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THE OIL SPILL -- NO REASON TO PROHIBIT OPENING OF COASTAL PLAIN

The accident was obviously very regrettable, but there are several reasons why the oil spill should not be used to prohibit development of the Coastal Plain. The oil spill and Coastal Plain development are separate issues.

Following the Alaska spill, the industry recognized that major new steps must be taken to prevent spills -- and that responses to major spills in the future must be more massive, more rapid, and more effective.

Within two weeks of the Alaskan spill, the American Petroleum Institute organized a task force to evaluate industry tanker operations and to look for ways to do them better. Chairmen or presidents of eight of the largest oil companies in the country worked on the task force. By late June, it completed a massive report and outlined a three-part industry program to implement many major improvements in three areas: prevention of oil spills, responses to them when they occur, and research to improve both prevention and response efforts.

In addition, enhanced oil spill prevention and response plans have been initiated and will continue to be developed specifically for Prince William Sound tanker operations carrying North Slope oil.

Congress should vote to allow development of the Coastal Plain -- the small part of ANWR that holds the promise of enormous quantities of oil. This oil is vital to the nation's energy security. If we can't produce oil there, we will have to substantially increase our already growing reliance on foreign imports. Virtually all of the additional imported oil would have to be transported by tanker.

Prohibiting development of the Coastal Plain will not reduce the risk of oil spills. If Congress voted against development, oil would still be produced from existing fields near ANWR, sent down the pipeline to Valdez, though in gradually decreasing amounts, and loaded on oil tankers -- for at least a generation. As less oil was produced from these fields, more would have to be imported via oil tanker from other countries, increasingly from OPEC nations. Clearly, ANWR oil that is not produced would have to be supplied by other countries.

The United States is importing about 50 percent of the oil it uses; in January, 1990, imports reached 54 percent of demand. Virtually all of it must travel by tanker through American waters into American ports. Failure to develop the Coastal Plain will not change the fact that imported oil will continue to be handled by tankers.

The oil spill accident should be viewed in the perspective of the industry's overall record exploring for, producing and shipping oil in Alaska. For example, in the 12 years before the Prince William Sound accident, 6.8 billion barrels of oil have been pumped

through the pipeline and transported out of Valdez, on nearly 9,000 tanker trips. There is no evidence, even in light of the spill, of any lasting environmental damage as a result of that activity.

In addition, the industry has managed to produce billions of barrels of oil on Alaska's North Slope without causing any significant harm to the environment there. Air quality has consistently met all federal and state standards. Drilling wastes have been disposed of according to strict industry and government rules. The caribou and other wildlife have thrived. Since operations began, the caribou herd, which environmentalists feared would be harmed by oil development, grew from 3,000 to more than 18,000.

The U.S. can help slow or stop the trend of increasing imports and, at the same time, help keep prices low and supplies plentiful by exploring for and producing more of its own oil. Currently, the Coastal Plain is the best hope for finding and producing large resources. The most optimistic estimates suggest it might contain more than nine billion barrels of recoverable oil. That's comparable to the fields at Prudhoe Bay, now the country's most productive source of crude oil.

It could take as many as 10 to 15 years to find and produce Coastal Plain oil. The sooner Congress gives permission to begin, the sooner the nation strengthens its energy security and the sooner it makes less likely oil price shocks that could have devastating effects on the economy.

We must do everything possible to prevent future oil spills like the one in Prince William Sound. However, prohibiting development of ANWR will not eliminate the risk of future spills. It will only ensure that the country is deprived of a potentially large source of petroleum vital to its economy and to its energy security. We simply cannot afford, to quote the *New York Times*, "to treat the accident as a reason for fencing off what may be the last great oil field in the nation."

MINIMIZING THE IMPACT OF DEVELOPMENT ON WILDLIFE, WATER AND THE ENVIRONMENT

An important debate is now going on over whether the Coastal Plain of Alaska's Arctic National Wildlife Refuge (ANWR) should be opened to oil and gas development. Some groups opposed to such development are claiming that environmental harm will result, in much the same way as did opponents to construction of the Trans-Alaska Pipeline.

Now that the pipeline and the Prudhoe Bay oil field have been operating for over 13 years, it is clear there has been no widespread environmental impact. During this time, technology has evolved, and the industry has taken innovative approaches to preventing such impacts.

In pointing to the effects of development at the Prudhoe Bay oil field, some claim that wildlife populations have diminished, that air pollution is damaging vegetation, and that oil spills and production wastes are left to contaminate the tundra. They also assert that with development in ANWR, the wilderness quality of the entire Arctic Coastal Plain will be lost and the resources such as gravel and water will be depleted.

These assertions simply do not stand up to objective scrutiny. If these claims were accurate, Prudhoe Bay, Kuparuk, and other North Slope oil fields would be biological wastelands. This simply is not the case. When the evidence is examined, it becomes clear that the underlying assumption of critics of ANWR development is an aesthetic ideal -- the belief that nature without man's presence is somehow better.

In the end, the most compelling rebuttal to such anti-development claims comes from the fish and wildlife populations that continue to feed, reproduce, and rear their young throughout developed portions of the North Slope. Research has provided no evidence that oil field activities have produced any measurable change in the population size of any fish or wildlife species using the North Slope. The only changes have been small and localized. There is no proof that the ability of habitat to support fish or wildlife species in the future has been reduced by the very small area of tundra occupied by all North Slope oil field activities. Less than two percent of the land in these oil fields has been affected.

I. Arctic Drilling.

The Coastal Plain for the most part is characterized by flat tundra terrain. Underlying the tundra are varying thicknesses of permafrost, ranging from a few feet to several thousand feet, depending on the location. The permafrost is a mixture of sands, soils, gravel and ice which remains permanently frozen.

A major concern has been potential impacts to both the tundra and the underlying permafrost. Because of the short growing season, any damage to the tundra can take years to rejuvenate. In addition, if heat is transmitted through the tundra to the permafrost, it can

result in melting and settling of sands and soils, which in turn causes swamping and ponding of waters at the surface, further disturbing the tundra.

One of the key improvements in development technology has been the reduction in the land needed to support a drilling operation. The operators on the North Slope have advanced the state-of-the-art drilling technology through such techniques as directional drilling. Dozens of wells can be drilled from the same pad with as little as 10 feet separating the wells (this is the case at Endicott, for example). In special cases, wells have been drilled even closer together. From the centralized drilling pads, wells fan out at angles from the surface location to reach remote parts of the underground oil reservoir.

Advances have also been made in the handling of oil field wastes. For example, most of the water produced along with the oil is now injected back into the oil reservoir to increase the pressure and allow for the recovery of more oil. This salty water is thus put to productive use rather than disposed of as a waste. In addition, wastes such as used oils, diesel, and some solvents are now recycled. Improvements have also been made in the design of safety flares at oil processing facilities to reduce the number of black smoke emission incidents.

New designs are being used for reserve pits -- the containment pits build into the gravel drilling pads to hold the muds and cuttings that are the by-products of the drilling process. In the past, reserve pits were made simply of frozen gravel. Advances in pit design, including the use of synthetic embankment liners and thawed and compacted gravel, now make it possible to minimize the seepage of pit fluids through the walls. Most important, improved ways of controlling the accumulation and disposal of fluids in the pits are now being used. These accumulated fluids are injected underground.

Many of the reported problems at Prudhoe Bay have resulted from poor operating practices by oil field service contractors based at Deadhorse. Some of these contractors have abandoned wastes at their pads, which are on land they leased from the State of Alaska, and the operators of the field are voluntarily stepping in to clean up these problems. At the recently developed Kuparuk field to the west, service contractors have been placed under more direct control. Contractor facilities are centralized in a location called the Kuparuk Industrial Center. Similar practices will be followed in ANWR to ensure that the operators have control over contractor facilities and have the legal responsibility to maintain environmental operating standards.

Since the Prudhoe Bay field began operation, methods have evolved to accommodate the passage of wildlife by installing crossing ramps and elevating pipelines. In the past 10 years, there has been no discernible decline in the overall use of the area by wildlife. Caribou from the Central Arctic herd continue to move through the oil field during calving and insect relief periods. The Prudhoe Bay oil field has been in existence for long enough to represent the long-term effects from oil development. The evidence supports the claim that wildlife and development goals are mutually achievable.

II. ANWR Coastal Wilderness.

It is important to understand that Congress is not considering opening all of the ANWR Coastal Plain to oil and gas development. The area under consideration consists of 1.5 million acres of the 19 million acres in ANWR. This "1002 area" is the part of ANWR's Coastal Plain that, because of its petroleum potential, was set aside for special study in Section 1002 of the Arctic National Interest Lands Conservation Act of 1980. This study, recently completed by the U.S. Fish and Wildlife Service, concluded that the 1002 area should be opened to development under appropriate environmental controls and regulation.

Some opponents contend that with opening of the 1002 area, the entire Coastal Plain would lose its wilderness character. However, the 1002 area does not include all of the ANWR Coastal Plain. The remaining 30-mile stretch of Coastal Plain between the 1002 area and the Canadian border contains 450,000 acres of legally designated wilderness.

This large tract of coastal wilderness outside the 1002 area includes a complete continuum of terrain and habitat types similar to those within the 1002 area, including five major river systems. This coastal wilderness is part of the refuge's eight million acres legally protected as Wilderness, accounting for about 42 percent of ANWR's total area. The ANWR wilderness, together with the rest of the refuge that would not be open to oil development, is nearly the size of the state of South Carolina.

A second misconception is that petroleum leasing and development would remove large areas of habitat from the 1002 area. More than 99 percent of the 1002 area will remain untouched even under full leasing.

Contrary to the impression being attempted by opponents of development, the 1002 area is not unique. The great majority of Alaska's Arctic Coastal Plain has similar landforms, scenic resources and habitats, including the ANWR coastal wilderness to the east of the 1002 area. The true uniqueness of the 1002 area lies in its oil potential, not its wilderness quality.

COMPATIBILITY OF OIL AND GAS OPERATIONS IN AND ADJACENT TO WILDLIFE REFUGES AND CONSERVATION UNITS

There are instances of compatibility of oil and gas operations in wildlife refuges and conservation units in Alaska and in the Lower 48 states. The National Institute of Urban Wildlife prepared a report for the American Petroleum Institute entitled "Environmental Conservation and the Petroleum Industry," which documents a variety of examples which show that environmental conservation and oil and gas operations are compatible.

Here are several examples of where oil and gas exploration has been conducted successfully in other units.

- **Coastal Marsh Land in Southern Louisiana** - Major concern was erosion caused by the uncontrolled ebb and flow of the tides through the canals. The Louisiana Land and Exploration Company developed water control structures in conjunction with its oil and gas operations to retard the erosion, and those areas protected by the structures have become nursery grounds for fish and other marine life, homes for fur-bearing animals, wintering grounds for waterfowl and sanctuaries for a variety of birds.
- **Pigeon River County State Forest, Michigan** - Major concern was the impact of oil and gas development on the elk population. After extensive studies were conducted, operations were designed to lessen impact on the elk. Current studies since operations have been conducted showing no adverse effect on the elk population.
- **Rockefeller State Wildlife and Game Preserve, Louisiana** - The American alligator, once thought to be near extinction, has grown in numbers. Revenues from the oil and gas leases contributes to a trust for research and wildlife conservation and management of this reserve.
- **Big Cypress Swamp in Southern Florida** - The Florida Department of National Resources recently conducted an investigation of the effects of oil exploration and production on the swamp and concluded that 30 years of petroleum operations have had no significant adverse effects on this wetland area.
- **Aransas National Wildlife Refuge, Texas** - The whooping crane winters in the Aransas National Wildlife Refuge located on the Gulf Coast about 20 miles from Corpus Christi. The refuge is protected by the San Jose and Matagorda barrier islands and lies adjacent to the inland waterway.
- **Avery Island, Louisiana** - Privately owned, the 2,500-acre Avery Island lies atop a salt dome amid 5,000 acres of marsh and cypress swampland. The island's summertime snowy egret population is estimated at 100,000, although many other birds -- as well as animals -- live there. The first producing well was drilled on the island in 1942.

and, since then, millions of barrels of oil have been safely extracted from the field below. Revenues from the petroleum have helped support wildlife management practices on the island.

- **Corkscrew Swamp Sanctuary, Florida** - In 1980, the National Audubon Society leased acreage in the northeast corner of the Corkscrew Swamp Sanctuary near Naples for the drilling of an exploratory well. The leasing agreement included an extensive list of environmental safeguards for wildlife habitat and the complex conditions of the area. The lessee would pay for any inadvertent damage caused to the sanctuary, and all waste would be removed from the site.

This cooperative effort benefits both the conservation community and the oil company. The conservation community -- in this case the Audubon Society -- receives substantial revenues to further its program, and the company receives the oil and natural gas produced to help meet America's energy needs.

- **Delta National Wildlife Refuge, Louisiana** - The entire Romere Pass production field, including the terminal station, is located in the Delta National Wildlife Refuge. The refuge was established in 1935, primarily as feeding and nesting habitat for large wintering waterfowl populations, including up to 35,000 for many other water and shore birds, as well as for white-tailed deer and other animals. Such coastal marshes in Louisiana have been the site of extensive natural gas and oil exploration and development, yet the region teems with fish and wildlife.
- **Kenai National Wildlife Refuge, Alaska** - Formerly called the Kenai National Moose Range, this 1.97 million-acre refuge was established in 1941 on the Kenai Peninsula south of Anchorage. Sixteen years later, when the moose population was estimated to be about 3,000, oil was discovered; the moose population there now exceeds 4,000.
- **Paul J. Rainey Sanctuary, Louisiana** - Petroleum operations have taken place in the National Audubon Society's Paul J. Rainey Sanctuary for more than a quarter of a century. These operations have been carefully tailored to protect the habitat of the 26,161-acre area, which is the wintering grounds for lesser snow geese. Thousands of coots and various species of rails use the marsh, as do egrets, roseate spoonbills, herons and songbirds.

Many species of animals are compatible with petroleum operations, both in the Lower 48 states and in Alaska. On Alaska's North Slope, for example, caribou move freely about the oil fields around Prudhoe Bay, and waterfowl return each year to the marshlands and tundra near the coast. Experience there demonstrates that those operations are environmentally compatible. And the care taken to protect the environment there -- including the wildlife and its habitat -- will be repeated within the ANWR Coastal Plain, if leasing is permitted there.

- **Texas Coastal Plain.** These areas, the site of numerous wellheads, drilling sites, and pipelines, are also the mating and breeding grounds for the endangered Attwater prairie chicken. Studies have shown that prairie chickens behave no differently on artificially maintained grounds near oil operations than on their natural mating and breeding grounds.

Many petroleum companies operated under their own strict environmental standards prior to passage of the National Environmental Policy Act of 1969. We believe the development of the Prudhoe Bay oil and gas field shows we can safely operate in ANWR.

PETROLEUM POTENTIAL IN THE ARCTIC NATIONAL WILDLIFE REFUGE

There is no doubt that the Arctic National Wildlife Refuge (ANWR) could contribute significantly to offsetting rapidly declining domestic proven reserves. It is estimated that the daily U.S. production from existing fields will decline from 7.5 million barrels today to about five million barrels by the year 2000. To supply the U.S. demand in the year 2000, we will need an additional 10 million barrels per day from new domestic reserves or become even more dependent on foreign sources. ANWR could go a long way in providing those additional discoveries.

The Interior Department estimates there could be 9.2 billion barrels of recoverable oil under the Coastal Plain. Thomas Marshall, a well-known Alaskan geologist, who conducted a private study for the National Wildlife Federation, concluded that the federal estimates of hydrocarbon potential on ANWR are conservative.

USGS investigator Kenneth Bird (1984) estimated potential reserves from one billion barrels of oil to 22.4 billion barrels, with an average 6.9 billion barrels. He also determined the average field size to be in the supergiant class and contain 900 million barrels of oil. Results of these USGS assessments confirm and quantify what geologists have believed for years -- that the ANWR Coastal Plain has the potential for large hydrocarbon reserves.

The Department of the Interior Coastal Plain Resource Assessment estimated in-place resources of between 4.8 and 29.4 billion barrels of oil. Recoverable reserves were estimated to range from between 600 million and 9.2 billion barrels, with a mean recoverable reserve estimate of 3.2 billion barrels.

Finally, these estimates of major potential should be placed in the context of Lower 48 oil field discoveries. In recent years, the typical oil field discovered was less than one million barrels. As a prospective petroleum province, ANWR may exceed that of Beaufort Sea, offshore California, and the deeper waters of the Gulf of Mexico.

The Importance of a Major Oil Discovery

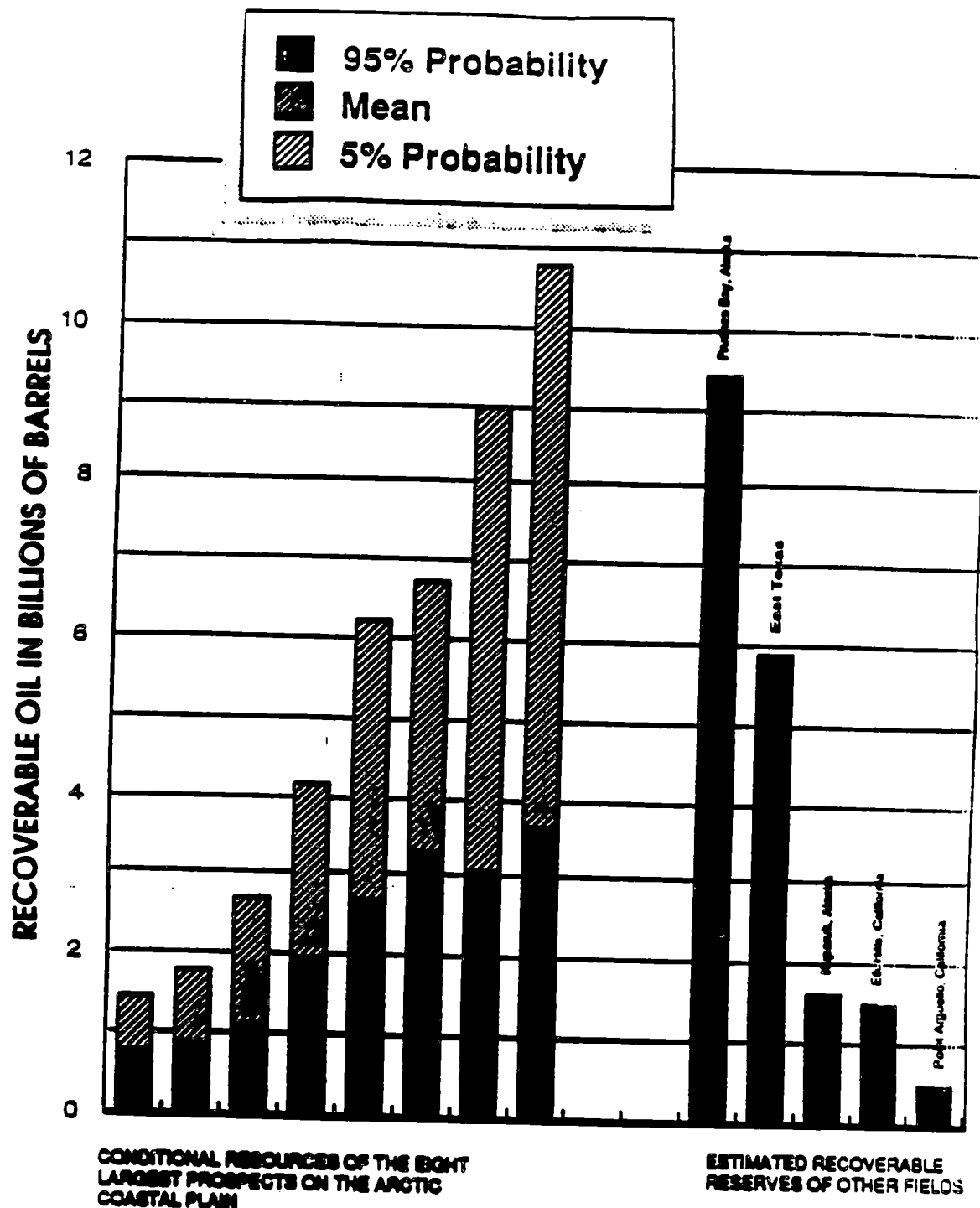
The Interior Department's 3.2 billion-barrel mean estimate of the ANWR Coastal Plain's recoverable oil would be a significant addition to U.S. oil supplies, and would be the third largest oil find in U.S. history -- exceeded only by the Prudhoe Bay and East Texas fields.

- When discovered, the original Prudhoe Bay field held an estimated 9.6 billion barrels of oil, of which nearly seven billion barrels of oil has been produced. Even that 1968 discovery represents less than a two-year supply of total U.S. oil consumption. Yet, that field and other North Slope fields -- with combined recoverable reserves now estimated at over 12 billion barrels of oil -- have been producing between 15 and 25 percent of all of the oil produced

in the United States since 1977, and are expected to continue to make a substantial contribution to U.S. oil supplies into the next century.

- The East Texas field was discovered in 1930 and has produced about six billion barrels of oil.

If the department's high estimate of 9.2 billion barrels were to be realized, the ANWR Coastal Plain could yield almost as much oil as the Prudhoe Bay field, and would increase domestic crude oil reserves by about one-third.



Conditional, economically recoverable oil resources on the Arctic Coastal Plain compared with estimated ultimate recoverable reserves of five known producing fields. (From Clough, Patton & Christiansen, 1987, Pg. 57)

CONSERVATION ALONE CANNOT SOLVE THE NATION'S DEPENDENCE ON FOREIGN OIL

Our dependence on foreign oil demands that we search for new domestic supplies. Opponents of oil exploration and development on the Coastal Plain of Alaska's Arctic National Wildlife Refuge (ANWR) claim that energy conservation alone can cure the nation's growing dependence on foreign oil. Preservationists assert that the government can stave off a future energy crisis, either by subsidizing the immediate replacement of every "gas-guzzling" automobile or by paying to weatherize every home and building. They state that either effort will save enough oil to cut petroleum imports to zero, and we won't have to search the nation's frontiers for additional oil reserves.

Oil and natural gas account for about 65 percent of U.S. energy consumption; oil alone over 40 percent. The U.S. transportation sector is about 95 percent dependent on oil-based fuel. Currently, the most economic alternative to pure gasoline as a motor fuel is gasoline blended with alcohol; methanol from natural gas or coal, and ethanol made primarily from corn. Alcohols and other materials, with current technology, are far from being economically competitive with oil-based fuels. Technology and economic barriers make it unlikely that alternative fuels will contribute significantly to our needs in the near future.

If conservation alone sounds too good to be true, that's because it is. We will need both energy conservation and new production to keep our national imports from climbing faster in the future. The potentially huge reserves beneath the remote ANWR Coastal Plain could eventually yield billions of barrels of oil -- if we begin now to develop them in a timely and environmentally sound manner.

But the effort to unlock ANWR's energy is being slowed by irresponsible claims that a single mandate such as weatherization or replacing inefficient cars will save enough oil to eliminate imports, making it necessary to drill on the Coastal Plain. The facts simply don't support such claims. Oil imports now average more than 6.5 million barrels a day, while automobile and truck fuel consumption alone totals 7.2 million barrels a day. Saving enough oil to eliminate imports would require more than an 85 percent reduction in fuel used by all cars and trucks in America. Even if every one of the nearly 120 million cars in the United States could be replaced immediately with a 40 miles per gallon auto, total fuel savings would be less than half of U.S. imports.

The costs for such a plan would be staggering. If government regulation resulted in the replacement of even half of our autos with 40 mile per gallon cars, it would cost at least \$450 billion, which is three times the current annual federal budget deficit. Even after subtracting oil savings of about \$100 billion, the proposal would still cost at least \$350 billion.

If conservation measures are practical and do not cost more than they save, consumers will adopt them voluntarily. The same test should apply to proposals for energy development. Using this measurement, oil from the ANWR Coastal Plain is a bargain. It could contribute more than a million barrels a day to the nation's oil supplies. It will also provide income to the federal treasury in the form of royalties, rent, and tax revenues.

Nuclear power and the use of coal are limited in their contribution to our energy needs because of the costs, safety, and environmental concerns. Technology, economic costs and public acceptance will continue to be barriers to significantly increased use of these resources.

Solar power has made only a limited contribution to the overall energy picture and appears to need significant technological breakthroughs to provide a feasible, cost effective energy source.

Shale oil and tar sands have been considered as sources of energy. Oil companies and the federal government have invested significant amounts of money in studies and technology to test the development of these resources. These alternatives do not appear to be economically competitive alternatives in the near future.

The development of alternative energy sources should be part of the nation's energy strategy. Over the long term, various energy sources will ultimately be developed as they become economically and environmentally feasible. Today and in the foreseeable future, oil will play a dominant role in our energy needs and security.

The only real cure for oil import dependence is to do everything possible today to ensure that America has as much domestic energy resources as possible for the future. Neither conservation nor production can do the whole job.

PETROLEUM POTENTIAL OF THE ANWR COASTAL PLAIN: ONLY A FEW MONTHS' SUPPLY OF OIL

In its April 1987 report to Congress, the U.S. Department of the Interior urged that the ANWR Coastal Plain, which occupies about eight percent (8%) of that 19 million-acre refuge, be opened to petroleum exploration and development. The department stated that up to 9.2 billion barrels of recoverable oil might be found there and that the mean amount of expected oil would be about 3.2 billion barrels. That oil -- if discovered and recovered -- could be important to the nation's energy future.

Nevertheless, opponents to opening the area allege that, in light of U.S. oil needs, development of the ANWR Coastal Plain would be likely to yield at most only a few months' supply of oil. By this argument, no field has ever been or ever will be worth developing. Yet, the history of petroleum production in the United States clearly shows that all fields -- small and large -- are necessary for the nation's energy supply.

Most of the older U.S. oil fields, large and small, are approaching or have passed their peak production, and major discoveries are needed to maintain an adequate level of domestic oil production. However, the U.S. economy is so large and U.S. energy needs so great that even a major find can be measured only in weeks or months of total consumption, not in years.

The United States is currently importing more than 50 percent of the oil it uses. The need to find and develop the potentially vast oil resources beneath the ANWR Coastal Plain will grow increasingly important as production from Alaskan North Slope declines. Those fields now account for one-fourth of total U.S. oil production.

Status of Domestic Oil Reserves

Opponents of oil exploration and development on the Coastal Plain fail to recognize (1) that U.S. oil reserves are the accumulation of thousands of individual fields, (2) that daily U.S. oil output is the sum of the contribution of those thousands of fields, and (3) that many of the fields have been contributing to the nation's annual production over decades, not just for a few days or months:

- Of the more than 27,000 oil fields in the United States, nearly 80 percent have reserves of less than one million barrels (far less than one day's consumption). Yet, together, these fields produced nearly three billion barrels of oil in 1988.
- The ANWR Coastal Plain has the potential for producing 150,000 to 600,000 additional barrels per day for 20 to 30 years. Production of 600,000 barrels per day would put this single area of the United States among the top 20 countries of the world in terms of crude oil production.

- Of the more than 620,000 producing oil wells in the United States at the start of 1988, some 460,000 -- more than 74 percent -- were "stripper wells" (wells that produce 10 barrels of oil or less a day). Taken together, these small-volume wells accounted for about 14 percent of the domestic oil produced in 1987. Yet each one, taken alone, could supply only a tiny fraction of even one day's U.S. consumption.
- Oil discoveries, large and small, contribute to domestic energy supplies over decades, not days or months. For example, wells in the Gulf of Mexico have been producing from 9 to 13 percent of domestic crude oil over a 40-year period.

The Importance of a Major Oil Discovery

The Interior Department's 3.2 billion-barrel mean estimate of the ANWR Coastal Plain's recoverable oil would be a significant addition to U.S. oil supplies and would be the third largest oil find in U.S. history -- exceeded only by the Prudhoe Bay and East Texas fields.

- When discovered, the original Prudhoe Bay field held an estimated 9.6 billion barrels of recoverable oil, of which some seven billion barrels of oil has been produced. Even that 1968 discovery represents less than a two-year supply of total U.S. oil consumption. Yet, that field and other North Slope fields -- with combined recoverable reserves now estimated at over 12 billion barrels of oil -- have been producing between 15 and 25 percent of all of the oil produced in the United States since 1977, and are expected to continue to make a substantial contribution to U.S. oil supplies into the next century.
- The East Texas field was discovered in 1930 and has produced more than five billion barrels of oil.

If the department's high estimate of 9.2 billion barrels were to be realized, the ANWR Coastal Plain could yield almost as much oil as the Prudhoe Bay field, and would increase domestic crude oil reserves by about one-third.

Another perspective on the potentially vast resources beneath the ANWR Coastal Plain is that the department's mean estimate of 3.2 billion barrels is roughly half of all the oil that has been produced from the more than 3,000 wells in the federal portion of the Gulf of Mexico since federal leasing began there in 1954.

Apart from the record oil discovery at Prudhoe Bay, additions to domestic reserves in recent decades have come largely from the cumulative effect of many discoveries, few of which could provide more than a few days or a few weeks of total U.S. production. Only 13 fields with over one billion barrels of recoverable oil have ever been discovered in this country. (One billion barrels is enough to supply about two months' consumption in the United States.) Most of those huge fields came into production before World War II, and some were discovered in the 19th century. For example, the Yates (Texas) field, which was discovered in 1926 and has produced more than one billion barrels of oil, is still active and

produced almost 45 million barrels of oil in 1986. Also, the Kern River (California) field, which was discovered in 1899, produced nearly 48 million barrels of oil in 1986.

Even small fields, however, are often productive for a long time. The Jay (Florida) field, for example, was discovered 18 years ago. It has produced more than 350 million barrels of oil (far less than one month's U.S. consumption) and is still producing at an annual rate of about six million barrels (less than a half-day's consumption). And in a number of states, such as Pennsylvania where the nation's first successful oil well was drilled more than 129 years ago, there have been few discoveries in recent years. Yet fields in Pennsylvania -- with some 1.4 billion barrels of oil reserves -- contributed some 4.8 million barrels to U.S. production in 1986.

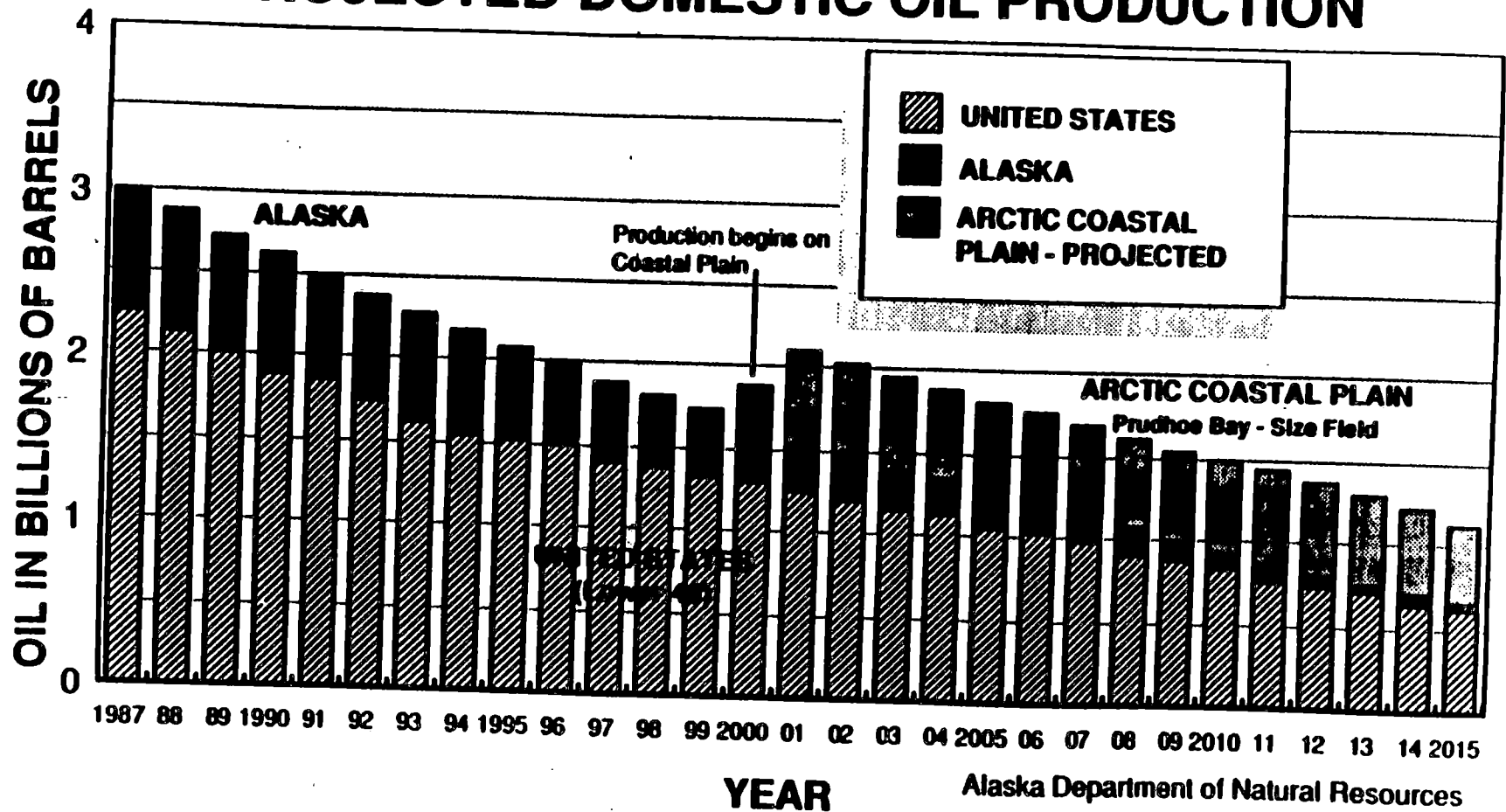
Conclusion

U.S. oil production is the sum of oil from all fields -- large and small. Each field makes its contribution to our domestic energy supply. And each contributes to lessening the quantity of oil this nation needs to import to maintain its economy and security.

It is unrealistic to attempt to measure each field's potential production in terms of days or months or even years and to base leasing decisions on that measurement. Rather, such decisions should be based on a policy of offering the opportunity to lease areas to firms that are willing to risk their capital to determine if economically producible oil exists that could contribute to future domestic energy supplies. That is the principle that should be followed for the ANWR Coastal Plain.

The United States is facing the prospect of declining production from existing fields and sharply increased future oil imports. Opening the ANWR Coastal Plain to petroleum exploration and development -- under strict environmental guidelines -- is necessary to ensure future domestic petroleum supplies, and to realize the economic benefits of the resources that are thought to be there.

PROJECTED DOMESTIC OIL PRODUCTION



Footnote: The figures for total production are based on the National Petroleum Council's Committee on U.S. Oil and Gas Outlook 1986. The projected trend assumes oil prices range from \$12 per barrel (1986) to \$21 per barrel (2000).

NATIONAL ENERGY POLICY

Opponents of development want Congress to withhold the decision to allow oil exploration and development on the Coastal Plain of Alaska's Arctic National Wildlife Refuge (ANWR) while they debate whether ANWR oil resources are essential to the long-term energy needs and security of America.

The nation needs to continue to pursue broad policies on energy diversification, conservation and efficiency. However, further steps to conserve energy and develop alternate fuels do not change the fact that oil will remain an essential energy source for the U.S. and the world for the foreseeable future.

Domestic oil production continues to decrease, while consumption is on the rise, leading to greater dependence on foreign oil. We are now importing about 50 percent of the oil consumed in the U.S. It is clear that no single energy policy can reduce this trend. Therefore, it is essential that we continue a broad-based approach that includes finding and efficiently using domestic oil resources.

An early decision by Congress to allow leasing and exploration on the Coastal Plain of ANWR is one of the most significant actions that could be taken toward energy independence and security. Prudhoe Bay production has begun its decline and the Coastal Plain of ANWR represents the best possible replacement. Discovery and development of potentially large oil resources on the Coastal Plain would give us the time needed to develop other alternate energy sources.

It is imperative that Congress not delay action to open the Coastal Plain to exploration and development while opponents debate the national energy policy. If the Coastal Plain were leased today, it will be beyond the year 2000 before oil, if any is found, could be contributing to declining domestic production.

ENERGY IMPORTS -- THE GROWING NATIONAL THREAT

Last July, U.S. dependency on foreign oil broke the 50 percent barrier -- for the first time -- and the oil import bill for 1989 was almost \$49 billion or 45 percent of the total U.S. trade deficit. In January 1990, imports reached 54 percent of demand and the American Petroleum Institute predicts U.S. oil imports will average close to 50 percent for all of 1990 if present trends continue. Several projections show that we could be breaking that barrier every month some time in the early 1990's and may regularly break the 60 percent mark by the late 1990's.

Although U.S. oil import dependency is at record levels and going up, Americans appear relatively unconcerned about their future energy security. Apparently, Americans believe that cheap and easy solutions to the oil import problem are available: a mix of greater conservation and further development of solar, biomass, and other environmentally benign fuels.

But hard facts show that these "solutions" are neither cheap nor just around the corner. And meanwhile:

- Oil consumption is rising. Since 1985, it has gone up about 1.5 million barrels a day.
- Domestic oil production is falling. Higher oil prices stabilized production in the early 1980's, but the 1986 collapse caused production to decrease, and the rate of decrease now shows signs of accelerating.
- Oil imports are rising rapidly, much of them from OPEC countries, a trend that experts project will continue through the 1990's.
- The more OPEC oil we import, the greater economic power we vest in a cartel -- whose Persian Gulf members have proven unreliable suppliers in the past.

According to a recent U.S. Department of Energy projection, the United States will need to rely on foreign suppliers for two-thirds of its oil by the year 2000. Even when additional energy efficiency gains are taken into account, DOE estimates that the United States will not save enough energy to overcome the effect of economic growth on oil use. Additional savings of several million barrels a day will be needed to keep the gap between domestic oil production and domestic oil consumption from growing even larger.

A recent API study indicates that the government would have to raise energy prices threefold to get sizeable savings. The study estimates that energy would have to rise from its 1988 price of \$13 per barrel of oil (or its equivalent) to \$38 per barrel by the year 2000 to hold energy consumption at its present level, assuming that the economy sustains a steady 2.5 percent annual rate of growth. And to reduce total U.S. energy consumption 10 percent

from its current level with such growth, a barrel of oil equivalent would have to sell for \$61 in the year 2000.

Massive government intervention, in the form of artificially induced higher energy prices or severe mandates, could run the risk of duplicating the economic dislocations -- inflation, recession, unemployment -- triggered in part by the oil price shocks of the 1970's.

Faced throughout the 1990's with a steady rise in the demand for oil and an accelerating decline in domestic oil production, the United States has three main energy options: growing dependency on foreign energy suppliers, massive government intervention to reduce oil demand, and encouragement of greater domestic energy production, including oil.

The reasonable response appears equally clear: adopt and pursue policies that combine cost-effective conservation, and some fuel switching -- with additional domestic oil exploration.

More oil found and produced here in the United States can help reduce imports. However, domestic oil production is in decline. In fact, U.S. oil production has declined nearly 1.7 million barrels a day since 1986.

There are several reasons for this decline. Our largest oil reserve -- Prudhoe Bay in Alaska -- is in decline. Moderate world oil prices have dampened interest in the riskier opportunities for domestic exploration and production. And many of the most promising areas for new development have been put off limits to exploration.

New oil in significant quantities is known to exist in the United States, both off and onshore. For example, major finds lie in the Beaufort Sea of Alaska and billions of barrels are believed to exist onshore beneath the Coastal Plain of the Arctic National Wildlife Refuge. Urgent congressional action is needed to allow exploration and production of this most promising prospect to reduce dependence on foreign oil.

U.S. OIL DEPENDENCE

Energy concerns have largely slipped from public view during the 1980's. The glut of oil on world markets and falling energy prices have left most Americans complacent about energy supply. But the current glut makes both long and short-term energy problems for the nation.

The truth is that the state of the nation's energy health today is perceived as "good" only because enough inexpensive foreign oil is available. Our conditions could turn to "poor" or "critical" if that supply were disrupted -- depending on the degree of vulnerability of alternative supplies.

What foreign oil-producing states do will make a big difference to the situation in this country. However, what the U.S. government does also will make a big difference. The U.S. government can take positive actions to improve the country's future economic energy posture or negative ones to worsen it. A major concern of energy analysts and economists is that Washington, largely insensitive in today's environment to world and domestic energy trends, will both choose the negative options and avoid the positive ones.

The impact of government decisions on energy could be more than two million barrels a day of increased domestic oil supply by the end of the 1990's. Two million barrels a day represents about one-eighth of current U.S. oil use -- and is about three times the amount of the shortfall in the 1970's crisis.

Unfortunately, there has not been and will not be any single, all-encompassing "Yes or No" government issue on energy security around which to rally consumers and influence decision-makers, but rather a series of issues in a wide variety of fields such as taxation, environment, and public lands.

However, the situation for both the industry and the country's economy must be viewed in the context of worldwide trends in petroleum markets and the disturbing energy scenarios to which they might lead. The facts are these:

- Domestic oil production is down and continues to fall.
- Domestic consumption is at a peak for this decade and continues to rise, increasing at an annual rate of about two percent.
- With production down more than one million barrels a day since 1986 and consumption up more than one million barrels a day, imports have increased by two million barrels a day.
- Imported oil makes up about 50 percent of the oil that the United States uses -- up dramatically from 31 percent only four years ago.

- Most of the future increases in oil imports by the United States and our allies must come from the Middle East. Imports from the Persian Gulf area tripled in 1986 and continued to rise in 1987, 1988, and 1989.
- Active drilling rigs, the key indicator of U.S. petroleum development activity, were down to 1,004 in early 1990 -- compared with 4,000 in 1981 and 1,200 in 1973.

Two Likely OPEC Scenarios

World oil demand is rising, and there is little or no growth in non-OPEC production of oil. Additional demand for oil is being met largely by OPEC countries, particularly by the large producing states in the Persian Gulf.

If these demand and production trends continue, a future price shock could occur under either of two possible scenarios: Under one scenario, world oil demand would continue to increase, while OPEC maintained its current production capacity or reduced it -- leading to tight markets in just a few years. Under a second scenario, OPEC would increase its production capacity, enlarging its ability to meet or exceed demand -- keeping prices low for a longer period but increasing the potential damage from a price crunch. Under either scenario, OPEC's relative power to control world oil prices could be strengthened. Here are the reasons.

The Dimensions of Energy Policy

Decisions made by the Bush Administration and Congress will profoundly affect the nation's energy/economic security in the 1990's and early 2000's. The objective should be to ensure an adequate and secure supply of energy at reasonable prices while reducing vulnerability to a future oil crisis.

Energy policy should be consistent with, and supportive of, other important national goals including: healthy economic growth, environmental protection, solid employment, reduction of the budget and trade deficits, and a strong foreign policy.

The policy must take into consideration the possible behavior patterns of OPEC and how that behavior might be influenced. A "national energy policy" does not mean further government involvement in energy markets. Rather, it means choices that encourage a healthier U.S. petroleum industry involving companies of all sizes, working to discover, produce, process, and distribute petroleum supplies to U.S. consumers.

Background Facts on U.S. Oil Dependence

- Our nation now imports about 50 percent of its petroleum, which is more than on the eve of the Arab oil embargo.

- One-fourth of our domestic production comes from Alaska's North Slope. Existing North Slope production is declining. If U.S. dependence on oil imports continues to increase as is projected, it will have serious national economic and security consequences.
- When oil imports increase, so does the U.S. trade deficit. The U.S. spent almost \$50 billion on oil imports last year. According to the U.S. Energy Information Administration, about 65 percent of the U.S. oil supply in 2000 will come from foreign sources at an annual cost of more than \$150 billion.
- Rising U.S. petroleum imports as well as increased oil imports by our allies would increase the U.S. strategic interest in the Middle East, which holds about 63 percent of the free world's oil reserves.
- The economic benefits from development of a major oil field in Alaska would be felt nationwide. Every state in the nation has benefitted financially from Alaska North Slope oil development. More than \$44 billion have been invested to date, with over \$10 billion spent on goods and services from around the country between 1980 and 1986. As an example, over \$541 million was spent in New York State alone.
- The U.S. Department of Energy estimates that production of oil from ANWR could substantially improve the U.S. balance of trade, since fewer dollars will leave the U.S. to purchase foreign oil if major reserves are found in the Coastal Plain.
- Net national economic benefits from ANWR production could reach \$325 billion in the high-case estimate of 9.2 billion barrels of recoverable oil.
- Lease-sale receipts from bonus bids are projected by the Department of the Interior to range between \$2 and \$4 billion, even if no oil is discovered; with a commercial discovery, a royalty of 12.5 percent and substantial federal income taxes will generate very substantial revenues from production.
- The lead time for Arctic oil production is between 10 and 15 years. If the process is begun now, the earliest Coastal Plain production could come on line would be about the year 2003.

CURRENT ANWR LEGISLATION

Legislation addressing opening the Coastal Plain of the Arctic National Wildlife Refuge (ANWR) to environmentally-sound oil development was put on hold after the Exxon Valdez oil spill. Below is an overview of the bills being debated at that time.

S. 406 (by Senators J. Bennett Johnston and James A. McClure) had been referred to the Senate Energy and Natural Resources Committee. According to Senator Johnston, S. 406 "... provides for the phased competitive leasing of the Coastal Plain; imposes strict environmental standards; requires that exploration, development and production be undertaken in a manner consistent with the interests of the area's subsistence users; and provides that a significant portion of ANWR revenues be available for use in conservation programs including the Land and Water Conservation Fund and wetlands protection, acquisition and restoration." The Senate Energy Committee passed S. 406 early in the 101st Congress.

H.R. 39 (by Representative Morris K. Udall) and S. 39 (by Senator William V. Roth, Jr.) would designate the ANWR Coastal Plain as part of the National Wilderness System. Wilderness designation is the most restrictive of all public land classifications. Under Wilderness designation, all resource development and most human uses are precluded.

H.R. 49 (by Representative Don Young) would authorize exploration, development and production on the ANWR Coastal Plain, and require that the Secretary of the Interior impose regulations to ensure the protection of wildlife and environmental values.

On the House side, the principal committees of jurisdiction are the Subcommittee on Interior and the Insular Affairs chaired by Representative George Miller and the Subcommittee on Fish and Wildlife Conservation and the Environment of the Committee on Merchant Marine and Fisheries chaired by Representative Gerry E. Studds.

Another bill, S. 471, which would allow competitive leasing, exploration, development and production has been introduced by Senator Frank Murkowski. Representative Walter Jones, Chairman of the Committee on Merchant Marine and Fisheries was also expected to introduce legislation early in the 101st Congress that would have allowed leasing of the Coastal Plain.

**IMPORTANT LEGISLATIVE AND OTHER DATES IN THE HISTORY OF
THE ARCTIC NATIONAL WILDLIFE REFUGE (ANWR)**

<u>Date</u>	<u>Event</u>
1903	First national wildlife refuge established by President Theodore Roosevelt's executive order.
1919	Migratory Bird Treaty signed. Presence of surface oil seeps on Alaska's North Slope, long known to Natives, described by Leffingwell in U.S. Geological Survey professional paper.
1929	Migratory Bird Conservation Act.
1944	U.S. Navy drills first of several exploratory wells near Barrow on Naval Petroleum Reserve No. 4 (now the National Petroleum Reserve, Alaska).
January 3, 1959	*Alaska Statehood Act permits state to select certain lands from the federal domain as an economic resource base.
December 6, 1960	Arctic National Wildlife Range created.
1963	First exploratory well drilled on U.S. North Slope by private industry.
December 14, 1964	State of Alaska holds first oil and natural gas lease sale on the North Slope on tracts east of Prudhoe Bay obtained under the Alaska Statehood Act (that state's 13th competitive sale).
July 14, 1965	State of Alaska holds its second North Slope lease sale (its 14th competitive sale).
1965	First onshore well drilled in Canada's Mackenzie River Delta.
March 13, 1968	Participating companies announce first discovery well on state lands at Prudhoe Bay; discovery contains nearly 10 billion barrels of oil and 26 trillion cubic feet of natural gas.
September, 1969	State holds competitive lease sale 23 in Prudhoe Bay area, bringing in nearly \$1 billion in bonuses.

* Brief synopsis of law follows.

<u>Date</u>	<u>Event</u>
December 18, 1971	*Alaska Native Claims Settlement Act becomes law.
November 16, 1973	Trans-Alaska Pipeline Authorization Act becomes law permitting construction of 800-mile crude oil pipeline from Prudhoe Bay to Valdez, an ice-free port in southern Alaska.
June 20, 1977	First oil enters TAPS pipeline and arrives at Valdez terminal 38 days later.
December 2, 1980	*Alaska National Interest Lands Conservation Act becomes law, setting aside 1.5 million-acre Arctic National Wildlife Refuge for further study of its petroleum potential and environmental impact. The Act dictated study by Department of Interior and mandated that the Interior report its findings within five years to Congress. One study was delegated to U.S. Fish and Wildlife.
December 13, 1981	Kuparuk field, the second largest in Alaska, comes on stream west of the Prudhoe Bay field.
February, 1983	Final environmental impact statement for ANWR exploration published.
April 19, 1983	Final rules for geological and geophysical exploration published.
Winters 1984-1985	Approximately 1,336 miles of geophysical data acquired in ANWR Coastal Plain; no further geophysical work allowed.
1985	Oil field at Milne Point, north of the Kuparuk field, begins production.
1985-1986	Exploratory well drilled by Chevron on Native Alaskan lands north of the Coastal Plain near the village of Kaktovik.
April, 1987	Secretary of the Interior's final report to Congress on ANWR recommends opening the Coastal Plain to petroleum operations.
1988	U.S. Senate Energy Committee and House Merchant Marine and Fishing Committees report out bills authorizing leasing in ANWR but Congress adjourns before floor action is taken.

* Brief synopsis of law follows.

ALASKA STATEHOOD ACT OF 1958
(16 U.S.C. 21)

Congress enacted the Alaska Statehood Act in 1958, making that territory the 49th state. In order to provide the fledgling state with a solid economic base, Section 6(b) of the new law authorized the state to select 102,550,000 acres from the federal public lands that were vacant, unappropriated and unreserved at the time of their selection. These selections were subject to any valid existing right, including any valid federal oil and gas lease.

Moreover, if state-selected lands contained a federal oil and gas lease, upon conveyance to the state, the state succeeded the federal lessor's interest. If only a portion of the land covered by a single lease was selected and conveyed to the state, the federal government reserved the minerals subject to that lease until the lease was terminated (at which time title to the minerals so reserved passed to the state).

The State of Alaska used its selection rights first to obtain title to land on the Kenai Peninsula (in southern Alaska), where oil had been discovered in 1957, as well as to well-known agricultural, recreational and mineral lands elsewhere in the state -- including lands near Alaska Native villages. Moreover, in 1964-65, the state chose some 1,650,000 acres of federal land along the North Slope, an area long suspected of having large oil deposits. The state held its first oil and gas lease sale in that area in 1964, followed by sales in 1965 and 1969. The 1969 sale, held after the Prudhoe Bay discovery, brought the state nearly \$1 billion in bonuses.

Section 4 of the Statehood Act provided that the state disclaim right or title to any lands or other property (including fishing rights) whose title was held by Indians, Eskimos or Aleuts or held in trust by the federal government for those Natives.

These two actions -- the acquisition of land near the Native villages and the lease sales held for Prudhoe Bay tracts -- set the stage for conflict between the Natives and the state. It also paved the way for the enactment of the Alaska Native Claims Settlement Act of 1971.

ALASKA NATIVE CLAIMS SETTLEMENT ACT (ANCSA)
(43 U.S.C. 1601)

In 1966, the Alaska Federation of Natives and other regional Native associations were formed throughout the state. These groups filed protest with the Department of the Interior's Bureau of Land Management against the land selections made by the State of Alaska under the Alaska Statehood Act, as well as against the conveyance of those lands to the state by the federal government. Forty protests -- covering some 80 percent of the lands selected by the state, including the land at Prudhoe Bay -- had been filed by 1968. The Native protests cast a shadow on titles to the North Slope oil and gas leases and the Secretary of the Interior administratively ordered a moratorium on the issuance of new federal oil and gas leases in Alaska.

In response to the Native protests, in January 1969, the Secretary of the Interior promulgated Public Land Order No. 4582, which formally withdrew from disposal all unreserved federal lands in Alaska, resulting in the rejection of applications for federal non-competitive oil and gas leases thereafter filed. This effectively halted the state selection process and other dispositions. The secretary's action was sustained by a federal circuit court.

The Alaska Native Claims Settlement Act (ANCSA) was enacted on December 18, 1971, to resolve these conflicts. The law:

- Extinguished aboriginal rights to lands claimed by Natives;
- Provided for the establishment of 13 Native regional corporations and an unlimited number of Native village corporations by qualifying villages;
- Allowed these village corporations to select the surface estate in land surrounding their respective villages;
- Provided for the conveyance of the subsurface estate beneath the village corporation lands to the regional corporations, and granted certain other land rights to the regional corporations; and
- Gave the Secretary of the Interior additional authority to withdraw unreserved public lands.

Under ANCSA, the Natives were given the right to acquire some 44 million acres of land. Of this, the village corporations were allowed to obtain surface estates to some 22 million acres, with the subsurface rights to those lands belonging to the regional corporation in which the village was located. However, the village corporation could veto any oil or gas activities in the subsurface area within its boundary. In addition, the regional corporations

were entitled to select 16 million acres of surface and subsurface estate outside of the areas set aside for village selection.

Any preexisting federal oil and gas lease was not affected by ANCSA, except that -- when leased land was conveyed to a Native corporation -- the Native corporation was substituted for the United States government as lessor. However, the federal government continues to administer any valid existing lease, right of way, easement or permit, unless the right to so administer has been waived. In contract with the Alaska Statehood Act, under ANCSA, lease applications pending on the date of the Native selection were held not to be valid existing rights.

ALASKA NATIONAL INTEREST LANDS CONSERVATION ACT (ANILCA)
(16 U.S.C. 410)

The Alaska National Interest Lands Conservation Act of 1980 (ANILCA), signed into law on December 2, 1980, contains a number of provisions affecting petroleum operations on federal lands in that state, including the area identified as the "Coastal Plain" of the Arctic National Wildlife Refuge (ANWR). Among the principal petroleum-related provisions, ANILCA:

- Allowed surface exploratory activity on some 1.5 million acres of the Coastal Plain of that 19 million-acre refuge, to permit the Department of the Interior (DOI) to assess the area's petroleum potential; and mandated the establishment of environmental guidelines, should Congress permit drilling and production activities at some later date;
- Added several new areas to the national park system which, subject to valid existing rights, were expressly withdrawn from mineral development, including petroleum operations;
- Added several million acres in different areas to the National Wildlife Refuge System, where oil and gas leasing may be permitted only if deemed compatible with the purposes of the refuge;
- Added several wild and scenic river segments, withdrawing them from operations under both the mining and mineral leasing laws; and
- Added several segments to the national forest system, with varying approaches to mineral leasing.

North Slope and Arctic National Wildlife Refuge

The Act mandated several Alaskan land studies and assessments of (1) some federal lands on the North Slope, (2) the Arctic National Wildlife Refuge, and (3) all federal lands in Alaska other than North Slope lands.

The study required by Section 1002 to be conducted in the ANWR Coastal Plain was to:

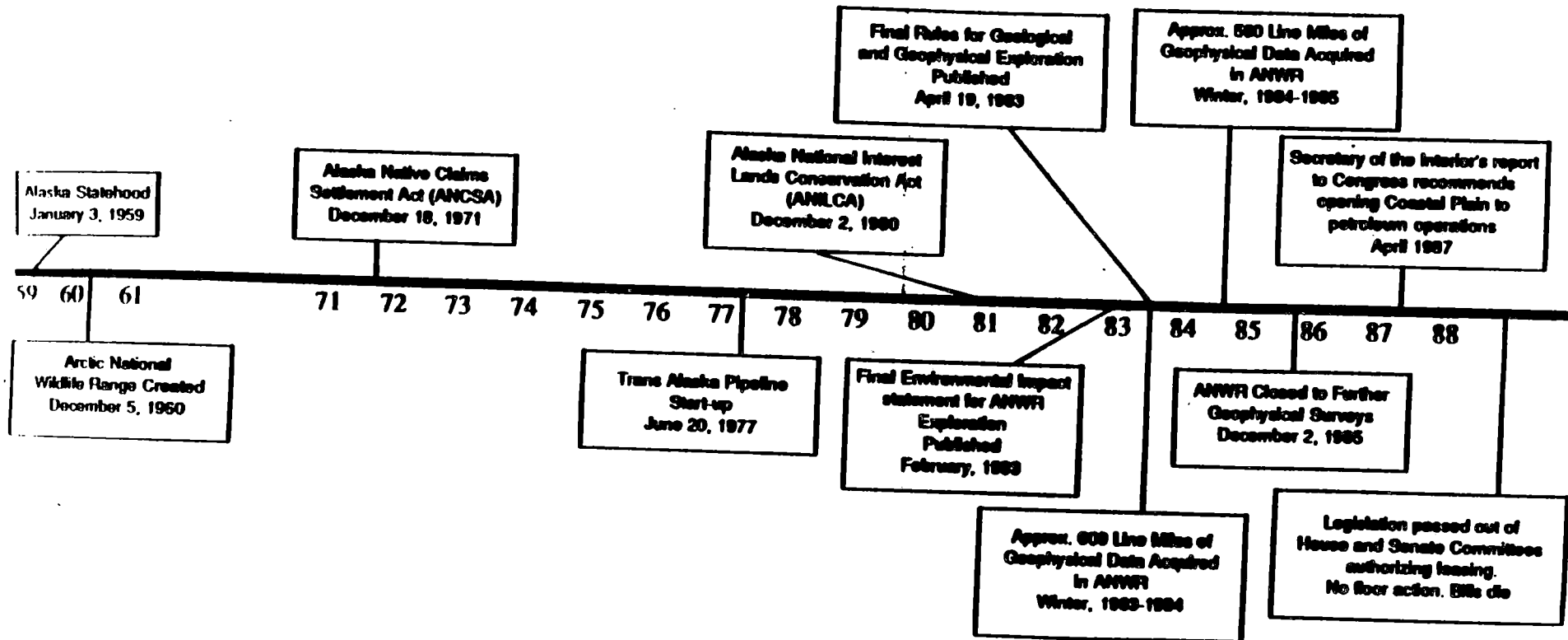
- Assess the size, range and distribution of fish and wildlife populations;
- Determine the extent, location and carrying capacity of the fish and wildlife habitats;
- Assess the impact of human activities and natural processes on fish and wildlife and their habitats;

- Analyze the potential impact on oil and gas exploration, development and production on such wildlife and habitats;
- Analyze the potential effects of such activities on the culture and lifestyle of affected people; and
- Report to Congress its findings and recommendations.

Although Section 1003 of the Act expressly prohibits leasing and other development leading to production in the Coastal Plain without congressional authorization, it directs the Secretary of the Interior to establish guidelines for limited exploration activities.

The Section 1002 study, which included geophysical and geological work but no actual drilling for oil and natural gas, was completed and a draft report was released for public review in November 1986. The final report -- issued in April 1987 -- recommended opening the 1.5 million-acre ANWR Coastal Plain study area to petroleum exploration and production.

Important Dates in ANWR Legislative History





AMERICAN FARM BUREAU FEDERATION

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400 HARRY LIND AVENUE S.W. • SUITE 300 • WASHINGTON, D.C. • 20024 • 202/434-2222

October 23, 1987

The Honorable J. Bennett Johnston, Chairman
Senate Energy and Natural Resources Committee
United States Senate
Washington, DC 20510

Dear Senator Johnston:

We request that this letter be included in the hearing record of the Arctic National Wildlife Refuge (ANWR) coastal plain.

The American Farm Bureau Federation, our nation's largest organization of farmers and ranchers, endorses the U.S. Department of the Interior's recommendation that Congress enact legislation to permit oil and gas exploration on the Arctic National Wildlife Refuge (ANWR) coastal plain.

While meeting in Anaheim on January 15, 1987, delegates to our national convention adopted a resolution supporting the development of energy in Alaska's coastal plain. This resolution originated with the Alaska Farmers and Stockgrowers Association (Alaska Farm Bureau) which adopted the position at its annual meeting in November 1986. It states:

"We urge Congress to open the Alaska Arctic National Wildlife Refuge Coastal Plain to environmentally responsible oil and gas exploration, development and production."

The Farm Bureau believes that it is imperative that our nation develop all its sources of energy. Adequate and consistent supplies of energy are critical if agriculture is to continue to meet our nation's demands for fuel and fiber.

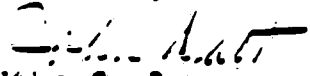
Nearly 80 percent of the energy used in agricultural production is derived from petroleum. Petroleum fuels have been an important contributor to the dramatic gains in agricultural productivity during this century.

Current economic conditions in both U.S. agriculture and energy industries make it all the more important that domestic oil and natural gas production be encouraged and the dependence on oil imports be minimized. United States agricultural and energy needs require that areas of potentially vast oil and gas resources, such as the Alaska coastal plain, not be closed off to energy exploration and development.

The Honorable J. Bennett Johnston, Chairman
October 23, 1987
Page Two

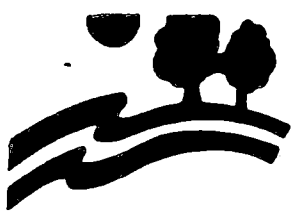
The American Farm Bureau Federation, for our more than three million families nationwide, urges Congress to open the ANWR coastal plain for oil and gas exploration and development.

Sincerely,


John C. Datt
Executive Director
Washington Office

JCD/laf

cc: Committee Members



NEWS:

American Recreation Coalition

Suite 726 • 1331 Pennsylvania Ave. NW
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Contact:

Mary Beth Keller

RECREATION COMMUNITY REGISTERS SUPPORT FOR ARCTIC COASTAL PLAIN LEASING ACT OF 1987

Washington, D. C. (October 14) -- "Recreation was a major victim during the energy crises of the 1970's when certain government officials displayed a hostile attitude toward the consumption of energy for leisure and recreational pursuits," said American Recreation Coalition President Derrick Crandall in testimony before the United States Senate Energy and Natural Resources Committee in support of S. 1217, "The Arctic Coastal Plain Public Lands Leasing Act of 1987."

Today, Crandall stated, "recreation is a \$300 billion per year industry in America and should not be singled out in the face of energy shortages."

Permitting oil leasing in the Arctic National Wildlife Refuge (ANWR), Crandall said, will greatly help to ensure America's energy future. "The 1.5 million acres of the 1002 coastal plain area, unique for its potential to contribute so greatly to this nation's energy security, should not be locked away as wilderness."

"Few are more concerned about or dependent upon the quality of lands and wildlife than the recreation community," concluded Crandall. "We are committed to the protection and enhancement of America's natural resources. In the case of the Coastal Plain of ANWR, we believe that the environment need not be and will not be sacrificed if oil and gas exploration and development are permitted on a careful basis."

In addition to Crandall's statement, letters from a variety of recreation interests -- many of whom participated in ARC's inspection of the Coastal Plain -- were submitted as testimony.

(more)

*Dedicated to the protection and enhancement of every citizen's
right to pursue health and happiness through leisure-time activities.*

**Recreation Supports ANWR Leasing
ADD ONE**

Elden Smith, Senior Vice President of the RV group of Fleetwood Enterprises, the world's largest manufacturer of recreational vehicles (RVs) and manufactured housing, said in his letter to the Committee:

'Our employees' livelihoods and the future success of our business depends on adequate supply of gasoline being available. We feel strongly that the energy supplies of ANWR must be explored and that any resources found can be recovered without damage to the environment.'

David McCoy, founder and President of Mammoth/June Ski Resort in California, wrote:

'At Prudhoe Bay, everything was spotlessly clean and unrecognizable as being part of a traditional oil field. We saw caribou on the tundra and birds of all species along the road. As a result of my visit, I have a whole new appreciation of the value of energy and now realize that in the United States, Alaska has the greatest reserve of energy in the form of oil. If we do not want to depend on outside sources, then we need to allow exploration now in ANWR.'

Merle Karst, Senior Vice President of Yamaha Motor Corporation, U.S.A., said:

'We rely more and more on oil imports. Logic and wisdom should prevail in this matter. I encourage positive action to take advantage of this important resource (ANWR) for the benefit and protection of this country. It is best if we drill now and produce for the future.'

Bill Estes, Vice President of TL Enterprises, Inc., a publisher of RV lifestyle magazines, wrote:

'I believe the exploration proposal is responsible and reasonable, in view of this nation's obvious critical need for development of petroleum resources. A majority of our 500,000 readers agree. It was obvious during my Prudhoe visit that the oil companies have done a fine job of minimizing the effect of their work on wildlife and the land.'

Edwin Kibler, Legislative Director of the National Campers and Hikers Association, wrote in his letter:

'NCHA suffered greatly during the energy crises of the 1970's. The availability of fuel is essential for continued outdoor recreation. Congress should not delay making decisions which will secure America's energy future. The coastal plain of ANWR represents the best potential on-shore source of oil in all of North America. Congress can act now by allowing exploration and development of the 1002 area in ANWR. With the 10-year completion date for production; far less impact would occur now than if development occurred on short notice.'

(more)

Darryl Harris, President and Publisher of Harris Publishing, Inc., remarked:

"As a snowmobiler, trailbiker, ATVer, boater, highway motorcycle tourer, and magazine publisher who represents those recreation interests throughout the western U.S., I would hope that our government would pursue a policy that would develop energy resources within our borders and place us less dependent on foreign oil."

John Zimmerman, President of the Sunline Coach Company, said:

"Exploration of ANWR should be done while we still have time to use all the precautionary measures to do it safely, rather than waiting until we have an energy crisis and doing it hastily, thus jeopardizing the environment. The record that has been demanded, expected and experienced at Prudhoe Bay should also be expected at ANWR. If no oil is found, we have lost nothing. If, on the other hand, oil is found, we will have insulated ourselves against another oil embargo."

Michael Schneider, Vice President and Publisher at TL Enterprises, wrote in a recent editorial:

"The care that's been taken in Prudhoe Bay is testimony to the fact that big oil and the natural land can co-exist. Postponing the leasing decision until an oil crisis is upon us guarantees there will be fewer restraints that now maintain environmental sensitivity. The solution is clearly to begin development now -- at a time when we can best balance the environmental concerns with the need to supply energy."

Copies of Mr. Crandall's testimony are available from the American Recreation Coalition.

Statement of
The Associated General Contractors of America
Presented to the
Committee on Energy and Natural Resources
United States Senate
on the Subject of
Oil and Gas Leasing in the
Arctic National Wildlife Refuge

S. 1217

October 13, 1987



AGC is:

- o More than 32,500 firms including 8,000 of America's leading general contracting firms responsible for the employment of 3,500,000-plus employees;
- o 105 chapters nationwide;
- o More than 80% of America's contract construction of commercial buildings, highways, industrial and municipal-utilities facilities.

The Associated General Contractors of America represents more than 32,500 firms, including 8,000 of America's leading general contracting companies which are responsible for the employment of more than 3,500,000 individuals. These member contractors perform more than 80 percent of America's contract construction of commercial buildings, highways, industrial and municipal-utilities facilities.

AGC is pleased to submit for the record, the following statement of the association's position in conjunction with current hearings on S. 1217, a bill to authorize oil and gas leasing, exploration and development within the coastal plain of the Arctic National Wildlife Refuge (ANWR) in Alaska.

AGC, by resolution adopted at its 68th Annual Convention, March 5-10, 1987, urged "that the Congress open the coastal plain of the ANWR to environmentally responsible oil and gas leasing, exploration, development and production."

The Arctic National Wildlife Refuge is a 19 million acre area on the Northeast coastal plain of Alaska. 65 miles to the west lie the Prudhoe Bay oil fields and adjacent on the east are the MacKenzie oil fields in Canada. 8 of the 19 million acres of ANWR are designated as wilderness. In 1980, Congress set aside 1.5 million acres of the refuge for further study of its resource and wilderness value. No oil activity was allowed pending completion of the study, and until Congress enacted legislation specifically authorizing the activity. The Department of the Interior was directed to make this in-depth study and submit its report within 5 years. In November 1986, the Department issued its draft report urging Congress to open this area to oil and gas operations under strict environmental guidelines.

On April 20, 1987, Interior Secretary Hodel released the final report on the hydrocarbon and wildlife resources of the Coastal Plain. The Department's projections deal with major oil and gas fields and potential reserves which rival, perhaps even exceed those of Prudhoe Bay, the nation's largest oil discovery. The study concludes that the Coastal Plain of ANWR may be the most outstanding oil and gas frontier remaining in the United States and recommends that the entire 1.5 million acre area be opened for oil and gas leasing, under prudent environmental regulations.

Currently, Prudhoe Bay and Alaska's North Slope provide more than 20 percent of the nation's total domestic crude oil production. These resources are now in significant decline and are not being replaced. The 1.5 million acre Coastal Plain has the potential for enabling Alaska's North Slope to continue to provide a major alternative to imported oil and a very substantial contribution to national petroleum needs.

National energy forecasters now predict that oil imports

may increase from the current 35 percent of the U.S. market to 50 percent by the 1990s. U.S. imports from the volatile Persian Gulf area increased 300 percent in 1986 and accounted for more than half the total increase in imports that year.

At the same time, production from current U.S. reserves is expected to decline considerably from the present 8 million barrels of oil per day to less than 3 million in the late 1990s. To compensate for this loss of production, new discoveries of domestic oil must be developed or imports will have to be increased. Much of this decline will be attributable to decreased Prudhoe Bay production, which in 1986 averaged 1.5 million barrels-per-day but will fall to 280,000 barrels-per-day by the year 2000.

It is anticipated that the earliest ANWR production could begin is 1998 to 2000 -- even if Congress approves exploration in 1987. By 2000, because of the Prudhoe Bay decline, the Trans-Alaska Pipeline System will be operating at 25 percent of its 2 million barrel-per-day capacity. ANWR development would fully utilize the pipeline and deliver critical domestic oil.

The need for orderly domestic oil and gas development has been clearly demonstrated. Also amply demonstrated is the fact that the development can be done in a way to protect the environment and wildlife.

Numerous laws and regulations assure that oil and gas activities can protect the surrounding environment. Experience in Alaska and the lower 48 states shows that oil and gas activities are consistent with other goals such as wildlife protection. Nearly 20 years of experience on the North Slope demonstrates that helping to meet the nation's energy needs and protecting our wildlife and environment are functions that can coexist to the benefit of all. Techniques employed to minimize disturbance include directional drilling, smaller and consolidated facilities, winter construction, use of temporary ice roads, special arctic equipment and elevated pipelines and facilities.

Because of the extremely long lead times needed to bring oil fields into production in the arctic, it is important that Congress move expeditiously to enact legislation to permit oil exploration and development of the Arctic National Wildlife Refuge in an environmentally responsible manner.

AGC strongly urges the Congress to do so.

MANUFACTURING ≡ CREATES ≡ AMERICA'S STRENGTH

Statement
of

The National Association of Manufacturers

ON PROPOSED
OIL AND GAS LEASING IN THE
ARCTIC NATIONAL WILDLIFE REFUGE, ALASKA

Before the Energy and
Natural Resources Committee
United States Senate

June 23, 1987



National Association of Manufacturers
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The National Association of Manufacturers is a voluntary business association of more than 13,500 corporations, large and small, located in every state. Members range in size from the very large to the more than 9,000 smaller manufacturing firms, each with fewer than 500 employees. NAM member companies employ 85 percent of all workers in manufacturing and produce more than 80 percent of the nation's manufactured goods. NAM is affiliated with an additional 158,000 businesses through its Associations Council and the National Industrial Council.

Executive Summary

NAM supports action to open up the Coastal Plain of the Arctic National Wildlife Refuge (ANWR). Our interest in the Coastal Plain stems from the fact that our nation needs an adequate and secure supply of energy at competitive prices to sustain economic growth. Unfortunately, recent trends in the oil and gas sector reflect a rising U.S. dependence on imported oil. U.S. petroleum imports were approximately 6 million barrels a day in 1986--the highest level since 1980. If this trend continues, imports could make up nearly 50-60 percent of U.S. needs by 1995.

Such heavy reliance on oil imports could further weaken the U.S. economy, which is why it is imperative that this nation prepare for the future and take action to explore and develop domestic resources including the Coastal Plain of ANWR. In addition, it is also important to note that exploration and development can co-exist with wildlife and strict environmental considerations. One need only look next door to Prudhoe Bay to see that energy resources can be developed in an environmentally safe and responsible manner.

The decisions we make today on ANWR will help to determine how vulnerable we are to imported oil in the near future. NAM, therefore, urges you to support legislation, which would give the United States the opportunity to explore for resources that we urgently need.

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ARCTIC NATIONAL WILDLIFE REFUGE, ALASKA

Before the Energy and
Natural Resources Committee
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June 23, 1987

This statement is submitted on behalf of the National Association of Manufacturers (NAM) in response to the committee's hearings on Alaska's Arctic National Wildlife Refuge (ANWR). NAM supports legislative action that would open up the Coastal Plain of the Arctic National Wildlife for oil and gas exploration, development and production.

NAM's interest in ANWR stems from the fact that our association's membership constitutes major users of energy as well as most of the domestic producers. Despite the diversity of NAM membership interests, however, it is safe to say that they're all concerned with international competitiveness, the balance of trade, the federal deficit, national security, and, of course, the health of our domestic economy.

FOREIGN OIL IS DISPLACING U.S. OIL IN THE U.S. MARKET

Today, America's energy producers are rapidly losing ground to imports in the oil marketplace. National energy forecasters now predict that oil imports may increase from 35 percent of the U.S. market to 50-60 percent by the mid 1990s. Furthermore, U.S.

imports from the volatile Persian Gulf area have increased 300 percent in 1986 and accounted for more than half of the total increase in imports last year.

But, even with immediate access to high potential areas such as ANWR, this picture will not improve short-term. Exploration and development of Arctic oil and gas usually takes more than ten years from the initial discovery to first production. Consequently, any production from this area is not likely to occur much before the end of this century. At that time, oil production from current U.S. reserves is expected to have declined considerably from the present level of over 8 million barrels per day (bpd) to less than 3 million bpd, and Prudhoe Bay production, which in 1986 is averaging 1.5 million bpd, will have declined (according to the State of Alaska, Department of Revenue) to 280,000 bpd in the year 2000. To compensate for this loss of production, new discoveries of domestic oil must be developed or imports must be increased. There are few alternatives.

But despite its relative inaccessibility, ANWR is actually a valuable potential source of domestic oil, in part due to the in-place infrastructure resulting from Prudhoe Bay development.

TRANS-ALASKA PIPELINE ENHANCES COMPETITIVENESS OF THE ANWR RESOURCES

It should be remembered when considering development of ANWR that the Trans-Alaska Pipeline System (TAPS), which was completed in 1977 and cost approximately 10 billion dollars, is already in place. The close proximity of TAPS to the ANWR region only enhances the resource potential for this area and other economic reasons make ANWR

attractive.

The approximate \$10 billion cost to place TAPS in operation represents a sunk cost: if capacity is fully used, the marginal cost of utilizing TAPS is independent of this cost and is quite low.

Since the cost of producing petroleum resources at any site includes development and transportation, the availability of TAPS capacity to transport potential North Slope production at ANWR and elsewhere represents a significant cost advantage versus a site where a more expensive transportation option is required.

This cost advantage resulting from the availability of relatively inexpensive TAPS capacity means that fewer resources need to be expended to produce the petroleum resources in ANWR than at a comparable site lacking in-place transportation facilities.

Consequently, the availability of throughput capacity at TAPS for potential ANWR production is not only valuable in that it will help keep out foreign imports, but it will also be economically competitive.

ENVIRONMENTAL CONCERNS

"Economically competitive" however does not exclude "environmentally compatible" development. Opposition to petroleum operations on the ANWR plain arises from the concern that wildlife species and habitat will be significantly harmed. Although any sizeable petroleum operation will have some impact upon the environment, previous experience

demonstrates that ANWR resources can be used in a safe and responsible manner

One need only look "next door" to the Prudhoe Bay operations. It has been proven that industry and environment can coexist in a multiple use land management program.

In fact, several major problems have been resolved as a result of the Prudhoe Bay operation. Aside from the hostile climate and difficult logistics of operating in an extremely remote location, the most challenging technical problems encountered and solved in the onshore Arctic were related to permafrost.

From the years of operating experience there has been developed an environmental protection technology to minimize, and in some cases eliminate, long term changes in the tundra. For example, low-pressure tired vehicles have been developed which can cross the tundra without crushing the vegetative mat or scouring the soils as tracked vehicles might.

The issue of the caribou is of course a concern. Again, Prudhoe Bay serves as an example. When the Prudhoe Bay oil field was developed in the mid-1970s, regulatory agencies acted cautiously and studies were conducted to determine the effects on the Central Arctic caribou herd. In fact, the results of the studies and the tools implemented to prevent damage to the Central Arctic herd were quite positive, in that the herd has increased at a rate of 12-18 percent per year over the past decade. At more than 13,000, it numbers at least four times what it did in 1975 before most of the Prudhoe Bay development activity began. The positive results from Prudhoe Bay and other similar experiences from northern

Europe and the Soviet Union, prove that herds can exist in the presence of industrial development, including oil fields and railroads. Wildlife habitats, environmental values, and the petroleum industry can and do coexist.

CONCLUSION

As important as ANWR is, it's only one piece of the major energy puzzle. ANWR is what could rescue this nation from foreign imports and provide for some energy needs well into the 21st century. We must be able to plan for future needs, and ANWR can play a role in meeting these needs, in the context of comprehensive energy planning.

NAM supports the recent proposal, S. 1217 offered by Senator Murkowski which would "authorize the Secretary of the Interior to lease, in an expeditious and environmentally sound manner, the public lands within the Coastal Plain of the North Slope of Alaska for oil and gas exploration, development and production."

In addition, NAM supports Rep. Young's bill H.R. 1082, which also proposes to authorize oil and gas leasing and exploration in the Coastal Plain of ANWR.

NAM's long-standing policy has been that public land should not be closed to or restricted from resource development and nonwilderness multiple uses in the absence of compelling national interests that override the need for adequate domestic oil, natural gas and other valuable resources. Before areas are set aside for exclusive uses, every effort should be made to determine the availability of materials and other resources on the proposed set asides, and access should be assured to explore and develop the area's resources.

United States' energy policy should be oriented towards significantly reducing our nation's dependence on imported energy resources. The development of domestic energy resources, such as those contained in ANWR, are the best hope to reduce America's energy vulnerability, and enhance the ability of U.S. manufacturers to be more competitive in world markets. We must take action against economic influences brought on by unstable energy markets that don't allow for proper planning of manufacturers' energy needs and the producers' opportunity to explore. Thank you for the opportunity to express our views.



Statement of the Chamber of Commerce of the United States

ON: UNITED STATES DEPARTMENT OF INTERIOR'S
ARCTIC NATIONAL WILDLIFE REFUGE, ALASKA
COASTAL PLAIN RESOURCE ASSESSMENT

TO: SENATE COMMITTEE ON ENERGY AND
NATURAL RESOURCES

BY: SUSAN CONNOLLY MOYA

DATE: JUNE 12, 1987

The U.S. Chamber of Commerce is the world's largest federation of business companies and associations and is the principal spokesman for the American business community. It represents approximately 180,000 businesses and organizations, such as local/state chambers of commerce and trade/professional associations.

More than 91 percent of the Chamber's members are small business firms with fewer than 100 employees, 58 percent with fewer than 10 employees. Yet, virtually all of the nation's largest companies are also active members. We are particularly cognizant of the problems of smaller businesses, as well as issues facing the business community at large.

Besides representing a cross section of the American business community in terms of number of employees, the Chamber represents a wide management spectrum by type of business and location. Each major classification of American business—manufacturing, retailing, services, construction, wholesaling, and finance—numbers more than 11,000 members. Yet no one group constitutes as much as 29 percent of the total membership. Further, the Chamber has substantial membership in all 50 states.

The Chamber's international reach is substantial as well. It believes that global interdependence provides an opportunity, not a threat. In addition to the 56 American Chambers of Commerce Abroad, an increasing number of members are engaged in the export and import of both goods and services and have ongoing investment activities. The Chamber favors strengthened international competitiveness and opposes artificial U.S. and foreign barriers to international business.

Positions on national issues are developed by a cross section of its members serving on committees, subcommittees and task forces. Currently, some 1,800 business people participate in this process.

STATEMENT
on
UNITED STATES DEPARTMENT OF INTERIOR'S
ARCTIC NATIONAL WILDLIFE REFUGE, ALASKA
COASTAL PLAIN RESOURCE ASSESSMENT
for submission to the
SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES
by
Susan Connolly Moya*
June 12, 1987

The U.S. Chamber of Commerce appreciates this opportunity to express its support for the Department of the Interior's recommendation that Congress enact legislation making the entire Coastal Plain portion of the Arctic National Wildlife Refuge (ANWR) in northeastern Alaska available for oil and gas leasing, with necessary environmental safeguards.

The Chamber supports the Department of the Interior's recommendation to open the Coastal Plain of the ANWR to oil and gas development because the potential supplies would help to meet future energy requirements; strengthen the national economy; diminish U.S. dependence on foreign oil; create jobs; reduce the nation's huge balance of trade deficit; and provide a steady, large, and greatly needed source of income to the federal treasury.

The Chamber is concerned greatly about the adequacy and security of America's energy supplies. It is troubled by the fact that oil consumption in the U.S. has exceeded domestic production for more than 20 years and by projections indicating that the U.S. could be importing almost one-half of its oil by as early as 1990 under certain, not unrealistic conditions.

It is generally agreed that the 1.5 million-acre Coastal Plain in the ANWR contains the nation's most promising onshore frontier for major oil and gas prospects. Although expert opinion is divided over the size of the ANWR's petroleum resources, which is typical for any area before exploratory

*Manager, Energy and Natural Resources Policy

drilling, analyses of geologic studies and surveys predict a 95 percent chance of the Coastal Plain's containing more than 4.8 billion barrels of oil and 11.5 trillion cubic feet of gas and a five percent chance of its containing more than 29.4 billion barrels of oil and 64.5 trillion cubic feet of gas. No definitive data are available because current law prohibits even exploratory drilling in the ANWR Coastal Plain; therefore, estimates of the size of the reserves cannot be confirmed. Exploration is needed to make this range more definitive.

The Coastal Plain is prized not only for its oil and gas potential but also for its valuable wildlife. While the Chamber supports oil and gas exploration and development on the Coastal Plain, it cautions that extreme care must be taken to protect the valuable natural resources of this national treasure. It would encourage and support regulations based on the positive past experiences in arctic climates to ensure environmental integrity in all oil and gas operations in the area.

Experience shows that oil and gas development can be compatible with the Alaskan environment and wildlife. Petroleum operations on the adjacent Prudhoe Bay/North Slope coastal plain clearly demonstrate this. Based on the North Slope operations, the Chamber believes that oil and gas development would not adversely affect the Coastal Plain. In fact, technology and experience from North Slope activities will be used and improved in the ANWR.

Because of the 10 to 15-year lead time required for oil and gas development in the Arctic, steps must be taken now to encourage, with appropriate environmental safeguards, oil production on all of the most promising federal lands, particularly the Coastal Plain area of the ANWR.

We must keep in mind that authorizing the lease of the Coastal Plain for oil and gas exploration and development does not mean development and production today--rather it is an insurance policy for tomorrow. The recent gyrations of the oil market emphasize the need for a long-term view.

America's Energy Needs Are Growing, and Supplies Are Shrinking.

The U.S. relies on oil and natural gas to meet two-thirds of its energy requirements. The need for oil is growing; and efforts to develop alternative sources, such as synthetic fuels, have fallen short of expectations. Therefore, for the foreseeable future, oil must continue to be the principal fuel on which the nation depends.

The U.S. must find 32 billion barrels of domestic oil during the next 10 years to replace what is being used. In fact, three-quarters of the oil that the U.S. must have in the year 2000—just 13 years from now—still has to be found. Despite this fact, domestic oil production in the "lower 48" states, including offshore wells, has declined substantially during the past decade. And, due in large part to the oil price decline, experts predict that by the end of this year, domestic production will decline by as much as or more than a million barrels per day. In contrast, consumption is expected to continue to increase. Last year it grew by more than three percent, from approximately 15.7 to an estimated 16.2 million barrels per day, doubtless due to increased economic activity, population growth, lower prices, and perhaps due to other reasons.

Also troublesome to the Chamber is that American oil reserves, that portion of our resources that has been located with considerable certainty and that can be economically recovered with present technology, have been steadily shrinking. These are estimated to hit the lowest levels since shortly after World War II by 1990. All of the onshore basins in the U.S. with the greatest potential for giant fields have already been explored, except the Coastal Plain of the ANW.

Since the U.S. began drilling for oil more than a century ago, it has produced about 50 percent of the estimated onshore oil and gas reserves and 10 percent of the estimated offshore reserves. Although America's Outer Continental Shelf, those lands beyond the three-mile state boundary, holds

great promise, only 15 percent of all offshore drilling exploration wells have been successful. Because of this limited success, knowing what the potential oil and gas resources are in the Coastal Plain of the ANWR is more important than ever.

Oil Imports Could Double by the Mid-1990's and Cost Billions of Dollars Annually.

In October, the National Petroleum Council (NPC) issued an interim report entitled U.S. Oil and Gas Outlook in which the NPC presented the U.S.'s near-term and longer-term oil import outlook as going from gray to "utterly black."

Specifically, in sharp contrast to 1985 when U.S. imports of crude oil and petroleum products were only 27 percent of domestic consumption, the NPC study projects that, depending upon whether future prices follow a relatively low or a relatively high path, the acceleration in the decline of future domestic production, accompanied by even moderate increases in consumption, could result in imports of 35 percent to 50 percent of consumption by 1990, 45 percent to 60 percent by 1995, and 50 percent to 70 percent by the year 2000.

To put these figures in perspective, when the Arab oil embargo began in 1973, the U.S. was importing about one-third of its oil—about six million barrels per day. Despite drastic increases in oil costs, imports continued to rise to almost 10 million barrels per day by early 1977. After that, oil imports gradually declined to less than four million barrels per day by early 1983. Since that time, however, imports have surged; and today the U.S. is importing more than one-third of its oil requirements.

According to the American Petroleum Institute (API), U.S. oil imports from the Persian Gulf have increased by more than 400 percent during the past year. These imports accounted for 16.6 percent of total U.S. imports in December, 1986, versus only four percent in November 1985. This increased reliance on Persian Gulf oil seriously threatens the nation's energy and national security.

Petroleum imports represent a significant component of all U.S. imports. In 1983, 1984, and 1985, net payments for imported oil amounted to almost \$53 billion—costing Americans an average of one billion dollars per week. Imported oil payments continue to be one of the largest factors in the U.S. trade deficit; last year they amounted to about one-third. According to the Department of the Interior's report, production from the Coastal Plain of the ANWR could reduce foreign dependence on oil and gas by almost nine percent in the year 2005 and save Americans billions of dollars per year.

Unless steps are taken now to increase development of domestic petroleum resources, the U.S. will become continually more reliant upon foreign suppliers. As long as the U.S. continues to import oil, it continues to export dollars and jobs.

Drilling for New Oil and Gas Is Critical Despite Current World Oil Surplus.

World oil prices are at their lowest in a decade, and oil companies—as a result of depressed earnings—are announcing reductions in their capital and exploration expenditures. Why then, with oil companies having less money to allocate, is it more important than ever that the Coastal Plain of the ANWR be made available for oil and gas exploration and development and not be declared as "wilderness," i.e., permanently closed to exploration and development, as has been suggested?

Experience tells us that when prices fall, demand inevitably rises, production declines, and the surplus disappears. America should not be lulled by the current surplus of oil in the world market; it must think of the future. The recommendation of the Department of the Interior that Congress enact legislation declaring the entire Coastal Plain available for oil and gas leasing is sound. Industry must be allowed to invest its limited financial resources most efficiently, i.e., in areas with the greatest development potential.

Unfortunately, the current talk of an oil "glut" has created the false impression that America need not worry about its petroleum or other energy supplies now or in the future. This has caused some to advocate that the U.S. delay energy development programs. However, those who propose the delay ignore the long lead time necessary for industry to find and produce energy sources. In the Arctic, this could mean as many as 10 to 15 years. They also ignore how the U.S.'s dependency affected it a decade ago and how it is affecting it now.

Other Benefits Would Accrue to the U.S. from Leasing the Coastal Plain of the ANWR.

Income to the U.S. Treasury. Revenues generated by petroleum exploration and development in the Coastal Plain would benefit not only the federal and Alaskan state governments but also the economy throughout the U.S. The Department of the Interior's report predicts that the net national economic benefits from oil production on the Coastal Plain will total \$8.0 billion (present discounted value). The State of Alaska would receive a share of the federal revenue and an estimated \$3.6 billion in tax payments related to leasing. In 1984, Alaska received about \$1.4 billion in oil and gas royalties, rents, and bonuses.

Creation of Job Opportunities. Another benefit that would accrue from oil and gas operations is a boost in employment nationwide because supplies and services for such operations come from throughout the nation. Depending upon the amount of oil and gas discovered on the Coastal Plain, the API predicts that national employment gains would range from 138,000 to 1,021,000 jobs.

Environmental Concerns.

It cannot be overemphasized that the human use of the ANWR's resources must not be allowed to diminish its aesthetic and refuge values. The Chamber strongly supports the recommendation that the Secretary of the Interior be authorized to impose necessary and appropriate measures to protect refuge

resources and ensure coordinated and efficient oil and gas activities, and it recognizes that developing the entire Coastal Plain of the ANWR could have some environmental consequences and would eliminate the "wilderness" character of that area. However, the most adverse effects could be mitigated by using the lessons learned and the technology acquired from development at Prudhoe Bay and from construction of the Trans-Alaska Pipeline. The evidence there showed that petroleum operations are compatible with the conservation of the land's natural values.

In discussing whether oil and gas operations should be permitted on the Coastal Plain of the ANWR, it is important to remember that the ANWR is only one component of an almost 90 million-acre National Wildlife Refuge System. By law, any activity occurring in a national wildlife refuge must be "compatible with the principles of sound wildlife management and will otherwise be in the public interest" (50 CFR Section 32.1). Experience in other refuges shows such compatibility.

A recent survey of oil and gas activities in 43 refuges in the contiguous 48 states, including 19 refuges with oil and/or gas production, found that oil and gas operations had little or no adverse effects on refuge wildlife or on other economic or recreational uses. This has also been true in Alaska in the Kenai National Wildlife Refuge and in sensitive areas of the North Slope.

Forty years of experience on the North Slope have demonstrated that oil development can and does exist in harmony with the environment. Techniques used to minimize disturbance include directional drilling, smaller and consolidated facilities, winter construction, use of temporary ice roads, use of special equipment, and elevated pipelines and facilities.

All activities on the ANWR would be monitored by the Fish and Wildlife Service, the State of Alaska, and the North Slope Borough. Moreover, if oil and gas exploration is allowed on the Coastal Plain, only a few, temporary

drill sites of less than 10 acres would be required to verify commercial reserves of hydrocarbons. And, if a discovery is made, only a small area of the refuge would be developed.

According to AFI, the operating area in the Coastal Plain of a field the size of Prudhoe Bay would cover 130,000 acres, which would be about 8.5 percent of the Coastal Plain. The actual surface area affected by pads, roads, etc. would be approximately one percent of the operating area, less than 0.1 percent of the Coastal Plain.

Millions of acres in Alaska already have been leased and explored, and now the ANWR clearly has the most potential for major oil production. Exploration for oil and gas must take place where they may be located, not where we would like them to be. With the rapid rate at which our reserves have declined, exploring the most promising areas first only makes sense. The ANWR should be explored because it combines maximum potential with good access and an established nearby transportation facility.

Alaska already has vast "wilderness" areas. The Chamber believes that to withdraw such a prospect as the Coastal Plain for only a 2.6 percent addition to wilderness areas is not in the nation's best interests.

Conclusion

The facts are clear. Continued orderly oil and gas development, with appropriate environmental safeguards, is vitally important to the nation's energy and economic future. The discovery and development of the Coastal Plain's potential petroleum resources must be permitted. By the timely and orderly exploration and production of its oil and gas, the U.S. can assure future dependable supplies of energy for its homes, farms, factories, businesses, and transportation and for strengthening its economy, increasing federal revenues, providing jobs, and lowering its balance of trade deficit.

The alternative is to sow the seeds for an energy crisis in the 1990's. In the face of today's lower energy prices, the exploration budgets of oil companies are being slashed drastically, and wells are now being shut in by the thousands in the U.S. Meanwhile, lower prices are encouraging demand. If the U.S. allows these seeds to continue to grow, it will, indeed, have ignored the lessons of the 1970's and will reap a bitter harvest in the 1990's.

OIL INDUSTRY CONTACTS

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BUSINESS AND FINANCE

cent decline, to an annual rate of \$726.9 billion, was the deepest GNP drop since the 1960-61 recession. And technically a recession, said such men as economist Theodore Tung of The Bank of New York, was exactly what the nation has been going through—however the Administration wishes to deny it.

In addition, growing numbers of economists argue that the control of inflation is much slower and less certain than Administration spokesmen would like to believe. Skeptics like Pierre Rinfret of Rinfret-Boston Associates have said they expect prices to continue advancing at current rates—about 5 per cent annually—through the rest of the year. By then, of course, the economy could be expanding powerfully—and prospects for any significant slowing of inflation could be blowing in the wind.

the North Slope to Valdez, a port in southern Alaska.

The conservationists argued that construction of the road—and then the pipeline—would upset the entire ecological balance in Alaska. Among other things, they said, putting the 48-inch pipeline underground, with the oil inside at a temperature of 135 to 180 degrees, might melt the Alaskan permafrost, causing the pipeline to rupture and spilling hundreds of thousands of gallons of oil. Moreover, the conservationists contended, if the pipeline were built above-ground it could act as a barrier to the migration of caribou and other native animals. Finally, they pointed out, the area around Valdez is subject to potentially damaging earthquakes.

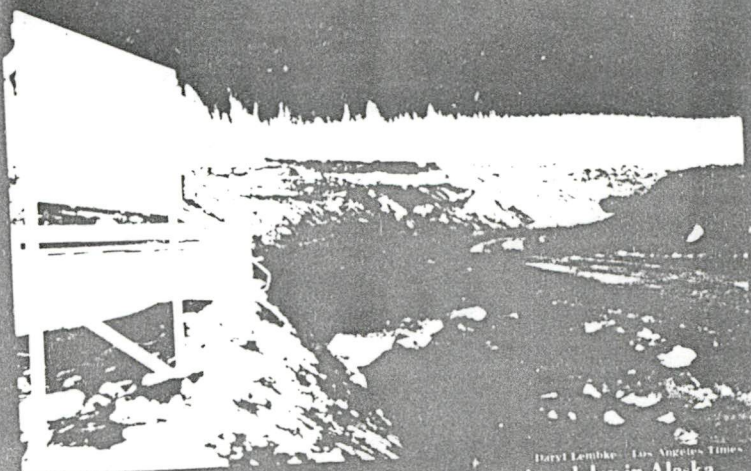
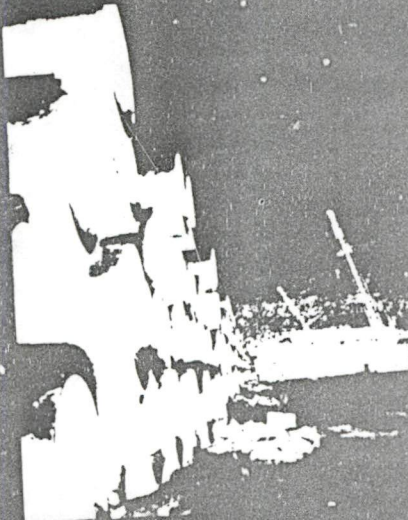
Judge Hart ruled against the road on technical grounds, but only after throwing

companies can show that construction will not cause severe ecological damage in Alaska. Even if that case can be proved, experts say, work on the pipeline will be delayed at least a year.

FINANCE:

Ma Bell's \$3 Billion

Nearly everything about American Telephone and Telegraph's \$3 billion rights offering to 3.1 million shareholders last week was superlative. It was the largest single new financing ever undertaken by a private corporation. The provisions of the offering were certainly among the most complicated. And with its cost to AT&T of about \$24 million—\$1 million for postage alone—the offering was the most expensive ever. The only



Pipeline lengths, road project: The ecologists win a delay in Alaska

OIL:

Blocking That Line

When Alaska opened its North Slope to oil exploitation last year, eager bidders quickly drove the total price for leases up to a staggering \$900 million. And small wonder: there were expert estimates that the 450,858 acres north of the Arctic Circle might hold at least 5 billion and at most 50 billion barrels of oil, and a total of 45 oil companies were hustling after the bonanza. But no matter how much oil lies beneath the tundra, the successful drillers still had to solve the major technicality of getting it to market—and last week in Washington, Federal Judge George L. Hart Jr. handed down a ruling that seemed likely to delay the whole process until next year.

The judge's ruling came on a suit filed by three conservation groups—the Wilderness Society, Friends of the Earth and Environmental Defense Fund, Inc. They sought to block construction of a work road that would parallel a 710-mile, \$1.3 billion pipeline intended to carry oil from

its advocates a broad cue that they fumbled badly. Could the Interior Department, he asked, give two weeks' public notice before granting a road permit? Attorneys for the department, which favors a modified pipeline plan, said they could offer no such pledge—even though the suggestion seemed designed to permit road building while the details of the pipeline case are being argued. And at that, the judge granted full relief to the conservationists—an injunction against the road and a ruling that two weeks' notice would have to be given before any pipeline permits would be granted.

The ruling also was a blow to Interior Secretary Walter Hickel, a former governor of Alaska who had fought hard for the pipeline. But the blow was even worse for the oil companies who have formed TAPS (Trans-Alaska Pipeline System), and had been hoping to have the road and oil pipeline ready to begin sending oil to market by 1972. Already they have at least \$40 million worth of equipment and 200 miles of pipe on scene in Alaska, waiting until the Interior Department and the pipeline

real question remaining last week was whether it would be a success.

Because of the complexity of the underwriting, the full answer won't be in for weeks—but the deal looked nearly irresistible. In essence, the company last week began sending out letters (they won't all be out until the end of this week) offering stockholders the right to buy one \$100 debenture for each 35 common shares they owned, plus two warrants for the future purchase of AT&T common shares, for a flat payment to AT&T of \$100. The interest set on the debentures alone over their 30-year life was a handsome 8.75 per cent annually. What's more, AT&T announced that each warrant would entitle the holder to buy one share of AT&T common stock at \$52 a share anytime between mid-November of this year and mid-May 1975. The "exercise price" was just \$1.25 above the \$50.75 at which AT&T common was selling when the offering was announced. This means that if AT&T's common stock rises over the next five years, the warrants will be worth nearly the full amount of the rise, giving the investor an

Newsweek, April 27, 1970

to fill them. There has been no attempt to match the GOP policy of sending Senators on nationwide tours in key areas where their help is needed. Some Republican Senators will appear in as many as twenty-five states before Election Day. The White House uses the promise of future favors to lure its Senators out onto the campaign trail.

The problem for McGovern is that he trails so badly in the public opinion polls that Senators see no reason to go out on their own to campaign for what most think will be a losing effort. In 1968 it was not until the final weeks of the campaign, when Hubert Humphrey's friends in the Senate saw the gap narrowing, that they began to work for the national ticket. There are theories that some Senators, anticipating a McGovern disaster, hope to pick up the pieces, come 1976.

The most painful absence of Democratic Senators is felt in specific areas of public interest. When McGovern criticizes the Administration's farm policy he is met head-on by Agriculture Secretary Earl Butz and at least one

wings to support the party nominee.

Men like William Proxmire and Gale McGee say they plan some campaigning in their home states—time permitting—but point to Senate business or tough local races as reasons for no more direct involvement. The presence of Senators Kennedy, Muskie and Humphrey boosts crowds for McGovern, but they could certainly be more useful campaigning where the candidate is not.

There are some Democratic Senators who have not yet even been asked to lend a hand. An official at the campaign headquarters says they really don't know if Lloyd Bentsen of Texas or Lawton Chiles of Florida is for or against McGovern.

It can be assumed that after the Senate adjourns some Senators will begin working full time for the ticket. But adjournment may not come until mid-October, too late for them to do any good. House Republican leader Gerald Ford may be right when he says that the Democrats want to stay in Washington so they won't have to go home and talk about George McGovern.

ARCTIC PIPELINE

Known Problems & Unknown Effects

QUINCY DADISMAN

Mr. Dadisman writes on environmental subjects for the Milwaukee Sentinel.

The United States used 22.1 trillion cubic feet of natural gas last year. Proven domestic reserves are down to 247 trillion cubic feet, less than ten years' supply, assuming only moderate expansion of use. Most of the easy-to-get-at gas in the United States is gone and new exploration is both expensive and chancy. Gas can be manufactured, but that is expensive. Possible raw materials include coal (technology perfected, but it is air polluting) or garbage (technology incomplete, but inviting as a solution in two or three decades).

Thirteen trillion cubic feet of natural gas are known to be under the Canadian Arctic near the mouth of the Mackenzie River, and probably ten to forty times that much is still to be discovered on the mainland and among the Arctic islands. The oil at Prudhoe Bay, Alaska, is associated with at least 26 trillion cubic feet of gas and possibly up to 65 trillion cubic feet, and the Prudhoe Bay field is only a relatively small part of the area of Alaska where gas and oil are likely to occur.

Gas can be transported in several ways. The cheapest, easiest and safest way is by pipeline. It can also be liquefied under high pressure and hauled in refrigerated ships. A few such ships exist; a few have disappeared on the high seas. Mariners point out that a cargo of refrigerated gas is highly explosive. Either method of shipment could be used to get Alaska's gas to the United States. It could be piped across Alaska to the south coast where it would be compressed, liquefied and hauled by refrigerator ship

to a West Coast port, there to be released into a pipeline for shipment across the continent. Or it could be sent directly by pipeline connections across Canada to the Midwest. The gas pipeline across Canada is obviously the simpler solution. That is why a gas pipeline across Canada is almost certain to be built, regardless of how the dispute over the trans-Alaska oil pipeline turns out.

And why some environmentalists are beginning to feel that, somehow, they've been had. Some suspect that the fight the oil companies have been making for the trans-Alaska route is a tactical move—that the producers' grand strategy calls for the oil to follow the same route as the gas. The producers, they believe, are getting ready to say, "O.K. We won't build the Alaska pipeline. We're ready to compromise on a route across Canada."

Many environmentalists would consider that a victory. Others are unwilling to accept any route for a pipeline across the Arctic wilderness, whether in Alaska or Canada. Any route, they argue, will cause irreversible damage to an ecosystem so fragile that building the pipeline would scar the North a millennium in the future. Two Canadian combines—Gas Arctic Study Group and Northwest Project Study Group—have spent several millions of dollars in the last three years on studies aimed at finding ways to build in the Arctic and prove the worriers wrong.

Three kinds of environmental problem face any construction "north of 60" (the 60th parallel on the northern border of British Columbia, Alberta, Saskatchewan and Manitoba) where the Arctic is generally conceded to begin: the effect of construction on the land itself; the effect of both construction and operation of

the project amid the teeming wildlife of the North; and the effect of possible accidents after construction is completed.

The key to the consequences of construction in the Arctic is the make-up of the ground. Half or more of North America north of 60° is really a mixture of soil and water, with water making up as much as 80 percent of the mix in some areas. Topsoil in the northern parts of the continental United States freezes during the winter, but is underlain by unfrozen ground through which water can still move. That subsoil has been thoroughly compacted by the moving water so that it forms a stable base for all but the heaviest construction.

Building a pipeline in such soil requires removal of the topsoil, placing a gravel base on the subsoil to provide drainage, setting the pipe and covering it with topsoil, seeding the surface and watching it return to something similar to the surrounding terrain. "North of 60," also, the topsoil freezes every winter, thaws every spring, but there it is underlain by permafrost, which often includes huge blocks of primeval ice that never melts, linked by smaller bits of ice, sand, rock and silt, frozen perpetually into a rock-hard subsoil.

That subsoil, too, offers a good base for construction, if it can be kept frozen. Homes in the Arctic are built on pilings so the air can pass under them and keep the ground from melting. Setting the foundation is relatively simple: A hole is drilled through the topsoil into the permafrost, a piling is placed and held upright while a slurry of water and crushed stone is poured around it. It freezes solid, forming a sturdy foundation for conventional construction atop it.

Building roads isn't too difficult. Topsoil is stripped away, a gravel pad is placed, and the road surfaced. The road stays put because the surface freezes and thaws with the topsoil, but the permafrost below is insulated from the air and remains frozen.

But building a home directly on the permafrost would be folly. Heat would seep through the flooring, melting the ground below, and the house would slowly drop out of sight. (One small Arctic community, Aklavik, Northwest Territories, was abandoned as a district headquarters because accumulated heat was melting the permafrost and the village was sinking into the ground.)

Building a pipeline offers a similar problem. Oil or gas is hot—150 degrees or warmer—as it comes from the ground. When it coursed through the pipeline, the oil or gas would give up that heat, the pipe would slowly sink deeper and deeper into the permafrost, floating on the water as it melted the ice in the soil. Eventually, it would pop through the surface soil covering the pipe in low areas, sag and break as the water seeped away in higher areas.

The two study groups say they've conquered those problems for gas pipelines. Essentially, their idea is to chill the gas—no hard job in the 60-below-zero weather common in the Mackenzie valley during the months when the most gas is burned—and keep it chilled so that it won't melt the permafrost as it travels south. Construction problems could be met. A road would be snaked across the tundra in midwinter—the only practical con-

struction period in the Arctic, which turns into a dense quagmire in summer—and the pipeline laid beside it. But construction in the bitter cold is never easy. Engines on heavy equipment must be kept running constantly or hours must be spent to restart them. Metal must be handled carefully to avoid frostbite, so everything must be made to be used by a man wearing heavy gloves. In extreme cold, human efficiency drops to less than half what it is in less rigorous weather.

Strangely, the most severe weather the builders would face would be not on the Arctic slope but 700 miles to the south, just north of 60°. Temperatures on the Arctic shore rarely drop lower than the mid-50s below zero. In the center of the continent, far from the sea's tempering effects, it is often 20 degrees colder. And one Arctic veteran said, "Even sled dogs won't work at 70 below."

A gas pipeline would probably be buried in a trench for most of its length, with compressor-cooling stations every 30 to 50 miles to keep the gas cold and moving. After construction, the road would be abandoned and the automated stations would be tended by airborne crews.

River crossings would be the most difficult part of the project because the work would have to be done during the brief, often hot and insect-plagued summer. The pipe would be placed in a trench sliced into the muck, well below the reach of winter ice. Twelve major crossings—a half mile or more—lie across the trans-Canada route. (There's only one on the trans-Alaska oil pipeline route.)

Building an oil pipeline will be still harder. Oil thickens as it cools and even heats up some from the friction of being pushed through the pipe. The oil companies have been testing various kinds of insulation at Prudhoe Bay. Engineers there are proud of one pipe, carrying oil at 180 degrees, which is covered with a 4-inch blanket of insulation. Snow brushed off the pipe a week after it falls is as powdery as that on the ground.

Some of the most telling criticism of pipeline plans has followed publication of pictures showing damage to the tundra from construction activities around Prudhoe Bay. Much of it was simple litter—15,000 to 30,000 oil drums were scattered over the barren landscape—but most resulted from ignorance. One picture, showing bulldozer markings scratched at a fuel cache, has been especially embarrassing to knowledgeable engineers. The scratches, made in 1968, barely penetrated the thin grass and wildflower cover of the soil. But they let the sun's heat penetrate, permafrost melted, and the marks are now ditches 6 feet deep.

The scattered oil drums, worth \$8 each at dockside in California, are being recovered by crews using huge machines that avoid damage to the tundra by stepping lightly across the summer bog on immense rollers. It has cost about \$15 a drum to pick up the several thousand now piled at the dock at Prudhoe Bay and will cost another \$5 a drum to get them back to California. Engineers planning the pipeline say construction "doesn't have to be messy if the people in charge make it clear that they won't tolerate sloppiness."

Some critics believe revegetation of the pipeline route is going to be harder than the pipeline planners think. Because the permanently frozen subsoil is so near the surface, woody plants grow very slowly in the Arctic—

tree roots are constantly chilled, can penetrate only a few inches into the ground, are able to reach only a limited amount of water. Pine trees 200 years old may be only a couple of inches in diameter and only 12 to 15 feet tall. A flying traveler on his first visit to the Arctic is startled by the long, straight lines he sees stretching across the forests from northern Alberta to the ocean. The lines are 10-foot-wide strips cut through the woods by seismic exploration crews working out the geology of the North. Some are already forty to fifty years old.

Distinct species of grasses and wildflowers have evolved in the Arctic. However, they're related to species found further south, and botanists working with the planners say the Arctic varieties will respond to fertilizer much as their Southern relatives do. But even under the best conditions a scar will show for centuries.

The effect of the pipeline on wildlife, both during and after construction, is much harder to gauge. Caribou range across both pipeline routes. It is a migratory species that winters inland but comes to more open areas at calving time in the spring. Caribou wander around Prudhoe Bay operations during spring and summer and seem, according to workmen on the scene, little troubled by the noise of men and machines. But no one is sure how they would react to construction machinery charging over the tundra or through the woods. Their migration time varies a great deal, too, but the planners say they would watch closely and stop operations when the caribou began to move.

The reaction of the caribou to a completed pipeline is another unknown. Farther south, whitetail deer follow pipeline clearings for a mile or so, then leave to go about their business of finding food. But whitetails are non-migratory and some ecologists say the pipeline scar could upset caribou migration. A pipeline on high stilts, they say, could appear to the caribou as tree trunks, but one on low stilts would almost certainly be a barrier.

Tests are being made this year with strips of snow fence stretched through the woods, and with high-level wires holding fluttering rags along the seismic exploration lanes, to see how migrating caribou react. Similar studies last year were thought inconclusive.

Another species whose response to the pipeline will be critical is the Barren Grounds grizzly bear. The bears, bigger, grumpier relatives of the grizzly of the Western states, are scattered across northern Alaska and the northern Yukon, with a few living in the Northwest Territories. The key to their response is the denning areas where they sleep away most of the winter and the cubs are born. Suitable den caves are rare, and a major attempt was made to find and map them last fall and this spring, so that the pipeline could be routed away from the bears.

Black bears are considered almost a nuisance in much of the area crossed by the pipeline route. Their usual response to pipelines farther south has been to ignore them, although they will, at times, move along the pipeline clearing. There is a small herd of musk oxen in northern Yukon, but their range is well away from the pipeline routes. Wolves and foxes are expected to use the opening

formed by the pipeline clearing as a hunting ground for lemmings, rabbits and other small game on which they prey.

Gravel beds in North slope streams are spawning sites for many seagoing fish that ascend fresh-water streams to lay their eggs. Pipeline planners say that when they drop the pipe into the mud bottoms they will take care not to allow silt to pour down onto the gravel beds. Environmentalists are skeptical.

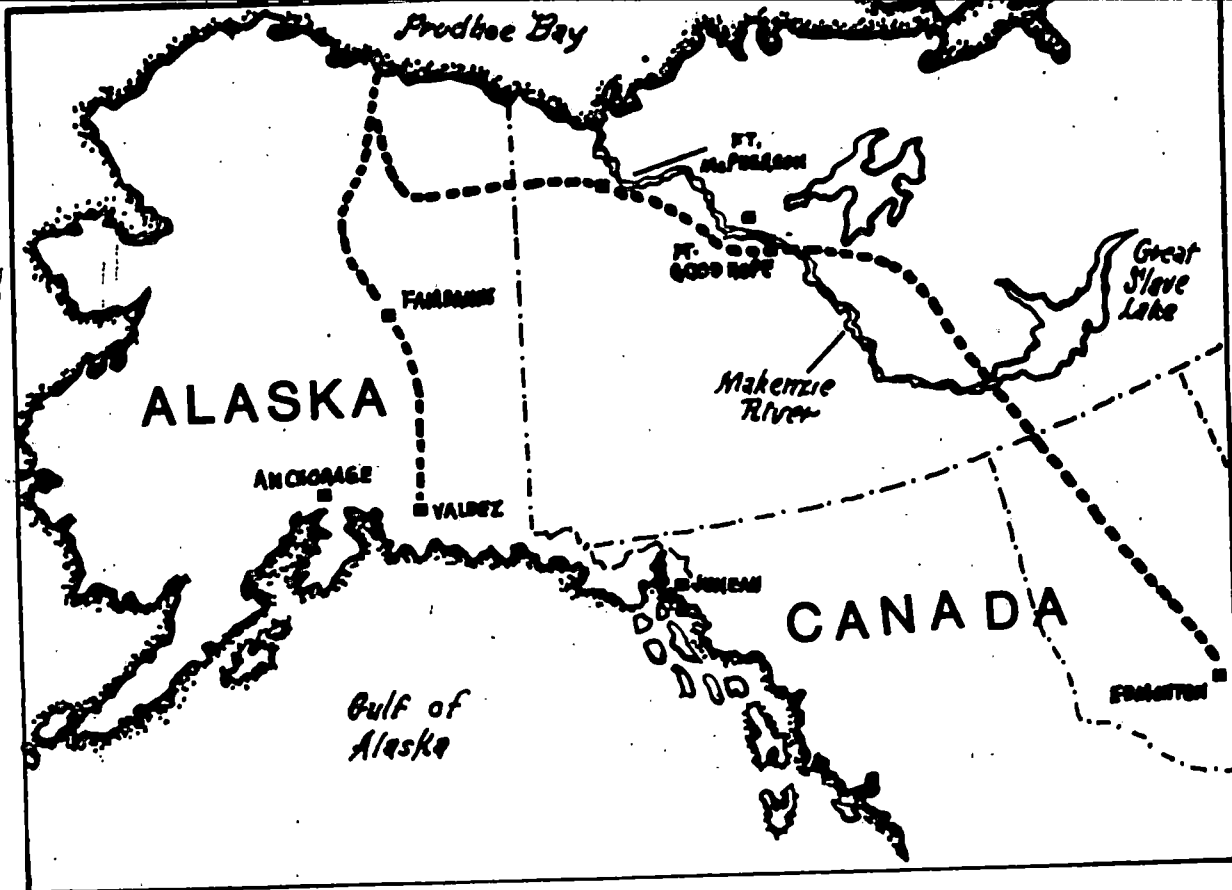
Another big question is the effect of the pipeline on waterfowl. If the line follows the coastal plain from Prudhoe Bay to the mouth of the Mackenzie, it will cross the Arctic Wildlife Refuge in Alaska and a similar refuge just proclaimed on the Canadian side of the border. The refuges are one of the principal waterfowl production areas of the continent with millions of ducks, geese and rarer birds nesting there. If it goes inland into the Brooks Range—a route the engineers show some preference for because construction might be easier in the rock than in permafrost—it would avoid the waterfowl nesting zone.

The pipeline route itself would have little effect on the birds, ecologists say, but the noise of the compressor and oil pumps—if an oil pipeline follows that route—and of the bustling aircraft supplying the stations, might disturb the birds. Records of compressor-station noises, amplified to twice the level of actual operations, were playing continuously at several spots in the Arctic this past summer to gauge the reaction not only of the birds but of other animals, too. Workmen at Prudhoe Bay say waterfowl nested last year in the shadows of working oil drills and many were so tame their waddling progress across roads often delayed trucks.

The species that would be affected most is man. The entire Northwest Territories, an area more than half the size of the forty-eight states, has fewer than 30,000 inhabitants, most of them concentrated around Great Slave Lake. Only a few dozen live in the 400 miles between Prudhoe Bay and Fort McPherson where the line from Alaska would join the all-Canadian portion of the pipeline.

Most of them are Eskimos, still living, in some ways, as their forefathers did, but eager for the amenities of life they know exist farther south. On both sides of the border, government will insist that "locals" be hired wherever possible to work on construction. Wages will have to be very high to attract workers into the bitter weather and "locals" will therefore receive relatively high wages. The cash will buy snowmobiles, television sets, clothing, pay for trips "outside," set up new and higher standards of living. The people of the North will be unwilling to return to the endemic poverty in which they now live, once the free-spending construction firms leave.

Roads are beginning to reach deep into the Arctic. Winter routes now link Prudhoe Bay with Livengood and the Mackenzie valley villages with the South. The oil companies propose to build and turn over to the state an all-weather road from Livengood to Prudhoe Bay. The Dempster Highway, linking the Yukon road system to the Arctic at Inuvik, probably will be completed this year or next, so the old isolation will be gone in any event. But it will be a long time before enough tourists



venture that far north to take up the slack left when the pipeline is completed.

Native claims to the land have been settled, more or less, in Alaska. Canada still has to negotiate a settlement with the Eskimos and Indians of the Northwest. The latter say they're going to be hard to deal with, demanding as good a settlement as was reached in Alaska.

Most of the objections environmentalists raise to the pipelines center on the possibilities of accidents after operation begins. A break in the gas pipeline probably would not have a serious environmental effect unless a fire resulted. The gas would dissipate and, once repairs to the pipe were completed, the surroundings would be much as they had been.

The oil line is another story. Any spill in the Arctic would spew thick, black crude over the landscape, killing almost everything it touched. In milder climates, a spill is a disaster that persists for months; in the Arctic, it could last for centuries. Many of the usual methods of cleaning up a spill would not work in sub-zero weather. Operations might have to await the spring breakup, with the ever present threat of a sudden change in the weather floating the oil away to damage wide areas. The micro-organisms that remove the last traces of an oil spill work only in warm weather. Summer is only six weeks long in parts of the North. Alaska south of the Yukon River is one of the world's earthquake centers. The companies say they have designed an earthquake-proof pipeline. Environmentalists say that's impossible. The trans-Canada pipeline corridor avoids earthquake zones.

Valdez—where the 789-mile trans-Alaska line would end—is at the head of a narrow fjord. Handling big ships could be very difficult, especially in the heavy snow-

storms for which Valdez is noted. The oil men say the latest in marine engineering would go into their ships and that it is unfair to compare them with the older, less well-engineered tankers operating in other parts of the world.

The route from Valdez to the West Coast parallels one of the most rugged shorelines on earth. This worries many Canadians because accidents would soak British Columbia beaches with oil. A tanker route across the Arctic Ocean was ruled out after the *Manhattan's* trip through the Northwest Passage. It just isn't practical with today's technology. The Bering Sea route is four times as long as the Valdez-West Coast route and just as difficult most of the year as the *Manhattan's* route.

Alaska has told the oil companies it will not allow gas to be wasted in the process of getting out the North slope oil, so oil production on any large scale depends on the gas being used. (A tiny refinery is now operating at Prudhoe Bay, producing a low-grade gasoline for use there. The gas is carefully pumped back into the ground, but that would be impossible in large-scale production.) Canada is just as adamant against wasting the gas in the Mackenzie delta. Therefore, getting the oil out depends on saving and shipping the gas. The Canadian Department of Indian Affairs and Northern Development has said several times that it is willing to consider only one main corridor for a pipeline—gas and oil must follow the same route if they move across Canada.

The trans-Alaska route would be an all-American route with financing immediately available. It could be in operation three years after final approval. The pipe made in Japan, is already in Alaska. Projected completion dates, say conservationists, are 1977 across Alaska 1980 across Canada.

A trans-Canada route, reaching 2,500 miles from

ritories. The key to their response is the denning areas where they sleep away most of the winter and the cubs are born. Suitable den caves are rare, and a major attempt was made to find and map them last fall and this spring, so that the pipeline could be routed away from the bears.

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Prudhoe Bay to Emerson, Manitoba, is the most expensive private construction project ever proposed. It has been estimated at \$5 billion, a figure that could thoroughly shake the Canadian money market, and has stirred up the nationalist element in eastern Canada to demand that it be financed only with Canadian money. Complicating that issue are Canadian fears about challenges to their sovereignty in the Arctic islands, voiced after the voyage of the *Manhattan*—an issue that also builds pressure for development of the North. In western, oil-conscious Canada, I heard it said that "development

is inevitable; better it be American-financed than with German or Japanese money."

Some opponents of the project have been puzzled by the Nixon Administration's insistence that the trans-Alaska route is necessary for American "security." They point out that the United States and Canada are so closely linked already that the security of each is dependent on the other. A few ask, "Is that oil really for Japan?," noting that it is only half as far from Valdez to Tokyo Bay as it is from the Persian Gulf, Japan's current oil source, to Tokyo. □

CENSORSHIP BY TAXATION

NEW MUZZLE FOR CHURCHMEN

JOSEPH A. RUSKAY

Mr. Ruskay, who practices law in New York, is co-author of *Halfway to Tax Reform* (Indiana University Press).

The Rev. Billy Graham is frequently photographed with President Nixon and his family at the White House, where he seems to occupy the position of unofficial chaplain. The fact that Billy Graham preaches a spiritual pabulum which carefully avoids mention of meaningful social and political problems makes him the more acceptable to the White House public relations people, who seek to project the President as the great crusader for peace and to spread the Nixon gospel that all would be right on the American scene if only a few grumblers and malcontents would keep their mouths shut.

But the Rev. Eugene Carson Blake, who, while visiting North Vietnam on behalf of the World Council of Churches, verified that American bombing was endangering that country's intricate dike system, is not likely to be invited to the White House. Indeed there are in-

cratic countries, and in countries with dictatorial regimes have lent their support to various shades of revolutionaries. This development has not only often brought them into conflict with their religious superiors but has created resentment among the predominantly conservative lay members of religious groups who feel that pastors and priests should "stick to religion."

In spite of this opposition, more and more rank-and-file clergymen in the United States, and the leadership as well in such influential groups as the National Council of Churches, the Unitarian-Universalist Association, the United Church of Christ, and the Protestant Episcopal Church, have been participating in and even spearheading anti-war, civil rights and anti-poverty activities.

It is one thing for the government to have to contend with public demonstrations led by college students, Vietnamese War veterans, black militants or poor people from Appalachia or other hard-hit areas. They can always be brushed off as fragments of the radical minority.



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

Speechwriter
FYI

March 4, 1991

NOTE TO: GOVERNOR SUNUNU
DIRECTOR DARMAN
EDE HOLIDAY
ROGER PORTER
HENSON MOORE
LINDA STUNTZ
DAVID DEMAREST ✓
STEVE HART
BOBBI KILBERG

FROM: BOB GRADY *RG*

I think we need something like this.

Attachment

cc: Phil Brady

*CNN
Bob Headline (old CBS)*

*200 E. 66th St.
Apt. C2004
NY. NY 10021*

Talking Points: Energy Conservation Items in the
National Energy Strategy

- o Over half the items in the NES relate to conservation or energy efficiency.
- o In total, the NES will reduce oil demand by 3.4 million barrels/day below projected levels (by 2010).
- o Funding for conservation and renewables R&D in the budget is \$495 million -- an increase of 17 percent. This includes a \$300 million joint R&D program to develop the battery for an electric car, and an increase of 46% in funding for solar photovoltaics.
- o The NES lifts the cap on CAFE credits that automakers receive for alternative fueled vehicles.
- o The NES raises the limit on tax-free subsidies that employers can provide for mass transit, vanpooling, and ridesharing.
- o Reform of the Public Utility Holding Company Act, by allowing the most capable builders of electric power plants to compete to provide power all across the country, will increase efficiency in the electric power generating business.
- o The NES allows tax-free treatment for discounts on utility bills provided for energy conservation investments.
- o The NES supports programs which offer a "bounty" for scrapping old gas-guzzler cars.
- o The NES supports Integrated Resource Planning -- investments in efficiency as an alternative to new power plants.
- o The NES will reform PURPA to allow more small and alternative energy producers to produce and sell electric power.
- o The NES extends the tax credit for renewable energy technologies through 1992.
- o The NES will speed the development and implementation of energy efficiency standards for buildings and appliances.
- o The NES will require energy efficiency labeling of various products, including lightbulbs.
- o The NES will ensure that energy efficiency rating becomes part of the mortgage financing process for all Federally guaranteed mortgages.

THE WHITE HOUSE
WASHINGTON

DATE: 3/13

NOTE FOR: DAVID DEMAREST

The President has reviewed the attached, and it is
forwarded to you for your:

Information ☐

Action ☒

Per our conversation. Please pass a
copy of this to Peggy Dooley.

Thank you.

PHILLIP D. BRADY
Assistant to the President
and Staff Secretary
(x2702)

cc:

DATE

3-13-91

FROM THE PRESIDENT

TO:

John S.

Re: ANWR and Energy Bill.

Phil:

Please assign someone the task of gathering quotes relating to the building of the Alaska Pipeline.

It seems to me we are now hearing the 'doom and gloom' quotes re: ANWR that we heard re: the pipeline.

I remember Gov Rhodes of Ohio, defendign against the critics, talking about teh Caribou and how there were more of them than befoer inspite of dire predictions.

It would be nice to get a n inventory of quotes to use in the ANWR debate.

Jim Burke

Mead Treadwell

H: 907-364-3430

112 Fifth St.

O: 907-465-2600

Douglas, AK. 99824

F: 465-2617

(Anch-H: 907-276-7763; F: 907-276-7747)

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(P.O. Box 10-1099, Anchorage, AK. 99510)

(Sanibel: 813-472-1561, x. 2468)

Sierra Club - Oil on Ice
Tom Brown

May 17, 1973

Rhodes - a

REMARKS BY WALTER J. HICKEL
BEFORE THE SOCIETY OF PETROLEUM ENGINEERS
HOTEL CAPTAIN COOK, ANCHORAGE
WEDNESDAY, DECEMBER 8, 1971

"THE COST IS TO CARE"

I CHERISH THE NORTH. IT HAS THE TWO MOST SOUGHT-AFTER
QUALITIES IN THE MODERN WORLD --- SEEMINGLY LIMITLESS NATURAL
RESOURCES TO MEET MAN'S NEEDS, AND BREATHTAKING BEAUTY TO
RESTORE MAN'S SOUL.

IF WE ARE TO DEVELOP THOSE RESOURCES WITHOUT DESTROYING
THAT BEAUTY WE MUST PAY A CERTAIN COST.

WHAT IS THAT COST?

THERE IS A GREAT DEBATE IN WASHINGTON NOW/ABOUT THE COST
TO CLEAN UP OUR ENVIRONMENT AND PROTECT IT FOR FUTURE
GENERATIONS.

SCARE FIGURES HAVE BEEN QUOTED WHICH MAKE A CLEAN ENVIRONMENT
SEEM FOREVER UNATTAINABLE.



To Peggy Dooley
MEAD TREADWELL
DEPUTY COMMISSIONER
Mead

STATE OF ALASKA
DEPARTMENT OF
ENVIRONMENTAL CONSERVATION

PHONE: (907) 465-2600
FAX: (907) 465-2617
3220 HOSPITAL DRIVE
MAIL: P.O. BOX 0
JUNEAU, ALASKA 99811-1800

Hickel's best pipeline speeches.

PRINTED ON RECYCLED PAPER

PAGE 2

THESE FIGURES TEMPT THE PUBLIC TO THINK THAT THE ENVIRONMENT OF A LOS ANGELES/OR A NEW YORK CITY/OR A BIRMINGHAM, ALABAMA WILL BE THE ENVIRONMENT OF THE FUTURE FOR EVERYONE.

EXTEND THAT PHILOSOPHY TO ALASKA/AND WE'LL BECOME RESIGNED TO THE BELIEF THAT THE ENVIRONMENT WE NOW ENJOY — MAY LAST FOR LESS THAN ONE MORE GENERATION.

I DON'T BUY THAT PHILOSOPHY AND I DON'T BELIEVE THOSE *up* FIGURES. THEY DON'T TELL THE REAL STORY. WHAT IS THE REAL COST? THE COST IS TO CARE.

THINK ABOUT IT. WHAT IF WE HAD STOPPED TO COUNT THE COST BEFORE WE ENTERED INTO WORLD WAR II?

INSTEAD WE SAID TO OURSELVES, "THIS IS A JOB WE HAVE TO DO. WHATEVER THE COST!" WE DECIDED WE WOULD DO WHATEVER IT WOULD TAKE TO WIN.

THAT ATTITUDE IS WHAT IS NEEDED AS WE APPROACH THE REMAINDER OF THIS CENTURY/AND GO INTO THE NEXT.

PAGE 3

I'VE HEARD SOME PEOPLE CRITICIZE SENATOR MUSKIE'S
BILL TO CLEAN UP THE NATION'S WATERS AS "UNATTAINABLE,"
OR "TOO IDEALISTIC."

NOW, I'M NOT NECESSARILY SAYING THE SENATOR'S BILL IS
THE EXACT ANSWER, BUT I DO SAY THIS:

WE WENT TO THE MOON IN TEN YEARS. . .

. . . WE WON WORLD WAR TWO IN FOUR YEARS. . . .

I'D TELL THE POLLUTERS WHERE TO GO IN LESS TIME THAN THAT!

WITH THAT ATTITUDE WE CAN DEVELOP OUR RESOURCES WITHOUT
DESTROYING OTHER RESOURCES.

PERHAPS / THE GREATEST CHALLENGE IN THIS REGARD / WHICH THE
ENGINEERS OF TODAY AND TOMORROW FACE / IS RIGHT HERE IN ALASKA.

SOME COME HERE AND RUN THEIR PROJECTS BY THE BOOK. . .
BUT THE BOOK OFTEN DOESN'T RELATE TO THE ARCTIC.

PAGE 4

THESE ARE THE ONES WHO ARE STILL TRYING TO RUN THE WORLD WITH THE ENGINEERING OF A TEMPERATE ZONE.

IF THE PIPELINE WERE BUILT THAT WAY, FOR INSTANCE. . .
DIG A TRENCH AND BURY IT. . . IT WOULD HAVE BEEN A DISASTER.
NOT ~~JUST~~ AN ENVIRONMENTAL DISASTER, A TECHNICAL DISASTER.

THE GREATEST OPPORTUNITY FACING US IS THE UNIQUENESS OF
THE ANSWERS TO THE ARCTIC. IN THIS SENSE, YOU MEN IN THIS
ROOM ARE TRULY ON ONE OF THE GREAT FRONTIERS OF TODAY, AND
FOR THAT I CONGRATULATE YOU.

I HAVE LONG BEEN A STUDENT OF THE ARCTIC.

THE ARCTIC IS LIKE THE OCEAN, MAN CANNOT WORK AGAINST IT.
HE MUST WORK WITH IT.

AND ALSO AS IN THE CASE OF THE OCEAN, MAN, IF HE IS NOT
CAREFUL, CAN READILY DESECRATE IT.

THAT DOESN'T MEAN THAT MAN SHOULD FEAR THE ARCTIC, OR STAY
CLEAR OF THE ARCTIC. INSTEAD HE SHOULD TOTALLY REGEAR FOR
THE ARCTIC.

PAGE 5

BECAUSE OF THIS UNIQUE AREA IN WHICH WE LIVE AND WORK /
MANY PEOPLE IN THE REST OF OUR COUNTRY HAVE BEEN WATCHING US /
AND WORRYING ABOUT US.

ESPECIALLY OVER THE PIPELINE.

BUT I AM HAPPY TO SAY THAT I BELIEVE WE HAVE TURNED THE
CORNER WITH THE AMERICAN PEOPLE REGARDING THE TRANS ALASKA
PIPELINE.

Right
I HAVE JUST RETURNED FROM FIVE WEEKS ON THE ROAD CRISSCROSSING
AMERICA. DURING THAT TIME I WAS INTERVIEWED 179 TIMES BY THE
MEDIA IN ALL THE MAJOR CITIES OF AMERICA.

ON NEARLY EVERY PROGRAM AND IN EVERY INTERVIEW I WAS ASKED
ABOUT THE PIPELINE. AS IN MY BOOK / I SIMPLY EXPLAINED THE
SITUATION AND THE PEOPLE LISTENED AND THEY UNDERSTOOD.

I AM A GREAT BELIEVER THAT THE AMERICAN PEOPLE / WHEN THEY
ARE GIVEN THE FACTS ABOUT A SITUATION / WILL MAKE THE RIGHT
DECISION.

PAGE 6

LEVEL WITH THEM, AND THE AMERICAN PEOPLE ARE GENEROUS IN THEIR DESIRE TO HELP. . .

. . . KEEP THEM IN THE DARK, AND THERE'S NO WAY YOU CAN WIN.

I THINK THAT AT LAST WE HAVE BEEN ABLE TO REMOVE THE FEARS FROM THE MINDS OF MOST AMERICANS ABOUT THE PIPELINE PROJECT.

AD LIB: "DO IT RIGHT, OR DON'T DO IT." "PALO ALTO" "BROWER"

ONE OF THE AREAS THE AMERICAN PUBLIC IS STILL SOMEWHAT CONFUSED ABOUT IS THE HIGHEST AND BEST USE OF PUBLIC LAND.

NEARLY EVERYONE SEES THE IMPORTANCE OF SETTING ASIDE AREAS FOR RECREATION, WILDLIFE PRESERVATION OR EVEN JUST SCENIC BEAUTY.

THIS IS ESPECIALLY IMPORTANT TO ALASKA BECAUSE SO MUCH OF THE PUBLIC LAND OF THE UNITED STATES IS RIGHT HERE WITHIN OUR BORDERS.

PAGE 7

glo
THERE ARE NUMEROUS WAYS TO SET LAND ASIDE --- NATIONAL PARKS,
NATIONAL FORESTS, RECREATION AREAS, WILDERNESSES, WILDLIFE
REFUGES AND MANY MORE.

TO THE GENERAL PUBLIC ALL THESE VARIOUS WAYS BLUR INTO ONE
AND THE SAME.

BUT EACH GEOGRAPHICAL AREA HAS ITS UNIQUE QUALITIES AND
REQUIRES AN APPROACH TAILORED TO ITS SPECIFIC NEEDS.

THIS IS THE REASON I HAVE LONG BEEN FIGHTING FOR A NATIONAL
INVENTORY OF ALL OUR PUBLIC LANDS. ONLY THIS WAY CAN WE
DETERMINE THE HIGHEST AND BEST USE OF THE PUBLIC DOMAIN.

A GOOD DEAL OF CONTROVERSY IN ALASKA SURROUNDS THE QUESTION
OF WILDERNESS AREAS, ON THE KENAI PENINSULA, IN GLACIER
BAY AND IN KATMAI.

MY PERSONAL BELIEF IS THAT THE FINEST CARE AND USE OF AN
ALASKAN AREA OF GREAT NATURAL BEAUTY WAS DRAWN UP FOR THE
WRANGELL MOUNTAINS AREA.

AD LIB: WRANGELL MOUNTAINS NATIONAL SCENIC AREA

PAGE 8

ONE OF THE HARD REALITIES OF DOING BUSINESS--- OR
JUST LIVING--- IN A FREE SOCIETY, IS THAT FREEDOM
ENDS WHEN IT INFRINGES ON THE RIGHTS OF OTHERS.

YOU OR I ARE FREE TO DESIGN OR PRODUCE A PRODUCT
FOR SALE.

BUT THAT FREEDOM ENDS WHEN OUR PRODUCT POLLUTES
THE AIR OR WATER. . .DESECRATES THE LAND. . . OR IN
SOME OTHER WAY REDUCES THE FREEDOMS OF SOMEONE ELSE.

THE LIFE BLOOD OF OUR FREE ENTERPRISE SYSTEM IS
COMPETITION. . .BUT IT MUST COME WITHIN A FRAMEWORK
OF EQUAL TREATMENT FOR ALL.

IN ALL MY DEALINGS WITH INDUSTRY, AS GOVERNOR AND AS
SECRETARY OF THE INTERIOR, I FOUND THIS TO BE TRUE.

THE GREAT INDUSTRIES/ AND THE GREAT LOBBIES, WILL
ACCEPT STRICT ENVIRONMENTAL CONTROLS/--- AND ACCEPT THEM
ENTHUSIASTICALLY. . . .

IF THEY ARE ADMINISTERED EVENLY AND FAIRLY FOR ALL.

PAGE 9

THE COST OF INCLUDING ENVIRONMENTAL PROTECTION ✓
IS PART OF THE COST OF DOING BUSINESS. . .
THAT IS A COST WHICH THE CONSUMER--- THE PUBLIC---
WILL NOT OBJECT TO, BECAUSE THAT IS THE COST OF CARE.

AD 40 *Ant-Safety light power*

HAND-IN-HAND WITH OUR FREE ENTERPRISE SYSTEM OF BUSINESS ✓
WE HAVE A SYSTEM OF GOVERNMENT IN THIS COUNTRY WHICH IS
THE BEST--- IN MY JUDGMENT---- IN THE HISTORY OF
ANGLO-WESTERN CIVILIZATION.

THANK GOD OUR SYSTEM HAS ROOM IN IT FOR ANGRY MEN, . .

. . .MEN WHO ARE ANGRY ABOUT THINGS THAT HAVE HAPPENED
IN THE PAST. . .ANGRY ABOUT THINGS THAT ARE NOT HAPPENING
NOW. . .ANGRY ABOUT THINGS THAT MIGHT HAPPEN IN THE FUTURE.

HONEST ANGER--- COUPLED WITH HEART CAN INSURE THAT THE
LONG-TERM GOOD OF THE PEOPLE/IS NOT IGNORED FOR A TEMPORARY
POLITICAL ADVANTAGE. . .

. . .IT CAN MAKE SURE THAT DECISIONS ARE NOT BASED ON
JUST MAKING THINGS EASIER FOR GOVERNMENT--- INSTEAD OF
THE PEOPLE!

PAGE 10

IF PEOPLE CARE, THE SYSTEM IS GREAT, AND IT CAN
BE MADE TO WOPK!

.

AT THE INTERIOR DEPARTMENT, WE DIDN'T SPEND OUR TIME
TRYING TO GET CONGRESS TO PASS NEW LAWS.

AN EXAMPLE? . . . WATER POLLUTION.

WE DUG UP A 70-YEAR-OLD LAW WHICH GAVE US ALL THE LEGAL
BACK-UP WE NEEDED FOR OUR ENFORCEMENT ACTIONS. . . .

. . . . INSTEAD OF STUMBLING AROUND ON CAPITOL HILL FOR
MONTHS, JUST TRYING TO LOOK LIKE WE WERE SOLVING
PROBLEMS, WE ACTED TO SOLVE PROBLEMS. INSTEAD OF GETTING
BOGGED DOWN IN ALL THE USUAL BUREAUCRATIC REASONS FOR
NOT DOING ANYTHING.

.

TODAY, BUSINESS AND GOVERNMENT MUST REALIZE THAT THEY
HAVE AN OBLIGATION. . . .

PAGE 11

. . .AN OBLIGATION---- TO THEMSELVES AND THE WORLD----
TO PROVE THAT THEY HAVE THE ABILITY TO PROVIDE NEEDED
GOODS AND SERVICES---- LIKE THE OIL ON THE NORTH SLOPE----
BUT NOT AT THE EXPENSE OF OTHER VALUES...

WHAT IS THE VALUE OF A SUNSET?

WHAT IS THE VALUE OF A CHANCE TO RENEW THE HUMAN SPIRIT?

WHAT IS THE PERSONAL VALUE OF SEEING MT. MCKINLEY FOR
THE FIRST TIME SHINING IN THE SUN?

THESE ARE THINGS YOU CAN'T BUY ON THE NEW YORK STOCK
EXCHANGE.

Print Enterprises, to print

FROM ALASKA TO HOUSTON. . . SANTA BARBARA TO NEW YORK. . .
WE STILL HAVE A JOB TO DO, CORRECTING A FALSE PUBLIC
IMAGE ABOUT "THE ENVIRONMENT."

IN REALITY, THE ENVIRONMENT INVOLVES HOW PEOPLE RELATE
TO WHERE THEY LIVE, AND THEIR SURROUNDINGS---- HOWEVER
GOOD OR BAD THEY MIGHT BE.

PAGE 12

THE ENVIRONMENT CAN BE THE CLEANLINESS OF PRUDHOE BAY. . .
OR JUST THE STRUGGLE TO STAY ALIVE--- "NEXT DOOR," IN
BARROW. . .

. . .IT CAN BE THE FINEST HOUSE IN WASHINGTON, D.C. . . .
OR A GHETTO, JUST BLOCKS AWAY.

THE ENVIRONMENT CAN BE BUILDING FENCES AROUND OURSELVES----
SO THE ONLY WORLD WE SEE IS OUR OWN LITTLE WORLD. . .

. . .OR IT CAN BE FACING PROBLEMS--- NOT AS PROBLEMS TO BE
IGNORED, BUT AS OPPORTUNITIES, TO IMPROVE THE WORLD IN
WHICH WE ALL MUST LIVE.

THE HUMAN SPIRIT IS SATISFIED BY COMFORT--- OR BY
CHALLENGE.

BUT CHALLENGE PROVIDES THE GREATEST SATISFACTION OF
THE TWO.

Right
AND AS I LOOK AHEAD TO THE END OF THIS CENTURY, I AM
CONFIDENT THAT OUR GOVERNMENTAL SYSTEM CAN WORK
AND ADAPT.

PAGE 13

THE SIMPLE KEY IS TO REMEMBER PEOPLE.

IF GOVERNMENT WILL TREAT PEOPLE AS HUMANS, INSTEAD
OF AS VOTES, THEN THE SYSTEM WILL WORK.

AND IF BUSINESS AND INDUSTRY WILL TREAT PEOPLE AS
HUMANS, INSTEAD OF JUST AS MARKETS, THEN A WHOLESOME FREE
ENTERPRISE SYSTEM WILL FLOURISH.

LET'S ADDRESS OURSELVES TO LONG-TERM DECISIONS. . . .

. . . DECISIONS WHICH CONSIDER THE ENVIRONMENT OF THE
MIND, HEART AND SOUL.

THEN AMERICA WILL AWAKEN, AND SHAKE OFF HER FRUSTRATIONS
AND FEARS.

AND WE WILL PROVE TO THE WORLD, THAT IT IS POSSIBLE TO
CARE FOR THE NEEDS OF ALL THE PEOPLE. . . AND THE NATURAL
ENVIRONMENT AS WELL.

PAGE 14

IN THIS DECADE OF NEW AWARENESS, WE ARE BEGINNING
TO REALIZE THAT WE MUST HAVE MORE THAN MANAGEMENT----
AND PRODUCTIVITY--- WE MUST ALSO HAVE A CONSCIENCE.

WE MUST HAVE MEN AND WOMEN WHO ARE EXCITED ABOUT LIFE,
AND WANT TO CONTRIBUTE SOMETHING GREAT TO IT.

.

AS MEMBERS OF THE PROFESSIONAL COMMUNITY, YOU CAN HELP
AMERICA RESPOND TO THE DREAMS--- AND EVEN THE DEMANDS---
OF THE GREATEST SPECIAL INTEREST OF ALL:

Sho
THE AMERICAN PUBLIC.

THE ENVIRONMENT CAN BE SAVED, WHILE WE ALSO DEVELOP
OUR VITAL RESOURCES. . . .

IF WE WILL ALL REALIZE THAT THE COST IS TO CARE.

I SAY, "CARE" IS A FAIR PRICE TO PAY FOR A MORE FULFILLING,
PEOPLE-ORIENTED FUTURE.

THANK YOU.

X X X X X X

TESTIMONY OF WALTER J. HICKEL AT ALASKAN PIPELINE HEARINGS
FEBRUARY 25, 1971

AS FORMER SECRETARY OF THE INTERIOR AND FORMER GOVERNOR OF THIS STATE, I FEEL THE EXPERIENCE GAINED IN THE FRONT LINES OF THIS FIGHT FOR KNOWLEDGE ON THIS VITAL ISSUE MAKES IT IMPORTANT THAT I CONVEY MY THOUGHTS AND JUDGMENT.

I CAN UNDERSTAND THE FEAR AND CONCERN OF MILLIONS OF AMERICANS REGARDING THE TRANS ALASKAN PIPELINE PROJECT.

FEAR GENERALLY COMES FROM THE LACK OF KNOWLEDGE.

FOR THIS REASON I ~~DEMANDED=AND~~ ORDERED THAT THESE PUBLIC HEARINGS BE HELD.

FOR THOSE WHO DON'T UNDERSTAND THE ARCTIC, I RELATE IT TO WALKING INTO A DARK ROOM. IF YOU OPEN THE DOOR, YOU DON'T CHARGE IN. THERE MAY NOT BE A FLOOR THERE. IT MAY BE COVERED WITH ALL SORTS OF OBSTACLES. IT WOULD BE DANGEROUS.

BUT THEN WHEN YOU TURN ON THE LIGHT --- THE LIGHT OF KNOWLEDGE --- IT MAY BE A GREAT ROOM WITH GREAT POTENTIAL FOR MANKIND. THAT IS THE ARCTIC.

PAGE 2

THOSE OF US WITH KNOWLEDGE AND CONCERN MUST TURN ON THE LIGHT SO THAT THOSE WHO FEAR CAN CLEARLY SEE THE BEAUTY OF DOING IT RIGHT.

IF THE PIPELINE CANNOT BE BUILT SAFELY IN PROFESSIONAL JUDGMENT, THEN IT SHOULD NOT BE BUILT.

BUT I AM CONVINCED THAT IT CAN BE BUILT SAFELY, AND IT'S UP TO GOVERNMENT TO DEMAND THAT STIPULATIONS AND REGULATIONS BE FOLLOWED SO THAT WE CAN HAVE THE WISE USE AND CONSERVATION OF THESE RESOURCES.

THE DISCOVERY OF OIL AND GAS AT PRUDHOE BAY IN SUFFICIENT QUANTITIES CULMINATED TWO DECADES OF SEARCH ON THE NORTH SLOPE BY PRIVATE INDUSTRY AND GOVERNMENT.

MY PREDECESSOR, SECRETARY UDALL, AUTHORIZED THE ORIGINAL LEASES OF THE PETROLEUM RICH NORTH SLOPE IN JUNE 1964. CERTAINLY IF OIL WAS FOUND IN THIS AREA IN COMMERCIAL QUANTITIES IT WOULD BE NECESSARY TO TRANSPORT IT BY SOME MEANS TO MARKET.

ONE OF MY FIRST ACTS AS GOVERNOR WAS TO RECOMMEND TO THE FEDERAL GOVERNMENT THAT A CENTRAL STRIP OF ALASKA BE DESIGNATED AS A TRANSPORTATION CORRIDOR, TO INCLUDE ALL FORMS OF TRANSPORTATION, TO THE NORTH SLOPE.

PAGE 3

THIS CORRIDOR CONCEPT AVOIDS THE PLIGHT OF MANY OTHER STATES WHERE THOUSANDS OF MILES OF HIGHWAYS LACE THE LANDSCAPE.

HERE IN ALASKA THE CORRIDOR IDEA WILL CONFINE THE TRANSPORTATION FACILITIES TO A NARROW RIBBON WHICH WILL LINK UP OUR ENORMOUS STATE FROM THE SOUTH TO THE NORTH YET AVOID, BY MANY MILES, THE GREAT WILDERNESS AREAS WE ARE SO PROUD OF.

THE TRANSPORTATION CORRIDOR HAS BEEN PROPOSED AND PUBLISHED IN THE FEDERAL REGISTER. A COPY OF THE FEDERAL REGISTER PUBLICATION COVERING THIS CORRIDOR CLASSIFICATION IS ATTACHED TO MY TESTIMONY FOR THE RECORD.

ALASKANS DESERVE THE OPPORTUNITY TO ENRICH THE LAND THEY LOVE, AND SHARE ITS GREAT NATURAL WEALTH WITH THE REST OF THE NATION, AND THE WORLD.

NOW LET ME TAKE THIS OPPORTUNITY TO REVIEW EVENTS WHICH LED TO THE FORMULATIONS OF THE ENVIRONMENTAL AND TECHNICAL STIPULATIONS THAT THIS HEARING IS ASSEMBLED TO CONSIDER.

SOON AFTER I BECAME SECRETARY OF THE INTERIOR THE QUESTION OF MOVING THE OIL FOUND IN PRUDHOE BAY TO AN ICE-FREE ALASKAN PORT WAS BEFORE US.

IN RESPONSE TO THE INTEREST IN EXPLORING THIS PROBLEM, PRESIDENT NIXON, IN APRIL OF 1969, ESTABLISHED A FEDERAL TASK FORCE

PAGE 4

THIS GROUP CONSISTED OF REPRESENTATIVES FROM THE DEPARTMENTS OF THE INTERIOR, COMMERCE, DEFENSE, H.E.W., TRANSPORTATION, H.U.D. AS WELL REPRESENTATIVES FROM AN AD-HOC CONSERVATION-INDUSTRY COMMITTEE, MEMBERS OF THE SCIENCE AND TECHNOLOGY GROUP OF THE NATIONAL SCIENCE FOUNDATION, AND THE OFFICE OF BUDGET AND MANAGEMENT.

THE AGENCIES DESCRIBED ASSEMBLED THE ENVIRONMENTAL STIPULATIONS OVER A YEAR AGO IN A HIGHLY PROFESSIONAL MANNER.

ON FEBRUARY 20, 1970 I APPOINTED A TECHNICAL ADVISORY BOARD TO ASSEMBLE EXISTING AND ACQUIRE NECESSARY ADDITIONAL DATA TO ADVISE ME OF THE GEOLOGICAL AND ENGINEERING FACTORS NECESSARY TO RENDER A DETERMINATION ON THIS VITAL QUESTION.

MORE THAN TWO DOZEN FEDERAL SCIENTISTS AND ENGINEERS, ALL OF THEM PROFESSIONALS, EXPERIENCED IN ALASKA, LABORED WITH DEDICATION TO ACCOMPLISH THIS TASK.

THIS GROUP WAS HEADED BY THE DIRECTOR OF THE U.S. GEOLOGICAL SURVEY, DR. WILLIAM PECORA, WHO HAS NOW RECOMMENDED THE TECHNICAL STIPULATIONS WHICH MUST BE MET ALONG THE ENTIRE ROUTE.

MAXIMUM SAFETY WAS THE KEY WATCHWORD IN THOSE DELIBERATIONS. I COMMEND THEM FOR A JOB WELL DONE.

PAGE 5

THE TECHNICAL STIPULATIONS REPRESENT THE FILTRATION OF THIS KNOWLEDGE INTO A WORKABLE ASSEMBLY OF SCIENTIFIC FACTS TO CREATE A SOUND FOUNDATION FOR THE ENGINEERING JUDGMENT TO INSURE THAT THIS PROJECT MEETS THE HIGHEST STANDARDS OF ENGINEERING AND ENVIRONMENTAL EXCELLENCE.

THE PROFESSIONAL GEOLOGISTS FROM BOTH IN AND OUT OF GOVERNMENT CONCLUDED EARLY IN THEIR DELIBERATIONS THAT A PIPELINE COULD BE BUILT SAFELY ABOVE GROUND ALL THE WAY.

WE QUESTIONED WHETHER THAT WAS ENVIRONMENTALLY ACCEPTABLE.

THE OIL COMPANIES WANTED IT BURIED ALL THE WAY, WE KNEW THAT WAS NOT POSSIBLE.

TO GATHER THE NECESSARY GEOLOGICAL INFORMATION TO EVALUATE THE DECISION OF HOW IT WOULD BE BUILT, CORE DRILLING SAMPLES HAD TO BE TAKEN IN CRITICAL AREAS ALONG THE PROPOSED ROUTE.

THIS WOULD GIVE THE GEOLOGISTS THE INFORMATION NEEDED TO EVALUATE WHERE THE PIPELINE COULD BE BURIED SAFELY AND WHERE IT WOULD HAVE TO GO ABOVE GROUND, AND HOW.

PAGE 6

THE CRITERIA TO MAKE THIS JUDGMENT HAS BEEN ARRIVED AT.

YES THERE WERE PRESSURES. THERE WERE PRESSURES FROM THOSE WHO SAID NOTHING SHOULD HAPPEN. THERE WAS PRESSURE FROM THOSE WHO SAID IT SHOULD HAPPEN IMMEDIATELY.

PRESSURES COME WITH RESPONSIBILITY, AND RESPONSIBLE ACTION COMES AFTER EVALUATING ALL THOSE PRESSURES IN THE BEST INTEREST OF 200 MILLION AMERICANS.

AND AS TO MY RECORD AS SECRETARY OF THE INTERIOR, IT IS CLEAR. AND I FEEL SO GOOD AND SO FREE... BUT THAT IS ALL BEHIND US.

GOD GAVE TO AMERICA AN ABUNDANCE OF RESOURCES NOT TO USE WITH ABUSE, BUT TO USE WITHOUT ABUSE, AND THIS IS THE ISSUE.

WE ARE RAPIDLY APPROACHING A CIVIL WAR OF PRIORITIES -- NEIGHBOR AGAINST NEIGHBOR, MAN AGAINST NEED --- OVER THE PRESERVATION OR USE OF OUR RESOURCES.

BITTER VOICES ARE BEING RAISED. . .

. . .ON THE ONE SIDE PLEADING, "GIVE US WORK, GIVE US ENERGY FOR OUR HOMES."

PAGE 7

. . .ON THE OTHER SIDE SHOUTING, "STOP THE RAPE OF OUR ENVIRONMENT. PROTECT OUR WILDLIFE AND OUR WILDERNESS."

SOMEWHERE IN BETWEEN THERE'S A STILL SMALL VOICE THAT SAYS, "IF WE WORK TOGETHER, WE CAN DO IT RIGHT."

WE CANNOT UNDO ALL THE WRONGS OF YESTERDAY, BUT WE CAN GUIDE RESPONSIBLY THE NEEDS OF TOMORROW.

WE CANNOT CONDONE EXPLOITATION OF ONE RESOURCE AT THE EXPENSE OF ANOTHER RESOURCE . . . , WHATEVER THAT RESOURCE MIGHT BE.

BUT NEITHER CAN WE PRESERVE UNTOUCHED ALL THOSE RESOURCES THAT MAN NEEDS.

ALL HUMAN NEEDS MUST BE TAKEN INTO CONSIDERATION - - - THOSE OF EVERYDAY NECESSITY SUCH AS ENERGY - - - OR THOSE OF LASTING BEAUTY, SUCH AS A WILDERNESS.

IN EVALUATING THE TOTAL SITUATION, I AM CONVINCED WE CAN MAKE USE AND CONSERVATION COMPATIBLE . . . AND FOR THE GOOD OF THE HUMAN, THEY MUST BE MADE COMPATIBLE.

PAGE 8

I HAVE THE UTMOST CONFIDENCE THAT WITH OUR TECHNOLOGY
AND SINCEPE DESIRE TO SEE A JOB WELL DONE, THIS CAN HAPPEN.

WITH THIS PROJECT - - -LET US SHOW NOT ONLY AMERICA - - -
BUT THE WORLD - - - THE DIRECTION WE MUST GO TO CARE FOR
ALL THE HUMAN NEEDS FOR THE LIVING OF LIFE.

I CARE. I CAN DO NO MORE THAN THAT.

SO LET US PROCEED WITH THAT KIND OF CONSCIENCE - - - WITH
THE CONCERN AND THE NEEDS OF ALL AMERICANS IN MIND.