ALASKA LEGISLATURE COMMITTEE FILES 1987-1988 8672
4865 HRES ANWR GENERAL

437

KIC has now got all it can, + ASRC too;
no more than a few hundred acres could go.

4/19
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Sam:

Here's a paragraph on the ASRC/KIC transactions in ANWR.

Under Sec. 12(a) of ANCSA, the Arctic Slope Regional Corporation was prohibited from following Village corporation selections within the National Petroleum Reserve and Arctic Wildlife Refuge and receiving the subsurface under them. Instead, ASRC was supposed to select subsurface from other federal lands withdrawn during the early 1970's for possible Native selections.

ASRC made some of these selections in lands that later were included in the National Park System by ANILCA. ANILCA allowed that these subsurface acres could be traded out of the National Parks in the future, including (contrary to ANCSA's prior language) within ANWR. So, as it has happened, ASRC in 1983 followed Kaktovik under about 92,000 acres of its holdings in ANWR and gave up about 100,000 acres of its acreage in the Gates of the Arctic National Park. When Kaktovik finalized its ANCSA selections in 1986, getting another township in ANWR just south of its existing lands, ASRC followed underneath them, receiving about 17,000 acres straight up and another 3,000 tentatively (the Jago River, which the State has contested as being navigable waters belonging to Alaska, unconveyable by the federal government)..

1/17

shd urge Govr, delegn to pound on DOI

---

shd urge consid'n of NPS inholdings - shd contact interest grps re These

---

shd oppose trades which affect state revenue share, w/ rationale for protecting state income

---

shd cite IOCC resoln -

---

shd question legality/const'lty of charging state's % -

Ned

RESOLUTION OF THE INTERSTATE OIL COMPACT COMMISSION REGARDING THE ARCTIC NATIONAL WILDLIFE REFUGE

WHEREAS, the U.S. Congress has reserved the right to permit further exploration for, and development and production of, oil and gas within the coastal plain of the Arctic National Wildlife Refuge, Alaska; and

WHEREAS, the oil industry, the State of Alaska, and the Department of the Interior consider the coastal plain to have the highest potential for discovery of very large oil and gas accumulations on the North American continent; and

WHEREAS, a decision to permit oil and gas exploration development and production on the coastal plain consistent with environmental considerations will increase the value and facilitate development of highly prospective state-owned tidelands and federally-owned OCS lands offshore of the Refuge; and

WHEREAS, facilities developed to transport petroleum resources discovered on the coastal plain to the Trans-Alaska Pipeline System (TAPS) may allow marginal discoveries located between the Refuge and TAPS to be developed and produced and may prolong the economic life of TAPS; and

WHEREAS, oil and gas exploration and development of the coastal plain and adjacent lands could result in major discoveries that could reduce our nation's future needs for imported oil, help balance our trade deficit, and significantly increase the national security; and

WHEREAS, if development commenced today it would be years, if not decades before production could commence and accrue benefits to the American consumer; and

WHEREAS, the 1.5 million acre coastal plain comprises only eight percent of the 19 million acre Refuge, and development of any oil and gas reserves subsequently discovered will affect an even smaller percentage of the coastal plain; and

WHEREAS, the oil industry has shown at Prudhoe Bay, as well as at other locations along the Arctic coastal plain, that it can safely conduct oil and gas activity without adversely affecting the environment or wildlife populations;

NOW, THEREFORE, BE IT RESOLVED that the Interstate Oil Compact Commission urges the Congress of the United States to open the Arctic National Wildlife Refuge (ANWR) Coastal Plain to environmentally responsible oil and gas exploration, development and production.

This edition Sponsored by: **Usibelli Coal Mine, Inc.**

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Resource Review

Resource Development Council for Alaska, Inc. Box 100516, Anchorage, AK 99510

October 1987

Mr. Dave Donley
AK State House of Reps.
3111 C Street
Anchorage, AK 99503

TALK ABOUT FANATICS!! SOME AMERICANS WOULD RISK WAR FOR PERSIAN GULF OIL — RATHER THAN DEVELOP THE ARCTIC COASTAL PLAIN OF ALASKA!

ANWR compromises begin to emerge

New dimension added to debate

The raw outlines of a compromise have begun to emerge in the Senate Energy and Natural Resources Committee after the latest round of hearings on legislation to open the Arctic National Wildlife Refuge (ANWR) to oil and gas leasing.

The only legislation before the Committee as of October 20 was S.B. 1217, submitted by Alaska Senators Frank Murkowski and Ted Stevens. The pro-development bill contains provisions for a competitive leasing program and sound protection of fish and wildlife resources as well as environmental values. Although environmentalists have labeled this approach extreme, the bill is practical, straightforward and does not circumvent environmental law.

The Senate panel is now proceeding to mark up the bill. Revised legislation reflecting public input may be released by November.

The most likely compromise will be phased leasing of the 1.5-million-acre Coastal Plain and extra protection for areas used heavily by caribou for calving pur-

(Continued on page 4)

— *INSIDE* —

Message from the executive director

By

Becky L. Gay

Executive Director Becky Gay poised on a ridge in Hatcher Pass where helicopter skiing is encouraged. Chugach Mountains and Palmer are in the background.

Not in Chugach State Park

In 1970, the 500,000-acre Chugach State Park was set aside to fulfill a variety of purposes, from providing diverse recreational opportunities in the areas bordering Anchorage to providing true primitive experiences in the 60% designated Wilderness.

The recent decision by the Department of Natural Resources to allow for the development of more than one resort in the periphery areas, including the proposed Eagle River site, is a good decision which dovetails nicely with the Division of Tourism's quest to expand winter tourism in Alaska.

Unfortunately, RDC's request to allow a year-long trial period for a helicopter landing site 400 feet inside the park was denied. No helicopter landings will be allowed at all, except for special events and official flights.

Prior to the 1987 amendments, no Chugach State Park master plan excluded ski areas or helicopter landings. In fact, the original legislation stated that "the periphery areas shall be operated as recreational areas, the central area as a scenic area and the eastern area of the park shall be operated as a wilderness."

Alaskans are sold on tourism. Tourism is touted by some as the industry which will reduce our dependency on oil revenues and help Alaskans diversify our economy. To that end, new industries supporting tourism are cropping up everywhere in the state. But what about existing industries? If existing industry cannot participate, is tourism all it seems at first glance?

Put yourself in the "shoes" of Alaska's world-class aviation industry, for instance. I am sure the companies anticipated servicing the demand for helicopter flight-seeing which is increasing worldwide. In neighboring Hawaii, it's major business. Too bad the DNR decision precludes it in the Chugach.

Sure, to some people ski resorts and helicopter access sound like civilization intruding on wilderness. But to others, ski resorts and helicopters sound like jobs, fun and comfortable access. To the elderly or handicapped adventurer, they provide the only realistic opportunity to experience the rugged and majestic Alaska outdoors. Many even prefer "high-tech" access such as helicopter flights. I guess we can tell them to go elsewhere instead of spending their dollars in Alaska with the private sector.

Alaskans should be cautious about precluding such opportunity, especially since we attract a great many older tourists. Furthermore, Alaska has minimal alternative infrastructure options to offer such as roads, gondolas, trams, and visitor centers.

A recent ACVB poll found 73% of Anchorage residents support ski resort development in the park and 65% support helicopter landings there also. It surely does not come as a surprise that so many residents want a variety of access to a 500,000 acre park next to the largest, most-populated urban area in Alaska.

Why not even one helicopter site in the Chugach? Why no trial period to see if the fear is really a non-issue based on noise concerns which could be mitigated by routing the flights around sensitive areas?

Remember, there are no other public lands in the Chugach Mountains which offer a remotely similar experience — unless you include the NIKE missile site at Arctic Valley — and you can't land there either.

More fundamentally, which industry or business will be next to find itself out of the running for tourist dollars because of some other equally stringent restriction on public lands? Watch out, it could be yours.

About the cartoonist

Ken Catalino is the Director of Administration for ENSERCH Alaska Services, Inc. and has been a resident of Alaska for over six years. He began his professional cartooning career as the editorial cartoonist for the San Diego State University newspaper, was a consulting artist for the San Diego City School District, and has been involved in a number of other art related projects. He currently accepts assignments as a free-lance cartoonist and illustrator.

The Cover Cartoon

To aid the Alaska Coalition for American Energy Security cartoon committee, RDC's and PLF's extremely good-humored staff came up with the following captions: Ayatollah says,

"I wouldn't be having all this fun if Americans developed Alaska's coastal plain."

"Who needs Alaska oil when we have the Arabian National Wildfire Range?"

"Crisis? What crisis? New Alaska oil? What Alaska oil?"

"Protecting Persian Gulf oil and locking up Alaska oil is stupid enough to be MY idea!"

"Imagine . . . all this to keep fron developing the American arctic."

Resource Development Council, Inc.

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.

Resource Review is the official monthly publication of the Resource Development Council, Box 100516, Anchorage, Alaska 99510 — (907) 276-0700.

The RDC business office is located at 807 G Street Suite 200, Anchorage.

Carl Portman
Editor & Advertising Manager

RDC Foundation slates forestry conference

Boreal Forest Management

To better understand the potential of the Alaska northern forests, the RDC Education Foundation, Inc., sister organization to the Resource Development Council, has organized a two-day international symposium directed at boreal forest management.

Management of the Boreal Forest will feature renowned technical experts from Canada, Finland and the United States. The program is keyed to Alaska's renewable forest resources and their economic and entrepreneural potentials.

The symposium will be held at the Clarion Hotel in Anchorage December 3-4. It is designed for executives of Alaska business, professional foresters, loggers, public policymakers, regional and village corporation officials, potential investors in Alaska projects, financial and engineering representatives and community leaders.

The boreal forest is circumpolar, stretching across North America, Northern Europe and the Soviet Union. It is predominately a coniferous forest, comprised of true firs, pines, larches and spruces, though deciduous species, such as birch, aspen, cottonwoods, and willows are important components.

With few exceptions, these forests are in wild and unmanaged states. Their potential for supplying commodities to spur economic and social growth in northern areas are not well developed. Development will require purposeful management if economic potential coupled with environmental protection and forest regrowth are to occur.

Alaska is the prime repository of boreal forest in the United States. The Alaska boreal forest is virtually unmanaged.

The program will open Thursday with a presentation by Alaska State Forester John Galea. Other speakers include Dr. Edmond Packee, Professor of Forest Management at the University of Alaska Fairbanks, Kenneth A. Armson, Ontario Provincial Forester, Dr. Aarne Nyyssonen, Director of the Finnish Forest Research Institute in Helsinki, Finland and Forester Dick Herring of Vancouver, B.C.

Other speakers include Dr. Douglas Rideout, Professor of Forest Economics at Colorado State University, Nick Salterelli of Abitibi-Price Company of Ontario and Stewart Bledsoe, Executive Director of the Washington Forest Protection Association.

The symposium continues Friday morning with Commissioner Judy Brady of the Alaska Department of Natural Resources,

(Continued on Page 6)

The trouble with democracy

"Government of the people and by the people" has a good ring to it, a favorable connotation. Certainly, it is the opposite of tyranny; yet, everything that is not tyrannical is not necessarily good. People in their self government role can make very serious mistakes, particularly in the short run.

Historically, in our representative governments, the elected officials tended to "use their own heads," attempting to lead people rather than blindly follow the majority as the majority's attorney-in-fact. Now, however, modern polling techniques ("accurate to + 1%") tend to distract elected representatives from their own insights, and propel them more towards a mechanical reflection of what the polls suggest on a given subject.

How good a way is this to run a government — government by polling? Of what does an issue poll really consist? (We are not discussing the poll which asks who you intend to vote for.) Is it not merely a random telephone call which interrupts a citizen's other domestic pursuits, and the anonymous caller asks, with a short question, the answering person's opinion on a rather profound subject. The opinion is usually able to be rendered as "yes," "no," or "undecided." Certainly no thoughtful reflection or debate has preceded 99% of the answers; more thought is given to one's annual vacation, than to such answers; yet the elected representative submerges his own more informed views so that he can reflect the views of the "majority" as reflected by a super-accurate poll!

Instantaneous polling has triumphed over logic and common sense in the $2.5 trillion national debt which ominously threatens to destroy the economic system of the United States and all her trading partners, and it has triumphed again in the perpetuation of Alaska's Permanent Fund dividend, paid annually to every man, woman and child claiming to be an Alaskan.

The young U.S. budget genius and former congressman, David A. Stockman, confesses that he and his government colleagues making the budget decisions have "given rise to a fiscal and political disorder that [is] probably beyond correction." Here was a case where the politicians continuously polled the voters with those brief telephone inquiries — two to three thousand random telephone calls across the nation — to determine the most important and profound decisions for 225 million Americans. The Congress and the Executive found that "the people" were against spending cuts, and against revenue increase. Apparently, seven years into the Era of Reaganomics, the politicians still perceive "the people" to be of that same mind. What would happen in these telephone polls if the person polled were told in the preface to the question that if we go on with such profligate spending and borrowing, the economic system of the United States might be wrecked through a cruel and very long depression. How the question is asked much determines the answer.

A most perceptive article in the October 1987 "Atlantic Monthly" by Peter G. Peterson, former Secretary of Commerce under the Nixon administration, describes our present plight as the "ill-fated gamble of Reaganomics" which has been, in truth, "disastrous fiscal mismanagement." Nevertheless, if you randomly polled two or three thousand Americans with a few nifty little questions, they would probably still applaud the status quo.

The same is certainly true of our own Permanent Fund dividend. If you frame the question by asking people how they like receiving $700 plus per year from the state treasury they will, for the most part, respond that they like it. The questioners never discuss alternatives: They never indicate that if the Permanent Fund earnings were spent on enumerated capital projects, the jobless Alaskan earning $700 per year from the Permanent Fund dividend might instead have a $40,000 per year full-time job. The questioner never reminds the Alaskans polled that "to build for the future means to build capacity," and that Alaska will not have much of a future if it does not build the infrastructure for which the place has been desperate over many decades.

The earnings of the Permanent Fund can support a series of very large bond issues; the bonds can finance the construction of necessary and useful improvements from Ketchikan to Prudhoe Bay; many of these improvements can pay back their own indebtedness through user fees. In time the projects would be paid off; their value automatically rises with inflation. No inflation-proofing of a capital improvement is required. In the meanwhile, the only unemployed Alaskan would be one who chooses not to or cannot work. And what contribution Alaska could make towards reducing America's balance of trade deficit by accessing natural resources, and fostering their export, straight or value-added.

Thoughts from the president

by Joseph R. Henri

Debate over ANWR exploration heats up

Continued from page 1

poses. The compromise may include specific convenants in the law to lessen environmental impacts as opposed to an Interior Department request that environmental standards be written into the lease agreements.

Right at press time, legislation extending wilderness designation to the Coastal Plain was introduced in the Senate Environment and Public Works Committee. The measure, sponsored by Senator Bill Roth (R-DE), would foreclose any exploration and development in America's hottest oil prospect.

Meanwhile, legislation setting an "exploration-first" policy was recently unveiled by Rep. Walter Jones, chairman of the House Merchant Marine and Fisheries Committee. This House bill calls for drilling no more than four exploratory wells after which the White House would decide whether leasing for development could proceed.

The bill would draw the National Academy of Sciences into the decision by requiring it to make independent reviews of both the exploratory program and an Interior Department report on oil potential.

The bill would prohibit any activities on a 376,000-acre area of the Coastal Plain. The "protective management zone" would be 130,000 acres larger than the area the state has proposed leaving unexplored until a seven-year study on the impact of development on caribou is finished.

While the state's proposal would allow development to occur in the area if studies found no serious consequences for the caribou, the Jones bill would permanently prohibit any surface activities.

In addition, the legislation would designate part of the 23.5 million-acre National Petroleum Reserve west of Prudhoe Bay as a national wildlife refuge. This measure would boost the size of refuge set-asides in Alaska to 100 million acres, an area roughly the size of California and ten times the refuge acreage in all other 49 states combined.

The legislation, which will be introduced within the next month, will be cosponsored by Rep. Lindsay Thomas and Rep. John Dingell.

Those familiar with oil and gas operations warn that the Jones Bill is a detailed road map on how to block every phase of exploration and production.

"This proposal would hamstring the industry's ability to find and extract oil and would turn Arctic operations into a bureaucratic nightmare," said Governor Steve Cowper.

Congressman Don Young, who is a member of the merchant marine panel, said he would not support the bill. However, he liked the fact that the legislation shifts the debate from **whether** there should be oil activities in the refuge to **how** such activities should be managed.

Industry officials were similarly unexcited about the exploration-first idea. They prefer the present system where the industry leases an area, explores for oil and produces it if the crude is found and economic. In addition, they claim as many as 30 or more exploratory wells could be needed to define the size of any oil field.

With the House sharply divided over the issue, the Jones bill will add a new dimension to the House debate. It could even spill over into deliberations of the Senate Energy Committee.

The Jones bill is said to be a compromise between Young's pro-development bill, which has 146 cosponsors, and Congressman Mo Udall's legislation which would designate the entire Coastal Plain wilderness. Udall's bill is largely symbolic because unless Congress takes a positive action to open ANWR to oil and gas leasing, the Coastal Plain will remain a defacto wilderness area.

In the latest round of Senate hearings, environmentalists appeared to have lost some ground after they failed to make suggestions on how to amend the legislation at hand to further minimize some of the environmental consequences of ANWR development. Instead, Senators heard very emotional and highly-speculative testimony reminiscent of the public hearings held fifteen years ago over Prudhoe Bay development.

Contrary to physical evidence, some environmentalists charged that "there's unbelieveable damage taking place at Prudhoe Bay." It's a broad claim to make, but the most compelling rebuttal comes from the fish and wildlife populations that continue to feed, reproduce and rear their young throughout the North Slope oil fields.

"There is no evidence that animal or bird populations have changed because of the presence of oilfield activities, nor is there evidence that the abilities of the habitat to support future populations of wildlife has been reduced by the very small areas of tundra occupied by all North Slope oilfield facilities," said RDC board member Doug Webb. "Of the 600,000 acres enclosed in unit boundaries of North Slope oilfields today, only 8,160 acres are actually occupied . . . less than two percent," Webb said.

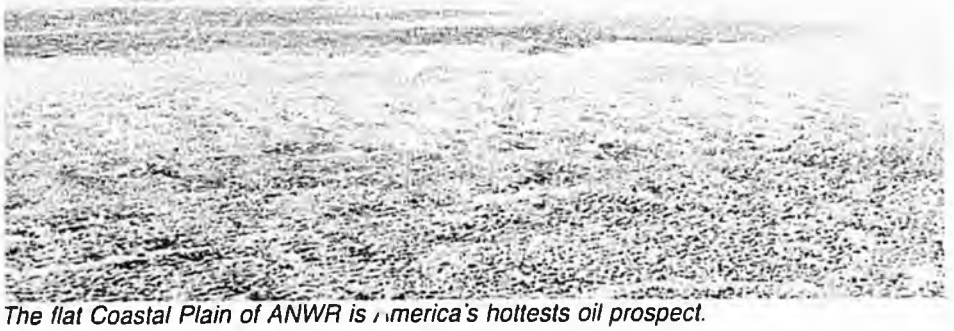
Webb, who serves as Vice President of Operations at Standard Alaska Petroleum Company, noted that the "footprint" in ANWR would be even smaller. He explained that Prudhoe Bay's oilfield facilities were the state-of-the-art when they were built 15 years ago. But the petroleum industry has learned a lot since then about "doing more with less, making things smaller, more compact and efficient."

Any oil development in ANWR would utilize advances such as horizontal drilling techniques, new drill rig technology as currently used by the drilling rigs at the new Endicott project and engineering advances in building and facilities design.

These and other advances will lessen the amount of land needed to produce any oil reserves found in ANWR. Industry experts have estimated that if development were to occur, it would take up less than one percent of ANWR's 19 million acres, leaving millions of acres of untouched wilderness inside refuge boundaries.

Another claim made by non-development interests is that the Coastal Plain of ANWR is Alaska's last wilderness stronghold. However, those making that claim refuse to point out that nearly half a million acres of coastal plain east of the area being considered for opening are designated Wilderness along with about half of ANWR's overall 19 million acres. Approximately 92 percent of ANWR is closed to development and will remain so despite whatever decision is made over the lands proposed for exploration.

In addition, huge blocks of designated Wilderness exist throughout the 49th state. For instance, one could take the combined states of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania and Ohio and still not equal the 125 million acres that has been set-aside as designated Wilderness, national parks and wildlife refuges in Alaska.



The flat Coastal Plain of ANWR is America's hottests oil prospect.

ANWR Alert

The Resource Development Council is convinced that the vast majority of the American public, and hopefully their elected representatives in Congress, will concur with the Interior Department's recommendation that the Arctic National Wildlife Refuge be opened to exploration and development if presented with the full story.

Unfortunately, much of the communications the Congress receives on the subject comes from individuals who maintain that keeping ANWR in the status quo or designated off limits to development overrides any other considerations. This view sacrifices the needs of the many to the ideological view of the few. It does not accept the environmental realities of modern day petroleum operations nor does it recognize the energy and economic needs of the country.

Although an energy conservation policy is important, it is crucial that members of Congress hear from those who believe that both environmental and energy interests can be met by allowing exploration and development to proceed in ANWR. RDC encourages you to convince your friends and relatives to contact their Senators and Representatives and ask them to support opening the ANWR Coastal Plain to oil and gas development. ANWR is a national battle and Alaska could lose a great deal if Congress choses to thwart sound resource development in the Arctic.

Hearings on the issue continue to be held in the House Interior and Insular Affairs Committee as well as the House Merchant Marine and Fisheries Committee and the Senate Energy and Natural Resources Committee.

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Bright future for Alaska coal

Plan could spark new coal exports

The key to transforming Alaska coal from its perceived bottom-of-the-totem-pole position in world markets to a top-of-the-line product lies in combining the sales potential of its low sulfur content with a low-moisture product, according to a leading industry official.

John Sims, Vice President of Marketing of Usibelli Coal Mine, told an RDC Thursday breakfast meeting last month that the key to cracking international coal markets and tapping Alaska's tremendous coal development potential may lie in physically upgrading the product. Sims explained moisture remains the main hurdle to expanding exports, but a plan being formulated by Usibelli and Brown and Root could solve that problem. This summer the two companies announced a joint venture to pursue development of a $250 million electrical generation plant near Healy. The huge 100 to 150 megawatt facility, which would be the largest coal-fired plant in Alaska, would feed into the Anchorage-to-Fairbanks powerline intertie to supply Railbelt communities with 15 percent of their energy needs in the next decade.

In addition to the construction of the cost-intensive power plant, a $20 to $25 million drying facility could be tied in that would upgrade the mine's sub-bituminous moisture-heavy coal from 8,000 BTUs per ton to 11,000 BTUs per ton.

The treated coal would make Alaska coal very attractive to energy-importing countries of the Pacific Rim.

Currently the best selling point of Alaska coal is its low sulfur content, Sims said. It registers .2 percent while European and other coals are typically in the 3 to 4 percent range.

"I think there's a specialized market in Japan that would embrace this product," Sims said. He noted there's a Japanese movement concerning pollution and "they look for the ultimate results in sulfur emissions."

The Usibelli official aiso said a higher quality product could cut deep into Australia's share of the market. "We have the opportunity to twist the kangaroo's tail a bit," Sims said with a smile.

The new power plant itself is still tentative, although Usibelli officials are meeting with related interests in Japan and Taiwan. Some of those have expressed interest on an equity position in the project.

If Usibelli's plans are successful, the plant would be on line in the mid-1990s. Usibelli would provide the facility with about 500,000 tons of low-sulfur coal a year.

Known in the industry as a "mine mouth plant," the facility would be located close to where coal is extracted, perhaps next to Usibelli's loading area on the Alaska Railroad two miles east of the mine. This would mean a big savings on transportation costs, Sims said.

But the biggest savings would come in construction of the power plant itself, Sims stressed. The plan calls for use of prefabricated modules that can be shipped to the site and assembled.

"We estimate that this will cut the cost in half," Sims said. "The technology we are looking at is state-of-the-art and can meet the strict air quality regulations."

The power plant would employ about 200 people during construction and about 50 full time. In addition, more jobs will be created at the mine because of the increase in coal demand.

If the coal-processing facility, which would use steam from the electrical plant as an energy source to dry coal, is built, approximately 50 additional full-time jobs would be created.

The Usibelli Coal Mine is located at Healy, some 100 miles south of Fairbanks on the northern slopes of the Alaska Range.

Usibelli Coal Mine at Healy now has an 800,000 ton-a-year contract with South Korea and is attempting to land a similar deal with Taiwan.

RDC Foundation slates forestry conference

Continued from page 3

Commissioner Dennis Kelso for the Department of Environmental Conservation and Commissioner Don Collinsworth of the Department of Fish and Game. Other Friday speakers include Senator Jack Coghill, Rep. Sam Cotten, Senator Jalmar Kerttula, Rep. Niilo Koponen, Rep. John Sund and Don Finney, Executive Director of the Alaska Loggers Association.

Registration fee for the symposium is $60. To register, call RDC at 276-0700.

All Wrong

Reprinted from the Ketchikan Daily News

By Lew M. Williams **Guest Opinion**

The Sacramento (Calif.,) Bee printed an editorial on Tongass National Forest Sept. 15 that is depressing and terribly inaccurate. The Bee is owned by the McClatchy family, which owns the Anchorage Daily News. We expect better.

It's depressing because thousands of Californians will believe the Bee. They'll complain to their congressmen and Alaskans will have another hurdle to overcome to stabilize their economy.

The title of the Bee's editorial was "Ted Stevens' folly."

Of Alaska's senior senator the Bee says:

"Thanks to a special provision he (Stevens) inserted in the Alaska National Interest Lands (Conservation) Act of 1980. . ." The Bee was referring to section 705 of ANILCA which appropriates $40 milliion a year to the Forest Service to take up to 450 million board feet of timber available each year for commercial harvest.

The Bee is wrong. The environmental lobby suggested the funds be included in NILCA to guarantee the 450 million board feet in exchange for 5.4 million acres of the Tongass going into wilderness.

"Those provisions were not my idea," Stevens has written editor C.K. McClatchy. Stevens will be glad to drop the appropriation if the timber land put into wilderness is put back in the commercial timber allotment.

The Bee says ANILCA provisions "help two timber companies in the Alaska panhandle destroy the Tongass National Forest."

Wrong. There are five timber processors in the Tongass. Also, the Tongass is growing at the rate of 1.182 billion board feet a year, or twice the volume it is being cut.

The Bee said, "The act in 1980 designated 5.4 million acres of public lands in Alaska as wilderness."

Wrong. The 5.4 million acres of wilderness was designated in the 16-million-acre Tongass. Also designated wilderness were 34.4 million acres of the 51 million in the National Park system in Alaska and 18.6 million of the 76 million acres in the U.S. Fish and Wildlife Service refuge system. Wilderness is designated in 56.5 million acres of the 153.9 million acres of parks, refuges, wild rivers and other reserves in Alaska. By comparison, there are only 100,207,000 acres in all of California.

The Bee said that of the 5.4 million acres of wilderness it's "mostly rocks and ice. Only a tiny fraction contained any commercially valuable timber."

Wrong. Twenty-eight percent of the 5.9 million acres of the Tongass suitable for commercial timber harvest went into wilderness, about 1.65 million acres.

Of the 450 million board feet a year harvest allotment, the Bee says "There isn't any market for that much timber."

Wrong. Early in the 1980s the timber demand was down nationwide, but mill operators are now complaining they can't get enough. The Wrangell mill was threatened with a shutdown recently because of a lack of logs.

The Bee says "55 percent of the timber the Forest Service has prepared for sale in the Tongass in the last five years has never been sold."

Wrong. The timber is selling. That figure may have been accurate in 1982-85, but that timber now has been sold. There is very little on the shelf. Four sales aren't active because they are involved in a foreclosure against an Alaska mill initiated by the Bank of California. Several large sales, such as South Wrangell, failed to sell as large sales. South Wrangell has been roaded by the Forest Service, thanks to the $40 million from ANILCA, and is selling rapidly.

The Bee said "last year, the government spent $7 million getting one section ready for sale that didn't draw a single bid."

Wrong. At least Forest Service officials are unable to identify what the Bee is talking about. Forest Service officials say that $5.9 million was used to put a road into the Coverden area, but that timber has been sold.

The Bee said, "that hasn't stopped the Forest Service from lopping off another 17,000 acres from the forest and putting it up for sale every 12 months, just like demented clockwork."

Wrong. Because of demand, sales that had been designed to go to bid next summer are now being moved up to December because of the increasing demand. The Forest Service does respond to the market. It is hindered in moving up the sales because, as one forester told us, too many of their people had to go to California in August to fight forest fires.

Referring to the two pulp mills in Alaska, the Bee said, "the two companies, one of which is Japanese-owned, pay next to nothing for the timber they do take under terms of some 50-year contracts they have negotiated with the Forest Service."

Wrong. Or at least the Bee doesn't tell the whole story. Congress passed the Federal Timber Modification Act early in the 1980s to bail out the timber industry throughout the western U.S., including Alaska and California. Section 4 of that act reduced stumpage for the Alaska pulp mills to carry them through the nationwide timber depression. The mills' stumpage is reviewed periodically and the mills are required also to buy timber outside of their allotment area by bid against other loggers and processors. The most recent timber sales advertised in the Ketchikan area required overall minimum stumpage bid of over $300 a board foot, which is higher than finished lumber prices quoted by the Chicago Board of Trade.

The Bee said, "last year, the gross receipts from Tongass timber sales added up to only $82,000. . . the taxpayers get back one penny in revenues on every dollar the government pays."

Wrong. No one in the Forest Service regional office knows where the Bee got that. Bee editors will be interested in a Government Accounting Office report going to Congress shortly that shows the federal government made $65 million last year on Tongass timber. GAO is an arm of Congress. Its inspectors worked with the Forest Service officials early this year to determine the facts for members of Congress.

The Bee says the pulp from Alaska is "shipped to Japan to make cellophane and rayon.

Wrong. Wrong. Wrong. Twenty-five percent of the pulp goes on the U.S. domestic market to make such diverse things as diet ice cream, paper products, explosives, food additives, pharmaceuticals and sponges such as we buy in the super market. Part of the pulp goes into cellophane and rayon. But only race car drivers prefer tires with rayon cord. It withstands the heat better than nylon.

Pulp from Ketchikan goes to 16 nations on every continent in the world except Australia. No foreign nation takes 20 percent of the product and no single customer takes 10 percent.

And one of the Ketchikan mill's toughest competitors throughout the world is the Japanese-owned Sitka pulp mill.

Additionally, only 40 percent to 50 of the timber cut in Alaska goes into pulp. The rest goes into high-quality lumber which is sold in Korea, Taiwan and China, as well as Japan. Almost all of the red or yellow cedar goes into domestic market or to South Korea.

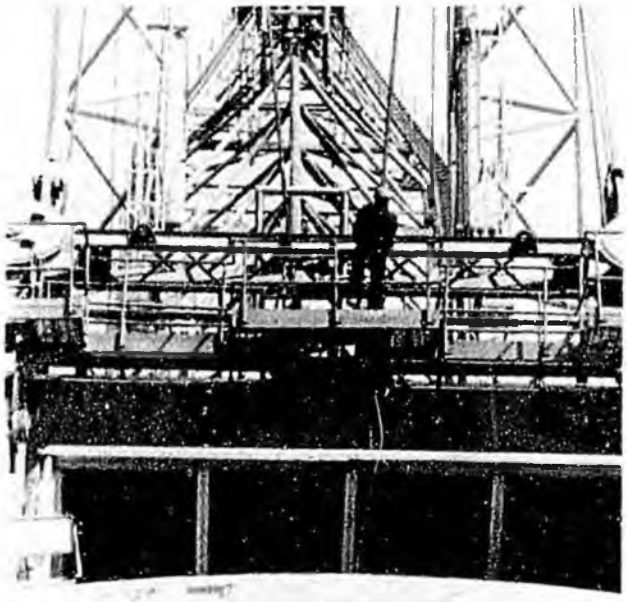
The Bee says that employment in the timber industry is down, which we acknowledge. The timber industry nationwide went through a slump in 1982-85. Alaska's 3,000 people directly employed on five million acres of commercial forest in the Tongass shrank to 2,000. We wonder how many of the 100,000 Californians employed on 17 million acres of California's commercial forests lost their jobs?

They are killing trees down there faster than they are shooting motorists on the freeways. Where's the Sierra Club when you need it?

The Bee concludes by advocating that the Forest Service cancel the 50-year contracts used to attract industry to Alaska 35 years ago. That's fair enough if the federal government will take back all of the land it gave to the railroads in the last century to open up the west, including California.

COAL

ALASKA'S ACE-IN-THE-HOLE



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SOLIDLY COMMITTED TO ALASKA'S FUTURE

NEWS

U.S. SENATOR
FRANK MURKOWSKI
OF ALASKA

April 20, 1987
FOR IMMEDIATE RELEASE
CONTACT: Richard Paul (202) 224-3185

STATEMENT BY SENATOR FRANK H. MURKOWSKI (R-ALASKA)
INTERIOR DEPARTMENT FINAL REPORT ON
ARCTIC NATIONAL WILDLIFE REFUGE

This report is the culmination of a long and detailed process of analysis and public scrutiny. With its release, the Administration is saying to the American people, let's not wait until the next energy crisis -- when we are all once again standing in gas lines and blaming the government -- to worry about our energy future.

Keep in mind that our dependence on imported oil has jumped from 27 percent to 40 percent. That is considerably greater than the level in the 1970's, which precipitated the energy crisis. Without question, new sources of oil must be located.

It's significant that Secretary Hodel has recommended full leasing of the entire coastal plain. By doing so he is demonstrating a full understanding that our security depends on government acting wisely and doing so now. It is essential that we know the size of our domestic reserves. This report shows a grasp of the high potential of finding substantial reserves in ANWR.

I commend Secretary Hodel for addressing issues raised in comments on the draft report, in particular the impact of oil activities on caribou. Careful review of data and public comments resulted in a finding that there is no permanent core calving area. Instead, the caribou calve in concentrated numbers in a variety of different locations from year to year. This final report recognizes this and projects the impact of exploration activities on caribou will be minimal.

Those who attempt to exploit fear over the well-being of caribou that live in ANWR ignore the Prudhoe Bay experience. There were about 3,000 caribou in Prudhoe Bay in 1972. Today that number has increased five-fold to nearly 14,000. There is no either/or choice. We can have both oil and wildlife protection.

This informative report will be the foundation for the legislative effort to open the coastal plain. I look forward to beginning that process soon.

# # # # #

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DEPARTMENT of the INTERIOR
news release

U.S. GEOLOGICAL SURVEY

Don Finley (703) 648-4460

For release: April 28, 1987

WORLD HAS IMMENSE RESOURCES OF OIL, BUT U.S. CONVENTIONAL SUPPLY LIMITED

The world still has an immense amount of known and undiscovered conventional oil that could last perhaps six decades at present consumption rates and has even larger resources of unconventional oil to be developed, U.S. Geological Survey oil-assessment experts said Monday (April 27, 1987).

The USGS experts told the 12th World Petroleum Congress in Houston, Texas, however, that the geographic distribution of the resources is uneven, resulting in potential supply problems for the United States and other nations.

Charles Masters, Richard Meyer and David Root, all from the USGS National Center in Reston, Va., said that the bulk of conventional oil resources is in the Eastern Hemisphere -- including the Middle East with nearly half the world total. By comparison, the United States has less than 7 percent. Conventional oil accounts for almost all the oil now being used and will remain the dominant fuel resource into the early 21st century.

The USGS experts added, however, that the Western Hemisphere has most of the known so-called unconventional oil resources, which could gradually become a major contributor over the long term as conventional resources are depleted. Unconventional resources, which are more difficult and expensive to develop, include extra-heavy oil, tar sands and shale oil.

The U.S. Geological Survey, Department of the Interior, estimates that the world has 795 billion barrels of conventional oil in known reserves, or 40 times the present consumption of about 20 billion barrels per year, according to Masters, a geologist and chief of The World Energy Resources Program of the USGS. Meyer, a geologist, and Root, a mathematician, also are members of the program.

In addition, the world has an estimated 425 billion barrels of oil (bbo) in undiscovered conventional resources, or enough to last two decades at current consumption rates, according to Masters, the chief spokesman for the group. His remarks were prepared for the World Petroleum Congress meeting April 26-May 1 in the Albert Thomas Convention Center in Houston.

"The combined total of 1,220 bbo for known reserves and undiscovered resources of conventional oil is 53 bbo less than we reported four years ago to the last World Petroleum Congress in London," Masters said. "The decline was a result of consumption since 1983 and reductions in assessments of undiscovered oil in some areas. But estimates of known reserves have increased in spite of a world discovery rate slightly less than production because old fields have continued to grow beyond expectations.

(more)

North America and South America combined have more than 91 percent of the world's shale oil, with a large portion of it in the United States.

Masters also said the world has an estimated 8,000 trillion cubic feet (tcf) of recoverable conventional natural gas left in the ground, with more than half of it in the Middle East and the Soviet Union. At a consumption rate of about 60 tcf per year, this amounts to a supply sufficient for more than 100 years at present rates of consumption. The natural gas totals include 2,500 tcf for the Soviet Union, 2,125 tcf for the Middle East and 600 tcf for the United States. Masters said the large Middle Eastern gas reserves "are one of the largest under-utilized energy resources in the world," with production of only 1.3 tcf per year.

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DEPARTMENT of the INTERIOR
news release

OFFICE OF THE SECRETARY

For Release April 29, 1987 Contact: Alan Levitt (202) 343 6416

SECRETARY HODEL STRESSES ROLE OF ORDERLY ENERGY DEVELOPMENT OFFSHORE AND IN ALASKA TO MEET FUTURE NATIONAL AND CALIFORNIA ECONOMIC NEEDS

Secretary of the Interior Don Hodel said today that by the turn of the century Californians will face a critical need for oil from both offshore and from Alaska.

Addressing the Town Hall of California in Los Angeles as he began an 8-day visit in the state, Hodel said there could be drastic repercussions on the economy and on the lifestyle of Californians if additional energy resources are not located and developed in the closing decade of this century.

"With 19 million cars, trucks and buses, California uses some 580 million barrels of liquid petroleum products every year, 10 percent of U.S. consumption," Hodel said. "In fact, California is the world's third largest consumer of gasoline, right after the remainder of the U.S. and the Soviet Union. Although California certainly is a major oil producing state, it still comes up more than 30 percent short in meeting its own demand."

Earlier this week, Hodel sent Congress a new 5-year plan for federal offshore oil and gas leasing.

Citing last year's sharp decline in U.S. domestic production, increasing demand and soaring imports, Hodel warned "OPEC (Organization of Petroleum Exporting Countries) is on the verge of getting back into the driver's seat."

"In my judgment, OPEC may have a more serious impact today than it had in the 1970s when it used an embargo successfully to escalate prices and in an attempt to blackmail us on foreign policy issues," Hodel said. "Now, whether by accident or design, they have a potentially more powerful weapon -- the whipsawing of prices to demoralize competition in non-OPEC nations.

"Lower oil prices have dulled memories of the 1970s gas lines, and lulled Americans into a euphoric state of believing our energy troubles are over," Hodel added.

He said it is vital that the United States "produce enough oil domestically to keep OPEC and others from perceiving that they have a stranglehold on this lifeblood of our economy and national security."

The Secretary said the Nation must move forward on offshore leasing and with an environmentally sound energy program for the coastal plain of the Arctic National Wildlife Refuge (ANWR) in Alaska.

(more)

"We can develop these energy resources and protect the environment," he said. "We do not have to choose between the two. We can do both.

"If we fail to move to develop resources available to us, it will be like putting a sign on America saying: 'Take advantage of us because we lack the will to help ourselves.'"

In addition to the 5-year offshore plan, Hodel recently released a congressionally-required report and recommendation for management of the 1.5 million acre coastal plain of ANWR, 65 miles east of Prudhoe Bay.

"The two most immediate promising prospects for adding significantly to America's oil and gas reserves are offshore California and the coastal plain of ANWR," Hodel said. "During the coming decade, we need to find more than 30 billion barrels of proven reserves just to hold our own."

Hodel said that if it were not for oil production from Prudhoe Bay, the United States would be importing over half of its oil. Prudhoe Bay now produces about 20 percent of U.S. domestic production. Experts predict that production will fall off drastically by the turn of the century.

"If we can't replace Prudhoe Bay production, California could stand to lose a significant percentage of its oil supply -- far more than in the 1979 crisis," Hodel said. If Congress moves expeditously to approve leasing at ANWR and oil is found, Hodel said that could cushion impacts on California and the Nation.

As for impacts of offshore development on California, Hodel suggested that production platforms on the horizon are far less a threat to tourism and recreation than potential impacts from future oil shocks if the resources are not developed.

"The record of consultations and the extensive provisions in the new 5-year offshore oil and gas leasing plan demonstrate amply that the Department of the Interior has gone the extra mile to address California concerns," Hodel said, pointing out that the 5-year plan he has sent Congress contains unprecedented sub-area deferrals and specific levels of environmental protection for lease sales offshore California. Neither of two previous 5-year plans (in 1980 and 1982) contained such provisions.

"It is in California's best interest to have an orderly, measured leasing program, such as the one we have proposed," Hodel said. "Additional moratoria on offshore drilling, such as those imposed by Congress in 1981 through 1984, will only increase the risk of a time when, because as a Nation we are suffering from wholly inadequate domestic oil supplies, there is overwhelming pressure for oil development under less stringent environmental controls."

To delay the search offshore or in Alaska, Hodel said, also would be to risk the permanent loss of oil industry technology, expertise and jobs, and to squander the time needed to assure care in the development process.

"We have the technology, we have the knowledge, we have effective and proven programs, and we have the commitment to explore, develop and produce these resources while protecting people, oceans, land, wildlife and the environmental values we all cherish," Hodel said. "The sooner we start, the easier the task, the more certain the victory."

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REMARKS OF SECRETARY OF THE INTERIOR DON HODEL
BEFORE THE TOWN HALL OF CALIFORNIA, LOS ANGELES
APRIL 29, 1987

LET'S KEEP AMERICA IN THE DRIVER'S SEAT

During the past two weeks I have sent Congress two environmentally-sound plans for orderly energy development as key elements in President Reagan's strategy to assure America's economic future and national security.

One is the new 5-year plan for federal offshore oil and gas leasing, and the other pertains to the coastal plain of the Arctic National Wildlife Refuge in remote northeastern Alaska. Both plans propose orderly exploration and careful development of potentially huge oil resources with ample protection for the environment.

It is no coincidence that my first stop after making these announcements is California. I am here because California has a vital stake in secure energy supplies, and these two plans -- for Outer Continental Shelf (OCS) leasing and for exploration of the Arctic plain -- are the best insurance policies for America, and for California in particular.

With 19 million cars, trucks and buses, California uses some 580 million barrels of liquid petroleum products every year -- 10 percent of U.S. consumption. In fact, California is the world's third largest consumer of gasoline -- right after the remainder of the U.S. and the Soviet Union. Although California certainly is a major oil producing state, it still comes up more than 50 percent short in meeting its own demands. Without imports, Californians might have to garage permanently perhaps 6 million of those vehicles. Right now, it is Prudhoe Bay, Alaska, that is keeping a good many of you on the road. Well, that's what America is all about -- people from one part of the country supplying food, fiber, products, services and energy that people in other parts of the country need.

Energy, of course, is the lifeblood of our lifestyles, our economy, and our national security. In California, as in the rest of America, and the world for that matter, oil remains the most efficient, most economical source of energy.

Today I want to talk about the international energy situation and why we have to move right now to improve our energy security in the future, even though in some minds these actions may appear unnecessary in today's energy market. Then we will get into the national offshore program, and the most contentious element of it, the when and how to develop offshore California. We will explore a part of the remote Arctic plain. Then, let's see if we can wrap it up in a comprehensive strategy for maintaining adequate domestic oil reserves, gradually increasing a stockpile, encouraging alternative energy development, and a rational approach to energy conservation.

I suggest that every American who cares about the future of our country has to be concerned about the precipitous decline in exploration and production by the U.S. petroleum industry. Responding to the oil shocks of the 1970s, industry poured billions of dollars into exploration and development to meet the challenge of OPEC domination of world oil supplies. This extraordinary effort, along with our good fortune of having Prudhoe Bay, enabled the U.S. to hold its own in the world production picture until last year.

Then Middle East oil countries, with enormous excess production capacity, knocked the props out by flooding the market. While energy consumers the world over have benefited extensively, the results have been devastating to Third World countries counting on oil revenues to repay debt, and to the U.S. oil industry and to "Oil Patch" states, and, as a result, to our energy future.

U.S. domestic oil production plummeted 9 to 10 percent between 1985 and 1986; consumption rose about 3 percent, and imports soared 22 percent -- increasing about one million barrels per day in 1986. Imports now exceed what they were in 1973 when the OPEC embargo was imposed. Drilling for new oil fields was down 41 percent last year; the number of rigs at work in America hit the lowest level since such record-keeping began almost a half-century ago. During this time, some 400,000 workers in petroleum-related sectors across the country have lost their jobs, which in turn affected the livelihoods of retailers, teachers and so-on in communities that months before had housed thriving oil related facilities.

The implications of these trends for America and our future security are detailed in the recent "Energy Security" Report to the President by the Department of Energy. Key projections in that report show U.S. oil imports increasing from 5.2 million barrels per day in 1986 to between 8 and 10 million barrels per day in the 1990s. In other words, from about one-third of our consumption last year to about one-half of our projected consumption in the decade beginning only 32 months from now.

And most of the increased imports will come from Middle East OPEC nations -- the ones who caused economic havoc in America in the 1970s. Imports from Persian Gulf nations were three times higher in 1986 than 1985. According to industry reports, the United States imported more oil from Saudi Arabia than for any other country in January of this year.

The Energy Security Report sees Middle East OPEC increasing its share in the world oil market from less than 25 percent now to as much as 45 percent in 1995. The report states: "Growing dependence on Persian Gulf suppliers has important implications for the economic, foreign policy, and national security interests of the United States."

I've been saying that for several years, but now we have it in writing following a detailed study by a high-level interagency task force. OPEC is on the verge of getting back into the driver's seat.

As the Energy Security Report notes, the Middle East is an area continually threatened by revolutions, regional wars or aggression from outside powers. The report notes: "Oil price increases precipitated by the 1978-79 Iranian revolution contributed to the largest economic recession since the 1930s. Similar or larger events in the future could have far-reaching economic, geopolitical, or even military implications."

Can we entrust our economic and national security to such an unstable and unpredictable area of the world? We cannot.

Let us remember that OPEC was formed by the major oil producing nations, mainly in the Middle East, specifically to control supply and manipulate prices.

Should we entrust our national destiny to such an organization dedicated to the use of oil to manipulate our economy and our national policies? I say no!

In my judgment, OPEC may have a more serious impact today than it had in the 1970s when it used an embargo successfully to escalate prices in an attempt to blackmail us on foreign policy issues. OPEC strategy backfired because they drove prices so high so quickly that they touched off an oil development rush in non-OPEC countries. Now, whether by accident or design, they have a potentially more powerful weapon -- the whipsawing of prices which undercuts potential competition in non-OPEC nations.

Along with oil, they have the ability to export economic instability.

The psychological effects of this new twist may prove even more detrimental to the United States' long-term security than the earlier embargo was to our immediate national security.

Lower oil prices have dulled memories of the 1970s gas lines, and lulled Americans into a euphoric state of believing our energy troubles are over. This is evident when someone asks: "Why talk about more oil exploration at a time when there is a world oil glut?" My answer is this: the current low prices are a boon to consumers, but we should not believe they will last forever.

Like a person on an addictive drug -- in this instance, temporarily cheap oil -- we are in danger of losing our will to provide for our own future; we may be putting ourselves at the mercy of a supplier who eventually will exact a very high price for a substance we must have to survive.

The psychological effect on the hundreds of thousands of oil industry workers who have lost their jobs is devastating -- and not just to these workers. If the expertise of these people is lost permanently to America, then we will have squandered a valuable resource it took decades to build, an expertise that may not be there when we need it in the future. At a recent conference, the head of a major oil company told me his firm is still planning offshore exploration years into the future, but he noted that offshore services and supply commpanies that employed 650,000 people in 1981 now have only 200,000 employees. Will we be able to recall these workers when we need them? Or will we have to recruit and train a new workforce? Or will we have to import the expertise -- a possibility that would be a sad commentary on a nation that has for more than half a century been the supplier of such expertise to the world.

And finally, there is the psychological effect on investors. Are people going to put money on the line to find and develop U.S. resources if there is no national commitment to a program that offers a reasonable degree of stability and the determination to produce enough energy to protect the national interest? It's not likely.

To protect the national interest, America must produce enough oil domestically to keep OPEC and others from perceiving that they have a stranglehold on this lifesblood of our economy and national security. Notice that I emphasized the world "perceiving."

Their perception that they have a stranglehold will come much sooner if we fail to allow and encourage exploration and development of America's most promising areas for oil discovery. If we fail to move to develop resources available to us, it will be like putting a sign on America saying: "Take advantage of us because we lack the will to help ourselves."

The two most immediate promising prospects for adding significantly to America's oil and gas reserves are offshore California and in the coastal plain of the Arctic National Wildlife Refuge in remote northeastern Alaska -- we call it "ANWR" for short.

U.S. proven reserves have dwindled from 39 billion barrels in 1970, to about 28 billion barrels at present. To put that in perspective, at current production rates we have less than 9 years' supply in proven reserves. During the coming decade we need to find more than 30 billion barrels of oil reserves just to hold our own.

We believe offshore California and the ANWR coastal plain together could provide one-quarter to one-half of the oil we must find in the coming decade. We won't know for sure, however, until there is exploratory drilling in both places. Should our expectations be met in these areas, then we enhance America's energy security in the 1990s and into the early 21st century; if either province comes up short of expectations, then we will have to look elsewhere and/or find other means of protecting our national interest.

And we need to find out quickly so that we can make adjustments in strategy if needed. Congress assigned the Secretary of the Interior the job of expediting development of energy resources on the public lands and the Outer Continental Shelf (the OCS) under strict standards.

Our offshore program is extremely important:

-- It produces one-quarter of our natural gas and one-eighth of our domestic oil;

-- The 34.2 billion barrels of oil equivalent actually discovered to date offshore is enough to replace 16 years of imports at 1986 rates;

-- Offshore production from 1954 through 1986 was enough to run every car in California for 40 years.

That is why we invested more than 3 years of extensive work and consultation with states and members of Congress into the new 5-year plan for offshore oil and gas leasing announced on April 27th.

Despite the extensive consultations and intensive discussions, there remains misunderstanding over the 5-year plan and the offshore leasing process in general.

The requirement for a 5-year plan is part of the OCS Lands Act Amendments enacted by Congress in 1978.

This is the third 5-year plan.

The first two 5-year plans, in 1980 and 1982, were primarily schedules for when sales would be held in each federal offshore area and the rules under which these sales would be conducted. In the past, it has been during the individual sale process that all sub-area deferrals and specific levels of environmental protection were worked out in consultation with the states, local governments and other interested parties.

In an effort to take into account the concerns expressed in California, for the first time we have provided deferrals for specific tracts within planning areas and specific levels of environmental protection as part of the new 5-year plan.

The 5-year plan now before the Congress focuses on promising acreage offshore California. It contains 54 million acres of subarea deferrals -- 74 percent of the federal planning areas offshore California. It excludes areas identified as having exceptional environmental sensitivity such as the immediate vicinity of Cordell Bank, the areas off Big Sur and San Francisco, and Santa Monica Bay. And there is a lengthy list of specified levels of protection for air pollution control, biological and cultural resources, commercial fishing, onshore oil processing, navigation, pipelines, and so on.

This unprecedented list of deferrals and specifications is the end product of a consultation process which began when Judge Clark, as Secretary of the Interior back in 1984, heeded requests from California and other states to move from an areawide program to a more focused leasing program. When I took over in 1985, I continued the process Judge Clark began, further defining the process to focus on promising acreage to make it easier for the states and all interested parties to work with us in the planning.

You also will recall that after a series of meetings with an ad hoc group of California Congressmen almost two years ago, we floated a preliminary agreement. I emphasize the world "preliminary" because that is exactly what it was. Every single member of Congress involved in the discussions leading to the announcement knew that it was only preliminary in nature, and, at our joint press conference announcing where we hoped we could go, they and I were explicit in characterizing the concept as being preliminary.

The reaction I encountered at 11 town hall type meetings in California, and new information on the lack of oil and gas potential in the leasing area proposed by the California Congressmen, left me with no alternative but to return to the drawing board.

This was not wasted effort, however, because as a result of the discussions and the voices I heard in California, I was able to identify subareas that we have subsequently deferred from leasing.

Congress then set up an 18-member House-Senate task force to work with the Department in an attempt to forge a compromise. Despite 13 meetings and additional technical sessions, the members of Congress on the panel could not reach a consensus, but came up with two widely divergent proposals. To cut the Gordian knot, Congress directed me to piece together a plan using elements from several proposals, including those of Governor Deukmejian who has an excellent understanding of the program and how to make it work for the State of California.

The proposal I submitted to Congress early in February was supported, by my calculations, by slightly more than one-quarter of the California delegation. Slightly less than two-thirds rejected it out of hand, but made no attempt to provide anything in the way of a reasonable compromise. Reaction by non-Californians in Congress who have expressed an opinion to me has been overwhelmingly favorable -- except for those who accuse me of making concessions to California not accorded other OCS coastal states. I can only plead "no contest" to that charge.

Although this process has been arduous, it has been fruitful. The record of consultations and the extensive provisions in the plan demonstrate amply that the Department of the Interior has gone the extra mile to address California concerns.

On the other side of the coin, legislation recently introduced seeking to exclude virtually the entire California coast from federal leasing demonstrate to the rest of Congress and the country a mindset that undermined our efforts to reach some middleground or consensus.

The plan I have sent to Congress is provides more flexibility than its two predecessors. It calls for only 24 standard lease sales in 21 planning areas nationwide over the coming 5 years. Another 11 sales will be held in frontier areas if there is enough interest, and there are three supplementary sales, none of which involve California planning areas.

Only five of the lease sales involve the three potentially oil-rich planning areas offshore California. Congress already has told us to delay sales in the Northern and Southern California planning areas until 1989. The first and only Central California planning area sale is scheduled for 1990.

Although it is my responsibility to represent the national interest -- and Congress and the U.S. Supreme Court have made it clear federal offshore resources belong to all the people of America -- I feel very strongly that what we are planning is clearly in the best interest of those who live in California as well.

Further moratoria on leasing offshore California, such as those imposed by Congress for in four of the last six years, is not in the best interest of the State or the Nation.

After my 1985 visit to California, several newspaper editorials, including the Los Angeles Times, said in effect that the question is not whether but when there must be additional oil production offshore California.

It is in California's best interest to have an orderly, measured leasing program, such as the one we have proposed. Additional moratoria, such as those imposed by Congress in 1981 through 1984, will only increase the risk of a time when, because as a Nation we are suffering from wholly inadequate domestic oil supplies, there is overwhelming pressure for development under less stringent environmental controls.

Californians have been ill-served by those who, without any facts to support them, warn of a "picket fence of black oil rigs" offshore California, or those who declare: "Our coast is not for sale." There are only 20 platforms in federal water offshore California at present, producing about 80,000 barrels per day of oil.

Even if exploration lives up to the most optimistic forecasts, the number of platforms will be relatively small. No platform can be closer than 3 miles from shore where the federal water begins. At Governor Deukmejian's request, I have added an additional 3-mile buffer for large areas. And there are major deferrals, such as along Big Sur, Point Reyes, Farallon Islands, Monterey Bay, San Francisco Bay, and other areas.

Understandably, some Californians remain uneasy because of the 1969 Santa Barbara blowout, even though this was the only blowout in the course of drilling some 31,000 offshore wells in state and federal waters that ever resulted in significant amounts of oil reaching shore.

Scientists have indicated that the biological effects of that blowout were temporary, generally lasting less than a year. But the effects on the federal leasing program were much more pronounced and lasting -- since 1970 federal regulations have imposed extensive additional regulations such as required subsea blowout preventers, more frequent inspections, oil spill contingency plans, oil spill cleanup centers, worker training, cleanup drills and other measures. Since that time, tremendous improvements have been made in technology to prevent pollution.

In a dozen years, we spent some $400 million on environmental and scientific studies to make the offshore program as safe as possible.

In the past 16 years, OCS operations off California's thousand-mile coastline have lost a total of only 21,000 barrels of oil while producing more than 330 million barrels. Compare this with:

-- Natural seeps that have leaked over 2 million barrels of oil;

-- The tanker "Puerto Rican" spill that dumped 48,500 barrels of highly toxic petroleum products;

-- The Los Angeles Joint Wastewater Treatment Plant which has discharged over 850,000 barrels of oil and greese;

-- Two dozen wastewater treatment plants from San Luis Obispo to San Diego have discharged 5 million barrels of oil and grease.

Those of us who believe in the offshore program work mighty hard at environmental safety. First of all because it's our environment, too. And secondly, because we all know that the program is not going to succeed unless it is environmentally sound.

Right now we are engaged in negotiated rulemaking with representatives of the state, the counties and other governmental units, industry and environmental groups to determine regulations for pollution control from offshore installations. The current regulations, formulated by Secretary Andrus in 1980, have been the subject of years of litigation. As I have said often before, we cannot have a viable OCS program if it is the cause of onshore communities' inability to meet air quality attainment standards.

I will concede there is one complaint that we have been unable to satisfactorily address in our new 5-year plan. That comes from people who simply do not want to <u>see</u> even a few oil platforms off the California coast, no matter where or how minute they might appear on the distant horizon.

There are numerous examples in the world -- in California, as a matter of fact -- where the visibility of offshore oil platforms simply has not had any detrimental impact on tourism.

But tourism did suffer substantial blows during the 1973-74 OPEC embargo and the 1979-80 Iranian revolution. Nationwide, some half-million persons in travel-related industries lost jobs during the latter oil shock. When gas-lines begin, people stay close to home. They don't drive or fly into California for vacations -- not to the beaches, not to the desert, not to the mountains.

Secure fuel supplies have to rank very high in a state that has 700,000 registered RVs and 99,000 campsites that provide 16 million camper nights per year. Anyone relying upon a car, plane, train, or bus to get to a beach, hotel or campground should find it reassuring -- not disturbing -- to see an occasional oil platform in the distance. Contrary to the commercial, it is possible to leave home without your trusty credit card, but most of us cannot leave home without oil -- at least, we can't get very far very fast without it.

Hostile to all but the heartiest of mankind, the coastal plain is a special area well deserving of concern because of its wildlife and other environmental values. The wildlife also provide subsistence for natives in Alaska and Canada.

In 1980, after establishing the 19-million acre refuge and designating 8 million acres as wilderness, Congress ordered the Secretary of the Interior to make geological and biological studies of the coastal plain, and to recommend future management for the area. The 1.5 million acre plain, only 8 percent of the total refuge, is used 6 to 8 weeks each summer by the Porcupine caribou herd as a portion of its almost 9-milion acrea calving area.

The area also is a world class supergiant prospect for oil -- the most promising onshore prospect in the United States. Estimates range from 600 million barrels to more than 9 billion barrels of economically recoverable oil.

The area is sandwiched between Prudhoe Bay, America's largest-ever oil field only 65 miles to the west, and major Canadian discoveries in the Beaufort Sea and Mackenzie Delta to the east. Most important, if oil is found, there is a good chance it could occur in time to replace production from Prudhoe Bay, which will be in sharp decline by the turn of the century.

This is extremely important because Prudhoe Bay currently produces 20 percent of America's total domestic oil production. Without it, U.S. oil imports right now would be around 52 percent of our total needs rather than 38 percent.

If we can't replace the Prudhoe Bay production, California could stand to lose a significant percentage of its oil supply -- far more than in the 1979 crisis.

But we would not be proposing oil leasing on the nearby coastal plain if there were evidence it would be devastating to the caribou and other wildlife.

Back in the early 1970s, critics of Prudhoe Bay and the pipeline predicted virtual annihilation of caribou in the area. Instead, there are three times more caribou today than before development and production began.

Given the experience at Prudhoe Bay and the biological studies, I am convinced that we do not have to choose between oil exploration and production on one hand, or protection of wildlife on the other. We can have both.

It is our intention not just to do as well as Prudhoe Bay and the pipeline in regard to environmental protection, but to do even better, building on that experience. I stand ready to work with Congress on a leasing program for the Arctic plain that will enable us to explore and develop oil with careful stipulations to protect the caribou, the muskoxen, the other animals, birds and fish in the refuge.

There are two reasons why I have focused today on exploration and development of energy resources that will be needed to preserve America's economic and national security in the coming two decades:

First, because that is my job as Secretary of the Interior to worry about development of resources in the federal domain.

Second, because if we do not have the will to seek out and develop our own resources, then any energy policy we as a nation follow is doomed to failure.

Filling of the Strategic Petroleum Reserve, encouragement of conservation and development of alternative energy resources are important elements of this Administration's energy strategy as well. But we don't think that arbitrary government regulations policed by federal agents is the way to achieve conservation goals.

The real gains in conservation have been market-driven rather than government required. A misleading argument has been made that an appliance standards bill vetoed by President Reagan would have saved the nation 1.3 billion barrels of oil by the year 2000, making it unnecessary to offer any more leasing offshore California. In fact, these "phantom savings" would have been in electricity, very little of which is generated by oil these days.

Government enforced conservation of oil does not produce one drop of additional new oil. Goverment allocation and restrictions can only move oil around from one use to another, causing great economic dislocations as we witnessed in the 1970s.

Some people, however, seem to take seriously the old joke about the man who streamlined the front of his car to increase gas mileage 25 percent; bought new tires to increase gas mileage 50 percent; installed an experimental carburetor to increase gas mileage 25 percent; and had a special tuneup to save another 25 percent. He saved so much gas that he had to stop the car every few miles and siphon out some gasoline to keep the tank from continually overflowing.

Unfortunately, that's not the way it works.

We have already made the easy, big savings in conservation. Improvements are likely to be much more incremental and far more costly in the future. That doesn't mean we stop trying. But as much as we can conserve, as successful as we may be at developing alternative energy resources, we still will have to find and produce a great deal of our own petroleum well into the next century if we are remain a strong and secure nation.

Our best opportunities to find major portions of the oil we will need is right here, offshore California, and on the Arctic coastal plain, but we need to begin now to provide the 7 to 15 years of leadtime between issuing of leases and beginning of production in such areas. We have the technology, we have the knowledge, we have effective and proven programs, and we have the commitment to explore, develop and produce these resources while protecting people, oceans, land, wildlife and the environmental values we all cherish.

To delay now is to needlessly risk losing the expertise and to squander the time required for orderly and environmentally sound development of essential energy resources. Worst of all, if we wait too long, we risk losing the means to control our own national destiny, to guarantee our own freedoms and that of others. I remain confident we will join together to do what is right for America. The sooner we start, the easier the task, the more certain the victory.

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COMMITTEE ON INTERIOR AND INSULAR AFFAIRS

U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515

October 8, 1987
9:00 A.M.
2359A Rayburn

SUBCOMMITTEE ON WATER AND POWER RESOURCES

Oversight Hearing

Arctic National Wildlife Refuge:
Prudhoe Bay Environmental Issues

Dennis Kelso, Commissioner, Department of Environmental Conservation, State of Alaska, accompanied by Larry Dietrick, Director, Division of Environmental Quality, Juneau, Alaska

PANEL

Thomas Cook, Exploration Representative for Alaska, Chevron USA, Anchorage, Alaska

Roger C. Herrera, Manager for Exploration and Lands, Standard Alaska Production Company, Anchorage, Alaska

James Weeks, Arco Alaska Incorporated, Anchorage, Alaska

* * *

Robert W. Adler, Executive Director, Trustees for Alaska, Anchorage, Alaska, accompanied by Lisa Speer, Project Scientist, Natural Resources Defense Council, New York, New York

OPENING STATEMENT

CONGRESSMAN GEORGE MILLER

October 8, 1987

This morning, the Subcommittee is holding its fifth oversight hearing on the Secretary of the Interior's report and recommendations concerning development of the coastal plain of the Arctic National Wildlife Refuge.

Several members of the Interior committee went to Alaska in August, visiting both the Arctic Refuge and the oil development at Prudhoe Bay. For myself, the trip helped put the debate over the future management of the coastal plain in better perspective.

Prudhoe Bay provides 20 percent of our nation's oil production. The technology that industry has developed to operate in the harsh arctic environment is indeed impressive.

Yet Prudhoe facilities constitute a major industrial complex. To allow development of the coastal plain would substantially, if not irrevocably, alter the wilderness character of an important part of the Arctic Refuge.

Today we will hear from witnesses representing the regulatory agencies, North Slope oil operators, and environmental critics. Each has been asked to present testimony on the industry's record at Prudhoe Bay and its implications for development of ANWR.

Our next hearing is scheduled for October 22 when we will examine the potential impacts of oil development on ANWR wildlife.

Notes on oil exploration in the Arctic National Wildlife Refuge´s biologically sensitive areas

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Debate over oil and gas development in the Arctic National Wildlife Refuge centers primarily on oil and gas resources that do not exist(if they exist , their location is unknown). While it is possible that the Arctic National Wildlife Refuge holds commercial quantities of oil and gas rivaling those at Prudhoe Bay, the odds are that most of the most sensitive habitat areas do not have any commercial oil or gas under them. The ongoing battle between and within the State of Alaska, the U.S. and Canadian governments, the oil and gas industry, environmental, local, subsistence and cultural interests, is likely to cost more than it would to substantiate the presence of oil in commercial quantities.

Exploratory drilling is the only way to determine the presence of oil and gas. Since exploratory drilling is allowed only in the winter, under strict environmental controls, there is general concensus that oil exploration could ocurr with virtually no damage to the refuge´s biological resources. It is the development of the oil ,the pipelines crisscrossing the landscape, the trucks rumbling endlessly down miles of dusty access roads, that could change the course of mighty caribou herds.

The problem is that with our current leasing system, nobody does any exploratory drilling unless they have a lease to develop the area they are exploring. There needs to be a way , when leasing is considered in biologically sensitive areas, to separate the exploration and the development stages of oil and gas leasing.

The presence of calving caribou does not indicate the presence of oil, and the odds are gererally greatest that promising geologic structures hold no oil or gas worth developing.So most of the millions of dollars spent hasseling about what happens in these admittedly critical habitats is wasted. Roads and pipelines are seen as sorces of pollution and disturbance,or as barriers to migration , but the extent of the inherrent problems can only be appreciated if the location of the oil and gas can be determined.

Current leasing practice increases the cost and decreases the efficiency of doing bussiness. Parties to the process spar with each other to develop imaginary resources and to protect against imagined conflict. The millions of dollars that this adversarial process costs could be dramatically reduced, and environmental safeguards would more likely be effective, if we could first find the oil.

In addition to exploration rights , leases also set royalty rates and all contractural details and environmental stipulations pertinent to the life of the oilfield that has yet to be discoverded. As a consequence, those concerned with the protection of the wilderness , wildlife and cultural values of the refuge feel compelled to oppose exploration and to provide for every possible (no matter how unlikely) conflict situation by writing restrictive lease stipulations and excluding areas from leasing.

Leasing is not where the public makes the big money on its oil. Prudhoe Bay leases totalled $900 million, but the State of Akaska's royalty share of Prudhoe Bay production is reconned in billions of dollars each year. Lease bonuses are most important to oil companies as up front costs in a risky bussiness.

The problem then is not which areas to defer from leasing because of their wildlife habitat values, but how to explore those areas in order that we can determine if any conflicts are probable or even possible. Further , if there were a way to locate the oil before production rights were leased, government (the public) might have a control over when the oil is produced.

An exploratory drilling program patterned after the seismic exploration program recently completed in the Refuge would allow the oil industry to explore the most promising structures and require the exploration of areas where biological resource and related subsistence use conflicts are most likely. The incentive for an oil company to participate in such a program might be something like the right to meet or beat any other bid for production rights in an area explored by that company. Exploration incentive credits that could be applied to leases in the ANWR, or any other federal area, are another possibility. The mechanism is a bit hazy, but it is not as important as a willingness to look for one.

What is important, is that current oil leasing methods lead to a deplorable situation, both morally and economically. So long as all major developmenmt decisions have to be made before the location of the oil is known, the result will be wild and irresponsible speculation over either the presence of gigantic oilfields or the demise of gigantic caribou herds. It is probably irresponsible to threaten the one of the last free roaminlg herds of ungulates in the United States, or to leave one of the last great oilfields on the contintent undiscovered, or to designate no wilderness on Alaska's north slope, or to leave the real decisions in these matters up to the holders of oil leases.

ANWR plan gets neutral reception

By JOHN CARTER
EMPIRE WASHINGTON BUREAU

WASHINGTON – The administration's plan to allow oil and gas development of the Arctic National Wildlife Refuge got a non-committal reception at a House subcommittee hearing Thursday, the first of a series of congressional reviews.

"I have not made a decision about ANWR, but I expect that this will be the first of series of hearings," where the issue will be fully explored, said Rep. George Miller, D-Calif., chairman of the water and power resources subcommittee of the House Interior Committee.

Interior Secretary Donald P. Hodel recommended last week that Congress allow full-scale development of the area some call the nation's last, best chance for finding oil.

Environmentalists and the government of Canada oppose development because they fear it would damage the area's ecology and decimate the native caribou herd.

The Alaska Congressional delegation supports ANWR development. Rep. Don Young, a member of the committee, told his colleagues Thursday that "ANWR is the answer.

"Prudhoe Bay is half empty and our dependence on foreign oil is creeping up again. Alaska would benefit from such development," Young said.

Young has introduced legislation to open ANWR to development, while Interior Committee Chairman Rep. Morris Udall has introduced legislation to protect the area as wilderness.

"I want to open the area to environmentally sound leasing while maintaining the refuge as we do in many national wildlife refuges.

"But this is truly a national issue. Development of Prudhoe had national benefits and so will ANWR," he said.

The principal witness at the hearing was William P. Horn, Hodel's assistant for fish and wildlife, who told the committee that ANWR "is the nation's best single opportunity to increase significantly domestic oil production over the next 40 years."

Geologists report that conditions in the area are exceptionally favorable for discovery of one or more super-giant oil fields.

The mean conditional recoverable oil estimate of 3.2 billion barrels could satisfy 4 percent of total U.S. demand, Horn said.

He noted that ANWR "provides a variety of outstanding arctic habitats," but oil production would produce only moderate impacts.

Horn claimed that the only major effect would be felt by the migratin caribou herds which travel fron Canada to calve.

"But, the experience at Prudho provides a strong measure of assur ance that caribou can coexist with oi development," he said.

"Furthermore, the long period o time required to bring commercia fields into production would provid ample opportunity to develop any ac ditional mitigation measures as ma be needed."

Some fear that the Native popula tion of the town of Kaktovik would b harmed by development, but Hor said "Interior is committed to work ing with residents to minimize the e fect of oil activities."

INITIAL REPORT

on the

ARCTIC NATIONAL WILDLIFE REFUGE, ALASKA

The Alaska State Senate
Committee on Resources

May 1987

INTRODUCTION

Due to the extensive public record which has been built through public hearings held across the state, this initial report constitutes what would normally be termed an Executive Summary.

The Senate Resources Subcommittee on the Arctic National Wildlife Refuge (ANWR) was established with the purpose of building a public record which the Alaska State Legislature could utilize in making an informed decision on proposed legislation regarding the ANWR. The second objective was to allow the public an opportunity to have input into this decision making process and access to the same information on which the legislature would base its policy decisions.

In order to fulfill these objectives, the subcommittee held public hearings in Fairbanks, Anchorage, Ketchikan and Kodiak. Members of this subcommittee were Senators Arliss Sturgeluwski, Jim Duncan, Lloyd Jones, and Chaiman Jack Coghill. During these hearings approximately 40 hours of public testimony have been taken and an uncertified transcript of this testimony has been completed.

Additional information in the form of reports, maps, pictures and correspondence, is also contained in this voluminous public record. This initial report does not attempt to footnote or reference any specific documents contained in the public record. This initial report is intended to provide an overview of the issues inherent in potential oil and gas activities conducted in the ANWR, and provide recommendations as to what the State of Alaska's policy should be in this regard.

Further hearings by the full Senate Committee on Resources were held in Juneau. It should also be recognized that the House Committee on Resources also held many public hearings on the subject of the ANWR in Juneau.

This report is assembled in a manner to highlight first the findings of the senate subcommittee; the findings are facts that can be documented in the public record; secondly, conclusions of the subcommittee, these points may or may not be referable summaries or judgements formed by the subcommittee, as a result of the hearing process; lastly this report contains recommendations of the subcommittee, these recommendations are assessments of the facts as they relate to the ANWR and they present policy direction.

It is anticipated that further documentation of the findings, conclusions and recommendations contained in this report will be performed using the public record at a later date.

This initial report was adopted by the full Senate Committee on Resources by unanimous vote on May 4, 1987.

TABLE OF ISSUES

Sections

Section 1: The Arctic National Wildlife Refuge

FINDINGS

* The coastal plain of the Arctic National Wildlife Refuge contains the greatest potential on the North American continent for the United States to discover economic quantities of recoverable oil and gas reserves.

* The coastal plain of the ANWR contains unique environmental and wildlife qualities which deserve consideration and encourage caution, in any scenario, to explore, develop or produce any hydrocarbon resources which may be present there.

* The United States government has entered into treaties and agreements with the government of Canada and other countries with regard to the fish and wildlife species that either reside or occasionally frequent the coastal plain of the ANWR.

* Only the Congress of the United States has the authority at this time to remove the restriction on oil and gas exploration, development and production in the coastal plain of the ANWR.

* In the establishment of the Arctic National Wildlife Range in 1960, Congress recognized the possibility that hydrocarbon resources might be present in the coastal plain.

* The indigenous people of Alaska, through their corporate representatives, have recognized the potential of the coastal plain of the ANWR to provide for the well being of future generations of their people as was the intent of Congress in enacting the Alaska Native Claims Settlement Act (ANCSA).

* The agencies within the U.S. Department of Interior and the State of Alaska, which have contributed to the wealth of information on the ANWR, in concert with the Governor of Alaska, have endorsed the exploration, development and possible production of hydrocarbon reserves which may be present in the coastal plain of the ANWR.

CONCLUSIONS

* The wildlife resources and the geologic environment have been explored, studied and documented extensively in the coastal plain of the ANWR and in the arctic generally for well over twenty years.

* There has been cooperation between the federal governments of the U.S. and Canada regarding the wildlife resources dependent on the coastal plain, the geology of the area and the transfer of pertinent information between the agencies of the State of Alaska and these two federal governments.

* The people of Alaska have expressed and demonstrated concern for the environment and wildlife present in the coastal plain of the ANWR, as well as the desire to enhance economic opportunities which may result from activities in the coastal plain of the ANWR.

* The State of Alaska, as well as those federal agencies responsible for protection of the environmental and wildlife resources present in Alaska, has established exemplary records fulfilling its respective responsibilities as related to exploration, development and production of the oil and gas reserves within Alaska and especially in the Arctic.

* There is a need for the U.S. State Department to formalize agreements which do not jeopardize the State of Alaska's position as sovereign and manager of state resources, particularly with regards to arctic resources and environment.

RECOMMENDATIONS

* The Congressional ban on oil and gas exploration, development and production from within the coastal plain of the ANWR should be lifted.

* The ANWR should be opened without a government exploration program.

* The ANWR should be opened to oil and gas exploration, development and production under a leasing program using the authorities of the Minerals Leasing Act of 1920.

* The Governor of Alaska should maximize Alaska's participation in all aspects of the ANWR and in the possible Congressional action to open the coastal plain to oil and gas activities.

* Given the nature and complexity of the issues relating to the ANWR, and given the long term effects any action taken by the Congress will have on Alaska's and the nation's domestic and international affairs and economics, the State of Alaska should establish an ANWR Policy Committee. The membership of this committee should be the Governor of Alaska, the Commissioner of Natural Resources, and one Executive Branch member-at-large; President of the Senate, the Chairman of the Senate Resources Committee, and one Senate member-at- large; and the Speaker of the House, the Chairman of the House Resources Committee and one House member-at-large. The task of the committee should be to forge an Alaskan consensus on the issues relating to the ANWR and advocate these positions before the Congress.

Section 2: The Potential for Hydrocarbon Discoveries in Economic Quantities

FINDINGS

* The geologic environment exists in the coastal plain of the ANWR to the extent that conditions are favorable for the production of oil and gas reserves in the substrata of the area.

* The coastal plain of the ANWR lays between the Prudhoe Bay/Kuparuk complex on the North Slope of Alaska and the Beaufort Sea/MacKenzie Delta area in Canada.

* The North Slope of Alaska contains 9 known significant oil and gas fields with proven and inferred original recoverable reserves of about 15.4 billion barrels of oil and 32.0 trillion cubic feet of gas.

* The Beaufort/MacKenzie area of Canada contains 39 oil and gas fields with proven and inferred original recoverable reserves of about 8.5 billion barrels of oil and 65.0 trillion cubic feet of gas.

* The coastal plain of the ANWR in Alaska contains 26 significant geologic structures which have been assessed by the State of Alaska to contain 16 billion barrels of recoverable oil. This figure assumes a recovery factor of 35 percent and compares favorably with the original recoverable oil reserves of about 10 billion barrels in the Prudhoe Bay field.

* The assessment by the State of Alaska also estimates that 29 trillion cubic feet of gas may also be present in the coastal plain of the ANWR.

* The Prudhoe Bay field is approximately 13 miles by 16 miles in size, as view from the surface.

* The ex-State Geologist, who recommended that the State of Alaska select the Prudhoe Bay area in the late 1960's, estimates that the structure referred to in the draft 1002(h) report as prospect 18 could contain 10 times the producing horizon of Prudhoe Bay if the proper conditions are present.

* It is estimated that a discovery in the coastal plain of the ANWR would have to be at least 350 million barrels to be economic.

* Kaktovik Inupiat Corporation has drilled the only exploratory well (KIC #1) in the coastal plain of the ANWR. The down hole information from this well is protected by law from public release.

* KIC #1 was drilled in 1 of 4 geologic formations that are estimated to contain 63 percent of the oil and gas resource distribution of the coastal plain of ANWR. (Draft 1002(h) report)

* The Kaktovik Inupiat Corporation owns approximately 92,000 acres of the coastal plain of ANWR as a result of the Alaska Native Claims Settlement Act and the Alaska National Interest Lands Act. The KIC #1 well was drilled on these lands.

CONCLUSIONS

* It is evident, and there is no disagreement among geologists, that the coastal plain of the ANWR has the highest potential for the United States to make a major oil discovery.

* It is also evident that even with an aggressive exploratory drilling program, the ANWR may not contain any reserves of hydrocarbons, and those that may exist may be uneconomic.

RECOMMENDATIONS

* Exploration and the possible development and production of hydrocarbon reserves should be allowed on the coastal plain of the ANWR.

* The program under which exploration, development or production should take place should not involve the federal or state government in any capacity other than as a leasor of subsurface rights and as a regulator of private sector activities.

Section 3: The Porcupine Caribou Herd

FINDINGS

* The Porcupine Caribou Herd (PCH) population has been increasing in recent times and now numbers approximately 180,000 animals.

* The PCH has been documented by explorers, adventurers and biologists since the late 1800's.

* Fluctuations in caribou populations are not understood at this time. It is generally recognized that world populations of caribou are on the increase.

* The PCH ranges over 96,100 square miles in northeast Alaska and northwest Canada.

* Spring migrations from southern winter range lands by the PCH to calving grounds on the Arctic coast begin in May. Caribou start arriving in the Arctic National Wildlife Refuge in mid to late May. The herd usually vacates the coastal plain of the ANWR by mid July.

* The first calves of the year are born during the last week in May, with the peak calving occurring during June 4 - 8.

* The calving grounds, including the coastal plain area, encompass nearly 8.9 million acres.

* The concept of a "core" or "concentrated" calving area is a matter of controversy among wildlife biologists.

* The concept of a "core" or "concentrated" calving area is based on the density of caribou using a specific area for that period of time when calving occurs.

* Biologists who support the core calving area concept believe it to be approximately 300,000 acres or 400 square miles in area.

* It is speculated that the PCH uses this "core" area because the area has some "survival value". Survival values that have been discussed are a reduced number of predators present, the snow melt cycle, a favorable emergence of forage at an earlier time than elsewhere or there may be a close association with favorable summer habitat, including insect relief areas. There is no indentified single value or combination of possible survival values to indicate scientifically why the caribou use what is referred to as the "core" or "concentrated" calving area other than it is on their migration route.

* The "concentrated" or "core" calving area was identified by counting at least 50 caribou per square mile, including calves, during a period from 1972 to 1985. These population densities were roughly plotted on a map. Eventually these maps were superimposed;

the area which over time contained the highest population density became the "core calving area".

* There is evidence, for example in 1973 and in 1980, when no concentrations of calving activity occurred on the 8.9 million acre calving grounds.

* There is evidence, in 1982 for example, when almost all the calving occurred outside of Alaska. There are also other years which indicate that although concentrations occurred, none of these areas were within the coastal plain "core" or "concentrated" calving area.

* It is not disputed that oil ar gas activities will have an impact on caribou.

CONCLUSIONS

* The validity of a core calving area is questionable, considering the extent of the PCH's range, migration patterns and the environmental variables which influence the progress of the PCH's annual migration.

* Since the PCH are only in the coastal plain for at most a two month period, and considering that exploration activities take place in the Arctic primarily during winter months when the ground is frozen, a leasing schedule can be implemented that would least affect the calving area of greatest concern to those biologists supporting the concept of a "core calving area". The time frames for arctic exploration in all likehood would not impact the calving area for at least ten years.

* The U.S. Fish and Wildlife Service has every option to stipulate mitigation measures to minimize impacts to wildlife resources in the coastal plain of the ANWR.

* Any additional environmental or wildlife resource information necessary to further mitigate oil and gas activity impacts could be better acquired as a result of industry presence in the coastal plain of the ANWR.

RECOMMENDATIONS

* The entire coastal plain of the ANWR should be opened to oil and gas activities, with proper consideration being given to the purposes of a National Wildlife Refuge.

Section 4: Land Exchanges: Value-for-Value, Buy Sell Agreements

Committee Note: Throughout the hearing process, witnesses refer to what amounts to a "willing buyer, willing seller" land transaction, as a land exchange. Although at this time it may be confusing, the points in the FINDINGS section have not been edited to reflect this buy sell relationship in order to preserve the integrity of the facts as they appear in the public record.

FINDINGS

* The original objective of the Department of Interior was to acquire high priority refuge inholdings that represented and brought with them high public interest attributes, particularly in the form of fish and wildlife resources and public recreation opportunities.

* The U.S. Fish and Wildlife Service in their normal acquisition process does not acquire subsurface estate. Past experience indicates that if the subsurface is virtually worthless, ownership will be relingquished without cost. If the subsurface is suspected of having value, the U.S. Fish and Wildlife Service normally can't afford it.

* The land exchange negotiations are concerned with three things:

  The land exchange contract, "the boilerplate", or "the master", which will be used as a starting point in all exchanges regarding the coastal plain of the ANWR;

  The land use stipulations, which will be applied to all surface activities on lands involving subsurface exchanges in the coastal plain of the ANWR;

  The tract identification process, which will provide procedures for tract selection and selection conflict adjudication, involving exchanges in the coastal plain of the ANWR.

* Native corporations, based on their independent judgements, have concluded that the present exchange concept is most responsive to their corporate needs.

* Land exchanges between the Department of Interior and property owners with title to lands within federal refuges, or other so called conservation units, are an accepted and authorized means for the Secretary of Interior to enhance the integrity of established conservation units.

* Land exchanges involving the lands in the coastal plain of the ANWR and native corporations are a matter of controversy among

Alaskans, the environmental community and the executive branch of the State of Alaska.

* While no one can predict the percentage of subsurface values involved in the land exchanges, the Department of Interior's objective is to preserve the bulk of those values for utilization or disposition through a traditional lease sale.

* Should the Secretary recommend and the Congress approve opening of the coastal plain of the ANWR to oil and gas activities, the exchange participants would have the opportunity to pursue exploration activities in advance of a Federal lease sale. A federal lease sale will procedurally take years to execute.

* The five native corporations participating in the exchange discussions have offered a package of lands totaling approximately one million acres, all high priority refuge lands.

* The State of Alaska holds title to 12 million acres within or adjacent to Federal conservation units and has offered these lands in exchange for lands within the coastal plain of the ANWR. Before the State withdrew from participation in the exchange discussions, 850,000 acres had been accepted for consideration by the U.S. Fish and Wildlife Service.

* The State of Alaska was an active participant along with the native corporations in the land exchange discussions with the U.S. Fish and Wildlife Service from December of 1986 to March of 1987.

* It is estimated the the value of the native corporations' 1 million acres will be sufficient to acquire from 25,000 to 50,000 acres of subsurface estate within the coastal plain of the ANWR. These native corporations do not believe they will be able to select the highest potential oil and gas lands, because the valuation on their offered exchange lands is not adequate to "buy" these high potential areas.

* If the Congress acts to remove the prohibition on exploration, development and production of possible oil and gas reserves within the ANWR and land exchanges are consummated before this act, the only revenues the State of Alaska will receive from possible oil and gas development will be in the form of severance and corporate income taxes.

* The U.S. Department of the Interior will ask Congress to ratify the land exchanges in order to preclude any injunctive actions.

* The decision by the Secretary of the Interior to recommend opening the ANWR is independent from the exchange negotiations.

* The State of Alaska's concerns, after careful review by the Governor of the trade proposals, in the context of the state as both proprietor and sovereign resulted in the following general reasons for leaving the exchange discussions:

The 90%-10% royalty question; the state loses its 90% share of royalty on the exchanged lands.

The geologic information; the information was deemed insufficient to consider an exchange, especially in light of at least one other participant having access to data from the KIC #1 well.

The Governor's position; the Governor, after personal talks with knowledgeable sources in Washington D.C., was convinced the exchanges would not occur.

The Governor's focus; the Governor wants to focus on opening the coastal plain of the ANWR and eliminate any divisive elements which may introduce complexity and unnecessary division within this state.

* Since only the surface estate is being exchanged by the native corporations, the 7(i) provision of ANSCA does not apply. 7(i) applies to transactions which involve subsurface revenues and timber resources on native corporation lands. If the native corporations trade surface for subsurface, 7(i) does not apply to revenues generated from the acquired subsurface.

* There are 430 refuges in the national wildlife refuge system, comprising approximately 90 million acres. Sixteen (16) of these refuges are in Alaska and they comprise 77 million acres. There are 13 to 15 million acres of private inholdings in Alaska's refuges. This is roughly the same amount of land contained in the refuges in all of the other states collectively.

* The proposed exchange will be the most significant transaction ever undertaken on behalf of the national refuge system.

CONCLUSIONS

* Although "land exchange" is the term applied to agreements to trade land titles of equal value, these trades involve a process to fix dollar value estimates on both surface and subsurface elements of the transaction. In this way the present process represents a conventional "willing buyer, willing seller" business transaction. In this case however, the "willing seller" is selling only surface value of land, and the "willing buyer" is using subsurface values in other lands to purchase the lands desired by the buyer. This process may be confusing to interested third parties because there are elements which necessitate both the "willing buyer" and the "willing seller" to reverse rolls throughout the negotiating process. For example, native corporations are the "willing seller" of the surface estate to lands they own within refuges. At the same time they are the "willing buyer" of what ever subsurface estate within the ANWR coastal plain the value of their surface estate will purchase. The U.S. Fish and Wildlife Service can also

be considered in this way. They are the "willing seller" of subsurface values within the coastal plain of the ANWR in order to be the "willing buyer" of valuable surface estate in other refuges.

* The amount of subsurface resources that might ultimately be exchanged is a subject of legitimate concern to the subcommittee and others.

* Oil and Gas activities conducted on lands whose subsurface has been sold as a result of an exchange of values have two potential beneficial impacts:

> Exploration would be conducted on a limited closely coordinated basis, thereby minimizing environmental impacts;
>
> Experience and data gained through early exploration would allow for a better designed lease sale that may result in higher revenues being generated while further minimizing adverse environmental impacts.

Thus, the concurrent exchange concept is most responsive to the needs of both those wishing to relinquish their high priority refuge inholdings and of those wishing to acquire these inholdings.

* It is in the interest of Alaskans and the national public that the federal government become the sole surface estate proprietor of National Wildlife Refuge System lands and of other federal conservation system unit lands, within Alaska.

* In the case of value-for-value transactions involving the coastal plain of the ANWR, congressional ratification of the exchanges would preclude the possibility of injunctive actions to halt or delay transfers of subsurface rights; the exception being that even congressional action can not waive statehood entitlements of submerged lands. Submerged lands are an inherent attribute of statehood.

* The transactions involving native lands have raised the question of whether or not traditional interests and the intent of the Alaska Native Claims Settlement Act are being considered. The native corporation's feel that their shareholder's traditional use of the land is protected under provisions of the Alaska National Interest Land Conservation Act (ANILCA) subsistence and access clauses and that federal refuge management and stewardship more than adequately protects their interests and lifestyle.

* If the state is not a party to the contract drafting process of this value-for-value transaction, it may be that state lands would be excluded from any Congressional legislation which included an exchange ratification and opened the coastal plain of the ANWR. Without being a party to the contract negotiations the State of Alaska has no formal means to seek approval of surface values it has offered for subsurface rights in the coastal plain of the ANWR,

nor is it possible to adequately protect the interests of all Alaskans in this process.

* After all the oil and gas in Alaska has been pursued developed and consumed, this value-for-value exchange effort could stand as a lasting testimony to our commitment, wisdom and foresight on behalf of future generations.

RECOMMENDATIONS

* The State of Alaska should renew its participation in the interest of the public in the buy sell agreement discussions, commonly referred to as the "land exchange negotiations".

* Considering that it is in the national interest to remove inholdings from federal conservation units and that the surface management of these inholdings by the federal government severely restricts or prohibits development of these lands, the State of Alaska should divest itself of its interests in the surface estate of inholdings within federal refuges, national parks and the like, for subsurface interests in the coastal plain of the ANWR.

* Provided that the heritage granted to the native community in Alaska by the ANSCA and the ANILCA is protected, and that there is an equitable adjudication process for tracts of land in the coastal plain which are selected simultaneously by the natives and the State of Alaska, both parties should proceed with buy sell negotiations.

Section 5: State Oil Royalties: The Mineral Leasing Act of 1920

FINDINGS

* It is the position of the executive branch of the government of the State of Alaska that the 90%-10% revenue share of royalties from the production of subsurface resources within National Wildlife Refuges within Alaska can not be changed without the consent of the State.

* Administrative actions taken by the Secretary of Interior with regard to refuges and mineral leasing on these lands does not in any way minimize the fact that Congress is the one establishing the policy. That policy is clearly provided in the Mineral Leasing Act of 1920. This act provides that each state should receive 90 percent of the revenue share, either directly or through the Reclamation Fund, and that 10 percent should go to the Federal Government. The fact that the Secretary of Interior can remove an area from leasing under the mineral leasing law does not mean that if the area is ultimately leased, the mineral leasing law is not the authority that applies.

* Congress made the Mineral Leasing Act of 1920 a provision of the Alaska Statehood Act (Section 6(h) and 28.), and as such it becomes an integral part of the compact provisions of Section 4 of the Alaska Statehood Act (72 Stat.339).

* The concept of an overriding royalty to the state from lands exchange in the coastal plain of the ANWR to the native corporations was introduced by the State of Alaska as a creative alternative which could both protect the public interest under the Statehood Act, preserve the principles of federalism and hopefully allow the exchange process to advance.

* The Department of Interior feels that an overriding royalty would have the effect of lowering the value of the tracts offered in the coastal plain of the ANWR to the exchange participants. This would increase the amount of land the participants would consume within the coastal plain of the ANWR.

* What the state is attempting with the overriding royalty is to retain the grant that is the result of the Statehood Act and the inclusion of the 1920 Minerals Leasing Act. The exchanges would take 100 percent of the revenue value produced from those tracts of land and trade it. That value includes the federal government's 10 percent and the state's 90 percent of the 12 percent royalty that is commonly applied to oil and gas production from state and federal leases. The only revenue source from these tracts therefore would be taxes.

CONCLUSIONS

* The ANWR should be opened using the existing authorities, namely the Mineral Leasing Act of 1920.

* The national interest is best served by encouraging competition for tract selection under the provisions of the Mineral Leasing Act of 1920.

* The Native corporations have every reason to expect value-for-value in the land exchanges.

* If a grant or overriding royalty is given to the state on subsurface tracts traded to native corporations, then the those lands in the ANWR will be devalued. Instead of a potentially small portion of the coastal plain of the ANWR being exchanged, an incremental increase in the amount of the ANWR subsurface would become available to reflect the override.

RECOMMENDATIONS

* The Congress should act to open the ANWR under the Mineral Leasing Act of 1920 in the public interest to encourage an expedient but prudent exploration and possible development and production of hydrocarbon resources in the coastal plain of the ANWR.

* The Governor of Alaska should encourage the Congress to utilize the authority of the Mineral Leasing Act of 1920 in any legislation enabling the exploration, development and production of hydrocarbon resources within the coastal plain of the ANWR.

Section 6: The Work Force: Local Hire

FINDINGS

* At this time, the Alaska labor unions oppose the opening of the coastal plain to oil and gas development without a labor clause in the enabling congressional legislation.

CONCLUSIONS

* An experienced work force is available in Alaska so that development in the coastal plain of the ANWR can take place in an environmentally sound manner using this professional labor.

* If labor agreements are required with unions, they should reflect a competitive position based on Alaskan labor market conditions.

* The issue of local hire in Alaska should be approached first from a regional level, then a statewide level and finally a union membership level.

RECOMMENDATIONS

* The use of Alaskan union locals should be encouraged. Industry has recognized that competitively priced union labor increases the efficiency and lowers construction and operating expenses in the Alaska oil fields.

* Congressional action should not include restrictions as to which Alaskan labor force should be utilized, union or non-union. That is a decision which is best addressed by individual private sector employers through the collective bargaining process.

Section 7: National Security Implications

FINDINGS

* The nation's imports of oil have fallen from a peak in 1977 of 8.5 million barrels per day (MMBD) or 46% of consumption, to 4.3 MMBD or 27% of consumption in 1985.

* The national trend toward decreasing dependence on foreign oil sources is reversing. Net U.S. oil imports during the first 10 months of 1986 were 29% above the comparable period in 1985. The United States is moving once again toward dependency on foreign sources of oil.

* The current oil glut may evaporate as early as mid 1990 or 1992 due to declines in domestic production and a steady rise in domestic consumption of oil and gas products.

* Domestic production, development and exploration have declined as a result of severe oil price declines.

* In a priority memo to the President, the Secretary of Energy concluded that, "Until oil prices increase appreciably, U.S. exploration will remain stagnant, our dependency on imports will continue to increase, and our vulnerability to oil price shocks and possible oil shortages or stoppages will rise to an excessively dangerous level. All of this could seriously affect our strategic and national security as well as our economic stability."

* A letter from the National Petroleum Council to Energy Secretary John S. Harrington stated that, "Additional import dependence will increase our vulnerability to a supply disruption, rapidly accelerate our balance of trade problems, undermine our national security and compromise our U.S. foreign policy."

* Thirty eight percent fewer oil and gas wells were drilled in 1986 than in 1985.

* Only 32,438 oil and gas wells were drilled nationwide in 1986, the lowest level in 12 years.

* There were 2,844 wildcat wells (wells drilled to discover new fields) reported completed in 1986 compared to 4,757 in 1985. The wildcats resulted in 302 oil discoveries and 193 gas discoveries in 1986 compared with 535 oil discoveries and 296 gas discoveries the previous year.

* Expansion of domestic oil production has several advantages relating to the nation's economic and military security. Expansion of other domestic energy supplies or energy conservation, to the extent they can substitute for imported oil, would have similar advantages:

Higher U.S. oil production will exert downward pressure

on the world price of oil.

Increased domestic oil production reduces the chances of a supply disruption that would have a sharp impact on the world oil price, since less U.S. demand for oil imports will increase slack in world oil markets.

Should there be a serious event that disrupts supply, the costs to the U.S. economy will be reduced if U.S. oil import demand is less relative to its total oil supply.

Less U.S. dependence on foreign oil allows U.S. foreign policy to be more flexible and strengthens relationships with oil importing allies.

CONCLUSIONS

* The single most important decision our Congress will make in the areas of domestic production and national energy security in the next 18 months is the opening of the coastal plain of the Arctic National Wildlife Refuge to energy exploration and production.

* At peak, Alaskan oil and gas production represents about 20% of our total domestic production. That production is now in decline and will dramatically fall over the next 10 years. Without new discoveries and a dramatic change in domestic consumption there is little hope that we can avoid serious, national economic shocks. We are already more dependent, as a nation, on oil products than ever before. Our nation can not afford to stand in line again.

RECOMMENDATION

* The Congress should act expeditiously to remove the prohibition on oil and gas activities in the coastal plain of the ANWR, and Alaskans should encourage the utilization of the resources that may be present there. In this manner, the State of Alaska can make its greatest peace time contribution to the security of the nation.

* The Congress and the State of Alaska should continue to encourage the conservation of energy resources through incentive programs and through the use of alternative fuels.

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TESTIMONY OF JAMES E. EASON

BEFORE THE HOUSE SUBCOMMITTEE ON WATER AND POWER RESOURCES

JUNE 23, 1987

Mr. Chairman and members of the Subcommittee, my name is James E. Eason. I am a petroleum geologist with thirteen years of experience in Alaska, and I am the Director of the Alaska Division of Oil and Gas. The Division of Oil and Gas is that agency within the Alaska Department of Natural Resources which is responsible for the competitive leasing of the state's oil and gas lands, the administration of those leases and the collection of the state's share of revenues from the leasing of its lands, and from the leasing of federal lands within Alaska and adjacent to certain of the state's offshore submerged lands.

Before turning to a discussion of the history of the development of Alaska's oil and gas resources, and describing current production within the state, I would like to stress two very important points. First, I believe oil and gas leasing and development in Alaska is extremely important to both the state and the nation, and second, I am convinced that the coastal plain (or 1002 area) of the Arctic National Wildlife Refuge (ANWR) is the most prospective unexplored petroleum province remaining in North America.

As a result of the field work and geophysical surveys conducted over the past twenty years, it has been clearly demonstrated by federal, state and independent investigators that the 1002 area could yield Prudhoe Bay-size quantities of petroleum. To put this conclusion in proper perspective, the Prudhoe Bay field on Alaska's North Slope, is the largest oil field in North America, with original reserves of nearly 10 billion barrels of recoverable oil. Production from the Prudhoe Bay field and the adjacent Kuparuk River field currently accounts for over 20% of the total daily domestic crude production.

Situated on trend between the prolific North Slope oil fields to the west and the petroleum-rich Canadian Mackenzie Delta province to the east, the 1002 area has all of the key geologic elements requisite for major hydrocarbon accumulations. Based on field observations of oil seeps and oil-stained reservoir rocks at surface outcrops, it is evident that oil has been generated by source rocks in the area. Hopefully, most of that oil has migrated into and been trapped within reservoir rocks in the very large structures which lie beneath the surface. The quality of source and reservoir rocks found in ANWR represent the best of both Prudhoe Bay and Mackenzie Delta. In addition, based upon

the limited geophysical data collected to date, twenty-six large prospective traps have been identified beneath the surface of the 1002 area. It is estimated that if oil is contained within these structures beneath the 1002 area, there is a five percent probability of there being between 26.5 and 29.4 billion barrels of oil in-place. This volume compares favorably with the 23.5 billion barrels of oil initially in-place at Prudhoe Bay. For additional perspective, it is interesting to note that prior to drilling, some industry officials estimated that there was only a two percent probability that the Prudhoe Bay area contained as much as two billion barrels of oil.

Exploring for oil and gas in frontier areas such as the coastal plain of ANWR is an extremely risky enterprise. The worldwide success ratio for exploratory wells in frontier areas is about one success in twenty, or 5%. In ANWR, the odds are estimated to be much better. The federal government estimates there is a twenty percent chance that economically recoverable oil is present in the 1002 area. This is an exceptionally high number for such a small area.

In our opinion, exploration to confirm ANWR's petroleum potential is clearly in the interest of the state and the nation. We in Alaska have just recently witnessed the production of the five billionth barrel of oil from Prudhoe Bay. This means that one-half of the total proven 10 billion barrels of recoverable oil have been transported through the Trans-Alaska Pipeline System (TAPS) in just ten short years. It also means that the largest field in North America, which currently contributes a major share of this country's daily production, will begin a precipitous and irreversible production decline in the near future (mid 1988).

Presently, North Slope crude flows through TAPS at a rate of about 685 million barrels per year. By the year 2000, even projecting the contributions of other known North Slope fields expected to come on line, annual production from Alaska will fall to approximately 386 million barrels per year. This volume represents only about 55% of the pipeline's capacity.

If the coastal plain of ANWR is opened to exploration and if petroleum is discovered in significant quantities, production from this region could help to offset the expected decline in

North Slope production. Most experts believe that by the year 2000 domestic oil production will be substantially less than the current 8.3 million barrels per day--it likely will be between 4.5 million and 6.4 million barrels per day. ANWR could contribute at least 700,000 barrels per day to the year 2000 totals, and 1.5 million barrels per day for the following ten years before its production decline begins. This increased production would be at the expense of imported oil, thereby contributing positively to our nation's balance of payments and its energy security.

It is clear to the state of Alaska that the high prospectivity of the coastal plain of ANWR, and its potential to supplement the projected domestic production decline, thereby reducing our oil imports, justifies an early and thorough assessment of the area by exploratory drilling. I believe a review of the history of oil and gas exploration and development in Alaska will underscore the importance and wisdom of proceeding with an orderly exploration program now rather than later.

Opening the 1002 area for drilling would be adding a crucial --and perhaps final--chapter to Alaska's long history of involvement in petroleum exploration and development. This involvement began around the turn of the century when early explorers and whaling crews reported occurrences of natural petroleum seeps along coastal regions of the state. Those discoveries were the harbingers of the exploration successes of the 1960's and 1970's which were to confirm the presence of massive oil and gas reserves along the North Slope of Alaska. It was the perseverance of the early explorationists--often in the face of staggering failures, which led to the discoveries of Prudhoe Bay and Kuparuk River, respectively North America's first and second largest producing oil fields.

The sheer magnitude of those North Slope discoveries tends to overshadow many important successes--and failures--elsewhere in Alaska during the intervening years. I believe it is important to review some of these other oil and gas milestones, because I think they will underscore the importance of exploring and confirming ANWR's potential without delay.

The state's earliest commercial petroleum development was of a much more modest scale than most North Slope development, and was located hundreds of miles south of Prudhoe Bay near the village of Yakutat along the Gulf of Alaska. Here, in 1902 the Katalla Oil Field was discovered. Before Katalla was abandoned in 1933 due to a fire at the production facilities, this field produced 154,000 barrels of oil. In thirty-one years Katalla produced less oil than is currently transported through TAPS every two hours!

The next major milestone in oil and gas development within Alaska came with the 1957 discovery of oil at the Swanson River Field by Richfield Oil Corporation and its partners. That onshore discovery on the Kenai Peninsula adjacent to Cook Inlet led quickly to the leasing, exploration and development of numerous onshore and offshore tracts within the Cook Inlet Basin. Since that first discovery at Swanson River, a total of 21 oil and gas fields have been discovered in Alaska's Cook Inlet.

Although the State of Alaska's competitive lease sales in the Cook Inlet Basin continue to draw moderate attention, most knowledgeable explorationists believe that Cook Inlet development has seen its zenith. Cumulative production from the area through 1986 was 1.073 billion barrels of oil and 4.9 trillion cubic feet of natural gas. The average annual decline in oil production is approximately 15 percent, and current total Cook Inlet production is about 46,000 barrels per day. Again for perspective, the combined daily oil production from all Cook Inlet fields amounts to slightly more than the volume moved through TAPS every thirty minutes.

Industry interest and the mapping of numerous extremely large subsurface structures in the Gulf of Alaska led the U.S. Department of the Interior, in 1976, to conduct its first competitive oil and gas lease sale in Alaskan waters, OCS Sale 39. Because of prior production onshore in the nearby Katalla area, the Gulf of Alaska then was considered to be highly prospective. Three federal OCS lease sales in the Gulf of Alaska generated total bonus bids of $670 million dollars for leases located there. However, exploration of those leases resulted in a succession of 12 very expensive dry holes.

The failure of the Gulf of Alaska to meet everyone's expectations serves to emphasize that, even in Alaska, and even next door to confirmed production, there is no certainty of success when it comes to oil and gas exploration. As a matter of fact, this unfortunate pattern--the subsequent condemnation of otherwise extremely prospective federal OCS acreage adjacent to previous discoveries--has since been repeated all too often in Alaska.

Like the Gulf of Alaska, the early successes in the Cook Inlet Basin did not assure similar successes on adjacent federal OCS tracts. In 1977 the first of three federal OCS sales in the Lower Cook Inlet was held. These sales netted the federal government $403 million in bonus bids, but resulted again in 12 dry holes. In fact, results were so discouraging that the final Lower Cook Inlet OCS sale, which was held in 1982, received no bids.

I would like to focus now, for a few minutes, on the history of exploration on Alaska's North Slope. In 1919, a geologist with the U.S. Geological Survey, Ernest de K. Leffingwell, traversed

the area on foot and with dog teams, recording the first formal descriptions of North Slope geology and documenting the locations of several oil seeps. After Leffingwell, other expeditions led by geologists of the U.S.G.S. followed. These survey teams mapped and documented the surface exposures of many potential petroleum deposits in Northern Alaska.

Based in large measure upon the results of these early surveys, in 1923, the Naval Petroleum Reserve No. 4 (now National Petroleum Reserve-Alaska) was established. The first exploration phase of NPR-4 ended in 1953; in the intervening years between 1923 and 1953 the United States Navy had drilled 37 test wells and found three oil accumulations and six gas accumulations within the Reserve. Only two of these discoveries were considered sizeable, namely Umiat, with 30 to 100 million barrels of oil and Gubik, with 370 to 900 billion cubic feet of gas. Gas from another of the discoveries, the small South Barrow gas field, is being produced today for local consumption at Barrow. The Navy's 30-year exploration effort in NPRA cost the federal government between $50 and $60 million.

In 1960, the Arctic National Wildlife Range (ANWR) was established. The closure of this area, extending eastward from the Canning River to the Canadian border, combined with prohibitions against competitive leasing in NPRA to the west, effectively confined industry exploration efforts to the area between the Colville and Canning Rivers. In 1964, the State of Alaska selected about 80 townships in this corridor between NPRA and ANWR, and in December of that year, the state held its first competitive North Slope lease sale, and exploration of the resulting leases began shortly thereafter.

Following a succession of seven dry holes in the arctic foothills to the south, exploration shifted northward to the central coastal plain. In 1965, the first dry holes in the area immediately surrounding the Prudhoe Bay structure were drilled. In January, 1967, in what was essentially a last ditch effort, a rig was moved to the Prudhoe Bay State No. 1 location. Twelve months later, in January, 1968 the discovery of the Prudhoe Bay oil field was announced.

Thirty-three exploratory wells were drilled the following year, and in September, the state held its 23rd Competitive Lease Sale which consisted of acreage near and adjacent to the Prudhoe Bay discoveries. That sale attracted over $900 million in bonus bids. This was the last lease sale on the North Slope until the Joint Federal-State sale in December, 1979. After the discovery of the Prudhoe Bay field and before the 1979 joint sale, over 100 exploratory wells were drilled on the North Slope, with 19 of those wells discovering oil or gas.

In 1974, exploration began again in NPRA, this time under the direction of the U.S. Geological Survey. Between 1974 and 1981 twenty-seven exploratory wells were drilled within NPRA at a cost to the federal government just over a half billion dollars. After the federal exploration program ended, Congress authorized competitive leasing in NPRA, and three sales were held. The first two of these sales received minimal interest, and the third received no bids. Only one additional exploratory well has been drilled on the leases acquired in those sales, and it was another dry hole.

Including the 1979 Joint Sale, three federal lease sales have been held in the Beaufort Sea. These three sales produced total winning bonus bids of $3.4 billion. Eighteen exploratory wells have been drilled offshore in the OCS area extending eastward from NPRA to ANWR. The results have included five announced discoveries near the Prudhoe Bay field, one each near Seal and Sandpiper Islands, two near Tern Island and one near Duck Island (Endicott). Also, a very recent discovery by Unocal at its Hammerhead #1 well is located about 10 miles offshore of Flaxman Island.

Since 1979, the state has conducted ten competitive lease sales, offering over 3.7 million acres of onshore North Slope and submerged Beaufort Sea acreage. Total bonuses received for these leases were more than $700 million. To date, these leases have produced only two discoveries, one oil discovery at Colville Delta by Texaco and its partners, and another by Shell Oil, et al at Seal Island. The Seal Island discovery straddles both state and federal acreage. These are the only successes on state acreage since 1979 contrasted to a long list of exploratory failures drilled to test the area.

Although new discoveries have been scarce, the post-Prudhoe Bay exploration activity has resulted in better delineation of several significant hydrocarbon deposits, both onshore and in the Beaufort Sea. These include the discoveries at Point Thomson, Kuparuk River, Milne Point, Gwydyr Bay, Endicott, Mikkelsen, Seal Island, Sandpiper Island, West Sak, Colville Delta, Tern Island, Lisburne and other areas.

The Kuparuk River reservoir was discovered in 1969, and production commenced from the Kuparuk River Unit in 1981. It is estimated that this reservoir west of Prudhoe Bay contains 1.5 billion barrels of recoverable oil. Production from the reservoir has been much better than expected, and is currently at 290,000 barrels per day.

ARCO Alaska has applied for approval of a pilot enhanced recovery project (Miscible Gas Injection) in an effort to boost ultimate recovery from the reservoir. A major waterflood program is already underway.

Although the Lisburne Oil Pool was discovered just days after the Prudhoe Bay Sadlerochit Oil Pool, production did not commence from this deeper reservoir until December, 1986. It is estimated that the Lisburne reservoir contains 3 billion barrels of oil in-place, with about 400 million barrels being recoverable. Production is currently about 40,000 barrels per day, and is expected to peak at about 100,000 barrels per day. Ultimate recovery from the reservoir will increase if a pilot waterflood project now underway proves to be successful, and if permits for an offshore drill site are ultimately approved. The Kuparuk River and Lisburne fields no doubt benefited from the infrastructure already in place at Prudhoe Bay.

The nearby Milne Point field, with estimated reserves of about 60 million barrels of recoverable oil, was brought on line in 1985 only by virtue of its close proximity to the infrastructure that resulted from the Prudhoe Bay-Kuparuk River development. Milne Point was subsequently shut-in January, 1987 due to the low price of oil.

The Endicott accumulation, discovered in 1978 and operated by Standard Alaska Production (BP), is located approximately 30 miles east of Prudhoe Bay. It has estimated recoverable reserves of about 375 million barrels. Production from Endicott is expected to commence in late 1987 or early 1988, and peak at approximately 100,000 barrels per day in 1989, marking the first ever commercial production from offshore acreage in the Beaufort Sea. The production rate can probably be maintained for about five years, at which time a 15% per year production decline will begin. Endicott is located two miles offshore in eight to ten feet of water, and is connected to land by a gravel causeway. In relative terms, Endicott is the most costly North Slope field to be developed to date.

The Point Thomson field, which lies east of Endicott and just west across the Canning River from ANWR, was discovered in 1977 by Exxon and its partners. Point Thomson is estimated to contain about 350 million barrels of recoverable condensate (light gravity crude) and 5 trillion cubic feet of gas. Development of this field is problematical under the current economic conditions and in light of the 60 mile distance from the Trans-Alaska Pipeline and other production infrastructure. If discoveries are made to the east of Point Thomson in ANWR or on nearby state or federal offshore acreage, the outlook for early development of this field would improve substantially.

In 1983, Shell Oil drilled a successful exploratory well at Tern Island, about 20 miles east of Prudhoe Bay field. A third well in this area has just been completed, but estimated recoverable reserves have not yet been published.

The Seal Island discovery, which lies offshore from the Prudhoe Bay Field, was made in 1984 by Shell, Amerada Hess and partners. It is located about eight miles offshore in 40 feet of water, approximately 20 miles from Pump Station 1. Reserves at Seal Island are estimated to be similar to those in Endicott, somewhere in the 300 million barrel range. The reservoir appears to straddle the state/federal Beaufort Sea boundary. The distance from shore and water depth will make this a very expensive prospect to develop. Higher oil prices and the expectation of continued higher prices will be required to initiate development and production from this discovery.

In 1986 Shell, Amoco and partners announced another discovery offshore northwest of Prudhoe Bay field at Sandpiper Island. Sandpiper is about eleven miles northwest of the Seal Island discovery. Estimated recoverable reserves have not, as yet, been published for Sandpiper. It is likely, however, that the development of Sandpiper will be linked to that of the adjacent Seal Island discovery.

Included within the boundaries of the Kuparuk River oil field is a very large oil accumulation known as the West Sak reservoir. The West Sak is estimated to contain at least 20 billion barrels of oil in place. Those massive reserves lie literally right in the center of the second largest producing oil field in North America. Unfortunately, the oil within the West Sak reservoir is only 3000 feet to 4000 feet below the surface, and only 1000 feet to 2000 feet below the bottom of the overlying permafrost layer. Consequently the oil is cool (70 to 90 degrees Fahrenheit), and it has a low gravity of 10 degrees to 20 degrees API. The combination of these factors precludes the heavy oil from flowing into the wellbores very rapidly.

Compared to a good Prudhoe Bay well which produces over 5000 barrels per day, an excellent West Sak well might produce only 500 barrels per day. The shallow reservoir depth also means that there is very little gas dissolved in the heavy oil, and therefore, minimal pressure to drive the oil into the wellbores. The shallow depth adds another negative factor, in that fewer wells can be drilled directionally (due to steep drilling angles) from each individual drilling pad. These factors will add considerable development expense to the West Sak project.

Poor oil quality, low flow rates and added development expense have all combined to keep the West Sak from being developed at today's oil prices, even though it lies within the boundaries of the Kuparuk River field and is only twenty miles or so from Pump Station 1 of TAPS. Even though the volume of oil in place is staggering by any standards, the West Sak awaits higher oil prices and additional technological advances to make its development possible.

Oil prices in the mid $20 per barrel range would go a long way toward making the West Sak commercial. However, even if and when the West Sak does come on line, the total daily field rate will be relatively insignificant in comparison with current rates from Prudhoe Bay and Kuparuk River because of the low individual well rates. If the West Sak development does not piggy back onto the existing Kuparuk development, it may never come on line.

Having described the chronology and briefly highlighted some of Alaska's most promising discoveries, as well as its exploration failures, I would like to summarize what I believe these data are telling us regarding Alaska's and the Nation's future production capabilities. The state's only commercial production to date, with the exception of the minor production from the Katalla field, has come from either the Cook Inlet or the North Slope. The Cook Inlet production is now in a state of decline, and the basin itself is in a mature or advanced state of exploration--large additions to the known reserves are unlikely.

The current production from Prudhoe Bay field far surpasses the combined production from all other North Slope and Cook Inlet fields. The new North Slope discoveries announced over the last few years, although encouraging, will have little effect in delaying the precipitous Prudhoe production decline that will begin in the near future. As I have previously mentioned, by the year 2000, we project total Alaska production to be only 386 million barrels of oil per year.

The stark reality is that the list of past exploration failures in Alaska on both federal and state lands has grown quite long since the monumental discovery at Prudhoe Bay. The list of failures includes the Gulf of Alaska, Lower Cook Inlet, several interior basins, the Alaska Peninsula, NPRA, and large portions of the western and central North Slope, both onshore and offshore. In the past two years, there has been a succession of dry holes drilled in the once promising OCS frontier basins offshore of western Alaska, including the St. George, Navarin, and Norton Basins.

Since the discovery of oil in Cook Inlet in 1957, 65 exploratory wells have been drilled on federal OCS leases while several hundred more have been drilled on state leases in Alaska. These wells were drilled at a substantial cost to the oil and gas industry. While the total costs are not readily determinable, the leases alone cost over $7.5 billion, and in the vast majority of cases, wells drilled to test these leases were disappointing. Because of the disappointing results elsewhere in Alaska, exploration now has shifted to the eastern North Slope and Beaufort Sea. But, historically, even in these prime prospecting areas, failures far surpass successes. Perhaps one of the most famous examples is the much-touted Mukluk prospect in the

Beaufort Sea west of Prudhoe Bay. Leases overlying that prospect drew about $1.4 billion in competitive industry bids in 1982, and the first well there cost an additional $150 million to drill. As we all know now, Mukluk turned out to be another major disappointment.

These failures serve to emphasize two very important points. First, we cannot simply assume that ANWR holds oil and gas reserves which can be banked for future development. Our pre-drilling estimates of resources there may in fact be seriously in error, as they were at NPRA and Mukluk. Both national security and economic efficiency argue strongly for expeditious confirmation of ANWR's potential. Secondly, there are no areas left in this country with the potential, such as ANWR, to substantially and positively affect our nation's overall balance of trade and national security.

The discoveries at Seal Island in the Beaufort Sea and the huge West Sak heavy oil deposits west of Prudhoe Bay may help to supplement future North Slope production volumes, but only if oil prices climb and stabilize above $20 per barrel (in 1987 dollars). Unfortunately, however, unless a new multi-billion barrel discovery is made on the North Slope, annual throughput in TAPS will decline significantly beyond 1995 regardless of what the oil price may be at that time.

There are obviously many direct benefits that would follow if ANWR is opened to exploration and if oil is found in commercial quantities and developed. However, I would like to direct your attention to some of the secondary, indirect benefits that I believe would follow as a result of construction of an oil pipeline from ANWR discoveries westward to TAPS Pump Station #1. First, total projected TAPS throughput would increase significantly, and tariffs for all oil transported through TAPS would decrease, resulting in a net higher wellhead value for the oil. This means that existing fields like Prudhoe Bay and Kuparuk River could produce longer, and discoveries such as West Sak and Seal Island may become economic to develop.

Secondly, exploration for new fields would increase since expected revenues from any new discoveries would be higher if pipeline tariffs are lower. Onshore state, federal and native lands, and offshore state and federal tracts would benefit from the increased pace of exploration. Future discoveries in the deeper waters of the Beaufort Sea, where development will be extremely expensive, will have a greater likelihood of being explored, developed and produced.

In addition, existing discoveries located between Pump Station #1 and ANWR would be developed sooner since a major part of the required infrastructure, that is the pipeline, would be in place. For example, Point Thomson field, which is immediately adjacent

to ANWR and contains about 350 million barrels of recoverable oil, could probably support development with some incremental help from ANWR discoveries. The catalytic effect of new discoveries in ANWR on extending the field life of producing North Slope fields and in encouraging new exploration and development elsewhere along the Arctic coast of Alaska cannot be overemphasized. There truly is no better place and no better time to explore for the oil reserves that will be critical to this country's energy future.

Mr. Chairman and members of the Subcommittee, this concludes my written testimony. I greatly appreciate the opportunity to provide this subcommittee some information on oil and gas production in Alaska and the history of that development. I also appreciate the opportunity you have provided me to explain why I believe it is crucial that the coastal plain of ANWR be opened for competitive leasing without delay. I will be happy to answer any questions you may have.

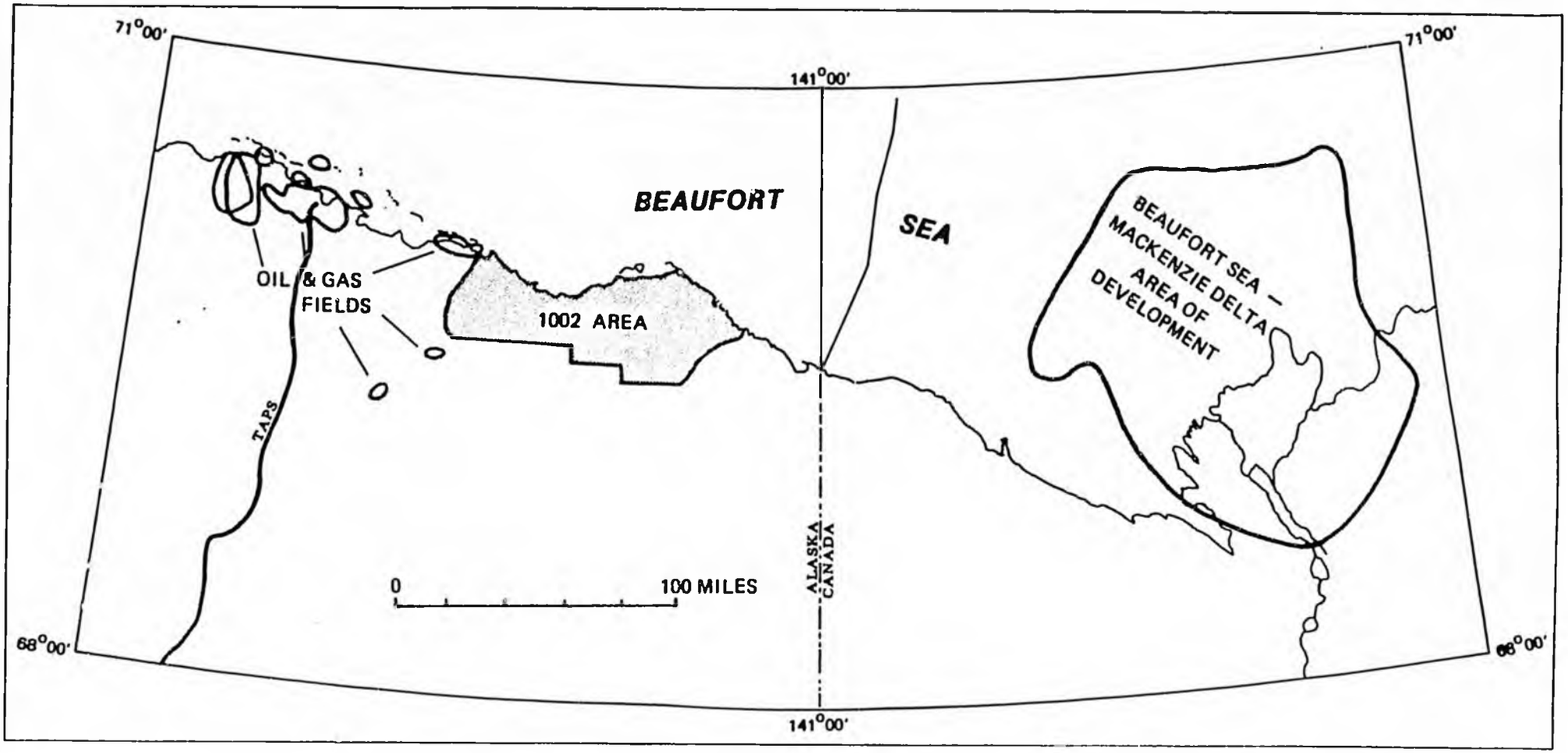

Figure 1. 1002 Area Location Map.

Alaska Department of Natural Resources
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ANWR COASTAL PLAIN: HIGH HYDROCARBON POTENTIAL

1. ANWR coastal plain situated on trend between North Slope oil fields to the west, and the Canadian Mackenzie Delta province to the east.

2. All key geologic elements requisite for major hydrocarbon accumulations are present:
   - excellent source and reservoir rocks expected; represent the best of Prudhoe Bay and Canada.
   - producing formations at Prudhoe and adjacent areas found within ANWR.
   - documented oil-stained sandstones and oil seeps.
   - 26 large structural traps (prospects) mapped from seismic data.

3. Expensive well drilled on largest prospect (Jago River #1, KIC); results are confidential.

4. 5% probability of finding between 26.5 and 29.4 BBO in-place.

5. 20% probability of finding economically recoverable oil:
   - exceptionally high for such a small area
   - minimum economic field size in ANWR = 440 million barrels
   - worldwide success ratio in frontier areas is 5%

Alaska Department of Natural Resources
Division of Oil & Gas 6/87

Figure 2. ANWR Hydrocarbon Potential Summary.

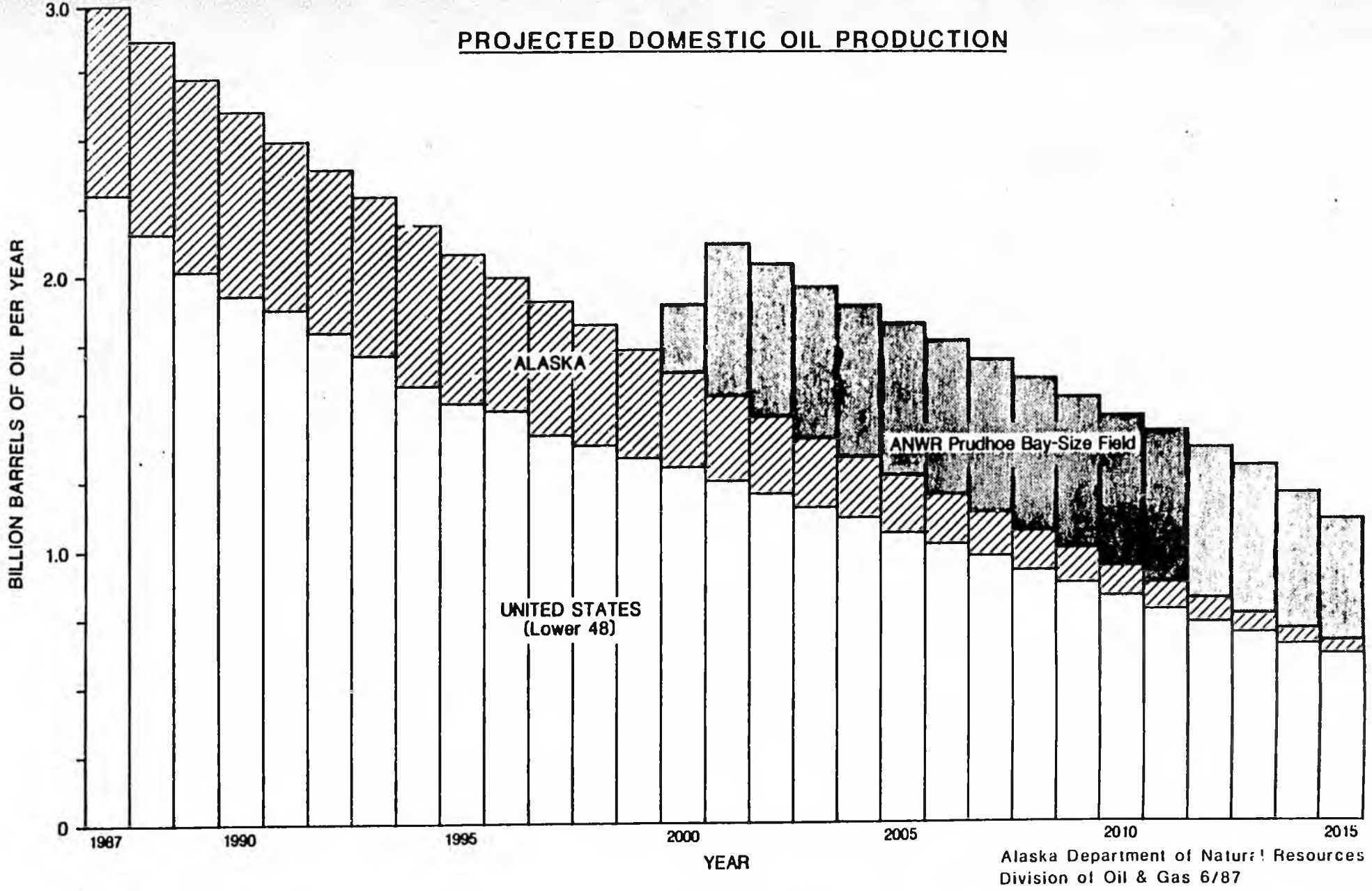

Figure 3. Projected Domestic Oil Production.

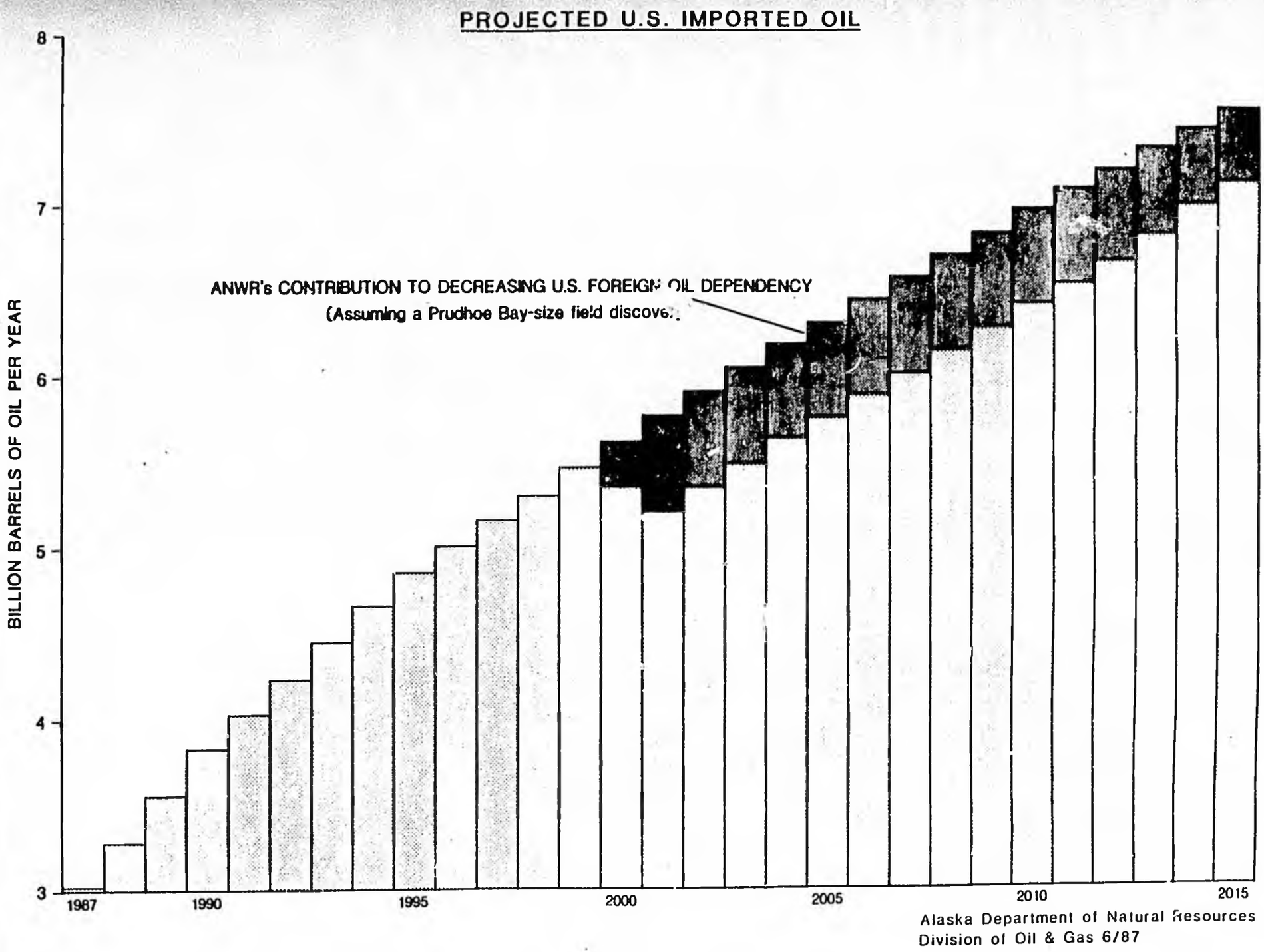

Figure 4. Projected U.S. Imported Oil.

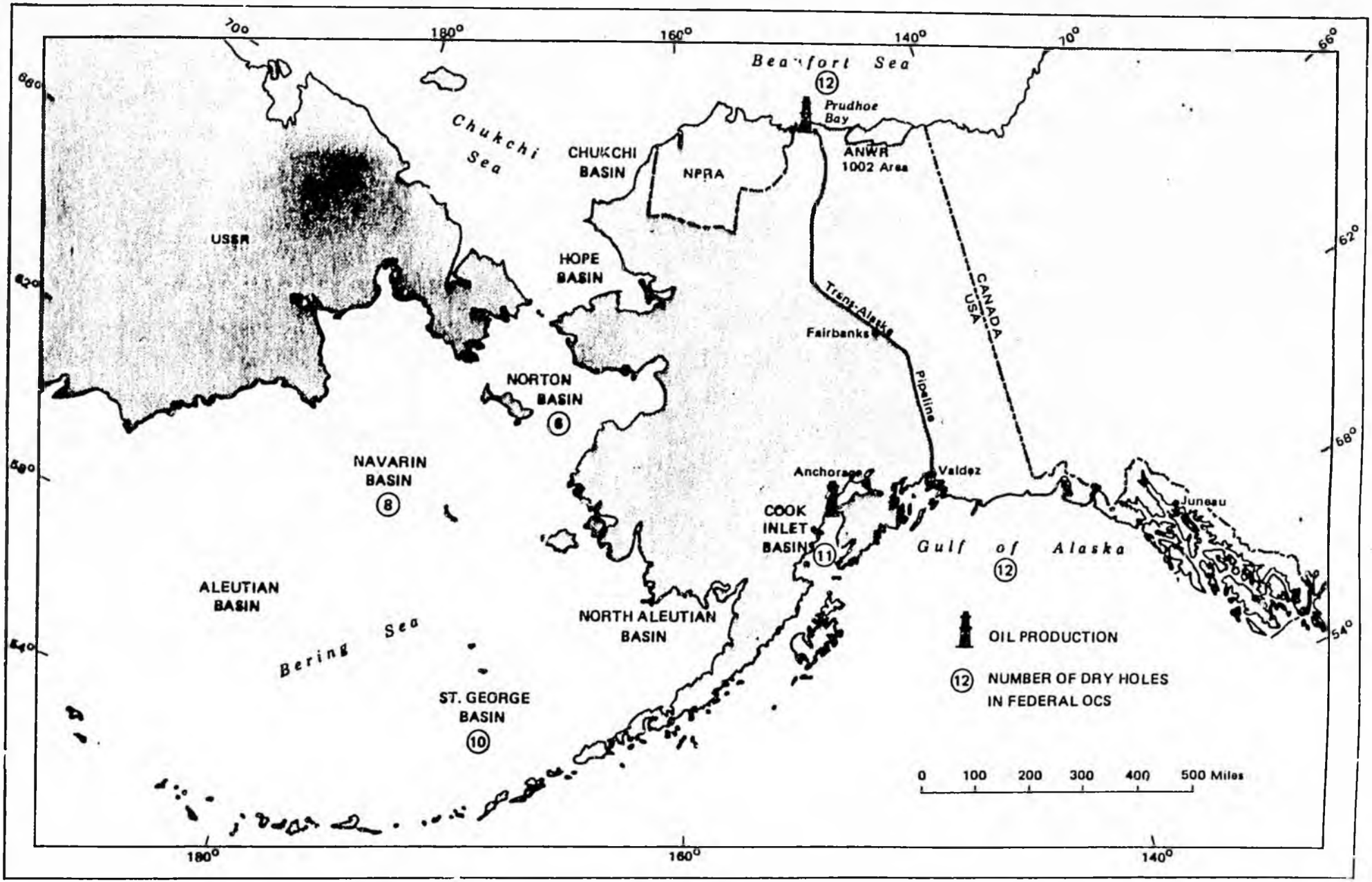

Figure 5. Number of exploratory dry holes in Federal OCS.

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Cook Inlet/Gulf of Alaska Oil and Gas Fields

As of January 1, 1987

Field Name	Discovery Date	Company	Estimated Original Recoverable Reserves	Production Start-up Date	Cumulative Production	Remaining Reserves
Swanson River	7/57	Richfield Oil Corp.	259 BCF 217 MMBO	7/60	Gas reinjected 205 MMBO	259 BCF 12 MMBO
N. Cook Inlet	9/62	Pan American Petro.	1594 BCF	2/69	777 BCF	817 BCF
Granite Point	6/65	Mobil Oil	105 BCF 126 MMBO	2/67	90 BCF 104 MMBO	15 BCF 22 MMBO
Trading Bay	6/65	Union Oil	63+ BCF 90 MMBO	1/67	63 BCF 88 MMBO	•• 2MMBO
McArthur River	10/65	Union Oil	965 BCF 574 MMBO	9/67	315 BCF 523 MMBO	650 BCF 51 MMBO
Middle Ground Shoal	6/62	Pan American Petro.	86 BCF 162 MMBO	12/65	78 BCF 150 MMBO	8 BCF 12 MMBO
Beluga River	12/62	Standard Oil of Cal.	1003 BCF	1/67	229 BCF	774 BCF
Cannery Loop	6/79	Union Oil	300 BCF	(11/87)	0	300 BCF
Falls Creek	6/61	Standard Oil of Cal.	54 BCF	Shut-in	0	54 BCF
Nicolai Creek	5/66	Texaco				
North Fork	12/65	Standard Oil of Cal.				
West Foreland	3/62	Pan American Petro.				
West Fork	9/60	Halbouty Alaska				
Sterling	8/61	Union Oil	25.1 BCF	1/66 Shut-in	2.1 BCF	23 BCF
Birch Hill	2/67	Standard Oil of Cal	11 BCF	Shut-in	0	11 BCF
Beaver Creek	6/65	Marathon Oil	241.5 BCF 4 MMBO	10/82	47.5 BCF 3 MMBO	194 BCF 1 MMBO
Ivan River	10/66	Standard Oil of Cal.	504 BCF	Shut-in	0	500 BCF
Lewis River	9/75	Cities Service		9/84	4 BCF	
Moquawkie	11/65	Socony Mobil Oil		Shut-in		
Pretty Creek	2/79	Halbouty Alaska		12/86		
Stump Lake	5/78	Chevron USA		Shut-in	0	
Kenai	10/59	Union Oil	2496 BCF	8/61	1740 BCF	756 BCF
Totals			7606.6+ BCF 1173 MMBO		†3345.6 BCF 1073 MMBO	4361 BCF 100 MMBO
Gulf of Alaska						
Katalla	1902	Alaska Development Co.	?	1912 Shut-in 1933	154,000 BO	?

* BCF - Billion Cubic Feet of Gas
MMBO - Million Barrels of Oil

•• Included in McArthur River Remaining Reserves
† Does not include reinjected gas

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Figure 6. Cook Inlet/Gulf of Alaska Oil and Gas Fields.

North Slope Oil and Gas Fields

As of January 1, 1987

Field Name	Discovery Date	Company	Estimated Original Recoverable Reserves	Production Start-up Date	Cumulative Production	Remaining Reserves
Prudhoe Bay	12/67	Richfield Oil Corp.	28,500 BCF 9590 MMBO	10/69 (Tests) 7/77(Pipeline)	6423 BCF ** 4918 MMBO	25,816 BCF 4672 MMBO
Kuparuk River	4/69	Richfield Oil Corp.	640 BCF 1600 MMBO	12/81	345 BCF ** 292 MMBO	566 BCF 1308 MMBO
Prudhoe Bay (Lisburne Pool)	12/67	Richfield Oil Corp.	≈ 635 BCF 400 MMBO	11/83 (Tests) 3/85	11.4 BCF ** 5.3 MMBO	624 BCF 395 MMBO
Milne Point	10/69	Socal	? ≈ 60 MMBO	5/85-1/87 Shut-in	1.9 BCF 5.4 MMBO	? 55 MMBO
Endicott	3/78	Sohio	731 BCF 375 MMBO	(Late 87-Early 88)	0	731 BCF 375 MMBO
S. Barrow	4/49	U.S. Navy	25.2 BCF	8/49	17.2 BCF	8 BCF
E. Barrow	5/74	U.S. Navy	12.4 BCF	12/83	3.4 BCF	9 BCF
Totals			35,543.6 BCF 12,375 MMBO		6801.9 BCF ** 5220.7 MMBO	32,754 BCF 7155 MMBO

* BCF - Billion Cubic Feet of Gas
MMBO - Million Barrels of Oil

** Portions of Gas Reinjected

Alaska Department of Natural Resources
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Figure 7. North Slope Oil and Gas Fields.

Undeveloped North Slope Oil and Gas Discoveries

As of June 16, 1987

Name	Discovery Date	Company	Estimated Recoverable Reserves
Umiat	12/46	U.S. Navy	50 MMBO
Gubik	8/51	U.S. Navy	600 BCF
E. Umiat	3/63	McCulloch Oil	?
West Sak	4/69	Richfield Oil Corp.	?
Kavik	11/69	Richfield Oil Corp.	?
Kemik	6/72	Forest Oil	?
Flaxman Island	9/75	Exxon USA	?
Pt. Thomson	10/77	Exxon USA	5000 BCF 350 MMBO
Mikkelson	1978	ARCO Alaska	?
Gwydyr Bay	1981	Conoco	<50 MMBO
Tern Island	5/83	Shell Oil	?
Seal Island	1/84	Shell Oil	300 MMBO
Colville Delta	1985	Texaco USA	?
Hammerhead	2/86	Unocal	?
Sandpiper Island	1986	Shell Oil	?

* BCF - Billion Cubic Feet of Gas
MMBO - Million Barrels of Oil

Alaska Department of Natural Resources
Division of Oil and Gas 6/87

Figure 8. Undeveloped North Slope Oil and Gas Discoveries.

FIVE-YEAR OIL & GAS LEASING PROGRAM

ALASKA DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL & GAS

Proposed Area & Date		1986						1987										1988										1989										1990										1991							
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
51	Prudhoe Bay Upl. 1·87			P	R		F	S																																														
50	Camden Bay · 6·87				R		P			M	F		S																																									
54	Kuparuk Upl. 1·88	A			R							P		M	F	S																																						
55	Demarcation Pt. 6·88				R			A							P		M	F		S																																		
52	Beaufort Sea 1·89				R					L		A									P		M	F		S																											
56	Alaska Peninsula 6·89	C			R								L	A												P		M	F		S																					
59	Cook Inlet 1·90				R			C										L		A									P		M	F		S																	
57	N.S. Foothills 6·90				R			C													L		A									P		M	F		S													
64	Kavik 1·91	N			R			D				C														L		A							P		M	F		S											
65	Beaufort Sea 6·91	N			R			D						C										L		A											P		M	F		S									

N = Call for Nominations
R = Request for Comments on Proposed New Sales & 5-Year Schedule Revisions
D = Proposed Sale Area Included in 5-Yr Leasing Document
C = Call for Public Comments

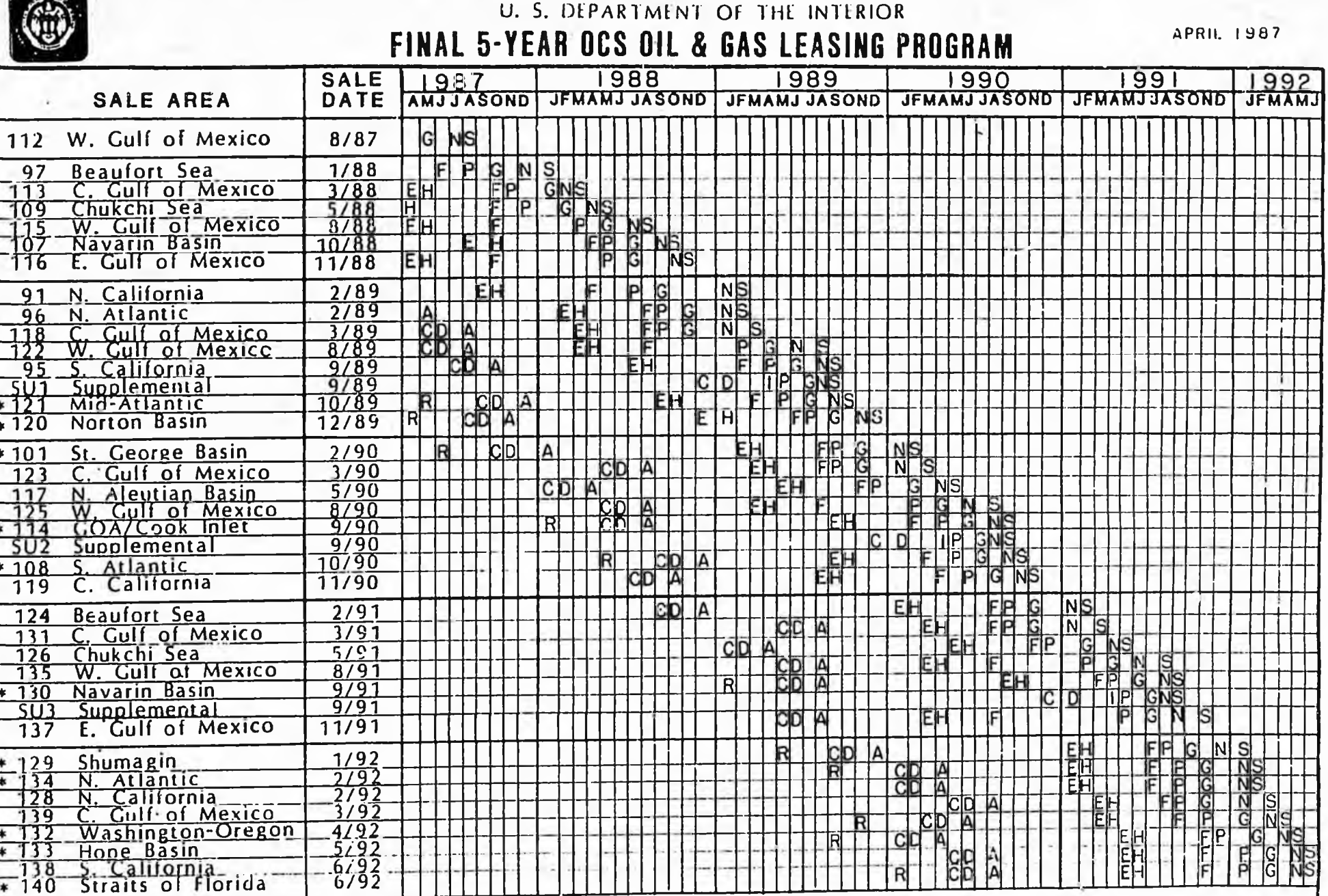
L = Preliminary Land Status Check
A = Agency & Public Comments Requested for Socioeconomic/Environmental Analysis
P = Preliminary Analysis/Preliminary Notice (AS 38.05.945(a)(3))

F = Final Decision/Final Notice of Sale and Terms (AS 38.05.945(a)(4)) Alaska Coastal Management Program Consistency Determination
S = Sale

U. S. DEPARTMENT OF THE INTERIOR

FINAL 5-YEAR OCS OIL & GAS LEASING PROGRAM

APRIL 1987



* Frontier Exploration Sale. Request for interest will be issued if necessary.

R - Request for Interest C - Call for Information & Nominations D - Comments on Call Due

A - Area Identification E - Draft EIS H - Public Hearing F - Final EIS

I - Issue Environmental Assessment for Supplemental Sale P - Proposed Notice of Sale

G - Governor's Comments Due N - Notice of Sale S - Sale


THE STANDARD OIL COMPANY

Standard Alaska
Production Company
900 East Benson Boulevard
P.O. Box 196612
Anchorage, Alaska 99519-6612
(907) 561-5111

Sam → N

STANDARD
ALASKA PRODUCTION

September 1, 1987

Representative Sam Cotten
11940 Business Boulevard
Eagle River, AK 99577

Dear Representative Cotten:

I thought you might be interested in seeing the enclosed white paper which was prepared by Standard Alaska's Environment Department to address 19 environmental contentions which were raised during recent congressional testimony on the opening of ANWR to oil and gas leasing. The paper documents considerable use of oilfield areas by birds, caribou and other wildlife and contains scientific information supporting industry's performance on the North Slope over the last ten years.

I hope this consolidation of data will be a helpful resource to add to your collection of reading material on the ANWR issue. We have additional copies available should you require extras.

J. A. Palmer
Manager, Government Affairs

JAP:ceb
4803s/1796L

Enclosure

OIL AND GAS DEVELOPMENT IN THE ARCTIC NATIONAL WILDLIFE REFUGE 1002 AREA

ISSUES RAISED BY ENVIRONMENTAL GROUPS DURING TESTIMONY BEFORE CONGRESS

August 1987

A White Paper Prepared By
THE STANDARD OIL COMPANY

7760U

INTRODUCTION

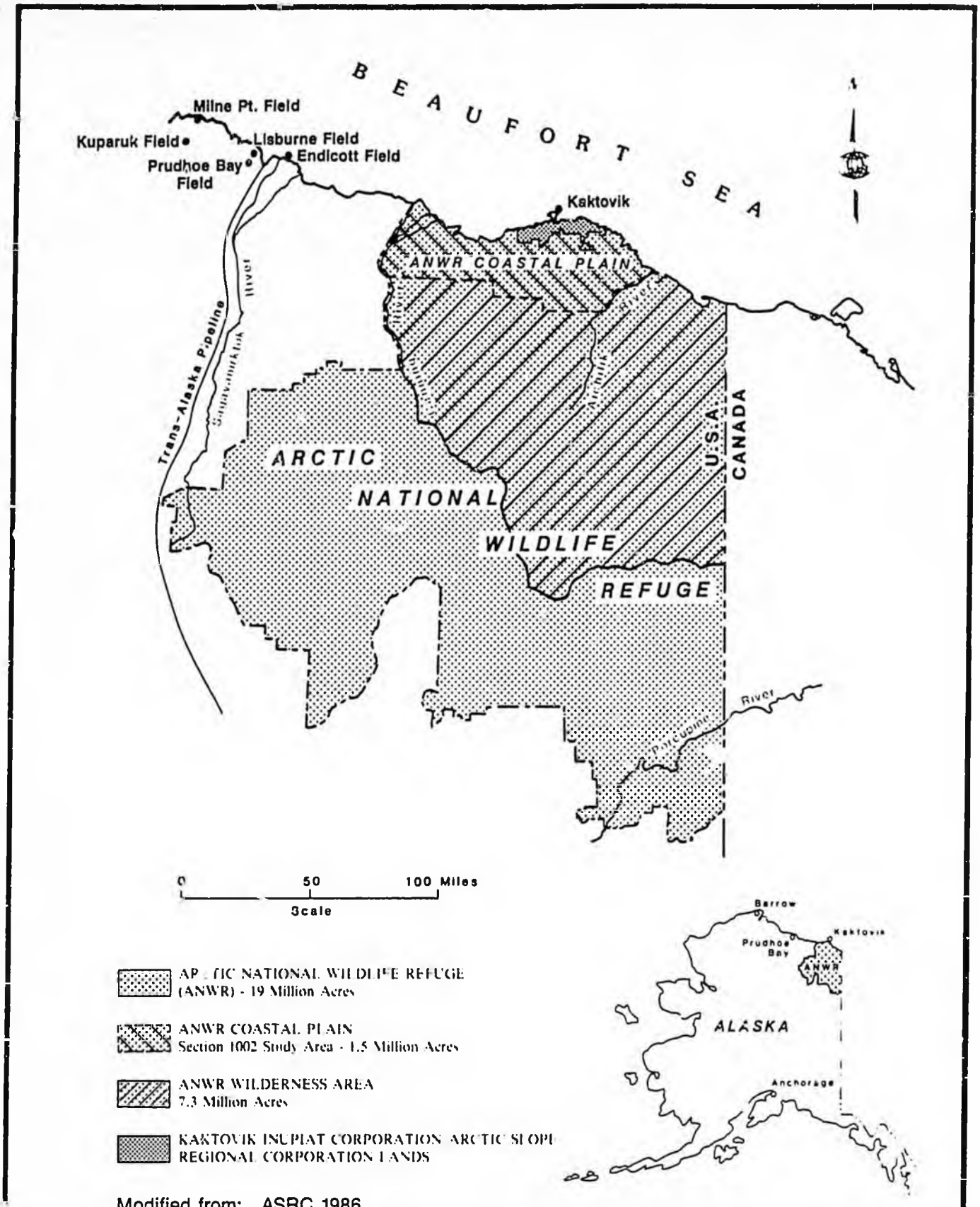
This paper briefly examines 19 issues raised in testimony before Congress by environmental groups opposing petroleum leasing in the "1002 area" of the Arctic National Wildlife Refuge (ANWR) coastal plain. (See Figure 1.) The issues are:

- Destruction of last arctic coastal wilderness;
- Loss of shorebird nesting habitats;
- Displacement of calving caribou;
- Predicted decline in polar bear population;
- Adverse effects of gravel causeways on Beaufort Sea fish populations;
- Environmental contamination from reserve pits;
- Pollution risk from underground injection of liquid wastes;
- Lack of adequate land reclamation technology;
- Existence of potential Superfund sites at Prudhoe Bay;
- Lack of accountability of oilfield service contractors;
- Oil and chemical spills causing severe adverse effects on tundra;
- Biological destruction from Storkerson Point oil spill;
- Increasing air pollution and adverse effects on tundra vegetation;
- Potential impacts of air pollution on lichen communities;
- Black smoke emissions contributing to air pollution;
- Inadequate regulatory control of oil industry operations;
- Lack of gravel availability in ANWR;
- Lack of water availability in ANWR;
- Cumulative biological effects not adequately addressed;

The claims implied by these issues are easy to make. However, oilfield development and operations on the North Slope do not occur in a regulatory vacuum. Every aspect of industry performance is strictly regulated and closely monitored by federal, state, and borough agencies in a complex structure of permits, stipulations, and performance criteria. Moreover, industry has sponsored many years of field research in the Arctic with agency participation and review at every stage. The results of these studies are documented in an extensive literature which is available to the public. If the catastrophes described by environmental groups were actually occurring on the North Slope, they would have been reported in that literature and acted upon by government agencies with regulatory responsibility for North Slope oilfield activities.

The most compelling rebuttal to the environmental community, however, comes from the fish and wildlife populations that continue to feed, reproduce, and rear their young throughout developed portions of the North Slope just as they do in the larger, undeveloped areas. Research has provided no evidence that oilfield activities have produced any measurable change in the populations of any fish or wildlife species using the North Slope at any time of the year. Nor is there evidence that the ability of habitat to support fish and wildlife populations in the future has been reduced by the very small area of tundra occupied by all North Slope

oilfield facilities (8,160 acres out of a total surface area of North Slope oil fields of approximately 600,000 acres; Heiken 1987). If the claims of the environmental community were accurate, Prudhoe Bay, Kuparuk, and other North Slope oilfields would be biological wastelands. This clearly is not the case.



Modified from: ASRC 1986

FIGURE 1 ARCTIC NATIONAL WILDLIFE REFUGE

DESTRUCTION OF LAST ARCTIC COASTAL WILDERNESS

Environmental Community Position:

> ***Petroleum development will destroy the last undisturbed wilderness on the United States' Arctic Ocean coastline, which is also the world's greatest arctic wilderness ecosystem.***

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Scientific Response:

There is a common misconception that oil and gas leasing of the 1002 area would lead to development of the entire ANWR coastal plain and loss of its wilderness quality. The area singled out by Section 1002 of the Alaska National Interest Lands Conservation Act of 1980 (ANILCA) because of its oil and gas potential does not include all of the ANWR coastal plain. ANILCA incorporated about 45 percent of ANWR's 19 million acres into the National Wilderness System. This included a significant portion of the coastal plain totaling about 450,000 acres along a 30-plus mile stretch of coastline, extending east of the 1002 area to the U.S.-Canada border. This frequently overlooked portion of the ANWR coastal plain is part of the refuge's 8 million acres legally protected as designated wilderness. It adjoins Canada's 3 million acre Northern Yukon National Park, also protected from development. Together these protected areas provide a major continuum of coastal plain wilderness that would be untouched by oil and gas development in the 1002 area.

Concerns that the 1002 portion of the ANWR coastal plain would lose all of its wilderness qualities if petroleum development occurred are unrealistic. The majority of the leased areas would remain untouched either because no oil was discovered or because reserves were not found in economic quantities. Records show that many leases elsewhere on the North Slope have already been relinquished. Even under a full leasing scenario and assuming development of three major prospects in the 1002 area, most of the ANWR coastal plain would remain wilderness. Less than 1 percent of the 1002 area's land surface would be affected; with full development, 99 percent of the area would remain untouched. (See Figure 2.) The area's habitats would not be altered sufficiently to affect the size, growth rate, or regional distribution of fish and wildlife populations. The only significant change would be aesthetic: over a period of decades, widely spaced roads, pipelines, drilling structures, and support facilities would be built on the open coastal plain. Structures would be removed and disturbed areas reclaimed when production ceased.

The 1002 area is not unique in relation to other parts of the Arctic coastal plain with respect to landforms and biological resources. ANWR wilderness lands to the east and south of the 1002 area include abundant examples of all geologic, terrain, habitat, and wildlife features found in the 1002 area.

Although ANWR's 1002 area is referred to as "wilderness," it should not be assumed that the area has never received human use and impact. There have been three Defense Early Warning (DEW line) stations in the area, one of

which is still active. Also, the village of Kaktovik has been relocated three times in recent history. The ANWR coastal plain has a history of reindeer herding dating back to the introduction of reindeer to Alaska in the late 19th Century. Human presence in ANWR has been light, but it has been there historically and continues today.