

**OVERSIGHT HEARING ON COMPROMISING OUR
NATIONAL SECURITY BY RESTRICTING DOMESTIC
EXPLORATION AND DEVELOPMENT OF OUR
OIL AND GAS RESERVES**

OVERSIGHT HEARING
BEFORE THE
COMMITTEE ON RESOURCES
HOUSE OF REPRESENTATIVES
ONE HUNDRED SIXTH CONGRESS
SECOND SESSION

APRIL 12, 2000, WASHINGTON, DC.

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**OVERSIGHT HEARING ON COMPROMISING
OUR NATIONAL SECURITY BY RESTRICTING
DOMESTIC EXPLORATION AND DEVELOP-
MENT OF OUR OIL AND GAS RESERVES**

WEDNESDAY, APRIL 12, 2000

HOUSE OF REPRESENTATIVES,
COMMITTEE ON RESOURCES,
Washington, DC.

The committee met, pursuant to notice, at 11 a.m., in room 1324 Longworth House Office Building, Hon. Don Young (chairman of the committee) presiding.

Present: Representative Young.

The CHAIRMAN. [presiding] The committee will come to order.

**STATEMENT OF THE HON. DON YOUNG, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF ALASKA**

The CHAIRMAN. I want to thank all of you for participating in what will be, I hope, an interesting hearing regarding our national energy policy. It's not the first hearing we've had. We've had hearings over the years considering energy policy. They have not produced very much. We hope this will produce something other than just comments.

This hearing will focus on the alarming fact that while our nation is one of the largest consumers of fossil fuels, it lacks a coherent energy policy. Americans are forced to rely on what I call a policy of knee-pad diplomacy, begging those countries that produce our fossil fuels. Essentially, our energy policy consists of, very frankly, the Clinton-Gore Administration sending diplomats abroad, as I mentioned, to beg other nations for the oil necessary to supply our national demand.

This committee's jurisdiction relates to public lands so our focus today will be on how public lands could play a meaningful role in protecting our national security by increasing domestic production and reducing our reliance on foreign sources of energy. Coming from Alaska, I can't think of a better example of unrealized potential than the coastal plain of the Arctic National Refuge, the development of the coastal plain of ANWR, which clearly holds the most significant untapped oil and gas reserves in our nation.

If I may digress, and I'm the chairman; I guess I can, from this opening statement, it seems just like *deja vu*, we were in this room, this exact room, in 1973 in March of that year, discussing our dependency on foreign imported oil. At that time it was 36 percent and we were talking about Alaska and the necessity for building

a pipeline to deliver the largest deposit of oil that we knew of at that in Prudhoe Bay.

Some of the arguments we'll hear against this proposal of ANWR will be exactly the same we heard back in 28 years ago. I would like to remind my audience that some of you, especially younger people, go back and study the record and see some of those comments that were made.

To truly understand the importance of our Alaskan oil, we need to take a trip back in time, as I just mentioned. 20 years ago, the Trans-Alaskan pipeline actually, in fact, was completed in 1976 and 2 million barrels per day and foreign imports were around 35 percent. And, remember, it was 37 percent when we started. Now, in the year 2000, the Trans-Alaskan pipeline is moving about 1 million barrels a day and foreign oil makes up 57 percent of our domestic demand.

There's no question the State of Alaska holds a place of promise when it comes to producing crude oil. However, in the face of declining domestic supplies, the administration refused to put in place an energy policy that includes the development of significant prospects on Federal lands, frankly, including Alaska. If I may say so, neither did the past administrations. This makes my sixth administration I've been under and the Congress itself has not seen fit to set forward a policy that develops all forms of energy and not dependent on just one.

In fact, looking to bolster production on Federal lands, this administration has done the reverse. Our domestic oil production is the lowest it's been since World War II. Keep that in mind. It's the lowest it's been since World War II as far as domestic production. And I've often said anybody who owns 56 percent or 57 percent of your company, you're going to do exactly as they tell you to do.

The major factor in the decline of domestic production, down 17 percent since 1992, is the rise in regulations and taxes. The administration is currently finalizing regulations that will increase domestic producer's tax burden by over 60 million per year.

What about coal? Let's get away from oil. More than half the electricity produced in this country is generated by coal-fired power plants and yet the administration utilized the Antiquities Act to lock up the cleanest burning coal in the lower 48. This is not a policy that promotes energy security or important high-paying American jobs.

While we feel the impact at the gas pump, and all of us do, high oil prices and our dependence on foreign sources of energy have larger consequences. Our economy is prospering, but we need the stable source of natural resources to meet our energy needs and sustain our economic growth. Importing such high volumes of foreign fossil fuels account for one-third of our trade deficit. It's not automobiles, it's not TVs. In fact, it is oil.

Americans are spending \$300 million per day on foreign oil. This added up to \$100 billion last year. That is \$100 billion of American dollars, American job security, very quickly, are exported each year.

Not only can a declining domestic industry affect American jobs, our dependency on foreign oil can have catastrophic effect on our economy. While the administration often claims credit for the pros-

perous economy we now enjoy, this can quickly change. If you don't believe me, check the NASDAQ as of yesterday.

It has been reported that a \$10.00 increase in Federal law equals .5 percent increase in inflation, a .25 percent decline in economic growth. Suppliers like Iraq continue to increase their exports to the United States. In January 1997, Iraq exported less than 100,000 barrels per day to the United States. By last December, that number had steadily increased to nearly 800,000 barrels per day.

When we went to war against Saddam Hussein less than 10 years ago to have a greater role in providing for our domestic energy needs, do we really trust foreign suppliers like Algeria, Angola, and Iraq enough to give them the level of control over our economy and energy security? It's not in our national interests to become so reliant on foreign oil that countries like Iraq can exert so much control over our economic future.

The root of this problem is the development of our domestic oil and gas resources. The USGS forest as much as 16 billion barrels to be typically recovered from Alaska. The single new source of domestic production will replace Iraq's import for more than 54 years. Our nation holds vast natural resources with more discoveries being made daily. Not only are our domestic natural resources plentiful, but we have the most stringent environmental laws in the world to ensure that there's a balance between our energy needs and environmental safety.

Clearly we can do both. Frankly, in Alaska we've done that. We've proven with a track record of safety producing oil and gas resources for decades in the Arctic. With the advances in technology on ice roads and better directional drilling, the environment is protected. Federal public lands and Federal waters hold significant promise and should be developed to secure America's energy needs. The simple fact is Americans are dependent upon oil, gas, and other natural resources. We need electricity to live, oil to heat our homes, and gasoline to move our airplanes, cars, and buses.

Even that famous association that supports me every day, the Sierra Club, will be testifying today. They need these resources to carry out day-to-day business. They like, many organizations, utilize the Internet. A large percentage of the total electricity is consumed in activities related to the Internet. The increasing use of the Internet is estimated to be responsible for more than half the growths in electricity demands. A two megabyte e-mail uses a pound of coal or five ounces of oil. Add up all the messages that are sent, and you're talking about a significant amount of fossil fuels.

Let's face it. Whether or not you support the production of natural resources, you use them every minute of every day and they are needed to live if you want to live as American people and all those other people in the world should live.

Americans use about 6 million barrels of oil in the United States and more than 56 percent of this volume is supplied by four nations. Even if you support alternative sources of energy—and, by the way, not many of you who support alternative sources support it. I don't know how many times I've suggested that you support nuclear power, you objected. I suggested that you support more coal burning, you object to that. I suggest hydropower and you ob-

ject to that. Each time, you object to alternative sources of fuel then, in fact, you put yourself on more dependency on foreign sources of energy.

The United States already holds an abundance of natural resources that we must develop among our Federal lands because we do own, the Federal Government, the American people, own about 875 million acres of land and the Federal waters on the Outer Continental Shelf.

This nation needs and deserves a coherent energy policy that includes all forms of energy, not just fossil fuels. But so far, we depend so much on fossil fuels any time one of the foreign countries burps, we have a stomach ache and we need that fuel. We shouldn't go through that.

With that, I'll yield to the gentleman from Minnesota.

STATEMENT OF THE HON. BRUCE F. VENTO, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MINNESOTA

Mr. VENTO. Well, thanks, Mr. Chairman. I'll put my full statement in the record.

I'm pleased to note our friend and former colleague, Senator Johnson, and others that are here and so interested. It's good to see him back. We've worked with him on the many different energy problems over my career starting with, I might mention, synthetic fuels.

[Laughter.]

A name that will live in infamy. But, in any case, in his work on nuclear power and waste and with our former colleague and our mentor, Mo Udall, and so many others, obviously the oil issue is one that separates us. I feel a little bit like a hostile takeover here today in the Resources Committee with regards to the folks that have a view with regards to ANWR.

My view, of course, as a sponsor, lead sponsor, which, with 170 members joining me in the House on this measure to protect and set aside this area as wilderness long been a debate about where we're going to go in terms of how we deal with our Federal lands. Actually, while the chairman has pointed out that domestic production of oil and gas are up from 89 to 98 and a substantial portion of that, about 25 percent now, as opposed to about 15 percent comes off the Federal lands, so we've actually increased the amount of oil.

Certainly there's a potential to do a lot more with the existing leases that are outstanding through something called due diligence as opposed to building up portfolios of leases that are not being developed and utilized. Of course, there's a lot of reasons for that. Some will suggest that the price of oil has to go up. There are a lot of other factors that have to be considered in the mix. Obviously, if oil stayed at \$30.00 a barrel, some of that oil in Texas that's been remaining and is hard to recover and expensive to recover would all of a sudden be possible to bring to the market, as an example.

But the fact that we have had a problem and that we have been vulnerable and, to an extent, a greater increase in terms of imports is evident to all of us. The fact is that in the mid-1970's, it was

summer and the range of 35 percent was imported. Today it's over 50 percent as the chairman has pointed out.

But part of that, of course, is due to the consumption aspect of what we're dealing with and how much we're using. And, considering on a global basis that we're using about 1/5 the energy when we have a population that is, of course, 5 percent of the total world population gives us some indication of where we could make adjustments and where we may not be willing to make those.

But, clearly, as far as OPEC is concerned, OPEC now is responsible for less than half of the oil that we import comes from OPEC. So we've actually, in a sense, reduced the dependence on OPEC, but increased our dependence on foreign sources of oil.

And, of course, we know ourselves that we're part of the international marketplace. Even some of this oil from the North Slope that we keep telling ourselves is pretty much for domestic consumption, especially on the West Coast, even a small portion of that, about, I guess it's, actually, Mr. Chairman, I misstated this someone was pointing out. I pointed out 5 percent and they said I was overstating it. It's actually 5.5 percent so I was being a little conservative.

But that is exported and, obviously, based on the policies that you have sponsored, Mr. Chairman, we can obviously look forward to exporting even more of that oil down the road. But we are part of the international marketplace in terms of these issues.

Now I think that, while we've opened up a lot of areas in Alaska most recently, of course the National Petroleum Reserve has been opened and available. I expect this takes a long time to come on line is what my competition might say, but that oil has been opened up. And there is reason to believe that these areas, and, of course, the demise of oil production in Alaska has been long predicted but it has not occurred. Frankly, there has been and is substantial areas where there is oil possible from West Sak and other areas to be developed that will continue to keep that pipeline relatively full.

That is say, of course, and, of course, the environmental problems and concerns we have with regards to wildlife are something we can debate for a while. But, clearly, I think the values with regards to ANWR, with regards to its diversity and its importance in terms of the Native American group, the Gwich'in that are there, is more important. It reminds me of our friend, Geraldine Ferraro, who we served with who said that some of us seem to know the cost of everything and the value of nothing.

So I do think, as a nation, we need to look at continuing to try and set aside some of these special areas, especially to balance that off with meeting our economy and other needs, as I said in the context of diligence, in the context of work that needs to be done.

And to recognize the limitations that we have with regards to spills. There have been, you know, literally hundreds of those spills that have occurred in the Trans-Atlantic pipeline since the late 1970's. There are many changes, environmental changes, that have taken place there that are of concern. We can take about ice roads and dewatering activities that gone on. We can talk about the small footprint. But, while the size is small, the effect of it is very profound in terms of what goes down.

Mr. Chairman, I, obviously, look forward to the hearing from this. This hearing is a little bit of a mystery. By some it's been perceived that there's a great threat and the administration's energy policy is compromising our sovereignty by some mysterious rogue states and international schemes. But, fortunately, our caped crusader that wears a blue sportscoat, Mr. Richardson——

The CHAIRMAN. And now the gentleman's time has run out, when you're talking about the——

Mr. VENTO. And his lucky blue sportscoat has been successful in beating down the opposition. So I don't think there's any great mystery. I don't think this is going to compete for a script with James Bond. I think that or do we need any more black helicopters added to the mix of this issue.

The CHAIRMAN. The gentleman's time has run out.

Mr. VENTO. We have some problems and hopefully we'll be able to deal with it in a rational way. And, Mr. Chairman, thank you for the time.

[The prepared statement of Mr. Vento follows:]

**Statement of Congressman Bruce F. Vento
Regarding Energy Security
House Committee on Resources
April 12, 2000**

MYSTERY

This hearing is a bit of a ~~facade~~. It has little to do with the perceived threat that the Administration's energy policy is compromising the sovereignty of the United States by mischievous rogue states and international schemes. If this is the case, than I'm sorry for my brief absence because it sounds like a great script for a James Bond story. All we need to complete the story is to throw in a couple of the United Nation's black helicopters to invade the North Slope. In reality, this hearing is purely one-dimensional, driven by preconceived notions and vivid imaginations, and is little more than a platform to rattle sabers despite there being no political muscle to herd the policy of opening the Arctic National Wildlife Refuge to oil and gas exploitation to the House floor.

Thanks to the late Mo Udall's perseverance and dedication to the environment during the passage of ANILCA, the Arctic Refuge at least has been spared from big oil and the scarring effects of oil and gas exploration. I came home to the Committee this week to continue his legacy to fight for the permanent preservation of the Arctic Refuge's coastal plain. Preventing the exploitation of the coastal plain is one of many solutions that can be employed to demonstrate this nation's commitment to energy conservation and to protect Alaska's natural beauty.

If we are going to discuss the need to open the Arctic Refuge to oil and gas exploration, we need to look at the facts, not the rhetoric, fiction and cooked figures that Members are being subjected to on a daily basis. First of all, a report issued by the Reagan Administration in 1987 stated that there was less than a 1 in 5 chance of finding economically recoverable oil in the Arctic Refuge. The most recent report issued by the United States Geologic Survey in 1998 projected an average mean estimate of 3.2 billion barrels of economically recoverable oil, which amounts to less than a six month supply of oil for the United States, if it's even there. In addition, if you look at the Alaska Department of Revenue's forecast of the benchmark price of Alaskan North Slope crude delivered to the West Coast, they expect the price to decline below the benchmark price of \$16.94 from 2002 through the end of their forecast in 2010. If this forecast is correct, then according to USGS figures, no economic quantities of recoverable oil will be found in the Arctic Refuge.

Just a few years ago, drilling proponents warned the Trans-Alaskan Pipeline would run dry by the turn of the century without drilling the Refuge. Since there seems to be more than enough oil to both satisfy U.S. and Asian needs, the oil industry has publicly stated there is enough oil from existing fields on Alaska's North Slope to keep the pipeline flowing for over 40 years. This includes developing fields such as West Sak, which has

an estimated 20 billion barrels of oil in place that would likely yield billions of barrels of recoverable oil.

At the center of this debate is speculation and statistics and some questioning my fast and loose use of numbers. I recently read a handout distributed by Arctic Power stating that environmentalists claim all of Alaska's oil is being exported to foreign nations. In reality, only 5.5% of that oil is being sent to Asia. I'm sorry I got those numbers wrong. *My staff has been a little too conservative by only stating 5% of Alaska's North Slope is exported abroad. I'll be sure to correct that in any future pro-Arctic message I deliver. In all seriousness, this is a very telling statement made by Arctic Power. If any oil is found in the Arctic Refuge, it could be exported to China or another foreign country. It's only a drop in the U.S. trade deficit with China, but it is millions of barrels of U.S. oil being exported, while at the same time numerous supporters of legislation to open the refuge tout "national security." Whose needs would the committee be catering to? It seems clear that it's to the needs of a country whose trade status is in limbo and not the American peoples' needs that are to be satisfied!

Let's look at this a little further now. Suppose we don't export any North Slope oil to Asia. Where will this oil go now? It all goes to West Coast to states like California. It doesn't help any of those families in the Northeast who sought federal aid to heat their homes because of high-energy prices this past winter. In fact, that phenomena is a cracking problem more than a supply issue. This oil stays out West to fuel expensive and thirsty sports cars and SUVs.

And, let's not pull the caribou skin over everyone's eyes again when we hear about the blossoming caribou population around North Slope oil fields. Advocates who favor drilling in the Refuge say North Alaska's caribou population is not threatened by big oil, but, in fact, a study by the Alaskan Department of Fish and Game in 1995 revealed a 23% decline in the population of the Central Arctic Herd around Prudhoe Bay and a 41% decline of caribou in the vicinity of the Kuparak field.

Adjusted for inflation, crude oil prices are still the same, even less, than what they were before the energy crisis of the 1970's. Gasoline, ironically, is one of the better buys in town. Gallon for gallon, gas is cheaper than milk, fruit juice and even bottled water.

Instead of finding crafty solutions to drill away America's last great untamed wilderness, this Congress should devote more resources to directly attacking this problem head on by promoting and developing alternative energy to reducing our reliance on foreign oil. This ~~paper~~ week a St. Paul, Minnesota brewery is converting over to ethanol with Midwest corn power. Hopefully it won't diminish the beer supply. The recent spike in oil prices was not a signal that this nation needs to produce more oil. It only reaffirmed what many people in this nation already know—that we must decrease our reliance on fossil fuels. Driving currently accounts for 40% of all gasoline consumed in the United States. This nation could save billions just by raising CAFE standards for light cars and trucks. In fact, raising CAFE standards would save more oil than if the U.S. imported more Persian Gulf oil, opened the Arctic Refuge and found oil and drilled California's offshore

combined. This nation needs to move forward not backwards in terms of its energy policy, and we can do this by investing in green power to reduce our reliance on fossil fuels.

Congress can further demonstrate its commitment to reducing this nation's reliance on fossil fuels by permanently protecting the coastal plain of the Arctic National Wildlife Refuge as wilderness. At best, this area would provide a 51 day supply of oil. But at what cost? The destruction of the last remaining five percent of fragile arctic tundra, which is not a barren desolate tract of land as some may argue, the splintering of the 130,000 strong Porcupine River caribou herd, and the loss of a 1,000 generation old Gwich'in Indian culture. Of course, the Inupiat, who live within the confines of the Refuge, are most decidedly in favor of drilling—instant gratification for one group at the expense of another always seems in vogue. Who can blame them when millions of dollars may be at stake? Would drilling sound so lucrative if we propose to drill some offshore oil wells where the heart of their whaling and fishing, and, in fact, their subsistence lifestyle occurs? We know that answer already—a resounding “No way!” Just look at a letter sent last year from the City of Kaktovik commenting on the proposed Beaufort Sea Lease Sale 176 asking the Minerals Management Service for a 50-mile deferral around Kaktovik because of its importance as a whale feeding area.

The United States as a world leader in preserving lands of significant and symbolic value, cannot let the degradation associated with oil and gas development occur to its land or wildlife. Opening the Arctic Refuge is akin to tapping Yellowstone's geothermal properties or prospecting in the Grand Canyon. The facts are all too apparent. We cannot, as a nation, drill our way to energy independence. In the words of my colleagues new presidential “wanna be” George W. Bush, “governments don't control the price of oil, at least in America.”

INUPIAT

The CHAIRMAN. The gentleman's time has expired. I appreciate it and I'd just like to clarify one thing. Waiting for 8,650,000 a day from other countries, the majority is from the OPEC countries.

No. 2, the money from the oil that's been supposedly exported from Alaska is 55,000 barrels a day of heavy crude; 55,000 barrels of oil from California. And your State alone, I believe, exports about 16,000 barrels of energy in some form.

Mr. VENTO. Mr. Chairman, if I might reply. This week we're making the ultimate sacrifice. A brewery in my district, a brewery, is going to now start producing ethanol.

The CHAIRMAN. Ethanol, which has cost more money to produce than—it takes more energy to produce ethanol than the ethanol that's produced to produce energy.

Mr. VENTO. Yes. But we're all praying that the ethanol production won't cut into the beer production.

The CHAIRMAN. All right. I appreciate that.

The gentleman, Mr. Largent, the first panel up today is Mr. Largent was here first and he gets to speak first. Steve.

STATEMENT OF THE HON. STEVE LARGENT, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OKLAHOMA; ACCOMPANIED BY THE HON. GEORGE W. GEKAS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF PENNSYLVANIA; THE HON. TOM DELAY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS; AND THE HON. VITO FOSELLA, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK

STATEMENT OF THE HON. STEVE LARGENT

Mr. LARGENT. First of all, that I am a member of the Energy and Power Subcommittee on Commerce. I come from an oil-producing State, the State of Oklahoma. My hometown and the center of my district is Tulsa, Oklahoma; it's known as the oil capital. So this is an issue that I am knowledgeable of and am sensitive to. And so I appreciate you holding this hearing and giving me a chance to testify.

I read, just as an aside, I read a fascinating book called *The Prize* by Daniel Yergin and would highly recommend it to this committee. In particular, it's a book that Daniel Yergin won the Pulitzer Prize and it's basically the history of oil in this country, in fact in the world. And it may be a little intimidating because of its length. If it is, then you should know that PBS also produced a videotaped series of this book called *The Prize*. And I would highly recommend it to my colleagues.

And so I would like to deliver my testimony at this time.

In response to the recent upsurge in prices at the pump, Congress and the President are scrambling to decrease prices. Suggestions include eliminating 4.3 cents per gallon Federal gas tax, pressuring OPEC nations to produce more oil, and encouraging the development of alternative energy sources. While I understand the logic and support aspects of each of these ideas, I believe the real answer may literally be right under our noses.

We need to focus on developing a long-term energy policy based on self-reliance. This policy must promote domestic oil and gas ex-

ploration and production. Rather than directing our efforts at short-term Band-Aid fixes, we need to work to prevent future price fluctuations. We need to stop treating the symptoms of our dependence on temperamental foreign producers and work to find a long-term cure.

Every administration since Eisenhower has concluded that the level of oil imports threatens national security. Earlier this year, the Clinton Administration released a section 232 analysis which concluded that imported oil poses a serious threat to our national security. Because our economy is based on energy and, more specifically, petroleum, America should be prepared to meet as much of this need as we can. While I support free trade and relationship building between the United States and OPEC nations, it is unhealthy for this relationship to threaten American economic independence.

During the last few years, the American oil industry has been overregulated and overtaxed. The administration's regulations place ridiculous restrictions on how, where, and when producers can work. Producers are subject to excessive reporting and permitting rules that increase their overhead, hurt their profit margins, and decrease their likelihood of survival.

There are not one or two big regulations that harm producers. Rather, there is a vast mosaic of rules and restrictions from several agencies that interact to slow production and frustrate producers.

We need to develop a tax policy that helps this vital industry. We should develop a tax policy that eliminates the net income limitation and 65 percent net taxable income limit on percentage depletion. The tax policy should also modify the alternative minimum tax. Then we need to save marginal oil production through an aggressive tax incentive program. 80 percent of the oil produced in Oklahoma is from marginal wells, wells that produce less than 10 barrels of oil per day.

Regulations and perverse tax incentives have cost the oil industry 65,000 jobs, many of which were in my State of Oklahoma. Curiously, domestic crude oil production has declined, while American oil consumption has increased. Today we import 56 percent of our crude to meet domestic demand.

During the recent gas price increase, politicians of all stripes have expressed concern. However, the focus on the short-term puzzles me. Rather than wringing our hands and sending the Secretary of Energy overseas to plead for increased international production, we need to look at the factors that have increased gas prices.

First, the United States needs to reduce regulations on domestic producers. While drilling should be safe for workers and the environment, producers should be given the freedom to run their operations efficiently and effectively.

Second, the administration and Congress should be willing to explore resource-rich areas in the United States, like the Outer Continental Shelf, the Rockies, the Arctic National Refuge. About half the oil and one-fourth of the national gas in the Outer Continental Shelf is in areas that are off-limits to exploration. A recent Department of Energy report argued that opening these lands to production would not be environmentally dangerous.

Third, the United States should examine energy policies to determine the impact that these policies will have on fuel prices. Before gas taxes are imposed and before environmental treaties are signed, the United States should examine the economic impact of these policies.

In conclusion, without a strategy for reducing our addiction to Middle Eastern oil, we will continue to be vulnerable to the whims of foreign nations. To prevent future reliance on imported oil, the United States should reduce red tape on domestic producers, explore oil rich areas in safe ways, and evaluate the impact that energy policy decisions will have on consumers and our economy.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Largent follows:]

Testimony of Representative Steve Largent
Before the House Committee on Resources
April 12, 2000

In response to the recent upward surge in prices at the pump, Congress and the President are scrambling to determine how to drive prices down. Suggestions include eliminating the 4.3 cents per gallon federal gas tax, pressuring OPEC nations to produce more oil, and encouraging the development of alternative energy sources. While I understand the logic and support aspects of each of these ideas, I believe the real answer may literally be right under our noses.

Developing a self-reliant energy policy.

The Administration and Congress need to focus on developing a long-term energy policy based on self-reliance. This policy must promote domestic oil and gas exploration and production. Rather than directing our efforts at short-term, "Band-Aid" fixes, we need to work to prevent future price fluctuations. We need to stop treating the symptoms of our dependence on temperamental foreign producers and work to find a long-term cure.

Every Administration since Eisenhower has concluded that the level of oil imports threatens national security. The Clinton Administration has made this observation twice. On March 24th of this year, the Administration released the results of its Section 232 analysis which concluded that imported oil poses a serious threat to our national security. Our economy is based on energy and, more specifically, petroleum. As such, America should be prepared to meet as much of this need as we can. While I support free trade and relationship-building between the United States and OPEC nations, it is unhealthy for this relationship to occur at the expense of American economic independence.

The current situation is unstable and we need to understand how vulnerable the U.S. economy is to decisions made by foreign governments. As a result of the extended low prices in 1998 and 1999, capital investment in oil production throughout the world declined. Existing production was lost. In the U.S., production dropped from 6.3 million barrels per day in 1998 to 5.9 million barrels per day in 1999. At the same time, demand increased from 14.6 million barrels per day early in 1999, and reached 15.4 million barrels per day by October 1, 1999. Logically, our production should grow as demand grows. Unfortunately, this has not been the case.

And now we find ourselves victims of an energy policy dependant on the kindness of other oil producing countries.

The problems: regulations and perverse tax incentives.

During the last two years, the American oil industry has been hammered with **regulations** and **perverse tax incentives**.

Regulations. Regulations place ridiculous restrictions on how, where, and when producers can work. They are subject to excessive reporting and permitting rules that increase their overhead, hurt their profit margins, and decrease their likelihood of survival. Rather than having one or two big regulations that harm producers, there is a vast mosaic of rules and restrictions that interact and come from several agencies to slow down domestic production and frustrate domestic producers.

Perverse tax incentives. Presently, there are tax penalties on domestic oil and gas production. We need to remove these penalties and replace them with a tax policy that would include expensing of geological and geophysical costs and delayed rental payments; our tax policy should include a five-year net operating loss carry back for independent producers; our tax policy should give oil producers a fair depletion rate to encourage

capital investment; our tax policy should include elimination of the net income limitation and the 65 percent net taxable income limit on percentage depletion; our tax policy should change the way the Alternative Minimum Tax penalizes production. Then, we need to save marginal oil production through an aggressive tax incentive program.

Regulations and perverse tax incentives have cost the oil industry 65,000 jobs, many of which were in my state of Oklahoma. Curiously, domestic crude oil production has declined while American oil consumption has increased. Today, we import 56 percent of our crude to meet domestic demand. To give a sense of perspective, I should point out that the oil crisis of the 1970s was ignited when American dependence on OPEC hit 35 percent -- now, we are at 56 percent.

Solutions.

During the recent rise in gas prices, politicians of all stripes have expressed concern. However, those of us from oil states have been predicting such price increases for years. I am puzzled about why the Administration's response is focused on the short-term. Rather than wringing our hands and sending the Secretary of Energy overseas to plead

for increased international production, we need to look at the factors that have taken gas prices to their current level.

Reduce red tape. First, the United States needs to reduce the regulations on domestic oil producers. While there is a place for ensuring that drilling is safe for workers and the surrounding community, producers should be given the freedom to run their operations efficiently and effectively.

Understand domestic resources. Second, the Administration and Congress should drop prohibitions on the exploration of potentially oil rich areas in the United States. Even if the Administration does not wish to develop these resources now, we should at least try to determine what kind of resources we have at our disposal in regions that are currently off-limits. Instead, the Administration avoids dealing with the clear need to open federal lands to exploration and production. Even a recent Department of Energy report debunked the Administration's argument that opening these lands to production would be environmentally dangerous. Studies have shown that the United States has access to 213 trillion cubic feet of natural gas offshore and in the Rockies. We should be prepared to use these

resources rather than dismissing them as unsafe out of hand. We need to examine tax credits for marginal wells. We need to explore the production potential of the 16 billion barrels under the Arctic National Refuge in Alaska.

The Outer Continental Shelf (OCS) is an area that stretches 200 miles out from the Atlantic, Pacific and Gulf coasts. About half the oil and one-fourth of the natural gas in the OCS region is in areas that are off-limits to exploration. While there are safety concerns about off-shore drilling, it is important to note that, since 1975, when current federal offshore safety regulations went into effect, 99.999 percent safe of the oil has reached its destination safely.

Measure economic impact of policy. Third, the United States should examine energy policies to determine the impact that these policies will have on fuel. Just before Christmas, President Clinton implemented "Tier 2 standards" by executive order. Some have projected that these standards have raised the cost of fuel by five cents per gallon or more. Additionally, the Clinton-Gore Administration has proposed BTU taxes of 7.5 cents per gallon, and encouraged the acceptance of the Kyoto accords, which would increase prices by up to 60 cents per gallon.

In conclusion, without a strategy for reducing our addiction to Middle Eastern oil, we will continue to be vulnerable to the whims of foreign nations. To prevent future reliance on imported oil, the United States should reduce red tape on domestic producers, be willing to explore oil-rich public lands in safe ways, and make decisions on energy policy in light of the effect that they will have on consumers and our economy.

The CHAIRMAN. Thank you, Mr. Largent. May I congratulate. It's rare I have a Congressman stick within 5 minutes. I mean, I want to compliment you.

The Honorable George Gekas from Pennsylvania, would you please take the witness stand? Yes, sir, you're up.

STATEMENT OF THE HON. GEORGE GEKAS

Mr. GEKAS. I thank you, Mr. Chairman. The opening statement of the chairman acts as a backdrop for the presentation that I am about to make, because the chairman decried the absence of a long-term energy policy. And that was endorsed by the gentleman from Oklahoma who complained, properly, that whatever policy we have is bits and pieces; it's going to the OPEC companies and begging for more production, begging them to sell us more oil. That's some policy that we see in effect.

So what we need, the chairman says and Mr. Largent agrees, everybody agrees, is a long-term energy policy. The bill that I've introduced about 2 weeks ago with the cosponsorship of the chairman of this committee, who's name escapes me at the moment, oh, Don Young. This piece of legislation crystallizes our vision of the long-term energy policy.

How does it do it? It calls for the immediate formation of a bipartisan, blue-ribbon commission that would explore all of the alternative sources of energy, all of the tax provisions to which Mr. Largent has referred, all of the combinations of ethics and conservation and drilling issues that could come before it, and determine that, within 10 years, putting X, Y, and Z and D and A in place, we could become self-sufficient. The goal would be 10 years.

Before anyone laughs, that's what John Kennedy projected for putting a man on the moon and it was done within 10 years. We can become self-sufficient in 10 years, I am confident.

Only recently, for instance, the administration did come through, for the first time, in response to the latest crisis, on some proposals having to do with tax credits. Unlike previous Congresses, which did away with the oil depletion allowance which hurt Oklahoma so badly and Texas, back in that age, that many wells were capped, the oil depletion allowance was a kind of a tax credit that could have helped was ripped away from the books and wells were capped.

On top of that, previous Congresses imposed excess profits taxes, exactly the wrong kind, that's a disincentive to drilling and to investing and to do our domestic self-sufficient work. And so this commission that I envision would analyze all of these and return to a sane prospect of tax credits and exploration incentives for the domestic market.

And offshore drilling, as the gentleman from Oklahoma says, is not going to allow the Continental Shelf to sink in and lose the whole country while we drill for oil. It will take conservation measures and environmental issues into consideration. But we need to do that.

So, just as the wording of the bill itself says, this commission would explore alternate sources of energy: ethanol, solar power, electricity, natural gas, coal, hydrogen, wind energy, and any other forms of alternative power sources that the imagination can con-

jure up. Not to mention the initiatives that are purely American in energy, ever since oil was discovered.

So we can do it; 10 years and we'd become self-sufficient. No more begging OPEC. No more relying on 55 percent of our energy to come from foreign sources. It's a national security issue, as well as a domestic security issue. I urge everyone to join the chairman and me in the formation of this commission through this bill.

By the way, what this would do, it seems to me, would amalgamate all the ideas. There are some people who would think tax credits are the real way to accomplish self-sufficiency. Others think that unabated Continental Shelf offshore drilling would do it. Others believe that changing the price schedules and doing some other kinds of tax improvements would help.

This commission, made up of experts that we would have a role in choosing, would put all of this together and come through with a nice, comprehensive, long-term energy policy that, little by little, will eat away at our dependency on OPEC and bring about self-sufficiency and make us absolutely independent politically, domestically, and internationally.

I thank the chairman.

[The prepared statement of Mr. Gekas follows:]

**STATEMENT BY
CONGRESSMAN GEORGE W. GEKAS
BEFORE THE COMMITTEE ON RESOURCES
APRIL 12, 2000**

Mr. Chairman, Members of the Committee, I want to thank you for giving me the opportunity to testify today at this very important hearing. I want to express my sincere thanks for holding this hearing on the compromising of our national security due to our dependence on foreign oil.

The Arab Oil embargo in the seventies produced long lines at gas stations, economic stagflation and an energy crisis. As a result, there was a call for the United States to become energy self-sufficient. But as the effects of the embargo wore off, and technology created more energy efficient products, things returned to normal, and interest waned. Since then, our dependence on petroleum imports has increased dramatically, more than doubling since 1985.

Now, as you know, the price of oil in the United States, particularly the Northeast, has dramatically increased over the last year, and especially over the winter months. In some areas, the price of gas reached almost \$2.00 a gallon and home heating fuel and diesel fuel went over the \$2.00 mark.

The impact of escalating oil costs affects prices for essential utility and municipal services, the distribution of vital supplies and other goods and services, and could threaten many American jobs. Clearly, our economy is highly dependent on oil products.

A significant portion of the increase in the price of oil was the result of international events that were beyond the control of the Congress or the people of the United States. Primarily, OPEC pursued a production quota among its member states that had a dramatic effect on the price of oil. In order to raise global oil prices, OPEC advised its member countries to cut production to a level that would sufficiently limit supplies in order to raise petroleum profits for member countries. By January, OPEC decreased its oil production by 4.2 million barrels a day. Simply put, the OPEC cartel dictates world oil prices.

So what was our response to this recent, dramatic increase in oil prices? We had to plead with OPEC members to increase their oil production. Imagine that, the greatest, most powerful country in the world was reduced to begging OPEC countries to help us out, many of whom we had spent billions of dollars protecting just a few years ago.

This is unacceptable! We cannot tolerate allowing our national security and economic health and well-being to be subject to the whims and fancies of foreign countries. It is time that we seriously begin to look at ways to become energy dependent so that we are no longer beholden to anyone.

OPEC's behavior, illustrated by the recent rise in oil prices, demonstrates the dangers of allowing America's domestic oil production to shut down. However, this Administration has pursued policies that have increased our country's dependency on foreign oil, especially OPEC. For example, this Administration has continued to put unnecessary restrictions on oil exploration and extraction. While there are many untapped reserves in the U.S., restrictions prevent companies from extracting this oil.

At the dawn of the 21st Century, the United States of America has the technology and capability to be energy self-sufficient. Technological advances have made it easier, cheaper, safer and more environmentally sound to prove oil domestically, giving us the capability to meet the energy needs of the American public while, at the same time, providing minimal disruption to the environment in which this oil is being extracted.

With the vast amounts of untapped resources in this country, it is time that the United States officially declares itself an energy self-sufficient nation. That is why I introduced H.R. 4035, the National Resources Governance Act of 2000. This act calls on Congress to officially commit to the concept that the United States can be energy self-sufficient by the end of the decade.

How can we become self-sufficient? We can start by utilizing the oil reserves that already exist in our great land. We should also explore and encourage alternative resource production and better fuel efficiency for our nations transportation infrastructure. One promising area of alternative fuel is the use of hydrocarbons. Many experts believe that our outer continental shelves hold vast reserves of hydrocarbons that would be able to fuel our economy for the foreseeable future.

We must adopt a long-term energy policy that will emphasize the U.S. position of being energy self-sufficient in the 21st century. It is vital to our national security and our economic health that this be done. How many more times must we be put through an energy crisis and the outrageous costs associated with it before we commit ourselves to energy dependency?

Again, I want to thank the Chairman for holding this important hearing on how we can develop a responsible energy policy to become self-sufficient and protect our national security. Again, Mr. Chairman, thank you for giving me the opportunity to speak at this hearing.

[End of Statement]

The CHAIRMAN. I thank you, Mr. Gekas. I have just a couple of questions and I am the sponsor of that bill and you do know my name. That's going to cost you a lot of money, by the way.

Mr. GEKAS. Yes.

The CHAIRMAN. But when's the timeframe if that bill is to pass, which, I agree with you, Congress can never agree.

Mr. GEKAS. Yes.

The CHAIRMAN. Mr. Vento wants to conserve his into posterity.

Mr. GEKAS. I'm not wed to any timetable because I really cannot fathom how best to get it started, but if we would pass this bill tomorrow and have it signed into law, I believe that by the end of this year, this commission would be fully at work and we could have a report within a year to give us the 10-year plan.

The CHAIRMAN. OK. Before we go to any other questions, Mr. DeLay, welcome aboard. We are glad to have you here. We have heard from Mr. Largent and Mr. Gekas and you're up now.

Mr. GEKAS. I'm going to give you a copy of my bill, to start.

[The Bill H.R. 4035 follows:]

106TH CONGRESS
2D SESSION

H. R. 4035

To establish a commission to review and explore ways for the United States to become energy self-sufficient by 2010.

IN THE HOUSE OF REPRESENTATIVES

MARCH 20, 2000

Mr. GEKAS (for himself, and Mr. YOUNG of Alaska) introduced the following bill: which was referred to the Committee on Commerce

A BILL

To establish a commission to review and explore ways for the United States to become energy self-sufficient by 2010.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the "National Resource
5 Governance Act of 2000".

6 **SEC. 2. FINDINGS.**

7 Congress finds that

8 (1) energy prices have risen dramatically, lead-
9 ing to significant harm to particular sectors of the
10 economy;

1 (2) an affordable domestic energy supply is
2 vital to the continued growth and vitality of our Na-
3 tion's economy;

4 (3) an uninterrupted supply of oil and other en-
5 ergy is necessary to protect the United States na-
6 tional security interests; and

7 (4) the United States continued dependence on
8 foreign sources of energy, particularly on the Orga-
9 nization of Petroleum Exporting Countries (OPEC),
10 for the majority of its petroleum and energy needs
11 is harmful to our national security and will not
12 guarantee lower fuel prices and protect our economy.

13 **SEC. 3. ESTABLISHMENT OF COMMISSION.**

14 There is established the National Energy Self-Suffi-
15 ciency Commission (in this Act referred to as the "Com-
16 mission").

17 **SEC. 4. DUTIES OF COMMISSION.**

18 (a) **DUTIES.** The duties of the Commission are

19 (1) to investigate and study issues and prob-
20 lems relating to issues involving the importation of
21 and dependence on foreign sources of energy;

22 (2) to evaluate proposals and current arrange-
23 ments with respect to such issues and problems with
24 the goal of seeking out ways to make the United

1 States self-sufficient in the production of energy by
2 the year 2010;

3 (3) to explore whether alternate sources of en-
4 ergy such as ethanol, solar power, electricity, natural
5 gas, coal, hydrogen, wind energy, and any other
6 forms of alternative power sources should be consid-
7 ered, including other potential and actual sources;

8 (4) to investigate the affordability of oil explora-
9 tion and drilling in areas which currently are not
10 being used for drilling, whether because of the cost
11 of doing so, because of current law, or because of
12 environmental regulation that may prohibit such
13 drilling;

14 (5) to appear at any congressional oversight
15 hearing before the proper congressional oversight
16 committee to testify as to the progress and operation
17 of the Commission and its findings;

18 (6) to consider tax credits and other financial
19 incentives, along with expanded drilling in areas
20 such as the Arctic National Wildlife Refuge and off-
21 shore, to help promote and establish the viability
22 and research of alternative forms of energy and do-
23 mestic oil exploration;

1 (7) to prepare and submit to the Congress and
2 the President a report in accordance with section 9;
3 and

4 (8) to take into account the adverse environ-
5 mental impact of its proposals.

6 (b) LIMITATION. This Act shall not permit the Com-
7 mission to recommend an increase in taxes or other reve-
8 nues or import restrictions on oil or other commodities.

9 **SEC. 5. MEMBERSHIP.**

10 (a) NUMBER AND APPOINTMENT. The Commission
11 shall be composed of 9 members as follows:

12 (1) 3 members appointed by the President, 1 of
13 whom shall be designated as chairman by the Presi-
14 dent.

15 (2) 2 members appointed by the Majority Lead-
16 er of the Senate.

17 (3) 1 member appointed by the Minority Leader
18 of the Senate.

19 (4) 2 members appointed by the Speaker of the
20 House of Representatives.

21 (5) 1 member appointed by the Minority Leader
22 of the House of Representatives.

23 (b) TERM. Members of the Commission shall be ap-
24 pointed for the life of the Commission.

1 (c) QUORUM. 5 members of the Commission shall
2 constitute a quorum, but a lesser number may conduct
3 meetings.

4 (d) APPOINTMENT DEADLINE. The first appoint-
5 ments made under subsection (a) shall be made within 60
6 days after the date of enactment of this Act.

7 (e) FIRST MEETING. The first meeting of the Com-
8 mission shall be called by the chairman and shall be held
9 within 90 days after the date of enactment of this Act.

10 (f) VACANCY. A vacancy on the Commission result-
11 ing from the death or resignation of a member shall not
12 affect its powers and shall be filled in the same manner
13 in which the original appointment was made.

14 (g) CONTINUATION OF MEMBERSHIP. If any mem-
15 ber of the Commission who was appointed to the Commis-
16 sion as a Member of Congress or as an officer or employee
17 of a government leaves that office, or if any member of
18 the Commission who was not appointed in such a capacity
19 becomes an officer or employee of a government, the mem-
20 ber may continue as a member of the Commission for not
21 longer than the 90-day period beginning on the date the
22 member leaves that office or becomes such an officer or
23 employee, as the case may be.

24 **SEC. 6. COMPENSATION.**

25 (a) PAY.

1 (1) NONGOVERNMENT EMPLOYEES.Ð Each
2 member of the Commission who is not otherwise em-
3 ployed by the United States Government shall be en-
4 title to receive the daily equivalent of the annual
5 rate of basic pay payable for level IV of the Execu-
6 tive Schedule under section 5315 of title 5, United
7 States Code, for each day (including travel time)
8 during which he or she is engaged in the actual per-
9 formance of duties as a member of the Commission.

10 (2) GOVERNMENT EMPLOYEES.Ð A member of
11 the Commission who is an officer or employee of the
12 United States Government shall serve without addi-
13 tional compensation.

14 (b) TRAVEL.Ð Members of the Commission shall be
15 reimbursed for travel, subsistence, and other necessary ex-
16 penses incurred by them in the performance of their du-
17 ties.

18 **SEC. 7. STAFF OF COMMISSION; EXPERTS AND CONSULT-**
19 **ANTS.**

20 (a) STAFF.Ð

21 (1) APPOINTMENT.Ð The chairman of the Com-
22 mission may, without regard to the civil service laws
23 and regulations, appoint and terminate an executive
24 director and such other personnel as are necessary
25 to enable the Commission to perform its duties. The

1 employment of an executive director shall be subject
2 to confirmation by the Commission.

3 (2) COMPENSATION.Ð The chairman of the
4 Commission may fix the compensation of the execu-
5 tive director and other personnel without regard to
6 the provisions of chapter 51 and subchapter II of
7 chapter 53 of title 5, United States Code, relating
8 to classification of positions and General Schedule
9 pay rates, except that the rate of pay for the execu-
10 tive director and other personnel may not exceed the
11 rate payable for level V of the Executive Schedule
12 under section 5316 of that title.

13 (b) EXPERTS AND CONSULTANTS.Ð The Commission
14 may procure temporary and intermittent services of ex-
15 perts and consultants under section 3109(b) of title 5,
16 United States Code.

17 **SEC. 8. POWERS OF THE COMMISSION.**

18 (a) HEARINGS AND MEETINGS.Ð The Commission or,
19 on authorization of the Commission, a member of the
20 Commission may hold such hearings, sit and act at such
21 time and places, take such testimony, and receive such evi-
22 dence as the Commission considers appropriate. The Com-
23 mission or a member of the Commission may administer
24 oaths or affirmations to witnesses appearing before it.

1 (b) OFFICIAL DATA. The Commission may secure
2 directly from any Federal department, agency, or court
3 information necessary to enable it to carry out this Act.
4 Upon request of the chairman of the Commission, the
5 head of a Federal department or agency or chief judge
6 of a Federal court shall furnish such information to the
7 Commission.

8 (e) FACILITIES AND SUPPORT SERVICES. The Ad-
9 ministrator of General Services shall provide to the Com-
10 mission on a reimbursable basis such facilities and support
11 services as the Commission may request. Upon request of
12 the Commission, the head of a Federal department or
13 agency may make any of the facilities or services of the
14 agency available to the Commission to assist the Commis-
15 sion in carrying out its duties under this Act.

16 (d) EXPENDITURES AND CONTRACTS. The Commis-
17 sion or, on authorization of the Commission, a member
18 of the Commission may make expenditures and enter into
19 contracts for the procurement of such supplies, services,
20 and property as the Commission or member considers ap-
21 propriate for the purposes of carrying out the duties of
22 the Commission. Such expenditures and contracts may be
23 made only to such extent or in such amounts as are pro-
24 vided in appropriation Acts.

1 (c) MAILS. The Commission may use the United
2 States mails in the same manner and under the same con-
3 ditions as other Federal departments and agencies of the
4 United States.

5 (f) GIFTS. The Commission may accept, use, and
6 dispose of gifts or donations of services or property.

7 **SEC. 9. REPORT.**

8 The Commission shall submit to the Congress and
9 the President a report not later than 2 years after the
10 date of its first meeting. The report shall contain a de-
11 tailed statement of the findings and conclusions of the
12 Commission, together with its recommendations for such
13 legislative or administrative action as it considers appro-
14 priate.

15 **SEC. 10. TERMINATION.**

16 The Commission shall cease to exist on the date that
17 is 30 days after the date on which it submits its report
18 under section 9.

19 **SEC. 11. AUTHORIZATION OF APPROPRIATIONS.**

20 There is authorized to be appropriated \$3,500,000 to
21 carry out this Act for each fiscal year for the duration
22 of the Commission.

○

The CHAIRMAN. And, by the way, what's the number of that bill, Mr. Gekas? What's the number?

Mr. GEKAS. This is H.R. 4035.

The CHAIRMAN. 4035. OK, good. Go ahead, Mr. DeLay.

**STATEMENT OF HON. TOM DELAY, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF TEXAS**

Mr. DELAY. Well, thank you, Mr. Chairman and I apologize for being late. There's a lot going on before we recess Friday.

[Laughter.]

I'm hearing calls for Thursday.

Mr. Chairman, I will focus on the restrictions in exploration and development of our oil and gas resources and the important role that our Federal land policies play in framing our domestic energy picture.

As I speak, our energy policy is in a shambles. Over recent years, the multi-use component of Federal lands have been sacrificed at the altar of environmental extremism because some don't think these lands should be used at all.

The recent fluctuations in oil and gas prices have served to intensify this debate and the stakes have never been higher. Our growing dependence on foreign imports have now exceeded 56 percent of our nation's energy needs and is a direct threat to our national security. But the real tragedy here is that all could have been avoided were it not for the Clinton/Gore Administration's Federal lands policies of lock them up now and ask questions later.

The four Federal land management agencies own nearly one-third of the land in the United States and with proposals being considered to further increase Federal and State land acquisition. That percentage is likely to grow each and every year. By abandoning an important mission of the multi-use Federal land system, the responsible resource extraction and energy production, we have increased our reliance on foreign nations.

We have seen the consequences of this anti-energy energy policy at the gas pump and in the oil patch. In a little over a year, oil prices have fluctuated from some of the lowest levels on record to some of the highest. In the process, more than 136,000 domestic oil wells and 57,000 gas wells have closed up since 1997 and we're left at the mercy of OPEC to make up the difference.

But that's only half of it. Layer upon layer of new government red tape and bureaucracy advanced unilaterally by this administration has undermined the vibrancy of the domestic oil and gas industry. Some of these include moratoriums on road construction, abuse of the Antiquities Act, restrictions on new pipeline and dam construction, obscure interpretations of our mining laws, increased fees for offshore production in the Gulf of Mexico, and expansive interpretations of the Endangered Species and Clean Water Acts that have, in many cases, unnecessarily denied permits on public and private lands.

And these are but just a handful of the harmful policies pushed forth by this administration.

Now, under fire, the President has said we should pass tax incentives for small producers. Now the President must have a very short memory, because just last year, Congress passed incentives

for increased domestic oil and gas production as part of the Taxpayer Refund and Relief Act. The President vetoed this measure just months before prices began to rise.

In response, even Energy Secretary Bill Richardson admitted that the administration was caught napping while the price of gasoline jumped to nearly \$2.00 a gallon.

So where can the President act to help the situation? First, to the north. He can look toward Alaska, Mr. Chairman. In 1995, he vetoed legislation that would have allowed oil exploration and development on a tiny portion of the Alaskan National Wildlife Preserve. He claimed it would undermine the environment, but only three square miles would have been affected. The rest of the area, which would have been untouched, is the size of Rhode Island.

In the south, the President should repeal the increased royalty fees that this administration unilaterally imposed. The Rigs to Reef program in the Gulf of Mexico has proven that we can drill for oil in the Outer Continental Shelf using new technologies to the benefit of both the industry and marine life.

Such capability is possible across-the-board. After all, a sound environment and a prosperous economy are not either/or propositions. They go hand in hand.

Mr. Chairman, it is possible to conserve the environment while meeting our domestic energy needs with a minimal dependence on foreign sources of energy, but the President must take common sense action to do it. And I thank you for allowing me to testify.

[The prepared statement of Mr. DeLay follows:]

One Hundred Sixth Congress
U.S. House of Representatives
Office of the Majority Whip
 April 12, 2000

Statement
 by
The Honorable Tom DeLay
 before
The Committee on Resources

Clinton/Gore Energy Crisis

Thank you, Mr. Chairman, for inviting me to testify today. I will focus on the restrictions in exploration and development of our oil and gas resources and the important role that our federal land policies play in framing our domestic energy picture.

As I speak, our energy policy is in shambles. Over recent years, the multiple-use component of federal lands has been sacrificed on the altar of environmental extremism because some don't think these lands should be used at all.

The recent fluctuations in gas and oil prices have served to intensify this debate---And the stakes have never been higher. Our growing dependence on foreign imports, which have now exceeded 56 percent of our nation's energy needs, is a direct threat to our national security.

But the real tragedy here is that all could have been avoided were it not for the Clinton/Gore Administration's federal lands policies of lock-'em-up now and ask questions later.

The four federal land management agencies own nearly one-third of the land in the United States. And with proposals being considered to further increase federal and state land acquisition, that percentage is likely to grow each and every year.

By abandoning an important mission of the multi-use federal lands system---responsible resource extraction and energy production---we have increased our reliance on foreign nations. We have seen the consequences of this "anti-energy" energy policy at the gas pump and in the oil patch. In a little over a year, oil prices have fluctuated from some of the lowest levels on record to some of the highest. In the process, more than 136,000 domestic oil wells and 57,000 gas wells have closed-up since 1997---and we are left at the mercy of OPEC to make up the difference.

But that is only the half of it. Layer upon layer of new government red tape and bureaucracy---advanced unilaterally by this Administration---has undermined the vibrancy of the domestic oil and gas industry.

Some of these include:

- Moratoriums on road construction;
- Abuse of the Antiquities Act;
- Restrictions on new pipeline and dam construction;
- Obscure interpretations of our mining laws;
- Increased fees for offshore oil production in the Gulf of Mexico;
- And expansive interpretations of the Endangered Species and Clean Water Acts that have---in many cases---unnecessarily denied permits on public and private lands.

And these are but a handful of the harmful policies pushed forth by the Administration.

Now under fire, the President has said we should pass tax incentives for small producers. Now the President must have a short memory because just last year Congress passed incentives for increased domestic oil and gas production as part of the Taxpayer Refund and Relief Act.

The President vetoed this measure just months before prices began to rise. In response, even Energy Secretary Bill Richardson admitted that the Administration was caught napping while the price of gasoline jumped to nearly two dollars a gallon.

So where can the President act to help the situation?

First, to the North, he can look towards Alaska. In 1995, he vetoed legislation that would have allowed oil exploration and development on a tiny portion of the Alaska National Wildlife Refuge. He claimed it would undermine the environment, but only 3 square miles would have been affected. The rest of the area---which would have been untouched---is the size of Rhode Island.

In the South, the President should repeal the increased royalty fees that this Administration unilaterally imposed. The Rigs to Reef program in the Gulf of Mexico has proven that we can drill for oil in the Outer Continental Shelf using new technologies to the benefit of both the industry and marine life.

Such capability is possible across-the-board. After all, a sound environment and a prosperous economy are not either/or propositions. They go hand in hand.

Mr. Chairman, it is possible to conserve the environment while meeting our domestic energy needs with a minimal dependence on foreign sources of energy. But the President must take common sense action to do it.

Thank you.

Clinton/Gore Energy Crisis
Majority Whip Tom DeLay
12 April 2000

Thank you, Mr. Chairman, for inviting me to testify today. I will focus on the restrictions in exploration and development of our oil and gas resources and the important role that our federal land policies play in framing our domestic energy picture.

As I speak, our energy policy is in shambles. Over recent years, the multiple-use component of federal lands has been sacrificed on the altar of environmental extremism because some don't think these lands should be used at all.

The recent fluctuations in gas and oil prices have served to intensify this debate---And the stakes have never been higher. Our growing dependence on foreign imports, which have now exceeded 56 percent of our nation's energy needs, is a direct threat to our national security.

But the real tragedy here is that all could have been avoided were it not for the Clinton/Gore Administration's federal lands policies of lock-'em-up now and ask questions later.

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Mr. Chairman, it is possible to conserve the environment while meeting our domestic energy needs with a minimal dependence on foreign sources of energy. But the President must take common sense action to do it.

Thank you.

The CHAIRMAN. Thank you, Mr. DeLay, and I understand you have to go. I have one question to ask you and Mr. Largent both because you've alluded to the closing of wells, the capping of wells. Is that a Federal law or are those State laws that require the capping, or is that voluntary?

Mr. LARGENT. Mr. Chairman, it's my understanding it's all of the above. But the State also has certain prerequisites that have to be met when you close and cap wells. But it's principally an economic decision when you cap a well. When it's costing you more to produce it than you can actually make, then, economically, it's no longer feasible to keep those wells open.

Then the process that you actually have to follow to cap the well, you know, there are EPA concerns, and—

The CHAIRMAN. What I'm looking at, because we lost about 3 million barrels per day from capped wells from 1986 until now. I believe that's about the figure. Maybe I'm wrong. What would be wrong with an incentive to keep those wells from being capped and using that oil as a reserve? And I'm just I'm looking because once it's capped, if I'm not mistaken, it's actually plugged.

Mr. LARGENT. That's correct.

The CHAIRMAN. And you lose that production, maybe 10 barrels a day. But if all the wells were available, it seems to me, that that would be a possibility that we might want to look at.

One thing I'm looking for all three you gentlemen, you've alluded to it, is if we don't get the commission like Mr. Gekas has suggested, some of you suggested some ideas. I like, you know, you are oil, I'm oil. We sit down with an idea of what we can do with oil, beyond what Mr. Gekas is talking about because he includes all the energy sources, which we have to do.

Because I don't think, contrary to what people say, we'll ever be self-sufficient in fossil fuels. But we don't have to be 57 percent. If we can get back down to 37 percent, 33 percent, they can't direct us on how we should manage our business. That's what they're doing right now. And if you think this price is going down, it's going back up again. Read the Wall Street Journal yesterday, as, actually, they say, it's going to go back up. And so that's one of the things.

And Mr. DeLay does have to leave. Does anybody have any questions for Mr. DeLay?

Mr. VENTO. Just on that point, Mr. Chairman, I won't keep him. I appreciate Mr. DeLay working to conclude our business tomorrow. He's the leader and, in spite of his, obviously, concern about getting the work done.

But I think that on the stripper wells that, in fact, there is, in the administration of those activities in terms of taxes, that there are the opportunity at least to, in fact, take off the royalty payments on them and to prevent the continued production. Of course, I think there are differences about when that's to go on or off.

And, of course, for a long time we had criticism in this country because of the cheap oil policies abroad. In fact, many of our oil price controls were initially put on with the idea of building a floor so that there would be production. It's ironic they ended up being ceilings at various times. But I think we've got to look very carefully at what we're doing here and I think most of us want to look

at that and talk about what the cost is and what we're getting back for it.

I'd just point out, I didn't disagree, Mr. Chairman, with you that we had increased imports. It's that OPEC makes up a, where they had made up a substantial portion of the import tax, they make up, I guess, at one point less than half, maybe it's more than half again right now, in 2000 numbers. But I did want to comment.

The CHAIRMAN. Let me have one more witness and then we have other witnesses in the room. Mr. Vito, you're not excused for being late. You're penalized. Mr. DeLay, you do have to go. Anybody have any questions for Mr. DeLay?

Mrs. CUBIN. Mr. Chairman, I have but one brief statement to make about Mr. DeLay's and Largent's testimony, but mostly Mr. DeLay. You referred to being able to use the public lands and not having access to the public lands. You referred to multiple use. Right now the Forest Service, through regulation, is trying to change the multiple use of the public lands from multiple use to pre-European condition. And that is just one example of how the administration is doing everything they can to block access for purposes of production of coal, uranium, hard rock, and fossil fuel, all the fossil fuels.

So I just wanted to say that.

Mr. DELAY. I thank the gentlelady and she makes my point for me. Thank you very much. Thank you, Mr. Chairman.

The CHAIRMAN. Vito.

**STATEMENT OF THE HON. VITO FOSSELLA, A REPRESENTATIVE
IN CONGRESS FROM THE STATE OF NEW YORK**

Mr. FOSSELLA. Thank you very much, Mr. Chairman, and please accept my apologies. I was in the Commerce Committee discussing vital national issues regarding low-flow and high-flow toilets and so the basis of my delay was voting, which is a good segway into the testimony I'm about to offer.

Mr. Chairman and members of the committee, I would like to thank you for the opportunity to testify today about an issue that greatly impacts America's long-term national and economic security. A recent spike in oil and gasoline prices have shined a bright light on a problem that has been brewing for many years and, if left unaddressed, is a potential threat to not just not just our economic well-being, but our safety and security as a nation and a people.

At the heart of the problem lies a simple and unambiguous fact: The present administration lacks an adequate understanding of our nation's energy needs as well as a plan or strategy to allow the marketplace to meet the demands of the American people. In other words, our Federal Government has now become too often the problem and, in fact, not the solution. High taxes and regulatory burdens inhibit the private sector from meeting the demands of the American people and stifle domestic production.

Despite statements by the President dating back 6 years and America's growing reliance on foreign oil to make the United States vulnerable to the whims of potentially unstable and unfriendly nations, the Energy Department has failed to articulate a clear, concise, and coherent policy.

In the words of the President several years ago, quote, "I am today concurring with the Commerce Department's finding that the nation's growing reliance on imports of crude oil and refined petroleum products threaten the nation's security because they increase U.S. vulnerability to oil supply interruptions." The nation's growing reliance on imports threatens the nation's security. I agree with the President.

Yet, rather than taking the needed steps to encourage domestic production, the administration has stood silently as demand for foreign oil surged dramatically from 51 percent in 1994 to 56 percent today, a jump of almost 9 percent. In fact, since 1992, domestic crude oil production is now 17 percent while our consumption has increased 15 percent. This is simply not acceptable.

Our growing reliance on foreign oil has once again garnered much attention. This past winter, unusually harsh weather and OPEC production caps pushed the price of home heating oil past \$2.00 a gallon. We experienced Economics 101, the laws of supply and demand.

I first called attention to the rise in oil prices in the early days of winter, hoping the administration would act quickly before the situation spiralled out of control. In the short-term, I urged the administration to pressure OPEC to end its production cutbacks. For nearly a year, these cutbacks have decreased the supply of oil in the world market by more than 4 million barrels per day. And, frustrated by the lack of action, we requested congressional hearings in the Energy and Power Subcommittee to explore the matter more deeply and to underscore the rising cost on America's economy.

During the hearings, I was left speechless and some of my colleagues when officials of the Energy Department conceded, quote, "It's obvious that the Federal Government was not prepared. We were caught napping. We got complacent," end quote. Tell that to the guy at the pump.

This is simply unacceptable, but not surprising, coming from the same agency and administration which over the past 7 years has not developed a strategy that realistically meets America's needs. OPEC is a cartel and over the past year we've clearly seen what this cartel has the ability to do, their ability to influence our economy, our politics, our markets, our everyday life.

This winter, we saw ballooning heating oil prices as residents of the Northeast were forced to pay exorbitant heating oil bills and, in fact, some had trouble paying and even getting oil to their homes or business. As winter turns to spring and the shortage of oil increased gas prices at the pumps to nearly \$2.00 a gallon. Americans are once again forced to dig deep in their pockets.

We have not seen these effects only in our heating, oil, and gasoline bills. Our shipping companies, taxis, airport shuttles, airlines, trucking companies all were forced to tack on fuel surcharges to the services they provide to Americans. Once again, the consumer paid the price.

We tried to get a trip to Vienna. The OPEC was meeting with Congressman Joe Barton and several others to pressure OPEC and underscore again American needs in terms of increasing produc-

tion. The administration, surprisingly, the Secretary of Energy, shortcircuited the trip and urged us not to attend.

We wanted to go to OPEC to see the ministers in OPEC to remind them that American lives were lost to defend the sovereignty and freedom of their nations and that the time for diplomacy and more meetings had long since passed. The price has spurred OPEC to increase production, which should bring some relief to the gas pump over the next few months, but not enough.

Mr. Chairman, I sit on the Energy and Power Subcommittee, along with Mr. Largent, who is also testifying, as you heard today. And I'd like to let this committee know that Chairman Barton plans to have a series of hearings examining our nation's energy needs and how to best address them, taking a close look at what we can do as a nation to ease our foreign dependence, to ease the regulatory and tax burdens on the energy industry, and to encourage and increase our reliance on domestic energy resources. We have an opportunity now. Let's do it.

What our country has experienced this year not only strengthens my belief that America needs to develop a long-term strategy that reduces our reliance on foreign oil, but reminds us that never again should the United States be forced to wait on bended knee for the assistance of other nations when our economic and national security are at stake.

Thank you very much, Mr. Chairman.

[The prepared statement of Mr. Fosella follows:]

STATEMENT OF HON. VITO J. FOSSELLA, A REPRESENTATIVE IN CONGRESS FROM THE
STATE OF NEW YORK

Mr. Chairman, Members of the Committee, I would like to thank you for the opportunity to testify today about an issue that greatly impacts America's long-term national and economic security. The recent spike in oil and gasoline prices has shined a bright light on a problem that has been brewing for many years and that, if left unaddressed, has the potential to threaten not just our economic well-being, but our safety and security as a nation and a people.

At the heart of the problem lies a simple and unambiguous fact: The present Administration lacks an adequate understanding of our nation's energy needs, as well as a plan or strategy to allow the marketplace to meet the demands of the American people. In other words, our Federal Government is too often the problem, and in fact not the solution. High taxes and regulatory burdens inhibit the private sector from meeting demands of the American people and stifle domestic production.

Despite statements by the President dating back 6 years that America's growing reliance on foreign oil could make the United States vulnerable to the whims of potentially unstable and unfriendly nations, the Energy Department has failed to articulate a clear, concise and coherent policy. Rather than taking the needed steps to encourage domestic production, the Administration has stood by silently as demand for foreign oil has surged dramatically, from 51 percent in 1994 to 57 percent today, a jump, of 6 percent. In fact, since 1992, domestic crude oil production is down 17 percent while our consumption has increased 15 percent—this is simply not acceptable.

Our growing reliance on foreign oil has once again garnered much attention this past winter when unusually harsh weather and OPEC production cuts pushed the price of home heating oil past \$2 a gallon. We expected Economics 101 and the laws of supply and demand to come into effect, but this did not happen. I first called attention to the rise in oil prices during the early days of winter, hoping the Clinton Administration would act quickly before the situation spiraled out of control. In the short term, I urged the Administration to pressure OPEC to end its production cutbacks. For nearly year, these cutbacks have decreased the supply of oil on the world markets by more than 4 million barrels per day. Frustrated by the lack of action, I requested a Congressional hearing in the Energy and Power Subcommittee to explore the matter more deeply and to underscore the rising costs to America's economy.

During the hearings, I was left speechless when officials of the Energy Department conceded, "It's obvious that the Federal Government was not prepared. We were caught napping. We got complacent." This is simply unacceptable, but not surprising coming from the same Agency and Administration which over the past 7 years had not developed an energy strategy that realistically meets America's needs.

OPEC is a cartel—and over the past year, we have clearly seen what this cartel has the ability to do—their ability to influence our economy, our politics, our markets—our everyday life. This winter we saw ballooning heating oil prices—as residents of the Northeast were forced to pay exorbitant heating oil bills and some in fact had trouble even getting oil to heat their homes and businesses. As winter turned to spring and the shortage of oil increased gas pump prices to nearly \$2 a gallon. Americans were once again forced to dig deep in their pockets. But we have not seen these effects in our heating and gasoline bills—shipping companies, taxis, airport shuttles, airlines and trucking companies all were forced to tack on fuel surcharges to the services they provide to Americans—once again the consumer paid the price.

Last month, when OPEC convened to discuss raising production levels, I, along with Energy and Power Chairman Joe Barton sought to arrange a Congressional delegation to attend the meetings and bring added pressure on the cartel. I believed the United States had to show a united front to spur OPEC to action. The Administration short-circuited the trip, but not before we reminded OPEC's oil ministers that, less than a decade ago, the United States brought peace and stability to the region when Iraq invaded neighboring countries. We reminded them that American lives were lost to defend the sovereignty and freedom of their nations, and that the time for diplomacy and more meetings had long since passed. The pressure spurred OPEC to increase production, which should bring some relief to the gas pumps over the next few months.

Mr. Chairman, I sit on the Energy and Power Subcommittee of the House Commerce Committee—along with Mr. Largent who is also testifying here today. And I'd like to let the Committee know that Chairman Barton plans on having a series of hearings examining our nation's energy needs and how to best address them—taking a close look at what we can do to ease our foreign dependence, to ease the regulatory and tax burdens in the energy industry and to encourage an increase in reliance on domestic energy sources. We now have an opportunity to take a long term approach to this issue—let's do it.

What our country has experienced this year only strengthens my belief that America needs to develop a long-term strategy that reduces our reliance on foreign oil. Never again should the United States be forced to wait on bended knee for the assistance of other nations when our economic and national security are at stake.

The CHAIRMAN. I thank you. And, at this time, the gentleman from Louisiana, do you have a question for this panel?

Mr. TAUZIN. Well, a very short one, Mr. Chairman. Most of you are focused on the problems with foreign oil imports and those who have a relatively good memory remember the long lines at gasoline stations when OPEC last declared an embargo on the United States. Steve, you were probably in high school at the time. And so were you, Vito. But I know George wasn't. George remembers.

What was interesting then was that our dependence was basically improving. And some members of OPEC, Venezuela, in particular, abandoned the OPEC oil embargo and continued to supply us with crude. And we got through that period of pretty hard times. In fact, in my State of Louisiana, we had the biggest shortage of any State in America, the biggest curtailments of natural gas of any State in America, believe it or not, even though we were one of the biggest producers.

But we got through it. With the help of some friends, even in OPEC, like Venezuela. We ought to remember that.

But today we've got a different form of dependence that is even more frightening, I think, for our country. Not only are we more dependent upon crude than ever before, even before the embargo, but now our dependence is also growing in refined products, as we in this country have failed to continue the pace of authorizing, li-

censing, and building refineries in America. The last one built in America was built in my district. The last one repaired and restored is in my district.

And the concern that I don't hear a lot about and I wonder if you might want to comment, any one of you, real quickly, on policy that would make us independent. How do we recommend changes? What do we do to encourage America to have more refining capacity, on the assumption that we can find a friend who will sell us crude when we need it? If we can't refine it and get it to the marketplace, if we depend upon Saudi refineries, if we depend upon OPEC refineries to supply us with refined products, and that shuts down, what are we going to do? Anybody have a thought on that or a comment on it? George.

Mr. GEKAS. Mr. Chairman and I'd say to the gentleman that, as I envision my proposal coming into effect, I could see that the gentleman from Louisiana would be one of the first witnesses to testify before the Blue Ribbon commission that I envision on trying to blend the considerations of the oil refinery problem with the crude oil problem with the tax incentive problem with the exploration of ANWR with the other tools that might be at hand for a comprehensive policy, but always to keep the oil refinery problem in the topic that is at hand, namely, the comprehensive long-term policy.

We can't have a long-term policy without dealing with the refineries. This is what I'm getting at in the comprehensive planning that this Blue Ribbon commission would recommend to the Congress.

Mr. LARGENT. I would respond to the gentleman by saying, and I'm just pulling these numbers off the top of my head, that if they're not exactly right, they're really close, that in 1979, the number of refineries that we had in operation in this country was around 47. Today, the number is about 23. And I think the last new refinery that was built in this country, you mentioned that it was in your district, I believe it was 1981 was the last refinery that was built in this country.

So, again, this is the result of the continued pressure from a lot of different sources, economic sources, environmental sources, that are putting pressure so that we're not only seeing a depletion of the refineries in this country where we have the ability to, you know, refine the crude oil, but we're also seeing a reduction in the number of drilling rigs that are available. They're rusting in Oklahoma today because it's just not economically viable to produce oil in this country because of the tax policies and the regulatory policy.

I'll give you two examples and one hero story about the domestic production. First the hero story. In Oklahoma, the oil producers formed an organization called the Oklahoma Energy Resource Board. It's an independent agency that's owned, operated, organized by domestic producers in the State of Oklahoma. They voluntarily donate a percentage of each barrel of oil that goes into the Oklahoma Energy Resource Board.

The Oklahoma Energy Resource Board has two functions. First, it disseminates information about the domestic production industry. The second thing that it does it clean up abandoned well sites. And in the process of the last several years, they have cleaned up hundreds of wells that had been abandoned in the State of Okla-

homa that never would have been readdressed had it not been for the domestic producers. And it's a tremendous hero story. Something that was done without, you know, government legislation, but was done on a voluntary basis.

Two examples of some of the regulatory burden. And, believe me, the regulatory burden that's on this domestic production industry, they're being nickel-and-dimed to death. I mean, these don't sound like huge things, but there's thousands of little things that are just nickel and dime. It's death by a thousand cuts.

One example. The Migratory Bird Act placed a burden on the domestic producers by saying they had to place nets over all of their barrels that they have to capture salt water that comes out as a result of drilling. So the salt water has to be pumped into these large barrels.

And they were finding that some of the migratory birds were landing in these barrels that literally are no bigger than the circumference of this table right here. And they had to buy these nets to put over several of these barrels—I'm calling them barrels, tanks is what they actually are, water tanks. And there will be three or four tanks at every well site.

Well, they had to net those because of the Migratory Bird Act. Well, the nets, you know, maybe cost, you know, \$5,000, \$7,500 bucks, but then when you multiply that times every well that has three or four barrels, it gets very expensive. Well, that's just one example of being nickel-and-dimed to death.

Another example would be the EPA has issued this decree that says that domestic producers have to have a toxic release inventory about the different components, products, that they use at the well site. And, as a result of that, they have to prepare this lengthy document. And once they did it, when this first came about, they realized we're going to spend, you know, thousands of dollars preparing this document about the toxic release inventory. Who do we turn it over to? EPA didn't even know who to turn it over to.

Well, they have to turn it over to the fire department. So they turned it over to the local fire department, they didn't know what the heck to do with it so—

The CHAIRMAN. Steve, I don't want to interrupt you. Whoever has got a phone in this room, I don't believe knows my rule. If you've got a portable phone and it's on, get out. It's that simple. And it's not a hard rule to follow. You've got a buzzer. If you don't have a buzzer, get a new phone.

Mr. LARGENT. It have been mine.

The CHAIRMAN. I don't care whose it is. I'm just saying leave.

[Laughter.]

Mr. TAUZIN. I've been thrown out already, Steve, so don't be embarrassed.

The CHAIRMAN. The gentleman's time has expired. I do appreciate, you know.

Mr. VENTO. Mr. Chairman, just for the record, I want to put an editorial in that I know that you'll enjoy reading.

The CHAIRMAN. That depends. Who's it from?

Mr. VENTO. The Minneapolis Star Tribune. "Energy Problems Can't be Drilled Away," Mr. Chairman. I'd submit it for the record.

And I would ask that Mr. Gekas' bill on the commission be put in the record.

[The information referred to follows:]

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Submitted by Hon. Vento
HOUSE COMMITTEE ON RESOURCES
HOUSE COMMITTEE ON BANKING AND FINANCIAL SERVICES

Congress of the United States
House of Representatives
Washington, DC 20515-2415
March 24, 2000

Dear Colleague:

Below is an editorial recently published in the *Minneapolis Star Tribune* regarding the current energy problem and calls by some Members of Congress to devastate the Arctic National Wildlife Refuge's coastal plain by drilling for oil and gas. Despite all the rhetoric, there is little convincing evidence that demonstrates the need to tap into questionable amounts of oil within the Refuge even as oil prices hover near all-time highs. Instead of plundering natural treasures such as the Arctic Refuge, we should develop a long-term energy policy that reduces our reliance on foreign oil through conservation and alternative fuels and renewable energy resources.

I urge all my colleagues to cosponsor H.R. 1239, the "Morris K. Udall Wilderness Act." This legislation seeks to permanently protect 1.5 million acres of the Refuge's coastal plain as wilderness, home to polar bears, grizzlies, wolves and the largest international migratory caribou herd in the world. If you would like to have additional information regarding the need to protect "America's Seregeti," or if you would like to cosponsor H.R. 1239, please contact Lew Crenshaw of my staff at 5-6631.

Sincerely,

Bruce F. Vento

Bruce F. Vento
Member of Congress

Oil and Alaska

Energy problems can't be drilled away

It was only a matter of time before Alaska's congressional delegation seized on national unease over gasoline prices to justify another attempt at sinking oil wells in a wilderness sanctuary. It's a lame rationale, but no more so than some others these folks have offered.

During the Persian Gulf War, the last time world oil prices were this high, the Alaskans said U.S. military security required opening the Arctic National Wildlife Refuge to drilling. In the federal budget struggle of 1995, they urged tapping the refuge to balance the books. And now, as the possibility of a \$2-a-gallon summer season approaches, Sen. Frank Murkowski says the refuge's oil is vital to shielding the economy from big swings in the world petroleum market.

The truth is that Murkowski, Sen. Ted Stevens and Rep. Don Young will favor drilling the refuge even when gasoline is cheaper than bottled water, as it often has been in recent years. This has nothing to do with the nation's interests and everything to do with Alaska's.

Oil is lifeblood in Alaska, funding most of the state's budget and ensuring that citizens get dividends — not income tax forms — from their government each year. Thus a congressional delegation that complains of U.S. reliance on foreign oil while winning repeal of a longtime ban on exporting Alaskan crude, then champions security interests while forcing the Interior Department to permit peacetime drilling in the National Petroleum Reserve — set aside in 1923 for use in war or national calamity.

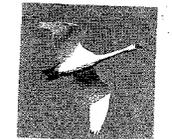
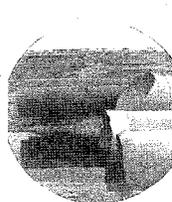
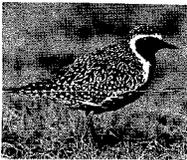
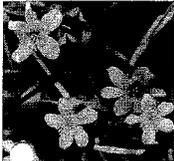
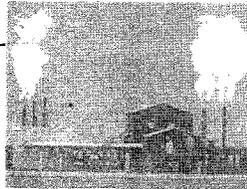
Production of North Slope oil has indeed declined in recent years, primarily because of oil companies' responses to low world prices and, more recently, the rejected merger of British Petroleum and Amoco. This is worrisome to Alaska, but should it be worrisome to the nation, for whom the Arctic refuge is held in trust?

Each spate of high gasoline prices reminds Americans that our way of life is entirely too reliant on oil. We may even change our habits for a time.

Each spate of high gasoline prices reminds Americans that our way of life is entirely too reliant on oil, too dependent on imports. We are persuaded anew of the need for a national energy policy that more vigorously promotes conservation and alternative fuels, reduces pollution, slows global warming. We may even change our habits for a time. Then the prices fall and we buy our sport-utility vehicles, give up our bus passes, build our new homes on the suburban fringe.

But even as we wince at today's numbers on the gas pump, most of us understand that we can't drill our way to a short-term solution, given the years it takes to bring new wells into production. We know it's not a long-term answer, either, for at some point the oil will run out. The most we accomplish is to postpone the day of reckoning by some unknown factor. Estimates are that oil under the Arctic refuge might supply the nation's needs for six months or a year, maybe more and maybe less.

For that postponement, should Americans be willing to scatter oil wells across the last pristine sector of Alaska's north coast, a fragile landscape of harsh beauty and critical significance to hundreds of species in the Arctic ecosystem, one of the last big places on the continent where human presence is undetectable? If so, perhaps we should prepare for the post-petroleum era by planning to build hydroelectric dams in the Grand Canyon and to log the Boundary Waters Canoe Area for stove wood.



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Opinion

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Editorial: Oil and Alaska: Energy problems can't be drilled away

Thursday, March 16, 2000

It was only a matter of time before Alaska's congressional delegation seized on national unease over gasoline prices to justify another attempt at sinking oil wells in a wilderness sanctuary. It's a lame rationale, but no more so than some others these folks have offered.

During the Persian Gulf War, the last time world oil prices were this high, the Alaskans said U.S. military security required opening the Arctic National Wildlife Refuge to drilling. In the federal budget struggle of 1995, they urged tapping the refuge to balance the books. And now, as the possibility of a \$2-a-gallon summer season approaches, Sen. Frank Murkowski says the refuge's oil is vital to shielding the economy from big swings in the world petroleum market.

The truth is that Murkowski, Sen. Ted Stevens and Rep. Don Young will favor drilling the refuge even when gasoline is cheaper than bottled water, as it often has been in recent years. This has nothing to do with the nation's interests and everything to do with Alaska's.

Oil is lifeblood in Alaska, funding most of the state's budget and ensuring that citizens get dividends -- not income tax forms -- from their government each year. Thus a congressional delegation that complains of U.S. reliance on foreign oil while winning repeal of a longtime ban on exporting Alaskan crude, then champions security interests while forcing the Interior Department to permit peacetime drilling in the National Petroleum Reserve -- set aside in 1923 for use in war or national calamity.

Production of North Slope oil has indeed declined in recent years, primarily because of oil companies' responses to low world prices and, more recently, the rejected merger of British Petroleum and Amoco. This is worrisome to Alaska, but should it be worrisome to the nation, for whom the Arctic refuge is held in trust?

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The CHAIRMAN. Without objection. The gentleman from Kentucky—Tennessee. Folks. We're all the same. Go ahead.

Mr. DUNCAN. Thank you, Mr. Chairman, and thank you for holding this hearing. You know, one of the things that I do is chair the Aviation Subcommittee and their transport association told us a few days ago that with each one penny increase in their fuel costs, that they lose \$200 million a year, the airlines do. \$200 million a year for each one penny increase in their fuel prices.

And what I've said, you know, the rise in the gas prices is not only hurting us in aviation, it's hurting us in agriculture, tourism, and almost every industry imaginable. And it also causes us the most serious problems, I think, for those who live in small towns and rural areas because so many of those people have to drive further distances to go to work.

And I have noticed over the years that these environmental extremists who don't want us to drill for any oil almost always come from very wealthy families and maybe they don't realize how much they're hurting the poor and the working people of this country.

But I have a statement, a full statement, that I want to put in the record.

But I have some very, very strong concerns about this. I read recently that our domestic oil production is at its lowest level since 1951. And Mr. Largent mentioned the refineries that I have closed. And I think it's very sad that we're sitting on all of this and these billions of barrels of oil up in Alaska and also billions more offshore and we have become so dependent on foreign oil.

But primarily the concern I have is that we are hurting the poor and the working people of this country by driving up prices and destroying jobs. And it's going to cause us some very serious problems if we don't act on some of this legislation.

And I want to put my full statement in the record. But thank you very much.

The CHAIRMAN. All right. And I want to thank the gentleman from Tennessee. And the one reason I—sometimes I have a hard time with it, but his name is Jim Duncan. Jim Duncan ran against me last time in Alaska and that gives me a little problem. And, without objection, so ordered.

The CHAIRMAN. The gentleman from American Samoa. The gentleman from California.

Mr. CALVERT. Thank you, Mr. Chairman. I find it interesting that this administration or the Justice Department would go after Microsoft, but they tend to not want to do anything about OPEC.

One thing I wanted to point out that Mr. Largent brought up about the refining capacity, most of the refineries that are closed in the United States closed in one State and that was the State of California. And the reason why those refineries closed was because California has a clean air standard that's different than anywhere else in the United States.

I don't say that, necessarily, is a bad thing. We have a reformulated gasoline standard in California that's done a lot, dramatically, to increase air quality in California. We have a sulphur standard right now at 30 parts per million that being dropped by California clean air folks to 15 parts per million.

But one thing I want to point out to my friend from Louisiana and from Texas and other States that have a tremendous amount of refining capacity, whatever is left, is in the process when California went through this transfer to new technology on refining, many of the small refiners did not have the capital in order to invest to stay in business and so they closed up. And so we had about 12 refineries in California and that went down to about 6 in California today.

And that's caused a big problem. And that's one of the reasons why we probably experience, we do experience, the highest gas prices anywhere in the United States. We're right about \$2.00 a gallon, isn't that correct, Mr. Pombo? It depends on where you go shopping for gasoline. And that has put a tremendous amount of stress on folks in California.

But as you well know, the EPA has made a determination that all refineries will have to go to the 30 part per million standard pretty soon, by 2004, I believe. And I would hope that we could work with the Commerce Committee and the Ways and Means Committees and whatever we need to do around here to remove the unintended consequence of refineries going out of business in this country.

Because if California is any evidence of what will happen, refineries in Louisiana and Texas will suffer because of this. It may be a great thing for clean air, but we ought to recognize that it's a tremendous amount of money. We need to help, especially, small refineries and large refineries to make these technological changes in order to meet Federal regulation that they're being imposed upon to do that without removing too much competition from the marketplace.

And I would like to agree with the chairman that we need to get more oil production in the country and that's part of the problem.

But, also, many nuclear facilities are going off line here in the next several years. And we have great new nuclear technologies that are clean. It's not the same technology that folks experienced 30, 40, 50 years ago. And I think we need to better explore new nuclear technologies, which, by the way, produces power for about three cents a kilowatt. And, obviously, it's clean. There's no so-called greenhouse effect. And I would hope that the environmental community would take another new look at the new nuclear power that is out there today.

And, with that, I thank the chairman.

The CHAIRMAN. The gentleman, Mr. Udall.

Mr. UDALL. Thank you, Mr. Chairman. I want to welcome the panel. And it's always great, in particular, to see my colleague Mr. Largent not in a baseball uniform throwing his big sweeping curve ball at your head and then it ends up over the plate.

But I want to thank the panel today. One very brief comment from a set of comments, Mr. Chairman, and I'd ask unanimous consent to include my statement in the record. I'm one of the cochairs of the Renewable Energy and Energy Efficiency Caucus, a bipartisan group. There are about 160 members in the House. And we ought to have more members, frankly, because there are renewable energy projects going on in almost every single congressional district in the country.

And when I look at the title of the hearing, "Compromising Our National Security," I think it's important to remember that there's great opportunity in the renewable area and in the energy efficiency area and we ought to be doing more in this Congress to invest in those research and development efforts. And that, in the long-run, would help us economically as well as making us less dependent on foreign sources of oil.

The petroleum geologists tell us that the world supply of oil is finite and eventually we're going to run out. So, yes, we should be doing all we can within the environmental laws and within protecting the safety of the workers and so on to extract as much oil as possible, but we ought to be complementing that with additional efforts in this exciting new area of renewable energy and energy efficiency.

Again, I thank you, Mr. Chairman, for the time and I yield back what time I have left.

[The prepared statement of Mr. Udall follows:]

COMMITTEE ON RESOURCES
April 12, 2000
OPENING STATEMENT
OF
REPRESENTATIVE MARK UDALL

Thank you, Mr. Chairman. I will be brief.

I do think we need to do more to lessen our dependence on imported oil. In fact, I think we need to do more to lessen our dependence on petroleum, whether it's imported or not.

Like you, Mr. Chairman - and like almost all other Members of the House -- I voted for H.R. 3822, the Oil Price Reduction Act, which the House passed last month.

I did so because I thought it was appropriate to call on the President to undertake diplomatic efforts to combat oil

price fixing by some of our foreign suppliers.

But as I said at the time, I think we need to do more to invest in alternative energy sources to reduce our dependence on petroleum. That's why I wanted to offer an amendment that would have authorized funding at the level of the President's fiscal 2001 budget request for the Department of Energy's solar and renewable energy research programs. It was similar to an amendment I offered and the House unanimously adopted during last year's debate on HR 1655, the bill to authorize the Department of Energy's energy research programs.

Unfortunately, the Rules Committee did not see fit to allow that amendment to be offered. I think that was an opportunity missed - and I think that we are missing an opportunity again today if this hearing does not also include a discussion of alternative energy sources.

We need to remember the importance of seeking out alternative energy sources to replace our dependence on ever-dwindling supplies of fossil fuels. We need to invest more in renewable energy programs. They benefit our economy by stimulating private sector activity and adding jobs, and they reduce our reliance on petroleum.

Renewable energy and energy efficiency are all about investing in America's future - the future of our energy security, our environment, and our international competitiveness. I hope the importance of that investment will not be overlooked by our witnesses today.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you. The gentleman from Pennsylvania, Mr. Peterson.

Mr. PETERSON. I would like to thank the panel this morning and, I guess, remind them that I come from where it all started. I live five miles from Great Swale where the first oil well was produced in this country. I was actually a dug well, 68 feet deep. The oil sand came that close to the surface where it had been oozing out of the ground for years and the stream was called Oil Creek nearby because there was always oil in the water, naturally.

Any way, we're not a major player in the oil field. We were always considered the premium or Quaker State, Penzoil, where all the major brands came from because we were a paraffin-based oil. We still have some oil production, but I've lived to watch that business pretty well wither up and dry, especially when oil became so cheap for so long. And also with the regulations and the controls.

But I know Oklahoma, and I'd like to ask the gentleman from Oklahoma, is a State that is one of our major producing States and I guess, with oil being 40 percent, the recent figures I've seen that 40 percent of our energy today comes from oil, for all uses, mostly transportation, but for all uses, that oil is still 40 percent of our energy, can the spigot really be opened in a State like Oklahoma with fair policies and fair regulations and some tax incentives?

Mr. LARGENT. I think the answer to that is absolutely. The economics are what drive domestic producers. And, frankly, I would like to concur with what Mr. Vento said. I didn't read the article that he submitted for the record, but saying that drilling will not solve all of our energy problems, I agree with that. I don't know that if we open up all of these areas that we will be able to supply 100 percent of our domestic needs.

But we certainly would not be reliant to the tune that we are today on foreign oil and I think that's what we need to examine, especially in light of the national security risk that it inevitably leads to.

Mr. PETERSON. I know in Pennsylvania, 10 or 15 years ago when the decline happened, the huge unemployment, the number, the people. It was the working man who lost his opportunity and there were, I don't know, about Oklahoma, but in Pennsylvania we never really replaced those jobs when we lost the oil patch jobs. Those were working jobs from the average working people, blue-collar people, who went out and worked in those fields and that was a work force that's never been replaced. Most of them cannot go to work in high-tech factories. They don't have the skills.

Mr. LARGENT. Well, I would just respond by saying that you're exactly right and that's taking place in my State of Oklahoma where 50,000 jobs have been lost here just in the last 5 years. And what happens is not only are we losing the ability to use the equipment—the drilling wells that are rusting, the drilling equipment that's rusting, it's irreparable, it's going to take years to replace that—but we're losing the manpower and the experience as well. As those jobs are lost, people are moving on into other jobs, as you would expect. And we lose that as a resource as well.

And so what I'm saying is the longer we wait and prolong moving forward and developing a sound national energy policy, the longer it's going to take us to cycle back up to where we need to be.

Mr. PETERSON. To revive your patch, we need to move quickly, right? Thank you.

Mr. TAUZIN. Would the gentleman yield a second?

Mr. PETERSON. you bet.

Mr. TAUZIN. Just to say, one thing that's also missing in this equation, but we get a lot of people saying why don't we just produce alternatives to oil and gas? The problem is, once you've become as dependent upon OPEC oil as we've become, then all the folks who might want to go into alternative forms of energy know that any day OPEC can drop that price just by opening their spigots, they can drop it down to \$8.00 a barrel, and destroy anybody who's invested in an alternative energy form.

So that the reliance on OPEC oil is creating a disincentive to go out and explore other ways of producing alternative energy for America. It's doing the perverse effect of discouraging us to become more dependent on alternative forms.

So, in a sense, the very people who are putting all these regulations and suppressing the development of ANWR and suppressing the development of oil and gas in our own country have built a reliance now that makes it even more difficult for us to move to the alternative forms that they recommend for the country. It killed the goose that laid the golden egg.

The CHAIRMAN. The gentleman, Mr. Pombo. The gentlelady, Mrs. Cubin.

Mrs. CUBIN. Thank you, Mr. Chairman. I will continue to point out the problem of access to the public lands as we go throughout this hearing today for purposes of energy development. There are alternative sources that people on the other side have talked about, for example, coal bed methane, in the State of Wyoming. This is a huge resource. It's a very clean-burning fuel that needs to be considered as part of our national energy policy.

But because of administration regulations, road blocks, and so on, coal bed methane is literally going into the air because coal bed methane, as you might expect, is methane that is in the coal seams. And when we can't get permits for pipelines to transport this wonderful clean-burning fuel to markets, then there is a waste of a resource that we could be using that is not, you know, one that people think of right off the top of their head.

I think that access to public lands is very important and certainly Wyoming suffers from the same problems that you have described with the oil industry, oil and gas. And I hope that we will be able to come up with some suggestions for how much of our energy should be supplied, what percentage should be supplied, through domestic sources, whether it's uranium, whether it's geothermal, solar, oil and gas, coal. Whatever it is, we need to have a policy that says this much, this percentage of production will make us nationally secure and will provide the energy that this country needs.

Mr. VENTO. If the gentlewoman would yield briefly?

Mrs. CUBIN. Certainly.

Mr. VENTO. Listen, obviously, on the oil issue, in the last 10 years, from 1989 to 1999, the numbers I've seen, actually from the Federal lands, that the amount of oil has increased from about 16 percent to 26 percent, from the Federal lands. Now domestic pro-

duction may have gone down and some other factors, but the question is what are the State lands producing? What are the private? And I think we've heard a little bit here about the uneconomic nature of some of the wells because of tax and other incentives.

But I think that, you know, just as far oil is concerned in that issue, you know, there hasn't been this decline, necessarily, in the percentage of domestic oil coming from Federal land. If anything, it's increased by about 10 percent from the total of domestic oil that's produced.

Now there are other problems outstanding, but I didn't want—

Mrs. CUBIN. Reclaiming my time. The National Petroleum Council, which is an advisory group to the Secretary of Energy, just published a study that's called, "Meeting the Challenges of the Nation's Growing Natural Gas Demand."

Mr. VENTO. Natural gas. That's not oil. I'm talking about oil.

Mrs. CUBIN. That is true. That is true.

Mr. VENTO. I'm not talking about—

Mrs. CUBIN. Reclaiming my time. The principal factor is improving Federal land access. And that includes on OCS.

The CHAIRMAN. I want to thank the panel. I hope you, if you leave this room, don't forget it—

Mr. VENTO. Mr. Inslee wanted to comment, Mr. Chairman.

The CHAIRMAN. Oh, I'm sorry. You're down at the bottom of the well. Go ahead, Mr. Inslee.

Mr. INSLEE. Thank you, Mr. Chairman. I know you mean me no disrespect, at least publicly, which we appreciate.

Have any of you read any recent scientific information about the climate change issue, carbon dioxide? Is that something that's been on your radar screen at all? Yes, global warming phenomena?

Mr. GEKAS. The only thing I can say about global warming if, indeed, it is developable as a real fact, let's assume that it is, that would help exploration of solar energy technology that would improve our capacity for using solar energy. So I see some good coming from, if there is indeed global warming, of which I'm very much skeptical. But that's a climactic change that we'd have to take into account in a long-term energy policy.

Mr. INSLEE. Vito, do you?

Mr. FOSELLA. Yes, to a degree I'm aware of it, yes. And I also understand that there is some dispute in the scientific community as to the nature of the problem and, as Mr. Gekas says, to what extent it exists if at all.

But, if I may, just briefly articulate and it sort of comes in different ways listening to the respective members of this committee, the fundamental notion of, it's a mindset. I think the American people want a balanced approach to meeting the demands of the marketplace and their needs. With economic growth, with, whether you drive a taxi or a truck or just driving your family, you know, to the store, you want to be able to meet your needs but, at the same time, government cannot be disconnected from the reality of the needs of the American people.

And I think, too often, it's knee-jerk responses, whether they're the nets for migratory birds or preventing the reasonable access in Congressman Young's district. What you find is that there is no balance. And, at the end of the day, the American people suffer.

Let me just give you one small example as to how the least fortunate suffer the most. In my district, there's a taxi company and for years the gentleman who owns it had offered senior citizens a discount of \$2.00. Well, for the first time in 20 years, he had to eliminate that discount because gas prices rising cost him about \$1,200 more per week. So he was absorbing that cost all that time, but now he could no longer afford it. So it was the senior citizen, living on a fixed income, who suffered the most.

So, while I agree with and appreciate your efforts, I also think, in the near-term, there's got to be some, I guess, for lack of a better phrase, grasp of reality that the American people and some of the least fortunate are suffering. And if you want to take a long-term view, fine. I think we should. But I think there is just no grasp of what's going on right now.

Mr. INSLEE. Let me ask you a great favor. If I sent you something about this issue, at least a short synopsis of the science on the issue, I know you fellows are interested in energy issues, could I ask you to read it? Could I get your agreement to take a look at that? Because I think there are some interesting things going on in the science recently about this issue.

I'll send you some, because I just think it's a beautiful day outside, but I think there are some things going on out there; that the science is showing that you and I, assuming we're back here in the next few years need to deal with. And I just am using this opportunity to share a little—

Mr. LARGENT. If I could respond just briefly, I mean, this is one of the real paradoxes that I've found in my time in Congress is that let's assume that global warming is taking place. And I think, you know, that the reviews are mixed on the scientific evidence for that, but let's assume that that, in fact, is taking place. We know, according to that same evidence, that one of the leading contributors to the demise of the ozone and the warming of the globe are coal-fired generators for electricity.

If that, in fact, is the case and you're really concerned about global warming, what is the paradox to me is to find that the same people that are screaming global warming, global warming, you know, the sky is falling are also the ones that are the most vehemently opposed to the alternative sources like nuclear and like hydro. Those are the most environmentally friendly sources. Actually, natural gas is also equally environmentally friendly, to produce electricity.

But I find the people that are screaming global warming are also the ones that are opposed to these alternative sources that are much more environmentally friendly. And I have not been able to reconcile those two different perspectives.

The CHAIRMAN. The gentleman's time has expired. Before we excuse the panel, I would like to remind everybody in New Mexico approximately 12 million years ago there was 284 feet of ice. I don't know how the ice got there. I have no question about that. But I always wondered what melted the ice clear up to the North Pole. I just want everybody to think about that a moment. The panel is excused.

At this time, I'm going to call the Honorable J. Bennett Johnston of Johnston & Associates; David Hayes, Deputy Secretary, U.S. De-

partment of the Interior; Bob Gee, Assistant Secretary for Fossil Energy, U.S. Department of Energy.

And we're going to alternate Chairs here. Mr. Tauzin is going to handle this Chair. Mrs. Cubin is going to handle the next Chair. And I'll be in and out, if you don't mind. But Mr. Tauzin is going to be taking the Chair. Mr. Pombo can handle the third panel, all right?

STATEMENT OF THE HONORABLE J. BENNETT JOHNSTON, JOHNSTON & ASSOCIATES, INC.; ACCOMPANIED BY DAVID J. HAYES, DEPUTY SECRETARY, U.S. DEPARTMENT OF THE INTERIOR; AND ROBERT W. GEE, ASSISTANT SECRETARY FOR FOSSIL ENERGY, U.S. DEPARTMENT OF ENERGY

STATEMENT OF THE HONORABLE J. BENNETT JOHNSTON

Mr. JOHNSTON. Mr. Chairman, thank you very much for your kind comment. You are hale, hearty and spunky as ever. Mr. National Parks.

And, Mr. Chairman, I must note that since I have left the Congress and done an occasional bit of lobbying, I must remark at how much better looking and smarter all of you seem now than when I was there.

[Laughter.]

Mr. TAUZIN. [presiding] Flattery will get you everywhere.

Mr. JOHNSTON. Mr. Chairman, I think it was in this room, I was last here in 1995 when we were here at the Conference Committee of the Royalty Relief Bill. At that time, oil imports were about 50 percent. Today they are 57 percent. The Energy Information Administration says they are going to be 70 percent by the year 2020.

In the midst of that, we've had gasoline prices that have been bumping on the underside of \$2.00. People are pointing fingers at one another on the television, you hear the people at the gas pump saying it is outrageous what is happening.

And, you know, whose fault is it? Is it the President's? Is it the Secretary of Energy? Is it the Congress? Is it God's? Just whose is it? Well, the real question, Mr. Chairman, is can the Congress do anything about it, actually and really?

I would like to suggest three things that are practical, that are real, that ought to be done. They are, first of all, opening up ANWR. Second, requiring drilling or allowing drilling on the Destin Dome off Florida. And, third, renewing the Royalty Relief Bill.

I won't go into ANWR a great deal because I know you know about it. Let me just say this. There is not a single pound of commercial seafood produced off ANWR. The sport fishery I think is limited to Members of Congress who go there. In Louisiana, we produce a billion pounds, more than a billion pounds, of commercial seafood. We have hundreds of rigs that have been there for 50 years and more and have never done any harm.

Now you can believe that ANWR is the Serengeti if you want to. I've been there five times. Believe me, Serengeti, it is not. I've never seen a polar bear. I've never seen a brown bear. I've seen a few musk ox, not many. They were, by the way, an imported animal. They're not native. And if you believe that the Caribou herd is a problem, I say, look at the great experiment which took place

right next door in Prudhoe Bay where the caribou herd increase 7 times over.

Mr. Chairman, to say that it is too fragile, that it is too dangerous to drill in ANWR when we do it out in the greatest fish hatchery in the world, the Gulf of Mexico, is absurd and I would hope the Congress would recognize that.

Second, Destin Dome. There are, according to the Department of Energy, 2.6 trillion cubic feet of dry natural gas about 25 miles offshore. It has been declared by the State of Florida to be inconsistent with their coastal zone management program. And briefs are now being filed. The Secretary of Commerce will make a ruling on that I think in August. This being an election year, you can guess how it will probably come down because, bipartisanly in Florida, they believe this is a danger.

Now, Mr. Chairman, this is dry natural gas. You cannot see it from the shore of Florida. It would be pipelined into the Mobile Bay area. It would be serviced from Alabama. How anyone can, with a straight face, say that this is a danger to the fishery out there when you've got, as I say, 2 billion pounds of seafood over 50 years with hundreds of rigs that have never hurt anything off Louisiana. It's simply absurd.

Mr. Chairman, if the Congress can have a willing suspension of disbelief and allow Floridians, on a bipartisan basis, to say that there is this imaginary danger which prevents 2.6 trillion cubic feet of natural gas from being brought in, which is badly needed and a great solution to this clean air problem, then, Mr. Chairman, when people whose fault is it, everyone should point at himself.

Finally, royalty relief. Charts one and two connected to my statement show the vast increase in drilling on the Outer Continental Shelf of the deepwater that occurred immediately after the passage of the royalty relief bill. Now, Mr. Chairman, there is a new article just out yesterday that actually hasn't been published by Andrew Derman and Daniel Johnston and I would ask that that be distributed if it has not.

It examines this question of royalty relief in great detail and comes to the conclusion that the Royalty Relief Bill was, in fact, the reason or one of the principal reasons, for the huge upsurge in drilling in the Outer Continental Shelf. You know it is the only place in America where there has been a real upsurge in drilling. It will be \$9.5 billion by the year 2005 in drilling alone, not to mention bonuses and royalties and income taxes paid.

Mr. Chairman, I believe this committee ought to hold hearings and go in depth, ask NMS, ask DOE, to come up and testify about what the effect of it is. Because if it is as important as I believe it is, as the figures seem to show, then it ought to be continued.

Mr. Chairman, thank you very much.

[The prepared statement of Mr. Johnston follows:]

Statement of
J. Bennett Johnston

Submitted to

The U.S. House of Representatives
Committee on Resources

Washington, D.C.
April 13, 2000

Mr. Chairman and members of the Committee:

I appreciate the opportunity to offer my assessment on the national security implications of restricting domestic exploration and development of our oil and natural gas resources and to discuss the opportunities we might have to limit our dependence on foreign sources of energy.

When I appeared before the Conference Committee in 1995 we were working on a program to help solve the same problem we face today: the diminishing supply of domestic oil and gas. At that time, the Committee will recall, we were working on the Royalty Relief Act which was, of course, successfully passed into law.

At that time foreign imports stood at about 50%. Today foreign imports are 57% and the Energy Information Administration projects that by 2020 imports will reach 70%. We are presently witnessing some of the results of that dependency; OPEC can successfully manipulate the price of oil (and the gasoline at the pump) at will. The American public and members of Congress on both sides of the aisle have declared this to be "outrageous." Add to this OPEC threat even more sinister possibilities. When one considers the difficult neighborhoods in which so much of today's oil is produced: West Africa, the Caspian Sea, Kazakhstan area, Venezuela, the Middle East, Indonesia, etc., areas that have been and continue to be subject to revolution, civil war, religious strife, and other indications of instability, all of which threaten the security of these sources of supply. If gasoline prices are "outrageous" and if our National security is, in fact, threatened then the question before this Committee is, "Can the Congress do anything about increasing domestic supply?"

Mr. Chairman, I would suggest three immediate and practical actions which the Congress could take which would necessarily enhance our domestic petroleum supply. These are: 1) to allow drilling in ANWR, 2) to allow exploration and production from the Destin Dome areas off of the Florida Panhandle, and 3) to extend the Royalty Relief Act.

ANWR

According to the USGS, the Alaskan Coastal Plain has great potential for helping this country become less reliant on imported oil. The entire area is estimated to contain oil in place of 11.6 to 31.5 billion barrels. Of this, about 6 to 16 billion barrels, or about half, is estimated to be technically recoverable, which would be equivalent to more than 30 years of imports from Saudi Arabia today. This is based on today's technology, of course. With new technology, the share should be higher. And there should be significant amounts of natural gas as well. Simply stated, ANWR production alone would reverse the decline in U.S. production.

The attached chart (Chart # 1) shows the potential for ANWR on U.S. petroleum supplies.

Drilling pads, roads, airstrips and other facilities are constructed from ice that will melt when the warmer months arrive, leaving little evidence of man's presence. Special care is taken to prevent leaks in gathering and flow lines through the use of plastic pipe liners and even specially trained dogs to detect leaks early. To carry equipment across the tundra, operators use all-terrain vehicles with large, low-pressure tires that leave no tracks.

New technology reduces the time needed to drill a well, the number of rigs needed to extract oil from a field and the surface area affected by each well, radically decreasing the chances of any harm to the environment. The equipment used is much smaller and lighter, allowing operators to accomplish as much while leaving a smaller footprint.

New technology also allows companies to use fewer wells to achieve the same production capacity as 15 years ago. Companies can thus reduce the number of wells drilled per field and cut back on potential for environmental harm. In addition, new modular drilling technologies allow operators to use rigs that are a quarter of the size and weight of a standard rig and cut the time needed to drill a well, reducing the impact on surface environments.

Directional drilling allows companies to extract oil and gas from environmentally fragile areas. Horizontal drilling also means fewer wells and lower waste volumes. Oil rigs are manufactured from lighter, stronger material. They require less fuel for transporting and operation and have less surface impacts than conventional rigs.

Mr. Chairman, there are no commercial fisheries and virtually no sport fishing in the Alaskan Coastal Plain. For those who compare this area to Serengeti, I would only urge that they make a trip there to see for themselves. For those who are concerned about the Porcupine Caribou herd, I would urge that they look next door to Prudhoe Bay where the Caribou herd has increased many times over, since exploration and production commenced.

Over a billion pounds of commercial seafood is produced off Louisiana's Coast where over 50 years of drilling and hundreds of production platforms have produced no harm to the marine environment. I submit that Americans energy supply could be greatly enhanced by the recovery of ANWR oil and without any danger to the environment.

Destin Dome

According to the Department of Energy, the Destin Dome formation contains at least 2.6 trillion cubic feet of natural gas, one of the largest gas fields in the Gulf of Mexico. This gas is "dry" and is not produced in association with oil. In other words, the threat of an oil spill is virtually zero. In February of 1998, Florida rejected Chevron's drilling plan for this area. Briefs are presently filed with the Department of Commerce and Secretary Daley will have 90 days to rule which means a ruling will probably be handed down by early August.

The Destin Dome dispute also might preview additional drilling disputes. The Federal Government plans to lease parts of the Gulf of Mexico 100 miles and more off Florida for oil and gas exploration starting in 2002.

The Federal moratorium prohibits any drilling nearer to Florida's coast. Secretary Daley has the power to override Florida if he finds Chevron's development is consistent with the Federal Coastal Zone Management Act, or if he finds that Chevron's drilling plans necessarily lessen the Nation's reliance on foreign energy supplies.

Florida contends that these drilling operations pose a threat to polluting fish habitat, plants and animals, marine mammals, birds and beaches.

This being an election year it takes little imagination to guess what the Secretary's decision will be.

Though the drilling would take place off Florida, the gas would be piped to Mobile and the support activities would be based in Alabama.

Natural gas is said to be one of the principal solutions to America's air pollution problem. Virtually all of the new electricity generation in this country comes from combined cycle natural gas turbine. The Department of Energy projects that consumption of natural gas in this country will increase from about 21 T.C.F. to 30 T.C.F. by 2010.

I submit that Florida's fear of this drilling is based upon imaginary non-existent dangers. But the need to have access to these supplies of natural gas in order to deal with America's air pollution problem is not an imaginary challenge.

Royalty Relief

Mr. Chairman, the Deep Water Royalty Relief bill passed before this Committee and Congress in 1995, was one of the most successful bills ever passed for developing domestic energy resources. The attached charts (Charts #2 & #3) demonstrate the obvious connection between the bill's passage and the sharp increase in oil and gas production. I well recall the debates before this Committee about whether the Minerals Management Service estimates of increased production attributable to passage of the Act would actually materialize. As the Committee knows, those estimates were far exceeded.

Mr. Chairman, I am fortunate to have an in-depth article by Andrew Derman of Thompson and Knight law firm which was just completed, but not yet published. I have

the permission of Mr. Derman to use it which I attach and adopt as my own. It makes a very strong case for renewal of the Royalty Relief Act.

Mr. Chairman, I also attach hereto statements from Unocal Corporation and Occidental Petroleum Corporation which support the proposition that the Royalty Relief Act has in fact been an important incentive in procuring additional drilling and exploration in the Gulf.

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 A Unocal Business Unit
 14441 Southwest Freeway
 Sugar Land, Texas 77478
 Telephone (281) 287-7342
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April 11, 2000

The Honorable Bennett Johnston
 Johnston & Associates, Inc.
 1455 Pennsylvania Ave., NW, Suite 200
 Washington, DC 20004-0683

PIRIT
 ENERGY 76
 John T. Donohue
 President
 Spirit Energy 76

Dear Senator Johnston:

Unocal Corporation is pleased to provide you with information concerning our experience and future plans for deepwater activity in the Gulf of Mexico. Unocal has made a substantial commitment to deepwater technology and exploration, both in the Gulf of Mexico and in several hydrocarbon basins worldwide.

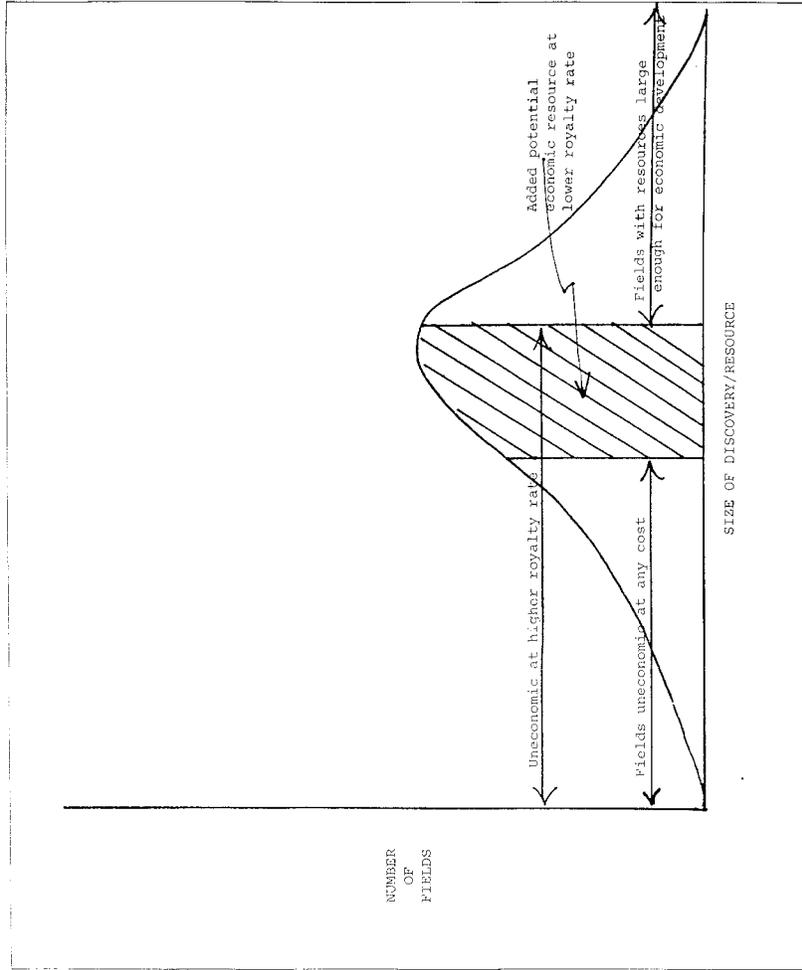
Since 1998, we have acquired interests in 219 deepwater tracts in U.S. federal lease sales in the Gulf of Mexico (an additional 5 bids pending review by MMS) at a cost of approximately \$250 million. In addition, as part of our strategy to enter the deep waters in the Gulf of Mexico, Unocal contracted for the deepwater drill ship, the Discoverer Spirit, with annual operational expenses of approximately \$168 million. The Discoverer will be in place this summer. It will be capable of operating in water depths of up to 10,000 feet and will be capable of drilling up to 26,000 feet. During our 2000-2001 drilling schedule, we will be in water depths of 5500 or greater. In fact, one well will be drilled in 9800 feet of water.

The deepwater royalty relief program has been an important factor for Unocal and other companies to move into deeper waters and to lease more lands. Although deepwater exploration and development is still a highly risky venture, we believe the royalty relief program will ultimately make possible development of deepwater tracts that are otherwise uneconomic.

In short, the program has allowed the industry to open up new frontiers, with the potential to bring more domestic oil to market, thus lowering our reliance on imports. Unocal believes that the royalty relief program has been a successful incentive to encourage the development of technology and the application of risk capital toward exploration of domestic energy resources.

I have attached a schematic to demonstrate graphically the effect the lower rate has had on bids and exploration. It is representational only, but demonstrates why there has been so much more bidding and activity in the deepwater of the Gulf of Mexico.

Sincerely,





JOHN WINTERMAN
Vice President
Worldwide Exploration

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(713) 215-7184 Fax (918) 641-7045

April 10, 2000

The Honorable Bennett Johnston
Johnston & Associates
1455 Pennsylvania Ave. N.W., Suite 200
Washington, DC 20004

Dear Senator Johnston:

I understand that you have been asked to provide information to the Congress about the oil and gas production which has occurred in the Gulf of Mexico following the passage of the Deep Water Royalty Relief Act of 1995. As you know, we have been active in the Gulf of Mexico in recent years. After a long absence from the Gulf we reestablished our presence there in 1997 following the implementation of royalty relief under the Act. We are convinced that the significant increase in exploration and subsequent discoveries of substantial new reserves by Occidental and other companies are directly attributable to the passage of the royalty relief legislation that recognizes the extraordinary costs of exploration and development in waters deeper than 200 meters.

There is no doubt that the Gulf would not have experienced the resurgence in interest and the dramatic increases in production without the benefits of the Act. As we move forward we are hopeful that the incentives to explore in the Gulf are continued in a fashion that will provide lease terms competitive with the other regions of the world that are seeking to develop their natural resources.

Lastly, we would be remiss if we did not thank you for your leadership in promoting the development of this nation's resources. Your efforts on the Gulf of Mexico and on many other issues have had a lasting and very positive effect on the country and on our industry. Thank You.

Sincerely

John Winterman
Vice President
Worldwide Exploration

US Petroleum Supply, Alternate ANWR Scenarios

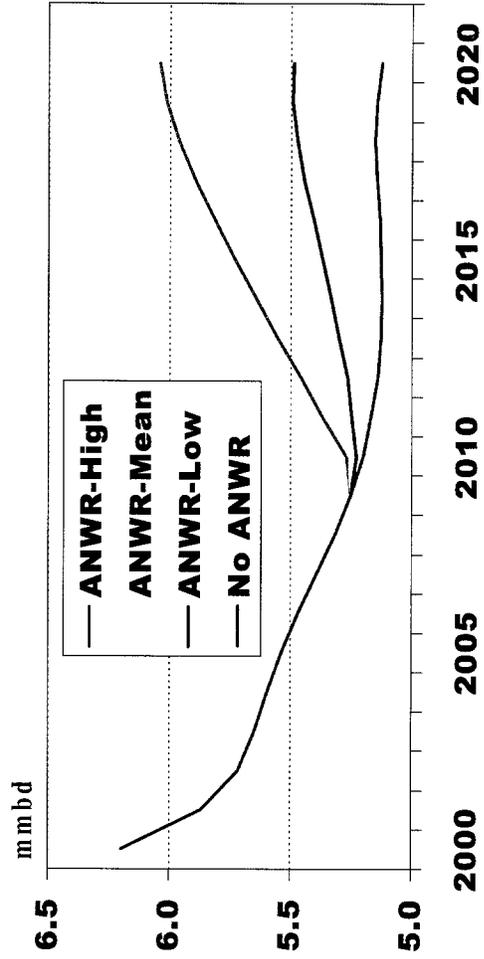


Chart 1

Deepwater Oil Production

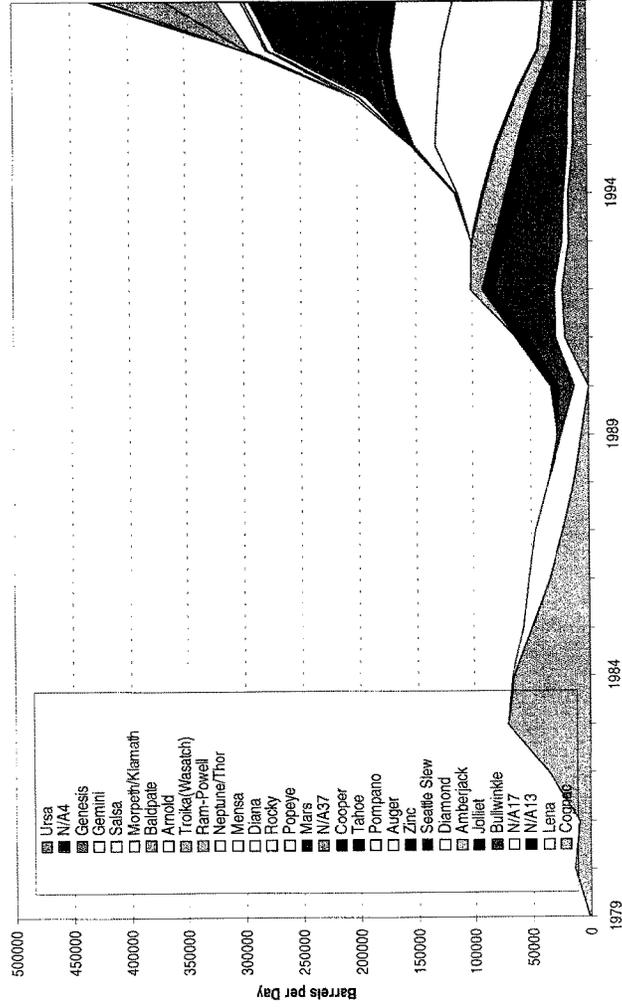


Chart 2

Deepwater Gas Production



Chart 3

Draft April 10, 2000

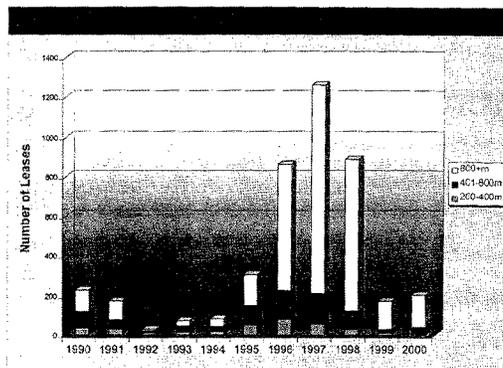
Deepwater Gulf of Mexico Royalty Relief:
A Critical Policy Crossroad

by Andrew B. Derman and Daniel Johnston

The deepwater royalty relief program was passed in order to stimulate exploration for and development of oil and gas in the deeper waters of the Gulf of Mexico. It affected all acreage offered between November 28, 1995 and November 28, 2000 in water depths 200 meters or greater in the Western and Central Planning Areas of the Gulf of Mexico and a small section of the Eastern Gulf of Mexico. Sale 175 which took place in March 2000 was the final Central lease sale to automatically benefit from the Deep Water Royalty Relief Act.¹

Under the terms of the deepwater royalty relief program, deepwater leases were granted certain limited royalty suspensions. Royalties are not payable until a specified number of equivalent barrels of oil are produced. The royalty suspension increases with water depth such that leases in water depths from 200 to 400 meters have a royalty suspension of 17.5 mmboe. This increases to 52.5 mmboe in water depths from 400² to 800 meters and a royalty suspension of 87.5 mmboe has been granted for leases located in water depths greater than 800 meters. In addition, similar royalty suspensions can be granted for leases issued prior to November 28, 1995, on case-by-case basis, if it is determined by the Minerals Management System (MMS) that without royalty suspension a development project would not be economic. Moreover, the Act permanently clarified that the MMS has the authority to reduce or suspend royalty payments.³

The deepwater royalty relief program has been an unequivocal success. The program got off to a fast start and after only two years, Carolita Kallaur, Acting Director of the MMS at the time, stated "[d]eepwater royalty relief for new leases has contributed to the record-breaking lease sales in the Central and Western Gulf of Mexico over the past two years, a clear signal that the Gulf of Mexico is now one of the world's leading oil and natural gas plays."⁴ More recently, the MMS in its January 2000 report on the Gulf of Mexico, concluded that the "large increase in bidding activity from 1996 to 1998 was partly attributable to the passage of Public Law 104-58, Title III, the OCS Deep Water Royalty Relief (DWRR) Act, signed on November 25, 1995."⁵ Figure 1 illustrates the dramatic increase in deepwater leasing in the Gulf of Mexico from 1990 to 2000.



Former Senator Bennett Johnston, author of the Deepwater Water Royalty Relief Act, when asked about the Act stated, "I am proud to have been involved with this legislation. It is a good example of how the government needs to create opportunities for the forces of the market to work. This legislation allowed us to advance the exploration and production in the Gulf by years over what would have happened without it. We have to keep this country competitive with other energy producing countries and we have been able to do so by providing incentives to the companies who risked their capital. It has been a win /win for everyone including the American public who gets the advantage of cheaper domestic energy and while the oil and gas industry will contribute additional bonus, rental, royalty and tax payments, as a consequence of the Act. It should be perpetuated."

Rarely has a government program been so effective in attaining its objectives. Not only has the deepwater relief program stimulated additional exploratory activity, but it will increase and accelerate oil and gas production and concomitant royalty payments - while substantially increasing bonus payments. Under the five year royalty relief program, the MMS has collected more than \$3 billion in deepwater lease bonuses to date.⁶ The deepwater leasing program has resulted in significant up-front bonus payments and, as a consequence, of the long cycle time from exploration to first oil - the bonuses paid in the deepwater are truly meaningful to the economic analysis. In response to arguments that the Deep Water Royalty Relief Act is a windfall to industry (by denying the Government of some future royalty payments), the program has resulted in more and relatively larger bonus payments. The substantial bonus payments made since the adoption of the deepwater royalty relief program generated an immediate financial benefit to the United States Treasury. Through the bonuses collected, the United States has obtained competitive prices for the acreage it has leased in the deepwater Gulf of Mexico.⁷ Moreover, the oil and gas industry's enthusiasm toward the deepwater Gulf of Mexico has allowed the MMS to increase the minimum bid from \$25 to \$37.50 an acre and the rental

payments from \$5 to \$7.50 an acre, in water deeper greater than 800 meters. Moreover, additional tax revenue will be received from projects that but for royalty relief would not be developed.

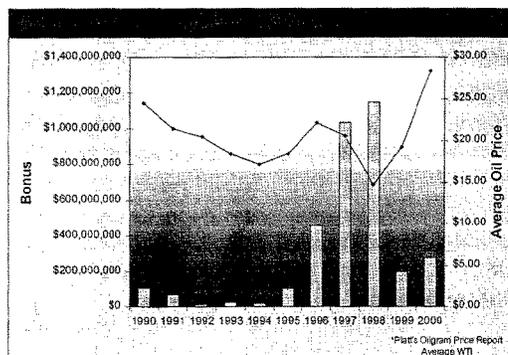
Beyond the collection of bonuses, the deepwater royalty relief program has stimulated billions of investment dollars in the search for oil and gas in the United States. It has been estimated that \$9.5 billion will be spent in drilling alone in the deepwater Gulf of Mexico between 1998 and 2005.⁸ With this activity has come the preservation and creation of employment⁹ in an industry that is rapidly consolidating and is increasingly focused on projects outside the United States. Employment in the United States oil and gas extractive sector has fallen rather precipitously. Between 1982 and 1999, employment in oil and gas extraction nationwide declined by more than 50%, from more than 750,000 to less than 300,000 people. During the eighteen-month period from October 1997 to April 1999, employment in oil and gas extraction nationwide fell from about 340,000 to less than 285,000 people. During this same eighteen-month period, employment in oil and gas extraction in Texas fell from about 162,500 to 144,000 people.¹⁰

While the new economy is attracting the focus of many new graduates, the oil and gas industry is rapidly consolidating and losing jobs. At some point, the United States may become critically short of oil and gas expertise. The issue of maintaining and attracting the best and the brightest to the petroleum industry needs to become part of the energy policy debate. Is it important to maintain oil and gas expertise in the United States? Can this expertise be "imported" when needed? The upstream oil and gas industry: employs sophisticated technologies, relies on a multi-disciplinary approach, must manage substantial risk, is capital intensive and has long lead times - especially in deep water environments. Can a "just in time" approach to filling employment needs work when the industry again looks to recruit highly skilled personnel? The recent increase in oil prices, has highlighted energy-related issues that have remained dormant for nearly a decade.

The royalty relief program has contributed to energy security of the United States in the face of rising dependence on imported oil. Imports now represent nearly 57% of the United States oil consumption. The Energy Information Administration has predicted that by 2020 the United States will import 70% of its oil.¹¹ In the face of proposals from the Administration to increase world oil supply, is this the time to remove the financial incentive that has contributed to the only significant recent regional increase in oil and gas production within the United States? Without oil production from the deepwater Gulf of Mexico, the United States would be even more dependent on foreign oil. The MMS has predicted that before the end of 2000, deepwater oil production will surpass shallow-water oil production for the first time ever. By the end of 2004, production from the deepwater may well account for as much as 65% of the daily oil production and as much as 32% of the daily gas production offshore.¹²

The MMS is now considering whether to recommend renewing the royalty relief program or instituting a similar program that would continue to stimulate investment activity. Some might suggest that it is not the royalty relief program that precipitated such substantial activity, but

rather the increased price of oil. It is interesting to note that while the price of oil increased in 1996 and 1997 and then fell in 1998, there appears to be no direct correlation between oil prices and deepwater leasing activity - at least in the short-term. Figure 2 depicts the lack of correlation between deepwater bonus payments during the six-year period immediately prior to the initiation of the deepwater royalty relief program and oil price.



It should be noted that under the terms of the Deepwater Royalty Relief Act, the royalty suspension ends and royalty payments are due when oil prices exceed \$25 per barrel or when gas prices exceed \$3.50 per million British thermal units, on an annual basis.¹³

The expiration of the deepwater royalty relief program is coming at a time when the oil and gas industry is managing its affairs conservatively and tentatively. Worldwide upstream investments fell markedly in 1999. Geophysical operations were down 20%, drilling was off 25% and offshore construction was off 30 to 45%.¹⁴ No doubt, higher oil prices will stimulate additional spending in 2000, but a sober even somber attitude prevails in the oil and gas business today.

Should the MMS be concerned that it will "kill the golden goose" if it fails to replace the deepwater royalty relief program? Oil and gas operations, especially deepwater operations, cannot be turned on and off easily. If the MMS fails to renew or replace the deepwater royalty relief program, it may bring a premature end to one of the great oil and gas plays. Industry and the MMS today are engaged in a dialogue over whether to perpetuate deepwater royalty relief. Is the program a critical ingredient to maintain oil and gas momentum in the deepwater Gulf of Mexico or is the program a windfall to industry and, if so, should the program be scaled back to re-balance the economic equilibrium in favor of the United States Government?

Exploration in the deepwater Gulf of Mexico has in many ways resembled medieval battles. The knights (super-majors) have led the charge armed with the most sophisticated technology of the day. The foot soldiers (majors and larger independents) followed closely behind battling that which had been left over by the knights. The peasants (smaller independents) come last looking for the wounded that had not yet been captured. To some extent, the question is whether the deepwater Gulf of Mexico can entice the foot soldiers and peasants into battle without the economic incentive of royalty relief?

The deepwater Gulf of Mexico will yield a small number of oil and gas fields that are sufficiently large to justify exploration and development without royalty relief. The number of these fields has proven to be few - to date. Participation in a play where exploration wells routinely cost \$25MM and more and where production facilities can easily exceed \$500MM, requires deep pockets and sufficiently extensive exploration programs to offer companies the statistical chance of finding enough oil and gas to support its program economics.

Statistically, one out of every three or four deepwater Gulf of Mexico exploration wells will be a technical success. The oil and gas found must shoulder the costs of extensive seismic and lease bonuses campaigns - to say nothing of multiple expensive wells and production facilities that challenge the budgets of even our largest companies. The discoveries in the deepwater obviously must be quite large to cover such program economics.

Fields must be large in the deepwater to economically justify development. However, exploration prospects must be even larger to justify the harsh risks associated with a \$25 MM exploration well not to mention associated costs. The difference between technical success and commercial success is the field size threshold for development. Technical success is when a discovery is made. Commercial success for an exploration well by definition is when it makes a discovery large enough to be developed. However, a commercial discovery does not indicate true commercial success for an exploration program that is always characterized by dry holes and non-commercial discoveries. One of the biggest problems in the deepwater Gulf of Mexico is that the field size threshold for development without royalty relief is close to what appears to be the median field size.

If industry can barely justify development of existing discoveries, then it will certainly not be able to justify further exploration. Royalty relief reduces both exploration thresholds as well as development thresholds and increases commercial success ratios relative to technical success.

The super-majors, BP Amoco and Shell, entered the deepwater Gulf of Mexico earlier (before institution of the royalty relief program) and they have, no doubt made a few large discoveries. But, the field size distribution has not demonstrated that industry can support its program economics in the deepwater Gulf of Mexico. The deepwater was once the near exclusive province of the super-majors. If the royalty relief program is not perpetuated, will the deepwater Gulf of Mexico again be the near exclusive province of the super-majors?

The oil and gas industry has historically seen clear benefits to having smaller companies (foot

soldiers and peasants follow the majors (knights). The oil and gas upstream food chain has allowed the smaller companies to focus on the smaller projects and assume operations that could not withstand the overhead costs of the majors. This dynamic has allowed infrastructures to be built followed by the more complete exploitation of a basin or region. Policy interests associated with the elimination of the royalty relief incentive may well jeopardize this dynamic. The implications associated with disturbing this dynamic by eliminating the royalty relief program demand investigation and debate.

A post mortem analysis of the deepwater Gulf of Mexico reveals that: anticipated success rates have not been as robust as expected, few large discoveries have been made, and economic returns are disappointing. No doubt, the MMS is genuinely interested in husbanding the public's oil and gas resource to maximize wealth and is interested in making the best possible decision regarding how best to manage the deepwater. The post mortem analysis supports the conclusion that the even those companies that have been fortunate enough to establish production in the deepwater Gulf of Mexico have not been the beneficiaries of anything close to a windfall - quite the opposite. This analysis leads to a determination that - but for the royalty relief program - deepwater programs (and especially the ultra-deep water) have generally not yielded attractive returns.

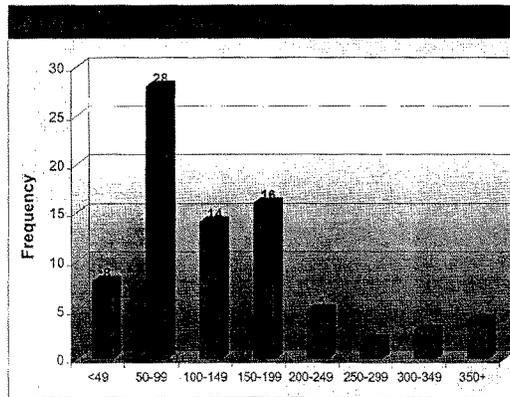
As of February 2000, 65 companies hold leases with 51 companies (28 operators) participating in the drilling of deepwater wells in the Gulf of Mexico. Nineteen companies have established production and 36 have either established production or are in the planning stages of development, in water depths greater than 1500 feet. The industry has drilled more than 230 deepwater wells in the Gulf of Mexico with about a 33% economic project success rate. Deepwater success rates related to larger fields are much lower and have been suggested to be no greater than 10%.¹⁵ Approximately 10 (or about 15%) of the 74 deepwater fields that have been discovered have found reserves in excess of 250 mmboe. And, as only one out of three wells is a technical success - then only about 5% (33% of 15%) of the wells drilled have found reserves in excess of 250 mmboe. Of these 74 fields, more than half, or 44 fields, have total reserves of less than 150 mmboe and 43% have total reserves of less than 100 mmboe.

Relatively few deepwater leases are producing. While deepwater provinces are notorious for large exploration field size requirements, as discussed previously, there have been relatively few large discoveries. The median field size for the deepwater Gulf of Mexico is 143 mmboe. While a 143 mmboe prospect may be an appropriate industry exploration target in some circumstances, such fields are rarely economically robust in a deepwater province and even less likely to support a company's exploration program economics. It would be a mistake to predicate any comprehensive economic thinking on field sizes any larger than 125 - 150 mmboe. The Gulf of Mexico holds a respectable position within the "Golden Triangle" of deepwater activity, including the deepwater provinces of West Africa and Brazil. However, aggressive testing of isolated prospects as small as 100 mmboe in the other deepwater provinces is unlikely. In fact, threshold field size for stand-alone grassroots development (as opposed to exploration) is very close to 100 mmboe in the Gulf of Mexico. And like most deepwater environments, virtually every development in these early stages is stand-alone.

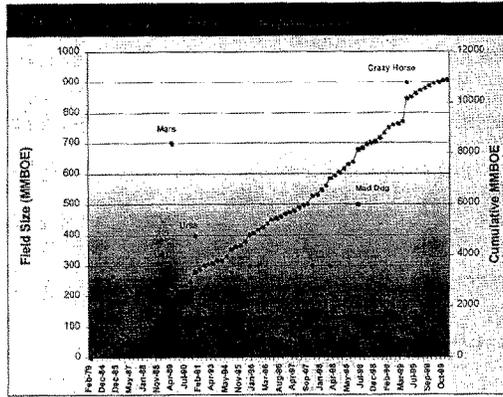
Beyond the relatively small field sizes of the Gulf of Mexico, there is another aspect that characterizes the province. Stratigraphy is proving to be more complex than originally thought and developments are requiring more wells than originally planned to drain reservoirs. Concern has been expressed over Shell's deepwater Mensa field and the possibility that unanticipated reservoir compartmentalization may constrain well productivity levels. A similar phenomenon has been observed at the Genesis field.

The deepwater Gulf of Mexico is known for extremely high well productivity rates on the order of 8,000 to 12,000 bopd or more. However, the economic impact of having to drill additional wells that could easily cost in excess of \$25MM per well is significant.

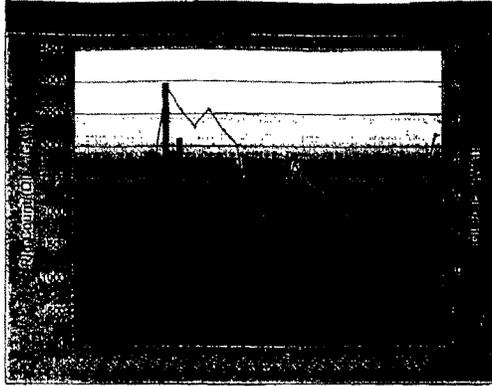
There are two clear phases in offshore basin development. The first phase is where we stand today - large fields are required to justify the enormous infrastructure investment. The second phase occurs when there is sufficient existing infrastructure to justify the development of smaller fields. The imminent elimination of the deepwater royalty relief program may both cripple the first phase and, as a consequence, prematurely choke off growth of the second. Without sufficient incentive to explore for and develop deepwater oil and gas, the industry will not install the infrastructure. And, without the requisite infrastructure, there will be little incentive for companies to explore for anything but giant fields. The linkage between the two phases is not likely to proceed in a predictable and progressive manner. In the near term, most deepwater developments will have to be stand-alone. This is partly because of the typically shorter life-cycle of a deepwater project where production to reserve ratios are predicted to be on the order of 20%, and partly because of distances and the fact that many deepwater production facilities will be mobile.¹⁶ The Gulf of Mexico deepwater play covers an enormous area and it will take many years and many billions of dollars of investment to develop a sufficiently extensive infrastructure to fully develop the potential of the area. Figure 3 illustrates the field size distribution in the deepwater Gulf of Mexico.



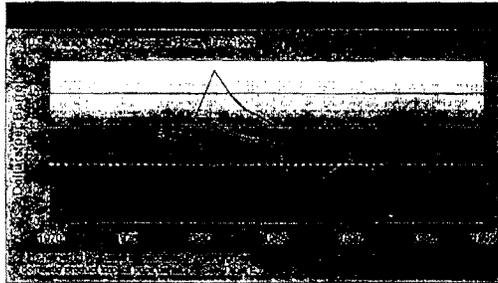
A smaller notional field size should be expected as the size of discoveries typically decrease over time - as the better identified large structures are drilled, during the early exploration phase of an area. Typically 70 to 80% of the reserves in a basin are held in 20% of the fields. Furthermore, often the reserves of the ten largest known fields represent from 30 to 50% of the known reserves and these larger fields are usually discovered within the first decade of exploration. Due to the technical challenges of the deepwater, the typical exploration cycle may be somewhat different, but it will directionally follow this pattern. Figure 4 illustrates deepwater Gulf of Mexico field size distribution over time.



With the exception of the deepwater Gulf of Mexico and areas that have been declared off-limits, the United States is an extremely mature oil and gas province. On the North America continent, upstream investment saw the most dramatic decrease from 1998 to 1999, with 27% less spending.¹⁷ This situation is exacerbated when one considers the global movement away from exploration and into development of proven oil and gas. Even with the increase in exploration in the deepwater Gulf of Mexico, the United States rig count hit fifty year lows in 1999 and remains depressed. Figure 5 depicts the fall in the United States rig count as compared with the price of oil.

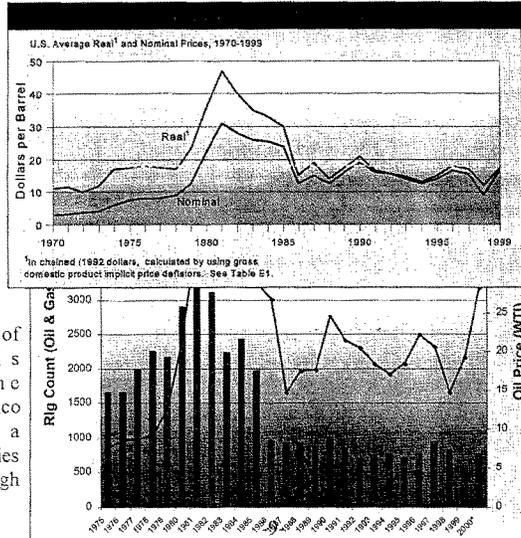


Our analysis used public domain information to recreate an economic analysis that considers the exploration, development and production costs that have been and will be incurred and the anticipated production profiles of those deepwater Gulf of Mexico projects that have been sanctioned. Historically, oil prices have averaged \$18 WTI in real terms and the economic analysis utilizes an \$18 WTI flat oil price, as adjusted for quality and transportation. Figure 6 illustrates that oil prices have historically averaged in the neighborhood of \$18 WTI in real terms.



The results of this economic analysis demonstrate that the deepwater Gulf of Mexico has not provided a windfall for those companies that have been fortunate enough to have successfully discovered oil and gas. Indeed, the reverse could be argued. While the deepwater Gulf of Mexico presents significant exploration and technical risk and enormous costs, it might still be expected that (with royalty relief) those companies that were successful in establishing production would experience returns in excess of 20%. This has not necessarily appeared to be the case.

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successfully discovered oil and gas. Indeed, the reverse could be argued. While the deepwater Gulf of Mexico presents significant exploration and technical risk and enormous costs, it might still be expected that (with royalty relief) those companies that were successful in establishing production would experience returns in excess of 20%. This has not necessarily appeared to be the case.

In light of the significant capital costs associated with deepwater Gulf of Mexico projects, the average size project (125 to 150 mmbbl) in 5000 to 6000 feet may generate a 20 to 30% rate of return. When this project is burdened with major seismic and lease bonus campaigns and the dry holes of other leases, program economics (as opposed to project economics) are severely eroded. While several companies, notably the early players BP Amoco and Shell, have experienced double digit program returns, other companies that have been successful in establishing deepwater Gulf of Mexico production have, at best, experienced single digit program returns. Obviously, most companies playing the deepwater Gulf of Mexico have not yet established production.

The economic analysis did not fully incorporate the full cost of exploration as we were unable to access internal costs associated with acquisition and processing of geophysical and other exploration data as well as the overhead costs. While these costs are relatively small when compared to the cost of drilling or development, companies expended additional sums looking for oil and gas that have not been factored into the economic analysis. Given that these costs occur early in the life cycle and deepwater projects have long cycle times, these costs should not be ignored. Although such exploration costs are not readily ascertainable and they are not captured in the economic analysis, they further depress the economic returns.

Conclusions

The expiration of the deepwater royalty relief program is coming at a time with the oil and gas industry is managing its affairs conservatively and tentatively.

Based on our analysis, it appears that without the benefit of an extension of the deepwater royalty relief program the economics of the deepwater Gulf of Mexico play might not warrant substantial industry attention. Should the MMS fail to perpetuate the deepwater royalty relief program, the United States risks suffocating its most promising oil and gas province at the very time it is struggling with what the nation's policy should be with regard to oil and gas.

Policy development must accommodate the special and peculiar boundary conditions of the deepwater Gulf of Mexico. The policy implications are truly profound - because the province is characterized by high costs and a dramatic, but highly sensitive risk/reward dynamic.

A subsequent article will scrutinize the economic analysis and consider those components of the deepwater royalty relief program that are essential to maintain the oil and gas industry's momentum in the Gulf of Mexico deepwater.

1. 1995 Deep Water Royalty Relief Act, 43 U.S.C. § 1337(a)(3) (1996).
2. The Act has an overlap at the 400 meter water depth.
3. The MMS has been granted authority to suspend "royalties for a period, volume, or value of production" as determined by the Secretary. 43 U.S.C. § 1337(a)(1)(H) (1996).
4. The Energy Report, Pasha Publications, Inc., Volume 26, Issue 3, January 19, 1998.
5. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, Gulf of Mexico Outer Continental Shelf Daily Oil and Gas Production Rate Projections From 2000 to 2004, January 2000, p. 14. This report also points out that "several other factors such as high oil and gas production rates from deepwater reservoirs, the evolution of economic deepwater development technology, and the reduced risk of deepwater exploratory and development drilling, among other factors, also had a significant impact." Id. p. 14.
6. The economic impact of bonus payments is more significant than is generally thought. For a discussion of this matter; see, Derman and Johnston, "Bonuses enhance upstream fiscal system analysis," Oil & Gas Journal, Feb. 8, 1999, p. 51.
7. The MMS reserves the right to reject high bids received in lease sales. In the recent past, the MMS has substantially increased the number of rejections of high bids. One analysis demonstrates that the percentage of bid rejections based on MMS fair market standards for five consecutive lease sales rose steadily from 1.8% in September 1996 to 7.7% in March 1999. See: Platt's Oilgram News, MMS Raising the Stakes on US Gulf Leases, September 10, 1999.
8. Houston Chronicle, Oil Industry Fears Higher Lease Royalties, May 5, 1998, citing Michael Smith, President of R.S. Platou, an offshore energy consulting firm.
9. Houston Chronicle, Oil Industry Fears Higher Lease Royalties, May 5, 1998, citing Bernie Stewart, Vice Chairman of the International Association of Drilling Contractors and President of R&B Falcon Drilling, U.S. stated that "[e]ven the discussion of changing the rules midstream has a chilling effect on investment plans for the Gulf. This threatens the thousands of jobs tied to the contract-drilling and related oil-field service industries."
10. Bureau of Labor Statistics, 1999.
11. Energy Information Administration, Annual Energy Outlook 1999, DOE/EIA-0383 (1999).
12. U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, Gulf of Mexico Outer Continental Shelf Daily Oil and Gas Production Rate Projections From 2000 to 2004, January 2000, p. 17.
13. 43 U.S.C. § 1337(a)(3)(C) (v) and (vi) (1996).

14. Oil & Gas Journal, "Worldwide drilling activity shrank by 25% in 1999," Mar. 20, 2000, p. 70.
15. Platt's Oilgram News, Industry to MMS: Hands off US Gulf Rules, July 1, 1998, citing Gary Jackson, BP-Senior Commercial Analyst.
16. Industry has predicted much of its deepwater strategy on a belief that technical advances will support the development of deepwater projects and much of this attention has focused on subsea tie backs. The tying satellite fields into producing facilities up to 60 miles allows for the development of smaller fields. See: Inside F.E.R.C.'s Gas Market Report, Deepwater Production Skyrocketing As Technology, Incentives Spur Growth, October 29, 1999.
17. Oil & Gas Journal, "Growth rate in E&P investments slowed to 3% since 1998," Mar. 13, 2000, p. 37.

Mr. TAUZIN. The Chair thanks you, Senator Johnston. We will now recognize David Hayes, Deputy Secretary of the U.S. Department of the Interior. Mr. Hayes.

STATEMENT OF DAVID HAYES

Mr. HAYES. Thank you, Mr. Chairman and members of the committee. I have written that I would appreciate entering into the record.

Mr. TAUZIN. Without objection, so ordered.

Mr. HAYES. Thank you.

I'd like to talk briefly, orally, Mr. Chairman and members, about the issue of oil and gas production on Federal lands. As Congressman Vento has accurately explained, in this administration, oil and gas production on Federal lands has increased steadily.

In 1992, for example, 500 million barrels of oil per day were produced on Federal lands. Today, that number is at least 100 million barrels per day higher. In 1992, 19 percent of our energy supply was supplied by energy from Federal lands. Today, the Federal lands provide more than 26 percent of the energy supply of the United States.

And there are some areas both offshore and onshore that illustrate the activity that is leading to these increases in energy production. Let me mention the offshore first and reference what Senator Johnston talked about as well.

Senator Johnston, of course, was a leader in the Deepwater Royalty Relief Act and that has had a dramatic impact on oil and gas production out of the Gulf of Mexico. From 1992 to 1997, leasing activity in the Gulf of Mexico has increased tenfold. The Department of the Interior, through the Minerals Management Service, has had a very active leasing program. We've had a 50 percent increase in oil production from the Gulf in the last 6 years.

Currently, 1.34 million barrels of oil per day are coming from the Gulf and the number continues to go up. 40 million acres of Federal offshore lands are currently under lease. 7,600 of these are in the Gulf. 1,500 are elsewhere.

Three weeks ago, there was a very successful lease sale in the Gulf, the latest example of our policy of opening up the Gulf, pursuant to current law and regulation. We received 469 bids on 344 blocks. In fact, I should mention that, in terms of offshore production, in the 7-years of the Clinton Administration, we have now exceeded the numbers of acres leased as was leased during the entire Reagan administration. In the past 7 years, we have leased over 34 million acres of Federal offshore lands for production.

Onshore, we also are engaged in significant activity. The Bureau of Land Management, which is our primary land holding agency, has leased over 28,000 leases and approved over 15,000 permits to drill since 1993. It has concentrated its effort in the area of greatest potential. We expect to process more than 1,000 applications for permits to drill in the Powder River Basin this year, by way of example.

Also the Bureau of Land Management expedited an environmental review that led to the approval of the opening of nearly 4 million acres of additional lands in Alaska in the National Petroleum Reserve for oil and gas exploration.

We are busy. We think it's appropriate that the Federal lands play their part in meeting our energy security.

I must say, though, that I disagree with Senator Johnston on one point. The administration believes that oil and gas exploration should not occur everywhere. And when it comes to Arctic National Wildlife Refuge, as I explained further in my written testimony, we do not believe that it's appropriate to initiate oil and gas investigations in that area.

The Arctic Refuge is the only place in the United States where the full spectrum of Arctic and Sub-Arctic ecosystems is protected in an unbroken continuum. The largest caribou herd in the United States by far, 160,000 caribou, are in the narrow Arctic plain, which is the only area that is being targeted for oil and gas production. It is the most sensitive area of the entire 19 million acre Arctic National Wildlife Refuge.

We believe it is appropriate to explore and drill in the Arctic, hence our recent affirmation and opening up of major new lands in the National Petroleum Reserve. In fact, that led to, last year, a lease bonus sale of over \$100 million for those new lands that have yet to produce but that are now open for additional domestic exploration and production.

I will close there. I will mention one thing if I can, in closing, the last 3 seconds. Actually, I'll save that for questions. Thank you very much, Mr. Chairman.

[The prepared statement of Mr. Hayes follows:]

STATEMENT OF DAVID J. HAYES, DEPUTY SECRETARY
DEPARTMENT OF THE INTERIOR
BEFORE THE COMMITTEE ON RESOURCES
HOUSE OF REPRESENTATIVES
ON RESTRICTING DOMESTIC EXPLORATION
AND DEVELOPMENT
OF OUR OIL AND GAS RESOURCES

April 12, 2000

Mr. Chairman, thank you for the opportunity to testify on the issue of domestic oil and gas resources and their impact on our national security. I understand that the Department of Energy will address the issue of the Administration's Energy Strategy in detail in its testimony, so I will confine my remarks primarily to the issue of oil and gas activities on Federal lands.

The Administration believes that the best interest of the American people and the oil and gas industry is served by a balanced policy consisting of promoting exploration and development where appropriate, protecting our natural heritage, and fostering the development of conservation and alternative energy sources. In that regard, the Administration supports the U.S. domestic oil and gas industry. We have supported efforts to increase oil recovery in the deep waters of the Gulf of Mexico; we have conducted a number of extremely successful, environmentally sound off-shore oil and gas lease sales; and we have opened the National Petroleum Reserve-Alaska (NPR-A) to environmentally responsible oil and gas development.

The Department of the Interior administers the leasing program for both onshore and offshore Federal lands. While domestic production of oil overall has gone down since 1989 largely due to the price of oil on the world market, production on Federal and Indian lands has increased and, as of 1998, accounted for 26.5% of domestic production, up from 16.3% in 1989. We have seen great successes on the Outer Continental shelf and have implemented policies to encourage continued production of onshore wells on Federal lands.

The United States now depends on oil and natural gas for nearly two-thirds of its energy needs. While the U.S. is mostly self-sufficient in natural gas, we currently import over half of the oil we consume. Because of this dependence, obtaining sufficient supplies of oil and natural gas at reasonable prices is crucial to our security and our economy.

Offshore production from the OCS is a critical component of the domestic energy supply and, during the last 10 months of 1999, accounted for more than 26 percent of the natural gas and 25 percent of the oil produced in the United States. Natural gas is expected to be a growing source of energy. The National Petroleum Council estimates that demand for natural gas will increase from 22 trillion cubic feet in 1998 to 29 Tcf in 2010. The present annual production of about 5 trillion cubic feet from the OCS will increase to about 8 Tcf. Most of this increase will come from deepwater production (that is, production from water depths greater than 200 meters). The Gulf of Mexico OCS is expected to play a significant and increasing role in meeting the demand for natural gas. Currently, OCS oil and natural gas provide the Nation with about the same amount of energy as coal and twice as much energy as all the nuclear power plants in the Nation.

The surge in deepwater production combined with innovative approaches on the shelf have, for the first time, moved the Federal OCS into second place as a supplier of oil to the domestic market. The OCS alone contributes more oil to the Nation than any single State and is second only to Saudi Arabia, as a supplier to the domestic market. Since 1994, oil production in the Gulf of Mexico has increased more than 50%. Deepwater leases now account for about half of oil production and over half of the proven reserves in the Gulf. Currently, approximately one out of every ten barrels of oil produced in the United States comes from a deepwater field in the Gulf. These increases would not have been possible without recently developed technology that has allowed exploration and production in ever-deeper waters. Total Gulf of Mexico production is expected to increase through at least 2002. In addition, we currently are examining incentives that can be used in designing leasing systems for future sales to ensure continued interest in developing our OCS resources.

The Administration supports leasing, exploration, and development where appropriate as evidenced by the *Outer Continental Shelf Oil and Gas Leasing Program for 1997 to 2002* developed by the Minerals Management Service and approved by the Secretary. The leasing program is the first step in the process to ensure a reliable supply of domestic petroleum resources. And the statistics from the program are impressive.

- The combination of technological advances and legislative incentives like the Deep Water Royalty Relief Act (DWRRA) caused leasing in the Gulf of Mexico to increase almost ten fold between 1992 and 1997.
- From 1993 to 1999, 6,538 new leases were issued covering approximately 35 million acres of the OCS.
- More than 40 million acres of Federal OCS are currently under lease. Approximately 94% of the existing OCS leases (7,600) are in the Gulf, and about 1,500 of these leases are producing.
- Lease Sale 175 in the Central Gulf of Mexico, held on March 15, 2000, offered 4,203 blocks (22.29 million acres) for lease. We received 469 bids on 344 blocks. It was the ninth OCS lease sale held subject to the DWRRA. Indicative of industry's interest in shallow and deepwater areas, approximately two-thirds of the bids were on blocks in relatively shallow water with heavy bidding coming from independent companies.
- The proposed Eastern Gulf of Mexico sale recognizes the high potential for the development of the significant natural gas reserves in the area and the potential for an extension of deepwater development.

A survey of the issues from last month's *Oil Daily* provides further evidence of the positive results of the Administration's policy. Arabian Oil Company will boost natural gas output from a field in the Gulf of Mexico after discovering a new gas structure with estimated recoverable reserves of 30 billion cubic feet (March 14, 2000, p. 7). BP increased estimates of recoverable oil from the Alaska OCS Northstar field by 36 million barrels (March 16, 2000, p. 8). Day rates for mobile offshore rigs improved for a ninth straight month (March 21, 2000, p.7). Improvement in day rates reflects an increasing level of drilling and exploratory activity. Total Fina Elf announced its Aconcagua appraisal well is successful, confirming a deep offshore discovery made in January 1999 in the Gulf of Mexico (March 31, 2000). Finally, Forest Oil reported a significant natural gas discovery at South Pelto 6 in the Gulf of Mexico (April 6, 2000, p. 8).

Our efforts have not been confined to Federal offshore resources, however. The Bureau of Land Management (BLM) has taken a number of actions to encourage production on Federal onshore leases. Since 1993, BLM has –

- Issued over 28,000 leases and approved over 15,000 permits to drill.
- Completed an integrated activity plan/environmental impact statement for the northeast portion of the NPR-A. In 1999, the BLM held a lease sale offering 425 tracts on 3.9 million acres; the first such sale for the reserve since 1984. Oil companies paid more than \$104 million in bids for the high potential oil and gas area.
- Implemented legislation changing competitive lease term from 5 years to 10 years, allowing lessees greater flexibility in exploration without endangering the lease.
- Concentrated its efforts on areas of greatest potential. Accordingly, BLM expects to process more than 1000 applications for permits to drill in the Powder River Basin this year.
- Refocused its planning efforts to meet industry's exploration and production demands. Reassessing and revamping its planning documents will provide greater certainty of access while reducing economic risks and potential for litigation. The revised BLM Planning Efforts will include rewriting its planning guidance to prescribe how stipulations will be determined and refocusing its efforts on ensuring quality, certainty and timeliness.

Our policies also have sought to provide economic relief to Federal onshore operators who have suffered during prolonged periods of low oil prices. BLM has provided royalty rate reductions for operators producing heavy crude to offset high costs of production. BLM also has provided royalty rate reductions for operators of stripper oil properties (leases producing less than 15 barrels per day) to provide an economic incentive to keep these properties in production. In

1998, a team representing BLM, MMS and DOE completed a study and recommended continuation of the program. In addition, BLM and the Forest Service agreed to use one bond to cover liabilities for operations on Forest Service lands, eliminating the requirement that operators buy separate bonding for BLM and the Forest Service. At the same time, we have taken steps to protect sensitive areas and resources from inappropriate activities, resulting in a policy that has balanced the nation's need for energy with a clean environment.

We are proud of the accomplishments of this Department with respect to production of oil and gas on Federal lands. The recent surge in oil prices has caused some people to suggest again that it is time to take additional measures, some of which are unacceptable to us, including, for example, opening of the Arctic National Wildlife Refuge to oil and gas activities. Rather than sacrificing the Arctic Refuge as a means to reduce oil prices, the Administration believes Congress should implement the President's long-term comprehensive plan to strengthen America's energy security.

Although the Prudhoe Bay oil production curve is declining, oil and gas exploration and production is strong on the North Slope. There are many new fields at different stages of exploration and development both onshore and offshore such as Liberty, North Star, Alpine, and Badami. The Department of the Interior recently made approximately 4 million acres available for oil and gas development in Alaska to the west of Prudhoe Bay in the National Petroleum Reserve. Last year we held one of the most successful lease sales since Prudhoe Bay. Winter exploration in NPR-A is taking place as we speak.

I would like to clarify a remark I made last week before the Senate Energy and Natural Resources Committee. The Arctic National Wildlife Refuge is the only part of the Arctic Coastal Plain closed by Congress to oil and gas exploration and production. Any other part of the Arctic Coastal Plain can be opened by administrative action of the next Secretary of the Interior or State and local officials. There is a time and a place for oil exploration in Alaska, and the Department of the Interior has permitted environmentally sound oil exploration in approximately 4 million acres of the National Petroleum Reserve, an area set aside for that purpose. Drilling is not

appropriate, however, in the Arctic National Wildlife Refuge.

The Arctic Refuge is the only conservation area in America that protects a complete spectrum of arctic and subarctic ecosystems, functioning in balance to perpetuate wildlife populations. The area offers more wildlife diversity than any other region of the Arctic. The Coastal Plain of the Arctic Refuge, the part of the Refuge being considered for oil drilling, is the most biologically productive part of the refuge and the heart of the refuge's wildlife activity. The Arctic National Wildlife Refuge was set aside in 1960 to preserve unsurpassed wilderness, wildlife, and recreational values. Opening the Arctic Refuge to oil development would threaten the birthing ground of thousands of caribou and important habitat for polar bears, swans, snow geese, muskoxen and numerous other species.

Recognition of the unique wilderness character of the Arctic Refuge and its coastal plain goes back a long way. In 1959, Fred Seaton, President Eisenhower's Secretary of the Interior testified before the Senate calling the proposed Arctic National Wildlife Range "One of the most magnificent wildlife and wilderness areas in North America . . . a wilderness experience not duplicated elsewhere."

Similarly, Secretary Cecil Andrus, in 1978, said: "In some places, such as the Arctic Refuge, the wildlife and natural values are so magnificent and so enduring that they transcend the value of any mineral that may lie beneath the surface. Such minerals are finite. Production inevitably means changes whose impacts will be measured in geologic time in order to gain marginal benefits that may last a few years."

A broad array of groups and individuals throughout the United States and Canada are united in their support for protection for the natural resources and wilderness characteristics of the Coastal Plain of the Arctic Refuge. Native villages subsist on the caribou and their lives and their culture are dependent on healthy caribou populations. The Canadian government, the National Congress of American Indians, the Tanana Chiefs Conference, the Council of Athabascan Tribal

Governments, the Episcopal Church, and numerous other religious organizations support the protection of this refuge.

The proposal to develop oil in the Arctic Refuge has most often been justified on national security grounds. This argument is not persuasive, for the simple reason that no single oil discovery, even a large one, can be expected to fundamentally alter our nation's oil security situation or the world price of oil.

History has shown us that national efforts to improve energy efficiency and to buffer short term disruptions through the measures included in our comprehensive energy strategy have had much more impact on our oil security than have additions to domestic supply.

Recently, I have heard from advocates of opening the Arctic Refuge that there are 16 billion barrels of oil there. The 1998 assessment of the area prepared by the U.S. Geological Survey found that there was a one in 20 chance of there being 16 billion barrels of "technically recoverable oil" in the entire area. Technically recoverable oil is that oil that can be recovered without regard to cost. To the best of our knowledge, we are unaware of oil being produced anywhere in the world without regard to cost. Economically recoverable oil, on the other hand, is the oil that ends up being produced.

In 1998, the US Geological Survey released a mean estimate of 2.4 billion barrels of economically recoverable oil in the Arctic Refuge at an \$18 per barrel market price in 1996 dollars, a figure higher than the average cost of oil over the last three years. Such a discovery would never meet more than a small part of our oil needs at any given time. The United States consumes about 19 million barrels of oil daily or almost 7 billion barrels of oil annually, with about 52 percent being met by net oil imports. Another statistic worth considering is that America has 2% to 3% of the world's known oil reserves. The OPEC nations possess 800.5 billion barrels, or 76% of the world's total reserves. In fact, just a few weeks ago, the U.S. Geological Survey issued a report estimating the total amount of future technically recoverable oil, outside the U.S., to be about 2,120 billion barrels.

Some would argue that with the technological advances over the last few decades that oil can be developed in an environmentally sound manner. It is true that industry has been able to reduce the impacts of oil development on the North Slope. Great advances have been made by using directional drilling to avoid critical habitat areas, smaller pad size, ice roads and winter exploration and development and reinjection of drilling fluids. Alaskans appreciate these advances and recognize a great difference between the Prudhoe Bay development in the 1970s and fields like Alpine where these advances have been put to work. Unfortunately, there are still major impacts with any oil development, particularly in an untouched wilderness.

All reasonable scenarios for oil development on the coastal plain of the Arctic Refuge envision roads, drilling pads, long pipelines, secondary or feeder pipelines, housing, oil processing facilities, gas injection plants, airports and other infrastructure. In addition, the USGS 1998 assessment found that oil in the Arctic Refuge appears to be spread out in several pools rather than in one large formation like Prudhoe Bay, making it harder to minimize the development "foot print."

Water in the Arctic Refuge is very limited, unlike Prudhoe Bay where surface water is plentiful. It takes approximately 1.35 million gallons of water per mile for ice road construction and 30,000 gallons per day to support a drilling rig. Each exploratory well uses approximately 15 million gallons. In the Arctic Refuge, ice mining and water diversion from lakes and rivers will be necessary and will likely result in negative impacts to fish and wildlife.

Air and water pollution and contaminated sites continue to be a serious problem in Prudhoe Bay and are inevitable with any oil development. Many gravel pads on the North Slope are contaminated by chronic spills. In addition, hundreds of old exploratory and production drilling waste pits have yet to be closed out and the sites restored. More than 76 contaminated sites exist on the North Slope and contractor performance has been spotty.

Prudhoe Bay is a major source of air pollution and green house gas emission along the Arctic Coastal Plain. Prudhoe Bay facilities annually emit approximately 56,427 tons of oxides of

nitrogen which contributes to smog and acid rain. North Slope oil facilities release roughly 24,000 tons of methane. Industry has numerous violations of particulate matter emissions and has opposed introduction of new technology to reduce nitrogen oxides and requirements for low sulfur fuel use. The Alaska Oil and Gas Association even lobbied the Alaska State Legislature to exempt drilling rigs from air quality standards.

Oil development simply does not fit in the Arctic National Wildlife Refuge. Oil and gas development would cover this pristine area with an industrial spider web of pipelines, roads, and other facilities, not to mention the threats to air and water quality. Most Americans agree, the impacts to native culture, wildlife, wilderness, and the environment far outweigh the benefits of the oil potential of the area.

In short, Mr. Chairman, we believe we have a strong record of oil and gas production on Federal lands. We are opposed to turning to the Arctic Refuge for oil production. The President has already stated that he will veto legislation that opens the Refuge to oil and gas drilling. We believe that the best interest of the American people is served by a balanced policy consisting of promoting exploration and development, protecting our natural heritage, and fostering energy conservation.

Thank you. I would be glad to answer any questions you might have at this time.

Mr. TAUZIN. The Chair thanks you, Mr. Hayes. And, finally, I'll recognize Mr. Bob Gee, the Assistant Secretary for Fossil Energy for the U.S. Department of Energy. Mr. Gee.

STATEMENT OF ROBERT W. GEE

Mr. GEE. Thank you, Mr. Chairman and members of the committee. I've submitted a statement for the record.

Mr. TAUZIN. Without objection, it's submitted for the record.

Mr. GEE. And I'll take only a few minutes to summarize it.

The recent volatility in the domestic and global petroleum market remind us again that energy is an integral facet of everyday life and that every American can still be affected by actions that occur well outside of our borders. The most recent spike in oil prices was the result of attempts by both OPEC and non-OPEC producing countries to compensate for the 1998 plunge in oil prices. Unfortunately, the production cuts imposed by these countries came at the same time the recovery in Asia began to push demand back up.

Extreme market volatility, volatility which is neither good for the energy consumer nor good in the long-run for the energy producer. High home heating oil prices created hardships for many Americans living on modest incomes and for other energy consumers. At the same time, the wild swings in oil prices have created difficulties for the nation's oil producers. When prices were low, domestic production dropped off and jobs were lost. Even when prices rebounded, financial markets have remained cautious and money continues to be tight. Reinvestment in the domestic industry continues and has been fully materialized.

I've outlined in my formal statement several guiding principles of our energy policy that are geared to restoring market stability. They include both short-term efforts, such as the diplomatic initiatives successfully pursued in recent weeks by Energy Secretary Richardson, and longer term efforts to increase production from our considerable domestic energy resources.

Several of the most important domestic initiatives include Secretary Richardson's direction to renegotiate delivery schedules for royalty crude oil coming into our strategic petroleum reserve. This has made more oil available to the market this spring and, in return, you will receive more oil for the reserve later this fall.

The President's call on Congress to reauthorize the strategic petroleum reserve, the authorities to which have been allowed to lapse. The President's support for legislation to create a regional heating oil reserve. Several new tax incentives to stimulate domestic oil and gas production and to diversify domestic energy supplies.

And the continued investment in better technology that can boost domestic oil and gas exploration and production. It is this latter area, better technology, that I believe offers our best hope for a long-term future and greater price stability.

The track record shows, Mr. Chairman, that investment in technology pays off. Technology has helped double the odds that an exploratory well will find producible reserves. And when producible reserves are found, technology has greatly increased their quantities.

In the 1970's, an exploratory well, on average, added about 10,000 barrels of new reserves. Today an exploratory well adds about 40,000 barrels of new reserves. Technology has helped reduce the footprint of oil and gas operations. When Prudhoe Bay was first drilled, for example, the well pad required about 65 acres. Today the well pad needs less than 10 acres. Today horizontal drilling allows producers to reach multiple targets from a single well pad. With extended reach drilling, those targets can be miles away from the surface well.

Seismic energy has been improved, providing resolutions many times better than just a decade or so ago. In the Gulf of Mexico where 3-D seismic has proven so valuable, we are now seeing the application of 4-D seismic, adding time to the data set. In one instance, this has increased reservoir recovery to a previously unheard of 70 percent.

Drilling and production rates are moving into greater and greater depths and, increasingly, we are producing both oil and especially natural gas from formations that were unreachable a few years ago. These technology advances could not have come at a better time because our demand for liquid and gaseous fuels continues to grow.

In the last 15 years, our appetite for oil in this country has increased by 20 percent. In the next 15 years, our demand for natural gas is likely to increase by a third or more. There is little doubt that meeting this demand will require better technology and, equally importantly, it will require access to areas where that technology can be applied.

The Department of Energy continues to strongly support rational, responsible, and environmentally protected development of energy resources on Federal lands. We recognize that some areas have environmental concerns such that, as a matter of policy, preclude development. Such is the case with the Arctic National Wildlife Reserve.

Yet there are other areas that offer considerable potential for environmentally sound oil and gas operations. For example, as noted, we supported the opening of the northeastern portion of the National Petroleum Reserve in Alaska. And later this month, we will hold a workshop in Anchorage to review the latest technologies for carrying out oil and gas operations in this and other Arctic environments.

In a similar vein, we are working with both State and Federal land management agencies to resolve environmental concerns in the Rocky Mountain area. This area was highlighted by the National Petroleum Council in its recent study on natural gas.

Finally, Mr. Chairman, we've taken several steps to return to the private sector those oil and gas properties which the Department of Energy had previously held as part of the Naval Petroleum and Oil Shale Reserves. In 1998, as you are aware, Mr. Chairman, we sold the Elk Hills Petroleum Reserve in California in the largest divestiture of Federal property in our history.

This year, Secretary Richardson has proposed returning the 84,000 acre Naval Oil Shale Reserve in Utah to the Northern Ute Indian Tribe in what would be the largest voluntary return of Federal land to Native Americans in more than a century. There may

be considerable gas potential on this property and it is appropriate that the Utes have the opportunity to benefit from its development.

These actions, Mr. Chairman, demonstrate our belief that the private sector is best able to develop our natural energy resources most effectively in an environmentally sound manner. We will continue to work with our colleagues at the Department of Interior and others to share with them the advances being made daily in science and technology as they make future decisions regarding development of Federal lands.

This concludes my opening statement, Mr. Chairman, and I'll be pleased to answer any questions you may have. Thank you.

[The prepared statement of Mr. Gee follows:]

**Statement of
Robert W. Gee
Assistant Secretary for Fossil Energy
U.S. Department of Energy
to the
Committee on Natural Resources
U.S. House of Representatives
April 12, 2000**

Mr. Chairman and Members of the Committee:

The recent announcement by OPEC and others that more oil will be flowing into global markets is good news for consumers and ultimately, for producers. It will build oil inventories and – as we have already seen in the past two weeks – it will lower prices. For producers, it will bring about greater price stability and enhance the confidence of lenders in financial markets.

But the recent price spike reminds us again that the availability and cost of energy remain an integral facet of everyday life, and that every American can still be affected by actions and decisions that occur well outside our borders.

The recent volatility in oil markets is yet another in a series of cycles. It is a cycle that actually began in 1997 when OPEC substantially increased production at about the time the economic downturn in Asia began to sharply reduce global oil demand. This led to unprecedented low oil prices – the lowest in 50 years – and much of our domestic industry suffered as a result.

The most recent price spike came as a result of a series of production cuts as both OPEC and non-OPEC producing countries attempted to compensate for the plunge in prices. Unfortunately, these cuts came at the same time recovery in Asia began to push demand back up. This led to the sharp price spikes we have recently experienced.

It is important to note that these dramatic swing in prices have largely resulted from an imbalance of less than 3 percent in world oil supply and demand. Today, the world consumes 75 million barrels of crude oil per day. A 2 million barrel supply overhang led to the price plunge in 1998. A 2 million barrel supply shortfall contributed to the price hike of this year.

This is the nature of the global oil market that affects every American. More than 50% of the oil consumed in the United States originates from outside of our borders. This is not only due to declining domestic production but from a continuing rise in U.S. demand. Our petroleum appetite has increased more than 20% since 1985.

Extreme market volatility negatively impacts several sectors of economy – both for energy producers and consumers. The rapid increase in the price of home heating oil created hardship for many families in the Northeast and Americans living on modest incomes. High fuel costs have hurt independent truckers, small businesses that are energy intensive, and farmers. Market volatility has also created difficulties for the nation's oil producers. When prices plunged in 1998-99, domestic production declined by more than 300,000 barrels per day. More than 30,000

oil workers – nearly 1 out of 10 – lost their jobs. Drilling rigs were scrapped. Even as prices rebounded, financial markets have remained cautious, money continues to be tight, and reinvestment in the domestic oil industry has not fully materialized.

U.S. Energy Policy

President Clinton and Energy Secretary Richardson have repeatedly urged policies that can help restore market stability by turning to markets and free market principles to set the future price of oil. Our overall energy policy is based on:

- Market forces -- not artificial pricing.
- Pursuing diverse sources of supply and strong diplomatic relations with energy producing nations.
- Working to improve the efficiency and environmental acceptability of production and use of traditional fuels through new technology development.
- Diversifying our energy sources through long-term investment in alternative fuels and energy sources.
- Investing heavily in increasing efficiency in the way we use energy.
- Maintaining and strengthening our insurance policy against supply disruptions - the Strategic Petroleum Reserve.

Increasing Domestic Oil and Gas Supplies and Reserves

There are some short-term global actions that can help. We have diversified our international sources of oil supply. Last year we imported oil from 40 different countries. We can engage in global diplomacy – and Secretary Richardson deserves a considerable amount of credit for the diplomatic efforts he has made in recent weeks. We will continue to maintain strong relationships with major oil and gas producing nations and continue to encourage their movement toward open markets, privatization, and regulatory reform.

But we must also continue to take actions that strengthen *our own* domestic energy security and protect those Americans that can be harmed most by sharp price fluctuations. That is what the President and the Department of Energy have been doing. For example, we have:

- **Renegotiated delivery schedules for royalty crude oil coming in to our Strategic Petroleum Reserve** so that this oil goes into the market in the short-term. The Energy Department has contracted for 28 million barrels of federal royalty oil taken in kind by the Minerals Management Service from leases in the Gulf of Mexico to be delivered to the Strategic Petroleum Reserve. About 10 million barrels have already been delivered. We have renegotiated contracts to shift the delivery of 5 million barrels from this spring to this fall and winter, when conditions are more favorable for putting crude oil in the Reserve. Postponing delivery dates until prices are expected to be lower has allowed DOE to negotiate greater than contracted-for quantities of crude oil.

- **Urged Congress to reauthorize the Strategic Petroleum Reserve.** The Reserve is our “first line of defense” against the threat of energy shortages that can cripple our economy; however, the organic authorities for the Reserve in the Energy Policy and Conservation Act expired on March 31st. Congress extended EPCA for only six months last September. Although the Senate has passed a 4-year extension last September, the House has not taken action since that time. It is critical that the Congress extend EPCA as soon as possible to ensure that the president maintains the ability to use all available tools to respond to the needs of the United States economy.
- **Called on Congress to Establish a Regional Heating Oil Reserve.** The President remains concerned about the effect that future shortages of heating oil may have on consumers, particularly in the Northeast and New England. To reduce the likelihood that future shortages will harm consumers, the President is:
 - Supporting the Establishment of a Regional Reserve: The President supports the creation of a two million barrel heating oil reserve in the Northeast with an appropriate trigger to combat future product shortages. In the event of heating oil shortages, heating oil can be sold from the reserve to increase the supply on the market.
 - Directing DOE To Undertake Necessary Environmental Reviews: The President has directed the Department of Energy to begin the appropriate environmental reviews for the creation of the heating oil reserve.
 - Calling on Congress to Establish a Reserve Through Legislation: The President has called on Congress to pass legislation that authorizes creation of a regional heating oil reserve and includes an appropriate trigger. The President has reserved his right to establish a reserve under his existing authority in the event that Congress fails to act.
- **Proposed a Tax Incentive Package to Stimulate Domestic Oil and Gas Production.** The President is proposing new steps to support new domestic exploration and production, and to lower the business costs of producers when oil prices are low. They include:
 - *Expensing of Geological and Geophysical Costs:* The President is proposing to support domestic exploration and production by adjusting the treatment of the costs of exploration and development -- geological and geophysical costs -- in the tax code. Under current law, geological and geophysical costs may be deducted if the related exploration activity was unsuccessful but must be capitalized if the exploration activity was successful. By allowing the industry to expense these costs, we will be encouraging the discovery of new reserves.
 - *Allowing Expensing of Delay Rental Payments:* A "delay rental payment" is an amount paid by a lessee to the lessor of a petroleum resource when the lessee does

not begin producing commercial quantities of oil or natural gas as soon as was agreed. The delay rental payment is intended to compensate the lessor for the royalties he does not receive while production is delayed. Currently, the federal tax code requires delay rental expenses to be capitalized under some circumstances. Allowing producers to expense delay rental payments in the year incurred will lower the cost of doing business and allow more dollars to be invested in finding and producing new domestic oil reserves.

The Administration will also continue to examine measures to preserve marginal well production. Domestic marginal wells (which produce 15 barrels of oil per day or less) account for more than 20 percent of onshore oil production in the lower-48 States.

- **Proposed Additional Tax Credits, Other Initiatives to Diversify Domestic Energy Supplies.** The President believes that any tax package to improve the energy security of the country must include incentives to improve energy efficiency and promote the use of renewable energy. In his proposal, therefore, the President also included (1) tax credits for electric, fuel cell, and qualified hybrid vehicles, (2) tax credits for efficient homes and buildings, and (3) tax credits for efficient, non-petroleum based sources of power. He also reemphasized the importance of Congressional passage of his FY 2001 budget request which includes more than \$1.4 billion to accelerate the research, development and deployment of alternative energy sources and more efficient end-use technologies.

The President also directed the Department to conduct a 60-day study on converting factories and major users from oil to other fuels, to determine whether this will help to free up future oil supplies for use in heating homes.

- **Continued the Federal Investment in Better Technology to Boost Domestic Oil Exploration and Production.** If we hope to avoid the roller coaster fluctuations of oil prices 10 or 15 or more years into the future, we must invest in better oil exploration and production technology today – and most importantly, sustain that investment in the coming years.

It has been the steady pace of technology that has helped keep the domestic industry viable. In the 1970s, an exploratory well had about a 14 percent chance of finding producible hydrocarbons. Today, those odds have more than doubled. An exploratory well in the 1970s, on average, added about 10,000 barrels of oil in new reserves. Today, an exploratory well adds *four times* that amount, more than 40,000 barrels in new reserves.

Major technological advances in oil exploration, such as three- and four-dimensional seismic drilling, are helping us to find more oil at greater depths, both on- and off-shore. At the same time, these technologies have reduced the environmental footprint left by exploration in some areas to 1/10th the size it was 25 years ago.

Research and development partnerships between government and industry have become increasingly important in recent years. The domestic petroleum industry of the 21st century is not the industry of the 1970s or even the 1980s. It no longer is dominated by "Big Oil." Increasingly today's modern-day domestic oil industry is an industry of independents – an industry of smaller companies. They are the ones that can benefit most from new technology -- especially technology that resolve production problems in the older, more complex U.S. fields -- but they are the ones least able to afford research and development.

Our petroleum technology efforts at the Department of Energy fit into two primary categories:

- 1) **Preventing near-term abandonment of still-productive resources** through the transfer of existing and improved oil and gas production technologies to domestic producers, especially the smaller independents.

When domestic wells are plugged and abandoned, the surface infrastructure – pumping units, gathering systems, storage tanks, and other equipment – that has been installed and financed over decades is dismantled. The capital investment to restore this infrastructure can be so large that few companies – especially the smaller ones – can obtain the necessary financing no matter the price of oil. The resource is, for all intents and purposes, no longer accessible under any reasonable price or technology scenario.

To forestall the abandonment of still-productive oil fields Secretary Richardson, in February 1999, restarted the *Reservoir Class Field Demonstration Program*, a program to provide federal matching funds to producers willing to try improved approaches to keeping declining fields in production. In October, we selected 10 projects to receive \$23 million in Federal funding, all of which involve independent producers.

We have also set aside funding for our *Technology Assistance to Independents Program* which provides grants to the smallest of our independent producers to solve specific field production problems. Since this program began in 1995 and was restarted last year, 45 companies have received assistance in applying innovative solutions that have kept many wells in production.

We are also beginning a new effort called the *Preferred Petroleum Upstream Management Practices Program* (PUMP) program. Our plan is to find out where geologic, regulatory or other factors have combined to hold back production, and then develop an integrated set of "best practices" that can get production back up quickly. This month, we will issue a competitive solicitation to begin this program.

- 2) The second aspect of our petroleum program is to **develop the longer-range technologies** that can ultimately produce the full potential of the U.S. resource.

The potential for improved oil technologies is enormous. Many people are surprised to know that for every barrel of crude oil produced in the United States in the history of the domestic oil industry, nearly two barrels have been left in the ground. Technological improvements can help U.S. producers recover a much greater portion of the oil that is currently beyond the capabilities of today's exploration and production processes.

Already, the same technology used by Steven Speilberg to create the dinosaurs of *Jurassic Park* is being used to image the flow patterns of oil reservoirs. 3-D seismic became a more widely used tool when advances in computer technology brought down the cost of digital processing. And that has helped boost exploratory well success rates to as high as 50 percent. Now companies are adopting 4-D seismic – adding time to the data set – and beginning to see new production benefits. One company has seen recovery rates jump to 70 percent.

Artificial intelligence is just beginning to make its mark in the industry. That, combined with micro-technology – perhaps one day, nano-technology – could lead to a new generation of “smart” auto-drilling systems that can reduce the costs and increase the success rates of future drilling.

A complete “logging and chemical laboratory-on-a-chip” might be in the industry's future. This technology would analyze for hydrocarbons near the bottom of the hole while drilling is underway. Fiber optics, perhaps embedded in composite drill pipe, could bring about quantum improvements in the way data is transmitted from the bit to petroleum engineers on the surface.

In the future, new polymers and other chemicals, along with different types of gas injection (including greenhouse gases such as carbon dioxide), could offer better ways to force previously unmoveable crude oil through the tight pores of reservoir rocks and to production wells. It may also be possible to use naturally-occurring microbes that live deep in reservoirs to produce substances that can aid in the future recovery of crude oil.

These are some of the examples of technology that begins to maximize production – technologies that could provide a way for U.S. producers to tap the true potential of the considerable oil wealth that remains in this country.

The Issue of Access to Federal Lands

Much of the Nation's oil and gas resource resides on federal lands or beneath federal waters. The Federal government owns 657 million acres, or 29% of the onshore land area of the United States. Federal onshore lands in Alaska account for 31% of the government-owned acreage,

while 62% of Federal onshore lands are located in 11 Western states (California, Washington, Oregon, Idaho, Nevada, Arizona, New Mexico, Colorado, Wyoming, Utah, and Montana).

Due largely to increased production from Federal offshore tracts, the share of domestic oil production from Federal lands has increased from 16.3% in 1989 to 26.9% in 1997; similarly, the federal share of natural gas production has increased from 30.2% in 1980 to 39.3% in 1997.

While the Administration supports production on federal lands where it is environmentally sound, there will be areas in which production is not appropriate. For example, development in the Arctic National Wildlife Refuge is not appropriate due to environmental concerns, and the same is true in certain other portions of the Outer Continental Shelf. However, there are other extensive Federal and State lands on the Alaskan North Slope that can be developed. Industry is currently conducting work to develop reserves in:

- the West Sak Reservoir "Core Area"
- the Alpine prospect area of the Colville Delta,
- the North Star prospect area in the Beaufort Sea,
- the Badami field, and
- the Schrader Bluff field.

The National Petroleum Reserve in Alaska. One of the most potentially significant areas for future oil production is the National Petroleum Reserve in Alaska (NPR-A), located on the western side of Alaska's North Slope. The U.S. Department of the Interior has estimated that the economically recoverable portion ranges from 500 million barrels at \$18 per barrel to 2.2 billion barrels at \$30 per barrel. (Note: There may be between 1.8 and 4.7 billion barrels of technically recoverable oil in the planning area, with a mean estimate of 3.1 billion barrels.)

In 1998, the U.S. Department of the Interior decided to make available most of the Northeast portion of the Reserve for leasing. The Department of energy strongly supported this effort. DOE's support was based largely on the significant advances in technology that have reduced the environmental impact of oil and gas activities in the arctic region. On May 5, 1999, Interior held the lease sale and accepted winning bids totaling \$105 million for 134 tracts. The first exploratory wells are underway today.

As examples of improved technology, DOE cited the following:

- Drill pad size has decreased by more than 80%, from 65 acres with older pad designs used at Prudhoe Bay to less than 10 acres.
- Horizontal drilling has greatly reduced the number of pads required to access target oil-bearing zones. Reservoir targets miles away from the surface well head can be tapped by extended reach wells, further reducing the number of drill pads needed.

- Roadless development is now possible because of improvements in ice-road and drilling pad construction, eliminating long-term impacts to the tundra. Exploratory drilling can take place in winter on ice pads that leave no mark on the tundra after operations are completed.
- Used drilling fluids and rock cuttings can now be disposed of by injecting them into underground formations, eliminating surface discharges and mud-reserve pits.
- Advanced seismic imaging results in more successful wells and fewer dry holes.
- Production sites can be operated remotely with fiber optics, remote sensing, and robotics, minimizing human disturbance.

Many of these new technologies will be profiled in an upcoming workshop to be sponsored by the Department of Energy and the State of Alaska. Titled "Established Oil & Gas Practices and Technologies on Alaska's North Slope," the workshop will produce a compilation of the best approaches to carry out oil and gas operations in the NPR-A or in similar Arctic environments. It will be held April 25-26 in Anchorage.

Current and future advanced technologies and innovative operating practices should provide the requisite environmental protection for oil and gas activities within the available areas of the NPR-A. It is important to recognize, however, that the NPR-A was set aside as a potential site of future petroleum production. It is distinctly different than a wildlife refuge, and even within the NPR-A, there are areas that are off-limits to drilling because of wildlife issues. Improvement in technology can reduce environmental impacts, but it unfortunately cannot eliminate them. In the designated areas within a petroleum reserve, the impacts of state-of-the-art oil and gas operations are acceptable; in a pristine area such as ANWR, however, they would not be.

The Prospects for Increased Gas Production in the Rocky Mountains and Eastern Gulf of Mexico. The United States is facing the prospects that demand for natural gas, the cleanest of fossil fuels, is likely to increase by more than a third in the next 10 to 15 years. By the end of this decade, domestic gas demand could be at least 30 trillion cubic feet per year and will likely continue to increase in future years.

To supply this demand, producers will increasingly turn to more challenging sources of production. Recently, the National Petroleum Council – a private sector advisory panel to the Secretary of Energy – forecast that between 1998 and 2015:

- Deepwater production from the Gulf of Mexico, currently in its infancy, would increase more than five-fold (from 0.8 Tcf to 4.3 Tcf annually).
- Onshore production from nonconventional formations would increase by approximately 50% (from 4.4 Tcf to 8.5 Tcf), with most of the increase coming from tight, low-permeability reservoirs in the Rocky Mountain region.

- Onshore production from deep conventional formations greater than 10,000 feet could increase by approximately 20% (from 4.6 Tcf to 5.5 Tcf).

The National Petroleum Council report states that access to potential gas supplies on Federal lands is a key factor in determining whether the U.S. gas demand will be met. Two of the most promising regions for future gas production are the Rocky Mountains and the Gulf of Mexico.

The Council recommended that an Interagency Work Group on Natural Gas be established under the auspices of the White House to work with industry and other stakeholders to formulate a strategy for natural gas development, including the issue of access to federal lands. While plans are underway to establish this work group, the Energy Department is also working with several federal land management agencies to resolve issues that have restricted access to much of the land identified in the National Petroleum Council study. For example:

- ***The Federal Leadership Forum has been formed*** to address the environmental review processes that must be conducted before federal lands can be leased and again before actual drilling can occur. The goal of the forum is to ensure that the National Environmental Policy Act (NEPA) processes are carried out as efficiently as possible while still addressing the environmental issues required by law. In the Rocky Mountain region (Wyoming, Utah, New Mexico and Colorado), DOE, the Bureau of Land Management, the Forest Service, the Environmental Protection Agency, the Fish and Wildlife Service, the National Park Service, and the Bureau of Indian Affairs have joined to develop ways to streamline the NEPA process, develop a cooperative approach to analyzing the impacts of oil and gas development, and resolve disputes among agencies.
- ***A resource assessment is being conducted for Wyoming oil and gas.*** DOE is part of a collaborative effort with the Wyoming State Geological Survey, the Wyoming Oil and Gas Conservation Commission, the Bureau of Land Management, the U.S. Forest Service, the Bureau of Indian Affairs and the U.S. Geological Survey. When completed in late 2001, the project will produce a comprehensive, science-based regional assessment of oil and gas resources throughout the State based on resource occurrence, rather than ownership boundaries. It will also present scenarios for future resource development and establish a framework in which assessments can be kept current.
- ***Technology partnering continues with BLM.*** Since FY 1998, DOE and the Bureau of Land Management have jointly conducted research on technologies that can improve access to Federal lands. DOE provides funding while BLM nominates and prioritizes projects and helps manage them. Projects already funded include air quality monitoring in Wyoming and better ways to remediate damage from salty water produced at oil and gas sites on Native American land in Oklahoma. This year, we will support coal bed methane-related research in Colorado and Wyoming, a study on the impact of compressor noise on wildlife in New Mexico, the effects on oil and gas development on wildlife in Wyoming, and the development of a cultural resources predictive model for Nevada.

DOE's Initiatives to Transfer Federal Oil and Gas Properties to the Private Sector. For much of the last three decades, DOE has had direct responsibility for large tracts of federal oil and gas holdings within the land set aside for the Naval Petroleum and Oil Shale Reserves. In the mid-1990s, with these properties no longer needed for national security purposes, the Clinton Administration began an initiative to return them to the private sector.

In February 1998, the Department and Occidental Petroleum Corp. concluded the largest divestiture of federal property in the history of the U.S. government. The sale of the Elk Hills Naval Petroleum Reserve in California for \$3.65 billion underscored the Administration's faith in the private sector to carry out responsible development of the Nation's 11th largest oil and gas field. Subsequently, the Naval Oil Shale Reserves #1 and #3 in Colorado were transferred to the Department of the Interior for inclusion in the agency's minerals leasing program.

More recently, in coordination with the Department of the Interior, the State of Utah, and the Ute Indian Tribe, Secretary Richardson has announced plans to submit legislation to transfer the Naval Oil Shale Reserve No. 2 in Utah to the Northern Ute Indian tribe. The transfer of 84,000 acres would be the largest voluntary return of land to Native Americans in the lower 48 states in more than a century. The land was transferred from the Northern Utes to the Federal government in 1916 as a source of shale oil for the U.S. Navy. While it is unlikely that shale oil production will be an economically viable enterprise on the property, the land could contain significant quantities of natural gas. The transfer will give the Northern Utes – the original owners of the property – an opportunity to develop this potential.

Under the plan, 9 percent of any royalties from future energy resource production on the lands would help fund clean-up and disposal of uranium mill tailings at a site near Moab, Utah. Another provision would put into place additional environmental protection for a 75-mile stretch on the eastern side of the Green River under the jurisdiction of the Northern Ute Indian tribe.

Conclusion

It will take a combination of actions – both near- and long-term, both to encourage additional domestic oil production and to increase the efficiency in our future use of oil – to give the United States a more stable energy future.

The problem of market volatility will not be solved overnight. It will take continuing dialogue and a common understanding among both consuming and producing nations that stability in oil markets is a shared and desirable goal.

A fully responsive and capable Strategic Petroleum Reserve will also remain a key element of a more secure energy future, and we will continue to work with Congress to pass its reauthorization as soon as possible and to establish a regional reserve that will provide heating oil to help cushion future price swings.

We will continue to make investments in technology that can increase the amount of crude oil that can be produced in the future from our own domestic resources. If these programs are

successful, we may be able to halt the decline in U.S. oil production by the mid part of this decade and begin to slow our growing dependence on imported oil.

Finally, we will continue to work with our colleagues at the Department of the Interior and at other federal and state agencies, sharing with them the advances being made daily in science and technology, as they make future decisions regarding development of Federal lands.

These steps are key elements of a sound, comprehensive energy strategy that has helped sustain the longest economic expansion in American history. They will enhance America's energy security, create jobs, protect the environment, and produce long-term benefits for both energy consumers and producers.

This concludes my prepared statement, Mr. Chairman. I will be pleased to answer any questions.

Mr. TAUZIN. The Chair thanks the gentleman and the Chair now yields to the chairman of the committee, Mr. Young, of Alaska for a round of questions.

The CHAIRMAN. [presiding] I know your position as far as the administration goes. And I want to thank the panel. I did hear some of your testimony in the back room. I was meeting with some other people back there. I did like, Senator, your testimony was excellent. I want you to know that.

[Laughter.]

The administration's, you know. Since I can't really believe this administration has any desire to produce any oil. You wouldn't have taken increased the royalties, which you did, ironically, just as the prices started hiking.

You have not let any public lands available for oil exploration. And you may say PET Four, but not the areas that we chose. And I have to say this and I'm going to say it again. I said it when we were talking about the pipeline. I've heard this argument 95 percent of Alaska is open for, in fact, I think you said it before Dan Murkowski's committee, is open for drilling, which is not true.

And, unfortunately, there's some thought in the administration that just because you can drill there, that there might be oil there. I've often said that just because a pool table is green, there's no rabbits. And yet there's some idea—I hope nobody caught that, for god's sakes, but that's what the administration thinks, that they can drill because there's the land available.

The lands we identified in PET Four were not the lands, by the way, that you let be open for oil drilling. The bids were very minimal compared to what we thought they should have been because you wouldn't give us the areas that we thought were best. That's beside the point.

But, in your testimony, I would happen to agree that the caribou herd that you mentioned is probably the largest one. But what is the number of caribou right now in Prudhoe Bay? Anybody like to address that?

Mr. HAYES. Mr. Chairman, I believe it's quite a small fraction of the porcupine herd. I believe it's about 20,000 compared to 260,000.

The CHAIRMAN. But the reason I asked that question: How many caribou were there before we drilled Prudhoe Bay?

Mr. HAYES. I'm not aware of the exact numbers. The number fluctuate significantly.

The CHAIRMAN. Well, I understand that. But, see, that's why be aware. We heard the same arguments given in this committee. I was sitting down where Mr. Simpson is sitting, by the way, and Mr. Staggers was sitting up here. The same arguments, same story, 25,000 caribou. And how many did you say were in the bay?

Mr. HAYES. There are about 20,000.

The CHAIRMAN. That's amazing to me. And my god, we drilled and they multiplied. Let us drill some more.

[Laughter.]

I mean, and we even built walkways, by the way, for those who don't know. We required the pipeline to have walkways over it so the caribou could walk over and go from one side of the pipeline to the other. It costs us \$28 million to build those walkways.

To this day, no one's ever found a walkway that's being used by caribou. Now goats used it a couple of times. But the most amazing thing is, guess what the caribou do? They walk under it and rub their backs to get rid of those boils on their backs on the pipeline. But we spent \$20 million doing it.

And, to our knowledge, most of the wildlife—and I'd say all of the wildlife—in the area have increased, not decreased, because of the activity and because of the inactivity of taking game in that area.

And so we hear the argument about ANWR, it doesn't hold water. You know, it's a terrible idea that we're going to destroy that area, which is nonsense. The refuge, 19 million acres, that's the size of the refuge, right? 19 million acres? OK. How many acres are we actually going to use in that refuge to develop ANWR if it's opened?

Mr. HAYES. The Arctic Plain is less than 1 million acres, but it is, as I mentioned in the oral testimony, our belief is it's a key acreage in terms of the biology of the refuge.

The CHAIRMAN. But that's no more different than any other is, including Prudhoe Bay. It's exactly the same and we've done no damage.

Now you've got less than 1 million acres. Probably less than 12,000. Probably less than 3,000 total acres is going to be disturbed. They could deliver oil to the pipeline 64, 74 miles away.

And, by the way, we can sit in this room. All you people who are against this or for it, whatever it is. It is going to be opened. It is going to be developed. And anybody that doesn't think that is smoking pot. Right up in front of everybody, it's going to happen. The difference is will it happen under stress or will it happen under due diligence?

I was, again, sitting right down there. We opened the pipeline. We built the pipeline in 3 years. Should have taken us probably 10 years. Because why did we build it? Because we were short, Mr. Bennett was here, we were short of oil and OPEC was enforcing their stranglehold on our throats. And we built it and delivered the oil, 2 million barrels a day; 1976 it began.

Why can't the administration think about the future? This is not the Serengeti everybody says it is. That's nonsense. I've been there. I've walked it. I've seen it. Now if you go a little bit further south, it is. It's gorgeous. And I think maybe you ought to look at it. Have you been up there?

Mr. HAYES. Yes, sir.

The CHAIRMAN. When were you up there?

Mr. HAYES. Last summer.

The CHAIRMAN. Oh, I love you guys. You go up in the summertime?

[Laughter.]

Ah. Why don't you go up in the wintertime when the wind's blowing 40 miles a hour? And you could stand out there and say, my god, this is beautiful.

[Laughter.]

Mr. HAYES. Mr. Chairman, I was scheduled to go in February, but I had to testify in front of this committee that day.

[Laughter.]

The CHAIRMAN. Well, I tell you, I want to thank—not in front of me you didn't.

Mr. HAYES. No. I believe it was Mr. Doolittle's subcommittee.

The CHAIRMAN. No, not in front of me. But I do believe next time I'll make sure—you won't be around—but I'll make sure that the next guy who wants to go see this area, which I say is really—I'm going to make sure you get up there in the middle of January. We'll cancel the hearings. And then I want you to stand there and tell me how gorgeous.

And, by the way, I have to say this in all seriousness, because I mentioned it will be developed. I've had some great ideas and I bet the oil people in the audience won't like this, if you really want to reserve, you really want to control those OPEC countries, you develop it. You explore. You sell the leases. You explore it. You develop. You tie it in. And I'd even be willing to pay the oil companies not to pump the oil.

We can produce 2,200,000 barrels a day with that pipeline, if we had the refineries to refine the oil. But we could do that. That's a true reserve, not SPR or whatever you want to call it. We don't have the refineries that they can do that.

But we would have that on line and say, OK, you guys think you can raise the price like you've done. We're going to take and produce another 1,200,000 and we would lower the prices. And that's why, it's not just you, I did pass it in 1995 and you guys vetoed it. I had trouble to do it before. Very nearly had it happen before.

But I'm just saying the administration, I understand why. I understand the makeup of your administration. The environmental community, they can direct and pull your strings, but it is wrong for this nation. That area should be explored, sold, explored, and developed, and hooked it.

Mr. JOHNSTON. Mr. Chairman.

The CHAIRMAN. Yes, Mr. Senator, go right ahead.

Mr. JOHNSTON. I took a bunch of senators up there a few years ago and one of them got up there and looked around at that barren landscape and said, my gosh, if I told the people in my barrooms back home that we couldn't drill here and we were going to be short of oil and I was going to be responsible for that, they'd laugh me out of the barroom. Lo and behold, that senator ended up voting against us because, you know, some of her people thought it was Serengeti. But those who have been there know it is not.

The CHAIRMAN. Well, I appreciate that, Senator, and before I finish I have to say that when we were fighting this battle in 1995, they had some posters put out, the Sierra Club put them out, and I loved it. They had a wolf laying next to a caribou calf. Now that's a cold day in January when that will ever happen. Or July, I don't know which way you want to see it. That was a great—good in Philadelphia. Good in San Francisco, New York, and maybe DC., but not in reality. And I do appreciate your coming. Gentleman.

Mr. TAUZIN. Fair to say you'd find rabbits in a pool table before you'd see that happen.

Mr. VENTO. The gentleman reminds me of my mentor, Mr. Udall, and he always said that the lion may lay down with the lamb, but the lamb isn't going to get much sleep.

[Laughter.]

Well, I think there are a lot of issues here. Obviously, my chairman has pointed out the volatility or the dynamic nature and crash of caribou populations that exist there. He pointed out that even the Alaska Department of Fish and Game in 1995 revealed a 23 percent decline in the population of the central Arctic herd around Prudhoe Bay and then a 41 percent decline in the caribou herd in the vicinity of the Kubak field.

So, I mean, they do go up and down, clearly. The presence of caribou might represent the absence of our friend the grey wolf and/or bear and other predators. So there are a lot of factors that get into this that we kind of take and turn around to suit what our needs are.

And I'd say, though, that this area which we're debating here, this 1.5 million acres is something we set aside in the Alaska Lands Act that we have to make a decision upon. Obviously, I favor it being declared wilderness and 170 sponsors in the House favor that, along with a pretty close margin in the Senate, as we know, favor not opening this up and continuing the protection.

I think the issues here in terms of going to what's happened in Prudhoe Bay are important. I have information that indicates that, since it was opened in 1977—and I have an interest in this. My brothers were part of the 3-year welding team that put that pipeline together, I might say. They're ironworkers who said if I had behaved myself, I could have had a good job like their's.

[Laughter.]

The CHAIRMAN. That's not the area that's leaking is it?

[Laughter.]

Mr. VENTO. I don't think so. You could probably have them up there and check up on it. I think it's probably those caribou rubbing against it that are causing it.

But, in any case, we obviously have some firsthand knowledge, through their experiences, about this issue and about some of the events. And I've visited in both the winter and the summer, Mr. Chairman. I must say, it's more fun in the summer, but there's no place like it in the world, that's for sure. And it's sort of an Arctic desert, as was implied here, when you talked loosely about ice roads and talked about the problems in building paths and, you know, mining gravel out of whatever part of the Brooks Range has been carried down toward the ocean. We're talking about a very fragile environment.

It's an area that's almost a window on the Ice Age. And we don't have much of that left anywhere in the world. And, obviously, some of us think a little bit of preservation. So I don't look at the Great Rift Valley or the Serengeti, Bennett, but I look at it as something a little different. So I don't need to carry on. You know what my passion is here.

But the issue is we've got a lot of problems we haven't resolved up there in Prudhoe. As Mr. Hayes knows, he points out in his testimony, that we've got air pollution problems. He didn't have time to give that information, Mr. Chairman, orally, but it's in his written statement. He points out there's how many oil spills that we've had in Prudhoe Bay, Mr. Hayes? Can you give us any indication

of that in the last 23 years? There have been hundreds, haven't there?

Mr. HAYES. We have had hundreds. And there was just a felony conviction 2 months ago, a \$15 million fine against BP for some environmental violations.

The CHAIRMAN. May I suggest, respectfully, that is nonsense. What size oil—

Mr. VENTO. Well, I'm just trying to get to the bottom of it—

The CHAIRMAN. I'll get to the bottom of it. I will check your testimony and I want you to verify it. An oil spill is a teardrop to you. Now don't be telling me there's oil spills there.

Mr. VENTO. Mr. Chairman, I have, you know, my information tells me that there have been 640-some oil spills.

The CHAIRMAN. You drop one drop of oil, it's considered an oil spill. And I want to tell you, go down the street and look at any automobile and I'll tell you there's an oil spill under every automobile in this town. Right now. Including your car.

Mr. VENTO. Just relax. Enjoy your yogurt there.

[Laughter.]

Mr. TAUZIN. And don't be spilling it.

Mr. VENTO. I don't want you to get indigestion, Mr. Chairman.

But the issue that we've had a phenomena going on with the air quality conditions that are rather unique, haven't we, Mr. Hayes?

Mr. HAYES. Yes, certainly. In terms of there have been emissions from the field. There also have been emissions down in Valdes.

But, quite frankly, Congressman, it is the point you made earlier. We do not object to the activities in Prudhoe Bay. We are proposing that there be additional drilling in the National Petroleum Reserve. We have \$100 million that's been put on the table by oil companies to take advantage of the opening.

The primary point is that this is the only place on the entire North Slope where Congress has said no to drilling. We think this area should be kept pristine.

The CHAIRMAN. Point of information. Would you tell me when has the Congress said no?

Mr. VENTO. In the law.

The CHAIRMAN. The law does not say that, now. The law says that Congress can make that decision. We made that decision that it would be drilled and you vetoed it.

Mr. HAYES. Well, NWLCA has an explicit provision that expressly says—

The CHAIRMAN. And NWLCA says that area, the ANWR, shall be opened if the Congress says so. It did not set it aside. Now read the law.

Mr. VENTO. It's a rather reserved negative, Mr. Chairman. In any case, that's a distinction, maybe, without a difference. But it is, obviously, reserved to Congress for a future decision to do that which precludes it from being done at this point.

I just wanted to point out that the temperatures in the Arctic, for instance, have, on a Fahrenheit basis, apparently increased almost three degrees in the past few decades. So that there are some changes going on, whether we think it's a larger part of a global phenomena and other factors is to be debated. Obviously, there is

a pretty significant body of information that we could look at to make decisions about this.

One of the questions I raised earlier in my testimony, unrelated to this, Mr. Hayes, and I don't know where your responsibility is here, but it had to do with due diligence and the amount of leases that have been out. You pointed out 34 million acres of new leasing on the Outer Continental Shelf largely, I think, for gas, as my friend and colleague from Wyoming has pointed out, the numbers there are going up where the Federal Government produces about 30 percent of it.

But what about oil? That's sort of the nexus of what we're talking about here. Oil leases have gone up, as you pointed out, significantly. But what about this question of due diligence and the amount of land or the amount of acreage under leases today, totally, between all of the different land management agencies and the national government? For oil purposes, can you give me a number there? You obviously pointed out 4 million new acres in the National Petroleum Reserve.

But the question is, and, of course, my beyond that question is, are we, in fact, gaining performance, adequate performance, out of these particular leases that we're putting out? Or are we just building up somebody's portfolio of leases? In other words, what type of pressure should we be putting on them in terms of obtaining the type of domestic production from national lands? So can you give me a ringing defense of the Clinton Administration's aggressive conduct with regards to this?

Mr. TAUZIN. [presiding] Other gentlemen have comments, so ring it quickly.

Mr. HAYES. I'll answer very quickly, Congressman, and I will get the information to you specifically about how much acreage is available. And I could probably—Mr. Gee could probably answer this better than I. Our sense is that the major limiting factor in terms of increased oil and gas production on Federal lands has been the low price of oil over the last several years. Obviously, oil has spiked up and now there is more of a financial incentive to do more activity, but there is an enormous amount of lease holdings available for production that is not being taken advantage of and probably the largest factor has been the price.

Mr. VENTO. Mr. Chairman, just to point out. My point is not just what is under lease, but whether we need to do more in terms of due diligence. I understand market factors indicate the prices and what the demand is, but the question is how much is already out there and has not really even been explored, much less developed.

Mr. TAUZIN. Well, the gentleman's time has expired. Now the Chair recognizes the gentlelady from Wyoming, Mrs. Cubin.

Mrs. CUBIN. Thank you, Mr. Chairman. There's one thing that I would like to say that Chairman Young and I have in common. We have a lot of things in common, but one is that sometimes our passion is mistaken for anger and so I just wanted to say that because, you know, he really got totally out of hand there for a minute.

[Laughter.]

And I agreed with every single word you said.

The CHAIRMAN. Yes, will the gentlelady yield for just a moment? I have to go, but I've got to go back to my friend. You said you were in ANWR?

Mr. HAYES. I was in the North Slope.

The CHAIRMAN. You were not in ANWR?

Mr. HAYES. No, I'm sorry. I thought you were wondering if I was up there.

The CHAIRMAN. You were not in ANWR?

Mr. HAYES. No, I was in the North Slope. That's correct.

The CHAIRMAN. But you were not in ANWR?

Mr. HAYES. That's correct.

The CHAIRMAN. You didn't see the Serengeti Plain?

Mr. HAYES. No, I did not.

The CHAIRMAN. Well, everybody had the illusion you were there. That was my interpretation.

Mr. HAYES. I apologize if you misunderstood or if I miscommunicated. Second, Mr. Chairman, if I can—

The CHAIRMAN. Not yet. I've got to go.

Mr. HAYES. OK.

The CHAIRMAN. The Canadian government opposes this, right?

Mr. HAYES. Pardon me?

The CHAIRMAN. The Canadian government opposes drilling in ANWR.

Mr. HAYES. Yes, that's my understanding.

The CHAIRMAN. The National Congress of American Indians opposes this.

Mr. HAYES. Yes.

The CHAIRMAN. The Tanana Chiefs Conference?

Mr. HAYES. Yes.

The CHAIRMAN. The Council of Alasabasken Tribal Groups? The Episcopal Church and other numerous religious organizations? But why I want to question this is out of all those groups, only two people oppose it that you mentioned. The rest of them outside the United States, including the Canadian government. Is that correct?

Mr. HAYES. Yes. Yes.

The CHAIRMAN. In other words, the Canadian government is dictating our energy policy.

Mr. HAYES. No. No. It's meant, Mr. Chairman, as an illustration, of some of the many folks who are concerned about potential drilling. Probably the most relevant of those groups are the Alasabaskens, the Gwich'in native folks.

The CHAIRMAN. OK. The other thing is the Saudi Arabians are against this too, aren't they?

Mrs. CUBIN. Reclaiming my time.

Mr. TAUZIN. The Chair will start the gentlelady's time again and we'll commence.

Mrs. CUBIN. Thank you, Mr. Chairman. And Chairman Young's points really bolster mine. I guess they team up, if you will. In your oral testimony, you talked about how more production is taking place on Federal lands as if to disprove my assertions that access to public lands is the No. 1 problem that we face.

And I have to point out that the production you are referring to is, No. 1, OCS production and, No. 2, PET Four production and

permits for PET Four and so what I'm asking you is show me the money in the Lower 48. It isn't there. It is plain not there.

Last year, we appropriated, I'm referring to coal bed methane, I mean, do you dispute me that in the Lower 48 it isn't there? It is happening at PET Four. It is happening on the Outer Continent Shelf, the oil production, but it is not happening in the Lower 48.

Mr. HAYES. It certainly is true that most of the increase in production is offshore, Louisiana, and—

Mrs. CUBIN. And don't you think that that truly is a distortion of the reality when I talk about access to public lands? I'm talking about acres in the Rocky Mountain States. Gas, for example. Northern Montana. Gloria Flora put off-limits the most highly prospective area for natural gas production in the Lower 48.

Last year, for Fiscal Year 2000, we—and I worked very hard to get this appropriation, \$2.5 million earmarked for APDs for the coal bed methane project in the Powder River Basin. Out of that money, 11 new employee—and I realize they needed more employees, and that's why I, you know, worked so hard for the appropriation.

But out of that, they bought 12 new trucks and hired 11 more people and before the ink on the EIS was even dry, they came to realize that the cumulative effects of the coal bed methane development that the BLM did have to acknowledge that the number of wells that they had studied was already spoken for and so now they're requiring a new EIS which, again, the industry will pay for.

So what happened to the other \$2.5 million? Is there any way BLM can reprogram some of that money to get some more of those permitted?

The problem is that the BLM wasn't forward-looking enough in their overall environmental look at the whole area to address this. So now producers, explorers, are in a position that they can't move forward. And it is causing a horrible hardship in Wyoming.

Mr. HAYES. Congressman, I'm not aware of that specific issue. I'm happy to look into it. I passed a note in terms of onshore natural gas production, which was one of your questions of whether there's really been onshore increases in natural gas production. And since 1992—

Mrs. CUBIN. And oil.

Mr. HAYES. And oil.

Mrs. CUBIN. And permitting.

Mr. HAYES. Sure. Sure. But just a point of fact, the natural gas production has increased, onshore, in the Lower 48 from 1.2 trillion cubic feet in 1992 to 2.0 trillion cubic feet in 1999.

I don't deny your point, though, Congresswoman. And certainly there are individual cases where access has been difficult on Federal lands. There's no question about it and there's certainly some cases where access is essentially being denied, like the Arctic Refuge. But we are trying to work with the industry to increase production where appropriate.

Mrs. CUBIN. You know what bothers me about your testimony, Mr. Hayes? It's that I generally think assessing blame is not a constructive thing to do. When we find ourselves in a situation that is damaging to ourselves personally, to our families, to our country,

that assessing blame for getting in that situation, generally, isn't constructive.

What is constructive is looking at the current situation, the facts that are at hand, and trying to figure out a way to get out of it. And what I got, and I recognize that if people can misinterpret Mr. Young's and my passion for anger that, you know, I can misinterpret your testimony today, but it seems to me that rather than the administration saying let's really do something about access to public lands.

I mean, this was an agency that advises the Secretary of Energy that said access is the problem. Instead of accepting that and saying let's look at it, it seems that this administration only defends the things that have happened in the past that are currently happening today in my State I know instead of trying to move forward. And I would just implore you and the agency to try to move forward.

And if the chairman would just grant me one question for Mr. Gee. Wyoming, as you know, I said earlier that we have to address all forms of energy in order to meet our national security needs and our energy consumption needs for our standard of living.

The Department of Energy has the authority, jurisdiction, I don't know what you want to call it, to offer grants for studying coal technology so that, you know, coal would be a more friendly fuel to the atmosphere. Wyoming is far and away the largest producer of coal, as you know. And yet a very, very small fraction of the money that is given for research into coal technology has ever been seen by the State of Wyoming.

And I realize that, politically speaking, we have one representative and two senators, but I think there is coal technology for efficiency in burning coal that is just as important as clean coal technology for those fuels that have a higher sulphur content. And I would just ask the DOE to be more open-minded and look at, you know, the consumption of coal that comes out of the Powder River Basin and help us fund research so that it can be a more efficient fuel, not just an environmentally friendly fuel, but more efficient and, thereby, more environmentally friendly. Thank you.

Mr. TAUZIN. The gentleman may respond.

Mr. GEE. I may respond? I appreciate your suggestions. What my testimony points out is that of our key tenets of our energy strategy, and we can debate whether that's a well-thought-out strategy, is fuel diversification. And it does still continue to recognize the importance of coal in our energy portfolio. We have, in fact, asked for more coal research and development appropriations in this latest budget request.

We also have, you should know, some ongoing solicitations for various projects for existing programs that are now being looked at to increase energy efficiency in coal generation and in clean coal technology. So, certainly, to the extent that you have some constituents who have some worthwhile proposals that we ought to look at, we would certainly be happy to.

And I understand the spirit of your remarks. We don't look to see whether a particular State has one or two or three Members of Congress.

We look at the merits of the particular proposal. If it makes good sense from a scientific and energy technology standpoint, we look at it. If we think that those benefits that would come from a particular research project are going to benefit not just your constituents, but the country as a whole in continuing to maintain a diverse energy resource portfolio mix, if we think it's a worthwhile project, we'll certainly be happy to talk to you and to any project sponsors that might be in your State that would be of interest in working with us.

Mrs. CUBIN. And I'd like to add, as may well be expected, from my point of view, the Department of Energy has been much more conscious of trying to find solutions to our national energy problems than the BLM and the Forest Service. And I think we need to work together as a team.

Mr. GEE. On that, my I add—

Mr. TAUZIN. We've got some bills. Let me ask the gentlelady, I'm going to put her in the Chair in just a second. I have to testify—

Mrs. CUBIN. And then I'm just going to talk on and on as I want to.

Mr. TAUZIN. Let me ask the gentleman if he would hold his response. I need to do one thing before I leave though, very quickly. Mr. Hayes, your testimony says that the Department has seen great success in the Outer Continental Shelf program since the enactment of the Oil Relief Act. Does your Department support reauthorization of the Act?

Mr. HAYES. We supported the legislation when Mr. Johnston—and I don't think it's been presented to the administration for a position yet.

Mr. TAUZIN. So you have no position as yet?

Mr. HAYES. I am not authorized, no. I don't believe it's been sent to the administration for a position.

Mr. TAUZIN. Steve, do you have a position on the reauthorization of the Act?

Mr. GEE. Reauthorization of the—excuse me, what was the question?

Mr. TAUZIN. Reauthorization of the Deepwater Royalty Relief Act.

Mr. GEE. We don't currently have a position on that as a department, Congressman. We're working with the Department of the Interior and discussing what are the relevant facts.

Mr. TAUZIN. It would be very good if both of you could seek some guidance from your departments to give this committee some information on it. As one of the recommendations Mr. Johnston's made, we'd like to hear your recommendations, also.

The Chair recognizes for 5 minutes Mr. Faleomavaega and will put Mrs. Cubin in the Chair.

Mr. FALEOMAVAEGA. Thank you, Mr. Chairman. I, too, would like to offer my personal welcome to Senator Johnston to the committee and someone that I certainly have the utmost respect for over the years and when he served as chairman of the Senate Energy & Natural Resources Committee. And I would really like to add my thank you for all of the help that you've given, especially to the insular areas.

And, of course, welcome Secretary Hayes and Secretary Gee for their comments and their responses. Nothing pleases me more than to have than Chairman Young and the gentleman from Minnesota always having a very interesting dialog when it comes to issues referencing the environment and the oil industry.

I read a couple of years ago that our country currently consumes about one-third of the world's energy resources. I don't know if it's every day or every year, but I wanted to know if there was any truth in that. Do you have any statistics as to exactly how much our nation consumes per year as far as all the world's energy supply is concerned?

Mr. Gee might have some reference for that.

Mr. GEE. I have heard, Congressman, I have heard that, roughly the same number. It is true that because we are the most industrialized and developed country in the world, it would not surprise me that our total aggregate consumption would be of the magnitude that you describe. I do know that, certainly, we are the largest consumer of oil in the world. We consume 19.3 million barrels per day.

If I may. The total amount that has been given to me is that we consume 94 quads. We consume 94 quadrillion BTUs of energy, although that's getting a little too technical, of energy per day and that is a substantial sum. The total global number, I'm told, is 402 quadrillion BTUs and we consume 94 quadrillion BTUs. So it looks to me to be about probably one-quarter, judging by that number.

Mr. FALEOMAVAEGA. Along those same lines, Secretary Gee, the fact that we do consume a lot, what percentage do we waste?

Mr. GEE. I guess waste is a relative term. Let's say that the way we consume energy has embedded a number of inefficiencies, from the point of production to the point of use. Whether that's from the supply end of the equation and the end use end. And we are spending a great deal of our time and resources as a Department trying to boost efficiency, certainly in power generation, to boost our natural gas turbines from, say, a 40 percentile up to a 60 percentile, and our coal generation from a 30 percentile to a 40 percentile rate of efficiency.

On the end use side, we're trying also to find ways to maximize at the industrial end as well as in the residential end ways to minimize consumption through a higher applied standard of efficiency, CAFE standards for the automobile, and that sort of thing.

Mr. FALEOMAVAEGA. Mr. Secretary Gee, you make mention in your statement about the OPEC countries and the crisis of the situation that we're in. This is not some cynical or purposely done effort to try to undermine the concerns that we have as far as energy supply is concerned in our nation. It is partly because of the Asian crisis that we find ourselves now in this kind of a predicament.

And I'm just curious, we, here again, I understand that we have enough coal supply here as an energy resource to last us for another thousand years. And adding onto what our good lady from Wyoming indicated, has the Department of Energy made any serious effort to look at this?

Now, as I listen to what Mr. Tauzin said, that we're in somewhat of a catch-22. We increase production of oil and then, at the same time, when we look at alternative energy resources, this always

seems to bring us back to a crisis. It doesn't really answer the question.

But I think that, following what Congressman Cubin was saying, what can we do with this tremendous amount of resource that we have right in our backyard. If we have enough to last, I mean, a long time. Is it because the means to refine it are difficult, or we just don't want to bother with it, or we just prefer using other sources offered, such as fossil oil fuel is because it's more convenient?

What's the basis of our policy as far as coal is concerned, because it seems to me if we have this resource, why aren't we looking to the technology and perfecting it and refining it to use it as such?

Mr. GEE. Well, Congressman, the short answer is that we are. Coal makes up currently 55 percent of electric generation needs. We have an ongoing program at the Department to try to find ways to utilize coal as a potential means of providing liquid transportation fuels as well as electric power as well as process heat. That is an ongoing program which could lead to the conversion of coal to a transportation fuel.

Let me add that one of the key cores of our energy policy, and I know, again, some would dispute whether that a well-considered policy, is fuel diversification. And by that I mean that the range of all of the fossil fuel technologies and resources, but also renewable energy, solar, photovoltaic, wind, geothermal, as well as energy efficiency technologies, both at the generation end and the end use end.

Our consumption of petroleum went up by 20 percent since 1985. One of the things we need to focus on, in conjunction with our supply end concerns, obviously, is the end use and the efficiency end, as you recognized. We think that energy security can be found, certainly, in our supply side alternatives, but also in the way we maximize our efficiency and use of energy.

Mrs. CUBIN. Eni, I have to go for a vote. And I hate to ask the panel to wait until we come back. I will get over there as quickly as I can and back. I know Congressman Duncan did want to, at the very least, make a statement for the record and so, if you would indulge us and we'll get back as quickly as we can.

[Recess.]

Mrs. CUBIN. Take your positions at the table. I'd like to recognize Congressman Duncan.

Mr. DUNCAN. Thank you, Madam Chairwoman, and I've been told that this panel has to leave and I'll try and be very quick.

But let me just say that I think that one of the problems here may be that when people look at a map of the entire United States and they see it on one small page in a book, they don't realize how big this country is. And this Arctic Wildlife Refuge is 19.8 million acres. And we say that so easily, yet I represent half of the Great Smokey Mountains National Park, which is the most heavily visited national park in the country with some 10 million visitors. And those people come there and most of the people that come there are in awe of the size and the beauty of that park. And yet ANWR is 35 times the size of the Great Smokey Mountains National Park.

And I've read many articles about this. And every article says that they only want to drill or impact on about 2,000 or 3,000 acres. One article, I think, estimated it may possibly be as much as 12,000 acres. 12,000 acres, if that's what it is, out of 19.8 million acres. I'm not even sure if I could figure that out, but that's probably less than 1/100th of 1 percent. It's phenomenal how small the impact would be and yet how exaggerated the impact is made by some of these groups.

I mean, I went up there. Senator Johnston mentioned that he'd been up there five times, I think. Is that correct, Senator? I went up there four a half years ago to Prudhoe Bay and to Barrow. And I've seen it described as a flat brown tundra, although a big part of the year, apparently, it's covered in snow, in this coastal plain, which it was mentioned earlier, is less than 1 million acres, although every article I've seen says it's 1.5 million acres.

There's hardly a tree or bush on it. And yet all these groups, very falsely and very misleadingly, run these pictures of the parts of the Arctic Wildlife Refuge where there are trees and bushes and mountains and streams and all that. And, sure, those are beautiful areas, but nobody has ever advocated drilling for oil on those parts of the Arctic Wildlife Refuge. And so it's worse than misleading; it's just false propaganda comparable to what they used to do in countries opposed to everything that we've always stood for in this country.

And I'll say again there are some of these groups who don't seem to want people to drill for any oil, dig for any coal, or cut a single tree. And it's sad because they've not only destroyed thousands and thousands of jobs, they drive up prices and they hurt the poor and the working people most of all. And yet they sit there and do it and act like they're for the little man. And it's really disgusting.

The geologic survey says that there's almost 16 billion barrels of oil up there. Chairman Young told me that he thinks there's far more than that up there. And then you take billions more offshore and all of this to be done in an environmentally safe way, gotten to. And I think some of these groups are funded by some of these big companies that benefit if we don't drill for any oil in Alaska or we don't drill for any oil offshore, because there are shipping companies and there are oil companies from other countries that benefit greatly.

So what we do, we hurt the poor and working people in this country and we help these big companies that benefit if we don't produce any oil domestically.

I think it's very sad and it's particularly sad coming from people that try to pretend like they're in favor of the little man in this country. So, with that, I'll stop and we can move on to the second panel, I suppose.

The CHAIRMAN. [presiding] I thank the gentleman. This panel is excused. I want to thank, especially, the senator for appearing. And get out and start talking about it. I do thank the administration for appearing, although we differ. You know, time does flies fast, thank God.

Next panel. Dr. M. Ray Thomasson, president of the American Association of Petroleum Geologists; Robert E. Ebel, director of energy programs, Center for Strategic and International Studies;

Jerry Jordan, Independent Petroleum Association of America; Howard Geller, executive director, American Council for an Energy-Efficient Economy; and Gerald L. Hood, secretary-treasurer, General Teamsters Local 959, Anchorage, Alaska.

Will the panel please take their seats? I do thank the panel and, for those that have been waiting patiently, this is a process we have to go through. Many Congressmen, including myself, have a tendency to speak too long, but the information you give us written and vocally will be in the record as we review this and we hopefully will do so when it comes to drawing an energy policy up either this year or next year, whenever we're going to do it. So I do welcome it.

Dr. Thomasson, you're the first one up.

STATEMENT OF M. RAY THOMASSON, PRESIDENT, AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS; ACCOMPANIED BY ROBERT E. EBEL, DIRECTOR, ENERGY PROGRAM, CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES; JERRY JORDAN, INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA; HOWARD GELLER, EXECUTIVE DIRECTOR, AMERICAN COUNCIL FOR AN ENERGY-EFFICIENT ECONOMY; AND GERALD L. HOOD, SECRETARY-TREASURER, GENERAL TEAMSTERS LOCAL 959, ANCHORAGE, ALASKA

STATEMENT OF M. RAY THOMASSON

Mr. THOMASSON. Thank you, Mr. Chairman, for the opportunity to provide the view of the petroleum geology community on these important issues. My name is M. Ray Thomasson. I've been a practicing petroleum geologist for 41 years. I'm president of the American Association of Petroleum Geologists, a professional organization composed of more than 30,000 field scientists engaged in the exploration and development of energy resources throughout the world. The AAPG is proud of contributing to the supply of reliable and inexpensive energy.

Crude oil and, more recently, natural gas have fueled the economic development of our country. Today the U.S. imports more than one-half of our crude oil and refined product needs. Mr. Chairman, the domestic production of crude oil has declined from 8.9 to 5.9 million barrels of oil per day since 1985 and the production of natural gas is essentially flat because of changes in the tax code and increasing restrictions in access to public land.

The resources are there. Predictions about a supply shortage have been made for over 75 years. Every prediction has been proven blatantly wrong. The next figure shows previous estimates of the ultimate size of U.S. crude oil resources versus cumulative production. The resource has grown slightly faster than has cumulative production. New science and technology are permitting us to do a better job.

Crude oil can be moved between world markets with relative ease, but natural gas cannot. The natural gas that we need must come from U.S. production as well as from imported from Canada. Assessments of the Gas Research Institute and Energy Information Administration each show a demand for as much as 32 trillion

cubic feet of gas per year by 2015. This is a 50 percent increase over current domestic production.

Presently, we are barely replacing our current annual production with newly discovered reserves. Since 1967, over 300 exploratory wells have been drilled offshore of the Canadian Atlantic and discovered at least 12 trillion cubic feet of natural gas and 2 billion barrels. The estimated ultimate is 50 trillion cubic feet of gas and 10 billion barrels of oil. This geologic trend, with similar possible greater potential, projects southward for some 1,000 miles off the East Coast of the U.S.

All of these wells and platforms are operating in the prime commercial fishing waters and off the pristine tourist coastlines of eastern Canada. Production coexists with tourism, commercial fishing, for the betterment of all concerned.

Mr. Chairman, the National Petroleum Council and the AAPG believe that the resource base is sufficient to support the expected growth in demand. However, a substantial portion of that resource base is, at present, either not accessible due to Federal moratoria or accessible with onerous restrictions that destroy the economic viability of development.

The NPC study also notes that the necessary increase in capital expenditures needed for exploration and production will have to increase from about 32 billion per year now to more than 50 billion per year by 2015. Public lands contain a substantial portion of the undeveloped oil and gas resources this country needs. These lands are underdeveloped because of two categories of restrictions: non-accessible and accessible with restrictions.

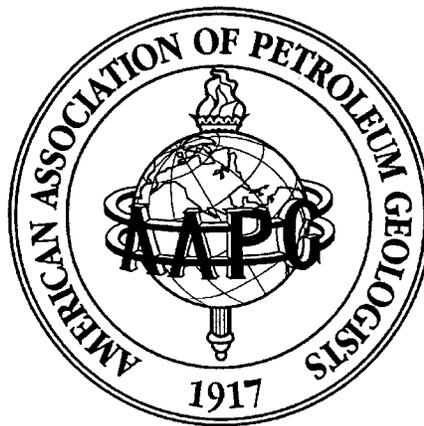
The 1002 area of ANWR, as well as the similar coastal plain area of NPRA should be open to exploration and development. The 1002 area represents less than 10 percent of the 19 million acres of ANWR and contains potential oil reserves of a range 11.6 to 31.5 billion barrels.

The Department of the Interior's management of the resources on public lands and the Rocky Mountain region and elsewhere needs to be reformed. We request that Congress reform both the Clean Water Act and the Endangered Species Act and thwart the EPA's efforts to severely regulate the use of hydrologic fluid borehole fracturing methods. No additional areas of public land should be removed from access, especially by the sole action of the President of the United States, until a proper assessment of their resource potential is conducted.

Lastly, petroleum exploration and production are extremely capital-intensive. Major tax reform that more fairly treats capital in its effort to find and development new sources of domestic oil and gas will dramatically help our ability to provide safer and more secure resources.

In summary, Mr. Chairman, without improved access to public lands and fairer tax and regulatory treatment, we will continue to jeopardize our nation's economic stability and, thus, our own national security.

[The prepared statement of Mr. Thomasson follows:]



Testimony of

M. Ray Thomasson
President, American Association of Petroleum Geologists

Before the

U.S. House of Representatives
Committee on Resources
April 12, 2000

**TESTIMONY PRESENTED BY
DR. M. RAY THOMASSON, PRESIDENT
OF THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS
BEFORE THE
HOUSE COMMITTEE ON RESOURCES
APRIL 12, 2000**

ECONOMIC STABILITY THROUGH ENERGY SECURITY

Thank you, Mr. Chairman for the opportunity to provide the view of the petroleum geology community on these important issues. My name is M. Ray Thomasson. I have been a professional geologist for 41 years, engaged in exploration and development for petroleum and natural gas. I am currently President of the American Association of Petroleum Geologists (AAPG), a professional organization composed of more than 30,000 geoscientists. These men and women are engaged in exploration and development of energy resources throughout the world, in research on new exploration and development concepts, and in the education of future geoscientists for the profession. The AAPG, founded in Tulsa, Oklahoma in 1917, was chartered to serve the profession through the identification and application of new science and technology for the discovery and production of hydrocarbon resources. The application of new exploration and development concepts has led to more efficient practices that have lowered the cost of produced products and significantly reduced the environmental consequences of such activities. The membership of AAPG is proud of their contributions in supplying the world with reliable and inexpensive energy, in developing new ways to do that job better, and in the education of new geoscientists to carry on the tradition.

I would like to note that AAPG is affiliated with the American Geological Institute, an umbrella organization representing the geoscience community with offices in the Washington, D.C. area, and acknowledge their assistance in the development of this presentation.

Mr. Chairman, crude oil, and more recently natural gas, have fueled the economic development of our country. The 200 million vehicles (cars, trucks, and busses) that traverse our streets and highways, the planes that transport us from coast to coast and around the world, the ships that bring passengers and goods to and from our shores, the factories and businesses that produce and distribute the products we use are powered in large measure by fossil fuels. Today, the average U.S. citizen uses about 26 barrels of crude oil and 84 thousand cubic feet of natural gas per year. Thus, the U.S. with less than 5 percent of the world's population consumes about 25 percent of the world's petroleum production. Compare that with the Far East with 40 percent of the world's population that has a per capita consumption of crude oil of less than one barrel per year and natural-gas consumption that is too small to measure. The mechanical and thermal energy as well as the products produced from these fossil fuels are important contributors to our standard of living. So, it should be no surprise to see other nations working toward similar goals. Thus, the competition for global supplies of oil and gas will increase dramatically as these emerging economies enter the consumer age.

Today, the U.S. imports more than one-half of our crude oil and refined products needs. That amount has increased substantially since our “energy crisis” of 1973. At that time our imports amounted to only 35 percent of our total demand. Yet, the result of an embargo by Arab producers was long lines at service stations with rationing of the amounts that could be purchased. The petroleum industry responded to that crisis with an increase in exploration and development. That effort resulted in a net increase in domestic production and a corresponding decline in imports. However, it is important to note that the response was not instantaneous. In fact, almost five years passed before such increases were realized (Figure 1). Construction of new rigs, training of crews, and the exploration process itself takes a long time. Today, we would be in substantially worse shape if such an event were to occur because since 1985 domestic production has declined at an annual average rate of 180 thousand barrels per day. It should be noted that masked in these data is the fact that the automotive industry substantially improved the mileage efficiency of the U.S. automotive fleet. While that had a major effect on transportation fuel demand during the years following the 1973 crisis, having been done, it is not likely to be achieved again to such a degree.

Natural gas underwent a similar decline in production following the energy crisis of 1973 because of myopic views that the U.S. was running out of gas. Actually, just the opposite is true, in that the North American natural gas resource base, unlike oil, is incredibly large and will be able to fuel our economic engine well into and probably through this century. Unfortunately, legislation was passed in the mid 1970s that substantially changed the economics of exploring for and developing natural-gas. The Fuel Use Act prohibited the use of natural gas for process heat in new facilities and Incremental Pricing passed on the increased costs of natural gas primarily to the industrial sector in an effort to reduce that consumption. These actions reduced the annual base load of natural gas for electric power generation and other industrial uses and essentially made natural gas a winter heating fuel. Thus, the substantial fluctuation in demand between summer and winter caused corresponding large fluctuations in price leading to declining economic performance, especially for small producers. Domestic production declined from 22.6 trillion cubic feet per year in 1973 to 15.8 trillion cubic feet in 1983. In the late 1980s, the industry increased drilling activities, propelled by rising commodity prices and the application of new technologies, and by 1997 production increased to 19.4 trillion cubic feet. Since then it has remained essentially constant. However, demand continued to rise to 22 trillion cubic feet in 1999. This increase in demand in excess of domestic production has been met with imports, largely from Canada.

Mr. Chairman, the questions that need to be asked are why is the domestic production of crude oil declining and why is the production of natural gas essentially flat? One answer that is commonly expressed is that the U.S. is running out of **opportunities** to discover new reserves of oil and gas. That statement is only partially correct. Please note the emphasis on opportunities. Because of changes in the tax code and increasing restrictions in access to public lands, the U.S. petroleum industry is facing declining opportunities to develop those commodities that are present.

However, some will argue that the resources are not there to be found. That is simply not true. From the first effort to estimate the U.S. resources to present, there have been numerous predictions about the demise of our supplies of petroleum and natural gas. Each

of those predictions has been proven blatantly wrong. An illustration of previous estimates of remaining crude-oil resources in the U.S. may help to understand this statement. Figure 2 shows 10 historical estimates of the ultimate size of the U.S. crude oil resource versus cumulative production. Note that the size of the resource has "grown" slightly faster than has cumulative production. What this illustration implies is that the more we learn about even the most mature petroleum-producing basins in the U.S., the more resources we discover. The resource has always been there; it is new science and technology that is permitting us to do a better job of assessing the economic amounts that are present. The most recent assessment by the U.S. Geological Survey, as have all prior assessments, demonstrates that the petroleum and natural-gas resource base is large enough to sustain an active domestic petroleum industry for many decades. The next assessment probably will demonstrate a similar growth because we are far from reaching the limit on the applications of new science and technology in the petroleum industry.

Mr. Chairman, the problems of accurately assessing remaining resources is particularly well shown in figure 3. In the 15-year period from 1985 to 2000, the estimates of remaining natural gas in the United States have grown from about 300 trillion cubic feet to more than 2,000 trillion cubic feet. The reason for this is displayed in figure 4 which shows that with increasing technological capability, the industry can economically recover an increasing volume of resources. This is, in large part why we have been able to date to meet the growing demand for natural gas in this country.

I want to caution you as well in your evaluation of the numbers you see for estimates of remaining oil resources. Most estimates, such as those made by Campbell and others, are for conventional resources. In fact, 65 percent of our production of oil today is from so-called unconventional resources. Because, with technology and experience, unconventional resources become conventional and our resource numbers continue to increase.

The real question, Mr. Chairman, is how important is domestic crude oil and natural gas? Is it important enough to permit access to prospective public-lands for exploration and development? Is it important enough to provide appropriate economic incentives for that development? Or, as the present policy seems to be, should we depend more upon other countries to supply our future petroleum needs and not encourage the development of our domestic resources. I need not remind you of the trauma faced by this country in our one experience with an energy crisis in spite of the fact that during that time we lost only 5 percent of our crude oil supply, the amount supplied by Arab OPEC countries. If a 5 percent decline could cause the problems that we had then, think of what would happen today if we lost our imports from the same sources as before.

Many will say that it could never happen again, but most did not believe that it would happen the first time. Witness the fact that we had no contingency for that event. Today, with more than 50 percent of our petroleum coming from non-U.S. sources, our strategic petroleum reserve would provide very little relief from a major disruption in supply, the reason for which it was established. In fact, it is a deterrent to our facing the reality of the situation because it is giving us a false sense of security. In addition, it is looked upon by some to be a quick fix for high oil prices rather than the supply security reserve it was established to be.

While crude oil remains a problem, natural gas is an entirely different matter. Crude oil and refined products can be moved between world markets with relative ease, but natural gas cannot. Natural gas is a North American continental commodity. The natural gas that we need must come from U.S. production as well as imported from our friendly neighbors in Canada and Mexico. Although, Mexico is not a likely source of supply in the foreseeable future. In fact, we are now exporting a small, but increasing, amount of natural gas to Mexico for the growing industrial development just south of our border.

The only alternative to these North American gas sources would be the importation of liquefied natural gas. The fully amortized cost of such gas would be in excess of \$5.00 per thousand cubic feet at present prices or essentially double the current market price for natural gas. The likely consumer outrage of having to pay that price would make the current concern over high gasoline and heating oil prices seem benign in comparison.

Mr. Chairman, assessments by the Gas Research Institute and the Energy Information Administration each show a demand for as much as 32 trillion cubic feet per year over the next 15 to 20 years. These forecasts are based upon rapidly escalating increases in usage of natural gas for electric-power generation and other industrial and commercial uses where a less polluting fuel is needed. This essentially is a 50 percent increase over current domestic production. At present levels of exploration and development activity, we are barely replacing our current annual production with newly discovered reserves. To increase that production by 50 percent over that time frame will require a very large increase in drilling activity.

Once before, the U.S. increased production of natural gas by that amount over a 15-year period. However, at that time we had a healthy petroleum industry with about 4,000 drilling rigs and access to prospective lands. Today, we have a substantially diminished industry with fewer than 1,000 active rigs and growing restrictions to prospective lands. If federal restrictions and regulatory burdens in accessing public lands continue as they are today, there is little chance that we will be able to achieve those projected higher production rates. In fact, we may be unable to sustain current levels of production beyond the next few years unless actions are taken now to increase access to public lands and improve economic conditions conducive for exploration and development.

To demonstrate that good things can happen when conditions are right, since 1967 in excess of 300 exploratory wells have been drilled within the offshore outer continental shelf waters of the Canadian Atlantic. To date, at least 12 trillion cubic feet of natural gas and 2 billion barrels of oil have been discovered. These discoveries have been off the Scotian Shelf, the Grand Banks and even the Labrador Sea. The Hibernia platform, 150 miles off the east coast of Newfoundland, is now producing more than 125,000 barrels of oil per day from a large platform on the prolific fishing grounds of the Grand Banks. Natural-gas production of 400 million cubic feet per day began at the end of last year from the Sable Offshore Energy Project, off the coast of Nova Scotia, just a few hundred miles north of Boston. A majority of that gas will be serving the New England market from these offshore production platforms. Assessments to date of the Eastern Canadian offshore indicate that the region contains in excess of 50 trillion cubic feet of natural gas and 10 billion barrels of oil. All of this is being accomplished within the prime commercial fishing waters and the pristine tourist coastlines of Eastern Canada. In fact, for more than thirty years

offshore exploration and production calmly have co-existed with tourism and commercial fishing for the betterment of all concerned.

Many experts agree that these types of oil and gas accumulations in the Eastern Canadian offshore extend south along the U.S. Atlantic from Georges Bank on the north to the Carolina Trough to the south, a distance of almost 1,000 miles. In fact, a recent major gas discovery announced by PanCanadian Petroleum of Calgary, in a long, subsurface carbonate reef-styled formation suggests to many that similar potential extends far down the East Coast of the United States, and perhaps even as far as Florida. Nova Scotia, like Florida and the other Eastern seaboard states, has a thriving tourism industry. Yet, tourism, fishing, and offshore petroleum production co-exist in a cooperative and even supportive environment. Simply put, Canada has been able to develop their precious resources in a safe and rational manner. Given our circumstances, especially with respect to natural gas, it is difficult to understand why we cannot do the same, especially since offshore natural gas development poses little threat to any coastline, and significant reserves have already been discovered off New Jersey and Florida years ago. We can do this in the U.S., if only we have the courage to work together as our Canadian neighbors have done among themselves.

Mr. Chairman, the National Petroleum Council has released recently a comprehensive assessment of the natural-gas supply and demand situation in the United States. I urge you and your colleagues to examine this document carefully because it contains valuable information that should have a bearing on matters before your committee. I wish only to summarize a few points from their extensive study. They conclude, as have others, that the resource base is sufficient to support the expected growth in demand. However, they note that a substantial portion of that resource base is, at present, either not accessible due to federal moratoria or accessible with onerous restrictions that destroy the economic viability of development (Figure 5).

The NPC study also notes that a significant increase in capital expenditures will be required to achieve the projected growth in natural-gas demand. For increased exploration and production alone, the capital expenditures will have to be increased from a current rate of about 32 billion per year to more than 50 billion per year by 2015 (Figure 6). Given today's financial climate, that will happen only if appropriate incentives are provided to the industry.

Mr. Chairman, I believe that we have provided information to demonstrate that the industry can and will be able to provide the oil and gas supplies needed by this Nation for the economic stability to permit continued growth and prosperity. However, to do so, the Congress must address two issues. These are improved access to public lands and appropriate incentives to provide for capital generation.

Public lands contain a substantial portion of the undeveloped oil and gas resources of this Nation. They have been under developed with respect to state and fee lands, and thus contain a disproportionate share of the remaining resource base. There are essentially two types of restrictions on public lands, non-accessible and accessible with restrictions. The offshore East Coast is an example of non-accessible lands and some of the Rocky Mountain basins are examples of accessible with restrictions.

The Canadian government has demonstrated its willingness to go forward with the development of its offshore resources, and that is being accomplished in a safe and compatible manner with the prime commercial fishing area of their country. They also enjoy a bountiful tourism industry, which is unaffected by this resource development activity. We believe the resources in the offshore of our East Coast and those of the Eastern Gulf should be opened to access as well. The concern over oil spills has been consistently overstated. Except for two incidents over the last 50 years, one off the coast of California over three decades ago and the other off Mexico in the 1980s, neither of which should have happened, all major spills have come from tanker accidents. Our risk exposure to future large tanker spills increases, given our increasing need for crude oil and refined product imports. The oil that we fail to produce in the U.S. will be delivered by an ever-increasing fleet of tankers with the corresponding risk of more such spills.

We believe that the 1002 area of the Arctic National Wildlife Refuge (ANWR), as well as the similar coastal plain area of the National Petroleum Reserve-Alaska (NPRA), should be opened to exploration and development. The 1002 area represents less than 10 percent of the 19 million acres of ANWR. Experts believe that it contains technically recoverable oil resources of 4.3 to 11.8 billion barrels. Less than 1 percent of the land within the 1002 area would be affected by petroleum exploration and development activities. The coastal plane of the NPRA, recently held back by the BLM from last year's lease sale at the instruction of the Secretary of the Interior contains at least an estimated 1.5 billion barrels. The Alaska pipeline, that has delivered a significant quantity of oil during its life span, is now down to transporting only about 1 million barrels per day. Unless new reserves are developed on the North Slope in the near future, the volume of oil that it carries will continue to decline. At some point, estimated to be about 600 thousand barrels per day, the operation will become uneconomic and will have to be terminated. At that point, based on present legislation, the pipeline may have to be removed. The adverse consequences of that for Alaska and the Nation would be substantial.

We believe that processes used by the Department of the Interior in managing the resources on public lands in the Rocky Mountain region and elsewhere need to be reformed with respect to petroleum exploration access and development. The extensive delays in granting access for exploration and in permits for pipelines to deliver natural gas to markets adds substantial costs to such projects to the point of making many uneconomical. The industry has repeatedly demonstrated the ability to operate in sensitive areas without damage to either the environment or the wildlife that inhabit those environments. Therefore, we would request that the Congress seriously consider reforming both the Clean Water Act and the Endangered Species Act, especially pertaining to wetlands designations, and create preemptive legislation to thwart the EPA's efforts to severely regulate the use of hydraulic fluid bore-hole fracturing methods. All three of these regulatory or legislative burdens significantly hinder the development of our Nation's energy supplies.

The total area of the U.S. Federal Outer Continental Shelf is about 2 billion acres, of which only about 2 percent has been leased. In its 1995 study, the Minerals Management Service assessed a mean undiscovered recoverable resource of 46 billion barrels of oil and 268 trillion cubic feet of natural gas. This is 2.5 times the offshore reserves found to date. Sadly, most of these public lands are now "off limits" for exploration and development.

Further, we believe that no additional areas of public lands should be removed from access, and especially by the sole action of the President of the United States, until a proper assessment of their resource potential is conducted. Such assessments must include the use of modern technology, including high resolution seismic exploration methods as well as all new methods of modern exploratory drilling technology to determine an area's potential for the development of existing natural resources.

Mr. Chairman, while I recognize that economic incentives are not within the scope of this Committee, I would like to add a few comments on this subject because it is equally important to the industry in meeting the substantial challenge of providing this Nation with needed future energy resources. Because of fundamental changes in the structure of the industry, many of our largest companies are devoting most of their attention to exploration and development opportunities overseas. Thus, the number and size of the operators that are left to develop the remaining resources in the U.S. are smaller on both accounts. Historically, small companies and independent operators have drilled most of the wells in the onshore of the U.S. In the future, we expect these operators to drill virtually all of the onshore wells. While most of the larger companies and a few of the smaller operators conduct exploration and development using internally generated funds, the vast majority must rely on external capital for such activities. In addition to those mentioned previously, we believe the following issues need to be addressed by the Congress:

- Examine the existing permitting process to make sure that permits are executed in a timely and reasonable manner.
- Establish certainty with respect to timing and area of off shore lease sales
- Restoration of the write-off of intangible drilling costs for the passive investor (doctors, lawyers, and other non-industry people).
- Eliminate the onerous Alternative Minimum Tax, which cripples investment.
- Expensing of delay rentals in the year incurred, not capitalizing them as currently required.
- Expensing of geological and geophysical costs.
- Make permanent the suspension of the net income limit for percentage depletion on marginal properties.
- Raise the depletion allowance provision to previous levels.

Petroleum exploration and production are extremely capital intensive and the role of taxation is critically important to the development of oil and gas resources. The U.S. tax code currently contains these onerous provisions which serve as major disincentives to these activities. Major tax reform that more fairly treats capital in its efforts to find and develop new sources of domestic oil and gas will dramatically help our ability to provide safer and more secure resources.

In summary, Mr. Chairman, I have attempted to provide a picture of our present energy situation, and the challenges that we face in meeting the demands for the future. With proper consideration by the Congress for those matters that need your attention, I am confident that the domestic petroleum exploration and production industry can deliver the oil and gas resources needed to help maintain this country on a course of continuing prosperity.

Absent attention to improved access to public lands and fairer tax and regulatory treatment to provide reasonable incentives and opportunities, we will continue to jeopardize our Nation's economic stability, and thus our own national security. Our continued inattention to these potentially dangerous problems, should concern us all. Time is running out. You need to act on these reforms soon. Let's make it happen!

ILLUSTRATIONS

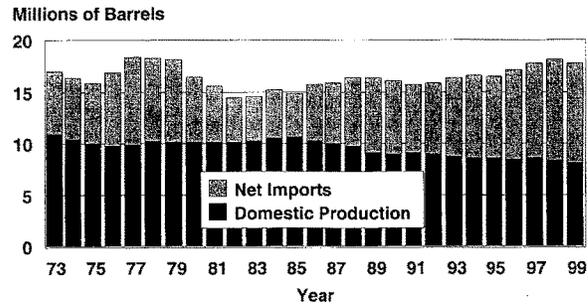


Figure 1. Production versus imports of petroleum from 1973 through 1999.

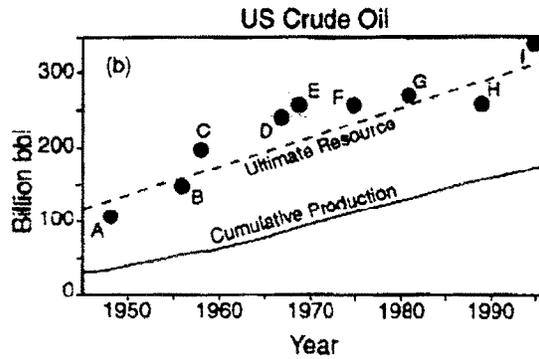


Figure 2. Graph depicting resource estimates of U.S. crude oil resources with respect to cumulative production. The estimates were made by various groups through time. The most recent (labeled I) is that of the U.S.G.S. and Minerals Management Service.

ESTIMATES OF REMAINING NATURAL GAS IN THE UNITED STATES

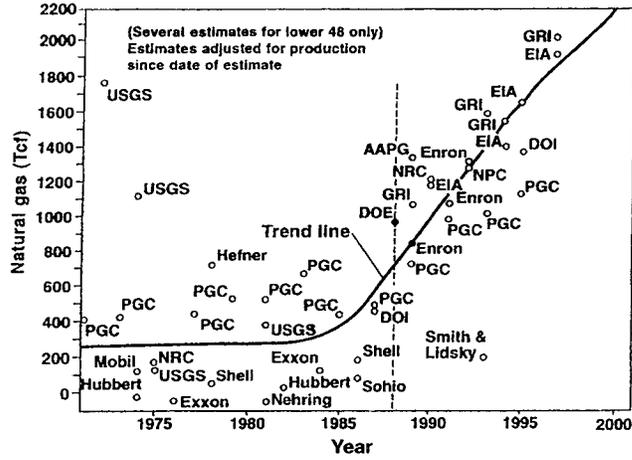


Figure 3. Estimates of remaining natural gas in the U.S. Estimates are from a variety of sources (Fisher, 1999).

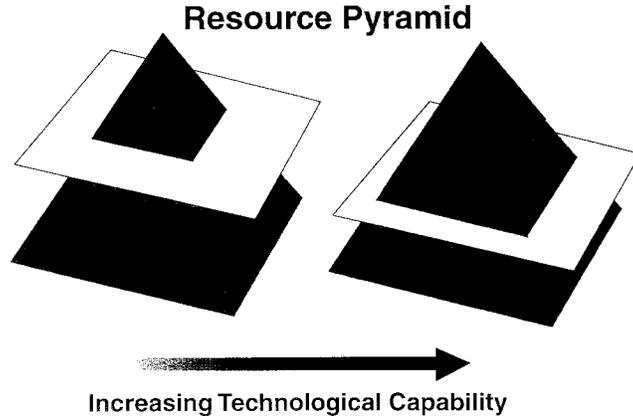
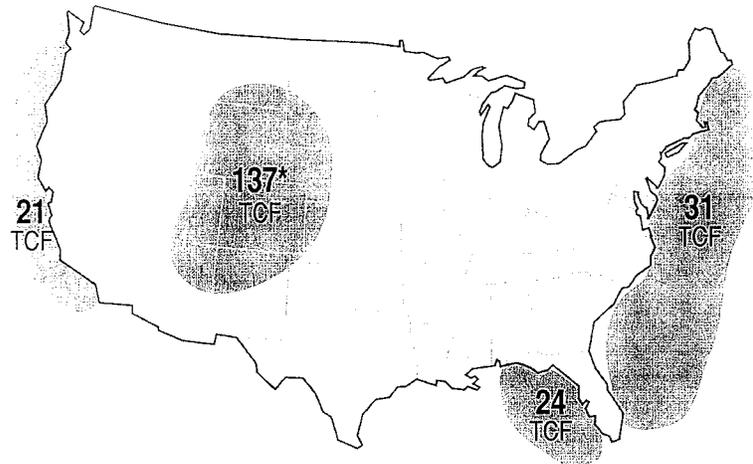


Figure 4. Resource pyramid showing an exponential increase in volume of resource due to increasing technological capabilities.

Figure 5. U.S. Lower-48 Natural Gas Resources
Subject to Access Restrictions



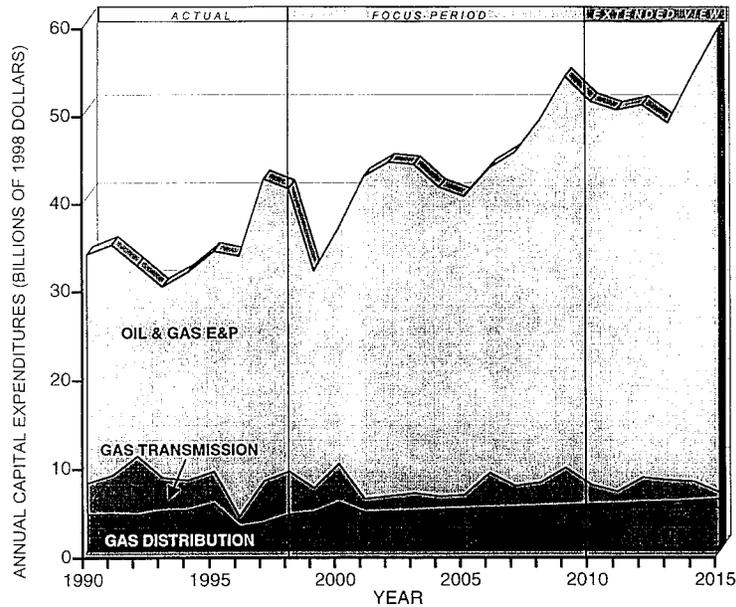
* Approximately 29 TCF of the Rockies gas resources are closed to development and 108 TCF are available with restrictions.

- Significant amount of resource is subject to access restrictions.
- These areas are close to large and growing population centers.

From NPC report on Natural Gas (12/15/1999)

Figure 5. An illustration from the report by the National Petroleum Council on Natural Gas showing estimated volumes of natural-gas resources that are subject to access restrictions.

Figure 6. Capital Required for Expansion



* Because "associated" natural gas is produced with oil, expenditures for oil and gas have not been separated.

- Substantial increase in capital expenditures will be required.
- Total capital expenditures for 1999-2015 will be \$785 billion.

Source of historical data: *AGA Gas Facts-1998*, and estimates from EEA, Inc.
 From NPC report on Natural Gas (12/15/1999)

Figure 6. An illustration from the National Petroleum Council report on Natural Gas showing the estimated increase in required capital to develop the projected demand for natural gas supplies.

The CHAIRMAN. Thank you, Doctor, and I do appreciate that you restated some of the comments made previously and I think the trend here is exposing itself and, hopefully, we can recognize it. We have two choices. One is to become self-sufficient or somewhat self-sufficient or to continue down that path of responding to the foreign countries. So I do thank you for your testimony.

Robert.

STATEMENT OF ROBERT E. EBEL

Mr. EBEL. Thank you very much, Mr. Chairman. Let me begin by noting that the general public's view of developments in the world oil market is very limited. It's limited to that little window on the gasoline pump at their favorite filling station. If the price per gallon is essentially unchanged since the last visit, then what's the problem? If the price happens to be a little bit higher each time they visit, then what are the oil companies doing to us now? The question of where that oil comes from is rarely if ever raised. Oil is oil and what matters is the price at the pump.

Policymakers do understand that our increasing reliance on imported oil threatens our national security. Three findings to that effect have been made in the past 12 years. But what to do about that increasing reliance? The answer from our government has been that present policy suffices, or words to that effect. That is, yes, there's a problem but don't expect any actions from your government which might help alleviate the situation.

But just what are these present policies? Our energy policy continues to be guided by two considerations. First, that the marketplace make the decisions and, second, U.S. companies are encouraged to search for oil outside the United States, but away from the Persian Gulf. Do we let the marketplace make the decisions? Of course not. That's an opportunity which governments cannot afford to bypass.

It seems to me a bit incongruous that our government encourages the search for oil outside the United States. To take that posture means we have consigned ourselves to greater and greater dependence on foreign oil. That means that oil exploration dollars are spent, but outside the United States. And that means, in effect, we have given up on ourselves.

Should we give up on ourselves? I think not. We all know individuals who have had great potential, but for some, they've never been able to live up to that potential. Nations are much the same way, having a recognized potential is not necessarily a guarantee of success. You have to work at it to develop their potential. Perhaps the most disappointing are those who turn away from what might have been. How can it be that the world's sole super power finds it so easy to turn its back on its inheritance?

What might happen if we would reverse our policy and encourage the search for oil and gas in the U.S. with our potential fully available for exploitation, rather than locked away? What will it take? Another oil embargo like we had in 1973, 1974?

Our energy policy is one-sided and inward-looking. Where were we, when the price of oil had fallen to \$10.00 a barrel? We were rejoicing because cheap oil helped fuel our great economic growth.

Did we care about the exporters facing financial difficulties? No, that was their problem, not ours.

But when they took collective action to raise prices, success probably surprised them as much as it did us. We watched over the months as prices tripled to \$30.00 a barrel. Now the problem became not one for the consumers, but for the producers as well, because they had to look at the impact of these high oil prices.

The U.S. is considered vulnerable because of our steadily rising dependence on foreign oil. And the oil exporters have a vulnerability of their own and that's their heavy reliance on oil-derived revenues. Few have diversified economies and few have even tried to diversify. Oil is their strength and their weakness and we should not be surprised when oil is used to express that strength or to overcome that weakness.

Mr. Chairman, whenever oil prices are rising, like the one we're in today, we reach for that shelf entitled project independence and we dust off the remedies of opening up prospective lands, now denied, for exploration. We take a second look at alternative forms of energy and we once again discuss the need to become more efficient in our use of oil.

But then the crisis passes, as this one will. And the remedies are returned to the shelf to once again gather dust to be revisited upon the time of the next crisis, which will surely appear but I don't know when or in what form. Mr. Chairman, in conclusion, I must ask the question when will we ever learn to act rather than react?

Thank you. And I would ask that my oral statement be entered into the record.

The CHAIRMAN. Without objection, so ordered. And thank you, Robert. Jerry.

STATEMENT OF JERRY JORDAN

Mr. JORDAN. Yes, Mr. Chairman, members of the committee. I am Jerry Jordan, chairman of the Independent Petroleum Association of America, IPAA. Today I'm testifying on behalf of the IPAA and the National Stripper Well Association and 32 cooperating associations, State and regional associations, around the country. These associations represent thousands of independent oil and natural gas producers in the country. Independents drill 85 percent of the wells drilled in the United States and produce two-thirds of the natural gas.

These hearings have been triggered by the recent OPEC actions and the price increases that changed the price of gasoline, diesel, and heating oil. So what happened and how can we avoid a repeat?

We have an economy that's based on petroleum, as you already heard, crude oil and natural gas. Petroleum remains the predominant energy source and will continue to do so for the future, at least the foreseeable future.

Domestically, we import over 55 percent of our crude oil demand. Natural gas, on the other hand, is largely a domestic resource with imports mainly from Canada. In the future, domestic oil and natural gas production will be more and more dependent on a healthy independent exploration and production industry. Major oil companies began shifting their exploration efforts overseas after the oil price crisis in 1986 and this pattern will probably continue.

Oil prices are set on the world market. The U.S. is a price taker as we've just recently found out. Independent producers are the most vulnerable to shifts in prices. We were damaged most severely during the low oil price crisis of 1998 and 1999. We are recovering slowly, but we need stability and we need policies designed to bolster our industry. It is critical to our country.

Our current energy policies make no sense. We rely too much on foreign oil and too little on our own resources. We talk about shifting to a broader use of natural gas, but we are constantly thwarting those producers who are exploring for gas. We need different policies, but, of course, as always, there's no single answer.

The previous testifier said he didn't know when the next crisis is going to be. I think I can predict that we will have at least a mini-crisis within the very foreseeable future because our natural gas demand and our natural gas supplies and decline curves on the wells that are producing in this country and offshore are heading for a collision. I don't mean it's going to be some big energy crisis. I don't know how bad it's going to be. But I think it will at least cause price increases and I think you ought to be warned of it. And I want to take the time out of my testimony to raise that question, since he said that.

I think our solutions are, first, we do have to continue to work with the foreign producer nations, as we have been doing. Second, we must start treating the domestic oil and natural gas production industry as a critical element of our national economic security. To do this, we must direct our efforts to the two areas which can have the greatest effect: access to government-controlled lands and water for exploration and production and access to capital.

With regard to land access, this committee's jurisdiction, of course, is at the heart of the developing policies on this question. Unfortunately, the administration not only avoids dealing with the clear need to allow exploration and production on Federal lands, both off and onshore, it seems to be dedicated to expanding the restrictions and prohibitions. In doing so, it is attempting to take additional western and offshore areas out of our exploratory inventory. This practice is going to cause large problems for our country as we attempt to meet our natural gas demands.

There have been successes, as described by Senator Johnston when he talked about the Deepwater Royalty Relief Act. That was a great success and, obviously, that should be pursued for renewal.

Mr. Hayes in his testimony, I think, showed that if you open it, they will come, interestingly enough. They simply aren't opening enough. And I thought his testimony actually proved our points better than his points.

What can we do? No one can expect that the long list of restrictions and limitations can be instantly revised. We're not dealing with one particular action on the restrictions to access. We're dealing with a whole series of actions. We're dealing with permit restrictions. We're dealing with prohibitions, moratoriums. It takes many, many forms. And they're very hard to fight because of this.

We do things like declare areas to be roadless areas. I happen to think, as a recovering lawyer, that I don't think you can do that, to take a multi-use property and then say, well, you can't really use it for the purposes intended because we won't let you build roads.

And we intend, I intend, to advise that we ought to test that in court if it actually happens. But these are the kinds of things that we face and they are very complicated and there's a number of them.

We first need to do an inventory, as this committee has recommended, an inventory of the properties that are being taken off the list of available Federal lands and Federal waters. Second, we need to make a clear list of the impediments that we are encountering, all the laws, regulations, permitting regs, all the environmental requirements, and basically take an inventory of them as well as the lands.

Finally, we must promptly open up the areas in the West which have been restricted. And we must stop the additional moratoriums. I don't know what the plural of moratorium is, but we must stop these actions that have been taking place and look like they're going to take place more in the next year.

Finally, with regard to capital, I would be remiss if I didn't mention a unique opportunity that we have. For the first time, we have an administration, as evidenced by statements of the President in his recent radio broadcast and also the Secretary of Energy, the industry, Members of Congress, all seem to think that we ought to do this little package of tax features or tax reform that have already been discussed. We ought to do that right now.

And we ought to do it with a rifle-shot approach, not a shotgun. Don't hang all the other things on it that make it lose. We have agreement among all these different interests on those issues and it won't be a solution, but it will help bring capital to our industry. And, other than land access, capital is the biggest problem we have.

I know I've overstayed my time and there are other things I could say, but thank you for the opportunity.

[The prepared statement of Mr. Jordan follows:]



STATEMENT OF JERRY JORDAN
FOR THE
INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA
AND THE
NATIONAL STRIPPER WELL ASSOCIATION
AND

California Independent Petroleum Association	Michigan Oil & Gas Association
Colorado Oil & Gas Association	Mississippi Independent Producers & Royalty Association
East Texas Producers & Royalty Owners Association	Montana Oil & Gas Association
Eastern Kansas Oil & Gas Association	National Association of Royalty Owners
Florida Independent Petroleum Association	Nebraska Independent Oil & Gas Association
Illinois Oil & Gas Association	New Mexico Oil & Gas Association
Independent Oil & Gas Association of New York	New York State Oil Producers Association
Independent Oil & Gas Association of Pennsylvania	North Texas Oil & Gas Association
Independent Oil & Gas Association of West Virginia	Ohio Oil & Gas Association
Independent Oil Producers Association Tri-State	Oklahoma Independent Petroleum Association
Independent Petroleum Association of Mountain States	Panhandle Producers & Royalty Owners Association
Independent Petroleum Association of New Mexico	Pennsylvania Oil & Gas Association
Indiana Oil & Gas Association	Permian Basin Petroleum Association
Kansas Independent Oil & Gas Association	Tennessee Oil & Gas Association
Kentucky Oil & Gas Association	West Central Texas Oil & Gas Association
Louisiana Independent Oil & Gas Association	Wyoming Independent Producers Association



NATIONAL STRIPPER WELL ASSOCIATION

Testimony
Of
Jerry Jordan
On Behalf Of The
Independent Petroleum Association of America
And The
National Stripper Well Association
Before
The Resources Committee
U.S. House of Representatives
April 12, 2000

Mr. Chairman, members of the committee, I am Jerry Jordan, President of Jordan Energy, Inc. of Columbus, Ohio. Today, I am testifying on behalf of the Independent Petroleum Association of America, the National Stripper Well Association, and 32 cooperating associations of the IPAA that represent state and regional interests. These organization represent independent oil and gas producers, the segment of the industry that is damaged the most by the lack of a domestic energy policy that recognizes the importance of our own national resources. NSWA represents the small business operators in the oil and natural gas industry, producers with "stripper" or marginal wells.

This Committee's jurisdiction is fundamental to addressing one of the key issues facing the domestic oil and natural gas industry in improving domestic oil and natural gas production – access to natural resources. However, before I address this specific issue it is essential to understand the current state of domestic energy and its production. We have an economy that is based on energy – from transportation to manufacturing to the Internet. More specifically, it is based on petroleum – crude oil and natural gas. And, like it or not, despite all the efforts to change the mix of energy sources, petroleum remains the predominant source and will continue to do so for the foreseeable future.

Domestically, we import about 56 percent of our crude oil demand. The issue is how to try to limit our foreign dependency and to emphasize the most reliable of our foreign suppliers. Natural gas – on the other hand – is largely a domestic resource, and imports are mainly from other North American sources. In the future domestic oil and natural gas production will be more and more dependent on a healthy independent exploration and production industry – major oil companies began shifting their new production from the United States after the oil price crisis in 1986, and this pattern will continue.

Oil prices are set on a world market. The U.S. is a price “taker.” Independent producers are the most susceptible to shifts in prices. We were damaged the most severely during the low oil price crisis of 1998-99. We are recovering slowly, but we need stability and we need policies designed to bolster of our industry because it is critical to our country.

The current situation is not stable and we need to understand how vulnerable the US economy is to decisions by foreign governments. As a result of the extended low oil prices in 1998-99, capital investment in oil production throughout the world declined. Existing production was lost. In the U.S., production dropped from 6.5 million B/D to 6.0 million B/D. Worldwide, new projects were delayed which limited increases in production capacity. Meanwhile, demand continued to increase.

Excess near-term capacity worldwide is limited. Experts placed it between 3 and 4 million barrels per day before the recent OPEC action – probably closer to the lower figure. Everyone is still trying to assess exactly what production increases will result from OPEC’s decisions. But, the key point is that – in the short term – the world is not awash in oil that can be supplied by opening the spigots.

Moreover, the wild card becomes Iraq. In late May or early June, the UN sanctions review is scheduled. If Iraq pulls its exports off the market – as it has before – prices can again increase to well above current levels. Depending on the severity of the situation, the United States’ only recourse could be use of the Strategic Petroleum Reserve – and that is not a long term solution. It is this threat that argues against releases from the Strategic Petroleum Reserve to respond to the price spikes that have now been eliminated, or swaps of crude oil today that may be needed in the future.

Clearly, Saddam will use his country's oil resources to try to extricate Iraq from the straight jacket of UN sanctions. Many knowledgeable experts already want to end the sanctions. If Iraq withdraws its oil from the market, it could erode what little resolve exists in the world to constrain his actions. Then, Iraq will be in a position to sell as much oil as needed to rebuild its oil industry, its armaments, and worst of all, to terrorize the world with its weapons of mass destruction.

Taken together, this shows that this important factor of our economy is in the hands of foreign rulers. We end up relying on a kingdom in Saudi Arabia to work with a radical Iranian government to stabilize oil prices. We have effectively handed Saddam Hussein the control of world oil prices that he sought when he invaded Kuwait.

These policies make no sense. But, if not these policies, what should we do? There is no single answer.

First, we must continue to work with foreign producer nations to move toward oil policies that produce the stability needed to maintain and enhance our domestic production. And, as we do, we cannot assume that other countries are willing to sacrifice their national incomes to meet our expectations that product prices should be low in the U.S.

Second, we must develop better policies to enhance and maintain domestic oil and natural gas exploration and production – we need both. Frequently, oil and natural gas are discovered and produced together. We must begin treating domestic oil and natural gas production as a critical element of national economic security. To do this at the federal level we must direct our efforts at the two areas where they can have the greatest effect – access to capital and access to domestic natural resources from government controlled lands and waters.

Land Access

This committee's jurisdiction is at the heart of developing policies that address the complicated issues of access to the nation's resources under government controlled lands. Recent successful laws that have addressed access are the Deepwater Royalty Relief Act, The Royalty Fairness and Simplification Act, and moratoriums on rules for illegally assessing new oil royalties. We are pleased to announce that in a recent decision, *IPAA v. Armstrong*, the District Court ruled that in fact the government doesn't have the legal right to require producers to market at no cost to the lessor, a matter at the heart of the oil royalty rulemaking. These actions have enhanced the development of federally controlled resources.

The legislative requirements of the Deepwater Royalty Relief Act are expiring. The authority to continue royalty relief will rest in the hands of the Minerals Management Service. IPAA believes it is critical to continue to provide a royalty structure that encourages offshore development. The Deepwater Royalty Relief Act has proven that its approach works. However, while its benefits have largely flowed to the major integrated oil companies, independents are now moving more aggressively into the offshore generally and the deepwater more specifically. Major integrated companies are moving toward the ultra-deep water where their cutting edge technologies are allowing them to go. IPAA and other associations, and companies involved in the offshore have begun working with MMS and the DOE to look at how royalty policies can enhance domestic offshore production. Hopefully, these efforts will lead to administrative actions to create a royalty structure throughout the offshore that will enhance domestic production. However, if this result does not occur, this committee should revisit and revitalize the Deepwater Royalty Relief Act.

At the same time it is equally important to recognize that a larger aspect of access to natural resources involves opening access to that which is not now available and halting the trend of further embargoes of western lands. Unfortunately, the Administration avoids dealing with the clear need to open federal lands to exploration and production. It hides behind an environmental sensitivity argument that is proven wrong by its own DOE report. It focuses on arguments against opening ANWR and avoids dealing with access issues offshore and in the Rockies where its own National Petroleum Council *Natural Gas* study concludes that over 200 trillion cubic feet of natural gas is either off limits or difficult to permit.

It is important to understand that access issues differ between these areas. ANWR and offshore activity off of California, the Eastern Gulf of Mexico, and the Atlantic are constrained by policy decisions, both executive and legislative, through prohibitions and moratoriums. These are based on outdated reactions to spills occurring in the past. The Administration's own study, *Our Ocean Future*, concluded unequivocally that offshore oil and natural gas production is a success story. We need to move into the 21st century and make enlightened decisions to use these critical national resources.

Access in the Rockies won't be resolved by a single act. Here, we are dealing with a mosaic of limitations. Some involve land that is completely excluded from oil and natural gas exploration and production.

- The Antiquities Act of 1906 has been used to declare areas as national monuments placing land completely off limits.
- In other areas, the Department of Agriculture is proposing to expand roadless areas in national forests that will preclude oil and natural gas development.

- Some national forests, like the Lewis and Clark National Forest, projected to be a world class gas source, have been administratively closed to oil and natural gas development
- Wilderness areas have been created without an understanding of the resources that might be lost.

We must also deal with permitting limitations and other indirect actions of federal agencies.

- Because these are federal lands, it is necessary that federal agencies issue permits for the exploration and production activities. These agencies are charged with the task of developing environmental management plans for areas under NEPA. NEPA can be used to create effective, environmentally sound management plans, or it can be used to delay and deny access. Frequently, the results reflect the attitude of the agency and its leaders. For example, in the Powder River basin the development of coal bed methane has first been delayed by the inability of the BLM to process permits. But, as the magnitude of effort was more clearcut, BLM fell back to the excuse that the EIS for the area was outdated and required a new plan under NEPA. This has led to further delay. BLM then argues it needs additional funds, requiring Congress to act and resulting in further delay. In the San Juan basin, BLM has tried to argue that its management plan needs updating and permitting needs to be delayed until another plan can be developed despite repeated assessments of the plan that demonstrate its adequacy.
- NEPA is only one of many laws that are involved in the planning or permitting processes and BLM is only one of the agencies that must be dealt with. Others

include the Endangered Species Act and the Fish and Wildlife Service, the Clean Water Act that can involve both the Environmental Protection Agency and the Corps of Engineers when wetlands are concerned, and even the Clean Air Act.

- For example, many areas in the Rockies are limited during certain times of the year because of management plans designed to protect various species. While each plan individually provides opportunities for resource development, collectively, they interact to effectively prohibit oil and natural gas extraction.

If we are to provide the country with the domestic energy it deserves, we need to create national policies that allow environmentally sound development of these resources. No one can expect that this mosaic of limitations can be instantly revised, but we need to start the process.

First, we can determine where the most likely resources lie. Congress should compel the development of such an inventory, an action advocated by this committee. When actions like this have occurred in the past, they allow the disputes to be better focused. They allow the issues to be discussed in a real rather than hypothetical context. And, this can lead to real solutions for specific areas.

Second, we need a clear understanding of the impediments that we are encountering. We need to know how many laws, regulations, conflicting management plans, and whatever else are in play. This perspective is essential to provide a real sense of how these actions can result in effectively foreclosing any development. A recent assessment of one area of the Rockies showed how a mixture of management plans for various species effectively foreclosed any oil or natural gas development, but no single plan would result in such denial (a graphical presentation is attached to this testimony).

Third, we cannot expect to meet our nation's needs for clean burning natural gas without reasonable access to the resource. The NPC *Natural Gas* study and all other analyses conclude that the Rockies contain significant extractable reserves of natural gas. Yet, in the Rockies access is being limited. It is either the unanticipated outcome of laws, regulations, and plans that unintentionally deny access or the manipulation of these laws to produce that outcome. In either case, access limitations are not the result of a clear policy decision. Consequently, we need a commitment from Congress and the Administration that these types of constraints will be eliminated or restrained and proper funding will be provided a continued basis to allow environmental documents, leases, and drilling permits in a timely fashion..

Clearly, there are environmental extremists who will not support this essential development. But, as the DOE has demonstrated in its report, it can be done and in an environmentally sound manner. It will take effort, and it will also take courage.

Access to Capital

The federal government also needs to look at actions it can take to improve capital flow into this critical industry. Generally, there are two areas for possible action – tax reforms and federally backed financial instruments. The most immediate focus is on tax reforms.

Following his recent radio address, President Clinton released documents indicating that he intended to propose legislation to allow expensing of geological and geophysical (G&G) costs and of delay rental payments. These are sound first steps, but more must be done.

He also indicated that he was evaluating proposals dealing with marginal wells. Action regarding these wells is essential to preserve existing production and we believe there are four key elements that should be enacted immediately:

- A 5-year net operating loss carryback;
- Eliminating the net income limitation on percentage depletion for marginal wells;
- Eliminating the 65 percent net taxable income limit on percentage depletion; and,
- Creating a countercyclical marginal wells tax credit.

All of these have been introduced or passed in some form over the past two plus years. Most recently, Senator Kay Bailey Hutchison introduced S. 2265 incorporating the expensing proposals and the marginal wells tax credit in one bill. We are at a rare juncture. Both Congress and the Administration are moving in the same direction regarding tax reforms for domestic oil and natural gas exploration and production. Both are looking toward such provisions that will encourage exploration. Both are looking at ways to extend the life of domestic marginal wells – our true strategic petroleum reserve. Now is the time to act.

Will these steps guarantee that domestic production will rebound? Nothing is certain but it will guarantee that more capital will get into this industry when it is needed. And it will avoid the mistakes of 1986 when Congress enacted Alternative Minimum Tax provisions, just as the industry needed capital to rebound from low oil prices. This was one of many factors that have resulted in the loss of about 2 million barrels per day of domestic production from 1986 to 1997.

This is not all that we need to do. We should also look at other tax reforms that can help bring capital to this industry like modification of the AMT. And, we should look at federal financial instruments like the PADDIE MAC concept that would create a FANNIE MAE-like program to help lower the capital costs to the smaller producers so essential to maintaining the nation's marginal wells.

But, right now, some of the keys are available to improve the status of domestic oil and natural gas production. And, we should use them.

The CHAIRMAN. You notice I didn't hit the gavel, Jerry.

Mr. JORDAN. I know.

The CHAIRMAN. The next one is Howard Geller, executive director of American Council for an Energy-Efficient Economy.

STATEMENT OF HOWARD GELLER

Mr. GELLER. Thank you, Mr. Chairman. I'm Howard Geller, the executive director of the American Council for an Energy-Efficient Economy, a non-profit organization based here in Washington.

In my oral statement today, I would like to make four points. One, domestic oil production in the United States is falling and will continue to fall, with or without opening the Arctic National Wildlife Refuge to petroleum exploration.

Two, growing oil imports is a serious threat to national security and our economic well-being.

Third, reducing consumption of petroleum products through improving the fuel economy of new vehicles is our single most effective and desirable strategy for cutting oil imports.

And, fourth, tougher fuel economy standards should be adopted to increase the efficiency of new vehicles.

Total crude oil production in the United States peaked in 1970 and generally has been falling since then, as I show in figure one in my testimony. Domestic crude oil production in 1999 was 39 percent less than peak output 30 years ago. This has occurred because we are running out of economically recoverable oil in the United States. Furthermore, the Department of Energy and many other organizations project that domestic crude oil production will continue to fall in the future.

I am not an expert on the potential costs and benefits of allowing oil production in the Arctic National Wildlife Refuge, but one thing seems clear. Opening up ANWR to oil production would not make a significant contribution to curtailing our growing dependence on oil imports.

As Mr. Hayes has stated, the U.S. geological survey estimates that there are 2.4 billion barrels of economically recoverable oil under ANWR at an \$18 per barrel market price. If this amount of oil is produced over 25 years, additional oil production from ANWR would average 0.26 million barrels per day. Even assuming twice as much economically recoverable oil, ANWR production would average only 0.53 million barrels per day. And total domestic oil production in the year 2010, in all likelihood, will be less than it was in 1999.

The Congress should be concerned that oil imports are high and growing. We and our allies are dependent on unstable nations for our vital oil supplies and our economy is vulnerable to another oil price shock. Even without a price shock, the Department of Energy projects that our oil import bill will climb from \$60 billion in 1999 to \$110 billion by the year 2010.

Unlike the poor prospects for increasing domestic oil production, there are good prospects for reducing oil demand by raising the efficiency of our vehicle fleet. In fact, if we had the foresight and political will to steadily increase the fuel economy of new vehicles sold in the United States during the past 12 years, as we did dur-

ing 1975 to 1987, we probably would not have experienced the recent run up in oil prices.

Of course, we can't go back and redesign the vehicles sold over the past 12 years. But we can enact policies today to ensure that vehicles sold during the next few decades are gas sippers rather than gas guzzlers. Tougher CAFE fuel economy standards are essential for significantly increasing new vehicle efficiency.

Independent analyses, including those from our national laboratories, have concluded that the initial CAFE standards were largely responsible for the near-doubling in the average fuel economy of cars and a more than 50 percent increase in light truck fuel economy from 1975 to 1987, resulting in oil savings of over 3 million barrels per day. The standards were met largely through better technologies without negative side effects.

We recommend increasing the current fuel economy standards by 60 percent to 44 miles per gallon for cars and 33 miles per gallon for light trucks by 2012 with further increases at the rate of 2 1/2 percent per year beyond this date. Car manufacturers say it can't be done or it will cost a fortune, as they did when the original CAFE standards were debated. But policymakers and the Congress and the Ford Administration enacted standards in 1975 in the face of industry opposition and the car companies complied at reasonable cost. Tougher standards are now long overdue and should be adopted before we face another oil price shock.

We estimate that tougher fuel economy standards I just referred to would reduce gasoline consumption by 1.5 million barrels per day by 2010 and over 4.5 million barrels per day by 2020. With this level of savings, oil import growth would be moderated during this decade and imports would then fall after 2010. The potential oil savings from such standards far exceed the potential oil supply from opening ANWR to development, as I show in figure four of my written statement.

The CHAIRMAN. How much more time do you have?

Mr. GELLER. Let me just conclude here and say that increasing vehicle fuel economy was our key response to the oil crises of the 1970's. This strategy can and should be applied again to avoid new oil crises in the 21st century.

Thank you and that concludes my statement.

[The prepared statement of Mr. Geller follows:]



American Council for an Energy-Efficient Economy

WASHINGTON, DC

TESTIMONY OF HOWARD GELLER, EXECUTIVE DIRECTOR
THE AMERICAN COUNCIL FOR AN ENERGY-EFFICIENT ECONOMY (ACEEE)

BEFORE THE COMMITTEE ON RESOURCES
U.S. HOUSE OF REPRESENTATIVES

ON NATIONAL SECURITY AND STRATEGIES FOR REDUCING OIL IMPORTS

April 12, 2000

ACEEE is a non-profit organization dedicated to increasing energy efficiency as a means for both promoting economic prosperity and protecting the environment. We were founded in 1980 and have contributed to key energy legislation adopted during the past 20 years, including the Energy Policy Act of 1992 and the National Appliance Energy Conservation Act of 1987. I appreciate the opportunity to appear before the Resources Committee. In my testimony today, I would like to make the following points:

- (1) Domestic oil production in the United States is falling and will continue to fall, with or without opening the Arctic National Wildlife Refuge (ANWR) to petroleum exploration.
- (2) Growing oil imports is a serious threat to national security, consumers, and our economy.
- (3) Reducing consumption of petroleum products through improving the fuel economy of new vehicles is our single most effective and desirable strategy for cutting growth in oil imports.
- (4) A combination of tougher fuel economy regulations, tax incentives, and other measures should be adopted to increase the efficiency of new vehicles.

Domestic oil production in the United States is falling and will continue to fall.

Total crude oil production in the United States peaked in 1970 at 9.6 million barrels per day (MBD) and has been falling steadily since then (EIA 1999a). Domestic crude oil production in 1999 was about 5.9 MBD, nearly 39 percent less than the peak output of 30 years ago (see Figure 1). Net imports (imports minus exports) now represent over half of the oil products consumed in

United States, due to both rising demand and falling domestic production. Furthermore, our oil import dependence is rapidly rising.

The prospects for reversing this situation do not look good because we are running out of economically recoverable oil in the United States. In its most recent baseline Reference Case forecast (see Figure 1), the U.S. Energy Information Administration (EIA) projected that total domestic crude oil production will fall to 5.2 MBD by 2010 (EIA1999b). Assuming growing demand for oil products under “business-as-usual” policies and trends, the import share of oil products supplied is projected to reach 60 percent by 2005 and 64 percent by 2020.

We cannot produce our way out of this high dependence on oil imports. Even if oil prices remain relatively high, the domestic supply picture will not change much. At a world oil price of \$26.30/bbl instead of \$21/bbl (in 1998 dollars), the EIA projected that domestic crude oil production in 2010 would equal 5.5 MBD instead of 5.2 MBD. Our import share in 2010 would still be 62 percent in this high oil price scenario (EIA 1999b).

I am not an expert on the Arctic National Wildlife Reserve. I do not have an opinion on how much oil would actually be produced if ANWR is opened to development, and I do not know how much opening ANWR to development would harm the wildlife living there and the environment. But one thing seems clear—opening up the ANWR to oil production would not make a significant contribution to curtailing our growing dependence on oil imports. The U.S. Geological Survey (USGS) recently estimated that there are 2.4 billion barrels of “economically recoverable” oil under the ANWR tundra at an \$18/bbl market price (1996 dollars) (Hayes 2000). If this amount of oil is produced over a 25-year period, additional oil production from ANWR would average 0.26 MBD. Even assuming twice as much economically recoverable oil as this USGS estimate (which would be consistent with a significantly higher world oil price), ANWR production would average only 0.53 MBD. Even with this optimistic level of production from ANWR, total domestic oil production in 2010 would still be less than in 1999 and oil imports would continue to rise during the next 20 years, based on other assumptions in the EIA Reference Case forecast.

Growing oil imports is a serious threat to national security, consumers, and our economy.

The Administration and Congress should be concerned that our oil imports are high and growing. In the EIA Reference Case forecast, our oil import bill is projected to climb from \$60 billion as of 1999 to \$110 billion annually by 2010 and \$138 billion by 2020. This forecast assumes a relatively moderate world oil price of \$21/bbl (in 1998 dollars) in 2010. If the world oil price stays around \$25/bbl or climbs higher due to monopoly price control or future Middle East crises (as it very well may), our annual oil import bill could reach \$150-200 billion.

We and our trade allies are dependent on unstable nations and regions for our vital oil supplies. Our economy is vulnerable to another oil price shock. Besides the direct cost of importing oil and its contribution to our massive trade deficit, we need to spend additional tens of billions of dollars per year to help defend oil-producing nations and protect oil supply routes. And at times we need to go to war to defend our oil supplies, as was the case in 1991.

The recent run-up in oil prices demonstrates the risk and potential harm from our high and growing oil import dependence. The United States is sending an additional \$50 billion per year to foreign oil producers (or about \$500 per household per year), with gasoline costing about \$1.57 per gallon on average instead of the \$1.00 or so per gallon being paid a short time ago. This is the “OPEC tax” we are now paying by allowing OPEC to regain its grip on world oil prices.

Reducing consumption of petroleum products through improving the fuel economy of new vehicles is our single most effective option for cutting oil imports.

The recent oil price run-up is due in no small part to the growth in consumption of petroleum products—mainly gasoline and diesel fuel—in the United States during the past 12 years. Gasoline and diesel fuel account for about 55 percent of total U.S. oil consumption. The average fuel economy of new passenger vehicles (cars and light trucks) declined from a high of about 26 miles per gallon (mpg) in 1988 to about 24 mpg in 1999, due to increasing vehicle size and power, the rising market share for light trucks, and lack of tougher fuel economy regulations (see Figure 2). And vehicle use steadily climbed about 3 percent per year during this period. As a result of these two factors (decreasing vehicle efficiency and rising vehicle use), consumption of gasoline and diesel fuel this year will be about 10.6, 1.7 MBD (19 percent) greater than in 1988.

Unlike the poor prospects for increasing domestic oil production, there are good prospects for reducing our oil demand and cutting future oil imports by raising the efficiency of our vehicle fleet. In fact, if we had the foresight and political will to steadily increase the fuel economy of new vehicles sold in the United States during the past 12 years, as we did during 1975-87, we probably would not have experienced the recent run-up in oil prices caused by growing demand coupled with OPEC supply restraints.

Specifically, if we had increased the average fuel economy of new cars by 1 mpg per year and the average fuel economy of new light trucks by 0.5 mpg per year, starting in 1987, rather than allowing fuel economy to decline, the rated average fuel economy of new cars sold this year would be 41 mpg and that of light trucks would be 27 mpg. Fuel use by the overall passenger vehicle fleet on the road today would be about 1.3 MBD (16.5 percent) less than it actually is. Moreover, because of our large market and the influence we have on vehicles sold worldwide, the total worldwide fuel savings from improving U.S. vehicle fuel economy would surely exceed 2 MBD,

the amount believed necessary to relieve recent pressure on world oil prices. And the fuel savings would continue to grow in the future as the vehicle fleet turns over.

Of course we can't go back and redesign the vehicles sold over the past 12 years. But we can enact policies today to ensure that vehicles sold during the next few decades are "gas sippers" rather than "gas guzzlers." The next section presents ACEEE's policy recommendations for improving vehicle fuel economy.

Tougher fuel economy regulations, tax incentives, and other measures should be adopted to increase the efficiency of new vehicles.

Tougher fuel economy (CAFÉ) standards are essential for significantly increasing new vehicle efficiency. Independent analyses (including those from our national laboratories) have concluded that the initial CAFÉ standards were largely responsible for the near doubling in the average fuel economy of cars and more than 50 percent increase in light truck fuel economy from 1975 to 1987, resulting in oil savings of over 3 MBD (Greene 1999). The standards were met largely through cost-effective technologies (e.g., engine efficiency improvement, weight reduction, etc.), not downsizing, without negative side effects (Greene 1999). Indeed, the safety of new vehicles, as measured by highway fatalities per mile driven, declined substantially at the same time that fuel economy increased during the past 20 years (see Figure 3).

If the fuel economy standards were again made tougher, they could again be met through technological improvements—both refinements to conventional designs and advanced vehicle technologies such as hybrid drivetrains and eventually fuel cells (DeCicco 2000). Honda and Toyota have started production of hybrid vehicles with 50-75 percent greater fuel efficiency compared to typical new cars in the same size class this year. Ford just announced it will begin producing and selling a very efficient and clean hybrid sports utility vehicle in 2003. As in the past, fuel economy can be increased at a moderate incremental vehicle cost once the technologies are mass-produced, with the value of the fuel savings exceeding the extra first cost (DeCicco and Mark 1998).

We recommend increasing the current fuel economy standards by 60 percent to 44 mpg for cars and 33 mpg for light trucks by 2012, with further increases at the rate of 2.5 percent per year beyond this date. Car manufacturers will protest and say "it can't be done" or "it will cost a fortune," as they did when the original CAFÉ standards were debated. But they were wrong in 1975 and policy makers in the Congress and Ford Administration moved forward in the face of industry opposition. The auto industry vigorously lobbied against tougher CAFÉ standards during the 1990s, and both the Administration and Congress succumbed to this pressure. Tougher standards are now long overdue and should be adopted before another oil price shock or crisis devastates the economy, considering "technological feasibility, economic practicability, and the

need of the nation to conserve energy,” as stated in the Energy Production and Conservation Act of 1975.

Tougher CAFÉ standards should be complemented by market incentives, voluntary programs, and expanded research and development in order to build consumer demand for high-efficiency, cleaner vehicles and facilitate implementation of tougher standards. The Congress should approve the tax incentives for innovative, highly efficient hybrid and fuel cell vehicles along the lines proposed by the U.S. auto companies and Clinton Administration, but with an earlier start date and requirements that vehicles receiving incentives meet minimum fuel economy improvement and emissions thresholds. And the Congress should consider expanding the federal “gas guzzler” tax and converting it to a revenue-neutral fee and rebate system. ACEEE also recommends expanding voluntary programs to educate consumers about vehicle fuel economy and emissions, and encourage owners of vehicle fleets to commit to purchasing “best in class” vehicles as well as innovative, highly efficient vehicles once they become available.

We estimate that the tougher fuel economy standards and complementary policies recommended above would reduce gasoline consumption by 1.5 MBD by 2010 and over 4.5 MBD by 2020. With this level of savings, oil import growth would be moderated during this decade and imports would then fall after 2010, based on other assumptions in the EIA Reference Case forecast. The potential oil savings far exceed the potential oil supply from opening ANWR to exploration and development (see Figure 4). Tougher fuel economy standards and complementary policies could save consumers over \$350 billion net (gasoline savings minus increased vehicle cost) through 2020 (Geller, Bernow, and Dougherty 1999). Tougher standards also would reduce emissions of hydrocarbons and other air pollutants. And new fuel economy standards would cut emissions of carbon dioxide and other greenhouse gases, thereby slowing global warming while saving consumers money.

Conclusion

Growing oil imports is a serious threat to our national security and economic well-being. Steps should be taken to lower oil imports over the long run. But policy makers should recognize that domestic oil supplies are limited and declining. The best opportunity for the foreseeable future lies on the demand side, specifically by increasing vehicle fuel economy. Adopting tougher fuel economy standards, along with tax incentives for highly efficient vehicles and other market incentives and voluntary programs, is the most effective strategy for reducing our dependence on oil imports and thereby enhancing national security, reducing our trade deficit, and exerting downward pressure on world oil prices. Increasing vehicle efficiency addresses the root of the problem—unchecked growth in oil consumption—unlike other proposals such as opening ANWR to oil development, rolling back the gasoline tax, or marketing oil from the Strategic Petroleum Reserve. Tougher fuel economy standards also will result in net economic savings for consumers

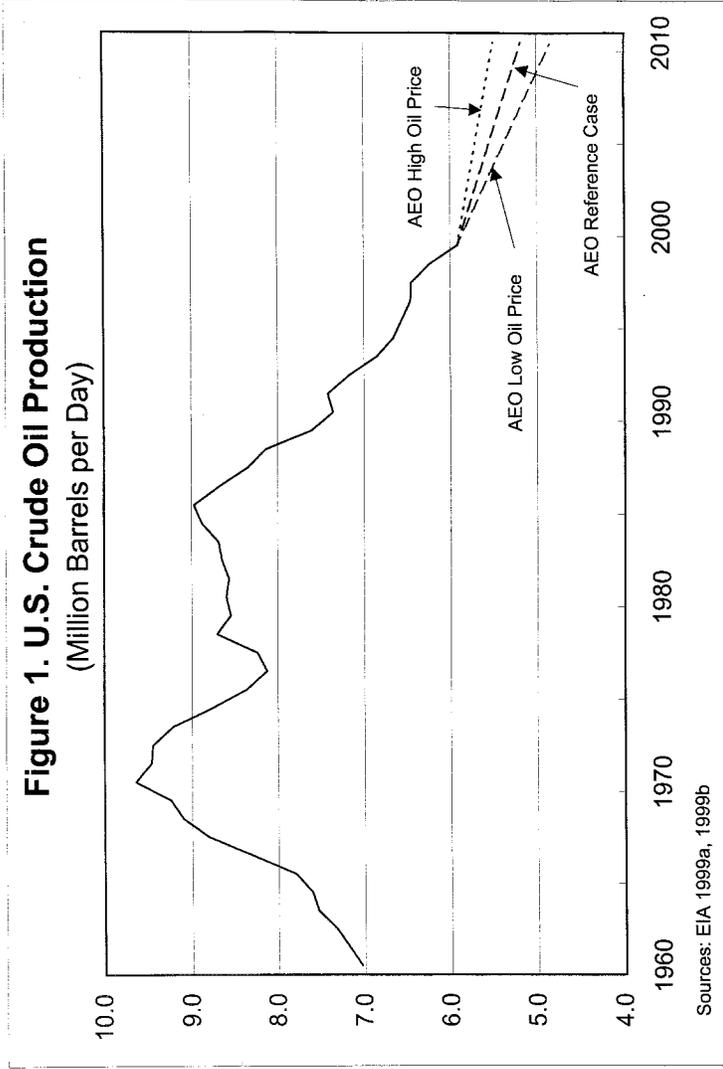
and lower emissions of air pollutants and gases causing global warming. Increasing vehicle fuel economy was our key response to the oil crises of the 1970s; this strategy can and should be applied again to avoid new oil crises in the 21st century.

This concludes my testimony. Thank you for considering these views.

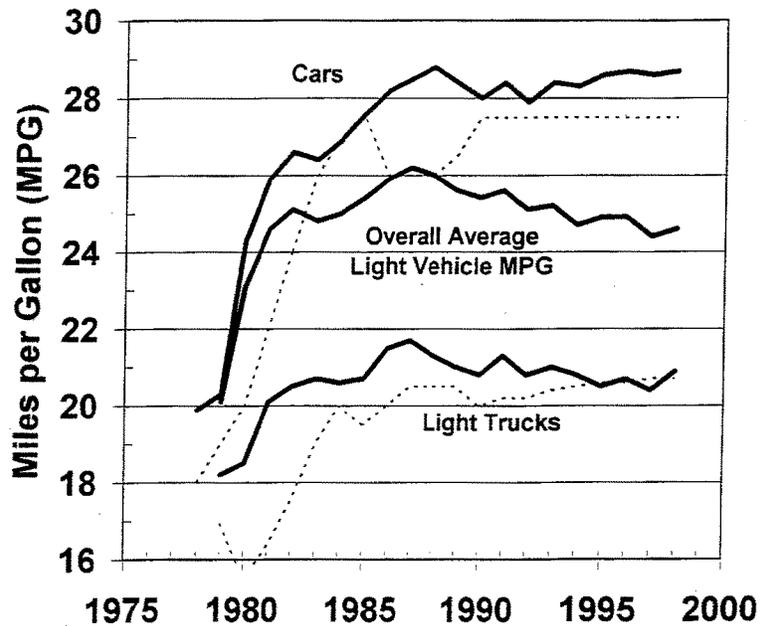
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Cellier Testimony



New Car and Light Truck Fuel Economy in the United States



CAFE standards shown as dotted lines, actual MPG as heavy lines. Overall light vehicle (combined car and light truck) fuel economy peaked in 1987-88 at an average of 26 MPG. Since then:

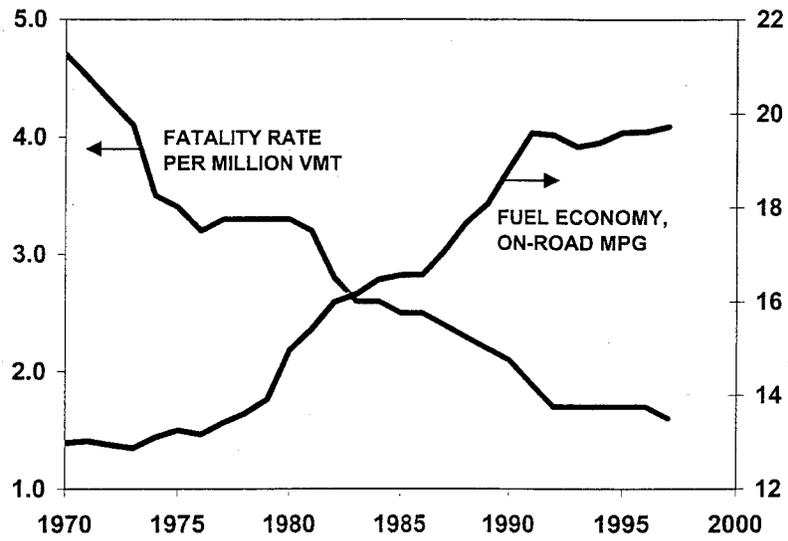
- * Car fuel economy is roughly unchanged;
- * Light truck fuel economy has dropped about 0.5 MPG;
- * Light truck market share rose from under 30% to nearly 50%.

Therefore, overall fuel economy has dropped to 24.5 MPG.

Source: U.S. DOT NHTSA Summary of Fuel Economy Performance, Oct. 1998

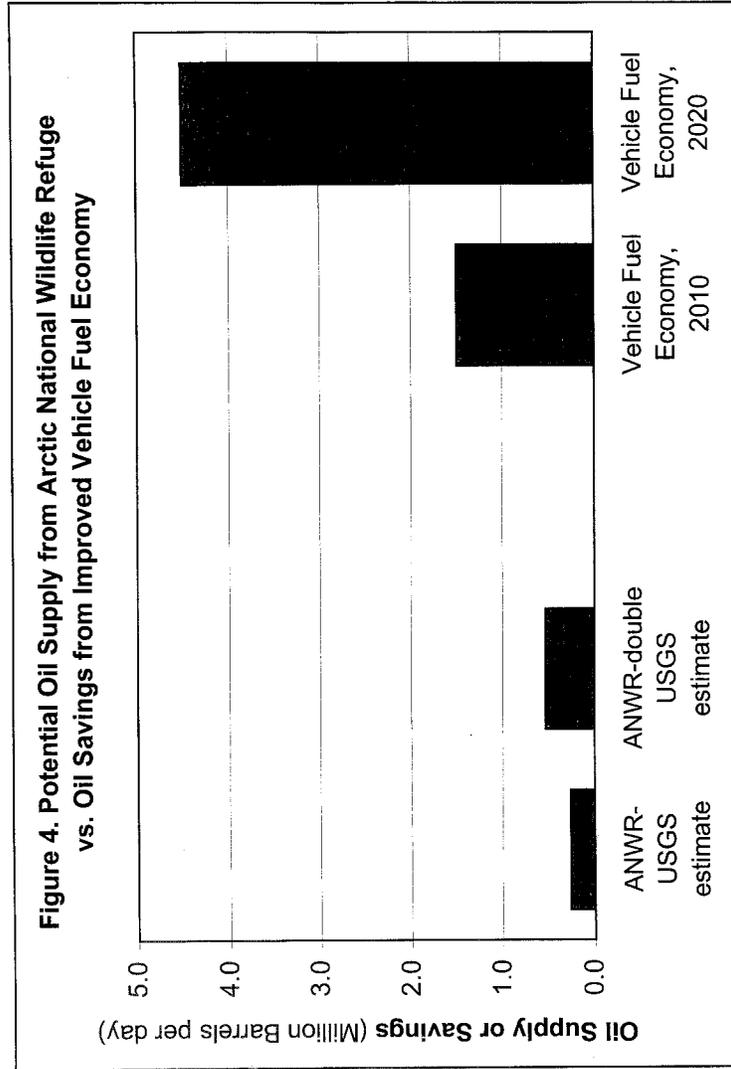
Geller Testimony

Figure 3- Trends in U.S. Traffic Fatalities and Light Duty Vehicle Fuel Economy



Source: compiled by ACEEE from NHTSA Traffic Safety Facts 1997 and ORNL Transportation Energy Data Book 1998.

Geller Testimony



The CHAIRMAN. Thank you. My good friend Mr. Hood from Anchorage, Alaska, president of the Teamsters. Mr. Hood.

STATEMENT OF GERALD L. HOOD

Mr. HOOD. Thank you, Mr. Chairman. I'm here today not only representing the 7,000 members in Alaska, but I also am speaking for the entire 1.5 million members of the Teamsters Union throughout the country.

And I submit that there are some in denial that there exists in this country today a gas crisis or an energy crisis that we haven't seen the likes of since the early 1970's. Gas prices are at an all-time high and are projected to increase even more, notwithstanding OPEC's recent indication to increase production and regardless of what you read in the press. Yet, due to the lack of a comprehensive energy policy, this country continues its dependence on the importation of foreign oil from countries that don't necessarily share our global philosophy and have agendas that are directly in conflict with our own.

Our solutions to this energy crisis must be multi-faceted. One of the components has to include an increase in our domestic supply of oil which, whether you like it or not, will require making Federal lands available for leasing. We desperately need to reverse the trend of importing roughly 56 percent or 9 million barrels a day of our petroleum needs.

And I'd remind the committee that 25 years ago this country only imported 35 percent of the oil it consumed. Domestic production is down 17 percent over the last decade and consumption has risen 14 percent. You don't need a road map to see where this trend is taking us.

We must develop a program to hold our allies and trading partners accountable for their actions. The United States didn't hesitate to protect the sovereignty of Kuwait during Desert Storm and, in fact, we drove the Iraqis from those oil fields after they had set them on fire. Had it not been for America and American expertise, much of the oil now being sold to us at such high prices could still be burning.

We must look to areas of our own country where the potential for hydrocarbon fuel production is greatest and where it can be developed with the highest standards and performance and environmental protection. The State of Alaska currently produces approximately 1 million barrels of oil a day, or 20 percent of our domestic supply, and the coastal plain of ANWR, according to the USGS, has the potential of producing up to 1.5 million barrels per day. In my estimation, this would be a tremendous step in reducing our dependence on foreign oil.

And there's another testimony that disputes the figures with regard to how much oil there may be in ANWR. Let me just point out that when we drilled in Prudhoe Bay, we estimated then that there would be 9.6 billion barrels of oil. Today, we've produced 10.5 billion barrels of oil from Prudhoe. We anticipate, by the time we're finished with Prudhoe Bay, we'll recover about 14 billion barrels of oil. Now this is just Prudhoe Bay. It doesn't include Nully Point, Alpine, and Kuparuk and the other surrounding fields.

Now there are those who argue we shouldn't ravage and pillage and plunder this last pristine wilderness in the 49th State. Let me just say that ravage and plunder and piller aren't my words. Those are the words of the extremists that want to preclude our developing section 1002 of ANWR.

We in Alaska have explored and produced oil for over 30 years. We've done so with the greatest of respect for our environment because this is, after all, the land that we live in and we work in.

I spent time in Prudhoe Bay here recently visiting exploration and production facilities where my members work. And I was reminded of some years ago we had a Russian delegation visit us in Prudhoe Bay and they didn't believe that we were producing oil. And we asked them why. It's because we don't see any leaking or we don't see any on the ground.

So I would ask those who vigorously oppose the exploration of ANWR, where would you rather see oil exploration done? In a place of the world where there's little or no environmental protection or regulation or in a place in our own country where we have the strongest and strictest environmental regulations in the entire world?

Now members of organized labor have worked in Alaska's North Slope oil fields since their discovery in 1967. And we've done so correctly in an environmentally sound manner. Our workers are the most efficient, the best trained, the most skilled, and the safest workers in Alaska's oil patch.

As I testified before the Senate Committee on Energy and Resources in 1995 and again last week, I want to emphasize to this committee as well that the development of ANWR will create somewhere between 250,000 and 750,000 jobs throughout this great nation of ours. And the difference between these jobs that we will be creating and the ones that have been created recently is that they are higher end jobs with excellent wages and excellent benefits, not like the jobs created here recently which are service sector and minimum wage jobs.

Mr. Chairman, the issue before you today is important to the members of my organization. My organization includes 600,000 drivers who turn the key on a truck to start their work day. And whether they drive cement mixers, deliver packages or bread, or move freight throughout the country, they rely on gasoline and diesel fuel to get their job done.

We're asking for a comprehensive national policy, which includes the leasing of Federal lands for oil and gas development, recognizing the consequences of high priced oil to a national economy that relies on trucks to transport 80 percent of the freight in this country.

I thank you for this opportunity to testify before the committee today.

[The prepared statement of Mr. Hood follows:]



In The

UNITED STATES HOUSE OF REPRESENTATIVES

Committee on Resources

Testimony

of the

INTERNATIONAL BROTHERHOOD OF TEAMSTERS

Domestic Exploration & Development of Oil & Gas Resources

Submitted by: Gerald L. Hood, Secretary-Treasurer
General Teamsters Local 959
State of Alaska
520 East 34th Avenue
Anchorage, Alaska 99503
(907) 565-8102

Good morning Mr. Chairman and Members of the Committee:

My name is Jerry Hood. I am the chief executive officer of Teamsters Local 959, State of Alaska. I represent 7000 teamsters in Alaska and I am here today speaking on behalf of the entire 1.4 million members of the International Brotherhood of Teamsters.

Even though there are some in denial, there exists in this country today an energy crisis of which we have not seen the likes of since the early 1970's. Gas prices are at an all time high and projected to increase even more, notwithstanding OPEC's recent indication to increase production and regardless of what you read in the press. Yet, through the lack of a comprehensive energy policy, this country continues its dependence on the importation of foreign oil from countries that do not necessarily share our global philosophy and have agendas in direct conflict with our own.

While our solutions to this energy crisis must be multifaceted, one of the components has to include an increase in our domestic supply of oil which, whether you like it or not, will require making Federal lands available for leasing. We desperately need to reverse the trend of importing 56%, or roughly 9 million barrels a day of our petroleum needs. I would remind the Committee that 25 years ago this country only imported 35% of the oil it consumed. Domestic production is down 17% over the last decade and consumption has risen 14%. One doesn't need much of a map to see where these trends are taking us.

We must develop a program to hold our allies and trading partners accountable for their actions. The United States did not hesitate to protect the sovereignty of Kuwait during Desert Storm and in fact, we drove the Iraqis from the oilfields after they set them on fire. Had it not been for America and American expertise much of the oil now being sold to us at such high prices could still be burning.

We must look to areas of our own country where the potential for hydrocarbon fuel production is greatest and where it can be developed with the highest standards and performance of environmental protection.

The state of Alaska currently produces approximately 1 million barrels of oil a day or 20% of the domestic supply. The coastal plain of

ANWR, according to the USGS, has the potential of producing an additional 1 to 1.5 million barrels per day. This would be a tremendous step in reducing our dependence on foreign oil. There are those who dispute these figures so let me point out that Prudhoe Bay was predicted to hold 9.6 billion barrels of oil. To date 10.5 billion barrels have been produced and we expect the total to be at least 14 billion barrels. This does not include the surrounding fields such as Kuparek, Alpine and Milne Point.

There are those who argue that we must not ravage this last undeveloped pristine wilderness of the 49th State. They either knowingly or mistakenly tell you that 95 percent of the north slope of Alaska is already available for development and there is no reason to plunder the coastal plain of ANWR. In reality, only 14% of Alaska's northern coastline is available for development and if you were to add the coastal plain of ANWR you would only raise the area of potential development to 25%.

Let me say that "ravage" and "plunder" are not my words. Those are the words of the extremists who oppose development of section 1002. We in Alaska have explored and produced oil for over 30 years. We have done so with great respect for the environment. This is, after all, the land we live and work in. I spent time at Prudhoe Bay recently, visiting exploration and production facilities where my members work. I was reminded of a visit by a Russian delegation a few years ago to see our north slope operation first hand. As they were touring the oilfields and pipeline they commented on their disbelief that oil was actually being produced. When asked why, they said it was because they saw no oil leaking or on the ground.

I would ask those who so vigorously oppose the exploration of ANWR where they would rather see exploration and development; in parts of the world where there are little or no environmental restrictions or in an area of our own country where we have the strongest and strictest environmental laws and regulations in the world?

Members of organized labor have worked in Alaska's north slope oilfields since their discovery in 1967. We have the expertise to insure development in ANWR is done correctly and in an environmentally sound manner. Our members have a proven track record to have the highest productivity, to be the most efficient, best trained, most skilled and safest workers in Alaska's oil patch. This brings an economic advantage to this

project and creates a stability which benefits all involved, even the opponents!

As I testified before the Senate Committee on Energy and Resources in 1995, I want to emphasize to this committee as well that the successful development of ANWR will create somewhere between 250,000 and 750,000 jobs throughout this great nation of ours. These jobs will be both union and nonunion, but the difference between these jobs and those created recently is that they are higher end jobs with excellent wages and benefits, unlike the service sector and minimum wage jobs we have seen created as of late.

Mr. Chairman, the issue before you today is important to the members my organization represents. It includes more than 600,000 drivers who turn the key on a truck to start their workday. Whether they drive cement mixers, deliver packages or bread or move freight across the country they rely on gasoline and diesel fuel to get their job done. We're asking for a comprehensive national policy which includes leasing of federal lands for oil and gas development recognizing the consequences of high priced oil to a national economy that relies on trucks to transport 80% of the freight in this country.

Thank you, Mr. Chairman for the opportunity to testify today on this most important issue. I would ask that my entire written statement be entered into the record.

The CHAIRMAN. Thank you, Gerry. And I was going to bring it up a little later on. We talked about fuel-efficient cars and fuel-efficient that, you cannot save your way into prosperity. Anybody who's been in a bank knows that. And everything that's delivered to us is delivered to us by a truck of some type.

And, at this time, I'll let the good lady take over the Chair for a few moments and I'll be back.

Mrs. CUBIN. [presiding] Thank you, Mr. Chairman, as you leave. And I just love it because here I get to talk as long as I want. Although, you know—oh, good.

I want to make one statement about Mr. Hood's testimony. As you all know, I represent the entire State of Wyoming. I was in a small town in Wyoming and the President had been on touting the 8 million jobs that his policies had created since he's been in office. And I had a lady come up to me and say, you know, I believe that the President has created that many jobs. She said, I know. I've got three of them. That's how much it takes for me to make a living.

And so your point that service jobs have been created, but good paying jobs that can result from a healthier energy industry are not plentiful. And, you know, the minimum wage jobs that are created simply aren't adequate for what we need for the people that we represent in this country. So I appreciate that point that you made.

I'm the only person I know that can't see at a distance, at my age, but I can read stuff. So forgive me for a minute, but I want to see your faces when I ask you questions.

I want to ask one thing. Most of you mentioned access to lands to explore for energy sources, most of you mentioned that in your testimony. What was your reaction when you heard the witness from the Department of the Interior deny that access was a problem and brag about the increase in production on public lands? I would like each one of you to respond to that. You want to start, Jerry.

Mr. JORDAN. My reaction is that we're playing games. You know what they say about numbers and what games you can play with numbers. The point is that we have had a studied, steady campaign to take huge areas of our government lands out of our exploratory inventory, notwithstanding the numbers they may be able to play with what they listed. I mean, they've been taking million-acre blocks, bites, and that's what's important here. And it's got to stop or we are not going to be able—you know, I agree with Ray completely and the National Petroleum, which I serve on, on the Gas Committee.

We've got the resource base to produce the natural gas that we're going to need, but if we don't take these restrictions off the access, there's no way we can do that. So it is critical. And I don't know what kind of games he's playing. I'm sure he's telling the truth, technically, so don't get me wrong. But I think that it's painting the wrong picture.

Mr. THOMASSON. May I respond?

Mrs. CUBIN. Certainly. Please do, Dr. Thomasson.

Mr. THOMASSON. I was struck by the fact that the place where those acres have become available is in the offshore and the place

where production has gone up dramatically is the offshore. I think simple logic would allow one to come to the conclusion that if you open up access, you're going to open up our ability to find and develop more resources.

And I second what Jerry says. Not only do we have an enormous resource base, but because of technology today, that resource base is not shrinking, it's expanding. So I disagree very strongly with Mr. Geller and his statement that we are running out of resources. It's not true.

Mrs. CUBIN. Yes and I agree with you, from all of the information that I've been able to glean through the subcommittee that I chair.

I would like to address this question probably to Jerry, but to any of you who have an idea on it. As Mr. Jordan stated that independent producers drill 85 percent of the wells and I think he said produce two-thirds of the gas production in the United States. And because of that, I really have a goal of trying to do everything I can to create an environment where we can help independent producers along.

I have a problem with some of the policies that the major oil companies have pursued. Because I realize that they have to answer to their stockholders. However, I still think that there ought to be some patriotism and that there ought to be some regard for national security. And where they spend their money for drilling, while it is none of my business, it's irritating to me. I think that independents have a harder row to hoe, if you will.

So I would like to ask you, do any of you think that it is realistic that the majors might move their money, if we could create a better environment, might move their money back to exploring in the United States?

Mr. JORDAN. Shareholders are interested in returns. Unfortunately, we've been in a dotcom economy and it's very difficult, whether you're a major or an independent, to make the kind of returns, if you've got shareholders and if you have to answer to shareholders and sometimes to bankers, it's very difficult to justify drilling sort of where you ought to rather than where you want to.

The majors, I know, have to do what they—I mean, I think they're doing what they feel that they absolutely have to do. I know many of the executives, I know they are dedicated to our country being more energy independent, just like the independents are. But I think it's very difficult for them and I think that so often the policies and I've dealt with people, with majors, who are selling properties in the United States and they say, we don't really want to sell them, but we don't have any choice.

But it really works out well for the country because they sell them to independents and the independents go on and develop them. So it's this partnership that we have between the majors and the independents. And some of the independents are getting very large. And as they get very large, I'm happy to report that there are a lot of little bitty independents, it's kind of like the food chain, there are a lot of little bitty independents forming all over this country.

And if we create the kind of economic climate that we need to promote our industry. And we already pay big taxes. I mean, if we

make a lot of money, we pay a big percentage of taxes. And the oil companies pay taxes just like everybody else. But they also apply, if they do their practice is sometimes they get to delay paying taxes and that's considered an abuse, but it's not an abuse. It's a value judgment made by our system which says if you'll put your money back in and help develop resources, we'll let you defer those taxes. It's a value judgment.

These industries have to balance all these things. And I think that the system is working, but we need to push harder, just like Ray has said, we need to push policies that will encourage drilling and encourage exploration. And then, of course, we have to give them land access to do it because most of our lands in the West are controlled by the government.

Mrs. CUBIN. Right. And I don't disagree with anything you've said. I do think, from my own experience in talking to independent producers, that they have fewer resources to go through the environmental impact studies, the archeological studies, the endangered species studies, and all of the sort of things, the hoops that the Federal Government puts in front of people even when the land is not shut off by roadless areas, for example, and wilderness study areas, for example, and those sort of things. I guess that was the point I wanted to make.

I would like to address this question to Mr. Geller. You talked about standards that you'd like to see for efficiency in motor vehicles. Do you know what total production would need to be if, in fact, in the United States—no, not production in United States. What total consumption would be if those standards were adopted? Do you have any statistical information on that?

Mr. GELLER. Yes. The savings I indicated, 1.5 million barrels a day by 2010 and 4.5 million by 2020 can be compared to our total consumption which I think is around 18, 19 million barrels per day. Perhaps other on the panel—19.

Mrs. CUBIN. But are you speaking of only consumption for motor vehicles and not any other?

Mr. GELLER. Oh. That's total oil. Motor vehicles, I think our gasoline and diesel fuel use is 55 percent of our total oil consumption. OK, so, total oil consumption right now is something around 10 million barrels per day for motor vehicles. That's both passenger vehicles and heavy trucks. So that increasing these standards can do quite a lot in terms of saving a very significant amount of the total consumption that we have today and the projected consumption that we have in the future.

The thrust of my testimony is that there's two sides of the equation. There is a supply side, of course, and we don't deny that. We can't just run our country on energy savings. Of course, that's true. We need supplies.

But there's also the demand side of the equation and let's not forget about it and let's look at the opportunities to save energy, which will reduce oil imports, saving oil, which will reduce oil imports. The margin will be there in reducing imports from efficiency improvements in vehicles. That's the biggest opportunity on the demand side. And I would suggest a much greater opportunity for reducing imports than these other kinds of actions being discussed here.

That is oil, domestic crude oil production has been declining in this country for 30 years. Every forecast that I've seen, I haven't seen them all, but every forecast, government and non-government, is showing further declines in the future in domestic crude oil production.

Mrs. CUBIN. And I don't think that there's anyone that would argue that efficiencies and conservation of energy is something that we should not do. I believe everyone thinks that we should do that. How we do that is what's in controversy and whether government standards mandating that should be the way to go or whether the free market should be the way to go, I think, is where the argument and the disagreement occurs.

And I also, I don't know if you were here during the first panel's testimony, but, you know, I think back to Mr. Largent's response in answer to a question that it seems to be the very same who are saying we have to have mandatory efficiencies, we have to, you know, conserve, that we have to do something about our oil and gas consumption, or, particularly, or oil consumption, we have to do that.

But these are the very same people that over and over and over again will vote, in the Congress, and will rile against the things in the country that would promote other sources, whether it's nuclear, even the windmills that, you know, we have some in Wyoming. And if you drive over into California, you see this whole field of these windmills, you know, to produce wind energy.

I'm not saying I don't think that should happen, but, my goodness, to me that's way uglier than an 18 inch stick sticking out of the ground where they've drilled for gas. And, you know, as far as the aesthetics of the situation, I think people speak on one hand of what we need to do, but they are not willing, on the other hand, to do what we need to do to accomplish a reasonable energy policy.

I don't see that I have any other questions. Congressman Simpson, did you have some?

Mr. SIMPSON. Not really questions, Madam Chair. It seems like we're, from the testimony we're faced with, we have two options. Either increase production or reduce the demand. And I think, in reality, it's a combination of both. I think you're going to have to increase production in this country and you're going to have to reduce demand.

When we talk about fuel efficiency in automobiles, we always talk about the cost and how much the public can save by having increased fuel efficiency in automobiles. And I don't think that that's a bad thing by any means, but we also, for every action, there's equal and opposite reactions, and we never seem to talk about the number of deaths that have been caused by lighter vehicles on the road and so forth. The accidents that they get involved in are more serious.

Do you have any studies on that, Mr. Geller, on what's happened to the number of deaths on the road and how many of them have been attributed to lighter vehicles and such because of increased fuel efficiency?

Mr. GELLER. Yes, Congressman. In anticipation of this question, I addressed it in my written testimony. If you would be so kind to look at figure three, if you have my written testimony.

Mr. SIMPSON. I've got it somewhere in this stack.

Mr. GELLER. I can hold up the figure if you can't find it.

Mr. SIMPSON. I'm sure I can find it somewhere.

Mr. GELLER. The figure shows two lines: the on-road fuel economy, the average from 1970 until today, showing the increase from about 13 miles per gallon up to close to 20 miles per gallon today. And it shows, over the same period, the fatality death per million vehicle miles of travel, per unit of driving, which declined from about close to five deaths per million vehicle miles of travel back in 1970 down to less than two deaths per million vehicle miles of travel today.

So while we were improving fuel economy through better technologies, we were also improving the safety of our vehicles. The two can be done and have been done together. We've made our vehicles safer and we've made them more fuel efficient.

Mr. SIMPSON. You wouldn't deny that more vehicles are, that the lighter vehicles that are made of plastic today, are more dangerous in an automobile accident going 70 miles an hour, per se, would you?

Mr. GELLER. The statistics are showing that driving has gotten safer.

Mr. SIMPSON. Because of air bags and seat belts.

Mr. GELLER. Seat belts, improved designs, better engineering, more crush space. All kinds of things that have been done and that continue to be done to keep our vehicles safe and make them safer. It's a matter of engineering on both sides, on the fuel economy side and the safety side. We can cut emissions of air pollutants, we can improve fuel economy, and we can make vehicles safer.

And I would submit that Federal standards are key drivers of all those public goods that we're interested in. We had fuel economy improvements when we had fuel economy standards enacted under the Ford Administration.

Mrs. CUBIN. Would the gentleman yield?

Mr. SIMPSON. Yes.

Mrs. CUBIN. I just am sorry, but I have to make the point that in the very timeframe you're referring to is when law enforcement nationally, State by State, decided to really crack down on drinking and driving. And that is just something that you can't leave out of the equation.

I have a friend right now that has children that are just starting to drive and one of them wants an SUV. And he said, no, you can't have that because it kills more people. Well, you know, I bought a truck for each one of my kids not only because they need to haul things from our place in the country but because they're going to be safer in it if they get in an accident. What is wrong with—I mean, why not make the standard heavier vehicles so that people are all safer instead of, like the Congressman is talking about, plastic, tinny vehicles that crunch when you—I mean, we're not going to make semis smaller. So forgive me.

Mr. THOMASSON. Madam Chairman, could I answer Mr. Geller's comment about production one more time, with an illustration?

Mrs. CUBIN. Please.

Mr. THOMASSON. Skip, could you put up the first one right there on top and then get out the gas one? What this shows is that, as

cumulative production has gone up, our resource base has gone up as well. And what that means is that we are finding more resources than we thought we had just the year before the year before the year before.

Similarly, if you take gas that happens to be crude oil. Now the fact that production has come down in crude oil, and it has, is a direct result, frankly, of the policies that have inhibited our ability to react. But I want you to look at natural gas where there's been a concerted effort, because of pressure by the administration and, mostly, by economics.

And you can see the black curve is the curve that was projected by King Hubbard back in 1956. And that was for gas production. He correctly predicted oil production was going to peak in 19— you can show that one—in 1970. He was right on. But you notice we are now 37 percent over what he projected. In gas, we're actually back up at almost flat in our production.

My point is, and then if I could make one more point with the pyramids, that, as our technology becomes better and what this chart is showing is increasing technology allows us to cut further down into the resource pyramid. Think about in mining terms. At the very top, a nugget of gold that gets more finely disseminated as we go down. And as you slice further down, you expand exponentially the resource base available to you.

And your basins in Wyoming, the greater Green River Basin is a good example, that particular basin has, now listen to the number, please, Mr. Geller, 5,000 trillion cubic feet of gas in place and we're learning how to get that gas out. And we're going to learn more about how to get that gas out. And we will get a great deal of that gas out as we slice further down that pyramid.

So we are actually expanding our resource base now and we can increase our production.

Mrs. CUBIN. You know, I have trouble, and a lot of us have trouble, trying to imagine what is a trillion? Whether it's a trillion dollars. What's a trillion? It's a number too big to understand.

So my staff, we sat down and we said, OK, how do we figure out what a trillion is? And here's what we came up. If I'd opened a business the day Jesus Christ was born and lost a million dollars a day every single day from then until today, I wouldn't have lost my first trillion dollars. And we're talking 5,000 trillion. This is a large resource.

Mr. SIMPSON. Well, thank you, Madam Chairman. And I just want to—I'm not opposed to the CAFE standards and I think we will have increased fuel efficiencies in the future and we will also have new technologies and we will have more use of combination engines, electric engines, gas engines, and so forth. I know they're doing a lot of the research on electric automobiles and stuff out at the INEL and in Idaho and stuff. And I've been there and seen some of those things. And those things will come along. And I think we need to encourage them to the extent we can.

That doesn't mean that we can't have and shouldn't have and must have, I think, more exploration and development of the oil reserves in this country and the gas reserves in this country.

It's the combination of the two. It's not an either/or and we shouldn't be on the sides fighting these things and certainly we can

disagree on particular areas that are appropriate for drilling or not drilling, but the reality is that we're going to have to have more oil production in this country if we expect to be self-reliant or closer to self reliance in this country. Plus we're going to have more efficiencies and so forth and look at demand side.

So I appreciate the testimony of this panel.

Mrs. CUBIN. I'd like to thank the panel very much for their valuable testimony and thank you for being here with us and taking the extra time. This panel is dismissed.

I'd like to call the fourth panel forward at this time. Mr. Joseph Hegna, of ARCO; Dan Becker of the Sierra Club; Charles Bedell of the National Ocean Industries Association; Walter B. McCormick, Jr., the president and CEO of the American Trucking Association; and Monica Surprenant, chairwoman of the Louisiana State Mineral Board.

I'd like to welcome you all to the hearing. And, please, would Mr. Hegna begin his testimony.

STATEMENT OF JOSEPH H. HEGNA, ARCO ALASKA INC.; ACCOMPANIED BY DAN BECKER, SIERRA CLUB; CHARLES BEDELL, NATIONAL OCEAN INDUSTRIES ASSOCIATION; WALTER B. MCCORMICK, JR., PRESIDENT AND CEO, AMERICAN TRUCKING ASSOCIATIONS; AND MONICA T. SURPRENANT, CHAIRWOMAN, LOUISIANA STATE MINERAL BOARD

STATEMENT OF JOSEPH H. HEGNA

Mr. HEGNA. I have written testimony that I would like to summarize orally.

I represent not only ARCO Alaska here, but the Alaska Oil and Gas Association whose 17 members are responsible for the majority of exploration, production, development, marketing, refining, and transportation of oil and gas in the State of Alaska.

It occurred to me while I was sitting back here that not only have I visited the North Slope during February, I actually moved there. I was crazy enough to have moved up there in February 1985. Those first 2 weeks are some of the most memorable, as the wind chill temperatures were down below 100 below zero and I watched the frost crawl down my wall and attack my bed. And it finally started warming enough so it retreated. But visually, I remember that quite well.

I was asked to speak today on Alaska on how we work to minimize our impacts to the environment. And lately we've been referring to this as just simply "doing it right." What I'd like to do is step back for a minute and characterize not just what we're doing now with some of the newer developments, but to try to talk a little bit to what we've done in the past, speak to the record because this has been an issue several times today.

First of all, the North Slope is huge. It's 88,000 square miles, roughly the size of Idaho. It's 9 months of snow and ice on the ground there. Typically, you'd be looking at 30 below zero during the winter with wind's blowing 30 miles an hour.

Prudhoe Bay, which was discovered in 1968 and came on line in 1977, was the first of the oil fields. Now we've grown to where we

have actually six producing locations, including Prudhoe, Kuparuk, and several others.

Through that period of time, we've produced over 12 billion barrels of oil. Our environmental record, I think, is unequaled by any other location in the world. I feel like not only have we done it right, but I think we are the best of the best.

You've heard that the caribou speaks minimal impact that we've had on wildlife. The central Arctic herd has grown from less than 3,000 animals to roughly 20,000 today. What we haven't heard is about the minimal footprint that is left through the early developments. Prudhoe Bay, Kuparuk, the earlier fields that were developed were developed with less than a 2 percent foot.

A footprint is where we set down gravel on the tundra so we can put a facility on it and we protect the environment. Prudhoe Bay at 2 percent, if you compare it to the space center down in Florida which is 5 percent, that's very, very limited impact. And where we're at today, is even more incredible.

I heard some discussion on spills. And I would like to clarify some things around spills. First of all, we report all spills, no matter how small, whether it's a cup or a gallon. So the spills that you hear of being referred to, most of those are less than a gallon. And the vast majority of spills never reach the tundra because they almost always occur over the top of the gravel pad. So the damage that's been done by spills on the North Slope is relatively insignificant.

We talked about doing it right. The best example that I can think of is the current Alpine field, which is truly setting a new standard for doing it right. That field is due to come on line this fall and it's roughly 429 million barrels of proven reserves.

But the interesting thing from my perspective is the limited impact that we've had on the environment, not only in finding, but in developing that field.

In the exploration process when we're doing seismic work, there was no impact at all. When we went out to drill, we set down ice roads, we set down an ice pad, brought the rig in, and when we took it out, there was no evidence outside of the well that's left there.

If you look at the total footprint that has been left by Alpine, it's 2/10 of a percent of the surface area of the field. That's a 40,000 acre surface that has only got 97 acres gravel.

We've been able to do that by using some new technology. In the past, we had drilling muds and cuttings that were set aside in an impoundment on the surface called a reserve pit. We no longer require that. We're the first oil fields in the world that have gone basically to zero discharge on drilling waste. We grind and inject all the waste, inject them down into the Cretaceous zone where they are sealed 3,000; 4,000 feet below the surface.

Additionally, we talked about the ice roads. An ice road eliminates itself.

But the other development that's helped us out quite a bit in reducing our impact is directional drilling. Someone referenced it earlier by saying that we can extend out. We can go out about four miles. A good example would be putting a drilling rig on the White House lawn. We could drill the entire DC. area and a good majority

of the Arlington area as well without impacting any of those areas, except where that drilling rig is up.

So, truly, if you're looking at environmental impacts on what's being done on the North Slope, there are great examples of doing it right. And come on up in the winter. Come on up in the summer and you can see those, too. But the majority of the activity is done in the winter so we can minimize the impact.

Thank you.

[The prepared statement of Mr. Hegna follows:]

**Committee on Resources
U. S. House of Representatives**

**Oversight Hearing on
“Compromising our national security by
restricting domestic exploration and development
of our oil and gas resources”**

April 12, 2000

**Written Remarks by
Joseph H. Hegna, ARCO Alaska Inc.
P. O. Box 100360
Anchorage, Alaska 99510-0360**

**Written Remarks by
Joseph H. Hegna, ARCO Alaska Inc.
Before the
Committee on Resources
U. S. House of Representatives
April 12, 2000**

Good morning Chairman Young and members of the committee. For the record, I am Joe Hegna from ARCO Alaska, Inc. I have spent over 20 years working in the oil industry -- designing, building, and operating facilities. For the last 12 years I have been involved with various environmental management functions.

I welcome the opportunity to testify before this committee on "compromising our national security by restricting domestic exploration and development of our oil and gas resources." The focus of my testimony will be on the use of new technology to minimize environmental impacts for arctic oil and gas development. In Alaska, we call this "doing it right".

Before we get into a discussion of "doing it right" using new technology, I would like to put things into perspective by describing the North Slope of Alaska. The North Slope is a flat treeless plain, or tundra, which covers 88,000 square miles, an area slightly larger than the state of Idaho. It stretches from the Canadian border to the Chukchi Sea. It is 600 miles north of Anchorage, and about 1200 miles south of the North Pole. Winter temperatures are typically minus 30 to minus 40 degrees Fahrenheit with 30 to 40 mile per hour winds. Summers are generally a balmy 40 degrees.

Prudhoe Bay, the largest oil field in North America, was discovered in 1968 and went into production in 1977. Currently, there are 12 separate oil producing fields. These fields occupy less than 2% of the total surface area. Since Prudhoe first went into production, over 12 billion barrels of oil have been produced on the North Slope. These are some of the best facilities in the world -- in design and operation. I think they are the "best of the best".

Extensive research indicates that oil field activities have had no adverse effect on the North Slope's fish and wildlife populations. For example, the caribou move freely through the oil fields and have generally been unaffected by our facilities. In fact, the number of caribou in the Prudhoe Bay area has grown from 3,000 in 1972 to about 20,000 today.

Air quality is consistently better than required by state and national standards. Emission sources are closely regulated by state and federal agencies. The largest quantity of air emissions from North Slope oil operations comes from

turbines that power production facilities. These turbines are fired by natural gas, one of the cleanest burning fuels available.

All North Slope operators have a goal of zero spills. In operating these complex fields, however, some spills will occur. Most are from a pint to 10 gallons. And the vast majority of spills never reach the tundra or surface water because they are contained on the gravel pads on which the facilities are constructed, where they are easily cleaned up. All spills, no matter how small, are reported and cleaned up immediately.

These existing facilities are very well designed and operated. Operating excellence, with regard to the environment, has been recognized by others including recently the Environmental Protection Agency (EPA) and the Interstate Oil and Gas Compact Commission (IOGCC). In 1999, the EPA's Region 10 gave Kuparuk its "Evergreen Award" for pollution prevention. In 2000, the IOGCC gave Kuparuk the Stewardship Award for large oil and gas facilities.

Let's look at how new technologies and new approaches are making it possible to find, develop and produce new fields with even less impact on the environment. In the arctic, we can now explore for oil without leaving a footprint on the land. And when we do find new fields, we're able to develop them in ways that have even less impact on the land and the fish and wildlife that inhabit it.

The acquisition of 3-D seismic data is a key step in the exploration process. It's how we identify and map the prospects we're interested in. Onshore seismic acquisition on the North Slope occurs only during the winter after the federal, state and local governments issue permits authorizing tundra travel. Tundra travel doesn't begin until the tundra is frozen and there is six inches of snow cover. We use specialized low-impact tundra travel vehicles which weigh more than 10 tons. However, the tracks are long and wide, spreading the pressure over a large area . . . protecting the tundra from damage.

Onshore exploration is conducted only in the winter. We use ice roads to move drilling rigs, camps, men and material to remote locations. We build ice roads with water from lakes chosen with the assistance of the Alaska Department of Fish and Game. The volume taken from each lake is determined based on water depth and whether a lake contains fish. Ice roads are generally six inches thick. It's not unusual for us to build 60 to 70 miles of ice road a year to support remote drilling operations. In the spring, these ice roads simply melt away.

The best illustration of how we are "doing it right" is by a real example. I have brought a brochure on the Alpine Field – "Setting The Standard For The New Millennium". On the cover is a drilling rig.

A drilling rig weighs several million pounds and is moved to its location via ice road. The rig is set on an ice pad more than 12 inches thick. When drilling

operations are complete, the rig and support facilities are removed, and all drilling wastes are transported to existing facilities for disposal or injected back downhole. The final step is to take a front end loader and shave the ice pad down to pure ice. Scraped material is hauled out and disposed of in approved facilities. Pads melt, leaving no trace.

On the inside page is a photograph of an exploratory well at Alpine taken the summer after it was drilled. Six months before this picture was taken, a 160-foot tall, 3 million pound drilling rig stood on an ice pad where the well was drilled to an 8,000 foot depth. Prior to drilling we acquired seismic data over this entire area. You can see how much impact we've had.

The only visible sign of our presence is the well tree. And this remains on location because we are developing the field and will one day produce from this well. If the well had been unsuccessful, we'd have plugged and abandoned it below grade, leaving virtually no trace.

The thing that's amazing about ice-pad technology is that the vegetation adjacent to this well is completely undisturbed. We can explore without leaving visible footprints.

Producing oil requires infrastructure and a permanent presence for the life of a field. Our goal is to design, build and operate fields in a way that minimizes impact on the land, the water, the air and on the fish and wildlife that use a given area. To see how, let's look at the Alpine field which is now being developed and which will begin production in 2000.

The first step is understanding the environment. We began environmental studies of the Colville area in 1991, three years before we discovered the Alpine field.

We mapped 24 different habitat classifications that were developed with the assistance of the US Fish and Wildlife Service and the Alaska Department of Fish and Game. Baseline studies were designed with the help of these and other resource agencies. We used satellite infra-red photography, ground-truthed by summer field parties to develop the map. We did regional study first, then focused on the Alpine project area when the discovery was made. Different kinds of habitat are important to different kinds of wildlife. Some kinds of habitat are scarce, others are not. To avoid major impacts, you have to know where the high value and low value areas are.

Nuiqsut residents, who use this area for subsistence hunting and fishing, also played a role in this process. We used their input, agency input and this data to locate our facilities in areas where they would allow development of the field and minimize impact. At Alpine, for example, we moved a drill site away from a lake important to waterfowl and subsistence hunters.

Extended reach drilling allows us to drain oil from a very large area from a single location. At the Niakuk field near Prudhoe Bay, where ARCO and BP have developed two offshore oil accumulations from a single, onshore drill site, we've done it by drilling wells with departures of more than 20,000 feet -- or four miles. Our drilling targets are 9,000 feet deep and four miles away from our drilling rigs.

To illustrate what this means, I had our engineering department prepare a drilling scenario for Washington, D.C. With today's technology, and a 21,000 foot step out well, we could build a drill site on the front lawn of the White House and produce oil from beneath most of Washington and a big piece of Arlington, Virginia. The world-record step out well is longer than 28,000 feet—or 6 miles. With wells of that length you could produce from beneath the entire District of Columbia, all of Arlington, Alexandria, and a big piece of the Maryland suburbs too.

The evolution of production pads -- or drill sites -- on the North Slope is a classic example of how we have done it right. A drill site is a central location from which we drill and operate as many as 50 wells. In the early days, they were generally 65 acres in size. Wells were spaced 120 feet apart, and the pads included large reserve pits for storage of drilling wastes. Today wells are 15 feet apart and we've eliminated the reserve pits. At Tarn, we have space for 50 wells on a 6.7 acre pad. Pads today are one-tenth the size that they used to be.

Traditionally, drilling muds and cuttings have been placed in surface waste disposal impoundments known as "reserve pits". Today, using grind and inject technology, cuttings are crushed and slurried with seawater in a ball mill, then combined with the remaining drilling muds and reinjected into a confining formation 3,000 to 4,000 feet underground. This permanent and environmentally sound disposal method isolates the wastes, eliminates subsequent disposal problems and greatly reduces the spaced required for drilling operations.

The Alpine pipeline river crossing is the first of its kind completed in the arctic. We proved the technology, by installing 18" steel pipe in a 4,200 foot bored hole from one side of the river to the other. The pipe passes 100 feet below the river. A cased oil pipeline was then installed within the 18" steel pipe. In short, we will have a pipeline within a pipeline. This design ensures instant containment in the unlikely event of a small leak. A state of the art leak detection system will also let us know if we have a problem.

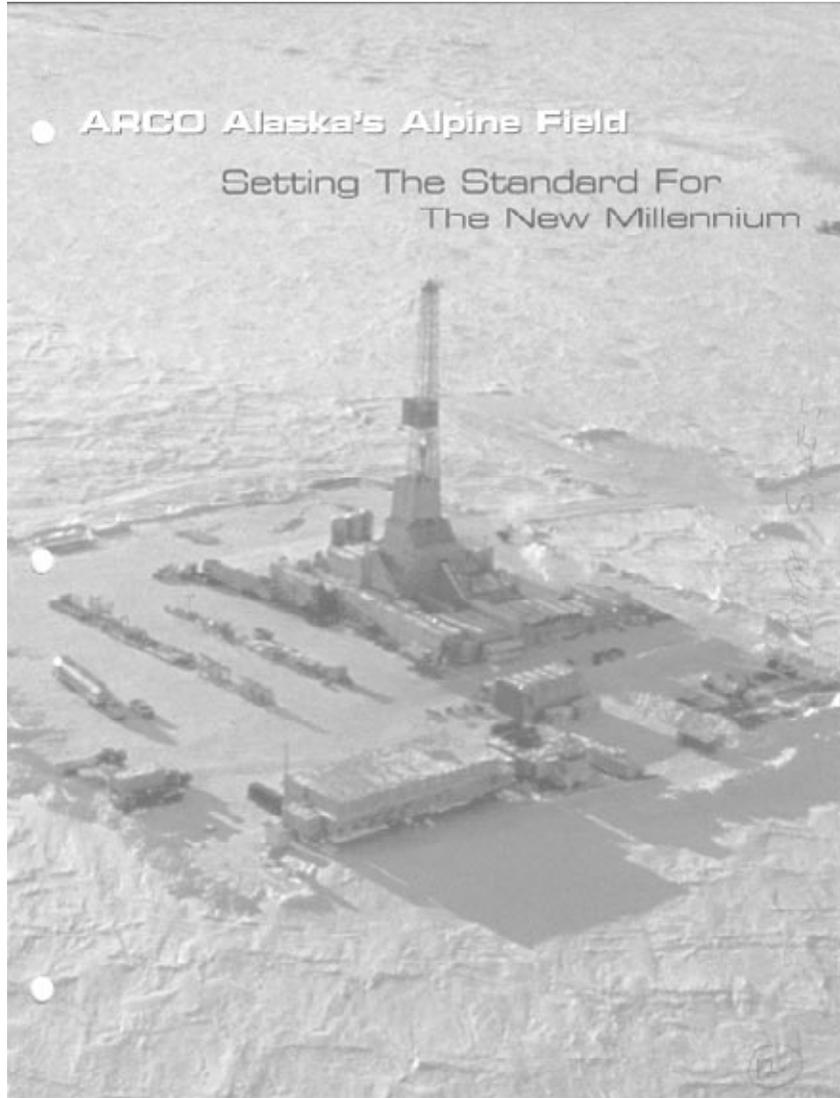
The Alpine field will be produced from just two drill sites, three miles apart. Pads will be joined by a gravel road that will also serve as an airstrip. Surface impact - gravel footprint -- will comprise about 97 acres. From this small footprint we will be able to access the Alpine reservoir, which encompasses some 40,000 acres—more than ten miles long and four miles wide. Less than 0.2 percent of the field will be impacted -- that's less than one-tenth the percentage at Prudhoe.

Construction is occurring during the winter, using ice roads. The construction will not disturb wildlife.

The Alpine field will not be connected by a permanent gravel road to existing infrastructure on the north slope. The operation will be much like that of an offshore platform. Drilling supplies and major equipment will be transported in winter using ice roads. Food and personnel will be transported by air, and the number and frequency of flights will be limited for a six week period in June and early July to minimize disturbance of nesting waterfowl.

Our goal is to minimize our impact on the environment and operate oil fields that are sanctuaries for healthy populations of fish, waterfowl, and wildlife. Thousands of caribou still return to our fields to calve and rear their young. The herd is six times larger than it was in the early 70's. Our waterfowl populations are healthy. We have turned our gravel mines into deep lakes that provide crucial winter habitat for fish—a rare commodity because most of the lakes on the North Slope freeze from top to bottom in winter. We've learned a lot over the years. We can explore without leaving footprints. And the footprint required for new developments is a tenth of what it once was.

Alpine -- with its new technology -- shows you what we mean by "Doing It Right."





The Future Starts Here

ARCO's Alpine field signals a new beginning for Alaska. Forty years ago we were the first to discover a major oil field in Alaska. Today we're investing in a new era for Alaska.

ARCO is developing Alpine in cooperation with our partner Anadarko, as well as the state and the people of Alaska. We are also forging new partnerships with local contractors and businesses. This means a new commitment to Alaskans and new opportunities that didn't exist until just a few years ago.

Alpine will be the first North Slope oil field on line in the new millennium, producing 365 million barrels of new reserves—that's 70,000 barrels per day—and contributing about \$1 billion to the state in taxes and royalties. It's a \$750 million investment and the largest find in a decade.

New technology is being used at Alpine to minimize environmental impact, maximize safety, and significantly drive down costs. We're seeking to reduce field development costs by 30 percent or more, compared to other North Slope developments. And, low cost means long-term investments and returns for everyone.

ARCO's Alpine. It's all part of a bright future for Alaska.

1996

Construction of Alpine begins

Anchorage truckable module assembly

Kanai

Making History Building The Future

BOTH SIDES

ARCO is doing something that has never been done before. As part of the Alpine project, we're building the first sealift modules ever constructed in Alaska. It's a new industry for Alaska, made possible by commitments between oil companies and Alaskan contractors. And new industries don't come along every day.

Three sealift modules—used to separate oil and gas—are the heart of the Alpine facility. They are being built at a new fabrication site in Nikiski on the Kenai Peninsula. Each one is three stories high and weighs up to 1,500 tons. Because of their size, they have to be moved to the

1998

2000

Sealift module assembly

Alpine drilling starts

Facility start-up
Sealift module install

North Slope by barge. We're also building truckable modules in Anchorage and Nikiski that will be installed on the North Slope this winter. From start to finish, we've worked with Alaskans to design, construct and transport them. Together, we figured it out.

This new industry marks the beginning of the future and a turning point for the economy. Hundreds of new jobs and new business opportunities are opening up across the state with economic benefits that will last for years.

From the North Slope to towns like Fairbanks and Anchorage, Wasilla, Palmer, Kenai and Nikiski, you can see it in their faces—the energy and pride of being part of a new industry.

Alaska buy, Alaska build, Alaska live. That's putting Alaska Inc.



ARCO Alaska, Inc.
PARTNERS IN ALASKA'S FUTURE

2001

2004

ation

Alpine production at 70,000 barrels per day

Projected drilling completion



Doing It Right

At ARCO, preserving the environment is central to everything we do. From the earliest stages of Alpinex exploration, we consulted with the people of the North Slope to make sure development would not interfere with subsistence hunting and fishing and traditional lifestyles in the region.

We gathered five years' worth of scientific data and carefully observed the habitats of birds and animals indigenous to the region. Each pattern was noted. Every seasonal change was compared to the previous cycle. And from that, we came up with ways to guarantee environmentally sound

development, like restricting aircraft traffic during the nesting season and eliminating a permanent road to the development site.

It's a continuing process. Ongoing research and observation at Alpinex gives us new perspectives and insights into the indigenous natural resources, land forms, wildlife, hydrology, and human use patterns so we leave the smallest footprint ever for a field site.

Understanding the people, their way of life, and protecting the land they rely on—that's the way we think and the way we do business.















Cover photo shows Alpinex drilling operations conducted from ice roads and ice pads during winter months. Here, a summer photo of the Alpinex site shows the Alpinex well is the only trace of winter activity.



Mrs. CUBIN. Thank you for your testimony. Is October the winter or summer up there, or fall, I mean, winter or fall?

Mr. HEGNA. It's clearly winter. There's winter and—winter's coming on.

Mrs. CUBIN. Because I was there in October.

Mr. HEGNA. It's the only two seasons we have up there.

Mrs. CUBIN. Right. I was there in October and I remember the cost of putting a light under a passageway like so that the fish could find their way where they were going. And I couldn't help but—never mind.

Thank you for your testimony. And welcome to the committee, Mr. Becker. And would you please present your testimony.

STATEMENT OF DAN BECKER

Mr. BECKER. Thank you very much, Madam Chair, members of the committee. I am the director of the Global Warming Energy Program at the Sierra Club and I want to thank you for the opportunity to testify on behalf of our more than ½ million members nationwide.

And our message—well, let me just say I will summarize my testimony if that's OK and would like to submit two additional pieces of documentation for the record.

Mrs. CUBIN. Without objection.

Mr. BECKER. Thank you.

Our message is short. We should not drill under the Arctic National Wildlife Refuge for oil. We should drill under Detroit by making our cars and light trucks more efficient.

Once again, oil prices have risen because OPEC is manipulating the supply to increase profits. Once again, we have been made vulnerable by our dependence on oil. And once more, Americans, tired of being victimized by OPEC, are looking to our leaders for real solutions. But we can't drill our way out of this problem.

We import 55 percent of our oil, but we sit on only 3 percent of the world's known reserves. It's a simple case of supply and demand, as we said here earlier. We can do very little to affect the supply, but we can do an enormous amount to affect the demand.

In 1975, for example, Congress passed the most successful energy saving law ever, the CAFE standards, which were signed into law by President Ford. It doubled fuel economy. It cut oil consumption by 3 million barrels of oil a day. And it helped put OPEC on the ropes.

But since 1996, Congress has blocked CAFE standards with an appropriations rider. And the industry has churned out gas guzzling SUVs at a prodigious rate. As a result, fuel economy has sunk to its lowest level since 1980. Oil demand has risen by 500,000 barrels per day. OPEC has come roaring back to life.

The biggest single step we can take to curb our consumption of oil is raising the CAFE standard. And had we started doing that in 1994 at a stately pace of 6 percent a year, we would have now been saving 35 million gallons of oil a day and \$52 million a day and we'd be saving twice the U.S. share of the OPEC shortfall.

At 45 miles per gallon and 34 for light trucks, we would save more oil than we import from the Persian Gulf plus what may lie

under the Arctic National Wildlife Refuge plus what may lie in offshore California. We would also be cutting global warming.

Mrs. CUBIN. Excuse me. Would you repeat that, please?

Mr. BECKER. Sure. If we raised the CAFE standards to 45 miles per gallon for cars and 34 miles per gallon for SUVs and other light trucks, we would save more oil than we import from the Persian Gulf plus what might lie under the Arctic Refuge plus what might lie under the offshore California fields.

Mrs. CUBIN. Over how much time?

Mr. BECKER. It would take a phase-in period of 10 years to have all the new cars replacing the existing fleet. Basically, 10 percent of the auto fleet retires every year. So it would take 10 years to phase-in.

But that is frankly the same period of time that is envisioned for bringing the Arctic National Wildlife Refuge field on line. So the timeframe is a similar one and we can begin saving by improving fuel economy this year.

The technology exists, through more efficient engines, improved transmissions, better aerodynamics, to make these changes to our vehicles. These kinds of technologies could change the Ford Explorer from a 19 mile to a 34 mile per gallon truck. And it would save \$5,500 on gas for the owner over the life of the truck. The investment in technology to achieve that \$5,500 savings would be only \$935.

Even better technology is on the new Honda Insight, which you can buy right now. I saw one on my way over to testify. It's a 65-mile-per-gallon car that has 2 engines side-by-side, a gasoline engine that recharges the electric motor that mostly runs the car. Toyota will sell a 55-mile-per-gallon 5 passenger Prius beginning in June. But Detroit is not going to reverse, in part because of this rider.

Rather than cutting back on energy efficiency, what we should be doing is using energy efficiency to cut back on our oil dependence. What we must not do is pillage the Arctic National Wildlife Refuge for a fix of oil.

The coastal plain of the refuge represents the last 5 percent that remains off-limits of Alaska. This is, as has been said before by this panel, although not necessarily respectfully, America's Serengeti. It is a home to unique wildlife: wolves, polar bears, musk ox, myriad bird species. It's the camping ground, as been said before, of the porcupine caribou herd, which migrate hundreds of miles to this special place to give birth to their young.

No one knows how much oil lies beneath the Arctic Refuge. The USGS's most recent study determined that a mean estimate of 3.2 billion barrels of economically recoverable oil may lie there. That's less than a 6-month's supply and, even at peak production, would represent less than 2 percent of total U.S. daily demand and would take 10 years, as I said a moment ago, for it to come on line.

But it doesn't really matter how much oil lies under the Arctic Refuge. It would be shortsighted to drill there just as it would be shortsighted to dam the Grand Canyon for hydropower or to tap Old Faithful for geothermal energy or to pop the Mona Lisa into the fire to warm your house. We must not sacrifice one of America's most spectacular national treasures just for a fix of oil.

Oil drilling in the Arctic Refuge would require construction of a large industrial complex with hundreds of miles of pipelines and roads, numerous drilling pads, production wells, power plants, and housing for thousands of workers.

Such a massive industrial facility would destroy this pristine wilderness. The Arctic National Wildlife Refuge is public land. It belongs to all of us. And it should be protected for future generations to enjoy and explore and discover. We cannot drill our way out of our oil dependence but we can save our way out of it. Now is the time to take the single biggest step to cutting our oil addiction by raising the CAFE standards.

Thank you very much and I'd be happy to answer any questions that you may have.

[The prepared statement of Mr. Becker follows:]

**STATEMENT OF
DANIEL F. BECKER
DIRECTOR, GLOBAL WARMING AND ENERGY PROGRAM SIERRA CLUB

BEFORE THE COMMITTEE ON RESOURCES, U.S. HOUSE OF
REPRESENTATIVES

ON NATIONAL SECURITY AND STRATEGIES FOR REDUCING OIL
IMPORTS**

April 12, 2000

Mr. Chairman and Members of the Committee, my name is Daniel Becker and I am the Director of Sierra Club's Global Warming and Energy Program. I appreciate the opportunity to testify on behalf of Sierra Club's more than half million members nationwide on how we can improve our energy security and cut our oil dependency. In short we should not drill under the Arctic National Wildlife Refuge for oil. We should drill under Detroit by making our cars go further on a gallon of gas.

Once more, oil prices have risen because OPEC-- a cartel of oil producing countries-- is manipulating supply to increase profits. Once more, we find ourselves vulnerable and victimized by our dependence on foreign oil. And once more, Americans, tired of being jerked around by the cartel, look to their leaders for real solutions.

But instead of using the last quarter-century to reduce America's oil dependency, Congress has bowed to the oil companies and auto industry -- refusing to encourage American car companies to make more fuel efficient cars and voting against research and incentives for alternate energy use. Since 1995, a rider on the Transportation Appropriations bill has frozen Corporate Average Fuel Economy.

Today's high prices at the pump are the result of high demand in the face of a small shortfall in world oil supply. Globally, oil consumption is 2 million barrels of oil per day more than supply because of OPEC's decision to cut back on production by 4 million barrels per day. The U.S. alone consumes about 18 million barrels a day. The U.S. share of this shortfall is about 400,000 barrels per day. If, in 1994, a 6% per year increase had been phased in, CAFE standards alone would have eliminated twice the U.S. share of excess demand according to analysis by the American Council for an Energy Efficient Economy.

Now some members of Congress are using the oil price hike as an excuse to renew their calls for drilling the Arctic Refuge. Clearly, destroying one of the most spectacular places on the planet is too high a price to pay for politics as usual.

America can break its dependency on OPEC. In the short-term, we should renew our ban on exporting Alaskan oil to lower prices at the pump for hard-working Americans. But

the long-term solutions lie in reducing our dependency on oil by making a car go longer on a gallon of gasoline, using alternate energy sources and enacting real campaign finance reform to reduce the influence of the oil and auto industries over our nation's energy policies.

How did we get here?

In 1975, Congress, with bipartisan support, passed the most successful energy savings measure it has ever adopted -- the provision, signed into law by President Gerald Ford, set miles per gallon standards for cars and light trucks. By requiring automakers to double the average fuel economy of cars between the late-1970s through the late-1980s, Congress ensured that the U.S. would be saving 3 million barrels of oil every day. Without these savings, the U.S. would be importing at least 1.5 million barrels a day more oil than we currently do.

Congress established the initial standards, and delegated responsibility for setting new standards to the Administration, specifically the Department of Transportation. Congress provided the Administration with four factors to consider in setting new standards: technical feasibility, economic practicability, the effect of other federal motor vehicle standards on fuel economy, and the need of the United States to conserve energy. With these directions, Congress recognized that the Department of Transportation (DOT), would be best equipped to provide the analysis necessary for a sound rule making at a low cost for the public value provided.

Today, demand for gasoline is at an all-time high and growing. In large part, this increase in demand is due to the transformation of light trucks into passenger vehicles. When Congress passed the CAFE law, it did not require automakers to steadily improve light truck fuel economy because these vehicles comprised only 20% of the vehicle fleet and were primarily work vehicles. Today, Sport Utility Vehicles and other light trucks are nearly 50% of the new vehicles sold, driving down average fuel economy and driving up demand for oil.

Since 1996, Congress has bowed to auto-industry pressure to block new fuel economy standards. By attaching riders to Department of Transportation funding bills since 1996, Congress has prevented the Administration from acting to reduce demand for oil by improving fuel economy standards for light trucks. Fuel economy for these vehicles has been stuck for 19 years despite their increasing percentage of the fleet.

Increasing Supply: A False Choice

To some, the solution to ending our dependence on foreign oil is simple: increase domestic supply. While close to half our oil is produced domestically, the U.S. has less than 3% of the world's known oil reserves. The numbers will never add up to oil independence. And our oil deficit is only getting worse.

The U.S. currently imports 55% of its oil. At the height of the oil crisis in 1975, the U.S. imported just 35% of its oil. Within the next few years the U.S. Energy Information Agency projects that we will be importing nearly two-thirds of our oil.

Where does oil go?

Oil meets 40% of our energy needs. The transportation sector is the leader in oil demand, with motor fuels accounting for 65% of oil consumption-- mostly in the form of gasoline. In fact, cars and light trucks alone guzzle 40% of the oil consumed in the U.S. Demand for gasoline has been steadily rising, in large part due to the boom in light truck sales, especially sport utility vehicles. Today, about half of all new vehicles sold in America are light trucks. Many of these are SUVs, which average 12-16 mpg.

The most noticed consequence of our oil dependence is the price of a gallon of gasoline at the pump. Prices at the gas pump in March were more than 50% higher than last year's prices-- upwards of \$1.50 per gallon for regular unleaded gasoline. But the consequences of oil dependence go far beyond draining consumers pockets at the pump. Oil dollars account for \$50 billion of our national trade deficit. Oil has extensive environmental impacts that begin with drilling and continue through to burning it in our cars and light trucks. The military costs of protecting oil from the Persian Gulf include defending oil-producing nations as we did in the 1990 Gulf War. And the greatest long-term costs: Demand for oil creates a constant pressure to drill in our pristine wilderness areas, particularly the Arctic National Wildlife Refuge and also off the coasts of California, Florida and other states.

The Arctic National Wildlife Refuge

Consumers facing high prices at the pump want solutions. But the United States can never drill its way to energy independence. Though some say the answer to our nation's energy needs lie below the surface of the Arctic National Wildlife Refuge, this spectacular landscape need not-- and must not-- be sacrificed for a few barrels of oil. Ninety-five percent of Alaska's vast North Slope is already available for oil and gas exploration and leasing. The coastal plain of the Arctic Refuge represents the last 5% that remains off-limits to drilling. But Big Oil wants it all.

The coastal plain of the Arctic National Wildlife Refuge is America's Serengeti. Nestled between the towering mountains of the Brooks Range and the Beaufort Sea in northeast Alaska, the narrow 1.5 million acre coastal plain is the biological heart of this untamed wilderness. It is home to unique and abundant wildlife: wolves, polar bear, musk ox and wolverine. Myriad bird species rely on the coastal plain for breeding, nesting and migratory stopovers on trips as far away as the Baja peninsula, the Chesapeake Bay, and even Antarctica.

The coastal plain is also the calving grounds of the 129,000 member Porcupine River Caribou Herd who migrate over 400 miles each year to this same place to give birth to their young. This migration is reminiscent of the buffalo that once roamed the Great

Plains. The coastal plain is also sacred ground to the Gwich'in Indians, a 20,000 year old native culture whose subsistence lifestyle depends upon the harvest of caribou. Their villages are strategically located along the migration routes of the caribou herd, and they depend on the animal for food, clothing, medicine and their cultural lore. The Gwich'in people fear that the oil development in the calving grounds of the caribou will disrupt the herd, cause a decline in caribou population and ultimately jeopardize their traditional way of life. The wildlife and the native culture that depend upon the coastal plain are at risk because it is precisely this coastal plain that Big Oil wants to open to drilling and development, claiming that vast quantities of oil lie beneath the fragile tundra.

But truth be told, no one knows how much, if any, oil lies beneath the coastal plain of the Arctic Refuge. The United States Geological Service (USGS) has conducted multiple studies of potential oil reserves and the estimates have fluctuated dramatically. Even in its most favorable estimate, the USGS published a determination of the mean estimate of economically recoverable oil as 3.2 billion barrels of oil. That's less than a six-month supply at current consumption rates and even at peak production, arctic oil would represent only 2% of total U.S. daily demand. Plus, it would take 10 years before any oil began to flow.

But it doesn't matter how much or how little oil may lie underneath the coastal plain. Drilling the Arctic Refuge would be as shortsighted as damming the Grand Canyon for hydroelectric power or tapping Old Faithful for geothermal energy. It would be as foolhardy as burning the Mona Lisa to keep you warm. America is losing our remaining wildlands at an alarming rate. We must have the foresight to protect one of America's most spectacular natural treasures-- not sacrifice it for a minimal amount of oil.

Proponents of drilling argue that the impact of oil development on the arctic environment will be minimal. But one need only look to the history of environmental abuse at the Prudhoe Bay oil fields 60 miles to the west to question that assertion. Prudhoe Bay is a massive industrial complex sprawling 800 square miles across now-ruined tundra. Oil development of the coastal plain will require hundreds of miles of pipelines and roads, numerous drilling pads, production wells, waste pits, airstrips, and dorms.

Such a massive industrial facility will forever destroy the pristine wilderness of the Arctic Refuge and once it's gone, it's gone forever. The Arctic National Wildlife Refuge is public land, which belongs to all Americans and should be protected for future generations to enjoy, explore, and discover.

Using 21st Century Technology in American Cars and Trucks

The technology exists today to improve fuel economy without impeding safety or causing inconvenience for motorists. However, the auto industry makes its largest profits from gas-guzzling SUVs and does not want to invest to improve their product.

Both Honda and Toyota are pressing ahead with hybrid gasoline-electric technology. Honda's Insight is on the market now and gets more than 60 mpg, and Toyota's 5-passenger Prius, expected in the market this summer, will get 50 mpg. Hybrid engines, combining gasoline and electric power will lead to improvements in fuel economy. These reasonably priced vehicles (\$18,000-20,000) offer astronomical improvements over current mileage. The Prius has a fuel economy of roughly 55-mpg and can go over 850 miles on a single tank of gasoline. And the Insight was recently praised with the first product endorsement award in Sierra Club history, the Award for Excellence in Environmental Engineering.

If Congress is serious about ending our dependence on foreign oil, it should make auto companies give consumers the choice to buy fuel-efficient vehicles. The Big Three automakers' response to date is three diesel prototypes with no commercial production, despite the American people's desire to end our oil dependence.

Updating fuel economy standards would not be a burden on the auto industry for two main reasons:

- 1) Change cannot happen overnight, it must be gradual and steady: A 60% improvement is achieved over the course of years. That's why the auto industry should increase fuel economy by an average of 6% a year for the next decade. This improvement is achievable with current technology.
- 2) Consumers will have more choices: The American people deserve more choices, not less. That's why CAFE standards are fleet averages. For every fuel-efficient Insight or Prius a company can still produce some gas-guzzling SUVs. But Americans need more options on the higher end of the spectrum to achieve this balance.

Benefits of Existing Fuel Economy Standards

The existing standards save more than 3 million of barrels of oil per day and reduce U.S. dependence on imported oil. Without these savings, the U.S. would be importing at least 1.5 million barrels more every day than today's current levels.

CAFE standards also result in consumer savings at the gas pump. Because fuel economy for cars doubled between 1975 and the late 1980s, a new car purchaser saves an average of \$3,000 at the gas pump over the lifetime of the car. Even at today's low fuel prices, CAFE delivers more than \$30 billion annually in consumer savings. Consumers can spend these dollars in their communities on food, housing, and clothing instead of on imported oil. Indeed, this program is a bargain for the American people; there can be no doubt that the very modest regulatory cost of the CAFE standard program is public money well spent.

CAFE standards cut pollution. These standards have reduced US greenhouse gas emissions by 140 million metric tonnes per year. By reducing oil consumption, they keep 500,000 tons per year of carcinogenic hydrocarbon emissions (a key smog-forming pollutant) from upstream sources -- refining and transporting of oil, and refueling at the pump -- out of the air we breathe. The standards, therefore, improve air quality, helping polluted cities and states achieve Clean Air Act requirements. They also keep millions of tons of carbon dioxide, the prime greenhouse gas, out of the atmosphere, helping to curb global warming.

Finally, the US can achieve higher fuel economy standards while creating jobs for Americans. A study by the American Council for an Energy Efficient Economy concluded that the money saved at the gas pump from a modest CAFE increase would be reinvested throughout the economy creating a net increase of 244,000 new jobs nationwide, with 47,000 of these in the auto industry. Raising fuel economy standards for cars and light trucks would build upon the significant benefits Americans have already received from the existing standards.

We can safely improve CAFÉ Standards

It is also important to recognize that the rate of traffic fatalities decreased by 50 percent over the same time that fuel economy doubled under the existing standards. The auto industry has consistently opposed the CAFE law. In 1974, a Ford representative argued before Congress that CAFE would result in a "product line consisting of either all sub-Pinto-sized vehicles or some mix of vehicles ranging from a sub-sub-compact to perhaps a Maverick." This dire prediction proved to be untrue. The industry met CAFE requirements while providing consumers with a full range of cars and light trucks. In fact, when Congress passed the CAFE law, America had the industrialized world's least efficient fleet of vehicles. The CAFE law spurred development of technology and improved the competitiveness of our auto industry. Eighty-five percent of efficiency improvements came from technologies such as more efficient engines and transmissions, and better aerodynamics.

Light trucks pose safety dangers to their owners and occupants. SUVs are four times more likely to roll over in an accident. Rollovers account for 62% of SUV deaths, but only 22% in cars. Yet automakers continue to fight new standards protecting occupants in rollover accidents. According to a study by the National Crash Analysis Center, an organization funded by both the government and the auto industry, occupants of an SUV are just as likely as occupants of a car to die once the vehicle is involved in an accident. One explanation is that SUVs have high rollover rates.

Light trucks particularly heavy SUVs and pickups, are fundamentally incompatible with cars on the road. According to the National Highway Traffic Safety Administration, collisions between cars and light trucks account for more than half of all fatalities in crashes between light duty vehicles. Nearly 60% of all fatalities in light vehicle side impacts occur when the striking vehicle is a light truck. SUVs are nearly three times as

likely to kill drivers of other vehicles during collisions than are cars. Finally, these vehicles pose excessive risk to pedestrians because of their design, weight and weaker brakes. Raising light truck CAFE standards would help restore balance and compatibility to the overall vehicle fleet, resulting in reductions in traffic fatalities and pollution

Freezing CAFE Standards: A Flawed Energy Policy

Starting with the FY 1996 Department of Transportation Appropriations bill Congress barred the Department from exercising its expert judgment under the fuel economy law. The rider blocking fuel economy standards has precluded the Department from using funds to "prepare, propose, or promulgate" CAFE standards. In effect, this blocks the department from even considering technical feasibility of improving the standards, the economic practicality of doing so, the effect of other Federal motor vehicle standards on fuel economy, and the need of the nation to conserve oil.

The rider blocking the DOT from doing its work has frozen fuel economy standards for both cars and light trucks. Light truck fuel economy has been most affected because the freeze provision killed a light truck fuel economy rulemaking; it has allowed the large disparity between car and light truck fuel economy to persist. The CAFE rider has, in essence, substituted Congress's judgment on the "technical feasibility" of raising light truck standards as well as the effect of other federal motor vehicle safety standards on fuel economy for that of the experts it charged with undertaking this analysis. And, by stealth, the rider even denies the American people the benefit of DOT's analysis that it would do in preparation for proposing new standards.

Automakers are now taking advantage of the light truck fuel economy loophole to produce fleets of gas guzzling, heavily polluting sport utility vehicles (SUVs), minivans and pickups. The explosion of gas guzzling light trucks in the marketplace has brought the fleet fuel economy of new vehicles sold in 1999 to its lowest point since 1980, according to EPA's 1999 fuel economy trends report. Fuel economy of today's light trucks has stagnated for 19 years while the market share of these vehicles has jumped from 20% in the 1970s to nearly 50% of new vehicle sales today. These vehicles are driving up demand for oil to an all time high.

The rider blocking CAFE also blocks critical action addressing "the need to conserve energy." OPEC oil will continue to provide the nation with the majority of its oil until Congress acts to pursue an energy policy that directly address rising demand by the transportation sector. The decision Congress made in the 1970s was to enact a sound energy policy that included the CAFE program. This program now saves millions of barrels of oil every day and could save millions more. Instead of seeing improvement in the average fuel economy of new vehicles sold, we are backsliding. The average fuel economy of new vehicles sold in 1999 was at its lowest point since 1980. The standard for trucks has stagnated for 19 years and car standards have not changed in 14. This status quo does not reflect the real need of the nation to conserve energy – specifically oil.

And, the rider blocking CAFE also prevents critical DOT from addressing "the need to conserve energy" to reduce air and global warming pollution. Twenty percent of US carbon dioxide pollution comes from cars and light trucks; transportation is the fastest growing source of US greenhouse gas emissions. Gas-guzzling light trucks are driving up US emissions of global warming pollution; improving the standards would help reduce this pollution. Each gallon of gasoline burned in our cars and light trucks spews out nearly 30 pounds of carbon dioxide, the prime global warming pollutant. A 14-mile per gallon SUV will emit more than 115 tons of carbon dioxide over its lifetime, while the average new car emits 64 tons. New standards would also significantly reduce carcinogenic smog-forming hydrocarbon emissions from upstream sources (refining, transporting and refueling).

Raising Fuel Economy Standards Will Save Oil

The single biggest step that the US can take to save oil and curb global warming is to make our cars and sport utilities go further on a gallon of gas by raising miles per gallon standards. In fact, improved standards will save more than we import from the Persian Gulf can expect to get from the Arctic and offshore California combined. The US could be saving an additional 3 million barrels of oil per day if updated fuel economy standards were phased in for both cars and light trucks. A six- percent increase in standards per year over a ten-year period would achieve these significant savings. One key step toward these larger oil savings is to close the loophole in the existing fuel economy program that allows light trucks to meet a significantly lower average standard than cars – 20.7 mpg rather than the 27.5 mpg standard that applies to cars. Closing this loophole would put the US on a course to save 1 million barrels of oil every day.

Automakers can use today's technology to achieve real oil savings. And, automakers can safely increase the fuel economy of cars and light trucks without significantly changing their size or performance. Research by both the Center for Auto Safety on cars and by the Union of Concerned Scientists on SUVs demonstrates that higher fuel economy standards can be achieved using existing technologies while also reducing occupant deaths and injuries without altering the vehicle mix. Cost-effective technologies such as improved engines and transmissions and new materials are the keys to achieving higher fuel economy in both cars and light trucks. These technologies will also help the American automotive industry face an increasingly competitive future.

Public Support for Raising CAFE Standards

Polls consistently show that the American people support raising fuel economy standards. An August 1999 World Wildlife Fund poll of light truck owners showed that 73% believed light trucks should be cleaner and two-thirds would pay significantly more for their next truck if it polluted less. Significantly, 70% believed automakers would not clean up their trucks if they were not required to do so. Another August 1999 poll by Zogby International of predominately Independent and Republican voters in New Hampshire revealed that 75 percent favored increasing fuel economy to address global

warming, even at a cost of \$300. A 1998, a Research/Strategy/Management, Inc. poll conducted for the Sustainable Energy Coalition showed that 97 percent of Americans favored use of new technologies that would improve fuel economy. And the 1998 Scripps Howard Texas Poll revealed that Americans are very supportive of measures that will reduce our dependence on oil. Sixty-four percent of Texans agreed with the following statement: "We should reduce our dependence on coal and oil energy sources in order to decrease the impacts of global warming even if that means we will pay more for cleaner, renewable energy sources."

Investing in Renewable Energy

While many congressional leaders are now calling for immediate action to reduce gasoline prices, they have blocked efforts to increase energy efficiency and reduce oil consumption. In the last two years, Congress has significantly under-funded the Administration's proposals to:

- * Fund research for energy conservation, solar and renewable energy, by 20% less than requested in FY 2000, or \$273 million for FY '99 and 2000;
- * Provide tax incentives to spur the purchase of energy efficient vehicles and other products, the use of renewable energy, and clean renewable electricity production, by 98% less than requested in FY 2000, and by 100% less than in FY '99, when Congress provided no funding. Those decreases represent \$7.1 billion for the two years, and;

Last year Sen. Jim Jeffords (R-VT) led efforts to add \$62 million to solar and renewable energy programs, but it was defeated. In the last two years, Congress cut \$7.4 billion from the Administration's efforts to reduce our consumption of energy. These programs would have saved business and consumers \$70 on their energy bill for every \$1 invested in these programs, which might have mitigated the cost of rising gasoline prices.

Weatherization

When the Northeast was hit with a cold snap in February, the high cost of home heating oil was a major issue. Congress, since 1995, has slashed funding for important programs that would help reduce oil consumption and improve energy efficiency. In Fiscal Year 1996, the energy efficiency budget was cut by 30%. Energy efficiency helps to reduce demand and save consumers money.

In addition to cutting funding for energy efficiency programs in general, Congress has slashed funding for the Weatherization Assistance Program, a program that provides essential services to low-income families. The program provides up to \$2,000 per household to weatherize homes-- improving insulation, windows, furnaces, etc. Weatherization has been shown to improve a home's efficiency by 23%, which would decrease demand for oil and save money in the long-term. Low-income families were the hardest hit by high oil prices in a cold snap. By slashing funding for the weatherization

program Congress ensured that homes were less efficient and required more oil to provide much needed warmth. Congress must invest in programs like weatherization to insure that the most vulnerable members of society are not left in the cold in the future.

Raising CAFE: A Win Win Solution

If there's one thing that all sides can agree on, it's that this issue won't go away by itself. We are far more oil-dependent today than 25 years ago. And unless we demand change, we will continue to be vulnerable to manipulation by oil producing nations.

Raising Light Truck Fuel Economy

Prior to the FY 1996 Transportation Appropriations bill rider, the Administration had initiated a rulemaking to increase light truck CAFE standards. The idea behind the 1998-2006 Advance Notice of Proposed Rulemaking was to give plenty of time to Detroit's engineers, designers and salespeople to prepare for and meet improved standards so that all Americans could benefit from energy efficiency technologies. In the years leading up to the proposed rule, the Administration had increased light truck fuel economy under the 1975 law by a mere two tenths of a mile, bringing the standard up from 20.5 mpg to the current 20.7 mpg. As these figures show, the Administration had not rushed out to raise light truck CAFE by large amounts.

But, the law provides for a thorough and well-considered rulemaking process guided by the factors Congress included in the 1975 law.

Today, light trucks are more than half of new passenger vehicles sold. The distinction between cars and light trucks created in the original law is no longer reasonable. Twenty years ago light trucks comprised less than 20% of the vehicle market and were primarily agricultural and commercial vehicles. Today, light trucks, which include sport utility vehicles (SUVs), minivans, and pickups, are used as family cars for grocery shopping, commuting, and driving the kids to soccer games on the weekends. On December 21, 1999 President Clinton announced new Tier 2 standards to reduce smog-forming pollution from automobiles. Significantly, the Tier 2 standards recognize that all passenger vehicles should be in the same program, closing the loophole that held light trucks to looser standards than cars. Yet, when it comes to fuel economy, these gas-guzzlers are driving up demand for oil, increasing emissions of air and global warming pollution, and compromising traffic safety because a loophole still exists.

Many of the same technologies used to make cars use less gas can be used to improve light truck fuel economy. The Union of Concerned Scientists has shown that the best selling Ford Explorer SUV could travel as much as 34 mpg instead of merely 19 by using technologies that exist or are on the verge of marketability. The cost of the technology is made back by the consumer in about two years from oil savings. Automakers have been very slow to bring new technologies to the market because the existing standards do not demand it. In recent years GM put new transmissions on large pickups boosting fuel

economy by 20%, but GM and its Big 3 rivals are still failing to meet the 20.7 mpg light truck CAFE standard.

Putting the light truck rulemaking back on track will not only result in significant oil savings, but will slash carbon dioxide emissions by as much as 240 million tons per year when fully implemented. A light truck fuel economy of 27.5 mpg can be achieved without compromising light truck safety; it will also help decrease the deadly threat these vehicles pose to cars on the road. This degree of increased efficiency can be achieved through a combination of engine and transmission improvements along with high-strength lightweight materials and better streamlining. Raising light truck fuel economy is an important starting point to put the US on the road toward achieving improved energy efficiency for all automobiles at reasonable, technologically achievable, and safe levels that satisfy the criteria provided in the law.

Conclusion

All Americans benefit from the existing CAFE standards. And, we would all benefit from the greater oil savings, reduced pollution, and improved safety that would result from new standards. By prohibiting the DOT from spending funds on preparing, proposing, or promulgating new fuel economy standards, Congress is denying the American people the benefit of the expert judgment of the agency Congress charged with making these important decisions.

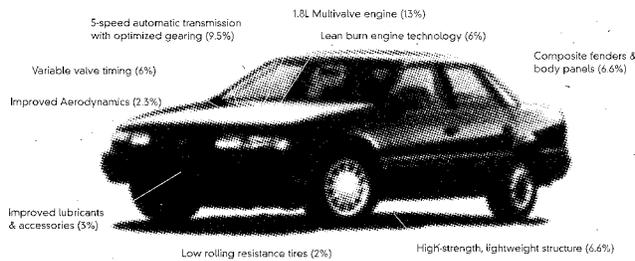
Congress charged the Department with considering the need of the nation to conserve energy, the technical feasibility of achieving new standards, and cost-effectiveness of new standards. Congress should allow the agency best equipped to evaluate this technical information to make a well-reasoned and supportable decision on the record. Ultimately, Congress can weigh in and act upon any action the agency takes. But, it should do so openly, with hearings, and with the benefits of the Department of Transportation's expert judgment concerning all of the information on what can be done to improve traffic safety, conserve energy, reduce pollution, and save Americans money at the gas pump.

Drilling the Arctic is not the solution. At our current level of consumption, there is no chance domestic production can equal demand. That's why we need a responsible Congress that isn't in the pocket of Big Oil to enact real solutions. We have the technology and national will to finally end our dependence on foreign oil. We need a Congress with the courage to fight now for working families and to protect America's environment.

[The information referred to follows:]



The best selling car in America could get 42 mpg...but doesn't.



Percentages indicate fuel economy improvement over current 27.5 mpg Taurus

Making the average car in America get 45 miles per gallon is the biggest single step we can take to save oil and curb global warming. The key to getting there is technology: improved engines and transmissions; new lightweight, high-strength materials; and sleeker aerodynamic designs.

To illustrate the potential new technology presents us, we've demonstrated how a popular car that meets the current Corporate Average Fuel Economy (CAFE) standard of 27.5 mpg could get 42.3 mpg. The technologies indicated by the arrows above are available to manufacturers, and most are already in production cars.

The performance, size and safety of the car would remain the same. Consumers would save more money at the gas pump than the changes would cost. But automakers won't do it on their own—we need to improve the law.

Today, Even More Technology is Available

The current Taurus is no technological dinosaur. Its 27.5 mpg CAFE rating is twice that of its 1975 midsize predecessor, the Ford Torino. Today's Taurus has good aerodynamic styling, a 3.0L V-6 engine that achieves relatively low friction levels and incorporates multipoint fuel injection, and an electronically controlled four speed automatic transmission with lockup. Safety features of the Taurus include a standard driver

side airbag, an optional passenger airbag, anti-lock brakes and a structure that meets the new side impact requirements. Even so, we've found room for a 54% improvement in fuel economy.

Improving the fuel economy of the Taurus and other cars will save oil, curb global warming, slash the trade deficit, and save consumers money at the pump. ■

Technology is Responsible for Past Fuel Economy Gains

Despite Ford's prediction in 1974 that a 27.5 mpg CAFE standard would make all its cars "sub-subcompacts," the company today offers a line of vehicles ranging from the subcompact Aspire to the large Crown Victoria. Efficient packaging, better fuel injection and other technologies accounted for 86% of the fuel economy improvement between 1974 and 1991 according to Department of Energy analysts. Less than 2% came from reducing the size of cars.



42 mpg Taurus Technologies in Detail

1.8 L Multivalve Engine—13% Improvement

The 42 mpg Taurus' 1.8L engine will have more power per unit engine size than the current Taurus 3.0L engine design. Adding 2 valves to each cylinder (multivalve design) improves air/fuel delivery and exhaust discharge, cuts pumping losses and dramatically boosts output. Multivalve accounts for 3% of the 42 mpg Taurus engine's 13% efficiency gain. Dual overhead camshafts to accommodate the extra valves will boost efficiency another 3%. The smaller 1.8L engine has fewer cylinders (4 cylinders instead of 6) than the current 3.0L design, yet the performance of the 42 mpg Taurus is the same. The switch to 4 cylinders accounts for 3% of the 13% efficiency gain. Better design and manufacturing of pistons and cylinder walls in the 42 mpg Taurus engine will eliminate some friction power loss that occurs in the current design and boost efficiency 2%.

Variable Valve Timing—6% Improvement

By allowing intake valves to close early during low power demand, valve timing in the 42 mpg Taurus will prevent inefficient pumping losses that occur in the current Taurus engine.

Lean Burn Engine Technology—6% Improvement

Lean burn technology lets the engine burn less fuel (lean air/fuel mix) under low power demand, but increases intake to admit more fuel when needed, such as during acceleration. Thus it makes the 42 mpg Taurus more efficient without compromising performance.

High Strength, Lightweight Materials—13.2% Improvement

The weight of the 42 mpg Taurus can be reduced to 2505 lbs. from the current 3151 lbs. by making extensive use of high-strength, lightweight materials as a substitute for steel. Fenders, body panels and even the vehicle structure, can be made from

composite plastics which reduce weight without sacrificing function or safety. Aluminum, which is half the mass of steel, can be used for the structure and/or the engine. Because aluminum is so light, aluminum parts can be made thicker, thereby improving crashworthiness and making the structure stiffer for better handling.

5-speed Transmission with Optimized Gearing—9.5% Improvement

A fifth forward gear provides 2.5% of the gain, while optimized gearing provides the remaining 7.0%. The latter saves fuel by reducing engine speed at a given power level by lower gear ratios (shifting sooner than in current transmissions). [Electronic transmission control in the current Taurus and the additional forward gear make optimized shifting work better. High gear ratios are used currently in some production manual transmissions.

Better Aerodynamics—2.3% Improvement

Though Ford was an industry leader in cutting vehicle body wind resistance (lowering coefficient of drag or CD) when it introduced the Taurus in 1985, the current Taurus' CD value of 0.32 no longer leads the industry. The 42 mpg Taurus' CD of 0.29 will be 10% lower, improving efficiency 2.3% and matching the current domestic leader, the Olds Cutlass. (The Lexus LS 400 achieves a CD of 0.28 and the GM Opel Calibra sold in Europe achieves 0.26).

Low Rolling Resistance Tires, Low Friction Lubricants and Improved Accessories—5% Improvement

Tires like the Goodyear GFE offer significantly reduced rolling resistance, boosting efficiency 2.0%. Available motor oils like 5W-30 reduce engine friction and improve efficiency 0.5%. More efficient pumps, alternators, etc. make air conditioning, power steering and other accessories use less power and improve fuel efficiency 2.5%.

Take action

Contact your elected officials and urge them to support Sierra Club efforts to reduce US greenhouse gas emissions. Expandably design 1990 levels by the year 2005. Use them to:

- Support the largest single step as you take to curb global warming: raising miles-per-gallon (MPG) standards for cars and light trucks.
- Work to increase funding for research, development, testing and field demonstration.
- Support improved efficiency standards for electronics and home appliances.

Call the President at 202-462-2111, 24 hours.
 President: G. Huber
 400 M St., E. Suite 200
 1800 Yerkes/Travis, Novato, CA
 94947-1101

For contact your Congressperson or Senator, call the US Capitol Switchboard at 202-224-3111.



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The biggest single step to curbing global warming and saving oil

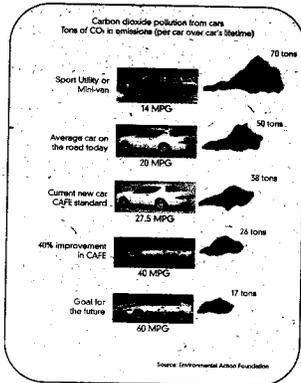
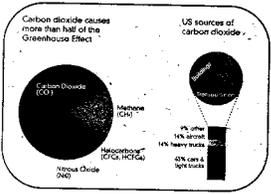
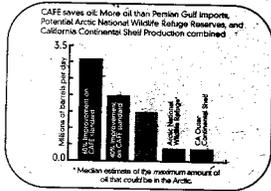
CAFE saves more oil than we import from the entire Persian Gulf

The biggest single step the Clinton Administration can take to curb global warming and ensure a safe energy future for America is to adopt strong automotive fuel economy standards for cars and light trucks.

Congress passed current Corporate Average Fuel Economy (CAFE) standards in 1975. They have been a great success. The standards require that new cars average 27.5 miles per gallon (mpg) and light trucks average 20.7 mpg. Since automakers reached the standard in the 1980s, however, fuel economy levels have begun to decline. Sierra Club, along with a coalition of consumer, safety, and other environmental advocates, is issuing a call to update the CAFE law to 45 mpg for cars and 34 mpg for light trucks over 10 years.

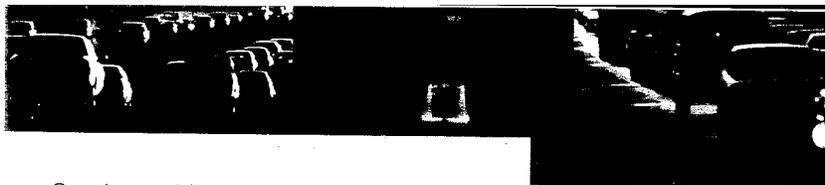
Since CAFE is an average standard, automakers can produce vehicles which fail to meet the standard, as long as enough vehicles exceed the standard to balance it out. Improving the CAFE standards would save this country 3 million barrels of oil each day and would prevent hundreds of millions of tons of carbon dioxide (CO₂) from entering the atmosphere annually.

CO₂ is the major contributor to the greenhouse effect, accounting for over half of the global warming problem. Each gallon of gasoline burned pumps 19 pounds of CO₂ into the atmosphere; in addition, 7 more pounds are created by the refining process. The average car emits about 50 tons of CO₂ over its lifetime, and the American automobile fleet produces more global warming pollution than all sources in Japan combined. The US is the world's largest emitter of CO₂, and must play a leadership role in reducing this pollution—particularly emissions by motor vehicles.



Raising automobile fuel efficiency is like finding a new source of oil under Detroit. Over 40% of the oil we use in this country goes into our cars and trucks. Improving fuel efficiency standards would:

- Lessen our dangerous addiction to oil.
- Slash carbon dioxide (CO₂) pollution, the primary source of man-made global warming.
- Reduce pressure to drill in sensitive areas like the Grand Staircase-Escalante National Monument and the Arctic National Wildlife Refuge.
- Enhance national security.
- Cut America's trade deficit.
- Save consumers money at the gas pump.



Questions and Answers

Q. Can we improve fuel economy without sacrificing safety?

A. Absolutely. Long time safety advocates such as the Center for Auto Safety and Ralph Nader support increasing the CAFE standard to 45 miles per gallon and point out that we can do so safely. In its report on automotive fuel economy, the National Academy of Sciences agrees that improvements in fuel economy need not impair safety: "Improved design and the incorporation of new technology can enhance both crash avoidance and crash worthiness potential, while improving fuel efficiency."

The auto manufacturers claim they can only achieve higher CAFE standards by making "mini-cars." But they said the same thing in 1974 when Ford spokesperson testified in Congress that a 27.5 mpg standard would result in a "product line consisting of either all sub-Pinto-sized vehicles or some mix of vehicles ranging from a sub-subcompact to perhaps a Maverick." Obviously, they were wrong then and they are wrong again today.

CAFE improvements would require increases in the average efficiency of the fleet of automobiles, not every individual vehicle. Manufacturers could use existing technologies (see below) to increase fuel efficiency, rather than making "Pintos and Mavericks."

Q. What technologies are currently available that will help get the average new automobile to 45 mpg?

A. Greater use of existing technology is the key to increasing fuel economy and saving oil. In its discussion of readily available fuel efficient technologies, the National Academy of Sciences pointed out that "most of these technologies have reached only a fraction of their potential application in vehicles sold in the U.S." Here are some currently available technologies:

- Changing an engine from two to four valves per cylinder improves its fuel economy by over 5%. Engines with four valves per cylinder deliver fuel and oxygen to their engines more efficiently, and increase fuel economy.
- Variable valve timing (VVT) adjusts the air flow at different engine speeds to the optimum level, improving horsepower and fuel economy by about 12%. Adding lean-burn technology, which

introduces more air than is needed to the combustion chamber, to engines with VVT can provide further fuel economy gains. Honda's 1994 Civic VX with a VTEC-E lean-burn engine was 44% more efficient than that year's Civic DX without the VTEC-E engine.

- Electronically controlled gear shifting, automatic transmissions with five speeds rather than three or four speeds, and continuously variable transmissions, such as the ones found in Honda's 1997 Civic HX and Nissan's AP-X concept car, enable cars to operate at optimal efficiency more of the time, wasting less fuel.

- High-strength, lightweight materials, like those found in Saturns and some Audi models, can reduce the load the engine carries without compromising safety. The Congressional Office of Technology Assessment found that 35 pounds of composite plastics or 45 pounds of aluminum can be as strong as 100 pounds of steel. Every 10% reduction in weight yields a 6.6% average improvement in fuel economy.

- Front wheel drive vehicles don't have bulky drive shafts, so they are lighter and require less fuel to operate. Automakers could shift the 1.5 million rear wheel drive cars sold annually in the US to front wheel drive and improve the fuel economy of each by 12.5%.

- Better aerodynamic designs, like that of the Ford Taurus, can cut down on wind resistance and improve fuel economy by 3 to 5%.

- Even greater improvements are beginning to emerge. Toyota is marketing a 4-door passenger car in Japan which uses both a gasoline and an electric engine, and achieves 66 mpg. Mitsubishi is developing a direct injection gasoline engine which promises to greatly enhance both power and fuel efficiency.

Q. The auto industry says higher fuel economy will cost jobs. Is this true?

A. No. A study by the American Council for an Energy Efficient Economy shows that higher fuel economy will actually create jobs. Although some sectors of the economy, such as the oil industry, will experience losses, ACEEE estimates the auto industry alone will gain 47,000 new jobs. They expect money saved at the gas pump to be reinvested throughout the economy,

creating a net increase of 244,000 new jobs nationwide.

The real danger to auto industry jobs is US automakers' lack of leadership in developing new technologies. While Japanese and European car makers are putting lean-burn engines, continuously variable transmissions, and other efficiency technologies into their cars, American automakers continue to produce primitive, inefficient designs. US fuel efficiency is actually in decline, with all 3 US automakers violating CAFE standards for light trucks in 1997.

Q. Will truck owners still be able to buy the vehicles they need under tighter CAFE standards?

A. Yes. Trucks will have to meet a lower average of 34 mpg over 10 years. Also, heavy duty pickups, which are the biggest gas guzzlers, represent only 1/9th of the truck fleet, even if they remain largely unchanged, there is still room for improvement in the efficiency of smaller trucks, mini-vans, and sport utility vehicles.

Over the last decade, trucks have only improved 0.4 mpg to 20.7 mpg, so they have even more room for efficiency improvements than cars. A CAFE increase for light trucks is especially important since they now account for almost half of the new vehicle market. ■



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STATEMENT OF ANN L. ROTHE *for the record*
EXECUTIVE DIRECTOR,

TRUSTEES FOR ALASKA

Before the

**UNITED STATES SENATE
COMMITTEE ON ENERGY AND NATURAL RESOURCES**

Regarding

Senate Bill 2214:

**"The Arctic Coastal Plain
Domestic Energy Security Act of 2000."**

April 5, 2000

INTRODUCTION

My name is Ann Rothe, and I am Executive Director of Trustees for Alaska, a nonprofit, public interest law firm whose mission is to provide counsel to sustain and protect Alaska's natural environment. We represent local and national environmental groups, Alaska Native villages and nonprofit organizations, community groups, hunters, fishers and others where the outcome of our advocacy could benefit Alaska's environment. Our services are free of charge, and for most of our clients, we provide legal counsel they could not otherwise afford on issues that affect their ways of life.

Trustees for Alaska was established in 1974 to provide support to environmental organizations and community groups concerned about the impacts of construction of the Trans Alaska Pipeline System on the environment of Arctic and Interior Alaska, including impacts to water quality and wildlife habitat. Our work has grown since our inception to include advocacy efforts and legal cases dealing with oil and gas development, mining, hazardous waste management, air pollution, water pollution, wetlands management, land use management and protection of marine ecosystems. But a significant segment of our work has always focused on limiting the environmental impacts of industrial development in America's only Arctic region, commonly referred to as Alaska's "North Slope", and the oil transportation system that sustains this development. It is our belief, and the belief of the organizations to which we provide counsel, that a balanced approach to management of natural resources is needed in America's Arctic, one that protects the region's most sensitive areas, resources and cultures. Our work in the Arctic over the past twenty five years has focused on achieving this balance, and it is this experience and commitment that underlies the testimony I present to you today.

The focus of my testimony is two-fold: first, to make you aware of the extent of existing development in America's Arctic, including the extent of leasing that has occurred in the region and the number of new developments in the offing, the environmental impacts that have occurred from existing development, and the extent to which this development has been allowed to proceed with little oversight or monitoring;

and second, to underscore the unique character of America's only Arctic ecosystem, including, most notably, the only portion of this region that has been set aside and made off-limits to industrial development, i.e., the coastal plain of the Arctic National Wildlife Refuge.

AMERICA'S ARCTIC

Stretching from the Canadian border to the Chukchi Sea, south to the Brooks Range and north to the edge of the polar ice cap, the Arctic Ocean coast of Alaska comprises a unique ecosystem. It is America's only high Arctic ecosystem. It is comprised of a vast expanse of frozen earth over which lies a complex network of treeless tundra, coastal lagoons, wetlands, streams and rivers, which in turn provide habitat for some of the largest and most unique concentrations of wildlife on the North American continent. Each summer, the wetlands of Alaska's North Slope host several million swans, geese, ducks and shorebirds. The rich saltwater lagoons of the Beaufort and Chukchi Seas provide essential calving, feeding and rearing areas for the some of the largest concentrations of marine mammals on the continent, including polar bears, Beluga whales and ringed seals. The watersheds of the region's major rivers are home to a unique population of Arctic Peregrine Falcons, as well as other raptors, including gyrfalcons, golden eagles and rough-legged hawks. The region encompasses the calving grounds of more than half a million caribou, including two of the continent's largest caribou herds--the Porcupine Caribou Herd and the Western Arctic Caribou Herd.

Progressing from the Chukchi Sea coast east to the Canadian border, the coastal plain of America's Arctic narrows as it reaches the Canadian border. The eastern portion of the coastal plain is encompassed within the boundaries of the Arctic National Wildlife Refuge. The 1.9 million acres that comprises this narrow extension of the Arctic Ocean coastal ecosystem is unique in that contains the full spectrum of Arctic habitats from the Brooks Range to the Arctic Ocean protected in an unbroken continuum. It provides essential habitat for the largest concentration of denning polar bears in

America, and provides essential calving and rearing habitat for the Porcupine Caribou herd, which in turn sustains one of the nation's last remaining intact aboriginal cultures. It is truly a unique and irreplaceable part of America's Arctic. This is why it was first set aside for permanent protection by President Dwight D. Eisenhower in 1960. It is the only portion of America's Arctic that is closed to industrial development.

THE "FOOTPRINT" OF OIL DEVELOPMENT IN AMERICA'S ARCTIC

America's Arctic also encompasses some of the world's largest oil and gas reserves. Since the discovery of oil at Prudhoe Bay in 1968, oil field development in the American Arctic has entailed the construction of a massive industrial complex that now accounts for nearly 20% of the nation's domestic oil production.

Much has been said about the relatively small "footprint" of oil field development in America's Arctic. The term, "footprint", has been used to describe the acreage of Arctic coastal tundra that has actually been buried with an insulating layer of gravel in order to support oil field infrastructure, a total of over 9,000 acres¹. It has been implied that this figure represents the extent of the impacts of development to the Arctic coastal ecosystem. But making such an implication is analogous to measuring the impact of a high seas drift net by measuring the amount of space it occupies as it lies curled up on the deck of a fishing boat. Since the discovery of oil at Prudhoe Bay in 1968, oil field development in America's Arctic has entailed the construction of a vast network of seismic exploration trails, gravel mines, roads, drill pads, pipelines, processing facilities, operating and housing facilities, and waste and sewage treatment facilities that stretches like an industrial drift net across nearly 1,000 square miles of coastal tundra from the Colville River to the Canning River, and has changed forever the character of this Arctic ecosystem. Superimposed on the East Coast, this development would stretch from Washington, D.C. down Interstate 95 to Richmond, Virginia, and east to the shores of Chesapeake Bay, with two solid-fill gravel causeways below the Potomac River

stretching out into the Bay and nearly reaching the Eastern Shore. It is one of the largest industrial complexes in the world.

OIL RESERVES AND OIL LEASING ACTIVITY

From the Canning River on the western boundary of the Arctic Refuge to the Colville River delta, the State of Alaska owns almost all of the oil-rich lands onshore. The only exception to state ownership are some subsurface lands in the Colville River delta owned jointly by the state and the Arctic Slope Regional Corporation (ASRC, a for-profit regional corporation created by the 1971 Alaska Native Claims Settlement Act). There are also a small number of Alaska Native Allotment Act “homesteads” in the Colville River delta, as there are in the Arctic Refuge. The federally owned National Petroleum Reserve-Alaska (NPR-A) extends from the Colville River delta west to the Chukchi Sea. Some state land inholdings are encompassed within the boundaries of the NPR-A, as are some Native allotments, as well as inholdings belonging to ASRC and Native village corporations.

The submerged lands in the offshore areas of the Arctic Ocean are owned by the state out to three miles from shore (except off the Arctic Refuge), and beyond three miles by the federal government.

Both the federal and state governments have had oil and gas leasing programs in America’s Arctic for decades. Since 1959, the State of Alaska has conducted approximately thirty lease sales in the region, resulting in the sale of oil leases that encompass some 32 million acres of state lands.² Both onshore and offshore areas have been leased, such that virtually all lands between the Colville and Canning Rivers have been offered for sale at least once. In addition, the U.S. Department of the Interior (Interior) conducted a series of lease sales in the NPR-A beginning in the early 1980s, with the last sale held in May 1999.³ ASRC has also entered into oil and gas leasing arrangements for its wholly owned subsurface estate.

There have been six federal offshore lease sales and one joint state-federal lease sale in the Chukchi and Beaufort Seas. As a result of the federal outer continental shelf (OCS) leasing program, 660 leases encompassing 2.32 million acres have been sold,⁴ and over thirty exploratory wells drilled in Arctic federal waters between 1980 and 1997⁵. Five offshore prospects have been unitized⁶ for development (Northstar, Sandpiper, Hammerhead, Kuvlum, and Liberty.)

In June 1998, the State of Alaska offered for sale all state-owned lands not already under lease between the Colville and Canning Rivers. Despite low crude oil prices, 139 tracts spread from the Badami field in the east to the Colville River in the west were sold for more than \$55 million.⁷ In addition, the May 1999 lease sale conducted by Interior in the northeast corner of the NPR-A resulted in the sale of some 130 leases for a total of \$105 million.⁸

Of these leased properties, most that lie between the Colville and Canning Rivers are either in production, are in the near-term planning/development stage, or are considered development prospects. Since 1977, 11.6 billion barrels of oil have been pumped from the producing fields.⁹ Since 1993, three new fields (Niakuk, Point McIntyre and North Prudhoe Bay/West Beach) began production, and North Star, Liberty, Badami, Alpine and Tarn are either under review for development or in progress. In addition, oil companies operating in America's Arctic have announced the discovery of onshore reserves in the Colville River Delta area that have not yet been developed. And in mid June 1998, oil companies announced two more discoveries, one in the Prudhoe Bay area and one in the Endicott area, that could total as much as 100 million barrels.¹⁰ More than 32 oil and gas fields have already been discovered from past exploration activities.¹¹ All told, there may be more that 50 satellite fields ranging in size up to 100 million barrels each found at the fringes of the producing fields.¹²

A common theme that runs through arguments in favor of opening frontier areas like the Arctic National Wildlife Refuge to oil and gas development is the compelling need to search for new oil (usually couched in terms of providing for the nation's "energy security".) However, existing fields and new prospects within the Prudhoe Bay area hold the promise of many years of production. Industry projections indicate that production between 2000 and 2005 will equal or exceed the current rates.¹³ An independent research report commissioned by the Alaska Legislature predicted an increase in North Slope oil and gas field "productive capacity" by the year 2005, without additional discoveries or production from the Arctic Refuge.¹⁴ And the state estimates that the North Slope oil fields will produce 7 billion more barrels of oil by 2020.¹⁵

OIL FIELD DEVELOPMENT IN AMERICA'S ARCTIC

The development of the existing oil fields in America's Arctic has involved the drilling of over 2,500 exploration and production wells, construction of 400 miles of roads, placement of nearly 1,200 miles of pipelines, and construction of six oil and gas processing facilities, as well as worker housing facilities and sewage treatment and power generation facilities. And it has entailed the excavation of thirteen gravel mines that collectively occupy a surface area of over 1,400 acres, from which 60 million cubic yards of gravel have been extracted to provide a layer of insulation under all production wells, permanent roads, and processing and support facilities.

All production wells are drilled from gravel pads, many wells to a pad. Huge amounts of water are injected into an oil-bearing formation to produce more oil. Feeder pipelines connect the wells to large central processing facilities, known as flow stations or gathering centers. At the central facilities, the mixture of oil, gas and produced water is separated, and recovered natural gas is used in the fields for fuel, or is re-injected into the oil formation to maintain reservoir pressure and thereby increase oil production. A road system services the fields, and a main road (the Spine Road) crosses from east to west, joined by access roads connected to the well pads. Other major roads connect to

West Dock, a causeway on the north edge of Prudhoe Bay used for receiving equipment and materials from summer barge traffic. Utility lines head east and west from the Deadhorse area, transporting electricity to the fields from central power facilities.

Two companies manage oil field production in America's Arctic, British Petroleum Amoco (BP) on the west side and Atlantic Richfield Co. Alaska (ARCO) on the east side of Prudhoe Bay. Each company has a central operations center with living quarters, office space and workshops. ARCO operates the Kuparuk field, and is generally expanding to the west (e.g., to the Alpine oil field on the Colville River), while BP has continued expanding east from its Endicott field. Both companies depend on dozens of oilfield service contractors based in Deadhorse to supply drill rigs, pipeline cleaning, oil well "work-overs," oil spill clean up, seismic surveys, and other construction and operational needs. All oil produced from the fields is sent to Pump Station 1 of the Trans Alaska Pipeline System (TAPS) and then transported down the 800 mile-long pipeline to its terminus in Valdez. There the oil is loaded into crude oil tankers and shipped to refineries in the U.S., Japan, Korea and China.

The scope of oil field development in America's Arctic extends from the activities undertaken at the onset of exploration work to full oil field development and the transportation of crude oil to market through TAPS and the tankers loaded at the Valdez Marine Terminal. The portion of this development that has impacted the Arctic ecosystem begins with initial exploration work.

Seismic Exploration Activities

To decide where to drill exploratory wells for oil, the oil industry employs seismic exploration techniques. Seismic exploration uses either huge vibroseis trucks weighing 56,000 pounds, with heavy steel vibrators mounted on them,¹⁶ or explosives, to produce sounds at or near the surface. This is done at thousands of "shot" points along lines that are surveyed across the tundra or offshore. Small microphones, known as

geophones, attached to miles of cables are placed on the ground along the lines near the "shot" points. When the vibroseis machine or dynamite is detonated, the sounds produced, including echoes from underground rock layers, are recorded on tape. Computers process this data to produce maps of the subsurface layers.

There are many potential adverse effects from seismic exploration. Past studies of seismic exploration in the Arctic Refuge showed significant effects on tundra vegetation and permafrost.¹⁷ In June 1998, after receiving objections from the Alaska Eskimo Whaling Commission representing Inupiat subsistence whale hunters, Alaska's North Slope Borough denied an application from Western Geophysical for offshore seismic exploration operations in the Beaufort Sea in several shallow coastal areas between Harrison and Camden Bays, citing new scientific information that "... showed the effects of one open water seismic survey displaced bowhead whales 12 miles from their migration path..."¹⁸

The latest development in seismic exploration technology is known as "3-D seismic" testing. 3-D seismic testing is more effective in determining geologic structures, but it can have more impact. The 3-D seismic crews are larger, and there are more tracked vehicles out on the tundra. The grid pattern is tighter. The 3-D seismic lines where vehicles travel laying out the grids of recording equipment are generally only about 1,000 feet apart. By contrast, conventional seismic lines are spaced six to ten miles apart.

The 3-D seismic crews on the North Slope in the winter of 1998 had 39 vehicles, including six bulldozers; ten vibroseis trucks weighing as much as 68,000 pounds each,¹⁹ fuel supply vehicles, and a variety of other vehicles all manned with a crew of 100-200 people. Typically, two crews operate at the same time in one season, so there may be as many as eighty vehicles involved.

There is strong evidence that 3-D seismic exploration activities may cause lasting damage to the Arctic tundra ecosystem. One federal biologist documenting the aftermath of 3-D seismic work reported that, "... new trails and older ones in various stages of recovery are visible from the air and on the ground in the summer. Current seismic exploration produces a much denser grid of trails than that in the Arctic Refuge. While the trails in the Arctic Refuge were five to twenty kilometers apart, those being made now are from 200 to 500 meters apart. Despite the magnitude of this activity, no studies have been published on the effects of seismic exploration on vegetation and soils in the Prudhoe Bay area and the cumulative impacts of many years of exploration and re-exploration have not been addressed."²⁰

Drill Sites in America's Arctic

The sheer number of wells drilled in North Slope oil fields gives a sense of the scale of development in the region. Some 2,586 exploration or production wells were drilled on the North Slope between 1944 and July 1992.²¹ According to the U.S. Army Corps of Engineers (the Corps of Engineers, or the Corps), there are now approximately 1,830 oil production wells, 97 gas injection wells, and 618 water injection wells in operation in North Slope oil fields.²²

Numbers for offshore development activities and facilities in the Beaufort and Chukchi Seas are equally massive. As of 1993, oil development in the Beaufort and Chukchi Seas included the placement of 216 exploration and delineation wells, 1,209 development and production wells, the laying of hundreds of miles of pipelines, construction of nine causeways, docks and pipeline landfalls, and the transit of thousands of barge and boat supply trips, tens of thousands of aerial over-flights and hundreds of thousands of miles of seismic lines.²³ These figures do not reflect the extent of the infrastructure associated with the onshore support activities necessary to carry out offshore development of this magnitude.

Water Use in Arctic Oil Fields

In 1980, the Corps of Engineers estimated that domestic use of water in North Slope oil fields (for drinking, washing, food preparation, etc.) was 85 gallons per capita per day, or a total of 800,000 gallons per day.²⁴ In addition to these domestic uses, both fresh water and seawater are used in oil field production. Drilling operations require large quantities of water for blending into drilling muds. A typical 10,000 foot well could require about 850,000 gallons of water for drilling, in addition to the amount needed for camp use. Over a four-month drilling season, a one-well drilling operation could require 1.6 million gallons of water.²⁵ For ARCO's Alpine development, the total water demand over one winter season of 150 days is estimated to be 8.4 to 14.7 million gallons.

At Prudhoe Bay, treated seawater is injected into oil-bearing formations to enhance oil production. The Corps reported there were 624 of seawater injection wells supporting existing onshore oil and gas facilities in June 1998.²⁶ The operating capacity of these wells totals some 2,884 thousand barrels of water per day, a huge number but well below the design capacity of the facilities.²⁷ The seawater treatment plant on the northern end of West Dock causeway supports secondary oil and gas recovery in the Prudhoe Bay and Milne Point reservoirs. In 1998, it was processing 390,000 barrels of water per day, with the capacity to process up to 1.2 million barrels per day.²⁸

Vast amounts of water are also needed for the construction of ice pads, ice roads and ice runways that are used to develop exploration wells and isolated fields such as the Alpine field. For example, to construct a six-acre ice pad one foot thick requires about 500,000 gallons of water.²⁹ The U.S. Bureau of Land Management (BLM) estimates that 1.0 to 1.5 million gallons of water is needed per mile for a six-inch thick, 30-35 foot-wide road.³⁰ To put the use of such huge amounts of water into ecological perspective, it must be remembered that the Arctic is very arid. Average annual precipitation across the North Slope oil fields ranges from about three to seven inches.³¹

Water withdrawal from the roughly 75 active permitted onshore water sources has the potential, therefore, of causing significant environmental changes.³² In areas such as the coastal plain of the Arctic Refuge, where water is very scarce, the impacts could be far more severe.

Gravel and Gravel Mining in America's Arctic

Gravel is a resource second only in importance to crude oil in Arctic oil fields. All of the onshore oil fields in America's Arctic are located in wetlands underlain with permafrost. As a result, a layer of gravel five feet in depth or greater is needed as a foundation for production wells, permanent roads, causeways, offshore man-made islands, airstrips, gathering centers, pump stations and all other oil field facilities. And all oil field development must be reviewed by the Corps of Engineers pursuant to Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act before it can proceed. According to records compiled by the Corps, over 900 applications for filling wetlands for oil and gas development activities in Alaska were approved between January 1979 and April 1992.

Gravel for development of oil field facilities has been taken from some thirteen large, open-pit mines in the floodplains and deltas of major rivers in the region. Seven of these are currently active.³³ Together, the mines cover a surface area of over two square miles. The U.S. Fish and Wildlife Service (USFWS) estimates that more than 60 million cubic yards of gravel have been mined from these mines for roads and drill sites in North Slope oil fields,³⁴ enough to cover the entire state of Rhode Island with an inch-thick layer of gravel. Just as with water, gravel is a scarce resource on the coastal plain of the Arctic Refuge. Mining and transportation of what gravel resources do exist in the Refuge for purposes of constructing oil field facilities could result in significant impacts to the area.

Oil Field Transportation Infrastructure in America's Arctic

Gravel roads. The Alaska Department of Natural Resources (ADNR) estimated that oil development on Alaska's North Slope included over 400 miles of gravel roads, excluding the 13 miles of road that lie atop gravel causeways jutting into the Beaufort Sea and the 145 mile-long TAPS "haul road", or Dalton Highway, that stretches from Pump Station 1 south through the Brooks Range to the Yukon River.³⁵ In 1996, a survey of traffic along the TAPS haul road showed a total annual transit of 45,236 trucks, an average of 3,770 a month.³⁶ Recently, the State of Alaska opened the TAPS haul road to travel by the general public (over the objection of the Alaska Native communities in the region), thereby increasing the impacts of road traffic to air quality and wildlife.

Ice roads. For frontier areas in the oil fields of the Arctic, ice roads are used for winter transportation.³⁷ Ice roads, ice pads and airstrips are constructed by smoothing or compacting the snow surface and spraying water on the surface to build up an ice layer.³⁸ Ice infrastructure is often pointed to as an improvement over infrastructure built with gravel, based on the claim that the ice will melt, leaving no trace.

In order to create the ice used for this temporary infrastructure, however, water is displaced from its natural location. This may have deleterious short and long-term effects on aquatic life and vegetation. New designs for ice pad construction have allowed pads to remain intact over a summer season, and "... limited, short-term impact does occur at multi-season ice pads, if tundra around the perimeter of the pad thaws and is blocked from sunlight."³⁹ Long-term impacts from ice roads, pads and runways are not well studied. At a minimum, there may be a "greening" of vegetation when the ice melts, leaving square strips and miles-long rectangles strewn among the natural polygonal shapes of the tundra landscape.⁴⁰

Airports. While much of the huge amount of equipment and supplies needed for oil development in the Arctic comes by summer barge or on the TAPS haul road,

development could not proceed without air transportation. At the time the construction of TAPS was contemplated, there were already four major gravel airports in the oil fields, at Prudhoe Bay, Deadhorse, Rivers Service City, and Sagwon (60 miles to the south), in addition to airports at Barrow and Nuiqsut.⁴¹ There were three jet runways and nine exploration support airstrips in the oil fields by 1987.⁴² Today, the state-owned and operated Deadhorse airport accommodates Boeing 737 jets on its 6,500 asphalt runway, with arriving and departing passengers numbering some 140,000 per year.⁴³ In addition, BP and ARCO own and operate 6,500 foot-long airstrips at Prudhoe Bay and Kuparuk. These have annual arrival and departure passenger counts of some 220,000 personnel.⁴⁴

ARCO has received permission from the Corps of Engineers to build a 3,000-foot airstrip in the Colville River floodplain to service its Alpine oil field, and there is a new airstrip at the Badami development. In addition, there is a 5,200-foot airstrip at Lonely; a 7,000-foot airstrip at Inigok south of Teshekpuk Lake; and a state-owned 5,400-foot airstrip at Umiat on the Colville River southwest of Nuiqsut.⁴⁵ The impacts of placement and operation of these airports is not well understood.

Docks. Marine barges bring oilfield supplies and equipment to Arctic oil fields in the ice-free summer months. To accommodate them, the oil industry uses two of three existing docks for unloading barges at Prudhoe Bay. Both are at the end of man-made, solid-fill gravel causeways, with West Dock the biggest at 13,100 feet long and 40 feet wide.⁴⁶ Such causeways have had a long, controversial environmental history because they have disrupted ocean current and temperature regimes, and have caused impacts on migration patterns of fish and other sea life.

Oil Pipelines in America's Arctic

In 1993, the state estimated that oil development on Alaska's North Slope included 1,137 miles of pipelines, excluding the 798 mile-long main TAPS pipeline to

Valdez.⁴⁷ The State of Alaska only regulates a portion of these pipelines. In 1997, the BLM estimated that there were seven major trunk pipeline systems (above ground and elevated) carrying crude oil to TAPS, totaling approximately 141 miles in length.⁴⁸ In June 1998, the Corps of Engineers reported that, "... approximately 1,123 miles (1,807 km) of pipelines connect producing wells to production processing facilities, and then to the TAPS."⁴⁹ None of these estimates include the hundreds of miles of additional product, gas and fuel lines strung throughout the oil fields.

Industrial Centers in the Arctic Oil Fields

The enormous industrial complex that comprises the oil fields on Alaska's North Slope includes an intricate web of oil and gas processing facilities connected by road and pipeline systems.

Power Plant. Power for most field operations in the Prudhoe Bay region is supplied by a central power plant located near Deadhorse. Power is distributed mainly via overhead power lines, although some lines are buried.

Central Processing Facilities. ARCO and BP operate a total of 6 central processing facilities.⁵⁰ According to the U.S. Environmental Protection Agency (EPA), as of 1995, there were a total of twelve gathering centers on the North Slope. All but the Endicott gathering center are onshore. (The Endicott field facilities are located on two man-made gravel islands in the Beaufort Sea.)

Refineries. ARCO's crude oil topping plant is one of 2 refineries located in the oil fields. This plant refines 1 million gallons of crude oil per day into diesel, jet and other fuels used on the North Slope.⁵¹

Residential Centers. ARCO and BP each have a base of operations that serves as a residential center and central office complex for the roughly four to five thousand oil company employees who live and work in the surrounding oil fields.⁵²

IMPACTS OF OIL FIELD DEVELOPMENT IN AMERICA'S ARCTIC

The impacts of oil field development in America's Arctic, including the impacts of the millions of gallons of surface discharges and thousands of tons of air emissions released each year from North Slope oil fields, are not well documented. While development on the North Slope has grown exponentially since the drilling of the discovery well in 1968, no state or federal agency has undertaken an evaluation of cumulative impacts of development in the region. No full environmental impacts review conducted pursuant to the National Environmental Policy Act (NEPA) has been undertaken for any onshore development in the entire region, with the exception of the Environmental Impact Statement (EIS) completed for TAPS in 1972. Development has been allowed to proceed "piecemeal" over the last thirty years, with no analysis of the full range of impacts from expanding industry activity in the region.

The TAPS EIS published in 1972 listed the Prudhoe Bay, Lisburne and Kuparuk "pools" as oil reservoirs to be developed, but it contained only seven sketchy, speculative pages devoted to development scenarios.⁵³ Most of the oil fields that exist in the region today were not predicted in the TAPS EIS. No development was predicted for areas farther west than Oliktok Point or farther east than the east channel of the Sagavanirktok River.⁵⁴ The eastern developments at Endicott, Badami, Point Thomson, and Sourdough were not predicted, and western developments like Alpine, Tarn and others were also not foreseen. Of the fields not foreseen in the TAPS EIS and for which cumulative impacts have never been fully assessed, Milne Point, Endicott, Niakuk and Point McKintyre are considered "major" fields by the state.⁵⁵ In short, for the region in America's Arctic from which over 20% of the nation's domestic oil supply is being extracted, no comprehensive EIS assessing the scope and magnitude of the environmental impacts of this massive

industrial complex has ever been undertaken. In light of this fundamental lack of information and understanding, it is disingenuous for proponents of developing the Arctic Refuge to suggest that such development can be undertaken with little impact to the coastal environment of the Refuge.

It was heartening to see that Congress recognized this serious lack of information and understanding when it approved legislation in September of last year directing the EPA to contract with the National Research Council (NRC) to conduct a two-year review of the cumulative impacts of oil development in America's Arctic. It is anticipated that this study will not only provide some insight into the extent of the impacts, but will also provide information regarding the industry's compliance record and the effectiveness of state and federal agency oversight, as well as the effectiveness of mitigation measures taken to ameliorate development impacts. We have some concerns regarding whether the review will be fair and objective given the intense industry scrutiny it has been receiving, but we are hopeful.

The initiation of the NRC review is particularly timely. Three new oil fields are being developed in America's Arctic, which represent giant steps to the east, west, and north of Prudhoe Bay, further spreading existing oil field infrastructure. ARCO's new Alpine field, located entirely within the active flood plain of the Colville River delta, will require a thirty-five mile-long pipeline to reach existing processing facilities. BP's new Badami field is located 25 miles east of Endicott, which marks the eastern boundary of current development, and, like the Alpine field, has necessitated the construction of a pipeline to connect it to the existing Prudhoe Bay area infrastructure. And to the north, BP's Northstar development will be located on a gravel island in the Beaufort Sea about six miles offshore of the Kuparuk River delta in Gwydyr Bay. It will be connected to shore-based processing facilities by a seven mile-long subsea pipeline that will transect an active ice scour area on the Beaufort Sea coast. The use of a subsea pipeline represents untested technology in this harsh Arctic environment. How development and

operation of these new fields will exacerbate the impacts of existing oil field development is not known. Nevertheless, development of these fields is moving forward.

Despite the lack of a comprehensive review of the cumulative impacts of oil development in America's Arctic, information is available that provides some insight into the magnitude of the pollution and waste streams generated daily from oil field operations.

Solid Waste. The only major solid waste facility in the oil fields is the Service Area 10 landfill at Deadhorse operated by Alaska's North Slope Borough. Metals, where metals, excess cement, sand, rubber, timbers, insulation, ash, non-hazardous chemicals, plastic, paper, household wastes, and other industrial garbage is disposed of at this landfill.

The principal contributors of solid waste to the Area 10 landfill are the BP and ARCO oil processing facilities, the TAPS pump stations, some 30 miscellaneous service contractors, and various industry camps.⁵⁶ About 23,000 tons of wastes were handled in 1994-95.⁵⁷ In 1996, nearly 53,000 cubic yards of waste were handled, and 38,000 cubic yards were handled in 1997.⁵⁸ BP says that between 1990 and 1997, its oil and gas development operations generated an average of 45,000 cubic yards per year of solid waste; and in 1997, it generated over 10 tons of hazardous waste.⁵⁹

Air Pollutant Emissions. Air pollution in the existing oil fields is generated in part from large stationary sources, which are permitted under state and federal air quality regulations. The oil fields contain one of the largest groupings of gas turbines in the world.⁶⁰ Ninety-eight natural gas-fired turbines were operating as of 1988.⁶¹

The Corps of Engineers measured actual emissions from stationary sources at the main facilities for BP and ARCO's operations. According to the Corps' report, between June 1, 1994 and June 30, 1995, actual emissions of nitrous oxides (NO_x) equaled

56,427 tons. Emissions of carbon monoxide (CO) equaled 11,560 tons; sulfur dioxide (SO₂) equaled 1,470 tons; particulate matter (PM₁₀) was 6,199 tons; and volatile organic compounds (VOCs) was 2,647 tons.⁶² To put these numbers in some perspective, the amount of NO_x emitted from the Prudhoe Bay oil fields dwarfs the total emitted in Washington, D.C, and is twenty thousand more tons per year than all other Alaskan sources combined. According to EPA data, the entire State of Washington has about 8,200 tons of NO_x emissions per year.⁶³ Oil field CO emissions are one third of the total of all CO emissions for Anchorage, Alaska's largest city with a population of 300,000.⁶⁴

In addition to the emissions from major facilities, there are hundreds of other so-called "minor" sources of air pollution in the oil fields for which air quality control permits are not required and for which no monitoring of emissions is done. These include mobile oil drilling rigs, automobiles, buses, trucks, aircraft, heavy equipment like bulldozers and seismic vehicles, small incinerators, unregulated fuel tanks, and fugitive dust sources like gravel pits and road dust. Added into the mix of emissions are toxic pollutants, such as arsenic, nickel, benzene and mercury. Because the oil and gas industry is exempt from the toxic release inventory reporting requirements of the federal Emergency Planning and Community right to Know Act of 1986, information regarding these air pollutants is difficult to find.⁶⁵ But there are some troubling signs that these toxins are being produced as a part of ongoing oilfield operations. For example, elevated levels of nickel, mercury and other metals have been found in the snow pack in the Prudhoe Bay area.⁶⁶

Wastewater discharges. Wastewater discharges from oil field operations at Prudhoe Bay are governed a complexity of state and federal pollution control and discharge permits. There are over 400 pollution permits that govern industry operations in the Prudhoe oil fields. Permitted waste streams include discharges from sewage treatment plants, discharges from the water flood treatment plant, drilling muds and cuttings, and gravel pit de-watering discharges. During the period from 1991 through 1997, approximately 25 billion gallons of contaminants were discharged into

surface waters under National Pollution Discharge Elimination System (NPDES) permits issued by EPA. There are also over 200 wastewater permits issued by the Alaska Department of Environmental Conservation (ADEC) for facilities related to oil and gas production in the Prudhoe Bay region. These permits represent millions of gallons of additional discharges into surface waters of the region.

In addition to the discharge of huge amounts of wastewater released by treatment facilities in existing oil fields, the arctic ecosystem has been changed by construction of facilities that alter normal water flow in the region and adversely affect water quality. For example, the placement of gravel roads and drill pads in some areas has disrupted the surface flow of water and created large, deep-water ponds that lack the biological productivity of natural, shallow water tundra ponds. In some cases, natural lakes have been drained, inadvertently or on purpose, for construction of support facilities. Pump Station 1 of TAPS is constructed entirely in the basin of a large tundra lake that was drained to clear the way for construction. And in the nearshore environment of the Beaufort Sea, according to the Corps of Engineers, " ... (e)xisting causeways have been identified as a cause of significant exceedances of chronic state marine standards for water temperature, salinity, and turbidity."⁶⁷

Oil Spills. The State of Alaska only began collecting comprehensive oil spill data for existing Arctic oil fields in the mid-80's. The state's figures show spill numbers peaked at 1,314 annually in 1989.⁶⁸ Between January 1, 1984 and May 24, 1993 in the oil fields, there were 1,955 crude oil spills involving 8,960 barrels (376,321 gallons), 2,390 diesel fuel spills involving 11,068 barrels (464,856 gallons), 977 gasoline spills involving 3,128 barrels (131,382 gallons), and 1,360 hydraulic fluid spills involving 1,840 barrels (77,301 gallons).⁶⁹ In 1990 alone, the state claimed that 4,096,348 gallons crude oil, petroleum products and toxic substances had been spilled on the North Slope, mostly from oil industry activities.⁷⁰ In 1996, 416 spills resulted from North Slope oil industry activities, with more than 60% of these crude oil and other hydrocarbon products.⁷¹ Other toxic materials spilled include acid, biocides, and ethylene glycol.

According to the BLM, “ ... the causes of Alaska North Slope crude-oil spills, in decreasing order of occurrence by frequency, are leaks, faulty valves/gauges, vent discharges, faulty connections, ruptured lines, seal failures, human error, and explosions. The cause of approximately 30 percent of the spills is unknown.”⁷² The chronic nature of the spills and the large percentage that are of unknown origin suggest the existence of faulty spill prevention systems, sloppy practices, and inadequate government oversight and enforcement.

Almost all of the Arctic spills to date have occurred in connection with onshore developments. BP’s proposed Northstar offshore development will be the first to include a subsea crude oil pipeline, running from an artificial gravel island to the shore and buried in the sea bed of the Beaufort Sea. Most of the year, the Beaufort Sea is covered in ice, and in near shore areas the ice completely displaces water to the depth of many feet. A large crude oil spill from an offshore well blowout or pipeline break would be an unmitigated disaster even under the most optimistic oil spill cleanup planning scenarios.

Contaminated Sites. As of 1996, there were 60 sites contaminated by oil-related industrial activity listed for the North Slope in the state’s contaminated sites database. ADEC considered more than half of these high priorities for clean up. More than a third of the high priority sites have been on the list for more than 5 years. A number of sites have been identified for more than a decade, and still have not been cleaned up.

Reserve Pits. For years, EPA and USFWS expressed concern about the disposition and effects of oil field wastes. At Prudhoe Bay and other onshore fields, the companies dumped drilling muds and cuttings into open “reserve pits” that adjoined drill pads and were diked with gravel berms. About 2-6 billion gallons of drilling wastes were dumped into some 450 reserve pits on the North Slope.⁷³ The unlined pits filled

with snow in winter. The snow melted in the spring and the mixture spilled over the dikes into tundra ponds and wetlands. Fluids also leaked through the gravel basins. A common way of getting rid of the excess water created by snow melt in the reserve pits was to pump it directly into tundra wetlands or to spray it on oil field roads to control dust.

In 1988, Trustees for Alaska and other conservation groups sued ARCO to halt discharges of reserve pit fluids into tundra wetlands, and to end other violations of the Clean Water Act. As a result of the lawsuit, the oil industry abandoned the use of surface reserve pits and began injecting production wastes underground into oil-bearing formations. According to BLM records, there are currently 262 abandoned reserve pits in North Slope oil fields that have yet to be cleaned up and closed out.⁷⁴

Waste Injection. The standard practice for management of production wastes in Arctic oil fields today is to inject the wastes into oil-bearing formations deep below the earth's surface. EPA and the Alaska Oil and Gas Conservation Commission (AOGCC) have jurisdiction over the underground injection of oil field wastes. These agencies have permitted two classes of injection wells. The first, Class I wells, can be used to dispose of production wastes, i.e., wastes that are generated at the well site in the drilling process, such as drilling muds and produced water, and also wastes generated from non-production activities, such as used motor oil, solvents and paints. The second, Class II wells, can only be used to dispose of production wastes generated on site⁷⁵. Hazardous substances cannot be injected into either class of well, but must be transported to an authorized hazardous waste disposal facility.

There are three Class I waste disposal injection wells on the North Slope permitted by EPA. To date, over 325 million gallons of wastes have been injected into these wells. EPA is currently processing permit applications for two additional Class I injection wells. The AOGCC permits and monitors 30 Class II injection wells on the North Slope. Over 42 billion gallons of wastes have been injected into these wells.

While it is the environmentally preferred alternative over the above-ground handling and disposal of wastes, underground injection has not been without problems—problems that suggest an inadequate level of government oversight over oil field activities. For example, a drilling company working under contract to BP pled guilty in April 1998 to illegally injecting Class I wastes and other hazardous substances into a Class II injection well at the Endicott oil field, and then falsifying records to hide these illegal disposals. Some of the wastes reached the surface and the surrounding waters of the Beaufort Sea.

The illegal dumping at Endicott was brought to light after a whistleblower reported the violations to federal authorities. Doyon Drilling, the BP contractor, was found guilty of 15 misdemeanors, ordered to pay \$3 million in fines, and given five years probation for ordering workers to dump thousands of gallons of toxic waste into the unprotected well shaft, including lead, methyl chloride, toluene, xylene and benzene. Three Doyon employees pled guilty to federal charges and were ordered to pay \$25,000 fines. One was given a year's prison sentence.⁷⁶ In a sad footnote to the incident, the whistleblower that brought the illegal activities to the attention of federal authorities is now unemployed and struggling financially.

That the illegal dumping occurred at the Endicott oil field is ironic. Endicott is often held up as a model of how oil field development should be done by proponents of opening the Arctic Refuge to oil development.

OIL INDUSTRY EXEMPTIONS FROM ENVIRONMENTAL LAWS

A significant impediment to determining the impacts of oil development in America's Arctic is that much of the needed information regarding pollution and waste management is not available. This is due in great part to the fact that the oil industry—unlike other heavy industries in this country—is not required under state or federal law

to provide such information to state and federal regulators or the public. The oil industry enjoys a number of significant exemptions to environmental protection laws, a situation that speaks to the political power of the industry and its ability to influence public policy-making regarding environmental protection.

Among the exemptions the oil industry enjoys are exemptions from federal water quality, hazardous wastes and community right-to-know laws designed to reduce pollution and protect environmental and human health.

RCRA hazardous waste exemption. Congress exempted certain oil and gas extraction wastes from regulation as hazardous wastes under the Resource Conservation and Recovery Act (RCRA), pending an EPA study.⁷⁷ Trustees for Alaska sued EPA to force it to do the study. When the agency finally completed the study in late 1987 during President Bush's Administration, it determined that regulation of such wastes was not warranted.⁷⁸

The RCRA exemption gives special treatment to the high volumes of oil production wastes, such as drilling muds and cuttings, oil rig wastes, produced water, and associated wastes, including tank bottoms, pit sludges, and well work-over wastes. If these wastes were produced by any other industry, such as dry cleaners, they would be regulated as hazardous wastes with special precautions taken.⁷⁹

Toxic Release Inventory. Anticipating that an informed public would pressure companies to reduce emissions, in 1986 Congress enacted the Emergency Planning and Community Right-To-Know Act. The Act requires certain polluters to report annually their toxic releases for inclusion in a Toxic Release Inventory, a database maintained by EPA and made available to the public. The database has been used to support calls for stronger regulations, and to publicize local polluters, as well as to prepare communities for accidental releases of toxic substances. Some financial advisors even use the database to screen companies for investors.⁸⁰

The oil industry is largely exempt from reporting oil field wastes to EPA for inclusion in the Toxic Release Inventory.⁸¹ In 1996, the industry was successful in its lobbying efforts to ensure that most oil field exploration and production facilities were exempted from EPA regulations that addressed the kind of industries required to submit yearly “right-to-know” reports.⁸² The exemption covers toxic air pollutants produced in oil field operations in America’s Arctic, including lead and known carcinogens such as polycyclic aromatic hydrocarbons, benzene, and xylene.

No Net Loss Of Wetlands, Except In Alaska. During his Administration, President George Bush adopted a “not net loss of wetlands” policy which called for compensation for wetlands destruction through purchase, creation, and/or preservation of other wetlands. In 1990, the Corps of Engineers and EPA entered into a memorandum of agreement concerning mitigation requirements under Section 404(b)(1) of the Clean Water Act that were designed to implement the no net loss policy. Because virtually all oil and gas development in America’s Arctic occurs in wetlands, both the oil industry and the State of Alaska vehemently opposed these mitigation requirements. In August 1991, the Bush Administration revised its wetlands protection policy to exempt Alaska—and Alaska only—from the compensation and avoidance requirements of this national wetlands protection policy.

When the Clinton Administration came into office, it reversed the course of the previous administration on Alaska wetlands protection. Since then, the Alaska Congressional delegation has unsuccessfully pursued bills to revive the idea of special treatment for Alaska wetlands. In 1997, the Alaska Legislature passed a resolution demanding that Congress and the President require the Corps of Engineers to “customize a (wetlands) permitting process ... in Alaska that does not include burdensome mitigation, avoidances, and other requirements applying nationally ...”⁸³

Low sulfur diesel fuel for mobile sources. Section 211 of the Clean Air Act⁸⁴ forbids the sale of motor vehicle diesel fuel which contains a concentration of sulfur in excess of 0.05 percent (by weight) or which fails to meet a cetane index of 40. Section 211 was passed because Congress wanted to reduce emissions of diesel particulates, which cause cancer, genetic mutations and other human health problems. Despite the documented health risks, the State of Alaska petitioned EPA for an exemption from Section 211.⁸⁵ The state claimed that whatever particulate matter problems it has are not due to diesel fuel, and that because Alaska's refineries do not produce such fuel, the transportation costs of shipping such fuel to Alaska would be too expensive. Alaska's oil refineries lobbied aggressively for the exemption because sulfur content in refined products is directly dependent on the sulfur content of the crude oil refined. And Alaska North Slope crude is so high in sulfur content that refiners, including the operators of the refineries in the North Slope oil fields which produce diesel for the fleets of vehicles serving the fields, were not able to make a lower sulfur diesel fuel without significant additional investment.

EPA has granted Alaska's petition⁸⁶ on two separate occasions, giving rural areas of the state, including North Slope oil fields, a permanent exemption and urban areas temporary exemptions.⁸⁷ Alaska is the only state in the nation to be granted these exemptions. As of June 1998, EPA was considering Alaska's petition to make the urban exemption permanent.

Nonroad engines. Prior to 1990, the Clean Air Act divided air pollution sources into two groups, stationary sources and mobile sources. Mobile sources included common highway vehicles (cars and trucks). In 1990, Congress amended the Clean Air Act to mandate the adoption of emission standards for stationary sources, termed "nonroad engines" or NREs. NREs include any internal combustion engine that is not used in a highway vehicle. The definition includes oil and gas drilling rigs, which are equipped with generators and other fuel burning equipment.

Since the passage of the 1990 amendments, the oil industry operators in Alaska have routinely opposed any additional regulation of oil drilling rigs as NREs.⁶⁸ They requested that ADEC exempt NREs from any permitting requirements. In response, ADEC examined the potential air quality impacts from oil drilling rigs and other NREs. After modeling potential NRE emissions and their impacts, ADEC decided that sulfur dioxide emissions posed a threat to ambient air quality. With respect to sulfur dioxide emissions, ADEC proposed an amendment to state air quality regulations that would have established allowable fuel sulfur concentrations for NREs, or allowed the selection of other alternative mechanisms for dealing with the emission threats. A group calling itself “The Alaska Stakeholders,” composed of oil companies, oil refiners, some utilities and other users of high sulfur diesel fuel, vigorously opposed the new regulation. After intense industry lobbying, the regulation was withdrawn.

In February 1998, a bill was introduced in the Alaska Legislature that exempted NREs and flares associated with oil and gas exploration and production facilities from all state air quality regulations—including permitting and analyzing the effects of air pollution from NREs. EPA said that if the bill became law it would be compelled to take over Alaska’s air permitting program and Alaska risked losing its federal highway funding. In a statement that reveals much about the current climate regarding oversight of oil industry operations in Alaska, ADEC’s *Senate Bill 299 Summary Analysis* claimed that one of the bill’s defects was that it “... *could increase public scrutiny* of air pollution issues surrounding oil drilling activities leading to more burdensome regulation ...” (Emphasis added.) ADEC also argued that if Alaska lost control of the air program to EPA, EPA would be much stricter. The bill passed, but was vetoed by the Governor. ADEC then entered into a non-binding agreement with oil rig operators in which ADEC agreed to allow a three-year transition period to implement the control of emissions from oil industry NREs envisioned by Congress when it passed the Clean Air Act amendments nearly a decade ago.⁶⁹

State Laws Governing Oil Industry Operations. The degree to which the oil industry has been able to influence state public policy-making regarding oil development in Alaska is astounding. As a demonstration of this influence, one need only review the legislation passed by the Alaska Legislature in recent years:

- Ch. 35 SLA 1994. Created a new oil and gas exploration licensing regime, one environmentally less restrictive than the existing licensing regime.
- Ch. 38 SLA 1994. Limited the scope of judicial review of ADNR decisions regarding whether an oil and gas lease sale was in the state's best interest.
- Ch. 11 SLA 1995. Rescinded ADEC's authority to regulate disposal of drilling muds, cuttings, non-hazardous oil and gas fluids and other wastes that are that are re-injected.
- Ch. 53 SLA 1996. Created a program for royalty credits for companies that discovered new oil and gas fields in Cook Inlet. (The law has the potential effect of increasing industry profits and reducing state royalty income.)
- Ch. 138 SLA 1996. Eliminated ADNR's duty to make a finding that an oil and gas lease sale was in the public's "best interests" if a finding was made in the previous ten years, absent the discovery of some unspecified kind of "significant" new information.⁹⁰
- Legislative Resolve 3 and 5 (1997). Demanded that the Arctic Refuge and NPR-A be opened to oil and gas development.
- Legislative Resolve 19 (1997). Asked Congress and the President to "require the United States Army Corps of Engineers to customize a permitting process for all

lands in Alaska that does not include burdensome mitigation, avoidances (sic), and other requirements applying nationally ...” to the preservation of wetlands.

- Ch. 29 SLA 1997. Insulated industry from civil or criminal penalties for violations of environmental laws if the violations were “discovered” in corporate self-audits. The law also allows industry to keep audit information on the release of toxic substances confidential and withhold it from the public.
- SB 299 (1998). Would have forbid ADEC from regulating air pollution from oil drilling rigs, oil and gas flares, and associated oil industry equipment. The governor vetoed the bill, saying “We will not be able to convince the federal government to explore new oil and gas areas in Alaska like the National Petroleum Reserve if we weaken environmental standards.”⁹¹
- “Arctic Power” appropriations (1998). Appropriated \$225,000⁹² to Arctic Power, a private organization lobbying to open the Arctic Refuge to oil development, adding to the \$378,000 Arctic Power had already received in state funds. In the same budget, the Legislature reduced funding for review of wastewater permits and for protection of drinking water quality in Alaska.

ENVIRONMENTAL ENFORCEMENT IN ARCTIC OIL FIELDS

The adverse impacts from the exemptions and special protections the oil industry has secured in state and federal environmental protection laws have been exacerbated by an accompanying lack of adequate enforcement of the environmental laws that do apply to industry operations in America’s Arctic. While oil field development has expanded in the region, regulatory agencies responsible for overseeing industry operations on the North Slope have suffered significant budget cuts. These oversight agencies are chronically under-funded and routinely rely on industry self-monitoring to determine if permit stipulations are being met. As a result, conservation-minded

citizens have had no recourse to ensure effective enforcement of state and federal environmental protection laws in Arctic oil fields, except courts of law. It is a great irony to these plaintiffs that many of the practices touted by supporters of oil development in the Arctic Refuge as examples of the oil industry's ability to "do development right" were forced on the industry as a result of successful citizen suits. Underground injection of oil field wastes serves as the best example of the changes forced by successful court action.

Successful oil and gas related litigation Trustees for Alaska has brought on behalf of public interest clients in the last two decades includes the following:

- In the fall of 1985, Trustees successfully sued EPA for failure to complete a study of drilling muds and other wastes produced during oil and gas operations, as was required by the Resource Conservation and Recovery Act. The study was supposed to be completed by October 1982. Under a consent decree, EPA agreed to complete the study by August 31, 1987.
- In February 1986, Trustees succeeded in securing a court order under NEPA requiring that the Secretary of the Interior solicit the views of the public through written comments and public hearings before making any recommendation to Congress about opening the Arctic Refuge to oil and gas development.
- In the spring of 1988, Trustees joined with the Natural Resources Defense Council in bringing a suit against ARCO over Clean Water Act violations at its North Slope drilling site reserve pits. The suit resulted in a multi-year settlement under which ARCO agreed to re-inject its drilling wastes.
- In 1991, Trustees sued EPA challenging an NPDES permit for a major sewage plant operated by ARCO on the North Slope. In January 1992, EPA withdrew the permit.

- In 1992, Trustees successfully sued the Department of the Interior under the Marine Mammal Protection Act, forcing it to adopt regulations governing the incidental take of walrus, polar bear and whales during oil and gas exploration activities.
- In 1997, on behalf of two Alaska Native villages, Trustees won a suit against the State of Alaska involving a state oil and gas lease sale. The state violated its own coastal zone management laws when it failed to evaluate the impacts of the proposed lease sale to fish and wildlife on which the villages depend for subsistence, and to habitats that sustain these subsistence resources.

FUTURE OIL DEVELOPMENT IN AMERICA'S ARCTIC

The extent of existing oil field development in America's Arctic serves as a yardstick by which proposed development can be measured. It also serves as a "reality check" to gauge claims that development of an oil reservoir of the size that some believe exists in the Arctic Refuge can be done with minimal surface disturbance and inconsequential impacts. It is true that today drilling for oil in the Arctic is more efficient and drill pads are, for the most part, not so numerous or so large as in the early days of field development. But technological improvements—particularly in the ability to find and extract oil—are allowing the industry to access oil reserves that in the past would not have been considered profitable and to develop fields more intensively to maximize oil production. In addition, the number of oil wells and the infrastructure needed to connect them to processing facilities is more a function of the geology of the reservoir than it is the availability of efficient development technologies.

As for pollution and industrial wastes generated from oil field development, the reality is that the extraction of crude oil—a toxic substance—from the earth's crust is a dirty business. Oil development in the Arctic Refuge or other pristine areas in America's Arctic can be expected to produce the kinds and volumes of pollution, loss of habitat from construction of roads and support infrastructure, disturbances to wildlife

and loss of wilderness, that have been documented to date in existing oil fields. It is not possible to extract the oil that may lie beneath the coastal plain of the Arctic Refuge and, at the same time, preserve its ecosystem functions intact. Claims to the contrary, which lead the American public that they can “have their cake and eat it, too” with regard to management of this unique slice of America’s Arctic, are disingenuous at best.

Given the extent of oil development that currently exists in America’s Arctic, the projections for oil production from as yet untapped onshore reservoirs within the boundaries of these developed areas, and the support infrastructure already in place to tap these reservoirs, federal oil policy should focus on bringing these fields into production while at the same time ensuring more effective enforcement of environmental protection laws for all oil development in the region. And federal land policy should focus on securing permanent protection for unique wild areas like the Arctic National Wildlife Refuge.

Thank you for the opportunity to provide comments.

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- ² U.S. Army Engineer District, Alaska, Draft Environmental Impact Statement Beaufort Sea Oil and Gas Development/Northstar Project, Vol. IV, ch. 10, p. 10-2.
- ³ U.S. Department of the Interior, Northeast National Petroleum Reserve Alaska Draft Integrated Activity Plan/Environmental Impact Statement, (December 1997), p. III-A-5.
- ⁴ U.S. Army Engineer District, Alaska, Draft Environmental Impact Statement Beaufort Sea Oil and Gas Development/Northstar Project, Vol. IV, ch. 10, p. 10-2.
- ⁵ Alaska Department of Natural Resources, Proposed Oil and Gas Lease Sale 86 Central Beaufort Sea - Preliminary Finding of the Director Volume I, (January 28, 1997), p. 2-12.
- ⁶ A unit is a combination of existing leases that the lessees and the State of Alaska (or Minerals Management Service for federal offshore lands) agree should be combined into one unit to promote optimal development without unnecessary duplication of infrastructure.
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- ⁸ Anchorage Daily News, "BP, Arco win 87% of NPR-A oil leases," May 6, 1999.
- ⁹ State of Alaska, Department of Natural Resources, Historical and Projected Oil and Gas Consumption, (1997), p. 19, and Table 4, p. 27.
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- ¹² Christian Science Monitor, "Quest to wring more oil from Alaska North Slope," October 8, 1996, p. 4. Oil company estimates are even higher. Anchorage Daily News, "Tarn prospect becomes worthy 'satellite,'" January 5, 1997, p. A-5 (1 billion estimate); Alaska Oil & Gas Reporter, "Meet Alaska: BP sees more oil on the slope: BP's Richard L. Olver sees another 5 billion barrels, not counting ANWR," February 19, 1996, p. 13.
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- ¹⁵ State of Alaska, Department of Natural Resources, Historical and Projected Oil and Gas Consumption, (May 1998), Table 1, p. 4. The state lists 46 separate oil and gas fields.
- ¹⁶ U.S. Department of the Interior, Fish & Wildlife Service, Final Environmental Impact Statement And Preliminary Final Regulations: Proposed Oil & Gas Exploration With The Coastal Plain Of The Arctic National Wildlife Refuge, Alaska, (1983), p. II-10.

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- ²⁰ U.S. Department of the Interior, Fish and Wildlife Service Memorandum from Botanist, Arctic National Wildlife Refuge to Refuge Manager (April 3, 1998), p. 2.
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- ²³ Greenpeace, Oil in Arctic Waters: The Untold Story Of Offshore Drilling In Alaska, (1993), pp. 68.
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- ²⁶ U.S. Army Engineer District, Alaska, Draft Environmental Impact Statement Beaufort Sea Oil and Gas Development/Northstar Project, (June 1998), Volume II, Table 3-2.
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- ³⁰ U.S. Department of the Interior, Bureau of Land Management, Northeast National Petroleum Reserve-Alaska Final Integrated Activity Plan/Environmental Impact Statement (August 1998), Vol. 1, p. IV-A-11.
- ³¹ U.S. Army Engineer District, Alaska, Draft Environmental Impact Statement Beaufort Sea Oil and Gas Development/Northstar Project, (June 1998), Volume II, p. 3-22.
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- ³⁴ U.S. Fish and Wildlife Service, Comparison of actual and predicted impacts of the Trans-Alaska Pipeline System and Prudhoe Bay oil fields on the North Slope of Alaska, (1987) draft report prepared by Fairbanks Fish & Wildlife Enhancement Office.
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- ³⁶ U.S. Department of the Interior, Bureau of Land Management, Northeast National Petroleum Reserve-Alaska Final Integrated Activity Plan/Environmental Impact Statement, (August 1998), Vol. 1, p. III-C-55.
- ³⁷ See U.S. Army Engineer District, Alaska, Draft Environmental Impact Statement Beaufort Sea Oil and Gas Development/Northstar Project, (June 1998), Volume II, Table 3-2.
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- ⁴² U.S. Fish and Wildlife Service, Comparison of actual and predicted impacts of the Trans-Alaska Pipeline System and Prudhoe Bay oil fields on the North Slope of Alaska, (1987) draft report prepared by Fairbanks Fish & Wildlife Enhancement Office, Table 2, p. 12.
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- ⁴⁷ State of Alaska, Department of Natural Resources, Final Best Interest Finding, Lease Sale 75A, June 22, 1993, p. 41.

- ⁴⁸ U.S. Department of the Interior, Bureau of Land Management, Northeast National Petroleum Reserve-Alaska Final Integrated Activity Plan/Environmental Impact Statement, (August 1998), Vol. 1, pp. III-C-57 - 58.
- ⁴⁹ U.S. Army Engineer District, Alaska, Draft Environmental Impact Statement Beaufort Sea Oil and Gas Development/Northstar Project, (June 1998), Volume IV, § 10.2.2, p. 10-2.
- ⁵⁰ BP Exploration (Alaska) Inc., Fact Sheet - Produced Water, No.98-15 ("six gathering centers/flow stations in the Prudhoe Bay field separate crude oil from produced water and natural gas"); R. Meehan, Oil Development in Northern Alaska, prepared for U.S. EPA (Corvallis, Oregon, 1988), p. 32.
- ⁵¹ ARCO, Supplement to Annual Report, (1985), cited by NRDC et al., Tracking Arctic Oil: Background Technical Report, (1991), p. 4.
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- ⁶³ EPA Office of Air Quality Planning and Standards, AIRSWeb at <http://www.epa.gov:6703/airwdded/ow> Source Count Report (August 21, 1998) for State of Washington Nitrogen Dioxide Air Pollution Sources.
- ⁶⁴ EPA AIRSWeb <http://www.epa.gov:6703/airwdded/ow> (August 21, 1998) Source Ranking Report Alaska Carbon Monoxide Air Pollution Sources (Anchorage total 38,500 tons per year).
- ⁶⁵ See Radian Corporation, Air Toxics Technical Assistance for the State of Alaska, Final Report, (March 1987) (estimated toxic emissions from oil field activities).
- ⁶⁶ U.S. Department of Interior, Bureau of Land Management, Northeast National Petroleum Reserve-Alaska Final Integrated Activity Plan Environmental Impact Statement, (August 1998), Volume 1, p. IV-H-5.
- ⁶⁷ U.S. Army Engineer District, Alaska, Draft Environmental Impact Statement Beaufort Sea Oil and Gas Development/Northstar Project, (June 1998), Volume IV, § 10.4, p. 10-20.
- ⁶⁸ State of Alaska, Department of Environmental Conservation, Oil and Gas Waste Management Issues and Recommendations for the Arctic National Wildlife Refuge, (1990, Juneau), Table 3.1-1, p. 43-A.
- ⁶⁹ State of Alaska, Department of Natural Resources, Final Best Interest Finding, Lease Sale 75A, June 22, 1993, p. 42.
- ⁷⁰ State of Alaska, Department of Environmental Conservation, Oil and Gas Waste Management Issues and Recommendations for the Arctic National Wildlife Refuge, (1990, Juneau), Table 3.1-5, p. 43-D.
- ⁷¹ State of Alaska Department of Environmental Conservation, 1997 Oil Spill Database.
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- ⁷⁴ U.S. Department of the Interior, Bureau of Land Management, Northeast National Petroleum Reserve-Alaska Draft Integrated Activity Plan/Environmental Impact Statement, (December 1997), Table IV.G-1, p. IV-G-1. The table was not reprinted in the final EIS.
- ⁷⁵ In BP's illegal disposal at the Endicott field, Class I wastes--engine oil, paints, solvents, etc.--were mixed with Class II wastes and injected into a Class II well. The injection records for this well were then altered to hide the disposal of the illegal wastes.
- ⁷⁶ Anchorage Daily News, "Pollution's price tag: \$1 million," May 1, 1998, p. A1; *ibid.*, "Enviro crimes," May 6, 1998, p. B-6.

⁷⁷ Section 8002(m) of RCRA, 40 U.S.C. Section 6982(m). For more details on this exemption see NRDC, et al., Tracking Arctic Oil: Background Technical Document, (1991), p. 25.

⁷⁸ 53 Fed. Reg. 11 (Jan. 4, 1988) (report to Congress); 53 Fed. Reg. 25446 (July 6, 1988) (regulatory determination).

⁷⁹ See 40 CFR § 261.4(b)(5) (1990).

⁸⁰ New York Times, "The Nation's Pollution: Who Emits What, and Where," October 13, 1991, p. F10.

⁸¹ Emergency Planning and Community Right to Know Act, Section 313, Title III, Superfund Amendments and Reauthorization Act of 1986, 42 USC § 11023.

⁸² Offshore Magazine 57(5), "Activity review of US regulatory, legislative issues," May 1, 1997.

⁸³ LR 19 (1997).

⁸⁴ 42 USC § 7545(i).

⁸⁵ 42 USC § 7545(i)(4).

⁸⁶ 61 F.R. No. 161, pp. 42812-17 (August 19, 1996).

⁸⁷ Anchorage Daily News, "Tesoro expands presence," February 18, 1997, p. A-1.

⁸⁸ Informal Attorney General Opinion, File No. 993-94-0102 (October 11, 1996), p.5 and n. 8.

⁸⁹ Two page letter from the Alaska Chapter of the International Association of Drilling Contractors to ADEC's Commissioner, May 1, 1998.

⁹⁰ An ADNR Division of Oil and Gas official suggested that an example of a "significant new" piece of information would be the discovery of a new, threatened species of wildlife. Personal conversation with ADNR's Ken Boyd and Trustees for Alaska staff attorney.

⁹¹ State of Alaska, Office of the Governor, News Release 98-105, (May 4, 1998), "Knowles Vetoes Bill That Weakens Air Quality."

⁹² Section 3 of House CS for CSSB No. 231 (FIN) am H (brf sup maj pld S) (May 10, 1998)

Mrs. CUBIN. Thank you very much.

Next, the Chair would like to recognize Charles Bedell. Is that the correct pronunciation?

STATEMENT OF CHARLES BEDELL

Mr. BEDELL. Yes. Thank you, Madam Chairman and members of the committee. I am here today to represent the National Ocean Industries Association. The National Ocean Industries Association represents over 260 companies engaged in all aspects of the exploration and development of the nation's Outer Continental Shelf natural gas and oil resources.

We have testified numerous times over the years and it's been interesting, again, to be sort of on the final panel here and hear all the byplay and back-and-forth and all the issues. Many of the things we'd like to say have been said. And, at this point, I think the basic question that brought us here today was, though, to take a look at the Clinton Administration's policies and what impact they may or may not have had on the situation we now find ourselves in.

25 years ago, we had gas lines going around the street back here on C Street several blocks. I know. I lived down there and worked in this building. And we haven't seem to have learned, as an institution or as a country, from these past lessons. And we haven't gleaned the truth that has been stated here today several times, that we need both things.

We seem to have this philosophy that, OK, we need to jerk America by the neck or by the collar and say you must go and save this or do that and then suddenly, somehow, we will stop using energy. And we have a complex society, one that can't be changed and turned around on a dime. Sort of like a law of physics. It has a lot of momentum.

And I think that what the administration has done hasn't really, to this point, helped out on that. What I'm speaking of in particular is that, for example, the administration had a report in September 1999 called, "Turning to the Sea: America's Ocean Future." This report takes a balanced approach to offshore energy, surprisingly enough.

And not only does it recognize how vital oil and natural gas resources on the OCS are to our domestic energy supply and the nation's security needs, but it highlights the importance of natural gas reserves on the OCS, as natural gas will be the necessary ingredient to meeting our growing energy needs, and especially for helping our clean air situation.

Now, however, there is an old adage that says actions speak louder than words and, unfortunately, the administration's record hasn't been one of following its own policy advice. Now there's a chain of events that's taken place since 1995. Back then, the administration issued a national energy policy plan that was called, "Sustainable Energy Strategy." Now this plan in part states that the administration is, and I quote, "committed to enhancing the competitiveness of domestic oil producers," close quote. And, "expanding the role of clean, efficient, and domestically produced natural gas," close quote.

Later, in March 1998, the administration released yet another study called "In the Year of the Ocean." These were discussion papers, as it was called. And these were prepared by Federal agencies with ocean-related programs and this document states that the environmentally sound development of the nation's OCS will help advance the energy policy plan outlined in the earlier 1995 document.

In addition, the document asserts that, and, again, I quote, "The offshore development, under proper environmental safeguards, poses less risk for large oil spills than does importing foreign oil in tankers," close quote. Pretty good.

Now in April 1998, the administration released another document, "Comprehensive National Energy Strategy." This one says that it seeks to arrest the decline of domestic oil production by the year 2005 by supporting, again, quoting, "environmentally responsible development of leased Federal lands for oil recovery," close quote.

It also seeks to increase, it says, "domestic production of natural gas by as much as 6 trillion cubic feet per year by the end of 2010." But on—there had to be a but—on June 12, 1998, during the National Ocean Conference in Monterrey, California, President Clinton issued an executive order extending and expanding the moratoria on oil and gas leasing off of most coasts of the United States outside the central and western Gulf and parts of Alaska until 2012. In making this announcement, the President said, quote, "We must save these shores from oil drilling," close quote.

There's yet another study, a September 2, a paper or report entitled, "Turning to the Sea: America's Ocean Future." Vice President Gore introduced this one and said that natural gas reserves on the Outer Continental Shelf are particularly important because natural gas has major environmental benefits over other fossil fuels. Yet 80 percent of our OCS is off-limits. Yet this administration opposes development of the project that Senator Johnston mentioned earlier, the Destin Dome 56 unit project off Florida, which has at early 1990's levels, I think it was 30 years of commercial natural gas for the State of Florida.

To summarize, Madam Chairman, I think it's clear that the offshore industry in the United States, if 25 years ago, we had sat in this hearing room and someone had said what we can do today was going to be possible, I think we would roll our eyes and said, oh, my goodness, you know, 8,000 feet of water, production and technology that it's safe for people, for the environment and it's proven.

Yet, again, we have this sort of aversion to drilling. The word "drilling" sets off incredible reactions in people. Yet the facts are there and we can't seem to make these things match and make policy based on science and on facts and not sort of hysterical reaction.

The natural gas dependency is growing and you can't just bring that stuff in by tanker. We can't just get it easily. We're going to be dependent on it for electricity in the State of Florida itself. Even though it also opposes the Destin Dome project, it is not opposing natural gas pipelines coming into the State. Yet, what are we going to do? Are we going to wait for there to be brownouts throughout the State? Are we going to wait for gas to be \$12.00 at MCF and have terrible impacts on our economy?

No, we shouldn't. We should start doing something today to prevent that kind of thing from happening. We should be reactive all the time. Again, that's been something that's been said.

America's offshore industry is here. You don't have to build it and we'll come. We're already here and we're already doing our job. And if we had time, I could show you all the maps showing that small companies like mine, as well as majors, are taking the risk. We're producing the goods. And it's here for America and we'll do as much as you'll let us.

Thank you.

Mrs. CUBIN. Thank you very much.

The Chair now recognizes Walter McCormick of the American Trucking Association.

STATEMENT OF WALTER B. MCCORMICK

Mr. MCCORMICK. Thank you, Madam Chairman. On behalf of the nation's responsible motor carriers, thank you for having me here today.

Madam Chairman, the title of this hearing is "On Compromising our National Security." And I can tell you from the firsthand accounts that have poured into my office that the current high fuel prices are devastating industries like the trucking industry.

In the trucking industry, we have seen a clear example of the frustration around the country with the recent truck rallies right here in our nation's capital. They were put together by a group of those entrepreneurs who were being forced out of business.

Madam Chairman, skyrocketing diesel fuel prices and the lack of a long-term national strategy to address them are a significant threat not only to the American trucking industry, but also to the U.S. economy as a whole. Trucking represents 5 percent of the gross domestic product and today more than 70 percent of America's communities relies solely on trucks to deliver their goods. Runaway fuel prices are the soft underbelly of the U.S. economy. They make our country's economic future vulnerable. Simply put, if trucking breaks down, so does this historic expansion.

While prices have dropped over the last few weeks, they remain excessively high. Last week, the national average retail diesel fuel price was \$1.44. Prices peaked at \$1.50 in mid-March, which was the highest price ever since the Energy Department starting collecting data. That price was a 50 percent increase over last year. So you can see that the modest six cent decline that we have experienced recently does not give the trucking industry much relief.

Earlier this year, the fuel crisis was concentrated in the Northeast. Now it has spread to all regions of the country. This underscores the need for a national policy.

Madam Chairman, with the crisis at the pump, many carriers are rapidly burning through their cash reserves. Others are seeing their operating ratios approach 100, which means no profit, none. If carriers are forced to either limit their runs or to shut down their rigs, there will not be a way to pick up and move all the freight. And, as you know, trucking is what brings the goods to our doors and to our stores.

The other modes of transportation, which are also feeling the brunt of high fuel prices, cannot help in this regard. If we start to

see bottlenecks, shippers who today object to a fuel surcharge will have to scramble to get their freight delivered at any cost. It's easy to see where that leads. Consumer prices rise and inflation snuffs out our country's economic expansion. It is a quick, short path to inflation.

But we believe that today's crisis can be addressed. A release of oil from the Strategic Petroleum Reserve would have an immediate salutary impact. On March 28, OPEC agreed to increase production quotas. This is a step in the right direction. But production increases will not be sufficient to reduce the current world deficit. Demand continues to outstrip supply and OPEC continues to pursue a policy of forced scarcity that threatens our economy.

One thing to keep in mind is that petroleum prices are very fungible. Therefore, we believe that a release of oil from the Strategic Petroleum Reserve would have an immediate impact at the pump. Some say it will take weeks to help. It's not true. The market is very efficient, particularly when it comes to commodities. It will react and react quickly to fuel prices based upon an increase in supply.

To speak for just a moment on the subject of this hearing, which is our national security. It is important to recognize that while there is credible scientific research being done on the fuels of the future, diesel fuel is and will be the fuel that drives this country for decades to come.

Madam Chairman, I know that you understand and that Chairman Young understands the importance of a continued flow of oil. And that Chairman Young's interest in opening up the Arctic National Wildlife Refuge to production in an environmentally sound fashion is due in part to his concern over the dependence on foreign oil. The same concerns hold true for other potential areas of discovery, including parcels in the Outer Continental Shelf and under other lands held by the Federal Government for the people of the United States.

Madam Chairman, the ability of trucking to keep consumer costs down has been a driving force in this historic economic expansion. It's something we're proud of. We don't want to see this booming economy go bust.

Therefore, I want to thank you for holding this hearing and for the leadership that you have shown, that Chairman Young has shown, the members of the committee have shown on this issue of vital national importance to our economy and to our security.

[The prepared statement of Mr. McCormick follows:]



AMERICAN TRUCKING ASSOCIATIONS

2200 Mill Road * Alexandria, VA * 22314-4677

★ ***Driving Trucking's Success***

Walter B. McCormick, Jr.
President & Chief Executive Officer

Statement of

Walter B. McCormick, Jr.
President and CEO
American Trucking Associations

Before the
House Committee on Resources

Oversight Hearing on
Domestic Oil and Gas Exploration and Production

April 12, 2000

Testimony of Walter B. McCormick, Jr.
President & CEO of the American Trucking Associations (ATA)
Before the House Committee on Resources
Oversight Hearing on Domestic Oil and Gas Exploration and Production
April 12, 2000

Mr. Chairman, members of the committee, I am Walter McCormick, President and CEO of the American Trucking Associations. On behalf of the nation's responsible motor carriers, I want to thank you for the invitation to be here and for holding this hearing.

I can tell you from the first-hand accounts that have poured into my office that the current high diesel fuel prices are devastating the trucking industry. We have seen a clear example of the frustration around the country with the recent truck rallies here in our nation's capital. They were put together by a group of those who are being forced out of business.

Mr. Chairman, skyrocketing diesel prices -- and the lack of a long-term national strategy to address them -- are a significant threat not only to the American trucking industry, but also to the U.S. economy as a whole.

Trucking represents 5% of the gross domestic product. Today, more than 70% of America's communities rely *solely* on trucks to deliver their goods. Runaway diesel prices are the soft underbelly of the U.S. economy. They make our country's economic future vulnerable. Simply put, if trucking breaks down, so does this historic expansion.

Current Situation

While prices have dropped over the last few weeks, they remain excessively high. Last week, the national average retail diesel fuel price was \$1.44. Prices peaked at \$1.50 in mid-March, the highest price ever since the Energy Department started collecting data. That price was a 50% increase over last year. So you can see that a six-cent decline doesn't give the trucking industry much relief. Earlier this year, the crisis was concentrated in the Northeast; now it has spread to all regions of the country. This underscores the need for a *national* strategy, and like you, Mr. Chairman, I do believe that the long-term strategy must include a greater focus on increased domestic oil production and less reliance on foreign imports.

There are several factors behind today's high prices: First, OPEC cut oil production. Current oil stocks are down 15% from last year. A few weeks ago, crude consistently closed over \$30 a barrel for nearly a month. It is currently hovering around \$26 a barrel.

Industry Impact

At this point, I'd like to answer the most frequent question I get from folks outside the trucking industry. They ask: If trucks move so much of the economy, why don't they do what any business has to do and just absorb the higher prices or pass them along to the customer?

That question gets to the bottom of this debate, so I'd like to address it head-on. First, we did just that in 1999 as prices began to rise. But when prices ran out of control, we knew we had to speak up or shut down. A key reason trucking is the dominant mode of transportation in this country is because it is affordable. We are affordable because of razor-thin profit margins of about three percent. If that margin moves even slightly, many in the trucking industry are forced out of business. Most trucking companies can't afford to absorb higher diesel costs and in a highly competitive market, they can't raise prices.

Itemize the vulnerabilities of trucking companies, and you'll find that fuel is the Achilles heel. It is second only to labor in direct costs. To give some perspective, on average across the country earlier this year, it cost truckers \$150 more each time they filled up compared to a year ago. Today, it is \$110 more. With shippers objecting to fuel surcharges, often the choice is haul at a loss or pull over and shut down.

Potential Impact on the U.S. Economy

Mr. Chairman, you are well aware of the many challenges facing the trucking industry. Even before this situation, the trucking industry was straining the limits of its capacity to meet the shipping demands of a booming economy. We are struggling with an acute driver shortage as we find ways to entice young people to a life on the road.

With the crisis at the pump, many carriers are rapidly burning through their cash reserves. Others are seeing their operating ratios approach 100 – translation: no profit, none. If carriers are forced to either limit their runs or shut down their rigs, there won't be a way to pick up and move all the freight. And, as you know, trucking is what brings the goods to our doors and our stores. The other modes of transportation, which are also bearing the brunt of high fuel prices, can't help. If we start to see bottlenecks, shippers who today object to a fuel surcharge will have to scramble to get their freight delivered at any cost. It's easy to see where that leads: Consumer prices rise and inflation snuffs out our country's economic expansion. It's a quick, short path to inflation.

Today's Crisis Can Be Easily Fixed

Mr. Chairman, I'm here to convey the economic challenges of working men and women who mean a great deal to this country. I make their case for one simple reason: today's crisis can be easily fixed.

On March 28 of this year, OPEC agreed to increase production quotas to 1.45 million additional barrels per day. The current world shortfall is roughly 2.5 million barrels a day. This is a step in the right direction, but it appears that this production will not be sufficient to reduce the current world deficit. Demand still far exceeds supply, and OPEC continues to pursue a policy of forced scarcity that threatens our economy.

One thing to keep in mind is that petroleum product prices are very fungible. We heard about one driver who filled up the tank on one side of his truck at one price, then walked around to the other side to find the price had gone up 15 cents. Clearly, pricing at the

retail level is not 100% based on the drop-for-drop cost of a barrel of crude. The release of fuel from the Strategic Petroleum Reserve would have an immediate impact at the pump. Some say it will take weeks to help. Not true. The market is very efficient. It will *react* and react *quickly* to future prices, immediately easing the pain at the pump.

I think it's also important that Congress ask the Attorney General of the United States to commence an investigation into any illegal diesel price gouging and ensure that profiteers are not taking advantage of cash-strapped truckers.

To speak for a moment directly to the subject of this hearing, while there is credible scientific research being done on the fuels of the future, diesel is and will be the fuel that drives this country for decades to come. Mr. Chairman, I know that you understand the importance of a continued flow of oil, and that your interest in opening the Arctic National Wildlife Refuge to production, in an environmentally sound fashion, is due, in part, to your concern over our dependence on foreign oil. The same concerns hold true for other potential areas of discovery, including parcels in the Outer Continental Shelf and under other lands held by the federal government for the people of the United States.

Mr. Chairman, the ability of trucking to keep consumer costs down has been a driving force behind this economic expansion. It's something the industry is very proud of. We don't want to see this booming economy bust. Unfortunately, it is a real possibility if we can't put the brakes on this crisis at the pump and prevent its recurrence should the price decreases that the Energy Department now anticipates fail to occur.

I want to thank you, Mr. Chairman, and the members of this Committee, for your leadership on this issue and for raising the vital subject of domestic oil and gas exploration and production. I would be happy to take any questions you may have.

Mrs. CUBIN. Thank you very much for your testimony.
The Chair now recognizes Monica Surprenant for the Louisiana State Mineral Board.

STATEMENT OF MONICA T. SURPRENANT

Ms. SURPRENANT. Thank you, Madam Chairman, and thank you for allowing me to come and share with you what Louisiana's experience has been with recent advances in technology. And that's what I'd like to share with you in my very brief moments here today with you.

We have seen substantial advances in the technology that is in this industry. I don't think many people realize how far we've come. A few minutes ago, my fellow on the panel here, Mr. Bedell, made a reference to it. But what we have seen recently with the advent of deepwater projects in the Gulf of Mexico right off Louisiana is truly outstanding.

What we have been doing, and we originally started this type of production in water deeper than 1,000 feet, calling that deepwater drilling. By November 1999, there were 32 deepwater rigs in the Gulf. Today are 90 prospects out there, serious prospects for oil.

Names like Mars Field, Neptune, Genesis, these types of rigs or these types of fields, really is more accurate, are in water 1,900 feet to over 2,900 feet. That's deep water. And when we hear old timers talk about these fields and production, they talk about them almost in hushed tones, as if they never would have believed that this would be possible.

And when I talk about old timers, I'm talking about people my age. I'm not that much older than they, because no one who's seen this business in the last 20 years or so would ever have believed this could be done. And it's being done. And the same technology that brought this about, the same technology that allowed the drilling to these depths is the same technology that's keeping it safe out there. At least that's what the statistics show and I'll get to that in a minute.

But the 2,900 feet is really nothing, as was previously mentioned. In July 1997, Shell had a production at 5,300 feet. Not only was it the deepest at that point, but it was 58 miles away from the platform. 58 miles. That's how far they were able to get from the source to a platform. In August, 1998, that record was shattered by Chevron with an exploratory well at over 7,700 feet. And that was 175 miles southeast of New Orleans.

We think that these records are going to be broken in the year 2000. This work is out there. It's being done on a daily basis. And these rigs are operating in a very—what we see to be a very safe manner.

Not only has Louisiana experienced and seen what the oil industry can do in deepwater, Louisiana still has the only offshore port in deepwater. And that's LOOP, the Louisiana Offshore Oil Port. Now that may be old news. That port was put in place and has operated for almost 20 years now, but no one else has built such a deepwater port.

We're the only one in the world where an ocean-going vessel, these large tankers that can't come in port anywhere else, can take their cargo and unload it. And unloading it out there at that port

is a lot safer than bringing it anywhere near the land. It's an amazing facility that LOOP has and it's really a modern marvel. They're able to offload these tankers with flexible lines anchoring the ship to the bottom of the Gulf of Mexico while being able to turn 360 degrees so as not to be impaired by wind or currents and waves while they're doing that. It's truly a marvel.

In all the years that LOOP has been out there offloading, at least in the first 15 years that we know of they've offloaded 250 million barrels of oil of over 3,300 tankers, they've never had a significant spill. So we know this is working. We've seen it working.

I can tell you that I looked before I came here at the MMS spill data for what is going on out there in terms of are we really having problems? We have the technology. It seems to be working. In all of 1999, from January to December 1999, the total spillage reported to that agency, and they have to report even an ounce, was 8,400 gallons. Now that's gallons. Not barrels. They are producing hundreds of thousands of barrels out in the Gulf, but of that, there were 8,404 gallons that were reported to be spilled.

I don't like spillage of any amount. I wish not one ounce would be spilled. But you need to look at the hard facts. And I think the hard facts say the technology is there. The technology is working. And the technology is working not only to get oil out of the ground, but to keep us safe.

Although we have been very proud of what we've seen in the Gulf, we do know that an ounce of prevention is worth a pound of cure. And we have, at times, had to step back when things have given us cause for concern. I am the chairman of the Louisiana State Mineral Board. And, in that capacity, we're in charge of leasing Louisiana State minerals.

And for those of you who are familiar with Louisiana, particularly southeast Louisiana, you may be aware of Lake Pontchartrain. Lake Pontchartrain is as vital to the City of New Orleans and the South Louisiana as its culture, its food, its jazz, and its relationship with the Mississippi River.

And the issue has come up, time and time again, regarding whether we're going to drill for oil in Lake Pontchartrain. And I'm proud to tell you that, as the chairman of the board, my board has consistently issued a moratorium on drilling in the lake, not because we're not willing to listen to people but because no one has come up with a plan to use directional drilling, or to tell us what they can do in a safe way. But these are things that are out there. We know the technology is out there, but people need to put that technology to work and come up with plans that will work, as they're working in the Gulf.

I see my time is up, Madam Chairman. Thank you for your time. It's been a pleasure being here and I hope I've provided some information you'll find useful.

[The prepared statement of Ms. Surprenant follows:]

U.S. House Committee on Resources Oversight Hearing
"Compromising our national security by restricting domestic
exploration & development of our oil and gas resources."
Written Testimony of Monica T. Surprenant
April 12, 2000

Thank you for the opportunity to address this Committee on this very important topic. In your invitation you indicated interest in testimony as to my "experience with offshore oil and gas development, specifically the use of new technology to minimize environmental impacts". I offer the following comments in response to your request.

The search for and conservation of oil and gas resources has been one of the most important cornerstones in the United States' march to being the most powerful nation in the world. Starting on shore, we soon moved to the lakes and marshes and then the bays. From these beginnings, we have unfailingly worked our way out to ever increasing depths in the Gulf of Mexico to help satisfy this nation's needs for energy. We have developed technologies to meet our particular environmental situations and we have adapted others which we found useful for increasing our ability to find and produce those resources. We have in turn brought these technologies to virtually every corner of the world to both feed the world's energy needs and to meet the challenge of producing petroleum products wherever they may be found.

First let me describe the scope of the effort from a management standpoint. As of the end of December 1999, there were 7526 active federal leases in the Gulf of Mexico. Of these, 1,507 were producing. The MMS Gulf of Mexico Regional Office conducts all leasing and resource management functions on the Outer Continental Shelf (OCS) for the Gulf of Mexico OCS Region and Atlantic OCS area. The OCS consists of submerged Federal lands off our coasts. The OCS has the potential to supply a significant portion of this Nation's future energy and non-energy mineral needs. MMS leases these Federal offshore areas for exploration and production and closely monitors OCS operations to protect our coastal environments and ensure proper royalty collection. As well as meeting major energy needs, MMS provides about \$6 billion in annual revenue benefits to the Nation. The deepwater portion of Gulf of Mexico has shown a remarkable increase in oil and gas exploration, development and production. In part this is due to the development of new technologies reducing operational costs and risks, as well as the finding of reservoirs with high production wells. There are about 90 announced Gulf deepwater prospects--the Gulf operators have been setting and surpassing records in water depth and length using new and improved proven technology. The GOM Region is responsible for administering more than 7,000 active leases covering more than 39 million offshore acres, where some 35,400 personnel work offshore on over 3,850 producing and 200 drilling facilities for some 160 qualified operators. The Region regards the safety of personnel, of the environment, and of operations as top priorities. The Nation's record for safe and clean offshore natural gas and oil operations is excellent. And to maintain and improve upon this excellent record, MMS continually seeks operational improvements that will reduce the risks to offshore personnel and to the environment. MMS constantly re-evaluates its procedures and regulations to stay abreast of technological advances that will ensure safe and clean operations, as well as to increase awareness of their importance. Prevention is our most important safety strategy. MMS's

approach to prevention has four major program components: the Technology Assessment and Research Program: an extensive offshore personnel training program; a regulatory program, which includes approval of plans, facilities, and operations, and an inspection of those facilities and operations; and accident investigations. Accidents reported to the MMS may trigger an investigation by the MMS district office in which the incident occurred. In the case of a major accident MMS may create an investigative panel of district, regional, and headquarters personnel, as well as representatives of the U.S. Coast Guard and other Federal agencies including the National Transportation Safety Board. Findings from both types of investigations may lead to the issuance of safety alerts, technology assessment and research, changes in the training program, and/or improvements in the MMS regulatory program all of which further ensure safe and environmentally sound operations. Through these comprehensive programs MMS remains deeply committed to ensuring that safety is a prerequisite of all activity on the OCS, now- and in the future.

To demonstrate the technologies which are or can move us closer to self sufficiency in an environmentally responsible manner I would like to tell you about recent advances in deep water (For purposes here, deepwater is defined as 1,000 feet of water or greater.) drilling technologies utilized in the Gulf of Mexico which have expanded the limits of where we will be successful in finding and producing hydrocarbons.

The deepwater portion of Gulf of Mexico has shown a remarkable increase in oil and gas exploration, development and production. In part this is due to the development of new technologies reducing operational costs and risks as well as the finding of reservoirs with capable of high production of oil and gas resources. In 1996 MMS issued a report describing deepwater activities. There are about 90 announced Gulf deepwater prospects--the Gulf operators have been setting and surpassing records in water depth and length using new and improved technology.

Shell's subsea development named "Mensa" in Mississippi Canyon, Block 731 set two world records in July 1997--a world water depth record for production at 5,300 feet and a world record of 58 miles for tieback distance to its host platform in West Delta Block 143. Chevron U.S.A. set a then new world record water depth for drilling an exploratory well in August 1998 on Atwater Valley Block 118 in 7,718 feet of water. The block is located about 175 miles southeast of New Orleans. This eclipsed the previous record drilled in April 1996 in Alaminos Canyon Block 600 in 7,620 feet of water in the BAHA prospect, a joint venture owned by Shell, Amoco, Mobil, and Texaco. Many companies are poised to break the world record in the year 2000.

Deepwater drilling continues at a high pace in the Gulf; in November 1999, there were 32 (temporary and permanent) deepwater rigs simultaneously drilling in Gulf of Mexico water depths greater than 1,000 feet (305 meters). Examples of this concerted activity include, the "Ram-Powell" Tension Leg Platform (TLP), installed in May 1997 and holder of the previous Gulf water depth production record, is a Shell/Amoco/Exxon joint venture in 3,214 feet of water. Ram-Powell surpassed the 2,940-foot permanent drilling and production platform depth record set by Shell/BP on its "Mars" tension leg platform. In March 1999 Shell (and partners Exxon, BP, and Conoco) began production from another TLP for the "Ursa" project on Mississippi Canyon Block 809 in 3,916 feet of water. It also sends its subsea well production back to the HUB platform at West Delta 143.

Kerr McGee's Oryx3/CNG's "Neptune" SPAR platform, in Vioska Knoll Block 826

pump station with four 6,000-hp pumps, meters to measure the crude oil receipts and deliveries, and a 25 million barrel Brine Storage Reservoir. In 15 years, LOOP has offloaded over 3.5 billion barrels of crude oil from over 3350 tankers. In 1995, LOOP handled over 250 million barrels, an estimated 685,000 barrels of oil per day, and is on pace to surpass that figure for 1996. LOOP is presently handling approximately 11% of all crude oil imports coming into the United States. Five connecting pipelines tie LOOP to over 30% of the United States refining capacity. Crude oil shipped through LOOP goes to refineries in Louisiana, Texas and the mid-west. The handling of such large amounts of oil each day continues to be a significant benefit to Louisiana's economy. As I mentioned this has been done in an environmentally sound manner. There have been no major releases of hydrocarbons from the LOOP facilities to date.

Offshore oil and gas production has benefitted our environment in some ways. It has been recognized for some time that these structures begin to provide habitat for a large variety of highly sought after coastal fishes and other sea life almost as soon as they are put in place. These structures quickly become targeted destinations for anglers across the coast in search of sport and tasty fish. We have found a way, even after these structures have completed their useful life in the oil and gas industry to have them continue to provide habitat in the Gulf waters. The Louisiana Artificial Reef Program was established in 1986 to take advantage of obsolete oil and gas platforms which were recognized as providing habitat important to many of Louisiana's coastal fishes. Federal law and international treaty require these platforms to be removed one year after production ceases, at great expense to the industry. The removal of these platforms results in a loss of reef habitat. Louisiana's offshore oil and gas industry began in 1947 when the first well was drilled out of sight of land south of Terrebonne parish. Today over 4,500 offshore oil and gas platforms have been installed supplying 25% of the United States' production of natural gas and 10% of its oil. In addition to meeting the world's energy needs, these structures also form one of the world's most extensive defacto artificial reef systems. However, Federal regulations require that these structures be removed within 1 year after the lease is terminated. Disposal of obsolete offshore oil and gas structures is not only a net financial liability for private industry but can be a public loss of productive marine habitat. The Louisiana Fishing Enhancement Act was signed into law in 1986, creating the Louisiana Artificial Reef Program. This program was designed to take advantage of fishing opportunities provided by these obsolete platforms. Since the program's inception twenty-five reef sites utilizing the jackets of 85 obsolete platforms have been created off Louisiana's coast. The use of obsolete oil and gas platforms in Louisiana has proved to be highly successful. Their large numbers, design, longevity and stability have provided a number of advantages over the use of traditional artificial reef materials. The participating companies also save money by converting the structure into a reef rather than abandoning it onshore and are required to donate a portion of the savings to the state to run the state program. One disadvantage, however, is that their large size restricts the distance to shore where these platforms can be sited. To achieve the minimum clearance of 50 ft as required by the Coast Guard regulations, the platforms must be placed in waters in excess of 100 ft. Waters compatible with reef development are generally found between 30 and 70 miles off Louisiana's gently sloping continental shelf, making them accessible to anglers with offshore vessels. Funds generated by the program can be used to develop reefs closer to shore using alternative low profile materials. Oil and gas development in the Gulf of Mexico region has and will continue to contribute to the Gulf's position as the nation's most productive and popular

(1,930-foot waters), is another example of new platform technology used in Gulf production. It represents the world's first production SPAR and was brought on production in 1997. A second SPAR system in the Gulf ("Genesis") was brought on production by Chevron U.S.A. (with Exxon and Fina) in 1998 on Green Canyon Block 205 in 2,597 feet of water. A third SPAR is in development by Exxon for its Diana Hoover prospect. Production is expected to commence in early 2000.

British-Borneo Exploration, Inc. has installed the world's first mini-TLP on Ewing Bank Block 965 in 1,700 feet of water on their "Morpeth" project. British-Borneo's mini-TLP was brought on production in 1998. Amerada Hess installed a compliant tower on its "Baldpate" project on Garden Banks Block 260 in 1,619 feet of water in 1998.

Production from Gulf deepwater reservoirs is also increasing. From 1994 through 1998 production of oil rose 260 percent to 159 million barrels in 1998. MMS expects deepwater natural gas and oil activities to continue to grow as operators explore and develop recently acquired and existing active leases. MMS's recent Lease Sales in 1996-98 are clear indications that industry is confident in the Gulf's deepwater resources. As technology advances and costs are reduced, deepwater development projects will become more feasible, allowing companies to venture more into ultradeep waters -exceeding 5,000 feet water depths.

We also have the technology and the ability to move the resources we recover here as well as those we will continue to import in an environmentally sound manner. As an example let me tell you about LOOP - the Louisiana Offshore Oil Port - LOOP is the world's first and only deepwater port operating under U. S. and Louisiana licenses. LOOP provides tanker offloading and temporary storage services for crude oil transported on some of the largest tankers in the world. Most tankers offloading at LOOP are too large for U.S. inland ports. Tankers offload at LOOP by pumping crude oil through hoses connected to a Single Point Mooring (SPM) base. Some of these vessels require water depths of 85 feet--the water depth at each of LOOP's SPMs is 115 feet. Three SPMs are located 8,000 feet from the Marine Terminal. The SPMs are designed to handle ships up to 700,000 deadweight tons. The SPMs are 21 feet in diameter, 46 feet high and are anchored to a seabed base with an anchor chain. Mooring lines connect the bow of a tanker to the buoy and flexible hoses are used to transport crude oil from the tanker to a submarine pipeline. The buoy and hoses can rotate a full 360 degrees allowing the tanker to maintain a heading of least resistance to wind and waves. The crude oil then moves to the Marine Terminal via a 56-inch diameter submarine pipeline. Its offshore marine terminal facilities are located 18 miles south of Grand Isle. It consists of a control platform and a pumping platform. The control platform is equipped with a helo pad, living quarters, control room, vessel traffic control station, offices and life support equipment. The pumping platform contains four 7,000-hp pumps, power generators, metering and laboratory facilities. Crude oil is only handled on the pumping platform where it is measure, sampled and boosted to shore via a 48-inch diameter pipeline. LOOP's onshore facilities, Fourchon Booster Station and Clovelly Dome Storage Terminal, are located just on-shore in Fourchon, LA and 25 miles inland near Galliano, LA. The Fourchon Booster Station has four 6,000-hp pumps which increases the pressure and crude oil flow en route to the Clovelly Dome Storage Terminal. The facility also supplies diesel fuel to LOOP's Marine Terminal via a 4-inch diameter pipeline. The Clovelly Dome Storage Terminal is used to store crude oil in underground salt caverns before it is shipped to the various refineries. The terminal consists of eight caverns with a total capacity of 40 million barrels, a

offshore marine fishing zone.

Drilling and producing petroleum products safely in deepwater will require special attention by industry and the use of the most advanced training and management systems available. This section is meant only to highlight some concerns and efforts. It is not meant to be a complete and detailed discussion. One important advance, which has been an industry led effort, has been the issuance by the International Association of Drilling Contractors (IADC) of "Deepwater Well Control Guidelines." A companion effort to this is a recently issued Notice to Lessees - NTL 99-G01 ("Deepwater Emergency Well Control Operations") requiring operators to plan for well control emergencies and relief wells for all well related operations in water depths greater than 400 meters. MMS recently published a Safety Alert concerning strong deepwater currents in greater than 6,000 feet (see Safety Alert 180). MMS also continues to track concerns about the effect shallow water flows have on deepwater drilling and development projects. Known occurrences are plotted on maps that are periodically updated by MMS.

While we are anxious to develop our resources we have kept one eye on the prize and one eye on the environment. We respond to real environmental threats in measured degree appropriate to the level of threat. As an example, we have, at present, a moratorium on drilling in Lake Pontchartrain which resulted because of a real threat to the lake. We stand ready to review the decision for this moratorium based on any new evidence which bears on the ability to produce resources in an environmentally sound manner.

While we are certainly seeking to make exploration and production "spill-free", we also know that that is not going to be the case. In order then to make informed decisions about the environmental risks involved in the exploration for and development of petroleum resources let us look at information regarding releases of oil to the environment. There are numerous sources for this information. The National Response Center maintains what is probably the most complete set of data with reference to "spill" occurrences. In order to get good data on actual amounts released it is best to rely on Coast Guard and/or MMS data. MMS spill data in federal waters in the Gulf of Mexico for the period January-December 1999 indicate that 8404 gallons (191 bbls) were reported as having been released into the environment. A search query performed by the Louisiana Oil Spill Coordinator's Office (LOSCO) on a database of National Response Center data for offshore Louisiana indicated that there were 160 reported releases of "oil" between 1992 and 1998. Considering the amounts of hydrocarbon produced and transported through the Gulf of Mexico and Louisiana these figures represent a minuscule proportion of the total produced and/or transported.

No matter what equipment and what safeguards are put into place we are dealing with an industry in which human efforts, in frequently hostile environments, under dangerous physical conditions, are the only method we have to extract these resources. In response to this challenge, we developed the following two plans and included them in our tool box to deal with offshore spills. Our reasoning was that OCS spills had the potential to be large and OCS spills represent, in many ways, the hardest to deal with. They are remote. Most oil spill equipment is, at best, cumbersome and slow. Most of this equipment has been developed for inshore/land and/or shallow water use. OCS spills present unique challenges which require aggressive methods of response in order to preclude a threat to highly sensitive habitats. Far from shore, they represent logistical nightmares for many responders. Response equipment designed for calmer waters

cannot operate effectively in open water conditions. Problems of travel times, storage of equipment and product recovered, transport of personnel and materials, as well as support for personnel make spills offshore most difficult to handle. To this end Louisiana and EPA Region 6 Regional Response Team have taken the unprecedented steps of pre-approving both the use of dispersants and in-situ burning as a means of attacking offshore spills.

Preapproval for dispersant use in oil spill response activities has been in effect since early 1995 for waters greater than 10 meters in depth or greater than, or equal to, 3 miles offshore.

Preapproval for in-situ burn in open water has been in effect since early 1994 for waters three miles or greater offshore, certain reefs excluded, and the area off Grand Isle excluded. In waters less than 3 miles offshore, incident specific approval is needed.

In closing I would like to reiterate several points.

We have a stable political environment in the U.S., relatively free from terrorism and/or sabotage which frees us to focus on the true technical difficulties of drilling safely wherever oil and gas reserves may be located.

We have a well trained work force which is ready and able to meet the challenges imposed by working safely with some of the most dangerous machinery in use.

We have the technology to find and develop oil and gas reserves in very wide variety of habitats and under very demanding environmental conditions. We are constantly pushing the bounds of our technology and re-inventing it to meet new challenges. Chief among these is to produce these resources without degrading the environment by losing the product. After all, how much better off are we if we can get the product out of the field but not get it to the refineries. That is not good business or good conservation.

We have a very sophisticated and extensive network of agency and industry response teams and equipment to deal with any spills which occur within the gulf region. We have further enhanced our tool box for spill response by pre-approving the use of in-situ burning and/or dispersants, dependent upon the circumstances of the particular spill.

Based on our experience, we are convinced that oil and gas exploration can be conducted under acceptable environmental conditions.

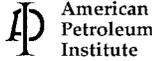
Mrs. CUBIN. I think you certainly have. As a matter of fact, I'm anxious to personally see LOOP and, you know, maybe take the subcommittee out to look at that and have a hearing in the district out there. I think that would be very beneficial.

One thing that I have observed from all the witnesses today is that no one seems to disagree with the fact that we do need a national energy policy. I think there are differences in how we should get there, but I think the most important thing is that we all are going to have to work together to arrive there, regardless of what our philosophies are, because if we don't work together, we'll never arrive. We will be here again and again and again, as everyone has testified.

By the way, before I forget it for the fourth time, I'm going to ask unanimous consent to enter a letter from the American Petroleum Institute into the record. Without objection, it's so ordered.

[The information referred to follows:]

Submitted by Hon. Cubin

1220 L Street, Northwest
Washington, D.C. 20005-4070
202-682-8100Red Cavaney
President & CEO

April 10, 2000

The Honorable Don Young
Chairman, House Committee on Resources
U.S. House of Representatives
Washington, DC 20515

Dear Chairman Young:

We at API have undertaken a review of the effects of the Deepwater Royalty Relief Act of 1995 as the incentive period draws to a close at the end of this year.

It has been less than a decade ago that declining offshore activity in the Gulf of Mexico was causing the area to be routinely dismissed as a potential source of new supply. The area was increasingly being referred to as the "Dead Sea" by knowledgeable industry sources. But since 1995, that nickname has been shed decisively, as the Gulf of Mexico has been transformed into the brightest growth area of the U.S.

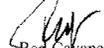
This radical turnaround occurred with the explosion of deepwater leasing activity in the Gulf of Mexico after 1995. Not coincidentally, this turnaround coincided with enactment of the Deepwater Royalty Relief Act of 1995, which passed the Congress in large part due to your efforts. In 1993-94, bids were accepted on only 943 Gulf of Mexico leases. In 1995-96, over 2200 leases were issued. In the words of a recent DOE analysis, "...the stimulus from the royalty relief provisions seems readily apparent when the bids are broken down by water depth. The fraction of blocks at water depths greater than 200 meters receiving bids in 1994 was less than 10% of all bids for tracts in the Central and Western Gulf of Mexico. By 1997, blocks in water depths deeper than 800 meters received more than half the bids."

Of course, these increases are a response to a number of factors, of which royalty relief was only one. While a number of critics dismiss the importance of the Act in contributing to the turnaround, MMS's own analysis suggests otherwise. MMS had developed estimates in late 1995 of the number of leases that would be sold in *ten* sales planned over the 1996-2000 period, both with and without royalty relief. They estimated that 420 leases in water depths greater than 200 meters would be sold without the Act.

and an additional 630 would be sold as a result of royalty relief, bringing the total to 1050 new leases. They estimated that bonuses of \$135 million would be paid on these leases without the Act, but that royalty relief would raise bonuses by \$485 million, to a total of \$620 million. In fact, the first *three* of these ten sales alone resulted in over 1500 new leases in water depths over 200 meters, about 50% more than estimated for the full *ten* sales. Furthermore, the first three sales generated winning bonus bids of approximately \$1.7 billion, nearly three times the MMS estimate for the *ten* sales.

While reasonable people may disagree as to precisely how much more activity was stimulated by the Act, there is no question that the Act was the key factor in turning around the Gulf of Mexico by opening the deepwater frontier. As such, the program stands as one of the most notable program successes in MMS's experience.

Sincerely,



Red Cavancy

Mrs. CUBIN. I wanted to ask you some questions. I'm going to throw you some softballs, Mr. Becker, because, you know, there aren't a lot of I have over here to help you, but they're not all softballs.

Mr. BECKER. Sure.

Mrs. CUBIN. You testified that efficiency in motor vehicle use would go a long, long, long way to solve the energy crisis that we're in and to help come to a good, strong energy policy for the country. Now is your claim that that alone would be adequate to solve our energy problems?

Mr. BECKER. No, not at all. What I was trying to point out was that you can get a lot more oil out of saving oil in vehicles than you could out of pumping the Arctic National Wildlife Refuge. Obviously, we're going to need more than just energy efficiency.

What we advocate is both supply side and demand side. Where there is ongoing drilling, where the land has been disturbed and you don't have a pristine ecosystem, we have not objected to drilling. And there are places where there has not been drilling heretofore which we also don't object to.

The question isn't an allergy to drilling. The question is where and how appropriate it is and how special the ecosystem is. One could chip off pieces of Mount Rushmore as a souvenir. That's not appropriate. That's not something that we think is a reasonable thing to do as a society. And the society as a whole, the American people as a whole, believe that there are special places that we should not either damage or threaten to damage in the search for oil.

But, no, of course we agree that there needs to be more than just efficiency. We do favor continued drilling in places where it's been going on. We favor tertiary recovery. We are strongly in favor of developing new resources, both fuels for vehicles and replacements for electricity generation from renewable sources, preferably. And we recognize that some of those aren't available yet.

But, as you pointed out in your own State, there are wind farms I believe in Carbon County, ironically.

Mrs. CUBIN. That's correct. Yes, right. And there's only one carbon molecule.

So that was going to be another question that I asked. Are there types of exploration for oil and gas, such as diagonal drilling, tertiary recovery, and those sorts of things, that your organization does support? Because I think we really, really need to try to find commonalities in what we do support, agree on that, put it behind us, and then go to the more touchy subjects like where can we drill and how can we become more independent.

Mr. BECKER. Yes, we do support many of those technologies. Again, it's a matter of the appropriateness. We wouldn't want to drill right through the floor of this august chamber. But there are places where it's appropriate to drill. So it's a matter of weighing—

Mrs. CUBIN. If someone put a giant vacuum under there and sucked a few out of here, it wouldn't be that bad. No one in this room, however.

I think, when we're talking about statistics and the estimations or assertions or whatever that you gave about how if we could in-

crease the CAFE standards over 10 years, what the results of that would be. I think of Mark Twain's book that he said there are three kinds of lies: lies, damn lies, and statistics. And, being a chemist by training with an emphasis in math and physics, I know a little bit about statistics and I think I know that we all choose to believe the ones that are more aligned with our fundamental philosophical beliefs.

And you chose to say that the median volume of economically recoverable oil would only satisfy the national appetite for 6 months, but I choose to think of it more in these terms that if the median amount of technically recoverable oil, as estimated by the USGS, was actually found and produced, it could displace for 29 1/2 years the imports from Saudi Arabia.

So I think that's an area where we really do need to get some information that you can believe and that I can believe. I'm sure that the facts about what the reserves are and what the consumption is is probably somewhere in between, but I'd really like to, you know, be able to come to sort of an agreement on that.

Mr. BECKER. Well, if I could just respond to that.

Mrs. CUBIN. Please.

Mr. BECKER. I think one can always compare a specific statistic to another relevant or irrelevant statistic. The key question that concerns the Sierra Club and our many members and lots of other people in the United States isn't exactly how much oil is there. We're not going to agree on that. But the appropriateness of drilling and disturbing this very special place, you know, there are lots of places where one could drill for oil. This is one place where—I have two girls. They are five and a half and nine and a half. And I'd like for them to be able to visit this very special place when they grow up with their grandchildren.

Mrs. CUBIN. In the summer.

Mr. BECKER. I'm sorry?

Mrs. CUBIN. In the summer. Excuse me. Go ahead. No, and I agree with you. I have sons that I'm sure I love as much as you love your two daughters. And I would absolutely agree that there are places where we should not be drilling, we should not be mining, we should not be harvesting timber. I absolutely agree with that.

But I also know what the alkaline high desert plains of Wyoming look like that are blocked from exploration because of what I consider to be really radical extreme environmental policies that have been put forward by this administration. And forgive me if it seems crass, but with the support of your organization and other organizations like it, where, you know, it would be more beneficial to drill there, to create jobs there because there are so many thousands of acres, millions of acres that look just exactly like it. At any rate, that's something we can discuss at another time.

I wanted to address this to Mr. Bedell. You testified before my subcommittee last August when we heard testimony on a bill to further lock up the eastern Gulf of Mexico, which was Congressman Goss' bill. Since that time, I wondered if Florida Utilities has changed their plans to convert their power generation from coal to fuel oil or to natural gas.

Mr. BEDELL. Madam Chairman, the latest developments there I believe are that there are at least two pipelines that are undergoing review by FERC, proposals to put large pipelines from Mobile Bay over to Tampa, the Tampa Bay area. And that the plans are going ahead to convert power plants from coal or other fuels to natural gas in that area of Florida.

My mother lives there and I was just visiting there 2 weeks ago and there were articles in the newspaper then about ash, fly ash or something, coming from one of these coal-fired plants. And, you know, I think that there needs to be, as was discussed earlier, a lot of continuing research on how coal can be used because it is a vital natural resource.

But, on the other hand, Florida has not objected to the routing of these pipelines, which are 36, I believe, inches or more in diameter and 500 miles long. They go within five miles of the proposed Destin Dome 56 unit where the platforms and things would be. They follow pretty much exactly the same route as an eight-inch pipeline that we had proposed running from that site offshore Pensacola to Mobile Bay. And yet Florida said that our eight-inch pipeline for that short distance violated their coastal zone management plan. And yet they don't object at all to these huge pipelines going across 500 miles of offshore Florida.

Mrs. CUBIN. I can't help but think of the seeming contradiction that can't drill for oil off of Florida, but it's OK to use the oil—or, excuse me, gas, but it's OK to use the gas that they produce off the shore of Louisiana when, in fact, Louisiana's economy is also dependent on tourism and, you know, its natural beauty.

Mr. BEDELL. And we have better fishing than they do, too.

Ms. SURPRENANT. We dispute that.

Mr. BEDELL. No, that's right. Louisiana has much better fishing.

Mrs. CUBIN. I wanted to ask Mr. McCormick a question. As you noted, many truckers, especially independent operators, and I have spoken with many in my State because that's how we get most all of our products in Wyoming is from the trucking industry, but many independent operators cannot afford the high diesel prices that they're faced with and I honestly have talked to many who expect to be going out of business in the very near future, if they aren't already.

And it's my understanding that my colleague, Nick Rahall from West Virginia, is devising legislation to address this situation involving, you know, the fuel surcharges. I wondered if you're familiar with this legislation. And if you are, would you comment on it for us?

Mr. MCCORMICK. Yes, I am. Madam Chairman, I am aware that Mr. Rahall has been exploring with the Owner/Operators and Independent Drivers Association the introduction of legislation that would impose a mandatory uniform fuel surcharge across-the-board in the event that fuel prices increase.

We've had discussions with Mr. Rahall about that. We've been going out to the broader trucking industry that we represent to get their views on it and hope to be working with him in the future on that.

It would have the impact, Madam Chairman, of taking the increased costs of fuel and passing them on. And, in that regard,

might well help the trucking industry, but it continues to leave the economy as a whole with the problem of increased costs of fuel.

And, as you know, my testimony really focused on the fact that this is a difficulty today for the trucking industry, but the trucking industry is the canary in the coal mine when it comes to the nation's economy. And what we're seeing is that, because of the increased costs on us, truckers are beginning to go out of business. Those costs, when they get passed on, impact other areas of the economy and will result in an economic slowdown.

So, while the trucking industry is very appreciative of Mr. Rahl's efforts to help us, we also feel that we, as a nation, need to address the larger issue of this dependence on foreign oil. OPEC, as you are aware, came out with a new rule that they are not going to just set production quotas at meetings. They have now given to the chairman of OPEC, the minister from Venezuela, the ability to set production quotas should the price of oil go below \$20.00 a barrel. Today it's at \$22.00 a barrel.

What you see here is the power to control price. And so we need to address that dependence on foreign oil and that's why we're here today.

Mrs. CUBIN. Thank you for that. And I intend and hope that all of you and all of your organizations will give input into a national energy policy. I intend to have more hearings and try to come up with some concrete recommendations for a national energy policy that addresses more than just the oil and gas industry, which is what this hearing has been more focused on. But that's because, you know, Mr. Young is the king and, you know, I'm the sometimes court jester and sometimes the queen. It depends on who you ask. But, at any rate, we will be having more hearings on an overall national energy policy.

Now, Mr. Hegna, you're now with ARCO Alaska and I wondered, after the merger of BP/ARCO, do you think that you'll be hired by Phillips Petroleum. Do you think you'll be working for them?

Mr. HEGNA. I won't be working for BP. The ARCO assets in Alaska are going to be sold to Phillips.

Mrs. CUBIN. To Phillips, right. That's right. Do you think you'll be working for Phillips?

Mr. HEGNA. Well, it depends on how this testimony came across. [Laughter.]

Mrs. CUBIN. Well, if they want a reference and you won't how it's going to be, but have them call me.

Do you think that the new regime of companies, if you will, will have the desire and the wherewithal to get the stranded gas to the Lower 48 States?

Mr. HEGNA. Definitely there's a tremendous—there's what, 26 trillion cubic feet of gas on the North Slope? But it's currently not commercial to bring that down. But there's a very active project team that includes BP and Phillips that are aggressively working those issues. So there's a number of things that will make it more economic, but I don't think the changes in Alaska with ARCO merging with BP will change that one bit.

Mrs. CUBIN. You heard Mr. Becker express the view that ANWR, and please correct me, Mr. Becker, if I don't characterize this accurately, but that ANWR should be forever protected from drilling.

Do you think, with your expertise in Arctic oil and gas development and also as an Alaskan, that oil and gas resources could be produced from ANWR and protect the environment at the same time?

Mr. HEGNA. Absolutely. And as I've gone through here, we have a tremendous record of minimizing the impact and doing it right to the environment. And, we're getting incredibly better as time goes on. So, yes, I'm convinced. I wouldn't be associated with the companies if they weren't good.

I have four sons, by the way, all that are of the age where they have to start producing. They have to start making money for their own families instead.

Mrs. CUBIN. Yes, because you might have to support them if they don't.

Mr. HEGNA. Absolutely. But we can do it right. And I have no concern about us going into ANWR and not being able to develop while protecting the environment.

Mrs. CUBIN. Mr. Becker, all of you, sometimes we get a piece of information and then we might not understand the basis for someone's opinion. And I don't think I ever asked you and I don't think it was in your testimony. Exactly what is it that you object to about drilling in this area? Is it the aesthetics that you wouldn't want to look at the oil rigs and the pumpers that are required to bring the oil out? Is it a potential for environmental accidents? Exactly what are the features that cause you to object to it?

Mr. BECKER. That's an excellent question and, no, we're not the aesthetic society, we're Sierra Club. What we are concerned about here is that there is a very special ecosystem. As a scientist, you know that the delicacy of an ecosystem can be affected by removing or changing any of the constituents of it.

So, for example, right now we have a pristine Arctic wilderness. There is no industrial activity in that area. There's activity in 95 percent of or 95 percent of the rest of Alaska is open to that activity. This is a very special place where a unique animal resource, the porcupine caribou herd comes across the Brooks Range and comes to the very place where they want to put the oil platforms and delivers its young each year.

There are native peoples who depend upon that herd for their survival. There are other animals that are either endangered or of concern to environmentalists and others which live in this very special place. And it's very difficult to imagine how you bring in the air strips, the industrial activities, the roads and pipelines that would be necessary, the oil drilling pads themselves, the housing for the people who are going to have to live there, without disturbing this very special ecosystem.

So it's not just a matter of aesthetics. It's a matter of picking apart something that has been that way for aeons and changing it with industrial development. That is the chief concern. It is the last place like this in the United States and it is a place that we would like to keep that way for people in future generations. It is part of the patrimony that our nation has inherited from our ancestors and we want to pass it on that way to our children.

There's lots of places you can go and look at oil development. I've been to parts of Louisiana and parts of California where oil development has taken place and seen what the place looks like. It isn't

the same as it was when it was pristine. And there's no way that this unique ecosystem would be the same after the development took place there.

Mrs. CUBIN. And the statement that I'm about to make is not meant to be argumentative about the point you just made. I don't have the expertise to argue with you on that.

But I want to tell you about an experience that I believe it was the second year I was in Congress. There was a bus from the West, public land States primarily, and I really wanted to impress upon the leadership how we can be good stewards of the environment and good stewards of the land and still produce natural resources, whether it's timbering, agricultural, minerals, or whatever. And we didn't want them to think we were just showing them the best and the most current technology. We wanted them to see how it really was.

And so one of the things we did is we took them on a bus ride. And, actually, Dick Arney's comment about this trip that we took them on was the first thing that he was going to do when he got back to Washington was offer a bill to increase the speed limit in Wyoming because we spent so many hours on highways on buses.

But at any rate, we took them to the Salt Creek Oil Field, which is about 100 years ago. And it's ugly. I mean, I love Wyoming and there isn't an ugly square inch in it, but other people who don't love it that way would consider it ugly. The pumper stations are real close together. The wells are too close together. It has a bad smell. It's just not what we have today. It's 100-year-old technology and it looks like it.

But while Newt Gingrich was standing there discussing the situation with me, a little rabbit ran across his foot. We saw an antelope that was lying in the shadow of a tank. And also there were some eagle nests that were over beside one of the pumper stations.

And my point to you is that, yes, we want to preserve some areas to be exactly like they are now, aesthetically. But, you know, sometimes I think that ecosystems can survive and be healthy with human activity in the area as well.

Mr. BECKER. I take your point and I understand it. I guess where I would disagree is that when you have an opportunity to create as much oil as you do by saving it from cars, why go destroy a special place? It'll still be there in 500 years if we don't drill for it. And if we sometime need it and decide that it's more important to drill there than it is to save it, it won't have disappeared and it won't be erased from the memory of humankind.

But if we do drill it, in 100 years, who's going to look back and say, gee, I'm really glad that we pumped that place for oil? Whereas I think they would be glad to say that we made cars cleaner and didn't need to pump that place for oil.

Mrs. CUBIN. In making cars cleaner, and, please, if other members of the panel have anything to say, please, I mean, it's just us now, just you and me, babe, in increasing or making more stringent the CAFE standards, living in a place like Wyoming where the distances are so vast between one population center—and when I'm talking about population center, I'm talking about 1,500 people to the next town of 750. We're talking about 100 miles, 150 miles, 200 miles.

And, in fact, there have been studies to show that the lower speed limit has actually caused an increase in highway fatalities because people tend to fall asleep and long straight highways that just go through nothing but high desert plains of sagebrush and an occasional antelope.

We're very concerned about the performance of vehicles. And, as a matter of fact, one of the reasons that SUVs and light trucks are so popular in the area that I live is that the performance of those vehicles comes closer to meeting our needs. Give me an idea what the downside in terms of performance of vehicles would be when the higher standards are, assuming they were, adopted?

Mr. BECKER. There would be no change in the performance of vehicles by using this technology.

First of all, let me step back and say that the way the CAFE standards are designed—and were signed into law by that radical environmentalist from Michigan, Gerald Ford—the way they're designed is as a fleetwide average so that if in Wyoming you want to buy the biggest, least efficient vehicle, but in California they want to buy more efficient vehicles, the two are averaged together.

So it's not that every vehicle needs to become more efficient. And not every vehicle would. But enough of the inefficient ones are balanced out by enough efficient ones to make the average meet at the standard.

But the way that we propose improving fuel economy is the way that the auto industry improved it from 1975 until by the end of the 1980's, by adding better transmissions, better engines, improved aerodynamics. These don't affect the function, the use of the vehicle. They don't affect whether they're car or truck. What they do is they dramatically improve the efficiency of the vehicle and, as I said in my testimony, they save more on gas than you pay for the technology up front.

So it's a win-win for the consumer. It's a win-win for Detroit, if they'll think about it, because the Japanese manufacturers are beginning to sell these advanced vehicles in the United States and the American manufacturers are sitting there hoping that they don't sell. And it's a win-win for the environment and our energy consumption because we can tell OPEC that we don't need their oil because we'll be saving 3 million more barrels a day if we make these changes to our vehicles.

So if the technology's there, it's—one caution that I would raise is I hope that the vehicles that you bought for your sons were ones that won't roll over in an accident because many of the SUVs, because they're designed to have a very high center of mass, do get into roll over accidents and 62 percent of the deaths in trucks occur in roll over accidents; only 22 percent in cars.

Mrs. CUBIN. Thank you. While I do disagree with your estimates of the benefits just on efficiencies and while I do think that we really drastically need to increase production, not just of oil and gas, but of many of our energy sources in order to have a viable energy policy that gives us national security and meets the needs of consumption that we have, I do appreciate your view.

What energy sources, I guess do all of you, think are the best? Fossil fuels for you, Mr. Becker, probably.

[Laughter.]

I don't need to ask you, Joe. I guess Mr. Becker.

Mr. BECKER. Well, what we would propose is that we use—first of all, we develop the cleanest energy sources that we can, recognizing that they're not all on line now, and that we use them in order of their cleanliness. So, to the extent that we can use renewable energy, wind energy as you pointed out, solar energy, that would be fine. That's not going to affect oil consumption, however, because those technologies primarily go to generating electricity and only about 5 percent of our electricity is generated by burning oil.

But we favor renewable energy. We favor using natural gas, especially over the next years, as renewable energy comes on. We favor using—

Mrs. CUBIN. Would you please tell the administration that so that we can get the natural gas out of the Powder River Basin in Wyoming? Excuse me.

Mr. BECKER. Again, it's a matter of appropriateness. We don't favor putting solar panels in the middle of people's living rooms and we don't favor all oil and gas development. But there are oil and gas developments that we have found acceptable. And the one that Senator Johnston mentioned earlier and others as well that we don't favor is nuclear. We oppose new nuclear generation in favor of the rapid but reasonable phase-out of existing nuclear power plants.

Mrs. CUBIN. Thank you.

Mr. BEDELL. Madam Chair, if I could address one of the alternative fuels that was mentioned earlier, I think it was the gentleman from Minnesota, Mr. Vento, had mentioned it, it was ethanol.

And I've had some experience in a group that was founded by U.S. oil companies and the Department of Energy called the Western Hemisphere Oil and Gas Environmental Forum. This group was put together to unite companies in North and South America to have us exchange ideas and information on how to deal with environmental questions and how to proceed with environmental stewardship, as well as producing resources. And we've met in Brazil a number of times at Petrobras, which is the national oil company which is now—through the private oil hosted us.

And during one of those visits, they mentioned the ethanol situation in Brazil. And they had come to rely on ethanol, had legislated, mandated, you know, use of ethanol in a fairly—I don't remember, forgive me, the exact proportions or percentage of the fuel that had to have ethanol in it.

But one of the things that happened that was rather ironic and which they didn't anticipate was that when the price of corn went up in the world markets for food consumption, they suddenly had a gas crisis in Brazil because there wasn't enough ethanol because the farmers were selling the corn to Australia or China or wherever and suddenly there wasn't just OPEC to deal with but there was another variable that they hadn't counted on.

I don't say that to say anything against ethanol, but just that there are problems in just about anything we can come up with as a quote, unquote, "solution." We need to have everything moving together at the same time.

And I think, as far as the environment is concerned, from my sort of humble beginnings as an ecology animal behavior biology student in undergraduate school and 25 years of experience in the field, I think there are, over biological periods of time, when we go in and do some oil and gas development that seems today to have disturbed something even, that doesn't mean that 50 or 100 years from now you'll ever be able to tell that we were there.

The tundra is a really unique situation. I understand that. But I think that ARCO and the other companies that have pioneered work on the North Slope have demonstrated that they've been able to come a long way and to just about eliminate, I think, over, again, biological time periods the fact that anyone will ever know we've been there.

When we come there, we aren't there forever. Unfortunately, those resources where we find them are finite. We keep finding new resources where we think there was only a smaller number, as other people have testified today or in a smaller amount. But we aren't there forever and I don't think that, in biological time, we destroy an ecosystem. I think ecosystems are a lot less fragile.

Mrs. CUBIN. I do too.

Mr. BEDELL. And I've seen beautiful birds wading right beside the road in Louisiana where we have traffic going by and they seem to be surviving quite well, too.

And one other thing, if I could, quickly. Leases sold to companies, another gentleman raised the issue earlier with the members of your committee that seemed to imply that companies are just accumulating leases by buying them up at lease sales, offshore lease sales, and that somehow these were just sort of kept in our back pocket until some time when we decided we'd just get around to drilling them.

That's far from the case. As anyone who knows the regulations that MNS has in place, when you buy a lease, you have to perform. You have to do certain things or you lose your lease and it goes back to the government. If there are large numbers of leases, apparently, that people think are just out there for speculative, economic purposes being held, I think it's a misperception. There are a certain number of years in which you have to act and do things and drill aggressively to try to find resources or give up the well. You have to maintain production or you lose your lease.

So, looking, again, it's one of those things with statistics. You can find things that seem to alarm you, but I think when you dig beneath that situation, you find one that there really isn't any plot going on here to grab all of these leases and hold onto them until they become more valuable.

Mrs. CUBIN. And I think that that is a really valid point, counterpoint—well, really actually not a counterpoint, but one that is relevant to the situation as wilderness study areas that are designated in, I'm speaking particularly of the Lower 48 States, that are treated as though they are wilderness areas, totally off-limits and those wilderness study areas have been in place for 10, 15 years.

And, in my opinion, as a matter of fact, this is just a little self-serving lobbying, hoping you'll all agree and come to the Congress and lobby your representatives, that the government needs to ei-

ther decide they are, do the study, determine that they should be wilderness areas or release them. And I think that is another point that would be very helpful.

Mr. BEDELL. I appreciate you bringing that up. That was one in my notes here too was I looked up the definition of moratorium and it takes about—this was in an unabridged dictionary. I didn't write the name of the dictionary down—it's a temporary cessation of activity considered dangerous. A moratoria is something that would seem—it also mentions about in an emergency or something.

And it seems to me, I guess in this room, is where the moratoria started. And at one point, people were forbidden to expend funds to study the situation and find out what it is that might or might not be wrong and how to get around it.

They are incredible, these stipulations on leases we get from them and that's right now that tell us you can't do this; you should do that; you shouldn't overfly this area in certain times of year because whooping cranes nest there; or this and that and the other thing.

And, you know, I think that your point is excellent and I'm glad that at least someone here is sensitive to that and understands it.

Mrs. CUBIN. I want to address the ethanol issue you brought up as well. I'm sure you're familiar with the ethanol plant that is in southeastern Wyoming and it just brings to mind what a complicated world it is. Farm prices depressed. The energy very expensive and it's complicated. We all need to work on it. We need to work on it together.

I'd like to thank you all for your participation and the record will be open for a week I guess—10 days, excuse me—for any additional information that you'd like to submit and for questions from the committee. Thank you very much. The Committee on Resources is now adjourned.

[The prepared statement of Mr. Pallone follows:]

Submitted by Hon. Vento

**STATEMENT OF THE HON. FRANK PALLONE, JR.
RESOURCES COMMITTEE HEARING
ON DRILLING OF THE ANWR**

April 11, 2000

Thank you, Mr. Chairman. I think it is completely ironic and inappropriate that we are holding this hearing – on drilling one of our nation’s last pristine landscapes – the Arctic National Wildlife Refuge – particularly as we approach the celebration of the 30th Anniversary of Earth Day (on April 22).

Mr. Chairman, if we open the Arctic Refuge to oil and gas development, we will only have the equivalent of six more months’ worth of oil supply. Yet, in the process, we would destroy one of our nation’s greatest natural resources forever. Try explaining that to your children on Earth Day.

Instead of drilling the Arctic Refuge, we should be banning exports of Alaskan oil to other nations. The Republican Leadership also wants to abolish the fuel tax. Another idea that even many Republicans disagree with. Instead, we should be implementing environmentally sound and protective measures. Unfortunately, the Republican Leadership seems incapable of passing practical measures that would conserve energy, promote our long-term energy security, develop alternative energy resources, and protect our environment, without sacrificing our economic growth. As we celebrate Earth Day, we should reflect on our responsibility for stewardship of our natural resources. We must work proactively to protect our environment now for the present and future generations.

Instead, the Republican Leadership wants to drill the Arctic Refuge, because they have harmed the nation’s energy security by cutting funding for energy efficiency, renewable energy, weatherization and alternative fuel programs during the past several years. In their first effort upon taking control of Congress, Republicans cut energy efficiency programs by 26%. Over the past five years, the GOP has slashed funding for solar energy, renewable energy, and conservation programs by nearly \$1.4 billion below the Administration’s requests.

Further, the Republican Leadership has done everything in its power to insert anti-environmental riders into critical funding bills at the eleventh hour in the hopes that the American public wouldn’t find out. But we in Congress have found out and the public has found out. And, they – and we – are speaking out. It’s time to stop gutting our environment – time to stop destroying our forests, land, water and air quality. Most Americans want to know why we’re not doing more to protect the environment. Most Americans indicate a willingness to pay more for energy efficient appliances and lighting.

It’s time to start funding common sense programs to conserve energy and develop alternative energy sources to reduce our reliance on polluting fossil fuels and on oil imports from foreign nations. It’s time to stop destroying our environment, especially one of our nation’s last pristine areas.

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Drilling in the Arctic Refuge will do nothing to increase our energy security or lower prices at the pump, so this hearing is pointless. On this Earth Day, let's focus on real solutions. Let's turn this hearing into examining what we can do constructively to protect, rather than gut, the Arctic Refuge. As Members of Congress, let's set an example for the rest of the nation for ensuring our long-term energy security and independence by using mass transit, riding bicycles and/or using more fuel efficient vehicles. These measures save energy, save thousands of dollars each year, and protect our environment. And, let's pass the Administration's budget request to advance our technological capabilities in the fields of energy efficiency and renewable energy for our country and to advance our economic advantage in exporting these technologies abroad. If we undertake these proactive types of efforts, then we can go home during recess and tell our residents and our children that we're working to protect our nation's pristine resources for them to enjoy on this 30th Earth Day and 30 Earth Days from now.

[Whereupon, at 3:46 p.m., the committee was adjourned.]