Committee on Resources,

Full Committee

- - Rep. James V. Hansen, Chairman
U.S. House of Representatives, Washington, D.C. 20515-6201 - - (202) 225-2761

Witness Statement

Testimony Roger C. Herrera
to the
House Committee on Resources
concerning the
Arctic Coastal Plain Domestic Energy
Security Act of 2001

11 July, 2001

Mr. Chairman,

My name is Roger Herrera. I am an Alaskan citizen and I have been asked to represent Arctic Power today. Arctic Power is a grassroots, citizen's organization whose sole objective is to persuade Congress to open the Coastal Plain of the Arctic National Wildlife Refuge (ANWR) to responsible oil and gas leasing. Arctic Power has approximately 10,000 individual members, mostly Alaskans, and represents all segments of Alaska people, of all political persuasions. It is funded by individual contributions, plus generous grants from the State of Alaska approved by the state legislature and governor. I, personally have lived in Alaska for almost 30 years and have been involved with its geology and the search for oil and gas since 1960. I have spent many summers and several winters working on the North Slope of Alaska and in the Canadian Arctic Islands with British Petroleum, where, at different times, I was responsible for the exploration and environmental programs of the company. Because of that experience, I have accompanied scores of members of Congress on their visits to the North Slope and the Coastal Plain, including members of your committee. I retired from BP in 1993 and am now a consultant to Arctic Power.

My long association with oil and gas exploration in the Arctic and my past responsibility for environmental protection in the region has allowed me to review, with interest, the text of the Arctic Coastal Plain Domestic Energy Security Act of 2001. It is a document which is a result of an evolution over the past 14 years during which time many similar documents have been prepared and debated in the House and Senate. Interestingly, none of the previous bills has been found wanting to the extent that not one has suffered defeat in the committee or on the floor. However, the fact that the issue has not been resolved indicates a certain resistance in the minds of some people, probably based on their lack of intimate knowledge of the arctic.

My point is that the present bill is the product of many decades of experience, not only of the preparation of legislative documents, but also, knowledge and practical know how of arctic operations and ways of protecting the arctic environment.

It is worth repeating that much of the technological change that can be recognized in the oil industry's operations over the past 30 years has resulted from ideas initiated on the North Slope of Alaska. These ideas, exemplified by treatment of waste materials, long step-out horizontal wells, coiled tubing drilling, use of ice pads and ice roads, new light-weight drilling rigs, etc., inevitably achieved the multiple objectives of more efficient, safer operations and more protection of the environment. They incorporate technological improvements that make it easier to operate in the harsh, dangerous, arctic winter and it has been the incentive supplied by the difficult climate coupled with the environmental responsibility of all Alaskans -

especially the residents of the North Slope Borough - that has triggered that remarkable evolutionary improvement. It has made the North Slope oil operations the cleanest and most advanced in the world.

The language of HR __ does nothing to diminish those benefits. It mandates that best technology should continue to be used, but it resists the bureaucratic tendency to stifle innovation by excessive rules. The bill gives great authority to the Secretary of Interior to formulate appropriate regulations. One has to hope that that authority will be used by staff with first hand knowledge of the arctic that liaise closely with the Eskimos and State of Alaska experts to achieve a win - win balance.

Such a balance can readily be established as exemplified by the Audubon Society in its Rainey Sanctuary in Louisiana and its Baker Preserve in Michigan, where careful oil and gas production has been quite compatible with nesting cranes and other wildlife for many decades.

The arguments often voiced by more extreme environmental organizations that the Coastal Plain cannot be developed in an environmentally acceptable way is opposed 75% of Alaskans (Dittman, 2001), to say nothing of the villagers of Kaktovik (www.kaktovik.com) who are the only inhabitants of the Coastal Plain. It is remarkable that the Coastal Plain area, despite the rhetorical superlatives used inaccurately to describe it, is one of the few federal land areas where the NIMBY syndrome does not apply. If the local viewpoint is so important in making decisions against drilling beneath the Great Lakes or offshore Florida, surely it should be the dominant consideration in opening the Coastal Plain!

Unfortunately the rules of engagement on this issue are more often emotional rather than factual. Caribou are a case in point. One hears concerns that Coastal Plain oil development might adversely affect the caribou of the Porcupine Herd. It is worth recording that the herd has declined in numbers for 189,000 in 1989 to 128,000 today. This decline occurred in a period when the herd has been actively managed and protected by a US/Canadian Caribou Commission and by the US Fish and Wildlife Service. It has been subject to harvesting by the Gwich'in Indians of Arctic Village and Canada, and some drilling has occurred within its range on the Canadian side, but, by and large, the herd has apparently declined due to natural causes.

The recent history of other Alaskan Caribou herds is a warning of what might happen to the Porcupine herd in the future. The Forty-mile Caribou herd in east central Alaska was once over 500,000 animals. By the 1960's the herd had declined to 6,000 animals, but it slowly recovered over the next 30 years to about 22,000 caribou - a shadow of its historical size. Similar fluctuations have been recorded in the Western Arctic Herd. In the 1970s, this herd crashed from 240,000 animals to only 75,000. The point about these huge statistical variations in caribou numbers is that neither oil development nor wildlife management has much influenced them. It is quite relevant, therefore, to worry about the Porcupine Caribou Herd decline, but it is probably quite irrelevant to suggest that a Coastal Plain oil field will in any way affect the population trends. The trend is clearly down for this herd, as it is clearly up for the adjacent Arctic Herds. Bearing in mind that there are almost twice as many caribou in Alaska as people, it is difficult to justify jeopardizing the nation's energy balance by excessive worry about the Porcupine Herd.

A decision to open the Coastal Plain as contemplated in HR__ is all about careful development of its oil and gas resources. Therefore a brief discussion of how much oil might underlie the Coastal Plain is appropriate, especially in the light of the distortions that have been applied to the US Geological Service estimates by environmental organizations. In its 1998 assessment the USGS concluded that, at $25/barrel oil and with an oil recovery factor of 37-38%, there was a 95% chance that the Coastal Plain could produce 5.7 billion barrels of oil over a period of 25+ years, and a 5% chance that almost 16 billion barrels could be produced. The relevance of these estimates is not in the geological assessment of how much oil might be present, but rather in the economic and technical parameters which impact the figures. I believe that the price of oil demanded by the USGS for optimum production is much too high. It does not take into account the huge cost efficiencies of the new arctic drilling technology already discussed. However, even more important, is the USGS estimate of how much oil can be taken out of a given geological reservoir. The expectation that only 37-38% of the oil present can be extracted is too low. The Prudhoe Bay field is now calculated to have

60-65% of its oil eventually produced. The Endicott field producing from a different, more difficult, geological horizon, will give up more than 55% of is oil, and the Alpine Field, which is the beneficiary of state of the art, 2001 technology, and which taps a "tight" reservoir, will produce over 50% of its oil. These examples justify the assertion that 37-38% recovery is much too low. Consequently the USGS resource figures are extraordinarily conservative and can be considered minimal and pessimistic.

I would prefer to await the results of exploratory drilling before being dogmatic about the amount of oil present, but because we already know that significant amounts of oil are present in the Soundough Field, which partially underlies the western edge of the Coastal Plain, and because of the conservative nature of the USGS figures, it is easy to believe that 10 billion or more barrels might be producible from the area. Such an amount would represent the largest new oil province found in the world in the past 30 years. The Caspian Sea area might prove the single exception to that, but it remains to be fully proven.

This testimony has argued that there is a lot of oil beneath the Coastal Plain and that it can be produced, with the law established by HR__, in a manner which will not sacrifice the environment and wildlife. Despite those conclusions, it is necessary to establish why we need the oil. The answer has a lot to do with peace of mind, a viable economy and OPEC. It goes without saying that America should continue to use innovation, energy efficiencies and other conservation measures to reduce the level of concern we presently and realistically have for our energy future. In particular, it is hard not to embrace more efficient automobiles, just as we embrace more efficient jet airplanes. Jets are safer, faster and cheaper to operate than they were 20 years ago, and other forms or transportation should strive to mirror that improvement. Having wished that, it is nevertheless difficult to forecast a significant reduction in our use of petroleum energy in the next generation or two, if only because of population growth. If that proves to be the case, America will inevitably become more and more dependent on oil imports from OPEC countries, specifically Middle Eastern producers.

This is a situation, which has faced advanced countries such as France, Japan and Britain for many decades. Britain's reliance on Middle Eastern oil was neutralized by its discoveries of the North Sea Oil. France and Japan both coped by embracing nuclear energy and by foreign policy decisions, with regard to Arab nations, quite different than those of the U.S. Unfortunately, OPEC nations now have effective control of the world price of oil. This is exemplified by the fact that in 1999 when OPEC increased world oil production by 1.75 million barrels of oil per day, the price of oil immediately slumped from $25.00/barrel to $10.00/barrel. Conversely an OPEC tightening of supply is solely responsible (coupled with world demand) for the present levels of $25-30/barrel. OPEC nations have every reason not to get too greedy in increasing the price of oil to levels where alternative or unconventional oils become competitive, but likewise the United States has every reason to reduce OPEC control by using ANWR oil to moderate the world price (any new oil in the world market will moderate price), and to reduce our reliance on OPEC production. The U.S. is the world's largest energy market so a clear indication to OPEC that we are willing to manage our energy use and production in a manner that lessens the cartel's influence is a very strong message indeed.

The alternative to more domestic production of oil is inevitably more U.S. troops in the Middle East to "protect" OPEC oil, and a sustained higher price. The alternative would also demand a radical change in our foreign policy in the region with the inevitable problems associated with such changes.

These are heavy issues that the energy legislation tries to address in a reasoned manner. Unfortunately, the opponents to ANWR oil and gas production whose mantra is environmental protection, wish to disregard the NIMBY syndrome by offering millions of acres of wind farms and tens of millions of acres of solar panels across the nation--all in an effort to prevent 2000 acres of ANWR Coastal Plain from being developed. Perhaps we should embrace windmills, solar, hydro, and nuclear, etc., but we still need oil and gas, and our own oil is better than anyone else's.

Production of oil from the Coastal Plain has been bitterly criticized on the basis that it only represents six months supply of oil to the nation. To some extent I have already addressed this misrepresentation in the

above discussion on reserve estimates, but it is worth amplifying the practical reality of ANWR production. The Coastal Plain is different from many isolated oil and gas basins (such as the Canadian Beaufort Sea) because it is already within 25 miles of an existing pipeline and has the benefit of the Prudhoe Bay infrastructure, 60 miles to the west. I mentioned that part of the Sourdough Field underlies the western edge of the Coastal Plain. It is possible that that known deposit would be developed very quickly after the first lease sale. Consequently, because only a feeder pipeline 25 miles long would be necessary to link to the Trans Alaska Pipeline, first production from the Coastal Plain could be expected as quickly as 2 or 3 years after leasing took place. Litigation used as a delaying tactic could increase that time and unfortunately such legal strategy has been used routinely in Alaska, nevertheless, all the physical plant for production could be built very quickly. Moderate sized oil fields in the arctic would have a 20-25 year lifespan. Giant fields (>1billion barrels) will inevitably continue to produce for a much longer period of time, so the coastal plain could easily be producing oil from 2005 for 50 years. The two certainties of such a long time frame is that more oil will be produced than originally estimated, due to continuous technological breakthroughs, and, second, that oil will still be a valuable world commodity as a source of petrochemicals if not of energy.

It is difficult to be sanguine about our energy situation in the near term and while we in America have taken cheap, reliable energy for granted all our lives, we have also exhibited a quick irritability when it becomes too expensive or not available.

The tendency of opposition groups to impose nuisance delays on oil development projects should be of concern in the future. The public process must always be rigorously followed to ensure responsible decisions on new developments, but deliberate litigious delay for the sake of delay should be strongly discouraged. I am not sure that HR___ achieves that necessary protection.

In conclusion Arctic Power--representing the vast majority of Alaskans--is fully supportive of passage HR___. We are proud of Alaska's contribution to America's energy portfolio over the last 45 years. We think we have long proven the compatibility of responsible oil development and healthy wild life populations better than anyone else. The Lower 49 states supply Alaska with all its goods and services because we have no manufacturing base, so our oil development generates hundreds of thousands of jobs for those states. The Coastal Plain belongs to all of us, but first it belongs to the Inupiats of Kaktovik, then it is Alaskans' responsibility and finally it belongs to any American who cares to think about it or visit it. This bill will realize its true riches and sacrifice nothing by so doing.

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