercially viable field in Brazil. Most of the discoveries have been small, and would require an expensive recovery process. The only international company currently in Brazil is Repsol-YPF. Shell is expected to begin production and has also gained permission to start exporting oil. Petrobrás had a monopoly on the oil industry until 1997, and engaged in price-fixing. Brazil has also become subject to the

357. Id.
358. Id.
359. Id.
361. Id.
362. Id.
363. Id.
364. Id.
365. Id.
366. Id.
367. Id.
368. Country Analysis Brief: Brazil, supra note 297.
369. Id.
370. Id.
371. Id.
372. Id.
world oil markets. In 2000, the Brazilian government sold a 28.5 percent share in Petrobrás.

In 1997, a law was signed that allowed for joint ventures between Petrobrás and foreign oil companies. The purpose of these policies was to help Brazil become more self-sufficient in its oil production. This law also created the National Petroleum Agency (ANP). The ANP is "charged with issuing tenders, granting concessions for domestic and foreign companies, and monitoring the activities of the sector, including establishing rights to explore for and develop oil and natural gas in Brazil." The current president has shown some signs of reversing these privatization policies. Companies who receive oil and gas leases in Brazilian oil must now devote a portion of their investments to purchase goods and services from Brazilian firms. The governor of Rio de Janeiro passed a law imposing an 18 percent tax on oil production, but backed down in the face of pressure from the oil companies operating in the region—mainly Shell and ChevronTexaco.

ANP announced in 1998 that it would place 92 percent of the nation's sedimentary basins up for sale to outside oil companies. They have since held four bidding rounds. Each round has been successful, as bids were received for all but a very few blocks. Oil companies from all around the world were involved in, and successful with, the bidding.

Petrobrás utilizes risk contracts in order to spread the risk of their foreign investments. In the early days of foreign investment, Braspetro usually bore all of the risk. President Geisel decided to implement the risk contracts after a series of Congressional studies. Under these contracts, Petrobrás regains control of the wells after the development stage. Foreign companies retain rights to buy back some of the oil that is produced at market price.

The contracts include exploration commitments with gradual reduc-
tions in service area. The foreign company is permitted to maintain control of the operations, as long as they provide personnel training and comply with local legislation. Brazil prefers for the companies to use local products and personnel. These risk contracts allow Brazil to retain ownership and control of its oil; however, these contracts are not always preferable to the foreign companies. To them, it can be described as “risk without title of oil.”

VII. ARGENTINA

A. OVERVIEW

Argentina maintains over 2.9 billion barrels of oil reserves. As the fourth-largest producer of oil within Latin America, it qualifies as a strong player in the Latin American oil market. Argentina’s oil production began to increase throughout the 1990s. This increase in production allowed Argentina to export a significant amount of oil. This increasing oil production reached a peak in 1998 and has generally been declining ever since. A large reason for this has been linked to an economic collapse in Argentina in 2001.

B. OWNERSHIP OF MINERALS

Argentina has a completely privatized oil sector. Repsol-YPF is the country's largest oil company. It was formed in 1999, when Repsol, a Spanish oil company, bought the country’s state-owned oil company. They dominate the industry accounting for 45 percent of Argentina’s oil production in 2002. Four companies account for 77 percent of oil production in Argentina.

C. ECONOMY

Argentina’s economy appears to be in recovery after a two-year reces-
The default of Buenos Aires led to great economic instability in 2001. An economic depression lead to a 30 percent drop in the GDP. This drop was a record for a country not at war. The currency was taken off its 1:1 ratio with the dollar, which lead to significant inflation. The economy began to stabilize in 2002. Growth was shown in the first two quarters of 2003. Some experts predict that the quick economic upturn could actually be detrimental to the long-term economic stability. They believe it will make the government reluctant to implement long-needed economic reforms.

D. GOVERNMENT

President Kirchner won a runoff election by default in 2003 when his opponent dropped out. Because Kirchner won only 22 percent of the vote, he has spent most of his time in office legitimizing his mandate. After only two months, he owns an 80 percent approval rating.

E. FOREIGN INVESTMENT

Repsol-YPF, ChevronTexaco, and Vintage Petroleum were all involved in trying to revive investment in exploration and drilling in Argentina in 2003. They were able to do this despite an unstable market. Economic recovery, government policies of re-patriatization, and strong oil prices encourage companies to continue to invest. The depreciated value of the Argentine peso has also encouraged companies to invest. In 2002, a 20 percent export tax and a freeze on domestic crude prices were implemented to limit investment in the future.

408. Id.
409. Id.
411. Id.
413. Id.
414. Id.
416. Id.
418. Id.
419. Gonzalez, supra note 410, at 22.
421. Id.
422. Id.
423. Id.
424. Id.
425. Id.
VIII. OTHER COUNTRIES

A. CHILE

Chile is a relatively small producer of oil. Its major export is copper. Copper exports have helped create a projected budget surplus in 2004. Chile’s economy has been relatively unaffected by the turmoil in Latin America. Chilean oil production has declined steadily over the last two decades. Existing wells have been drained out and attempts to find more reserves have been unsuccessful. Chile produces approximately 14,000 barrels of oil per day. The country consumes 240,000 barrels per day. This leaves 226,000 barrels per day that must be imported. Its reserves currently stand at about 150 million barrels. Chile does have three refineries. One of the refineries, Brazilian-owned Petrobrás, is negotiating to participate in an expansion of the refinery.

B. PERU

Peru is also a relatively small producer of oil. Peru’s oil production has been declining since the late 1980s, except for a small upswing around 1993. During this period, Peru’s oil consumption has been increasing. There have been no major petroleum discoveries in Peru since 1986. The few U.S. companies that had invested in oil exploration have mostly withdrawn. The government has been trying to entice foreign investors to increase oil and gas exploration. They have reduced royalties on oil and gas production contracts by up to 30 percent. The

428. Id.  
430. Country Analysis Brief: Chile, supra note 426.  
431. Id.  
432. Id.  
433. Id.  
434. Id.  
435. Id.  
436. Id.  
437. Id.  
439. Id.  
440. Id.  
441. Id.  
442. Id.  
443. Id.  
444. Id.
Noperuano pipeline carries oil through Peru. The pipeline has a large capacity, but is currently only transporting about 40 percent of that capacity. Peru has recently started to use the pipeline to ship oil from Ecuador.

Peru looks to become a large producer of natural gas, as the largest field in South America is located in the Camisea area of Peru. Investors are looking at the possibility of converting the gas to liquefied natural gas so that it can be exported to the United States and Mexico. U.S.-based Hunt Oil has already conducted feasibility studies regarding this endeavor. However, in the fall of 2003, the U.S. Export-Import Bank rejected a loan for upstream development of the Camisea project, putting the liquefied natural gas project in doubt.

C. ECUADOR

Ecuador also enjoys a considerable degree of importance in the oil industry. It is one of the largest oil exporters in South America. The oil sector accounts for about one-third of the government’s revenue. Ecuador’s state-owned oil company is called Petroecuador. While the output of other oil companies has increased in recent years, Petroecuador’s has declined. This has been attributed to insufficient investment in the company’s fields. High oil prices have helped to improve Ecuador’s economy. Oil production dropped 5 percent in 2002, after record production in 2001.

The opening of a new pipeline has helped to increase the overall production. It has allowed companies to increase production without incurring transportation problems. Foreign companies have been reluctant to invest in Ecuador because of factors such as taxes, hydrocarbon laws, changing policies, pending cases, and an oil workers

445. Id.
446. Id.
447. Id.
448. Id.
449. Id.
450. Id.


453. Id.
454. Id.
455. Id.
456. Id.
457. Id.
458. Id.
459. Id.
460. Id.
461. Id.
462. Id.
The government has been trying to increase investment in the industry.

D. COLOMBIA

Colombia is another important producer of oil in Latin America. Oil production in Colombia reached an all-time high in 1999. However, exportation and production have been down since that time. Ecopetrol, the state oil company, regulates oil and gas. Colombia hopes to sustain its role as a net exporter of petroleum. In 2003, Colombian exports to the United States were down 25 percent.

The Colombian government has been working to make investment more attractive to foreign companies. They reduced the mandatory participation percentage in joint ventures involving Ecopetrol from 50 percent to 30 percent. They also eliminated the mandatory 20 percent royalty and replaced it with a scale that varies from 8 to 25 percent.

There are many unexplored areas of Colombia. Many of these are potentially rich in hydrocarbons. There have been some joint ventures between Ecopetrol and other South American oil companies to develop new fields. Colombia is currently in a dispute with Nicaragua over the San Andres archipelago. Colombia claims jurisdiction over the waters based on a 1928 treaty. Nicaragua has declared the treaty invalid and plans to explore the area. Colombia has promised to respond by force if Nicaragua carries through with this plan. Oil exploration has been hindered by problems with the new fields and with attacks from left-wing rebels, who continue to attack the oil industry infrastructure.

463. Id.
464. Id.
466. Id.
467. Id.
468. Id.
469. Id.
470. Id.
471. Id.
472. Id.
473. Id.
474. Id.
475. Id.
476. Id.
477. Id.
478. Id.
479. Id.
480. Id.
481. Id.
482. Country Analysis Brief: Colombia, supra note 465.
483. Id.
E. Bolivia

Bolivia is home to the second-largest natural gas reserves in South America. Bolivia can satisfy its domestic oil needs, but it nonetheless imports nearly half of its diesel. Bolivia wants to build two gas-to-diesel plants that could produce diesel from natural gas. Bolivia’s state-owned oil company, Yacimientos Petroliferos Fiscales Bolivianos (YPFB) began its privatization in 1994 and it is now almost exclusively privately owned.

Bolivia hopes to export much of its natural gas in order to increase revenues to the extremely poor country. It exported natural gas to Argentina from 1972 until 1999, and resumed exploration in 2002. It continues to support the development of gas-to-liquid plants. Bolivia is also developing new pipelines for the transportation of natural gas to other countries. Some of Bolivia’s largest natural gas producing companies have agreed to form a consortium to ship liquefied natural gas to the United States.

IX. PETROAMérica

Venezuelan President Hugo Chavez wants South American companies to form the Petroamérica company—a coalition of oil, gas, and electric power companies in Latin America. He believes that “Petroamérica would be a transnational gas and energy producer.” He believes it would serve to strengthen the countries’ influence in trade organizations, such as the World Trade Organization (WTO). Brazilian President Lula has been receptive to the idea. PDVSA and Petrobrás are currently collaborating in some deep-water agreements. It is yet to be seen how other South American countries will respond. The United States strongly opposes the plan. It appears that the plan would align all of South America with OPEC because Venezuela, a founding OPEC member, is lobbying for the alliance, and is the largest oil pro-

485. Id.
486. Id.
487. Id.
488. Id.
489. Id.
490. Id.
491. Id.
492. Id.
494. Id.
495. Id.
496. Id.
497. Id.
498. Id.
499. Id.
ducer in the region.\textsuperscript{501}

X. PREDICTIONS AND SOLUTIONS

So what does the future hold for oil exportation with Latin America? Venezuela is the largest oil producer in the region, but is a founding member of OPEC. They follow the supply increases and decreases that OPEC mandates. The United States needs to develop new sources if it desires to end its dependence on OPEC oil. Venezuela possesses several advantages over other OPEC nations. For one, it is much closer to the United States. It also does not share the same regional instability as many of the other OPEC nations. In general, Venezuela is safer for workers and citizens of other countries than most Middle Eastern countries. Venezuela does have its own political instabilities that make foreign investors leery of investment. It would seem irresponsible to put too much reliance on Venezuelan oil because the climate could change at any time. However, Venezuela will remain a major source of oil to the United States.

Mexico seems to be the preferred choice. It is the closest, in geographic terms, to the United States. The United States also has a free-trade agreement with Mexico and a tradition of industrial trade. The Fox administration has been friendly with the United States. The problem with Mexico is its supply, as it has its own energy needs that must be satisfied. Although Mexico is currently a large supplier to the United States, the prospect that its role will increase in the future appears unlikely based on Mexico's lackluster supply.

Countries such as Brazil and Argentina would represent good trade partners, but their interests are concentrated on meeting domestic supply. Although they do export a portion of their oil, their primary focus is meeting local demands. Brazil has been increasing its supplies in recent years with the stated goal of self-sufficiency by 2006. As these countries develop, their domestic needs will continue to increase.

Ecuador and Colombia both appear to be likely candidates for trade. Both countries are developing their oil industries and are willing trade partners. However, political unrest in Colombia makes reliance on their oil an unwise choice right now. If the political situation improves and peace can be reached, then more reserves can be discovered and production may increase. Likewise, Ecuador faces its own political struggles. Uncertainty regarding the laws and how they may evolve discourages investment. If the government is successful in attracting additional investment, then Ecuador could emerge as a major supplier of oil to the United States.

The United States also has a growing need for natural gas. Many South American countries have an abundance of natural gas reserves. Venezuela, Bolivia, and Peru all have large proven reserves of natural gas.

\textsuperscript{501} Id.
However, the current political atmosphere in those countries renders transportation of natural gas to the United States unfeasible. An increase in demand and further research into liquefied natural gas should make the shipment a realization in the future.

Currently, there does not appear to be any country that is able to increase its exports to the United States substantially. Increases in production from these countries could lead to a decrease in the dependence on OPEC oil and a reduction in oil prices. Continued investment in the countries that are developing their petroleum production sector can only benefit the United States in the future. As long as the United States continues to place massive reliance on oil to satisfy its energy needs, more options are always preferable.