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Testimony Before the Senate Foreign Relations Committee
Subcommittee on International Economic Policy,
Export and Trade Promotion
October 21, 2003

Mr. Chairman, distinguished Committee members, I am pleased to be here today with the Department of Energy to discuss the important role West Africa and Latin America play in our energy security. We are particularly pleased that the Subcommittee has chosen these key regions to discuss: they are important both in an energy security sense and for the commercial opportunities they present for U.S. firms. Just to highlight at the outset the importance of the Western Hemisphere and West Africa to U.S. energy security, nearly 60 percent of 2002 U.S. imports of crude oil and oil products came from these two regions. As I will outline in my testimony, these regions will continue to play important roles as a significant contributors to the diversity of supply called for in our energy policy.

The President's National Energy Policy noted the importance of the Western Hemisphere and Africa to global energy production. Given the role Canada plays in our energy security and the importance of our North American Energy Framework, I have taken the liberty of including Canada and expanding my testimony to cover the Western Hemisphere rather than just Latin America. The National Energy Policy directs the Secretaries of State, Commerce and Energy to put a particular focus on regulatory harmonization and integration of markets, as well as to work with our foreign partners to improve commercial conditions and investment climates. We are working with colleagues at the Departments of Energy and Commerce to implement these directives, in West Africa and the Western Hemisphere and across all regions. I am pleased that we have successes to report, as well as areas for additional work for our agencies.

As Under Secretary Larson testified in April, we approach international energy policy aware of a number of hard facts that must be at the nexus of an effective energy security and foreign policy. These hard facts include net

import levels of roughly half of our energy needs, higher dependence by our trading partners on oil imports from one region of the world, and the reality that a disruption anywhere affects all market participants.

Taken together, these facts mean that one key element of an effective international energy policy must be to promote increased and diversified production of energy from a range of foreign suppliers in many regions, as outlined in the President's National Energy Policy. Today's hearing on the Western Hemisphere and West Africa will enable us to report to you how we are promoting the diversification that is central to our strategy in these two key regions of the world.

Reliability Through Diversification

Energy investments are costly, risky and require long-term commitments. For that reason, neither companies nor countries can afford to have all of their eggs in one basket. Recognizing this reality, our energy policy seeks to encourage in countries around the world like-minded free market policies toward energy and investment, emphasizing the expansion and diversification of energy supplies.

Let me provide you with just a few concrete examples that demonstrate what we are doing to achieve these goals.

North America: Energy Integration

We have made strengthening our energy cooperation with Canada and Mexico a top priority of U.S. energy policy. We established a North American Energy Working Group (NAEWG) in 2001 to serve as a forum for exchanging information and pursuing joint strategies. Last year, senior energy experts from the three North American governments released a North American "Energy Picture" report that, for the first time, jointly measures energy stocks, trading balances, and energy flows in the continent. This marks the first time we have truly looked at the North American market as a unified one. These NAEWG meetings enable us to harness the work of five sub-groups addressing the science and technology of energy, energy efficiency, electricity regulation, natural gas regulation, and critical infrastructure protection. This is not a negotiation, for each country makes its own sovereign energy policies. But we do see the NAEWG as an excellent forum from which to learn from one another, and from which to

evaluate the barriers that still impede a truly unified market.

Canada

I would like to take a few minutes to describe how Canada, our most important energy supplier, factors into the energy security equation, as we are trying to take a hemispheric approach to energy in the Americas. I start with Canada because it remains our leading supplier of imported electricity, natural gas and petroleum. All three flow across the border in both directions. The Canadian energy sector is developing its heavy oil reserves, with production expected to reach nearly one million barrels per day by year-end. These heavy oil reserves are anchoring Canada as a pillar of hemispheric energy security.

Canada's heavy oil is important to our energy security. DOE's Energy Information Administration compiles an annual reference citing various private sector compilations of overall energy reserves. This year, they have included the Oil and Gas Journal's new estimate that characterizes a significant portion of Canada's heavy oil as proven reserves. This one change, recognizing the commercial viability of oil sands, raises Canada's proven reserves estimate to some 180 billion barrels, making it the world's second largest holder of reserves after Saudi Arabia's 264 billion barrels and just ahead of Iraq. And 175 billion of those 180 billion barrels are in oil sands. Over time this number will rise as advances in technology make even more heavy oil reserves recoverable at prevailing market prices.

As a point of illustration, the shift in Canadian reserves is telling, as it alters overall distribution of world oil reserves. Including Canada's heavy oil reserves raises North America's share of the world's proven reserves from 6 to 18 percent (and the Western Hemisphere's from 13 to 26 percent), while those in the Middle East fall from 66 to 57 percent. This comparison is presented graphically at the end of my testimony.

And given this big shift, I also wanted to provide a brief overview of some of the commercial projects we see there, and some that may be over the horizon, and to note that many of these projects involve partially or majority-owned subsidiaries of U.S. energy concerns. Suncor and Syncrude (Canadian companies with major U.S. investors) have

decades-old projects in the oil sands which, with production costs now down to about $10 per barrel, are strongly economic. They have contributed much of the pioneering technical development that made this gigantic resource viable. More recently, ChevronTexaco, Shell and others have undertaken multi-billion dollar investments that can be expected, perhaps by the end of this decade, to lift production to two million barrels per day. This should make up for expected reduced traditional oil field production in Canada. The main constraint to bringing these resources to market will not be their availability, but pipeline and refinery capacity.

World-class oil and natural gas projects are also underway in the Canadian Maritimes, which until recently had no oil or gas production, but is now the fastest-growing source of natural gas for New England, the region of our country most dependent on home heating oil. In 2000 Nova Scotia began producing natural gas and shipping it southwest by pipeline to the Boston area.

Newfoundland began producing oil from its offshore continental shelf less than a decade ago, and it is showing increasing promise as a long-term component of North America's energy supply picture. Using technology and experience from Europe's North Sea developments, Newfoundland's oil output has been growing by 20 to 30 percent per year, and is at about 135,000 barrels per day from the first field, Hibernia. Production could double in the next six years as new fields come online.

Major U.S. companies, or U.S. divisions of major multinationals, involved in various facets of the offshore energy sector (exploration, production, pipeline systems, offshore support services, etc.) in Maritime Canada include: ExxonMobil, BP, Shell Oil, Bechtel, Chevron, El Paso Pipeline, Hunt Oil, Marathon, Rowan Offshore, and Global SantaFe. The State Department offers these firms our support, through our Embassy in Ottawa and Consulates in Calgary and Halifax, in dealing with occasional regulatory difficulties.

Given the importance of our energy partnership with Canada, the State Department has for years chaired an interagency bilateral "Energy Consultative Mechanism" between the two federal governments, allowing each side to work towards common ends and to address issues of

concern. Canada hosted the latest meeting of the Mechanism in Ottawa on July 17, where we discussed their oil sands production and our natural gas summit, as well as our shared electrical grid and numerous other topics. We have had numerous discussions with our Canadian colleagues since the August 14 blackout in Toronto, Ottawa, Washington and Detroit.

Mexico

Mexico is one of our leading energy and trading partners, and has, with other major producers, increased production in recent months to help global oil markets meet the challenges arising from recent events in Iraq and Venezuela. Mexico is generally among our top five foreign oil suppliers. In February of this year, crude oil imports from Mexico exceeded those of both Saudi Arabia and Canada, and Mexico has maintained higher than normal oil exports to the United States since then.

Our energy trade with Mexico is not a one-way street. We import crude oil and electricity from Mexico. But we also supply Mexico with over 10 percent of its refined petroleum products, and we remain a net natural gas exporter to Mexico.

Mexico has taken steps to liberalize transportation, distribution, and storage of natural gas, and has successfully attracted domestic and foreign investment there and in other parts of its energy sector. Some of you may have already met Mexico’s new Energy Minister, Felipe Calderon who, as a member of the Mexican Congress and a leader in President Fox’s National Action Party (PAN) party, participated in meetings of the U.S.-Mexico Inter-parliamentary Union in the 1990’s. Minister Calderon was appointed September 2 and is expected to continue the sector’s liberalization.

In recent months, integration has increased at the border. For example, PEMEX applied for a Presidential Permit to cross the international boundary to Brownsville, Texas, with a petroleum products pipeline that initially allows imports of about 10,000 barrels per day of diesel from a refinery in Monterey, Mexico. The pipeline will ultimately have a capacity of up to 100,000 barrels per day. The State Department issues such permits, and this one was signed in April after a thorough consideration of public comments and inter-agency review.

Mexico is also proceeding with plans to permit numerous LNG import terminals in Baja California and along its Gulf Coast. Although not all of these projects will ultimately be constructed, industry analysts believe several will be operational by around 2007. Foreign investors, including U.S. companies such as Sempra Energy, ChevronTexaco, and Marathon, are actively pursuing these projects, which will serve both the Mexican and U.S. natural gas markets.

Since 1992, Mexico has allowed private sector participation in the generation of electricity for self-supply, small production, cogeneration and independent power production (IPP). U.S. firms are major investors and suppliers in this new market. Mexico projects an overall annual growth rate in electricity demand through 2010 of 5.6 percent, and somewhat higher (6.5 to 7.6 percent) in industrial regions. Privately financed generating capacity is expected to grow at 14.2 percent annually, and Mexico expects to add over 28,000 Megawatts of new capacity by 2010. IPPs could play a major role in attracting the required investment in new generation and transmission infrastructure.

The reliability of North American energy trade is also enhanced, of course, by geographic proximity. But more important than geography alone are the rule of law and the predictable investment conditions created by NAFTA, integrated pipeline networks, close cooperation among our governments and energy companies, and long-term stable supply relationships.

LNG: A Bright New Industry for Trinidad and Tobago

Recent natural gas finds in Trinidad's waters have reinforced that country's position as a reliable supplier of liquefied natural gas (LNG) to the U.S. and global LNG markets. In fact, the country is home to the single largest LNG facility in the hemisphere, a clear signal that, with the right investment climate, investors will come. Currently, Trinidad and Tobago supplies about two-thirds of the U.S. LNG market, some 2.4 percent of total natural gas imports and 0.4 percent of total natural gas consumption. Trinidadian gas exports (98 billion cubic feet in 2001, valued at just under $400 million) contribute a significant portion of gas used in the Northeast. Trinidad hopes to triple its share of the U.S market by the end of the decade.

Several discoveries in 2001 increased Trinidad's substantial proven reserves to around 30 trillion cubic feet, with total potential reserves estimated at 90 to 100 trillion cubic feet. Low exploration, production and transportation costs make Trinidadian gas competitive with most other foreign sources of gas.

Venezuela: Historic, Strained, but Recovering Oil Supplier

Venezuela and the United States have also enjoyed historically strong energy ties. Traditionally, Venezuela has been one of our most reliable oil partners, and maintained an oil policy built upon a reputation of reliability, which was of great mutual benefit to Venezuela and consumers of its oil exports. Through World Wars, politically inspired embargoes, and global dislocations, Venezuela found that its national interest was best advanced through maintaining that reputation of reliability.

This reliability was, unfortunately, seriously eroded with the oil disruption at the beginning of this year. Venezuela's turmoil came at a difficult period for the world economy. It is up to the Venezuelans to work to restore that reliability with world petroleum markets. While production and refinery operations have recovered significantly, many industry experts assess that the sustainability of the recovery is questionable due to the lack of skilled manpower,

deferred maintenance activities, and lack of capital investment. Many argue Venezuela will experience an actual decline in capacity if these trends are not reversed.

Commercial aspects of the relationship continue to run deep. In the 1990s, Venezuela opened parts of its energy sector to international firms, most of them American. These firms, such as ConocoPhillips, ChevronTexaco and ExxonMobil as well as independents like Harvest International, Sampson and Anadarko remain hard at work there. In fact, foreign energy firms are producing an increasing share of Venezuela's oil. U.S. firms are also working with Venezuela as it begins to tap its large LNG potential in projects such as Plataforma Deltana. Venezuela's vast heavy and extra heavy oil reserves also deserve special mention in this regard. Joint-venture projects with major international partners are now on stream, and as the commercialization of Venezuela's heavy oil potential deepens, it seems likely that the private sector will book more and more of these reserves as proven, as in the case of Canada, and tip the Hemisphere's reserve balance yet further.

The investment relationship with Venezuela is a two-way street. In fact, Venezuela is one of the top ten overall foreign investors in the U.S. through CITGO, a major refinery and petroleum products marketer here. These reciprocal energy investments bring benefits to both parties. We will continue to maintain a robust, if possibly more difficult, energy dialogue with Venezuela.

The United States will continue to work to help Venezuelans resolve their political differences. The key to reversing the severe economic and political decline in Venezuela, and the key to recapturing their oil sector reliability, is a continued dedication to finding a constitutional, democratic, peaceful and electoral solution to the crisis, as called for in Organization of American States (OAS) Permanent Council Resolution 833 of December 16, 2002. The international community, including the OAS and the Friends of the OAS Secretary General's Mission for Venezuela, of which the United States is a member, stand ready to support Venezuelans' efforts to resolve their differences. Venezuela's newly instituted National Elections Council has the responsibility of determining when a recall referendum will be scheduled.

Brazil: Deep Water Resources, New Gas Finds

On April 29, Petrobras confirmed the largest gas discovery ever in the Brazilian continental shelf, with reserves of about 70 billion cubic meters, compared to prior total proven natural gas reserves of about 231 billion cubic meters. The discovery was made in the BS-400 block of the Santos basin, offshore from the State of Sao Paulo and Brazil's largest national energy consumer market.

As of summer 2002, the Campos Basin offshore of Rio de Janeiro State produced an average 1.26 mbd of oil and 18.42 million cubic meters of natural gas per day. At that time Petrobras was forecasting oil production by 2005 of 1.6 mbd in the Campos Basin and 1.9 mbd countrywide.

The National Energy Policy report recognized Brazil’s growing importance to the global energy picture, and its excellence in producing deep water hydrocarbons.

Nigeria

The Administration recognizes Africa's role as a major energy supplier. For example, Nigeria has been the fifth largest supplier of crude oil to the U.S., with exports to the U.S. averaging nearly 600,000 bpd in 2002. Overall Nigerian crude oil production averaged 2.118 million barrels per day (bbl/d) in 2002. Approximately 65 percent of Nigerian crude oil production is light and sweet, making it particularly suited for U.S. refineries since it yields high volumes of gasoline. Nigeria has the potential to increase its crude oil production significantly in the next few years as recent deep-water discoveries come on stream.

U.S. firms are playing an important, and very positive role in supporting development in Nigeria. On October 15 Secretary Powell presented ChevronTexaco with the 2003 Corporate Excellence award for the company's work in Nigeria. ChevronTexaco has done far more than drill for oil and gas. The company’s riverboat clinic brings badly needed healthcare to thousands of people in the Niger Delta. Like many parts of Africa, HIV/AIDS has cast its shadow over Nigeria. The company’s AIDS prevention program recently prompted Nigerian President Obasanjo to designate Chevron Nigeria’s managing director as co-chair of the country’s public-private sector alliance to fight HIV/AIDS. We applaud Chevron Nigeria’s commitment to its employees, and to the people of the delta.

Nigeria also has an estimated 124 trillion cubic feet (Tcf) of proven natural gas reserves (9th largest in the world). However, due to a lack of infrastructure, Nigeria currently flares much of the natural gas it produces and re-injects only about 12 percent to enhance oil recovery. Nigeria is beginning to develop its gas resources with its most ambitious natural gas project, a $3.8 billion LNG facility on Bonny Island completed in September 1999. This facility is slated to expand to more than double its current capacity over the next three years. Plans for additional LNG facilities are being developed. In February 2001, Nigeria and ChevronTexaco, Conoco, and ExxonMobil announced an MOU to conduct feasibility studies for an LNG facility, West Niger Delta LNG, expected to be on stream by 2005. An MOU for a third LNG plant in Nigeria was signed in September 2001 with Phillips and Agip. This facility, planned to begin operating in 2007, will be the world's first offshore LNG plant.

The West Africa Gas Pipeline (WAGP), being developed by a consortium led by ChevronTexaco, is an important regional gas development project that will bring needed energy supplies to West Africa and reduce wasteful flaring. The project received $1.55 million in technical assistance from the United States Agency for International Development (USAID). USAID assisted the pipeline countries in developing market mechanisms for natural gas and for building capacity of local government and regulatory agencies to ensure they could actively and effectively participate in the WAGP project. The $500-million WAGP will initially transport 120 Mmcf/d of gas from Nigeria to Ghana, Benin and Togo beginning in June 2005. The World Bank estimates that Benin, Togo and Ghana can save nearly $500 million in energy costs over a 20-year period as WAGP-supplied gas is substituted for more expensive fuels in power generation. Ghana estimates that it will reduce its imports by 15,000-20,000 barrels of crude oil per day by using WAGP gas in its power plants.

Nigeria’s oil producing Niger Delta remains politically volatile, with intermittent communal violence and labor disputes disrupting production in some areas. Ethnic violence involved well-armed militants, and the Nigerian military forced foreign operators to shut-in some 800,000 barrels per day during parts of March and April. Although overall production has returned to near previous levels, we remain in close contact with the Nigerian government, the local communities, and the firms operating in the Niger Delta

region as they work to address recurring problems. Our mission in Nigeria remains committed to supporting democracy, economic reform, and poverty alleviation in Nigeria.

Emerging African Producers

Existing and new producers, such as Angola, Gabon, Equatorial Guinea, Sao Tome, and Chad will continue to develop new oil and gas resources in coming years, and U.S. energy firms are key in Africa's on-going emergence as an energy-supplying region. From the large firms, such as ExxonMobil and ChevronTexaco, to the smaller oil firms such as Amerada Hess, Marathon, Devon Energy, Vanco, Kerr-McGee and others, U.S. companies bring the most advanced technologies, resources and capital to assist African countries in developing their energy resources.

The Angolan petroleum industry now produces up to 900,000 barrels per day, a figure that will increase substantially in the coming years as new fields are brought on-line. During 2003 more than 350,000 barrels per day of Angola's production has come to the U.S. Current production is concentrated off-shore of the northern province of Cabinda. ChevronTexaco is the largest operator in Angola with shallow and deep-water fields in and around Cabinda. We continue to engage the Angolan government on the humanitarian situation, and urge the Angolan military and rebel groups to take necessary steps to protect internationally recognized human rights in the Cabinda region.

Production from the Cabinda fields will be eclipsed by deepwater production further south in the Kwanza Basin scheduled to come on-line by 2007. ExxonMobil, BP, Norsk Hydro, and Agip have all made significant discoveries in concessions in this area that are under development. BP made the first significant ultra-deep water discovery in this area in 2002 and other ultra-deep water concessionaires remain optimistic.

Our Embassy is actively working with the Angolan government to support the development of a comprehensive national energy strategy. USAID recently completed an assessment of Angola's energy policies and institutions to assist in identifying critical policy questions and possible solutions. The State Department is following on this effort by providing $200,000 in Economic Support Funding to the Department of Energy to support the energy strategy effort with Angola.

Gabon, sub-Saharan Africa’s third largest oil producer, currently produces about 300,000 barrels of oil per day, although this is expected to decline over the next five years. Gabon is an eligible beneficiary under the Africa Growth and Opportunity Act (AGOA), and its duty-free exports to the United States in 2001 were valued at $938.8 million, almost all of which were oil or energy-related products. Over 45 percent of Gabon’s oil output is exported to the United States.

Equatorial Guinea is emerging as a major oil producer in the Gulf of Guinea. On average, Equatorial Guinea produced 179,000 barrels per day of liquids (including crude and natural gas liquids) in 2002. By 2010 Equatorial Guinea should have 515,000 barrels per day of oil and natural gas liquids, given current trends, and will also be a supplier of LNG. ChevronTexaco, Amerada Hess, ExxonMobil, Marathon Oil, and Devon Energy are some of the U.S. firms with investments in exploration, production, and service activities in Equatorial Guinea. We opened an Embassy office in Malabo this month that will enhance our dialogue with the government and signal our commitment to broad engagement with Equatorial Guinea.

Sao Tome and Principe, though it currently has no oil and gas production, is another promising emerging producer in the Gulf of Guinea. Sao Tome's petroleum reserves span both

its own Exclusive Economic Zone (EEZ) and a Joint Development Zone (JDZ) with Nigeria. The JDZ is estimated to hold substantial reserves, possibly as much as 6 – 10 billion barrels. ExxonMobil has already made investments in Sao Tome, and now that recent political turmoil has been resolved with the return to the island of President Menezes, more U.S. firms are likely to bring their capital and technological expertise to the table.

Oil began flowing this summer through the $3.7 billion Chad-Cameroon Pipeline, the largest single private U.S. investment in Africa led by ExxonMobil, with the participation of ChevronTexaco. The Pipeline is a good example of sustained cooperative efforts among various entities -– governments, international financial institutions, the oil consortium developing the project, NGOs and civil society -- to balance economic benefits, transparency, and humanitarian and environmental concerns. Our Ambassador in Chad is deeply engaged with the government of Chad to ensure that the unique capacity building and transparency measures incorporated into this project are implemented.

While the unique circumstances mean that some aspects of the Chad-Cameroon project may not translate directly to other projects, many invaluable lessons are being learned. According to projections released by the World Bank, total receipts for the project are expected to reach $12 billion over a 28-year period. Chad could earn $2.5 billion over the life of the project with annual revenues of up to $200 million. Chad’s Revenue Management College, an independent body that will help assure that oil wealth is used to benefit the citizens of Chad, is now established to monitor and assess the effectiveness of Chad’s oil revenue expenditures. The College is a unique feature of this project that we worked closely with the World Bank to see put in place. Its aim is to ensure transparent use of Chad’s oil revenues to alleviate poverty and to enhance its economic development.

Some concerns remain regarding adequate administrative capacity and oversight of the use of pipeline revenues, but the project has established channels for discussion and resolution of problems that are inclusive and sensitive to impacts on the local population.

Promoting Transparency and a Good Investment Climate

We have a strong interest in assisting oil-producing countries to channel receipts from their energy resources into solid and sustainable economic development that will benefit their populations over the long term. Democratization and the development of responsible governing institutions are particularly important in reducing oil related conflicts and promoting supply stability from oil and gas producers around the world. Substantial foreign direct investment is needed to develop energy resources both onshore and offshore in the Western Hemisphere and Africa.

The Administration has demonstrated a clear commitment to encouraging the reforms needed to improve the investment climate. Transparency and accountability are central to good governance and to ensure that oil revenues benefit local populations and support development. We have an interest in helping nations solve these problems, not just out of altruism, but also in our own self-interest. We are prepared to explore new partnerships to help countries make good on commitments to good governance, transparent business practices, sound economic policies and market-based regulation. Countries with these attributes make better hosts to the huge investments needed to develop energy resources, and they make more reliable contributors to our own energy security.

At its June Evian Summit the Group of Eight (G-8) countries endorsed a comprehensive action plan on “Fighting Corruption and Improving Transparency” to help developing countries acquire the tools to strengthen domestic institutions and enhance transparency and accountability. The initiative focuses on host government commitments to fight corruption, and to enhance transparency, especially in their budgets -– both on revenues and expenditures -- and procurement processes, because these are the channels through which resources are used and controlled. The G-8 approach recognizes that government commitment to transparency and good governance is central to ensuring sound and accountable use of their energy sector resources. The G-8 countries have therefore resolved to target assistance on countries with a commitment to improved performance on transparency.

The Action Plan also commits the G-8 to:

- Deny safe haven to corrupt leaders and their assets by among other things denying visas to corrupt officials;

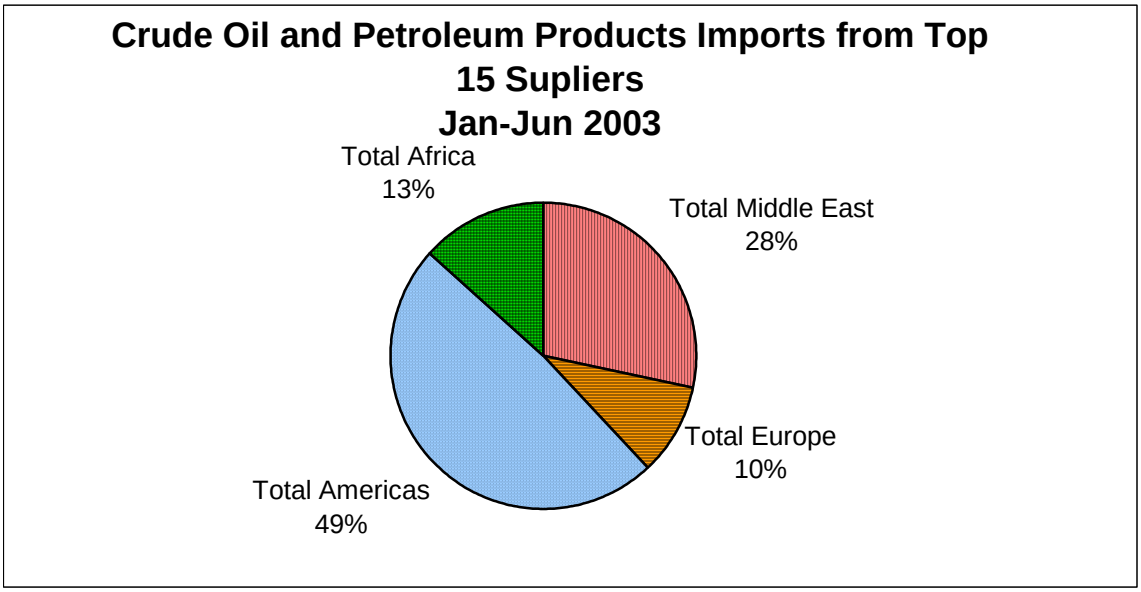
- Push for accelerated implementation of the OECD Anti-Bribery convention;
- Encourage the World Bank and other IFIs to insist on increased transparency in the use of funds by borrowing countries.

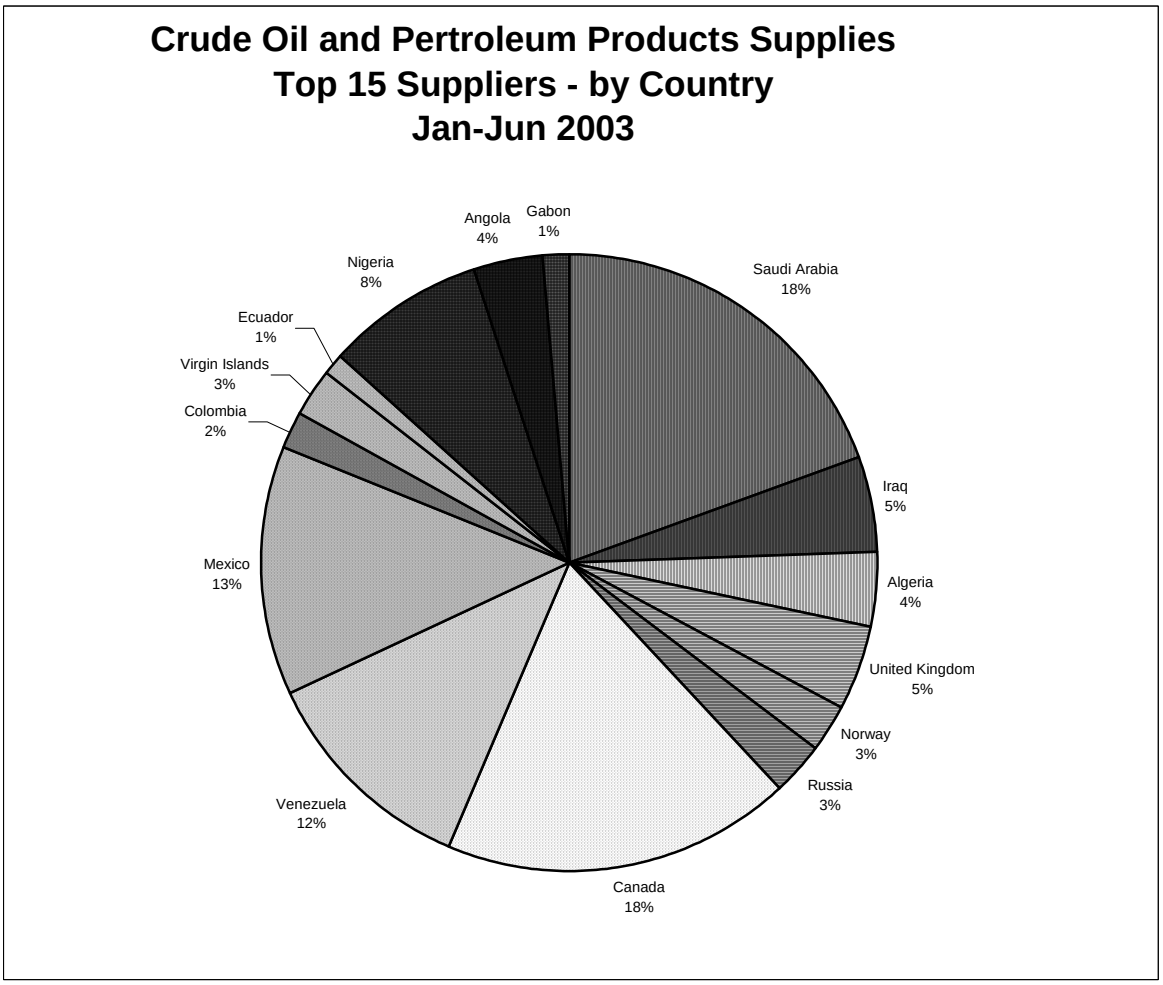
In addition to these commitments, the G-8 countries agreed to support voluntary compacts between governments and companies to disclose revenue flows and payments from the extractive sectors, including oil, gas and mining. The G-8 committed to support those governments that wish to implement such voluntary partnerships through capacity building assistance and by encouraging IFIs to provide technical assistance. We support an approach based on voluntary compacts between willing "pilot" developing countries and the companies operating in those countries, and civil society aimed at establishing a strong relationship among partners in public expenditure transparency. Our philosophy is that, to be effective, this approach must focus primarily on how governments allocate and use the resources associated with these key sectors. In most cases, their own state-owned enterprises have active control over much of the activity in these sectors.

Western Hemisphere and Africa - Helping to Meet our Energy Security Goals

New energy resources, from existing producers such as Canada, Venezuela, Nigeria, and Angola combined with those from emerging producers of oil and gas such as Peru, Equatorial Guinea and Chad, among others, are helping to meet our energy security goals by diversifying global energy supplies. As noted throughout my testimony we are working with host governments, both in Washington and through our Embassies overseas, to build and support open and stable business environments for U.S. firms to play a role in developing energy resources throughout the world. We are building on the National Energy Strategy goal of maintaining a diverse global energy market that enhances economic growth and stability.

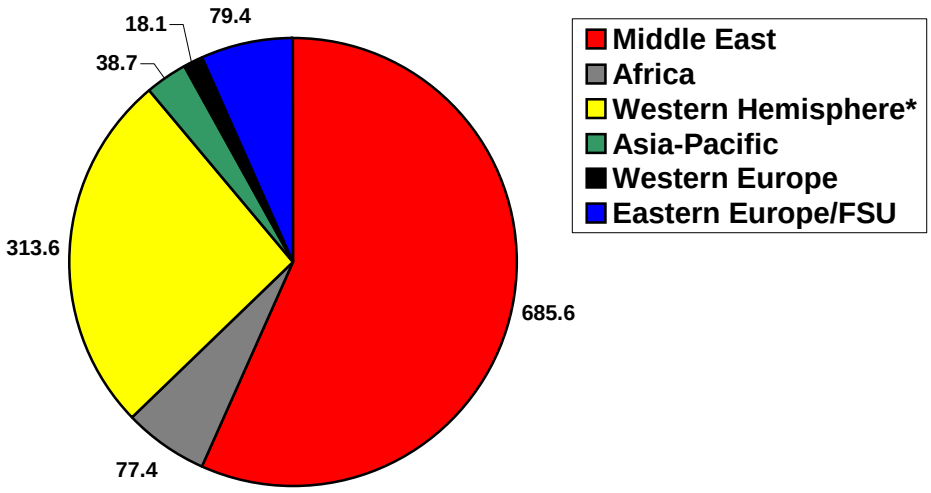
Appendix 1: Current Petroleum Imports (EIA Data)





Appendix 2

World Oil Reserves, Billion Barrels-- 1/1/03
(Source -- Oil and Gas Journal)



*Includes Canadian "oil sands" and bitumen

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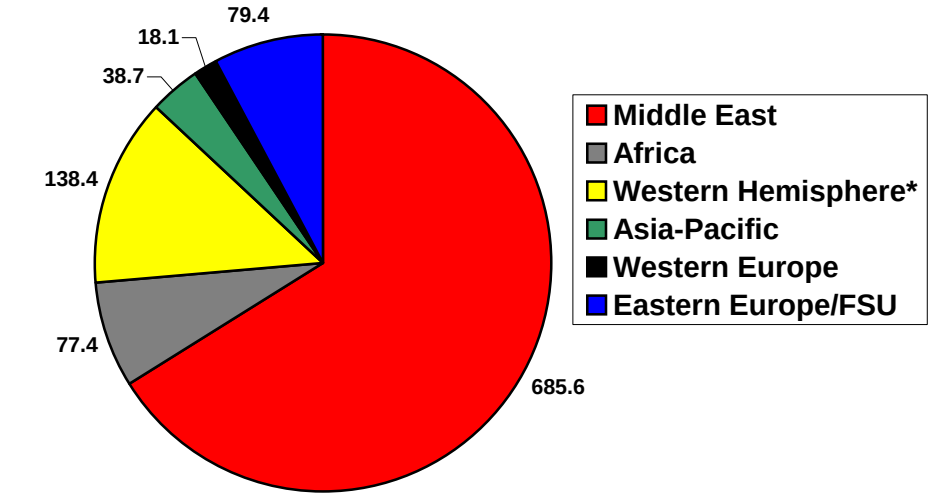


*Excludes Canadian "oil sands" and bitumen

Appendix 3

World Oil Reserves (billion barrels) -- 1/1/03
Source: Oil and Gas Journal

Middle East	685.6	57%
Africa	77.4	6%
Western Hemisphere*	313.6	**26%**
Asia-Pacific	38.7	3%
Western Europe	18.1	1%
Eastern Europe/FSU	79.4	7%
	1212.8	100%

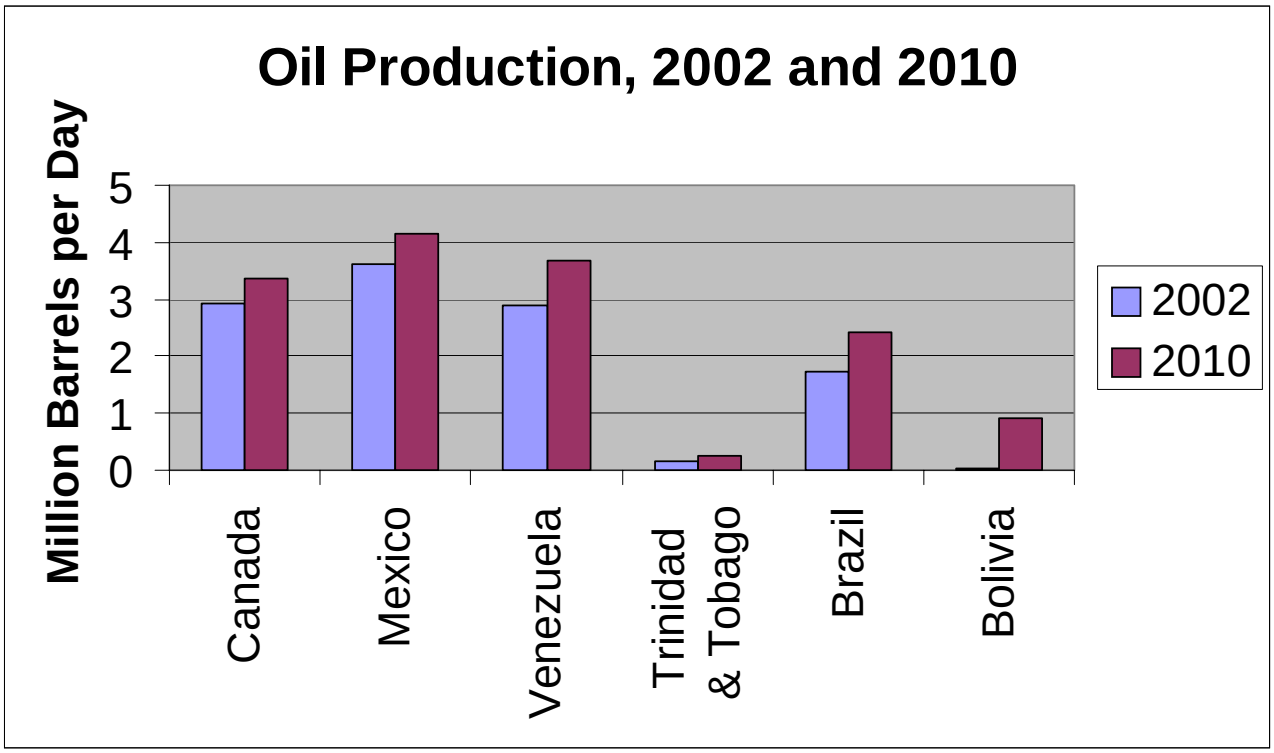
*Note: Includes Canada's oil sands and bitumen reserves

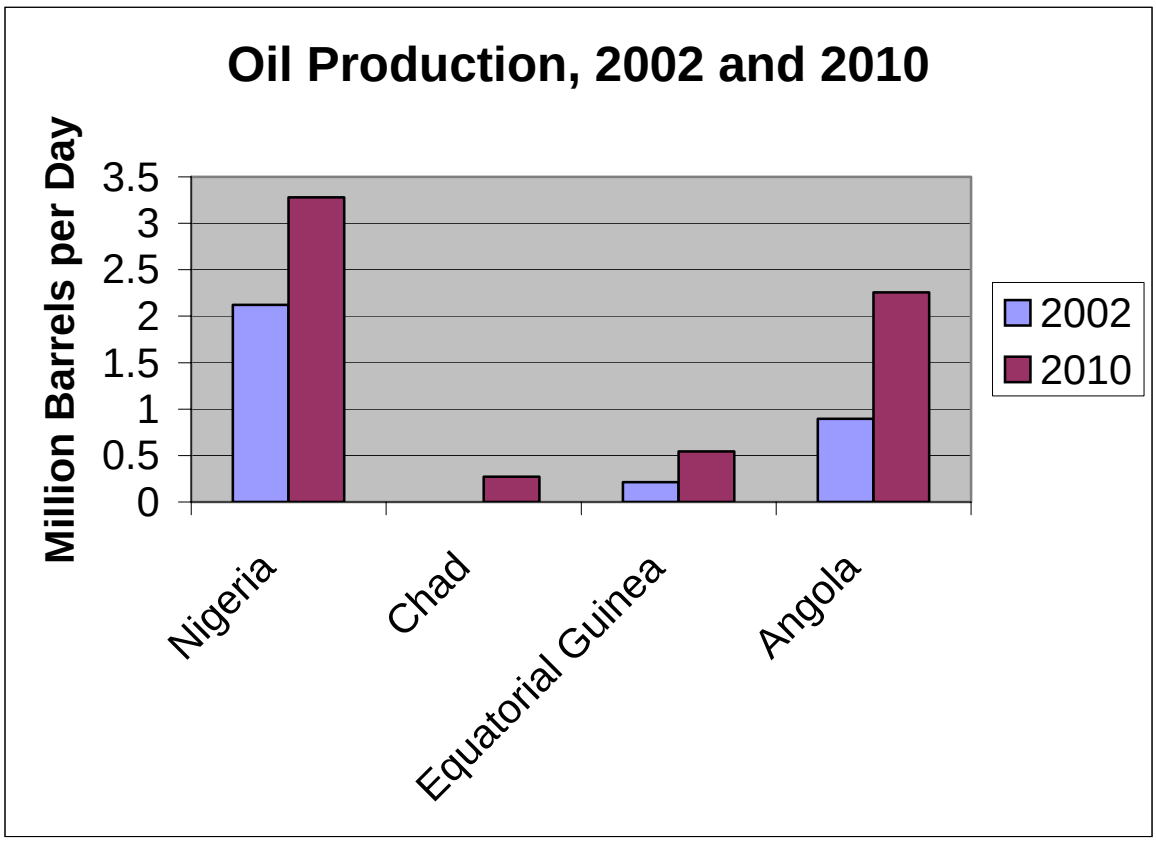
World Oil Reserves (billion barrels) -- 1/1/03
Source: Oil and Gas Journal

Middle East	685.6	66%
Africa	77.4	7%
Western Hemisphere*	138.4	**13%**
Asia-Pacific	38.7	4%
Western Europe	18.1	2%
Eastern Europe/FSU	79.4	8%
	1037.6	100%

*Note: Excludes Canada's oil sands and bitumen reserves

Appendix 4
Current Production and Forecasts – Source: EIA





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