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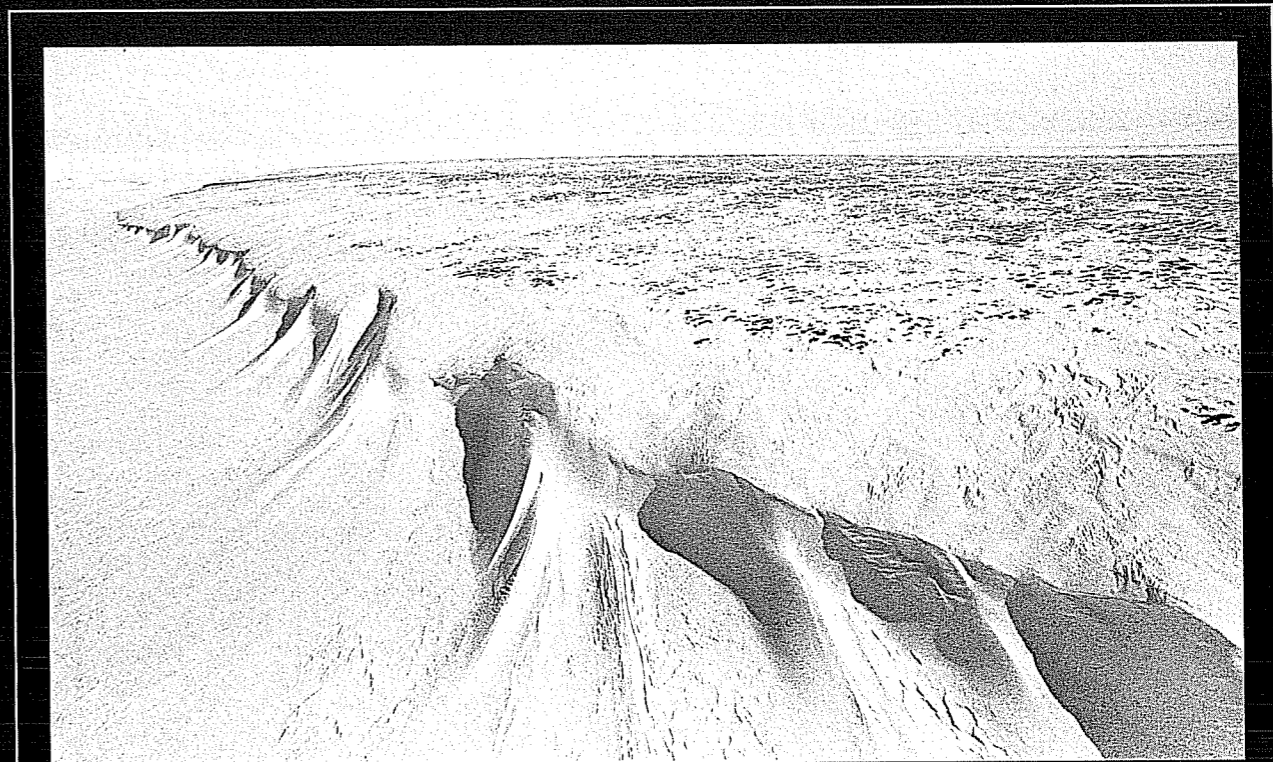
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Why not drill for oil in Alaska's Arctic National Wildlife Refuge?

How much oil? Untold riches or nothing at all?

Only way to find out is to drill

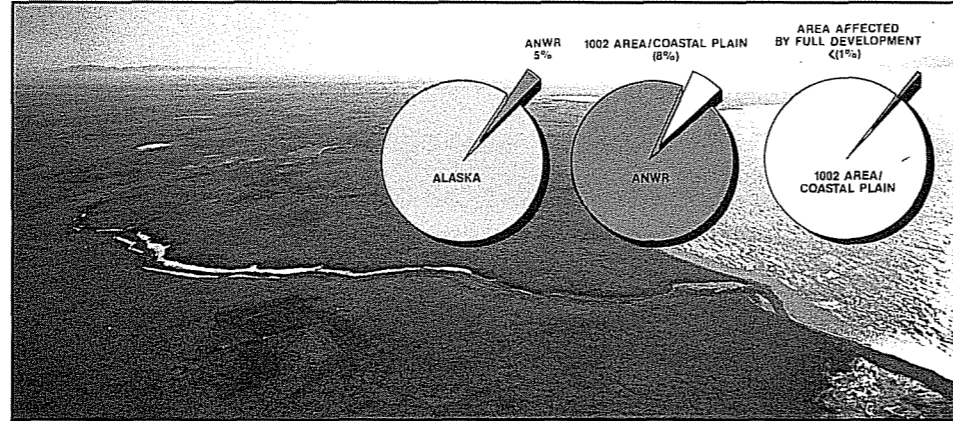
At 19 million acres, the Arctic National Wildlife Refuge is as big as South Carolina and almost as big as Indiana. Located in Alaska's Northeast corner, the refuge features striking mountain peaks which give way to a vast tundra coastal plain void of trees, but drained by streams and gullies into the Beaufort Sea.

Nearly half of the refuge (8 million acres) is closed to development through a federal Wilderness designation. When combined with similarly managed lands within the refuge, some 92% of this vast conservation unit is off-limits to development.

But outside the Wilderness zone lies the 1.5 million acre Coastal Plain, an area representing about 8 percent of the refuge. This remote, windswept and frozen strip of land along the northernmost point of the refuge has become the focus of an intense national debate for here lies geological structures which hint of tremendous oil reserves, perhaps as large as some of the great oil pools of Saudi Arabia. If major reserves are discovered, they could substantially improve America's balance of payments and make the U.S. less reliant on foreign sources of oil.

After years of study, the Interior Department concluded in 1987 that the Coastal Plain was the nation's best single opportunity to increase oil production and recommended leasing. However, environmentalists have vowed to keep oil companies from drilling even though exploration and development activities would utilize only a sliver of the vast refuge.

But with U.S. production down sharply, oil imports accounting for 55 percent of the foreign trade deficit and yet another war in



the Middle East, the environmentalists' case for not exploring the Coastal Plain is weakened by economic and geopolitical imperatives. Yet environmentalists have promised no compromises in ANWR.

In their campaign to expand the Wilderness designation over the Coastal Plain, thereby blocking drilling, opponents have focused on emotionally compelling but inaccurate concepts, particularly that the Coastal Plain is unique and pristine. Both concepts are untrue.

The lands considered for leasing are only two-thirds of the Coastal Plain, which itself is a small slice of the refuge. The other one-third of the plain, 400,000 acres, is already designated Wilderness and is not being considered for leasing.

Moreover, the refuge is by no means America's last Wilderness. ANWR makes up just 5 percent of Alaska and about 12 percent of the land in federal conservation units in the 49th state alone. Overall, there are 56 million acres of designated Wilderness in Alaska, more than enough the cover

the entire state of Utah.

The Interior Department estimates that oil production in ANWR would only require about 12,700 acres or about 0.07 percent of ANWR. Although the facilities would be impressively large if one were standing in their midst, they would amount to only a small sliver of the refuge, leaving over 99 percent of the land undisturbed.

Oil traps beneath the Coastal Plain could hold gigantic amounts of oil. Finding out is of little risk to the environment since exploration wells can be drilled in winter when the ground is nearly immune from damage.

According to the latest Interior Department estimates, there is a 46 percent chance the refuge holds commercial quantities of oil. In the oil business, the average chance of discovering a major find in wildcat drilling is 2 percent. If commercial quantities are found in ANWR, Interior says they could amount to over 9 billion barrels, enough to

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**Message from
the Executive
Director**
by
Becky L. Gay

The opening of the ANWR Coastal Plain to responsible oil and gas exploration and development has been a top priority of the Resource Development Council for many years. Legislation to open the Coastal Plain to oil leasing is now being debated in the 102nd Congress. Coastal Plain development is also a centerpiece of the new national energy strategy, released by President Bush in February.

More ANWR facts...

Overall U.S. oil production

• Domestic oil production has fallen to 7 million barrels per day, a 5.3 percent drop from last year. This is a 20 percent decline (2 million barrels per day) from 1986.

Alaska North Slope production

• North Slope oil production has averaged about 2 million barrels per day, about 25 percent of total U.S. domestic production. However, Prudhoe Bay production has peaked and will soon decline at a rate of 10 to 12 percent a year. New discoveries are needed to offset this decline and extend the life of the Trans-Alaska Pipeline.

• Total North Slope production passed the 8 billion barrel mark in 1990, saving the nation approximately \$192 billion in oil import costs.

U.S. consumption

• Oil consumption in the U.S. has exceeded domestic production for more than 20 years.

• U.S. oil consumption increased 6.5 percent over the past year, climbing from 16.4 million barrels per day to 17.5 million barrels per day.

U.S. oil imports

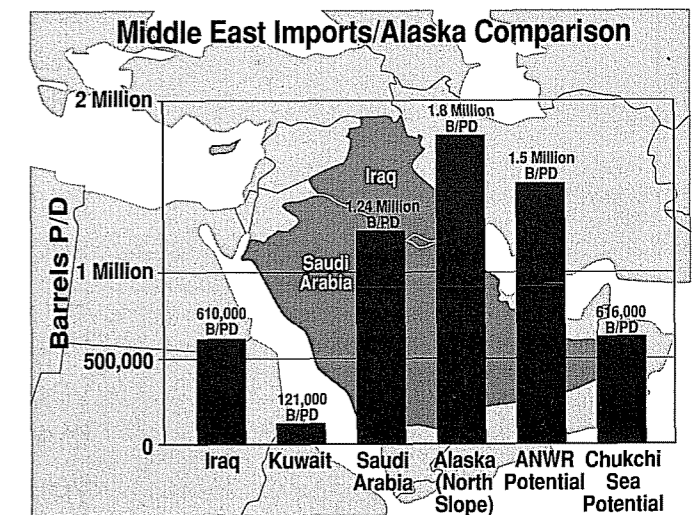
• By July 1990, the U.S. imported 51.3 percent of its oil, compared to 33 percent in 1986.

• In 1990, the U.S. imported 7.9 million barrels of oil a day at a cost of \$61.3 billion a year.

• Oil imports now account for 60 percent of the U.S. trade deficit.

Passage of legislation that would open a small corner of ANWR to oil and gas leasing is largely dependent upon the pressure a congressman or senator gets from his or her constituents back home. As a result, RDC members' action is imperative. It is critical that you now contact your friends, relatives and business associates in other states and educate them on why Congress should open the Coastal Plain to responsible energy development. RDC has a variety of ANWR brochures and articles you can send your friends to bring them up to date on the issue. This edition of Resource Review serves as an excellent educational document on ANWR. It's packed with facts and answers to the most frequently asked questions. We urge you to send this newsletter and other RDC material to those who can help us make a difference.

As far as Congress goes, personal letters receive attention, and are more effective than form letters in getting a legislator to recognize your point of view. To write your senator: Honorable "Senator's Name," U.S. Senate, Washington, D.C. 20510. To write your Representative: Honorable "Representative's Name," U.S. House of Representatives, Washington, D.C. 20515. Please do it now!



• Imports are likely to rise to \$100 billion a year because of continuing tension and conflict in the Middle East.

National economic benefits

• The Coastal Plain has the potential to reduce the need for imported oil and cut the trade deficit. One million barrels per day of new oil production would save the U.S. \$14 billion a year.

• According to the Interior Department, net national economic benefits from ANWR production could reach \$325 billion.

• Lease sale receipts from bonus bids are projected to range from \$2 to \$4 billion, even if no oil is discovered. Substantial revenues will be generated from production royalties.

• ANWR development could increase employment nationwide by 735,000 jobs by the year 2005. The U.S. gross national product would increase by \$50 billion.

• Every state would benefit economically in supplying billions of dollars of equipment and services needed to develop the Coastal Plain.

The Resource Development Council (RDC) is Alaska's largest privately funded nonprofit economic development organization working to develop Alaska's natural resources in an orderly manner and to create a broad-based, diversified economy while protecting and enhancing the environment.

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Writer & Editor
Carl Portman



ANWR: THE FACTS

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- A new report by the Interior Department estimates a 46 percent chance of finding economically recoverable oil in the Coastal Plain. This compares to a one in 50 chance in Lower 48 states.

Impact of oil production on the North Slope

- The "footprint" or land use impacts of oil and gas development on the North Slope are small and getting smaller as technology advances.

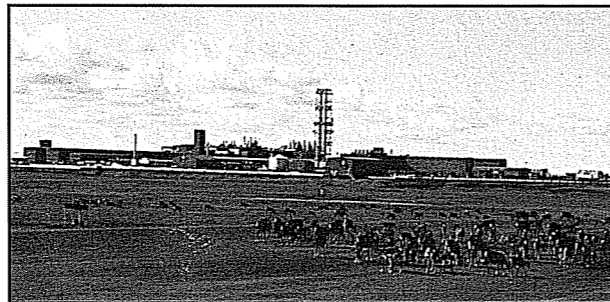
- Producing 2 million barrels of oil per day, Prudhoe Bay, the largest field in America, accounts for 25 percent of the nation's domestic production. But all of Prudhoe's gravel well pads, gathering lines, production facilities, roads, gas injection plants, airstrips and other infrastructure occupy less than 15,000 acres of land.

- Full development of the 26 oil and gas prospects found on the Coastal Plain's 1.5 million acres would require the use of only 12,650 acres, an area equivalent to the size of Dulles International Airport. With evolving technology, oil development in ANWR can be done with up to 75 percent less physical impact.

Impact of production on caribou and wildlife

- Full production is projected to require the use of less than one percent of the leasing area's 1.5 million acres.

- The Porcupine Caribou Herd uses portions of the Coastal Plain for six to eight weeks during most summers. The



Caribou have adapted well to energy development on Alaska's North Slope. The Central Arctic herd at Prudhoe Bay has increased six-fold since 1973.

herd's range covers over 60 million acres in Alaska and Canada. Habitat is not a limiting factor to the herd's productivity.

- The Central Arctic Caribou Herd at nearby Prudhoe Bay has grown six fold to over 20,000 animals since the Trans-Alaska Pipeline was built and North Slope oil fields have been brought on line. The caribou of the Central Arctic herd have not been displaced by oil development. They are everywhere they use to be and they still use the same areas for the same reasons.

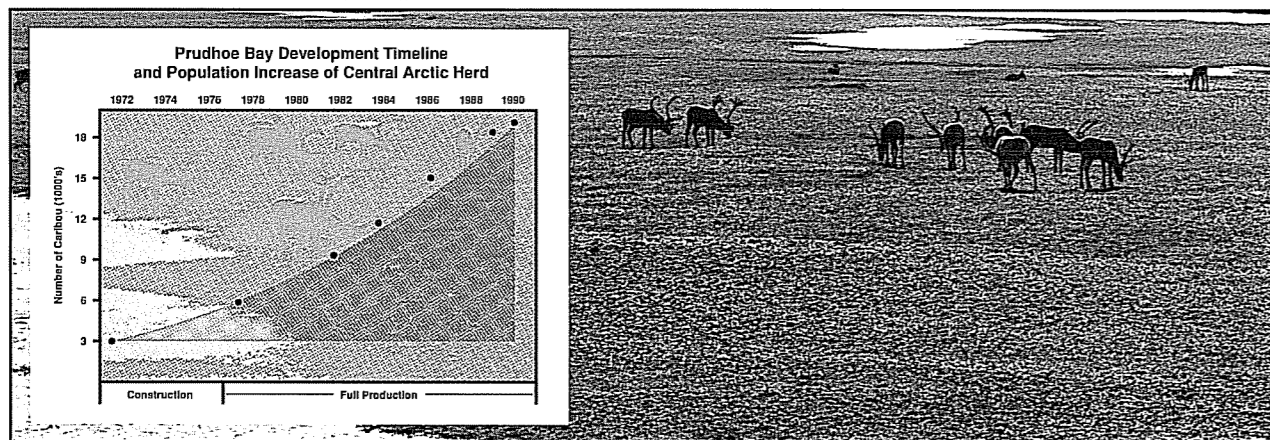
- Hunting is not permitted along the Trans-Alaska pipeline or in the Prudhoe Bay area.

- Migration routes and feeding areas used by caribou are carefully studied and mapped. Techniques for minimizing impacts on the herd are constantly improved.

- The U.S. Fish and Wildlife Service has found that oil development should not have a major impact on the Porcupine Caribou Herd.

- The State of Alaska has concluded that with the combination of current environmental controls and the innovative arctic technology developed by the oil industry over more than a decade of operations at Prudhoe Bay, ANWR's Coastal Plain can be explored and developed with no measurable impact to important wildlife and habitat values.

(Continued page 7)



Most frequently asked questions

Why should Congress open the Coastal Plain to oil development?

Congress should open ANWR's Coastal Plain because its potentially enormous oil reserves could help reduce America's growing dependence on foreign oil. With petroleum now accounting for about 65 percent of our nation's energy supply, development of significant domestic resources is a logical part of the solution. The Department of the Interior has concluded that the Coastal Plain offers the best single opportunity to increase domestic oil production.

Isn't ANWR drilling pointless since development would provide only a few months supply of oil?

It takes the development of many fields, large and small, to meet America's petroleum needs, but this question is based on the condition that all of ANWR's oil would be pumped out all at once and consumed by every American consumer at once. In reality, oil is extracted over time, in the case of ANWR, probably over thirty years.

If ANWR's oil reserves match those at Prudhoe Bay, we can expect the Coastal Plain to produce an average of more than one million barrels of oil every day for at least 20 years — with production peaking just below 2 million barrels a day by the year 2005. That level of production would place ANWR among the top eight oil producing nations in the world and make up about 20 percent of all domestic production.

What percentage of the ANWR Coastal Plain would be affected by development?

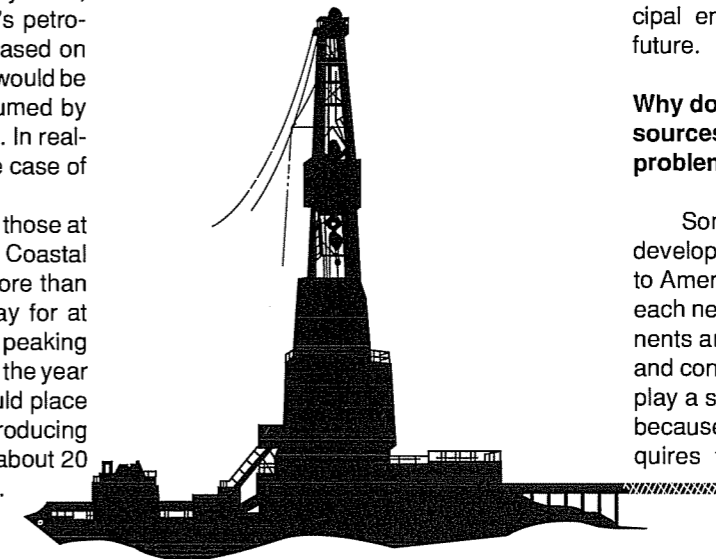
ANWR is 19 million acres, but the area of the Coastal Plain being considered for oil leasing is only 1.5 million acres, barely 8 percent of ANWR. According to the Interior Department, less than one percent of the Coastal Plain would be directly and indirectly affected by development. That's less than one-tenth of one percent of the refuge. This is smaller than Washington, D.C.'s Dulles International Airport in an area the size of South Carolina. Because of major advances in oil field technology and design, the "footprint" of future energy development in the arctic will become smaller and smaller, ensuring that alteration of land will be minimal and disturbances to wildlife can be avoided in almost all cases.

Isn't energy conservation a better solution to our energy problems?

Conservation must play a role in reducing this nation's growing dependence on oil imports, but it alone cannot solve the problem. America will require both energy conservation and new oil development just to keep pace with anticipated growth in the 21st century. According to the Department of Energy, U.S. energy use will increase about 11 percent by the year 2000, even with increased conservation. If we were to suddenly increase conservation efforts dramatically, the critical need for oil would continue for decades. To strengthen our energy security and to meet the energy needs of a growing economy, America must produce more of the energy it uses. There is no realistic scenario in which petroleum consumption can be eliminated as the principal energy source for the foreseeable future.

Why don't we look to alternative energy sources for the answer to our energy problems?

Some believe that a crash program to develop new energy sources is the answer to America's dependence on oil. However, each new energy source has its own opponents and its own environmental problems and concerns. As a practical matter, oil will play a significant role for decades to come because our economic infrastructure requires fossil fuels. Oil and natural gas



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Only way to find out is to drill

(Continued from page 2)

increase known domestic oil reserves by one-third. However, Interior claims that it's most likely that an ANWR discovery would yield about 3.2 billion barrels of oil, making the Coastal Plain the third largest oil field ever discovered in America.

But no one can be sure. There may be no oil or only a few hundred thousand barrels, but in the unlikely event that one of ANWR's major oil traps is full, untold yields may await discovery. Although the odds are small, one oil trap known as No. 18 could yield more oil than Saudi Arabia's proved reserves of about 254 billion barrels. Imagine the geopolitical ramifications and the jolt that would shake through all of OPEC if such a discovery were made.

The only way to find out how much oil is there is to drill. And the downside risks of exploring in the refuge are far fewer than most people realize while the upside is very bright.

ANWR: Most frequently asked questions

(Continued from page 3)

account for 65 percent of U.S. energy. American agriculture, the world's most productive, consumes nearly half of the oil and natural gas production. Our transportation system is 95 percent dependent on oil. The transition to alternative sources will be a long and gradual process. In the meantime, petroleum is the safest and most practical energy source. ANWR provides the best prospect for domestic production.

Why should we move to open ANWR now?

In 1990, America spent some \$50 billion on oil imports, which accounted for about half of the nation's petroleum requirements. Meanwhile, over half of Prudhoe Bay's oil reserves have been consumed and field production is now declining. Since Prudhoe Bay accounts for about 25 percent of all U.S. oil production, and America's infrastructure is largely dependent on oil and petroleum products, we must develop new domestic oil fields to meet our needs until alternative energy becomes available on a wide scale. ANWR is likely to contain the most promising oil field ever discovered in North America. It offers the best prospect to replace lost production from other aging fields. ANWR could give America the security it needs while alternative energy is developed.

Will oil operations on the sensitive Coastal Plain threaten arctic wildlife and the environment?

The facts say no. When opponents attempted to block development of Prudhoe Bay oil, they claimed that production would reduce or destroy caribou populations and that destruction of wetlands would decimate bird life. But with the application of evolving arctic oil technology, none of these problems materialized. After 20 years of Prudhoe Bay development, the caribou population across North Slope oil fields has increased six fold. Air and water are carefully monitored. The constantly evolving and improving technology developed for arctic operations would assure ANWR would be a world model if developed in a timely manner.

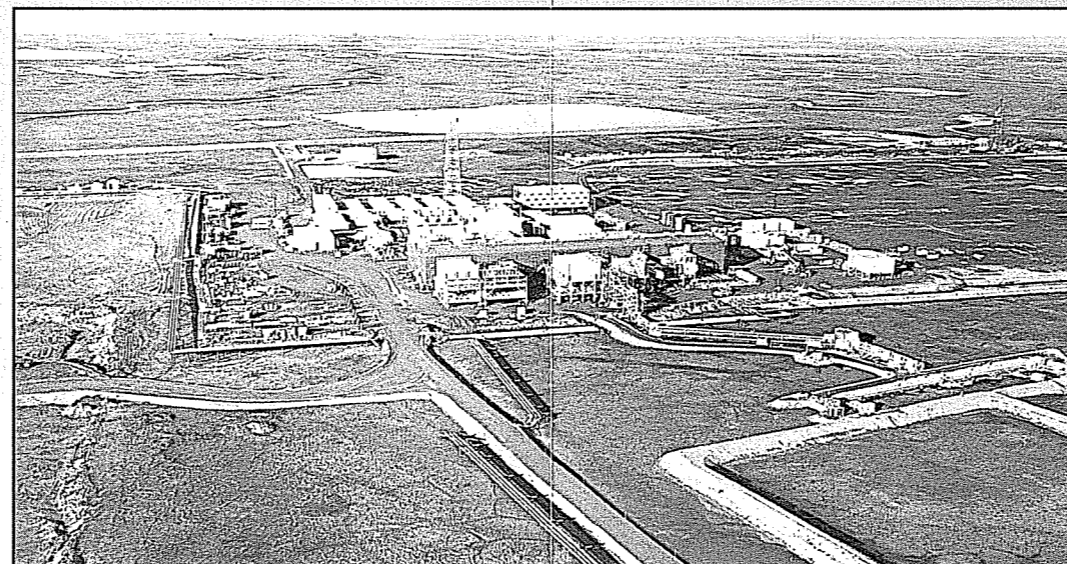


Who would monitor development activity?

Numerous federal agencies, including the U.S. Fish and Wildlife Service, together with agencies of the State of Alaska and the local North Slope Borough, would monitor all development activity on the Coastal Plain. Federal law mandates that the environment must be protected during oil and gas development.

After the Prince William Sound oil spill, why should we take the risk of developing ANWR?

The Exxon Valdez accident had nothing to do with geological extraction or moving oil



Producing nearly 2 million barrels of oil per day, Prudhoe Bay accounts for 25 percent of the nation's domestic oil production. But all of Prudhoe's infrastructure occupies less than 15,000 acres of land. Even with design and drilling techniques of 20 years ago, less than 2 percent of the land area in North Slope fields has been developed. New technology will allow for a much smaller impact in ANWR.

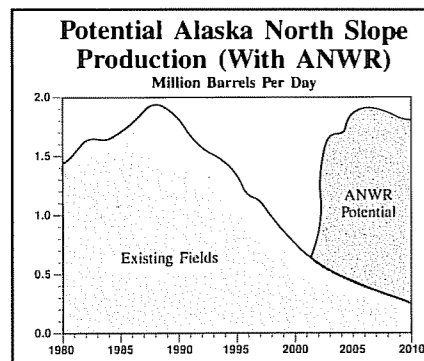
through the Alaska pipeline. However, that accident spurred enactment of tough, new oil pollution laws that enhance tanker safety and impose strict safety requirements on marine transportation. A much expanded tanker spill prevention and response plan is now in operation. Six specialized vessels, as well as tugs, barges, spill containment and recovery equipment and highly trained personnel now are in service. Every tanker carrying oil is escorted through Prince William Sound by two large emergency response vessels.

What are the economic benefits of Coastal Plain development?

According to an economic analysis prepared by Wharton Econometrics Forecasting Associates in May 1990, ANWR development could raise the U.S. gross national product by \$50.4 billion and increase employment nationwide by 735,000 jobs by the year 2005. Every state could benefit economically in supplying billions of dollars worth of equipment and services needed to develop Coastal Plain petroleum resources. Moreover, ANWR oil production would help reduce oil imports which in turn would cut the trade imbalance.



ANWR production would extend the life of the Trans-Alaska Pipeline. The pipeline provides nearly one-quarter of America's domestic production.



ANWR: THE FACTS

The Coastal Plain

- Alaska's North Slope covers some 56 million acres, slightly more than Minnesota or Kansas. The Arctic National Wildlife Refuge occupies about one-third of the North Slope.
- ANWR contains 19 million acres, an area larger than West Virginia.
- About 40 percent of ANWR, 8 million acres, is federally-designated Wilderness. This Wilderness block is larger than Maryland and Delaware combined.
- The area of the Coastal Plain proposed for oil leasing is 1.5 million acres, less than 8 percent of ANWR and 2.6 percent of the North Slope. Some 400,000 acres of the ANWR Coastal Plain is designated Wilderness and will not be considered for oil leasing.

Coastal Plain potential

- The ANWR Coastal Plain study area contains 26 separate oil and gas prospects which could each contain super giant fields.
- The Interior Department estimates that the range of recoverable reserves is from 600 million to 9.2 billion barrels of oil. The mean resource estimate for economically recoverable oil is 3.57 billion barrels.
- At 3.5 billion barrels, the Coastal Plain would be the third largest oil field ever discovered in America. A discovery of 9 billion barrels would increase domestic oil reserves by nearly one third and place ANWR second only to Prudhoe Bay.
- Until exploratory drilling is done, no one knows for sure how much oil lies under the Coastal Plain. Exploratory drilling can take place during the winter months when the tundra is frozen, leaving virtually no impact on the environment.

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