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HISTORY & CULTURE OF THE ANWR'S NATIVE INHABITANTS

produced by Michael J. Jacobson and Cynthia Wentworth (1982).

While the actual status of the Porcupine caribou herd is traced in technical detail in other portions of this report, the important conclusion to be drawn from this historical assessment is that the subsistence lifeway as it has evolved into the 1980s continues to depend upon not only the actual take in any given season, but also upon the political and cultural notions that access to this prime game resource must remain unfettered for its Native users.

The other great species of choice that undergirds and reinforces the contemporary subsistence lifeway is the Bowhead whale. The Inupiat of Northeast Alaska had never lost complete touch with the astonishingly complex and costly whaling enterprise; but it is true that vastly increased enthusiasm for pursuing it has occurred since the early 1960s when whaling captains once again found the means and willing crews to capture this great whale. Bowhead whaling in this region is a late summer/early fall activity in which the whole community is galvanized to action if a whale is taken so that it can be butchered and equitably distributed. It is hardly possible to overemphasize the importance attached to whaling by the Inupiat. Whaling captains are the most prestigious leaders of the community. Community festivals and celebrations are focused on the distribution and consumption of the catch. Those elements of Inupiat cultural values most prized are symbolically expressed in all that surrounds whaling. Here again the point is less one of dietary dependence on muktuk and whale meat as it is the contribution which whaling makes to the sense of community pride

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and achievement, social and cultural solidarity, and reasons to engage in a political program to safeguard Native rights. Here is proof positive that subsistence in its modern expanded meaning is to its Native practitioners as much an act of serving cultural desires as it is the act of filling empty stomachs.

The final element of the subsistence equation is that it is limited to no one or two wild species, but includes all wild resources sought and taken according to season and availability. Whether it is the fish of the rivers and lagoons, the seals and polar bear of sea and ice cover, migratory waterfowl or land birds, bear, moose, smaller furbearers, or the prized sheep of the upper river valleys and ridges, each species in turn is regularly hunted or fished. Many favored places for accomplishing the seasonal rounds associated with these subsistence pursuits have been identified by researchers (again, a fine example is Jacobson and Wentworth, 1982), and their locations carefully mapped in traditional land use inventories. Documented hunting and fishing sites have been identified in virtually every corner of the refuge. As with caribou and Bowhead, the protagonists of the modern subsistence lifeway express their concerns for maintaining constant access to these various species regardless on whose land they may be found to occur or during what season.

The irony that arises from this discussion of historical land use and the contemporary practice of subsistence is that far from inhibiting "traditional" hunting and fishing activities, Native

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settlement in modern villages has actually improved capabilities in those pursuits. The cash required to purchase the equipment necessary to locate and take fish and game is presently more available than at any other time in this century.

Social and Political Developments

Social change has not proceeded so evenly. The family and kin group were the bedrock of the traditional system. The kin group worked as a unit in economic enterprises, established communal relations with other groups based upon principles of kinship recruitment, and shared social values (or engaged in conflicts) with similar groups who spoke a common language. But with periods of migration and temporary resettlement after the collapse of fur trading and reindeer herding, many new factors appeared to disrupt the old kin unities. People were forced to forge new alliances within larger, mixed (non-kin) communities. Western schooling in the alien English language became a wedge driven between adults and their school age children. Pitiably small as they often were, wages in cash could be used to promote either individual upward economic movement or could be squandered on alcohol or high priced food from stores. Long distance travel, especially with the introduction of regular air service, revealed even more the distance between what was expected of an individual living in the rural countryside as contrasted to town life. Both paternalism expressed by one's white employers or teachers (not to speak of outright racialism on many occasions) and the obvious difference in

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the values these outsiders held could and did cause psychological distress that too often lamentably ended in the destruction of the concept of self-worth. All these matters were ably surveyed by the anthropologist Norman Chance (1966 and 1984) for the Inupiat residing on the arctic coastal plain in the 1960s. Many of the problems he analyzed then persist in the present day.

Yet it may be superficial to write of ANWR's contemporary inhabitants as if they were no more than hapless victims of devastating social disruptions over which they held no control. To cite the most salient example, the adaptation of traditional hunting units to serve modern purposes has achieved success. Nowhere is this more apparent than in the reinvigoration of the whaling crew with its captain, the umialik. These persons have become leaders in their communities based upon achievement in traditional social terms (amassing the wealth necessary to recruit a crew, providing the equipment and knowledge to conduct the hunt, and distributing its provender to the wider community). Whether whales are captured or not in any given season, the institution retains its vigor and appears to be ever growing in its popularity.

But perhaps most importantly, a new political consciousness and the leaders to foster, guide, and sustain it are revealed in a sequence of developments which led to a set of formal institutions created virtually from scratch in the 1970's.

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Kaktovik

The City of Kaktovik serves to illustrate how these institutions have developed. It is the only settled Native community wholly within ANWR's boundaries and possesses a corporate history dating back to 1923 when a trading post was established on Barter Island. Tom Gordon and his wife Agiak, Barrow residents, along with Andrew Akootchook, head of a local hunting family, opened a fur trading post in that year. It served the needs of hunter/trappers who moved between sites east and west along the coast as well as to some of the barrier islands. While two other families encamped near the trading post, most traveled to the post only for trade and holiday celebrations. Up through the 1930s the place retained this character until, at the end of the decade, the migration of many to Canada and to Barrow occurred. Three reindeer herds were also kept in neighboring areas until that enterprise also collapsed contemporaneously with that of the fur trade.

At the end of World War II the United States government focused its attention on Barter Island. A Coast and Geodetic Survey team appeared in 1945 and hired a few of the remaining residents to work for its coastal mapping survey. And then, in 1947, the U.S. Air Force constructed an airfield and soon after, the DEW Line station. As these establishments grew in size, more Inupiat arrived to take jobs with the construction contractors. Most stayed on to build houses and become permanent residents. The original site occupied an area on the sand spit where the airfield was built, and so the

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residents were forced to relocate toward its west end. In 1951 the Air Force laid claim to more land which caused yet another relocation. AS the population continued to grow with the arrival of still more job-seeking Native people, the Air Force demanded yet a third move, in 1964, to a location where the present town now stands. These upheavals forced by relocation may date the beginnings of a local Inupiat political consciousness in dealings with larger governments.

The town grew from a nucleus of only three families in the early 1940s to 46 souls by 1950 and nearly 145 by the spring of 1953. Clearly, the old informal ways of conducting business between a handful of families would not be suitable for managing this mushrooming settlement. The instruments available for governing such non-English-speaking communities at that time were based upon various types of traditional councils which had been promoted among Indian tribes of the Lower 48. Kaktovik likely had a Council along those lines. But for a long time the leaders of the founding families still operated as the functional town officials (Beaufort Sea Region Socio-Cultural Systems: n.d.: 63) of a traditional council.

In the early 1970s Kaktovik was incorporated as a second class city under Alaska state laws. By that time, however, the tidal wave of political and economic change that ANCSA set in motion had swept Kaktovik along with it. The Kaktovik Village Corporation was created and received over 92,000 acres of land as its share, almost

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all within the boundaries of ANWR. At the same time, Kaktovik residents became shareholders in the regionwide Arctic Slope Regional Corporation. Money from both the Federal and State governments was conveyed along with the lands. Both corporations were expressly designed to seek out profit-making enterprises. The transformation from the traditional Inupiat concept of usufruct lands to the problems of managing those same lands as owned real estate was thus forced in a single stroke. The tension between the two concepts--despite the irrevocable change--remains to this day.

The crowning development of new political institutions which require an increased political consciousness followed from the establishment of the North Slope Borough government in 1972. Kaktovik along with seven other North Slope villages was by this act directly tied to Barrow, the capital, from which the largest range of services was supplied: direction of the schools and health services, police and firefighting, public works and utilities. All these services opened the way for a vastly increased number of wage-paying jobs. And, when property tax funds levied against petroleum companies operating at Prudhoe became available, the Borough instituted a massive Capital Improvements Program which further enhanced the local Kaktovik economy through various construction projects that provided employment on modern housing and public facilities.

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Native corporations on the one hand and local and regional governments on the other have become the twin poles of contemporary political life and action. Other organizations, such as the ad hoc whaling and caribou commissions, traditional councils, boards and committees, form complementary organizations through which the Native voice is also expressed. But the basic sources of contemporary incomes and the places where decisions must be made rest largely within these new, large, formal institutions.

While this pattern differs little in outward appearance from that to be found in other small communities in Native Alaska, it does possess several features that owe their origins to the unique historical and cultural development of Kaktovik. The first of these is that for most discussions of public policy, subsistence uses of all the lands and resources of the region (not just the corporate lands) are the primary goal.

Second, the collective biography of the town still reveals the important role played by the handful of families who originally founded the settlement. Village leaders tend to be from among the more assertive members of these original families. The families themselves have taken pains to recruit to their numbers the various returnees from Canada and Barrow who swelled its population beginning with the DEW Line construction period. While this does not necessarily mean that Kaktovik always acts as a community of one voice, on such issues as how the town feels its newly founded

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political instruments should be used, the song is clearly harmonious: preservation of the hard-won subsistence lifeway which is composed of modern development and the benefits that development (employment, corporate profit-making activities, and the like) make possible in hunting and fishing pursuits.

ANWR's Neighbors

Much of what has been described above concerns the Inupiat who physically occupy and use the lands of the refuge. However, two other groupings of Native people must be mentioned as having very strong interests in the area's resources, particularly the caribou which range far beyond refuge borders, and the whales which pass near its shores in late summer. The first of these groups consists of the Canadian Inuit populations of the MacKenzie Delta. The ties are particularly strong here inasmuch as the Kaktovik Inupiat and the Canadian Inuit became strongly intertwined through intermarriage in the 1936-1950 period. Nearly every Kaktovik resident has close family relations living today east of the international border. The second group consists of the Athabaskan Indians who live along or near the Yukon Flats and Porcupine River. These Kutchin (Gwich'in) settlements such as Arctic Village, Fort Yukon, and Old Crow (Canada), to name but a few, are also international in their composition. Their history since the 19th century up until the late 1930's was deeply enmeshed in the fur trade of the Hudson's Bay Company. They, too, have demonstrated a high preference for the taking of caribou and are today among the

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more outspoken communities on issues which revolve about the proposed international management agreements covering the Porcupine herd.

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PAPER 5

RESOURCE EXPLORATION AND AESTHETIC VALUES IN THE
ARCTIC NATIONAL WILDLIFE REFUGE

One of the central questions facing all those concerned with the future status and use of the Arctic National Wildlife Refuge (ANWR) is whether or not continued human exploitation of its resources will diminish its aesthetic and wilderness values.

Many whose personal values are linked to the establishment of wilderness areas have worked with singular dedication to insure that the physical integrity and wildlife resources of ANWR are maintained in what they regard as a virtually untouched landscape. From this perspective, human uses of any but the most severely limited kind evoke images of a pristine wilderness lost.

To the Inupiat and Indian populations who have for centuries depended on ANWR's animal and other natural resources to sustain their lives, the aesthetic values attached to the land are inextricably bound up in the exploitation of those resources: by fishing and hunting, constructing habitations, and other human activity.

RESOURCE EXPLORATION & AESTHETIC
VALUES IN THE ANWR

For the majority of contemporary explorers and resource-users, the compelling attraction is that these scenic lands can continue to satisfy human needs of both an aesthetic and consumptive nature as they have done for their Native occupants for centuries without suffering destruction or serious alterations. Indeed, an important aspect of the aesthetic value is deeply embedded in consumptive uses that enhance the quality of human life.

To argue as some do that human use of ANWR will inevitably destroy its aesthetic and productive values is to argue against what has historically taken place there. The residents of Kaktovik, Arctic Village, and other Native settlements have, along with transient hunters and fishermen, exploited the wild resources in a fashion consonant with that of their forebearers. Evidence of these uses both ancient and modern are to be found in the cultural sites and archeological assemblages which dot the landscape and in themselves constitute major elements to be both preserved and appreciated by contemporary visitors. Earlier in this century, large areas of the coastal plain and foothills were intensively used for the breeding and pasturing of domesticated reindeer herds. Prospectors, trappers, surveyors, miners, and scientists have poked into most nooks and crannies of ANWR's mountainous reaches, river courses, foothills, and tundra plains without scarring the landscape in ways from which there was no hope of natural recovery. Recreational visitors continue to seek wilderness experiences as hikers, boaters, flyers, and photographers. Since, in recent years, all these users have conducted their activities under the watchful eyes

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of federal and state managers, human use has contributed to rather than detracted from the appreciation and conservation of refuge lands and their multiple resources.

It cannot be said, therefore, that human use--even intensive use such as occurred during the reindeer-herding era--has irrevocably damaged aesthetic and recreational values which we all share. Most of us gladly accept the stewardship obligation to conserve the scenic beauties, cultural and natural resources of this magnificent arctic reserve. But stewardship implies wise use as well as conservation.

The question is, will continued human uses--such as geophysical and petroleum exploration of the coastal plain portion of the refuge--represent such a departure from historical use as to permanently scar the refuge's wild character or to limit opportunities for the pursuit of aesthetic satisfaction?

In answer to this question we should be mindful of Spinoza's reflection that beauty and aesthetics should be looked for in the works of man as well as the magnificence of wild nature. To many there is also beauty in the act of man using nature's bounty to insure not only his bare survival, but his progress as well. When this creates widely used material benefits (and who would deny that the use of petroleum provides material benefit) to one's fellow man while still preserving the character of the landscape from which they are extracted, then the human experience is enhanced rather than degraded.

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This precept applies not only to places designated as refuges, but to all natural areas where development takes place. Admittedly, mistakes have been made in the past. Happily, not many have occurred in the vast and sparsely populated area that constitutes Alaska's arctic coastal plain. The effects of the early years of exploration on the National Petroleum Reserve have been followed by effective recovery of the natural habitats used by its wild animal populations. It is certain that mistakes made during early exploration will not be repeated elsewhere in the Arctic. In the developed North Slope oilfields themselves, a pronounced and heightened environmental consciousness has been present from the very beginning. This has resulted in the maintenance of productive wildlife habitats for the caribou, bird, and fish populations.

The important lessons learned from the early mistakes and, more to the point, from the later years of environmentally informed exploration and development activity in the oilfields of northern Alaska, will undoubtedly be applied fully to any frontier areas, especially in conservation units. It surely can be argued that carefully planned human uses of ANWR, including exploration and development, are really a continuation of, rather than a departure from the ability of all future visitors and permanent residents to enjoy in perpetuity both the features and the vital renewable resources of this place.

RESOURCE EXPLORATION & AESTHETIC
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Most explorers, including those who search for hydrocarbons, share a conservationist viewpoint with those who wish to see the natural environment preserved. What is not shared is the view of those who would limit the use of such areas to the very few and in so doing forever exclude the extraction of materially beneficial resources even if visible evidence of such activities will be transient.

The traditional Inupiat and Indian occupants of ANWR's lands clearly understood that careful and responsible resource exploitation was fundamentally a part of the aesthetic experience as well as the means to sustain human life. Their modern descendants share that view. Profiting from their experience, we, too, might wisely choose the same path. As an industrial society we have proved that it is within our abilities to use the land without seriously altering its natural features.

Visual impacts from oil and gas exploration are extremely limited and transitory in nature. Should any development occur, less than 1 percent of ANWR would be affected and only as a relatively temporary use of the land. The ANWR of the future would show little evidence of the activity.

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PAPER 6

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

The coastal plain of the North Slope of Alaska including that of ANWR has a long history of human use and access. Today multiple use of the coastal plain can be continued. The oil and gas industry, with its long history of operations in wildlife refuges and other sensitive areas, continued concern for the environment and strict compliance with regulations can safely explore and develop the resources of ANWR to the benefit of the State of Alaska and the Nation.

There have been many instances of compatibility of oil and gas operations in wildlife refuges and conservation units in Alaska and in the Lower 48 states. The National Institute of Urban Wildlife prepared a report for the American Petroleum Institute entitled "Environmental Conservation and the Petroleum Industry" which documents a variety of examples which show that environmental conservation and oil and gas operations are compatible. Chapter 2 of the report, "Compatibility of Onshore Oil and Gas Development and the Environment" in particular is pertinent to the

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issue of opening the ANWR Coastal Plain to oil and gas exploration, since it discusses some of the following examples of successfully conducted oil and gas operations in conservation units.

- Kenai National Wildlife Refuge, Alaska - Major concern was the possible adverse effect on the moose population. Oil and gas were discovered in 1957 developing into the Swanson River field covering 8,000 acres (.004%) of the 1.97 million acre Refuge. The moose population has now increased today to approximately 5,000 from 3,000 prior to operations.

- Coastal Marsh Land in Southern Louisiana - Major concern was erosion caused by the uncontrolled ebb and flow of the tides through the canals. The Louisiana Land and Exploration Company developed water control structures in conjunction with its oil and gas operations to retard the erosion, and those areas protected by the structures have become nursery grounds for fish and other marine life, homes for fur animals, wintering grounds for waterfowl and sanctuaries for a variety of birds.

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- Aransas National Wildlife Refuge, Texas - Major concern was threatened or endangered wildlife species, one being the endangered whooping crane. Conoco, Inc. designed its operations so as not to impact the whooping crane population which now numbers over 80 from the previous 29 before operations.

- Pigeon River County State Forest, Michigan - Major concern was the impact of oil and gas development on the elk population. After extensive studies were conducted, operations were designed to lessen impact on the elk. Current studies since operations have been conducted show no adverse effect on the elk population.

The Arctic National Wildlife Refuge (ANWR) is undeniably a sensitive environment. The petroleum industry has demonstrated it can operate in and protect such an environment. Contrary to information put forth by opponents that the petroleum industry only takes those measures for environmental protection that are required by law, the facts show otherwise. Many petroleum companies operated under their own strict environmental standards prior to passage of the National Environmental Policy Act of 1969. We believe the development of the Prudhoe Bay oil and gas field shows we can safely operate in ANWR.

COMPATIBILITY OF OIL & GAS OPERATIONS IN
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CONSERVATION UNITS

The Prudhoe Bay field and the northern portion of the Trans-Alaska Pipeline system are located on the Arctic coastal plain some 65 miles west of ANWR. Major concerns were the sensitive environment with permafrost and fragile tundra vegetation, and impacts on wildlife populations. The Prudhoe Bay oil field was developed to lessen any impact by 1) unitization of the field and consolidation of facilities, 2) cross-tundra travel by helicopter or Rolligon, 3) minimize road building and 4) drill well clusters from central gravel pads. The Central Arctic Caribou herd which utilizes the area around the oilfield and pipeline has continued to proliferate and is now at its highest numbers since the Prudhoe Bay discovery.

Other oil and gas activity also illustrates good environmental record. In recent years, prudent drilling programs have been carried out on lands immediately adjacent to the ANWR. In the Point Thomson Unit and surrounding area located near the Canning River or west boundary of the ANWR, Exxon and others have drilled some fifteen wells, beginning with Alaska State A-1 on Flaxman Island No. 1 in 1975. Union's E. de K. Leffingwell No. 1 well was drilled on a State lease just west of the western boundary of the ANWR and south of Exxon's Point Thomson Unit. Chevron U.S.A. Inc.,

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recently completed the drilling of the KIC exploratory well located fourteen miles east of the Village of Kaktovik on native land within the boundary of ANWR.

The drilling activities mentioned above were conducted by separate operators, but the plans of operations reveal a consistency of concern for the environment through regulatory provisions and company expertise. The plans of operation presented to the Federal and State regulatory agencies for approval prior to drilling satisfied the following concerns:

- a. Archaeological and cultural resources.
- b. Access roads to location.
- c. Construction of drilling pad.
- d. Air strip construction.
- e. Type of drilling rig, equipment design and layout.
- f. Down hole operations, (drilling fluids, coring and cementing, and testing).
- g. Water supply.
- h. Liquid waste, sewage, solid waste.
- i. Contingency plans in case of spills, leaks, or other accidents.

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- j. Wildlife protection.
- k. Air pollution.
- l. Plans regarding operations if there is a hydrocarbon discovery.
- m. Reclamation plans if operations were to cease.

Recent drilling activity near the boundary of ANWR has demonstrated safe operations and compatibility with environment. The petroleum industry has demonstrated that new areas of exploration and sensitive areas such as the ANWR can be explored and developed through joint operation during exploration phase and through a cooperative unit plan with one operator during the development phase; thereby creating an even lesser impact on the environment.

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PETROLEUM POTENTIAL IN THE
ARCTIC NATIONAL WILDLIFE REFUGE
BRIEFING PAPER 1

Rapidly depleting domestic oil reserves need replacing

- ° The U.S. is rapidly depleting its domestic reserves of oil and gas so that production from existing fields will decline from the current 8.8 million barrels per day to less than 3 million barrels per day in the year 2000. To supply U.S. demand in the year 2000 an additional 12 million barrels per day will be required either from new domestic discoveries and/or imports. The U.S. will, therefore, be very vulnerable to serious supply disruptions in the 1990's unless significant new domestic oil discoveries are made.

The ANWR Coastal Plain has the highest oil potential of unexplored onshore areas in the U.S.

- ° The coastal plain of ANWR has been recognized by geologists as having the greatest potential for major discoveries of oil and gas of any unexplored onshore area in the United States. All the geologic ingredients for oil and gas exist in ANWR including thick sequences of rocks that can contain oil and rocks that have generated oil as well as large geologic structures to pool oil. At the surface this potential is

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BRIEFING PAPER

indicated by oil seeps and oil stained rocks. The rock types that lie below ANWR are those in which the giant Prudhoe Bay and Kuparuk fields occur less than 100 miles west of ANWR and in which numerous discoveries have been made in the Canadian Beaufort Sea to the east.

Estimates of ANWR's oil potential are on the order of billions of barrels

- ° Estimates of the oil potential are in the billions of barrels rivaling or exceeding the reserves at Prudhoe Bay (9.6 billion barrels), America's largest oil field. The U.S. Geological Survey in 1980 estimated that the mean oil field would contain 890 million barrels which is classified as a super giant field. To determine the oil and gas potential of ANWR requires exploratory drilling to confirm all the other favorable geologic indicators.

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PROTECTING THE NATURAL ENVIRONMENT

MINIMIZING IMPACTS TO ARCTIC COASTAL PLAIN VEGETATION, SOILS,
WATER BODIES AND STREAMS IN THE COURSE OF OIL AND GAS
EXPLORATION AND DEVELOPMENT

BRIEFING PAPER 2

Impacts to the environment in general can be minimized

- ° Engineering technology has advanced during 40 years of oil and gas exploration and development in the Alaskan Arctic. New facilities will be considerably smaller than existing ones.
- ° Temporary facilities such as ice roads and pads will be used when prudent.
- ° Directional drilling techniques will be applied to further consolidate facilities.
- ° Common access roads and pipelines will be used.
- ° Facilities will be used sequentially to reduce overall impacts of development (for example, deep mining of gravel followed by use of resulting pit as a deep water reservoir for domestic and industrial use).
- ° If exploration does not yield discoveries, then there will be virtually no impacts.

PROTECTING THE NATURAL ENVIRONMENT
BRIEFING PAPER

Permafrost underlying the Coastal Plain will be protected in the course of exploration and production activities

- ° Disturbance to the insulating active layer will be minimized in using low ground pressure vehicles, limitation of off road travel by tracked vehicles to times when the ground is frozen, and careful selection of routes to avoid particularly sensitive areas.
- ° Elevated pipelines and buildings will be constructed to minimize thaw of underlying permafrost.
- ° Gravel and other insulating materials will be used to prevent thaw and subsidence of frozen soils under roads and pads.
- ° Success of these techniques has been shown by use at Prudhoe and Kuparuk

Tundra vegetation will be protected during oil and gas exploration and production

- ° Surface area impacted by exploration or development facilities will be minimized by consolidating facilities.
- ° Exploration and development sites will be selected to minimize impacts to important vegetation communities and habitats.

PROTECTING THE NATURAL ENVIRONMENT
BRIEFING PAPER

- Climatic conditions provide additional protection. For example, construction and seismic work will be conducted during the winter months when there is adequate snow cover and the ground is frozen; an exploratory well that requires less than about five months to drill and test can be completed during the winter months.
- Preparation of botanical maps for areas where development is to occur.
- Maintenance of drainage around gravel work pads and across roadways to minimize changes to hydrological regime.
- Application of dust palliatives to roads and pads as appropriate.

Water quality in lakes and streams will be protected in the course of exploration and production activities

- Secondary treatment of sewage before discharge: implementation of stringent quality control for all discharges.
- Design of stream crossings to maintain stream flow and prevent siltation.
- Construction of secondary containment around oil storage areas and other potential sources of pollution.

NS1:2.1

07/02/86

EXPLORATION AND DEVELOPMENT

ANWR BRIEFING PAPER 3

Modern petroleum exploration and development activities are compatible with environmental objectives for refuges and other sensitive lands.

- ° Special care is taken to protect all living resources, minimize disturbance of the land, reduce air and water pollution and protect archaeological and cultural resources. Millions of barrels of oil are produced safely in the U.S. every day in sensitive environments, including wells in wildlife refuges on the Gulf Coast and in the extremely fragile tundra of the North Slope of Alaska. Alaskan Petroleum industry activities are usually temporary in nature and conducted in a manner that protects environmental values. Petroleum operations today are carried out conscientiously, mindful of environmental goals and in compliance with the comprehensive body of laws enacted to further these goals.

WILDLIFE & HABITAT PROTECTION
DURING PETROLEUM EXPLORATION &
DEVELOPMENT (BRIEFING PAPER)

Discovery and development of a major oil field equal in size to the Prudhoe Bay Unit would affect only 1% of the total ANWR acreage.

- The Arctic National Wildlife Refuge (ANWR) comprises 18 million acres in northeast Alaska, largely uplands and mountainous terrain of the Eastern Brooks Range. Of this, approximately 1.5 million acres, or 8%, is coastal plain. It is beneath this coastal plain that oil and gas potential exists. Should oil and gas be found in commercial quantities and developed, only a small portion of this coastal plain would be affected. As a comparison, the giant Prudhoe Bay oil field, largest in North America, is developed from a combined operating area of 212,000 acres. This is approximately 1% of the surface area of ANWR, and 14% of the area of the coastal plain. The Kuparuk oil field, probably more likely to be the size of a developed field in ANWR, would comprise less than 10% of the coastal plain, or 0.8% of ANWR. Only an extremely small surface area would actually be impacted from roads, pads, etc.

A recent survey concluded that oil and gas lease activities in wildlife refuges "have had little or no adverse effect on wildlife in most refuges...and have often enhanced other economic and recreational uses which occur on the refuges..."

WILDLIFE & HABITAT PROTECTION
DURING PETROLEUM EXPLORATION &
DEVELOPMENT (BRIEFING PAPER)

- ° The extensive measures undertaken by industry on the North Slope and along the Trans-Alaska pipeline system (TAPS) are outstanding examples of the compatibility of oil operations and the environment. Oil companies operating in this area cross the tundra by Rolligons with huge soft tires, minimize building of permanent roads by building temporary ice roads to protect the tundra, use insulated casing for wells, lower noise levels by muffling engines and install redundant safety systems. Drilling pads, roadways, building sites and pipelines are insulated from the tundra by thick layers of gravel or other methods to prevent the underlying soil from thawing.

Caribou: Recent data clearly indicate that during the period of maximum developmental growth at Prudhoe and Kuparuk, the Central Arctic Herd has continued to proliferate at rates rivaling and even exceeding those observed for herds existing in areas where no development has occurred.

- ° Census figures produced by the Alaska Department of Fish and Game show that between 1973 and 1982 the Central Arctic Herd has increased at an average annual rate of 13%. More recent estimates are even higher, between 14-20%. All indicators show a healthy and expanding herd, despite the pipeline and Dalton Highway bisecting their range and the growth of oil field activities in the summer range. One of the conclusions from the NPR-A Caribou/Waterbird workshop conducted by the

WILDLIFE & HABITAT PROTECTION
DURING PETROLEUM EXPLORATION &
DEVELOPMENT (BRIEFING PAPER)

BLM in May, 1982, was that "winter seismic and exploratory drilling operations have had little impact on caribou to date." Further, "these activities would be unlikely to have significant impacts in the future given current standard operating permits and procedures.

Caribou habituate to stimuli that do not present a threat to their survival.

- ° The adaptability of the species to human presence is underscored by the fact that the species (reindeer) is semi-domesticated throughout much of its Scandinavian range. The Dempster Highway, initiated in 1959 and completed in 1979, bisects the winter range of the Porcupine Caribou Herd in Canada. At the low levels of traffic this highway supports (10 vehicles per day), there have been no significant effects on the daily activity budgets of caribou using the road corridor or their migration success. A pipeline elevated sufficiently to allow caribou to pass underneath (current regulations require 1.5 m) is generally not a barrier to most caribou, dependent on the intensity of insect harassment, the sex/age composition of the group and the groups size. Pipelines next to heavily traveled roads do present an impediment to movement, but studies have shown that these effects can be effectively mitigated by increasing the road-pipeline separation and/or imposing traffic restriction.

WILDLIFE & HABITAT PROTECTION
DURING PETROLEUM EXPLORATION &
DEVELOPMENT (BRIEFING PAPER)

Bird Populations: Although there are large differences from species to species on how birds will accommodate disturbance by oilfield activities, generally most species can and do successfully adapt.

Since most of these species winter in the continental U.S. and Mexico, they come into contact with development activities regularly throughout their lifecycle. No differences in responses of birds, species composition, community structure, abundance and nest density were found between a Pt. Thomson exploratory drill site and an undisturbed control site during an extensive 1980 field study. Snow geese and Brant displayed accommodation to the Lisburne oil field activities and were not significantly disturbed. The activity budgets of Canada and Greater White-Front Geese, on the other hand, did appear to be altered by oil field activity; but these affects apparently were not detrimental. During spring/summer of 1983, Thetis Island (Mukluk Island Project) was used as a staging area for over 1 million cubic meters of gravel used to build an artificial island. A study conducted that season concluded that the industrial activity did not have a measurable effect on the number and distribution of nests and the nesting success of common Eiders and Oldsquaw Ducks.

NS1:3.1

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HISTORY AND CULTURE OF THE ARCTIC NATIONAL
WILDLIFE REFUGE'S NATIVE INHABITANTS
BRIEFING PAPER 4

Prehistory of ANWR

- ° The area has been inhabited for at least 10,000 years.
- ° There are few remains of early settlements and camps. People were nomadic and seminomadic hunter/gatherers who had little or no access to permanent construction materials.

Highlights of recent history of Kaktovik and ANWR

- ° 1890-1910 Barter Island was a key trading point during the commercial whaling era. When whaling ceased about 1910, trade with the outside ended.
- ° 1920-1930 Fox fur prices were high and trading posts sprang up along the coast. During this same time several herds of reindeer were established in the ANWR area.

HISTORY & CULTURE OF ANWR
BRIEFING PAPER

- 1923 Tom Gordon established a trading post again at Barter Island representing the H. B. Liebes Company of San Francisco.
- 1935-1940 Fox fur market collapsed, resulting in closure of trading posts.
- 1936-1937 Severe winters resulted in loss of most of the reindeer to starvation.
- 1936 Bureau of Indian Affairs (BIA) Survey indicated that most of the residents in the Kaktovik area were near starvation.
- 1937 BIA attempt to drive reindeer from Barrow to Barter Island failed.
- 1938 Tom Gordon died and H. B. Liebes closed the trading post.
- 1945 U.S. Coast and Geodetic Survey began mapping the Beaufort Sea Coastline, bringing some wage employment to the area.
- 1947 Air Force constructed a runway and hangar at Kaktovik. A Distant Early Warning (DEW) System facility was later constructed there.

HISTORY & CULTURE OF ANWR
BRIEFING PAPER

- 1971 The Alaska Native Claims Settlement (ANCSA) provides for native selection of Alaska lands.

- 1980 The Alaska National Interest Lands Conservation Act (ANILCA) expands the refuge; calls for assessment of oil and gas potential and a report to Congress with recommendations on whether to allow leasing and exploration of the ANWR Coastal Plain.

- 1985 The KIC exploratory well commenced.

Subsistence activities will continue without disruption if the Coastal Plain is opened to oil and gas exploration and production

- Subsistence activities in the region require inputs of cash for hunting equipment (fuel, ammunition, overland vehicles, boats, motors, etc.).

- Despite commercial whalers, the Bureau of Indian Affairs, the Department of Defense, and others who have occupied or passed through the region, Alaska Natives have continued to use subsistence resources and to share their kills with their neighbors. There is no reason to believe that oil and gas exploration and production would have more impact on North Slope residents.

HISTORY & CULTURE OF ANWR
BRIEFING PAPER

- ° Archeological Surveys conducted prior to construction of any facilities will prevent loss of archeological sites.

- ° Scheduling of oil and gas activities to avoid seasonal hunts when possible will minimize disruption to subsistence.

- ° So long as animals are not displaced or access by Alaska Natives denied, subsistence utilization can continue at the same time that exploration and oil and gas extraction occurs.

NS1:4.1

07/02/86

AESTHETICS AND HUMAN USE

BRIEFING PAPER 5

Human Activity has continued for hundreds of years in ANWR

- ANWR has been subject to human activity for hundreds of years. Reindeer herding, mining, and settlement, have not diminished the aesthetic value of this area. With reasonable planning, petroleum development can come and go without compromising the wild and scenic values of ANWR. Even during the period when the petroleum industry is active, only a small part of ANWR would be affected.
- Subsistence culture is supported by cash economy provided by resource development.

Aesthetic values are considered in development of oil fields

- Oil companies are sensitive to environmental and cultural values, and the strong regulatory presence of government will ensure that the natural and scenic assets of ANWR will not be permanently diminished.
- Limited land use results from petroleum development

AESTHETICS & HUMAN USE ANWR
BRIEFING PAPER

Careful planning and design of facilities which blend with natural features will minimize visual impacts and enhance long-term rehabilitation.

Only a small percentage of Alaskan wilderness would be affected by exploration and development in the ANWR Coastal Plain

- ° 55 million acres of land in Alaska are now classified as wilderness.
- ° ANWR area of major scenic and wilderness values lies outside the Coastal Plain; 50% of the Refuge is already classified as wilderness.

NS1:5.1

07/02/86

COMPATIBILITY OF OIL AND GAS OPERATIONS
IN AND ADJACENT TO WILDLIFE REFUGES AND
CONSERVATION UNITS
ANWR BRIEFING PAPER 6

Oil and gas leasing, exploration and production has been permitted
in wildlife refuges in the lower 48 states and Alaska

° The Kenai National Wildlife Refuge (formerly the Kenai National Moose Range) represents a notable success story of the successful coexistence of important fish and wildlife populations, notably salmon and moose (caribou have recently been reintroduced to the southern part of the refuge), with oil and gas development.

- Leasing was permitted in the lowlands of the northern portion of the refuge in the mid-1950's and oil was discovered in Swanson River in 1957.
- The Swanson River field is a giant field with initial reserves of over 200 million barrels of recoverable oil; production commenced in 1962 and oil was shipped via a 16 mile pipeline to tidewater at Nikiski on Cook Inlet.

COMPATIBILITY OF OIL & GAS OPERATIONS
IN & ADJACENT TO WILDLIFE REFUGES &
CONSERVATION UNITS (BRIEFING PAPER)

- Over 100 production and exploration wells have been drilled in the Refuge.

- Under the direction of the refuge manager and in cooperation with the field operator (Chevron), a set of environmental protection measures were introduced to minimize or avoid adverse impacts to fish and wildlife.

- The environmental management program and oil industry operations are generally agreed to have been successful in the Kenai National Wildlife Refuge with no significant long term adverse impacts. The moose have thrived during the period of oil development and healthy populations of salmon annually migrate up and spawn in the Swanson River and its tributaries that runs through the middle of the oil field.

- ° In the lower contiguous states, the Aransas National Wildlife Refuge in Texas provides another excellent example of compatible coexistence of oil and gas and important wildlife resources. The population of endangered whooping cranes today has increased from 29 worldwide in 1939 to over 80 today, in large measure due to careful management in the Aransas refuge and the efforts of Conoco, who has operated the oil field since 1941.

COMPATIBILITY OF OIL & GAS OPERATIONS
IN & ADJACENT TO WILDLIFE REFUGES &
CONSERVATION UNITS (BRIEFING PAPER)

There are many other examples where oil and gas operations have successfully been conducted adjacent to ANWR and in or adjacent to other refuges/conservation units in the United States.

Oil and gas exploration and development in compatible with wildlife
refuge management

- ° Current regulations governing the management of wildlife refuges administered by the U.S. Fish and Wildlife Service permits leasing within Alaskan refuges after a classification procedure involving an assessment of compatibility of oil development with the protection of fish and wildlife resources.
- ° Multiple use of refuges with innovative and careful mitigation measures to protect fish and wildlife is attainable to the benefit of wildlife and economic development.
- ° Success of oil and gas operations in wildlife refuges has been further enhanced by the cooperative efforts of U.S. Fish and Wildlife Service refuge managers and oil industry personnel.

NS1:6

hard times - a case to be made pol'y -
non-contiguity of the state -

Ran Zobel -
1000 - W 500 A1
S. A. 300
Anchorage A1 1500

3/12 ANWR - villages

HJR 1
→

Arctic Village - opposed to dev't of 1002 area bec. it is "lifeline" -
dep. on caribou the way coastal people dep. on fish -
most reliable source of food -

→

elders dep. on caribou - in Arctic hospital one elder rec'dy wldn't
eat the hosp'l food -

imp't part of the cultural history
anything happening to caribou herd will hv extreme impact on
the villagers -

HJR 9
→

whatever happens on Arctic Wildlife Refuge, Venetie + Arctic
Village shd get 1^o consideration

Moses Sam Sr. -

^{just} worry for the caribou herd -

calving probs -

fluctuations in herd

Lillian Garnett?

confused -

ANWR - thought land was set aside for wildlife

people of Arctic Village are against oil exploration

hi cost of living - few jobs - (need caribou)

culture - clothing, arts + crafts - no jobs

if you destroy the caribou you set out of part of the
villagers' self-concept

want Arctic Village to be part of the planning, shd hv.

hugs; support Cooper on 10-year delay - calving area
in coastal plain -

elders can't change their diets. -

Peter Sr.

game hasn't bn in good shape since TAPS constr'n -

can't spoil water, harm fish + game -

village is looking good these days but still dep. on the game

no dg. -

2/19 HJR 9 - environmental

Grogan - imm. opening of ANWR

leg for core calving area def'd for 10 yrs.

allow for 7 year study, rec'n at end.

state auth's + resp's - viable role for Gov't to partic. in
final leg dec'n for core calving area

Cohen - carbon

water use

gravel

alt'r transp'n scenarios

Sam: Yukon gov't had diff'r idea about carbon calving
grounds etc. Norman: everybody participated in 1002
research but don't know if Yukon gov't participated -
satellite tagging - USFWS/ADF&G agree on the core
calving area location

Ad: Sec'l dec'n for core calving leg? Grogan: allow
Congress to decide, then Sec'y/Gov't can make rec'n take
effect if Congress fails to act -

Spencer: definite b'dries of calving area? Norman: calving
thought, 5

Army Kyle: 1002 did not inc. level of detail on DEC issues -
id'g areas that need to be addressed -
major waste streams - air, water, solid -
hv not yet id'd a process that will treat DEC issues -
aq. man'g - subst'l emissions of nitrogen oxides - impact
on ambient air qual. - NS studies. Flaring w/ startup
solid waste mgmt - ltr mgmt of drilling needs - want
to prov. for containment of wastes - need to separate
solids fr. liquids - don't hv regs yet but want to
be sure these are in place - metal waste resulting
fr. dev't - need method to dispose -
liq. wastes - sewage, brine etc. - need to prepare a
displ of ea.

haz's waste - O&G int'g wastes are excluded unless

req -
oil spill planning -

Reason: share some DEC/DFG concerns.

also conc'd re state acreage, benefits of dev't to state

access to offshore state acreg -

restriks on onshore dev't -

min. disruption

wd feel safe if DOI responded adeq ly to state concerns

Program: geology + wildlife

- ✓ Mark Fraker -
- ✓ Mike Matz -
- ✓ Randy Royce -
- ✓ Dave Cline -
- ✓ Bob Adler -

WEP

see ~~time~~ ^{time} if you need help
translating these notes.

4/5/87

Sum

Entitlement

① What are the scenarios if the land
~~surface~~ and subsurface mineral rights
are ~~is~~ owned by

Feds :

State :

Natives :

The terms of

① Revenue to the state / ^② Federal / ^③ ~~State~~ / ^④ ~~Native~~

~~② local line (Native line)~~

~~③ environmental control~~

~~④ Revenue to Fed~~

State tax structure on ~~native~~ corporations: state / Federal

Land trades

what is the general discussion
outline?

① What lands (inholdings)

where are they

how are the land values being
developed

② who is negotiating the trades

③ are the traded lands subject
to 7(i) distribution of subsurface
revenue

④ to the state involved in the
land trade negotiations

1. what lands

Sund

2/5/89

Environmental issues:

~~Carbon~~ -

- ① Water
- ② Land
- ③ Air

- ④ Animals
- Carbon
-

Issues:

Global Warming / Local Warming

Fed →

State →

Native →

Peak Experiences on North Slope

- Union hire

- non-union hire

Tom Roberts -

OCS lease language -

req's Sec Int to consider local/state needs
not very enforceable but courtly OK w/ some
precedent.

revenue paper: 90/10
NARA
compacts

Sand - solid waste disposal

Local here

→ Don Zobel - Ch of Comm. speech
what is possible - 3 steps
est. of prev. wage



Maus Fran

voluntary rights aren't adeq. -

→ For laborers but right isn't against req. Alaska have
interest of the nation in the energy local here -

Sand - Add 20% cost / 90/10 /
market - price on rev's -

Springer - 10%

Davidson - 10% -

could avoid for jobs on 75/10 - what do we get?

exp. need also local market jurisdiction?

"understand through compact that they aren't going
to do anything to us"

Price - land trades -

Davidson - energy, security - not issue -

"stamped effort in a part of a few"

→ Scam - national interest -

packet -

timing - final essential language

consensus points -

Rod for ~~the~~ Fri 13th

state's position: as much as poss.

state's participation:

which lands?

what probs in agmts/process? app'ls?

timeline?

legal analysis:

wd exchange be legal?

can dev't occur w/o Cong'l act?

what reg'y auth'y will feds lose in exchange?

7(i) issue

reverter clauses

want to amend 38.50

need maps. disc'n of state lands offered.

revenue scenarios in a.m.?

INTERIOR

brief: trades under consid'n - outline
maps - tracts in ANWR
appraisals
values of trade lands
§7(i)
reversion clause
state involvement
why no Parks?
legal authy

STATE

role/position
legal view
what reg'y authy wd be lost? in an exchange.

ANCSA corpora

CORP

Konigs

~~called~~
Frank
Pagers

- | | | | | | | |
|----|----------|---|--------------|---|-------------|----------|
| 1. | Sund | ✓ | pub. 1:30 | ✓ | Kantag | |
| | Peace | | Frangin 1:30 | ✓ | CIRI | ✓ |
| | Hoffmann | ✓ | | | Doyon | left msg |
| | Navarre | ✓ | | | vly copies: | |
| | Coleen | ✓ | | ✓ | | |
| | Herrmann | ✓ | | ✓ | | |
| | Sultz | ✓ | | ✓ | AFN | |
| | Springer | | away. | | BNC | 5432124 |
| | Davidson | ✓ | | | | |

2. USDOJ -

3. Munkowski - Tom Roberts.

4. ANCSA copies - Kantag / CIRI / Doyon / ~~██████~~ / Kantag area vlyg.
m

5. env't org's -

2/5 HJR 7 - HJR 9

get 1002 letter ASAT +
distrib.

Somerville:

Zawacki:

Sand: U.S. v AIC interests

labor

land trades

royalty

env't / coastal plan

want to assume pos'v benefit to the state

Ad: wd like > info on resident here

mentions Murki's lang.

Sam: wd hv. to rely on the deleg's

Lyman: affected communities? caribon / subic - shd hear fr.

The local people -

Sam: Lyman help get the local people on

Springer: env't data / concerns - EIS - Admin's views - timing, modes
of opin - comp'v model drawing tog' geol'y, ecol'y, timeframe
of dev't / research - when wd production begin

Sam: no authority until Congress opens, calls on Denny

Denny: intros Larry Dietrich

~~draft~~ draft 1002 report is seriously inadequate w/ reg. to env't
state to maintain a credible position must prep. on all
poss env't q's, field program, monitoring - Gov has
prop'd a supp'l budget item - NS history -
Phase I - 12 mos. NS dev't hist'y - Phase II - consultations
etc. look @ issue areas spec'ly, don't know how much
or how long yet.

want to hv. state ready as soon as Congress moves

Arctich - can design Phase II when DOI / Congress are occur.

Springer - econx / timing / knowledge

Dietrich - dev. steps on basis

a/w qual techniq / practices exist to address part'l prot

→
NF to Ct: →

2/5 HJR 9

Springer = lead agency?

Aspetren = same as other NS dev't - coordin among agencies -

Springer = carbon a big issue, 1st concern -
long-range data on larger mammals

ADFG →

Norman: data in the report coll'd over past 14 yrs

Springer: wants to know whether that's enough to be able to tell
if info is OK

seasonal delay?

ADFG →

muskoxen - are they resilient in response to human dev't
avifauna - unique/endemic? Norman: no

Pearce: concern in HJR 9

land trades - need to know more about them -

also taken aback by tone of Huhndorf's telegram, Kate
on line - Marki; in town on 13th? - will his staff
be along?

NF/Pearce →

public hrgs on 1002 report -
local hrg - Marki; -

Sam: 7(i) - re trades.

Katz sez may not be decided until problem occurs

DOP? →

Sund 1) entitlement issues

scenarios ^{under} state/ANCSA/fed'l ownership → rev. impact

2) land trades - what/where? value-basis det'n?

3) resident hrg -

4) env'l issues -

NF get for Cr →

Sam: bible-plate/tracts/draft steps

master pocket of info/notebook

When gov't info

Barrow. Charlie Edvardson: oppose ASPL/state dev't - enough o/g leases
are avail. -

2/4 HJR 9 -

Sam: intro'd 9

Terry:

Bob Swire:

Hansen:

Lochen:

Kelso: 1002 comments due Fri -

rec values are id'd, but env'l problems are not or ^{inadeq} ~~not~~ discussed: w/q, haz wastes, a/a, drilling and solid waste -

1) USDOE needs to do more work before Congress will agree: resolu'n of probs, coordin of state + fed'l agencies wth. inv. auth'y in const'n -

2) imprints of the study - special areas needing spec. mgmt + attention -

state needs to address q's that will be raised in Congress - Prudhoe/other NS dev't history, other issues needing exam'n - info ne'g to address the problems - site-spec. strips/plans/open'g program -

call Shaman →

Phil Holdsworth for RDC - credit Shaman's report

RDC has adopted a draft resolu'n like HJR 7, but there hv be some add'l concerns, wth. are add'd in HJR 9 -

RDC's basic feeling is that the most imp't issue is the 1st resolve - give Congress auth'y to open all, DOI hv auth'y to postpone leasing, RDC also believes land trades shd be delayed - defer to discussion

April Grosby - Arctic Audubon

Alaska's pos'n needs to be econ'y, ecol'y, esthetically defensible - ∴ data are very imp't - the resolutions don't reflect enough of the data - even HJR 9 is premature - The compromise in 1980 - 80% of arctic plain is open -

The state isn't rec'g protection of any coastal actig -
NPRM is avail.

other ways to get energy - consrv -

the legal arrangements for making it aren't in place
drilling explor' wells wd be a good idea bef. deciding
whether to open -

fr. 1002 - p. 54 - Prud/Kup Ellesmerian seq., also
if Ellesmerian aren't present wd need ANWR part 1 -

p. 67 -

p. 166 - actual explor'n needed

prudent choice wd be not to drill until oil is needed
we don't understand enough

Wingshoot

swamp owl

snow geese

tundra swan

crab - insect relief

India is exempt fr. haz's waste law -

prob'ly supp. no-oken alt'v

Richard Hellard - Jno S/C

good arguments for not drill'g -

Pooccupine land

wastes

sub's'c

nat'l issues = energy consrv -

oppose HJR 7 / HJR 9 -

wd prod. only a brief supply of oil -

Joe Thomas - labor -

ag. of Terry Martin re golden opp'g

relate ANWR to Prudhoe -

jobs -

Sen Mark's / Stevens have ensured local hire on
dev't proj's in Alaska

rec'd hire shd be part of any resol'n -

THE FOLLOWING DOCUMENT HAS
NOT BEEN FILMED BUT IS
AVAILABLE IN THE ORIGINAL
FILE



The Juneau Report is published by Standard Alaska Production Company (SAPC) Government Affairs Department to provide an overview of issues and legislation as they relate to the petroleum industry. Opinions of authors expressed here do not necessarily reflect the opinions of the company. The Juneau Report is edited by Jim Palmer. Inquiries should be directed to him or Bob Strain, Government Affairs, 564-5403 or 564-5537.

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Arctic National Wildlife Refuge (ANWR):

Congress will consider opening coastal plain for exploration

With domestic production falling sharply, nation will need major new oil discoveries

By Tim Bradner

Editor's Note: *This issue of Juneau Report is devoted entirely to the Arctic National Wildlife Refuge (ANWR) and the question of opening a small part of the refuge to oil exploration. It is an issue of major importance to the nation, the State of Alaska and the petroleum industry.*

Sometime in 1987, Congress will begin consideration of the opening of 1.5 million acres in the northernmost section of the 19-million-acre Arctic National Wildlife Refuge (ANWR) to oil and gas exploration. The Department of the Interior, in a formal report to be submitted to Congress this spring, will recommend allowing exploration in the coastal plain of ANWR, a stretch of gently rolling tundra extending from the foothills of the Brooks Range north to the Arctic Ocean. It will involve about 8% of the Arctic refuge area, which is itself about half the size of the State of Washington.

This will set off another major Alaska environmental controversy in the nation's capital, as environmental groups fight to keep the refuge closed. It will be a battle reminiscent of fights over the Alaska National Interest Lands Legislation (ANILCA) in 1980, when conservation groups

If oil is eventually found in the coastal plain, actual production facilities will take up a very small area. As examples, the Prudhoe Bay unit area involves 242,000 acres of leased acreage. The Kuparuk River unit, which many geologists believe to be more typical of what might be found in ANWR, covers about 150,000 acres of leases. *But in both these huge oilfields, including the smaller Milne Point field, only 8,000 acres are actually occupied by production pads, roads, pipelines or other facilities according to 1983 State Fish and Game surveys.*

By the time any discoveries in the coastal plain are developed, technological progress within the industry will allow development to take place taking even less space, through new "directional drilling" techniques and smaller, more compact field production facilities.

This is demonstrated in the new Milne Point, Endicott and Lisburne fields near Prudhoe Bay, where industry's experience in Prudhoe Bay and Kuparuk has resulted in the design of smaller production modules.

Congress Ordered Assessment

When Congress passed the Alaska National Interest



The Alaska *Great Opportunities* Conference
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of the
Arctic National Wildlife Refuge
Alaska



A Guide

PUBLIC-DATA FILE 87-1

Hansen, Kornbrath, Meyer, Robinson, Smith, Sheet 1 of 1

INTRODUCTION

This is a nontechnical report utilizing nonconfidential data to show that the coastal plain of the Arctic National Wildlife Refuge (ANWR) has high potential for containing large deposits of oil and gas.

Geographical Location

ANWR lies in the northeastern corner of Alaska and is bounded by Canada on the east, the Canning River on the west and the Beaufort Sea on the north. Its 19 million acres of land range from coastal-plain tundra to the high mountainous regions of the Brooks Range, which comprise approximately 73 percent of ANWR. The remaining relatively flat coastal plain extends 15 to 50 mi inland from the Beaufort Sea. Approximately 1.5 million acres of this area -- the 1002 area -- may be opened to leasing and drilling.

History of ANWR

1960 Arctic National Wildlife Range (8.9 million acres) was established.
1980 Arctic National Wildlife Range was assigned refuge status under the Alaska National Interest Lands Conservation Act (ANILCA); size was increased to 19 million acres.
1987 U.S. Department of the Interior reports its findings to the U.S. Congress concerning the oil and gas potential of the 1002 area along with its recommendations regarding leasing. Congress will decide whether to allow oil and gas exploration in this area.

Alaska Interest

If the 1002 area is made available for oil exploration under federal law, the State of Alaska currently would receive a 90 percent statutory share of all royalties, bonuses, and rentals derived from oil and gas leasing. The submerged lands within 3 mi of the coastal plain and the barrier islands belong to the State. Oil and gas lease sales 50 (Camden Bay) and 55 (Demarcation Point) are scheduled for this area during June 1987 and June 1988, respectively. Ownership of the lagoonal areas is in litigation between the state and federal governments and will be decided by the U.S. Supreme Court.

Native Corporation Interests

The Kaktovik Inupiat Corporation (KIC) and the Arctic Slope Regional Corporation (ASRC) own the rights for 110,000 acres of the coastal plain. The subsurface rights were conveyed to ASRC by the U.S. Department of the Interior in exchange for inholdings in Gates of the Arctic National Park. The State of Alaska is no longer entitled to the 90 percent revenue share for these Native Corporation Lands, nor would the State receive such revenue from any ANWR lands for which federal title is relinquished in the future. Further land exchanges in the ANWR coastal plain between the U.S. Department of the Interior and various Native Corporations are being planned.

Data Available

Geologists and geophysicists in the Alaska Division of Mining and Geological and Geophysical Surveys have conducted subsurface and surface studies in and adjacent to ANWR. The database for these studies includes the following:

- * Surface outcrop studies consisting of stratigraphic, structural, rock-property, age, geothermal, and lithologic analyses.
- * Exploratory well information including logs, tests, and sample analyses for geochemistry, age, lithology, and rock properties.
- * Seismic and gravity surveys.

The State is planning to conduct additional field studies for the 1987 and 1988 field seasons. New data will be integrated as they become available. Critical data not available to the State include seismic surveys and exploratory well data on KIC lands.

Gravity and aeromagnetic data in and adjacent to ANWR are the only nonconfidential geophysical data available for public release. These data were collected by the U.S. Geological Survey and several universities. State geophysicists have interpreted the gravity data to determine the regional basement configuration.

The U.S. Geological Survey reprocessed a portion of the 1300 mi of proprietary seismic data collected by Geophysical Service Inc. during 1984-85. Some lines are included in the U.S. Department of the Interior's draft report on ANWR (Patton and Christiansen, 1986), but the seismic data are not yet available to the general public.

Ned

Ron Zaebel

272-3597 (?)

says "he will not drop
or participate in
dropping any residency
laws!"

but is willing to
offer alternate suggestions
prevailing wage.

likes Donnelly proposal.

(says he is hard to reach -
like you)



THE ALLIANCE

P.O. Box 100100 / Anchorage, Alaska 99510 / (907) 278-4444

January 26, 1987

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Representative Cotten
P.O. Box V
Juneau, AK 99811

Re: Arctic National Wildlife Refuge

Dear Representative Cotten,

I have taken the liberty of compiling some information on the Arctic National Wildlife Refuge (ANWR) which may be of interest to you. I understand that resolutions have been introduced both in the House and the Senate favoring the opening of ANWR to oil and gas exploration and development. The enclosed documents contain information, statistics, and research concerning the Arctic National Wildlife refuge. I hope the attached documents will help you in your deliberations on this very important issue.

Kindest personal regards.

Sincerely,

James D. Linxwiler
Chairman
Alliance ANWR Committee

JDL:kdw
Enclosure
1672L

Alaska Support Industry Alliance

... for responsible economic development

HJR

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M E M O R A N D U M

STATE OF ALASKA


Department of Revenue

Petroleum Research Section

January 27, 1987

To: Vincent D. Bright, Chief of Research

From: Charles Loosdon, Petroleum Economist



Subject: Reevaluation of the Revenue Impact of Removing the Ban on ANS Exports

Per your request I have reevaluated the revenue potential of allowing the export of ANS crude oil by looking at the impact on severance tax and royalty income. This represents a modest revision of the analysis done July 18, 1986 to reflect more current information on transportation costs and market deliveries. The key assumptions, method, and estimates are as follows.

ASSUMPTIONS:

1. Alaska would sell 100,000 bbl/day of its royalty oil to Far East purchasers. Current production of ANS is 1,800,000 bbl/day of which Alaska's royalty share is roughly 225,000 bbl/day. Alaska is currently committed to sales of roughly 107,000 bbl/day royalty crude oil on long term contract. This leaves approximately 118,000 bbl/day available for other disposal.
2. Other Alaska producers would sell an additional 200,000 bbl/day to Far East purchasers. This is an arbitrary assumption which may be too high or too low.
3. The price paid by Far East purchasers could not be substantially different than what would have been received if the oil were sold by the U.S. Gulf.

- 1. The transportation cost savings due to avoiding the U.S. Gulf haul would be roughly \$1.90/bbl if shipped in Jones Act tankers or \$2.95/bbl if shipped in foreign tankers.
- 2. All exports are assumed to be barrels diverted from the U.S. Gulf and all the cost savings are assumed to translate directly into higher wellhead values. Currently 40% or roughly 650,000 bbl/day of the AAS marketed in the lower 48 goes to the U.S. Gulf. All royalty revenue impacts are prorated on this basis.
- 3. Although exports to the Far East could have direct effects on the AAS price on the U.S. West Coast, no DATA is made to estimate this impact because of uncertainty over the willingness of major AAS producers to export. Market theory suggests that competition would drive the West Coast price up. Further analysis would be needed to attempt to estimate this effect.

Method:

1. Increased Royalties = State Royalty Direct Sales - In-state Royalties - Sales to In-state Refineries at In-state Prices.

2. State Royalty Direct Sales

Jones Act Tankers	=	100,000 bbls	x	\$1.90/bbl	=	\$190 million/yr.
					=	\$27.74 million/yr.
Foreign Tankers	=	100,000 bbls	x	\$2.95/bbl	=	\$295 million/yr.
					=	\$17.37 million/yr.

There is the proportion of total royalties realized from the Gulf Coast now earning higher wellhead value.

Summary

	State of Alaska	Less State of Alaska Permanent Fund Effect	State of Alaska Net Revenue Effect to General Fund
Gross Production Revenue Effect	517.77 million/yr	17.22 million/yr	500.55 million/yr
Foreign Tankers	571.17 million/yr	12.10 million/yr	559.07 million/yr

where .12 is the tax rate after ELF kicks in for Prudhoe in July 1987.

4. Increased Severance Tax

Jones Act Tankers = Taxable bbl * Value * Tax Rate = 200,000 * 365 * 1.90 * .12 * (1 - (.125 * .222)) = 516.18 million/yr

Foreign Tankers = 200,000 * 365 * 2.05 * .12 * (1 - (.125 * .222)) = 526.12 million/yr

Where .125 is the royalty percentage of gross ANS production and .222 is the percentage of ANS royalties taken in-value or taken limited and sold at in-value prices after the 100,000 bbls. are sold to Japan adjusted for the amount displaced from the Gulf Coast, i.e. 1-100 * .222 * .1

3. In-Value Royalties and Direct Sales at In-Value Prices

Jones Act Tankers = 200,000 * 365 * 1.90 * .125 * .222 = 30.45 million/yr

Foreign Tankers = 200,000 * 365 * 2.05 * .125 * .222 = 33.98 million/yr

HJR

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Official Business

Alaska State Legislature

House of Representatives

Pouch V
Juneau, Alaska 99811

Special Committee on Fisheries

FOREIGN SQUID AND BILL-FISH DRIFTNET FISHERIES

The impact of Japanese drift nets in the directed salmon fishery has been brought to the attention of legislators and the general public. The potential impact of high seas driftnets that ostensibly target on other fisheries has received less attention, but is of equal or potentially greater detriment.

In addition to the directed salmon fishery, Japan has a 600 vessel fleet that targets on bill-fish such as marlin and swordfish. Japan, Taiwan and Korea all conduct driftnet fisheries for squid. According to a report by Robert Eisnebud of the U.S. Senate Committee on Commerce, Science and Transportation, "There are approximately 1,693 pelagic driftnet vessels fishing in the North Pacific setting at least 20,503 miles of net each day during the fishing seasons for a total of at least 1,065,510 miles each year. The mesh size for these squid nets (about 3.7 inches) is exactly the size that would be used for targeting the immature salmon of the high seas.

This summer the National Marine Fisheries Service impounded 230 tons of juvenile salmon in a Tacoma warehouse. At first it seemed that this Taiwanese salmon had stopped in the U.S. just for "laundering," so it could be transported to Japan in violation of Japanese restrictions. A closer investigation however indicates that the salmon may have been caught in U.S. fishing areas by Taiwanese vessels. First, the Taiwanese don't have a salmon fleet, also the Taiwanese squid fleet was not observed fishing in their usual area this summer, and finally scale analysis seems to indicate that the salmon come from waters of the North Pacific near North America.

In addition to the damage to our fisheries resources, these nets are extremely destructive to marine mammals and sea bird populations.

It is increasingly apparent that we need some way to police the foreign fisheries that have the potential of impacting our domestic fisheries. The State Department should have taken responsibility for resolving this problem, but has failed to do so. The driftnet bill sponsored by Senator Stevens is a Congressional means of mandating the adequate monitoring of these fisheries.



Official Business

Alaska State Legislature

House of Representatives

Pou.
Juneau, Alas.

Special Committee on Fisheries

February 11, 1987

TO: Representative Hoffman

FROM: Lee Goodman

SUBJECT: Update on the Japanese Drift-net situation.

A lot has happened since the INPFC agreement last April. While that agreement was much less than the Alaskan interests had hoped, it has had several positive effects. Among these, while the treaty only moved the line of the land-based fleet one degree west, it did result in Coast Guard patrolling of that line. Consequently the opportunity for foreign vessels fishing well east of the agreed upon line is less. There are also improved attempts to provide more comprehensive observer coverage of the mother ship fishery. As you know, there is now only observer coverage on vessels that fish within our EEZ. Even with this minimal coverage, the U.S. suspects that with one observer and two delivery stations per boat, various methods are used for misrepresenting the catch. NMFS suspects that there was cheating on the sockeye catch.

The most promising and exciting activity has been in Congress. Senator Stevens filed a bill last year that would have imposed strict observer requirements on high seas driftnet vessels in waters outside the EEZ (Attached is a short article I wrote on this bill). The bill also provides a sea-bird protection zone around the Aleutian Islands, and a reward (bounty) to be paid for the retrieval of lost nets. The bill did not pass last session in Congress, but it has been reintroduced by Stevens and Young, and we are optimistic about its chances for passing.

Another opportunity for curtailing the driftnet catch lies with an administrative law judge in Seattle. In catching salmon within our waters, the Japanese necessarily take an incidental harvest of marine mammals. NOAA has to give a permit for this harvest of marine mammals. If it can be shown that the mammals harvested in the driftnets are not at their optimum population, the Judge may recommend that the NOAA administrator refuse to award the permit. The marine mammal species in question here are the fur seal, the sealion, and the dahl's porpoise.

After the Judge's decision, there will follow a period during which the public may either refute or support his recommendation. It is unclear if the Administrator can give a permit for one or two of the marine mammal species

if it can be shown that one of the species is below optimum population. Apparently we may expect a decision from the judge sometime in early March.

It should be remembered that this permit only applies to fishing within the EEZ. The Japanese are already committed to a three year phase out of fishing in the doughnut (international waters) of the Bering Sea. Apparently the Japanese have threatened to reverse this phase out if they do not get the permit to fish in domestic waters, but this threat does not seem very solid.

Fishermen Praise Stevens Driftnet Bill

A bill introduced in the U.S. Senate by Ted Stevens would make it possible to assess the damage done to our fisheries and other marine resources by foreign high seas driftnet vessels. In introducing Senate bill 2611, Stevens called these foreign driftnets, "A devastating curtain of death for all living marine resources."

Demming Cowles, lobbyist for United Fishermen of Alaska said of Stevens' Bill, "It is the first positive step taken in Congress since the debacle of the [INPFC] agreement with the Japanese. It is the first effort to rectify what [the U.S. State Department] was unwilling to do."

The foreign driftnet fisheries have recently attracted attention for the number of sea birds, marine mammals and 'non-target' fish they entrap. In addition, "The Japanese mothership and land based salmon fleets also harvest 8 million salmon of North American origin each year" Stevens said.

About 640 miles of these gillnets are lost each year, and left to drift around the ocean indiscriminately catching fish, birds and marine mammals. A report by Robert Eisenbud (Counsel for Oceans Policy to the Committee on Commerce, Science and Technology) states that "over 50,000 northern fur seals also become entangled and die each year in lost and discarded nets and debris," and that this mortality "suspected as the chief cause of the continuing decline of the fur seal population."

Senate Bill 2611 would require that U.S. observers be on all foreign fishing vessels in U.S. waters, and on Japanese salmon vessels fishing in accordance with the INPFC agreement. Foreign vessels which are considered unsafe for carrying an observer would be denied fishing permits. Observers would document the number of mammals, birds, and nontarget species taken by the driftnets.

For vessels fishing outside U.S. jurisdiction, the bill includes a provision to encourage cooperation with the observer program. "The bill states that no permits to fish within U.S. waters will be given to a vessel of any government that has not entered into such an agreement," says Mary Munson of the Committee on Commerce, Science and Technology. "It forces them to come up with monitoring even though they are outside 200 miles" Munson said. "If they won't cooperate in international waters, they can't fish in our waters."

The Bill also requires the Department of Commerce to report on the impact of the high seas driftnet fisheries, and to supply the Congress with recommendations for solutions. The bill includes a provision that a study will be made into the practicality of making biodegradable gillnets. If the nets were biodegradable, once lost they would eventually break apart.

Lost nets, referred to as 'ghost nets' continue to fish effectively and are considered to be an un-

controlled and severe hazard to marine mammals, fish and sea birds. "Examination of one such abandoned salmon driftnet revealed ninety nine dead seabirds and more than 200 salmon entangled in just a portion of the net" according to Eisenbud's report. Stevens' Bill requires that a bounty system be established to pay vessel operators who retrieve these ghost nets.

To reduce the tremendous number of seabirds that are caught by high seas driftnets, the Bill establishes a "Seabird Protection Zone." High seas driftnets, will be prohibited around

the Aleutian Islands from the shore out to a distance of sixty miles.

Fishermen's groups and environmental groups are praising Senate Bill 2611 as a major step towards assessing and reducing the damage caused by high seas driftnets. "The net bounty system and the sea bird protection zone will immediately reduce much of the damage these nets are doing. The observer program will provide the information to prove what horrible damage the nets are capable of. Stevens is to be congratulated heartily" Cowles said.

*From the Bering Sea Fisherman
August, 1986*

1 (B) species of marine mammals, seabirds, and
2 marine turtles which breed within, or are other-
3 wise dependent upon, areas subject to the jurisdic-
4 tion of the United States, including its territorial
5 waters and its exclusive economic zone; and

6 (3) "Secretary" means the Secretary of Com-
7 merce, or the Secretary's designee.

8 MONITORING

9 SEC. 4. (a) Section 201(i) of the Magnuson Fishery
10 Conservation and Management Act (16 U.S.C. 1821(i)) is
11 amended—

12 (1) in paragraph (1)(A), by striking "(2)," and
13 inserting in lieu thereof "(2) and (3),";

14 (2) in paragraph (2)(A), by inserting immediately
15 after "vessels" the following: " , other than vessels
16 harvesting anadromous species under the International
17 Convention for the High Seas Fisheries of the North
18 Pacific Ocean, and the North Pacific Fisheries Act of
19 1954 (16 U.S.C. 1021 et seq.),";

20 (3) by inserting immediately after paragraph (2)
21 the following:

22 "(3) The requirement in paragraph (1) that a United
23 States observer be placed aboard each foreign fishing vessel
24 may be waived by the Secretary with respect to foreign fish-
25 ing vessels harvesting anadromous species under the Interna-
26 tional Convention for the High Seas Fisheries of the North

CORRECTION

**THIS DOCUMENT
HAS BEEN REPHOTOGRAPHED
TO ASSURE LEGIBILITY**

100TH CONGRESS
1ST SESSION

S. 62

To improve efforts to monitor, assess, and reduce the adverse impacts of driftnets.

IN THE SENATE OF THE UNITED STATES

JANUARY 6, 1987

Mr. STEVENS (for himself, Mr. MURKOWSKI, and Mr. DANFORTH) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To improve efforts to monitor, assess, and reduce the adverse impacts of driftnets.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That this Act may be cited as the "Driftnet Impact Monitor-
4 ing, Assessment, and Control Act of 1987".

FINDINGS

6 SEC. 2. The Congress finds that—

7 (1) the use of long, plastic driftnets is a wasteful,
8 indiscriminate, and destructive fishing technique that
9 results in the entanglement and death of enormous
10 numbers of target and nontarget fish, marine mammals,

1 seabirds, and other living marine resources in the
2 Pacific Ocean (including the Bering Sea) off the coasts
3 of the United States;

4 (2) there is a pressing need for detailed and reli-
5 able information on the number of fish, marine mam-
6 mals, seabirds, and other living marine creatures that
7 become entangled and die in actively fished driftnets
8 and in netting that is lost, abandoned, or discarded;
9 and

10 (3) increased efforts are necessary to monitor,
11 assess, and reduce the adverse impacts of driftnets.

12 DEFINITIONS

13 SEC. 3. As used in this Act, unless the context other-
14 wise requires, the term—

15 (1) “driftnet” or “drift gillnet” means a gillnet
16 composed of a panel of plastic webbing one and one-
17 half miles or more in length that is placed in the water
18 and allowed to drift with winds and currents for the
19 purpose of entangling fish in the webbing in the course
20 of commercial fishing operations;

21 (2) “living marine resources of the United States”
22 includes—

23 (A) anadromous species, as defined in section
24 3(1) of the Magnuson Fishery Conservation and
25 Management Act (16 U.S.C. 1802(1)); and

1 (B) species of marine mammals, seabirds, and
2 marine turtles which breed within, or are other-
3 wise dependent upon, areas subject to the jurisdic-
4 tion of the United States, including its territorial
5 waters and its exclusive economic zone; and

6 (3) "Secretary" means the Secretary of Com-
7 merce, or the Secretary's designee.

8 MONITORING

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10 Conservation and Management Act (16 U.S.C. 1821(i)) is
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17 Convention for the High Seas Fisheries of the North
18 Pacific Ocean, and the North Pacific Fisheries Act of
19 1954 (16 U.S.C. 1021 et seq.),";

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23 States observer be placed aboard each foreign fishing vessel
24 may be waived by the Secretary with respect to foreign fish-
25 ing vessels harvesting anadromous species under the Interna-
26 tional Convention for the High Seas Fisheries of the North